C
O
P
Y

THE GLIDDEN COMPANY
900 Union Commerce Building

R. K. Dutton
Assistant Secretary

Cleveland 14, Ohio

March 4, 1963

Mr. W. F. Dietrich, Executive Officer
OME FIELD TEAM - REGION II
555 Battery Street
San Francisco 11, California

SUBJECT: Docket No. DMEA-1219 (Copper Zinc)
The Glidden Company
Bully Hill Mine - Shasta County, California
Amended Contract No. Idm-E-187

Dear Mr. Dietrich:

Under date of February 28, 1962, we advised your office that our Company's Bully Hill mining claims had been leased to the Celtor Chemical Corporation, which anticipated commencing mining operations within 240 days from the date of the Lease. Under date of March 5, 1962, we furnished you with a copy of the Lease.

This letter will advise that contrary to expectations, the Celtor Chemical Corporation has not, to our knowledge and belief, conducted any mining upon the property. We have in any event not received any royalty payments as provided for in the lease nor have we received any report of any mining activity, although numerous requests have been made.

Under date of January 18, 1963, we wrote Celtor Chemical Corporation notifying them of our election to declare the Mining Lease, dated December 28, 1961, null and void, effective 120 days after receipt of notice, which by certified mail receipt appears to have been received January 21, 1963.

This letter is your notification of the termination of the Celtor Chemical Corporation Lease and the fact that there has been no work performed calling for any payments or reports to the DMEA.

Yours very truly,

THE GLIDDEN COMPANY

/s/ R. K. Dutton
Richard K. Dutton
Assistant Secretary & General Attorney

RKD/dm
cc - Mr. G. M. Halsey

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Amended Contract Idm-E187, Docket DMA-1219 (zinc-copper) dated April 30, 1953, with

The Glidden Company
900 Union Commerce Building
Cleveland 14, Ohio

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Bully Hill and Rising Star Mines located in Shasta County, California, during the period January 1, 1959, through March 5, 1962.

A certification of discovery or development was issued on October 19, 1956, and, in accordance with Article 9 and Amendment No. 1 of the Amended Contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 11 years from the date of the Amended Contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated November 20, 1956, indicated accepted costs under the exploration contract amounting to $254,514.98 with the Government's contribution on a 50 percent basis being $127,257.49.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through December 31, 1958. The royalty account as of December 31, 1958, was:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

As of March 5, 1962, the royalty account of this project was found to be:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

March 9, 1962

E. D. Talbert, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This Amended Contract provides that the Operator or his successor in interest shall pay to the Government a percentage royalty on all mineral production from the land described in Appendix I of a Prior Contract dated October 18, 1951. The property under the contract consists of all rights in 11 and the surface rights only in 1 patented lode mining claims and all rights, except the surface rights above the 1070-foot contour, in 5 patented lode mining claims and 1 patented placer mining claim, all owned by the Operator and stated as being situated in Sec. 16 and 21, T. 34 N., R. 3 W., M.D.B.M.

Exploration work under this contract was completed on December 31, 1955. Thereafter, on August 20, 1956, all movable facilities, fixtures, equipment, and buildings, except one brick building, were sold and subsequently dismantled and removed from the property. The Operator advised that "The completion and cessation of work by our Company is considered permanent".

No production occurred during the exploration work. Subsequent examinations by field representatives and semi-annual reports from the Operator disclosed no production through the period covered by this review.

On December 28, 1961, the Operator granted a 10-year renewable lease to the Celtor Chemical Corporation, 1694 Union Street, San Francisco 23, California. The lease, which covers only the claims described in the exploration contract, states that the property is located in Sec. 15, 16, 20, 21, 22, 28, and 29, T. 34 N., R. 3 W., B. and M. Mount Diablo. The lease requires that the lessee shall begin commercial mining operations within 240 days and shall construct and operate a 200-ton mill. The lease also recognizes the DMEA royalty obligation, but provides that the lessor will pay the royalty on any mineral production from the property.

It is noted that the lessee, the Celtor Chemical Corporation, an operating associate of Providence Tuolumne Gold Mines, Inc., defaulted in the payment of royalty under Contract Idm-E551, Docket DMEA-2826. Shipments subject to royalty under that contract were made in the name of Continental Ore Corporation.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The files indicate that no minerals were produced from the property since the date of the contract;

(2) The property has been inactive since 1955; and

(3) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

555 Battery Street
San Francisco 11, California

800

April 13, 1962

Memorandum

To: Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington, D. C.

From: Acting Field Officer, OME, Region II

Subject: DMA-1219 (Zinc-Copper)
The Glidden Company
Bully Hill and Rising Star Mines
Shasta County, California
Amended Contract Idm-E187

Enclosed is the original of a Report of Royalty Review covering the subject contract.

This office concurs in the facts as stated in the Report of Royalty Review.

PAUL V. FILLO

Paul V. Fillo

Copy to: Contract Administration & Audit Div.
OME, Washington, D. C.

APR 6 1962

Memorandum

To: Acting Field Officer, Region II

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMA-1219 (Zinc-Copper)
The Glidden Company
Bully Hill and Rising Star Mines
Shasta County, California
Amended Contract Idm-E187

The original and one copy of a Report of Royalty Review covering the subject contract are enclosed. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.; and

(b) One copy for your files.

This Report of Royalty Review is made for record purposes only; therefore, no copy for the Operator is provided.

As evidence of your concurrence, a copy of your memorandum transmitting the original report to the Fiscal Section should be furnished this Division. If for any reason you do not concur, both copies of the report should be returned to this Division with your comments.

Enclosures

EDTalbert/ama 4-6-62

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

C
O
P
Y

ROBERT K. EVANS
Geological Engineer

Hoopa California
February 2 1962

Minerals Section
U. S. Geological Service
Menlo Park, California.

Dear Sir:

The Company which I represent, Celtor Chemical Company, now has under lease The Glidden Company "Bully Hill Mine", in the East Shasta mining district of northern California. Could you please inform me as to where the drill logs and geologic maps would be stored, which would cover the work done with D.M.E.A. money on the property.

Any help or information you can give me will be very much appreciated.

Sincerely yours,

/s/ Robert K. Evans

Robert K. Evans
Geological Engineer

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files and records of the OME Field Team, Region II, pertaining to Contract No. Idm-K187, Docket No. DMA-1219X (Zinc-Copper), dated October 18, 1951, including Amendment No. 1, and Amended Contract dated April 30, 1953, including Amendment No. 1, with

The Glidden Company
1396 Commerce Building
Cleveland 14, Ohio

for the purpose of determining the amount of royalties due the U. S. Government on sales of zinc and copper ores from property known as the Bully Hill Mine, located in Shasta County, California, during the period of October 18, 1951, to December 31, 1958.

A certification of discovery or development was issued on October 19, 1956 and accordingly royalty is payable on all production from the land described in Article 2 of Amended Contract dated April 30, 1953 and Appendix I of Contract dated October 18, 1951, for a maximum period of 11 years from date of Amended Contract as stipulated in Amendment No. 1 of Amended Contract. A Report of Review in lieu of final cost audit dated November 20, 1956, indicated acceptable costs under the exploration contract amounted to $254,514.98 with the Government's contribution on a 50 percent basis, being $127,257.49.

No royalties have been paid to date in connection with this contract.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(a) According to the Field Team's Semi-Annual Report of Certified Projects for the period July 1, 1958 to December 31, 1958, there was no production during the period covered by this review and after August 1956 all buildings equipment etc were dismantled and removed from property.

(b) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

George Mavor

May 20, 1959

George Mavor, OME Auditor

MAY 25 1959

Memorandum

To: Mr. George Mavor, OME Auditor

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: Docket No. DMEA-1219 (Zinc-Copper)
The Glidden Company
Contract No. Idm-E187

The Washington copies of your Report of Royalty Review covering the subject contract have been amended as requested by your May 21 memorandum.

Distribution of the regional copies is authorized after this correction is made.

EDTalbert/ama
May 25, 1959

Copy to: Docket
Director's Reading File
CA & A Division

San Francisco, Cal
May 21, 1959

Memorandum

To: Mr. E. D. Talbert, Acting Chief
Contract Administration and Contract Accounting

From: George Mavor, OME. Auditor

Subject: Contract No. Idm-E187 (Zinc-Copper)
The Gledden Company
Docket No. OMA-1219X

OFFICIAL FILE COPY O. M. E. RECEIVED MAY 25 1959		
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Reference is made to Report of Royalty Review for subject Operator, which I sent to you yesterday for approval. I inadvertently left off the audit period at the end of the first paragraph which should have had a comma and continued as follows:

"during the period October 18, 1951 to December 31, 1958."

Would you please add the above to your copies and oblige.

George Mavor

REPORT
OF REVIEW

[redacted]

I have reviewed the Monthly Reports of:

The Glidden Company
an Ohio Corporation
1396 Commerce Building
Cleveland 14, Ohio

pertaining to Exploration Project Contract No. 12m-[illegible], Docket No. [illegible]-1219X, dated October 18, 1951, including Amendment No. 1, and Amended Contract, dated April 30, 1953, including Amendment No. 1, for the months of January 1952 to December 1955, inclusive covering a project for the exploration of zinc and copper, on property, known as Bully Hill Mine, located in Shasta County, California.

My review included an examination of the Monthly Reports (Forms RF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer in charge of the project, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reasons:

(a) the administrative cost to the Government would be excessive in relation to the estimated amount of possible disallowances thereunder;

(b) the Monthly Reports were supported by documentary proof of the costs claimed ($106,014.98) under contract provisions for contribution by the Government on the basis of actual costs incurred; and

(c) a major portion ($148,500.00) of the cost incurred were under a contract provision for payment by the Government on the basis of agreed unit costs of work actually performed.

The review disclosed the following facts in regard to the amount paid or to be paid the contractor:

Total cost as billed by contractor	$254,514.98
Exceptions	None
Total Accepted Costs	$254,514.98

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of One Hundred Twenty Seven Thousand Two Hundred Fifty Seven and 49/100 Dollars:

** $127,257.49 **

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

George Mayer
George Mayer
Auditor

vember 20, 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

NOV 26 1956

Mr. George Mavor
DMEA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Report of Review
The Glidden Company
Docket No. DMA-1219X
Contract No. Idm-E187

Dear Mr. Mavor:

Receipt is acknowledged of your Report of Review covering the above-cited project.

The Report is acceptable and normal distribution is authorized after changing the date of the Report from February 20, 1956, to November 20, 1956. This change has been made on the Washington copies.

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Chief
Contract Administration
and Audit Division

WBorovies/wb
November 26, 1956

Copy to: Docket
Admr. Reading File
Mr. Chambers

Governm[illegible]'s copy

WAIVER OF GOVERNMENT'S INTEREST IN PROPERTY

To: The Glidden Company
1396 Union Commerce Building
Cleveland 14, Ohio

Operator under Amended Exploration
Project Contract Idm-E187, Docket
No. DMEA-1219, dated April 30, 1953.

The United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, under the terms of the above-described contract, hereby waives its interest in all property acquired under that contract.

Dated NOV 14 1956.

THE UNITED STATES OF AMERICA

By [illegible]
Administrator, Defense Minerals
Exploration Administration

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. George Mavor
DMEA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA-1219X
The Glidden Company
Bully Hill Mine
Shasta County, California
Contract No. Ida-E187

Dear Mr. Mavor:

Receipt is acknowledged of your letter of September 20, 1956, in regard to the letter dated September 14, 1956, addressed to the Executive Officer, DMEA Field Team, Region II, by the Operating Committee, in connection with the salvage of pipe and track under the referenced contract.

You question the Operating Committee's statement that the waiver of the Government's interest must be signed by the Administrator, inasmuch as Question and Answer 13 in Operating Committee Memorandum No. 8, dated June 25, 1952, indicates that the Executive Officer is authorized to dispose of equipment costing less than $10,000. This Question and Answer was based on the authority delegated to DMEA Field Teams by the Secretary's Order No. 2684, dated April 25, 1952, to approve the sale of (1) any facility, building, fixture, or piece of equipment, the original cost of which did not exceed $10,000, and (2) any group (such as pipe, track, drill steel) of remaining materials or supplies, the original cost of which did not exceed $5,000. This same order, however, restricted the delegated authority of waiving the Government's interest to any facility, building, fixture, piece of equipment, or group of materials or supplies, the original cost of which did not exceed $1,000.

A subsequent Secretary's Order No. 2808, dated January 4, 1956, revoked Order No. 2684 and delegated to the Executive Officers the same authorities regarding property disposition with the exception that the limitations were reduced (1) on a facility, building, fixture, or piece of equipment to $5,000, and (2) on a group of materials or supplies to $2,500. No change was made in the $1,000 limitation on waivers of interest.

It is hoped the foregoing will serve to clarify the questioned matter.

Inasmuch as your letter indicates a copy was sent to Mr. Ricker, a copy of this letter also is being forwarded to him.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
September 25, 1956

Copy to: Docket
Admr. Reading File
Mr. Ricker, Reg. II
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

420 Custom House
555 Battery Street
San Francisco 11, California

September 20, 1956

Air Mail

Mr. Jay L. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-E187, DMA-1219X
The Glidden Company
Bully Hill Mine
Shasta County, California

Dear Mr. Chambers:

Reference is made to letter dated September 14, 1956, from George C. Selfridge, Chairman Operating Committee to Mr. S. Ricker, Executive Officer, Region II, in connection with salvage value of pipe and track applicable to subject contract.

I will not attempt to discuss any of the suggested methods for settling the salvage values as set forth in the above mentioned letter, as I believe my letter dated September 14, 1956, to Mr. E. D. Talbert, clearly presents the salvage values of pipe and track in which the Government may have some equity, therefore I will await your instructions and reply to my letter dated September 14, 1956. However there is a question in the last paragraph of Mr. Selfridge's letter which states "Waiver of Government's Interest in Property" should be prepared for Administrator's signature. Memorandum No. 8, Question 13 states that the Executive Officer is authorized to dispose of equipment costing lessthan $10,000.00. As the pipe and track costs amounted to $7,689.03, which is less than $10,000.00, please let me know who should sign the waiver.

Sincerely yours,

George Mavor

George Mavor
Auditor

Copy to: S. Ricker

RECEIVED
SEP 25 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. George Mayer
DMEA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

SEP 26 1956

Re: The Glidden Company
IAm-E187, DMEA-1219

Dear Mr. Mayer:

Receipt is acknowledged of your letter of September 14, 1956, in reply to this Division's inquiry of September 10, 1956, relative to the status of your Report of Review covering the referenced project. Your letter outlines your findings in regard to the salvage of project property and requests my opinion as to your conclusions.

I concur with your conclusions that the Government has an equity in neither the pipe and track acquired under the "agreed unit costs" provisions of the contract nor any of the project equipment. It appears that the only items in which the Government has an equity (under the contract, as amended by the footnote on page 2 of the Exhibit "A") are the pipe and track purchased under the "actual costs" provisions of the contract.

It is to be noted, however, that no purpose would be served by the Government claiming an equity in this relatively small amount of salvage, inasmuch as such amount is more than offset by costs in excess of the contract maximum. If deduction is made for the salvage value, the Operator properly may request reimbursement for additional costs equivalent to such salvage value. This point is brought out in the antepenultimate paragraph of the Operating Committee's letter of September 14, 1956, to the Executive Officer, DMEA Field Team, Region II (a copy of which was sent to you but, as seems habitual in this project, crossed in the mail with your letter.)

Under the circumstances there is no alternative but to withhold preparation of a Report of Review on this contract pending the release of a waiver of Government interest in the project property or other appropriate disposition of the matter as may result from the Operating Committee's letter to the Executive Officer.

Sincerely yours,

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
September 18, 1956

Copy to: Docket
Admr. Reading File
Mr. Chambers

SEP 14 1956

Mr. Spangler Rieker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-1219 (Lead-Zinc)
The Glidden Company
Bally Hill Mine
Shasta County, California
Amended Contract No. Idm-2187

Dear Mr. Rieker:

This is with reference to your memorandum of September 6 and to the Operator's final report concerning the Government's equity in jointly-owned property under the cited amended contract.

Under the terms of the contract "Agreed Unit Costs", the Government does not have any equity in equipment or supplies which were purchased by the Operator for the use of conducting this work.

Under "Estimated Actual Costs", it is stated in Exhibit "A" of the contract that the Operator shall furnish the operating equipment without cost.

Therefore, the only items that the Government would have an equity in are the pipe and rails which were purchased to rehabilitate the 300 level, the vertical shaft, and the 870 level. The pipe and rail according to the Operator's final report cost $7,689.03. If we arbitrarily assign a salvage value of 50 per cent to this material, we have a value of $3,844.52. Assuming that such salvage valuation is reasonable, the Government could properly demand that it be reimbursed half of such sum, or $1,922.26.

According to the MF-104 reports the Operator's costs for the work completed under items 1, 2 and 3 of Stage II of the contract far exceeded the maximum allowed for this work.

However, if the Operator did reimburse the Government for its equity of the pipe and rail, in view of its actual cost overrun beyond the allowable maximum, it could then properly demand that the Government bring its contribution up to its share of the allowable maximum figure.

Under this condition, the Operator and the Government would merely be exchanging identical checks to no purpose. Therefore, in this particular case, the property settlement can be waived.

As a "Waiver of Government's Interest In Property" should be prepared for the Administrator's signature, we will await your recommendation before preparing this instrument.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

JWAlt/er 9/12/56

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Mr. George Mavor, San Francisco, Calif, DMEA Auditor
Chron.
Mr. Jay Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
SEP 17 1956

420 Custom House
555 Battery Street
San Francisco 11, California

September 14, 1956

Mr. E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-E187, DMA-1219X
The Glidden Company
Bully Hill Mines
Shasta County, California

Dear Mr. Talbert:

Reference is made to your letter dated September 10, 1956, and my letter to Mr. Jay L. Chambers dated February 23, 1956 and his reply dated February 28, 1956, in connection with issuing a Report of Review for subject contract.

Before submitting the Report of Review to your office for approval, there is a question of salvage in amount of $2,431.75 which the Operator shows in his final report, as being due the DMEA, and in this connection I am attaching hereto, two copies of letter dated September 6, 1956 from S. Ricker, Executive Officer, Region II, to the Operating Committee, together with two copies of operator's final report, wherein you will note that the operator has allocated a credit of $2,431.75, representing salvage from disposition of track, pipe and operating equipment, which is accounted for as follows:

Summary

	Cost	Salvage Value	Salvage for DMEA %	Salvage for DMEA Amount
Track	$3,469.03	$1,387.61	19.90	$276.13
Pipe	7,876.70	1,969.18	19.90	391.87
Operating Equipment	20,951.06	8,863.03	19.90	1,763.75
Totals	$32,296.79	$12,219.82	19.90	$2,431.75

Method of Arriving at % for DMEA Salvage

Agreed Unit Costs	Costs chgd. To Glidden Co.	Costs chgd. to DMEA	Total Costs
Drifting and Crosscutting	$180,158.09	$56,250.00	$236,408.09

Estimated Actual Costs

Rehabilitation 300 Level	$ 27,741.64	$ 7,157.50	$ 34,899.14
Unwater & Rehab. Shaft	74,167.47	15,675.00	89,842.47
Rehabilitate 870 Level	61,807.35	6,328.00	68,135.35
Totals	$343,874.55	$85,410.50	$429,285.05
%	80.10%	19.90%	100.00%

By reference to the attached Operator's final report, under Schedules "A" and "B" you will be able to identify the above summary of salvage value $12,219.82 and total costs of $429,285.05. The documentation requirements of the total costs, based on the above summary of costs, can be accounted for as follows:

	Operator's Costs
Agreed Unit Costs No Documents Required	$236,408.09
Estimated Actual Costs Supported by Documents	192,876.96
Total Costs	$429,285.05

By further reference to Schedules "A" and "B", the track pipe and operating equipment, subject to salvage, can be identified for documentation requirements as follows:

	Track	Pipe	Equipment	Other Costs	Total Costs
Agreed Unit Costs No Documents Required	$3,205.80	$2,136.64	$5,262.31	$225,803.34	$236,408.09
Estimated Actual Costs Supported by Documents	1,948.97	5,740.06	15,688.75	169,499.18	192,876.96
Total Costs	$5,154.77	$7,876.70	$20,951.06	$395,302.52	$429,285.05

All of the above costs are attributable to work performed under the Amended Contract dated April 30, 1953, and it would appear from Exhibit "A" Amended affixed thereto, that no salvage is recoverable on costs reimbursed by the Government on an Agreed Unit Cost basis. There is also the question of salvage to be recovered on an actual cost basis, which no doubt has to conform with footnote 1/ at bottom of page two of Exhibit "A" Amended, which reads in part as follows:

> "Of the eight categories of costs set forth in Article 6 of the contract form, all are allowable costs except (4) Operating Equipment (which the Operator shall furnish without cost) and (6) New Buildings, improvements, installations....."

From the above, it would appear that the operator erred by including the cost of operating equipment in the total costs, therefore

the Government would not be entitled to any recoverable salvage from the disposition of equipment, and the only salvage in which the Government would participate would be track and pipe included with the costs shown above under the caption of "Estimated Actual Costs", and the salvage due the Government, as shown in Exhibit "A" and Exhibit "B" of the Operator's final report could be adjusted and computed as follows:

Track and Pipe Costs
Schedule "A"

	Track	Pipe
Reopening 300 Adit	$457.82	$768.39
Unwatering Shaft	---	2,808.50
Rehabilitation 870 Level	1,491.15	2,163.17
Totals	$1,948.97	$5,740.06

The percentages to be used in allocation of costs between operator and DMEA is based on the following total costs per Schedule "A".

	Amount For Glidden As Billed	Amount For DMEA As Billed	Total Costs
Reopening 300 Adit	$27,741.64	$ 7,157.50	$ 34,899.14
Unwatering Shaft	74,167.47	15,675.00	89,842.47
Rehabilitation 870 Level	61,807.35	6,328.00	68,135.35
Totals	$163,716.46	$29,160.50	$192,876.96
% of costs	84.88%	15.12%	100.00%

The percentages used by the Operator to determine the salvage value of track was 40 percent of cost, and the salvage value for pipe was 25 percent of cost, therefore the same percentages are used in recomputing the amount of salvage due the Government, and accounted for as follows:

Salvage Due DMEA

		Salvage Value		Salvage for DMEA	
	Cost	%	Amount	%	Amount
Track	$1,948.97	40	$ 779.59	15.12	$117.87
Pipe	5,740.06	25	1,435.02	15.12	216.98
Totals	$7,689.05		$2,214.61	15.12	$334.85

Based on my interpretation of the contract, it would appear that the amount of salvage due the Government is $334.85 as set forth

above, and not $2,431.75 as offered by the Operator. It should be noted that the method of allocating salvage is based on actual cash contributions by the Operator and DMEA, therefore the amount of $334.85 is 100 percent salvage due Government.

In my letter to Mr. Chambers dated February 23, 1956, I attached a summary which showed the actual cost of the contract to the Operator as $716,534.05. This amount can be reconciled to the total costs of $471,021.71 shown by Operator on Schedule "A" attached to final report, as follows:

Total Actual Costs	
My letter 2-23-56	$716,534.05
Less:	
Diamond Drilling	
Prior Contract	245,512.34
Total Schedule "A"	$471,021.71

There is also a change in the distribution of costs as shown in my statement, and involving $7,049.01, please change Drifting and Crosscutting from $243,457.10 to $236,408.10 and Rehabilitate from $61,086.34 to $68,135.35. Also change the last column Drifting and Crosscutting from $7,049.01 to -0- (zero) and Rehabilitate from $61,086.34 to $68,135.35.

The last MF-104 voucher received from the Operator was for the month of December 1956, and the costs shown therein, amounts to $2,907.00 and the Government's 50 percent contribution is $1,453.00, which has not been paid and will be held in obeyance until the question of salvage has been settled.

Mr. S. Ricker was in the office yesterday, and I discussed all of the contents of this letter with him and he concurs in my findings, pertaining to salvage recoverable by the Government. After this salvage question is settled, Mr. Ricker will issue a waiver covering disposal of Government's interest in property.

After you have reviewed the contents of this letter, I would appreciate receiving your opinion, regarding the proper amount of salvage due the Government.

Sincerely yours,

George Mavor

George Mavor
Auditor

Copy to: S. Ricker

RECEIVED
SEP 17 1956

1605 Evans Avenue
Reno, Nevada

September 6, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-1219 (Copper - zinc)
The Glidden Company
Bully Hill Mine
Shasta County, California
Contract No. Idm-E187

Enclosed are three copies of the Operator's final report on subject contract. The extra copy has been sent to our DMEA auditor, Mr. George Mavor, as you will note there is some question relative to the Government's equity in certain equipment before our account can be closed.

S. Ricker

Encl.

SRicker:gh
cc: Finance Off., Reg. II
Geo. Mavor
R. M. Smith
File

RECEIVED
SEP 17 1956

P. O. Box 4
Redding, California
August 31, 1956

Mr. S. Ricker, Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: FINAL REPORT
DMEA Docket 1219X Amended
Commodity: Zinc-Copper
Idaho-E-187

Dear Mr. Ricker:

Under the terms of the Amended Contract, April 30, 1953, it is necessary for The Glidden Company to file a final report covering all expenditures made under the contract. This report must also include an adequate geological and engineering report covering the estimated ore reserves resulting from the exploration work.

Since the original contract covered the diamond drilling by the E. J. Longyear Company of Minneapolis, a time and materials job, there was no recovery from this job for any equipment purchased or used in the diamond drilling due to the fact that E. J. Longyear Company supplied all of the equipment and material and removed it from the premises on termination of their contract. Likewise, the diamond drilling under the amended contract, which was performed by Boyles Bros. Drilling Co. of Salt Lake City was also a contract job. The contractor furnished all drilling equipment and supplies in connection with this work, and on completion of their contract, also removed from the premises all of the equipment and supplies used under the contract. This was caption No. 5 under the amended contract.

The exploration work carried on by The Glidden Company, in which the DMEA participated, was set forth under the following captions:

1. Rehabilitate 975 feet of drift on the 300 level from the portal of the adit to the vertical shaft as shown.

2. Unwater and rehabilitate the vertical shaft, a distance of 650 feet from the 300 level to the 870 level.

3. Rehabilitate a total of 1000 feet of drift on the 870 level from the aforesaid vertical shaft to the north end of the old workings.

4. Drift and crosscut a distance of 1500 feet from the north end and 1000 feet from the south end of the old workings on the 870 level.

During the time in which this work was under way, monthly reports were supplied to the DMEA Field Team, Region II, Reno, Nevada, on which was shown the total cost monthly of the work performed and the amount expended by The Glidden Company and also the DMEA. These are permanent records which you have in your files.

In order to arrive at some equitable distribution of the expenses, or rather the amount which could be recaptured by the government on supplies and equipment purchased under these various captions, we have taken our monthly costs and

and compiled them as follows:

Labor, including payroll taxes; rentals, timber, explosives, pipe and equipment purchased, and miscellaneous supplies; amount for The Glidden Company as billed, amount for DMEA, as billed, and the total cost. Hence, if you will please check your monthly forms MP 104-104A, you will find that they will check with the total amounts set forth on the schedules which we are submitting.

Rentals include equipment rentals, such as a Kohler electric light plant and portable compressors. Timber covers all mine timber used in reopening and drifting and crosscutting. Explosives cover all blasting supplies used in rehabilitation and the new work on the 870 level. Miscellaneous supplies include miscellaneous repair parts, gasoline, diesel fuel, grease, waste, power, etc. Hence, there is no recapture on any of these captions. However, on rails, pipe and equipment purchased, which were charged directly to the job and which were salvaged on completion of the job, it has been necessary for us to estimate the present value of this equipment, which has been set forth on Schedule B, where the original cost and the present value are shown. We have attempted to be absolutely fair in this matter and have set forth the value which we thought the equipment would bring in the used market providing we were successful in selling it.

Under the four captions as set forth, you will please note that Glidden's total expenditures amount to $367,611.21, DMEA's expenditures $103,410.50, or a total of $471,021.71. This agrees with the last report filed January 12, 1956. Percentagewise, this amounts to 80.10% for The Glidden Company and 19.90% for DMEA, and this percentage has been used in arriving at the amount due DMEA for the equipment now on hand and which probably can be sold in the local market. Consequently, the total cost of rails, pipe and equipment charged under the four captions is presently valued at $12,219.02. Of this amount DMEA's share is $2,431.75 and The Glidden Company's $9,788.07.

Our records here at Bully Hill are quite complete and should there be any question at all regarding our charges, we will be happy to have the government auditors audit those accounts.

GEOLOGICAL REPORT

During the life of this contract, the United States Geological Survey spent considerable time on underground mapping, and have a complete report out on our exploration work. Furthermore, they have the results of the analyses of all our underground samples and our diamond drill cores, and have logged the diamond drill cores. We feel that geological report is adequate and that additional geological reports are unnecessary. On the work which we were doing on the 770 level, which was not part of the DMEA contract, we have also furnished analyses of underground samples and also diamond drill cores, up to the date of our last report, and we are now enclosing analyses of diamond drill holes:

672-810-J-1
672-809-K-1
771-L-1
772-K-1

We are also enclosing 40 scale map of the 770 level covering the work completed after the filing of our last report with you, January 12, 1956. While this work was not part of the DMEA contract, we feel you are entitled to this information.

(DMEA Docket No. 1219X
Amended)

ESTIMATED ORE RESERVES

It is indeed a difficult matter to accurately estimate ore reserves where the exploration work is inadequate to make accurate measurements. On the 870 Level we only have one diamond drill hole, 272-817-874-C-1, on the downward extension of this ore shoot, and this hole has proven ore to a depth of 130 ft. However, above the 870 Level, we are only allowing 50 ft., notwithstanding the fact that a very fine ore shoot was uncovered on the 770 level above. On this basis we have the following positive ore:

	Length	Width	Tonnage	Oz.Au	Oz.Ag	% Cu	% Zn	% Fe
870 Ore Shoot	304'	8.45'	46,154	.11	4.16	1.57	8.18	-

The tonnage of probable ore here is very much larger. This was the only ore developed under the DMEA contract.

770 Ore Shoot	349'	5.92'	20,660	-	-	2.10	6.25	14.77

Here the probable ore is very great since there is strong evidence at hand that this ore shoot extends to the 570 level above, and probably to the surface. In addition to this, the reopening of 710 crosscut West exposed a very wide occurrence of zinc and copper ore in a territory which has not been mined. This, combined with the fact that there has been some very fine zinc ore left by the old operating companies, really makes the Bully Hill Mine a most attractive mining venture.

Respectfully submitted,

Edward L. Ralston
Manager of Mines

ELR:HM
Attach.

Schedule "A"

THE GLIDDEN COMPANY

DMEA CONTRACT 1241X (Amended). RECAPITULATION FROM MONTHLY REPORTS, FORMS DF 104-104A

MAILED TO EXECUTIVE OFFICER, DMEA FIELD TEAM, REGION II, RENO, NEVADA

	Labor, Inc. Ft Yards	Rentals	Timber	Explosives	Rails	Pipe	Equipment Purchased	Misc.Mine Supplies	AMOUNT FOR GLIDDEN AS BILLED	AMOUNT FOR DMEA AS BILLED	TOTAL COST
Propping 670 Adit	22,646.19	177.75	9,149.45	44.55	457.82	768.39	—	1,654.99	27,741.64	7,157.50	34,899.14
Unwatering Shaft	55,700.96	3,959.47	2,993.69	-	-	2208.50	7,262.26	17,117.59	74,167.47	15,675.00	89,842.47
Rehabilitation 670 Level	42,300.65	250.00	4,329.06	112.49	1491.15	2163.17	8,426.49	9,062.34	61,807.35	6,328.00	68,135.35
Exploration 670 Level	173,836.26	75.00	8,923.57	11,938.23	3295.80	2136.64	5,262.31	31,025.23	180,153.09	56,250.00	236,408.09
	$294,484.06	4,462.22	25,400.77	12,095.27	5154.77	7876.70	20,951.06	58,860.20	$343,874.55	85,410.50	429,285.05
									80.10%	19.90%	
Diamond Drilling									23,736.66	18,000.00	41,736.66
GRAND TOTAL									$367,611.21	$103,410.50	$471,021.71

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SEP 17 1956

Schedule "B"

OPERATOR:
The Glidden Co.
Cleveland, Ohio

ESTIMATED VALUE OF MINING EQUIPMENT AND SUNDRY SUPPLIES PURCHASED UNDER DMEA CONTRACT 1219X (A[illegible]d)
As of January 1, 1956

		RAILS Cost	RAILS Present Value	PIPE Cost	PIPE Present Value	EQUIPMENT Cost	EQUIPMENT Present Value	TOTAL ESTIMATED VALUE
		$5,154.77		$7,876.70				
Aug.1953	1 -14-7-13 Cameron Sinking Pump)							
	1 - 48" Sheave wheel)					$2,202.14	$1,101.07	
Oct[illegible]53	1 - 10x14 Vulcan Geared Hoist					3,412.12	1,364.85	
	1 Mine Cage					412.00	164.80	
Feb.1954	1 -14-5-13 Cameron Sinking Pump					669.50	334.75	
	1 -12-7-13 Cameron Sinking Pump					556.50	222.60	
Mar.1954	20 Mine Cars - 18" gauge					2,869.29	717.32	
Apr.1954	50 Edison Battery Cap Lamps with charging rack & motor generator set for charging					731.89	365.94	
June 1954	1 - Gardner Denver Driftor					1,417.28	708.64	
	1 - 7½ H.P. Direct Con.Sturtevant Fan					476.38	285.83	
	2000 ft. DuPont Ventube					2,171.24	868.50	
Sept.1954	1 - 48" Eimco Air Locomotive					2,468.66	995.00	
Oct. 1954	1 - Thor #92 Driftor					618.00	309.00	
	1 - 36" Eimco Air Locomotive					2,210.52	1,105.26	
Dec. 1954	600 ft. DuPont Ventube					651.37	260.55	
Jan. 1955	1 Cap Crimper					84.17	58.92	
	Rails Left Underground - 872 Drift North and 871 Drift South	(1,685.74)						
	TOTALS	$3,469.03	$1,387.61	$7,876.70	$1,969.18	$20,951.06	$8,863.03	$12,219.82
GLIDDEN CONSOLIDATED ZINC Mines	80.10%		$1,111.48		$1,577.31		$7,099.28	$ 9,788.07
D. M. E. A.	19.90%		276.13		391.87		1,763.75	2,431.75

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SEP 17 1956

MEMORANDUM

San Francisco, California
September 15, 1956

RECEIVED
SEP 17 1956

Mr. E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-E187, DMA-1219X
The Glidden Company
Bully Hill Mines
Shasta County, California

Dear Mr. Talbert:

After mailing letter to you, dated September 14, 1956, in connection with salvage for subject contract, I discovered that I neglected to change a date on page 4, in paragraph 3, wherein I show the last MF-104 voucher received for the month of December 1956. The year should have been 1955, and I would appreciate you changing your copies of the letter.

Sincerely yours

George Mavor

George Mavor
Auditor

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
SEP 17 1956

420 Custom House
555 Battery Street
San Francisco 11, California

September 14, 1956

Air Mail

Mr. E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-E187, DMEA-1219
The Glidden Company

Dear Mr. Talbert:

Reference is made to your letter dated September 10, 1956, in connection with subject contract, however in the last paragraph you state that you had not received my workload report for August 1956.

I did not mail the workload report for August 1956, until September 10, 1956 and as your letter was dated September 10, 1956, I assume our letters crossed in the mail and that you received the report after mailing your letter.

Sincerely yours,

George Mavor

George Mavor
Auditor

SEP 1 0 1956

Mr. George Meyer
DMEA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

AIR MAIL

Re: Idn-E187, DMEA-1219
The Glidden Company

Dear Mr. Meyer:

On your monthly workload reports for March to July, 1956, inclusive, your Report of Review covering the referenced project is indicated as being held "pending operator's final report".

It has been presumed that this quoted comment referred to the Operator's final MF-104, but a review of the files discloses a memorandum dated March 14, 1956, from the Executive Officer transmitting the Field Team's Final Report and indicating that the final MF-104 has been received. Apparently, therefore, you have been withholding your Report of Review pending receipt of the Operator's final engineering and geological report.

The preparation and release of a Report of Review or a final Audit Report and Certificate ordinarily should not be withheld for such reason. It is not the auditor's responsibility to enforce the submission by the Operator of a final engineering or geological report. Such responsibility rests with the Executive Officer. The closing provision of the Report of Review and Audit Certificate formats specifically relieves the auditor in this regard. (In this connection please refer to this Division's letter of December 8, 1953, regarding Idn-E455, DMEA-1953, Frank Bullock.)

Unless you have other justification for withholding the Report of Review for the referenced project, it is requested that the preparation and submission thereof be expedited.

Incidentally, your workload report for August has not been received. Possibly it has gone astray in the mail. Please forward another copy.

EDTalbert/ama
September 10, 1956

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Chief
Contract Administration
and Audit Division

Copy to: Docket
Admr. Reading File
Mr. Griswold
Mr. Chambers

FEB 2 8 1956

Mr. George Mayer
DMMA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Idm-X187, DMA-1219X
The Gilliken Company
Bully Hill Mine
Shasta County, California

Dear Mr. Mayer:

Receipt is acknowledged of your letter of February 23, 1956, relative to the issuance of a Report of Review, in lieu of a final audit, covering the referenced project.

If the "actual cost" portion of the Operator's claims on the Forms MF-104 are sufficiently documented to enable you to certify to the validity, propriety, and acceptableness of such costs, the issuance of a Report of Review would appear to be in order. The justifying reasons (a) and (c), as suggested in your letter, are appropriate; however, it is suggested that reason (b) be restated as follows:

> "The Monthly Reports were supported by documentary proof of the costs claimed ($106,014.98) under contract provisions for contribution by the Government on the basis of actual costs incurred."

Sincerely yours,

(Signed) J. L. Chambers
Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
February 28, 1956

Copy to: Docket
Admr. Reading File
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
420 Custom House
555 Battery Street
San Francisco, California

RECEIVED
FEB 27 1956

February 23, 1956

Mr. Jay L. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-E187, DMA-1219X
The Glidden Company
Bully Hill Mine
Shasta County, Calif.

Dear Mr. Chambers:

Thanks for your letter dated February 16, 1956 explaining certain provisions of subject contract, however before submitting my Report of Review to your office, I am attaching hereto a statement, which shows a comparison of actual costs as compared to costs claimed on a footage basis and for discussion purposes can be summarized as follows:

	Allowed by Contract	Claimed	Actual Costs	Costs Supported by Documents
Diamond Drilling				
Prior Contract	$47,693.98	$47,693.98	$245,512.34	$245,512.34
Estimated Actual Costs	60,150.00	58,321.00	185,827.95	185,827.95
Agreed Unit Costs	148,500.00	148,500.00	285,193.76	* 7,049.01
Totals	$256,343.98	$254,514.98	$716,534.05	$438,389.30

* Documentation not required discontinued June 1954.

From the above it will be noted that the actual costs $716,534.05 far exceeded the costs claimed $254,514.98, and that all actual costs requiring documentation were fully supported, and these fully supported costs were far in excess of the amounts claimed.

The documents attached to the MF-104's, are exceptionally well prepared and each payroll, invoice and material inventory are all certified as true copies and signed by Edward L. Ralston, Manager of Mines.

The reasons for issuing a Report of Review would be indicated as follows:

(a) The administrative cost to the Government would be excessive in relation to the estimated amount of possible disallowances thereunder;

(b) The Monthly Reports were supported by documentary proof of actual costs incurred however the costs claimed ($106,014.98) were based under a contract provision whereby the Government would only contribute to actual costs not exceeding maximum footage rates specified in contract; and

(c) a major portion ($148,500.00) of the cost incurred were under a contract provision for payment by the Government on the basis of agreed units costs of work actually performed.

In view of the complete documentation of actual costs, which were far in excess of the costs claimed, and also the fact that all costs claimed were charged at footage rates, it appears to me that a Report of Review would be appropriate to cover the costs reimbursed under the terms of the contract.

Please let me know if you concur in the procedures I intend to follow as set forth above.

Sincerely yours,

George Mavor

George Mavor
Auditor

Copy to: S. Ricker

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FEB 27 1956

The Glidden Company
Bully Hill Mine
Shasta County, California

Amended Contract No. Idm-E-187, Docket No. DMA-1219X

	Allowed by Contract			Claimed by Operator				
	Rate	Feet	Amount	Rate	Feet	Amount	Actual Costs	MF-104's Supported by Certified Doc'mts
Stage I								
Diamond Drilling Prior Contract 5,299'4"	$9.00		$47,693.98	9.00		$47,693.98	$245,512.34	$245,512.34
Stage II								
Agreed Unit Costs								
Drifting & Crosscutting	45.00	2,500	112,500.00	45.00	2,500	112,500.00	243,457.10	7,049.01
Diamond Drilling	9.00	4,000	36,000.00	9.00	4,000	36,000.00	41,736.66	-0-
Estimated Actual Costs								
Rehabilitate 300 Level	14.00	975	13,650.00	14.00	*1,022½	14,315.00	34,899.14	34,899.14
Unwater & Rehab. Shaft	50.00	650	32,500.00	50.00	627	31,350.00	89,842.47	89,842.47
Rehabilitate	14.00	1,000	14,000.00	14.00	904	12,656.00	61,086.34	61,086.34
Totals			$256,343.98			$254,514.98	$716,534.05	$438,389.30

* 47 1/2 feet in excess of contract is allowable, as the cost did not exceed the maximum Estimated Actual Costs of all three categories shown as a maximum of $60,150.00 in contract.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. George Mayer
DMEA Auditor
420 Custom House
555 Battery Street
San Francisco 11, California

FEB 16 1956

Re: DMA-E187, DMA-1279X
The Gladden Company
Bally Hill Mine
Shasta County, Calif.

Dear Mr. Mayer:

By letter dated February 10, 1956, you have requested advice relative to the disallowance of $332.50 for excess footage in the rehabilitation work performed on the 300 level under the referenced contract.

You state that it is your understanding that under contract provisions for contribution by the Government on the basis of agreed or fixed unit costs the number of units, the unit costs, and the total costs of each item are maximums and, therefore, the excess in this case appears to be an unacceptable cost. You are correct in your understanding of the unit cost provisions of our contracts; however, it appears that you have misinterpreted this contract.

The Exhibit "A" of the Amended Contract dated April 30, 1953, provides for various items of work to be performed under three different cost bases for contribution by the Government, i. e.:

(1) 5,299' 4" of diamond drilling on an actual cost basis, but not in excess of $9.00 per foot (including not to exceed $1.00 per foot for geological work), under the terms of the prior contract dated October 18, 1951;

(2) 2,500' of drifting and crosscutting at $45.00 per foot and 4,000' of diamond drilling at $9.00 per foot" on the basis of these agreed unit costs per foot as they accrue for units of work actually performed in lieu of actual costs"; and

(3) Under the title of "Estimated Actual Costs", 975' of rehabilitation on the 300 level at $14.00 (maximum) per foot, 650' of shaft unwatering and rehabilitation at $50.00 (maximum) per foot, and 1,000' of rehabilitation on the 870 level at $14.00 (maximum) per foot, with

a footnoted provision that "Of the eight categories of costs set forth in Article 6 of the contract form, all are allowable costs except (4) Operating Equipment (which the Operator shall furnish without cost) and (6) New buildings, improvements, installations. All other schedules are waived. However, the cost of a supervisor (for all rehabilitation work under this project) shall not exceed $750 per month."

It should be noted that the excess footage, referred to in your letter, occurred in one of the work items which is on an "actual cost" rather than a "unit cost" basis and for which footage figures are merely estimates. It, therefore, appears that the actual cost (up to a maximum of $14.00 per foot) of the footage in excess of the estimate is allowable provided that (1) the Field Team approves such excess (which they apparently have done) and (2) the contractual allowable maximums of $60,150.00 for all of the rehabilitation and unwatering work and $208,650.00 for all of the Stage II work are not exceeded thereby.

It is noted that your January 1956, Monthly Work Load Report indicates the scheduling of a Report of Review, in lieu of a final audit for this project. Presumably this decision was made as a result of your misinterpretation of the contract. However, as the Operator's claim includes a substantial amount ($106,014.98) under the actual costs provisions of the contract, it is suggested that you give the matter further consideration and, in the event that you determine only a review is required, be sure that you state justifiable reasons on your Report of Review for the review in lieu of an audit.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
February 16, 1956

Copy to: Docket
Admr. Reading File
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
FEB 13 1956

420 Custom House
555 Battery Street
San Francisco, California

February 10, 1956

Mr. E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Idm-187, DMA-1219X
The Glidden Company
Bully Hill Mine
Shasta County, Calif.

Dear Mr. Talbert:

Reference is made to final MF-104 Voucher for the month of December 1955, recently submitted by subject operator. When comparing the costs claimed by the operator to the costs allowed under the terms of the contract, the following footage difference was disclosed:

Rehabilitate 300 Level	Footage	Rate	Amount
Claimed by Operator	1022.5	$14.00	$14,315.00
Contract allowable Maximum	975.0	14.00	13,650.00
Excess Claimed	47.5	14.00	$ 665.00
Overpaid by Gov't 50%			$ 332.50

The above rehabilitation was completed by the operator during July 1953, and an Interim Inspection Report dated September 3, 1953 prepared by Mr. John D. Warne, a recommendation was made to allow this excess footage, and it appears no action was taken to allow this additional footage.

As the Amended Contract dated April 30, 1953 was prepared on Form MF-200 (June 1951) (Revised Feb. 1952) it is my understanding that the number of units, unit costs, and total costs of each item and the category are maximums, therefore the total cost of "Rehabilitate 300 Level" $13,650.00 is a mximum item, and if an amendment to the contract for the excess 47.5 feet cannot be processed, then it will be necessary to disallow the amount of $332.50 before paying the Final December 1955 MF-104 Voucher.

Please let me know if this disallowance of $332.50 should be made.

Sincerely yours,

George Mavor

George Mavor
Auditor

Copy to: S. Ricker

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JAN 18 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1955 Docket No. DMEA 1219X Amended Contract No. E-187
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: 50 % Amount, $ 1,453.50
323 ft. at 50% of $9.00 per foot (323 ft. @ $4.50 ft.)

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Diamond	2,907.00	33,093.00	36,000.00			
Bulldozing Repponing 300 Adit	-	14,315.00	14,315.00			
Crosscutting Explor. 870 Level	-	112,500.00	112,500.00			
Drifting Rehab. 870 Level	-	12,656.00	12,656.00			
Unwatering Shaft	-	31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$2,907.00	$203,914.00	$206,821.00			

RECEIVED DEC 10 1956 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 12, 1956 *Payee THE GLIDDEN COMPANY

Per Edward K. Roloson Title MANAGER OF MINES

*When a voucher is signed for receipt of the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary;" or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1453.50

Signature Lloyd H. Sjolander
Authorized Certifying Officer
(Authorized Certifying Officer)

Date DEC 6 1956 Vou. No. SF-DMEA-18

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 16m-E187 in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date 1/16/56

John D. Warne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker Title Executive Officer Date 1/16/56

S. Ricker

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1955 Docket No. DMEA 1219X Amended Contract No. E-187

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft			89,842.47	627.0			
Winzes Rehab. 870 Level	Ft			61,086.34	904.0			
Drilling: Core	Ft	6837.28	847	41,736.66	4524.0		4000'	
Churn								
Auger								
Stripping Explor. 870 Level	Ft			243,457.10	2776.8			
Trenching								
Test Pits								
Roads and Trails Reopening 300 Adit				34,899.14	1022.5			
Total Distributed Costs		6837.28	847	471,021.71				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		6837.28		471,021.71				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Jan. 12, 1956 Operator THE GLIDDEN COMPANY

By Edward E. Walton Title Manager of Mines

Edward E. Walton

Remarks: Chargeable under DMEA Contract 323 ft. - Total 4000 ft.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

John A. Haene

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

Month of December 1955

Docket No. DMEA
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 Level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 level to December 31, 1955	18,000.00
Total Government Participation to Date	$127,257.49

GLIDDEN CONSOLIDATED ZINC MINES
Diamond Drill Hole 872-814-H-1
CORE SAMPLES (CONTINUED)

Date	Distance	% Cu	% Fe
12/13/55	410.0 - 419.0	.14	14.05
	419.0 - 426.0	.71	19.20
	826.0 - 431.0	-	15.05
	436.0 - 446.0	-	16.20
	446.0 - 456.0	-	18.80
	456.0 - 463.0	.05	16.20
	463.0 - 466.0	-	8.50
	466.0 - 478.0	-	19.95
	478.0 - 488.0	.10	18.80
	488.0 - 498.0	.05	15.25
	498.0 - 506.0	-	19.50
	506.0 - 512.0	-	15.65
	512.0 - 523.0	Tr	15.90
	523.0 - 533.0	Tr	18.25
	533.0 - 543.0	.08	14.50
	543.0 - 553.0	-	12.90
	553.0 - 555.0	Tr	14.05
	555.0 - 565.0	.10	12.00
	565.0 - 571.0	.10	12.50
	571.0 - 578.0	.02	9.70

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE
Diamond Drill Hole: 872-11-I-1

CORE SAMPLES

Date	Distance	% Cu	% Fe
12/13/55	110.0 - 115.0	1.15	13.10
	115.0 - 121.0	-	7.85
	121.0 - 128.0	.05	14.20
	129.0 - 131.0	8.26	16.70
	131.0 - 137.0	5.18	11.80
	137.0 - 138.0	1.98	15.65
	138.0 - 147.0	.07	6.90
	147.0 - 150.0	.65	7.60
	152.0 - 158.0	.05	6.10
	158.0 - 166.0	.02	8.60
	166.0 - 171.0	.07	3.65
	171.0 - 176.0	.02	4.15
	182.0 - 188.0	.02	2.80
	188.0 - 198.0	.05	4.00
	198.0 - 207.0	.02	4.10
	207.0 - 217.0	.40	3.95
	217.0 - 225.0	.20	8.10
	225.0 - 232.0	.20	3.55
	232.0 - 234.0	.80	6.50
	234.0 - 238.0	.05	7.80
	238.0 - 244.0	1.55	7.85
	244.0 - 251.0	.40	9.90
	251.0 - 259.0	.35	6.90

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE
Diamond Drill Hole 872-11-L-1
Location: Breast 811 Crosscut
Direction: S. 75° W., Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Fe
12/8/55	0.0 - 10.0	Tr	13.35
	10.0 - 20.0	Tr	10.70
	20.0 - 31.0	0	8.30
12/14/55	31.0 - 38.0	-	11.95
	38.0 - 48.0	.50	8.40
	48.0 - 54.0	.37	8.95
	54.0 - 64.0	.50	11.05
	64.0 - 74.0	.89	8.45
	74.0 - 84.0	.94	6.80
	85.0 - 95.0	.94	11.95
12/15/55	95.0 - 105.0	.48	12.80
	105.0 - 110.0	1.05	24.30
	110.0 - 121.0	.75	11.90
	121.0 - 131.0	1.45	11.95
	131.0 - 137.0	2.95	13.50
	137.0 - 147.0	.25	8.55
	147.0 - 158.0	.30	11.75
	168.0 - 171.0	.30	7.05
	176.0 - 182.0	.15	12.30
	182.0 - 188.0	.05	11.95
	188.0 - 198.0	.07	8.75
	198.0 - 207.0	Tr	4.35
	207.0 - 217.0	.15	13.10
	217.0 - 225.0	.25	12.00
	225.0 - 232.0	.20	5.95
	244.0 - 251.0	.50	11.85
	251.0 - 259.0	.25	8.75
	259.0 - 262.0	.30	7.30
	262.0 - 270.0	.30	10.25
	270.0 - 280.0	.10	6.85
	280.0 - 290.0	.40	13.20
	295.0 - 301.0	.25	7.25
	301.0 - 311.0	.30	13.10
	311.0 - 326.0	.60	7.20
	326.0 - 337.0	.60	6.90
	337.0 - 346.0	.55	12.35
	346.0 - 356.0	.75	11.00

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE
Diamond Drill Hole: 872-810-J-1
Location: Breast 810 Crosscut
Direction: N. 80° W., Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Fe
Dec.	0.0 - 28.0	.85	9.10
	28.0 - 34.0	.10	4.90
	34.0 - 44.0	.15	5.90
	44.0 - 53.0	.20	8.70
	53.0 - 63.0	.75	12.65
	63.0 - 70.0	.05	10.60
	77.0 - 88.0	.02	5.85
	88.0 - 95.0	.15	12.70
	95.0 - 106.0	.10	6.60
	106.0 - 116.0	.05	5.60
	116.0 - 135.0	.05	7.85
	135.0 - 146.0	.02	15.10
	159.0 - 169.0	.05	6.70
	169.0 - 177.0	.07	9.60
	177.0 - 180.0	.10	11.95
	180.0 - 188.0	.10	7.85
	188.0 - 203.0	.15	7.85
	203.0 - 209.0	.07	3.75
	209.0 - 222.0	.02	7.20
	222.0 - 228.0	.40	7.05
	228.0 - 236.0	.60	7.65
	246.0 - 258.0	.15	8.35
	259.0 - 270.0	.10	6.30
	270.0 - 280.0	.10	4.90
	280.0 - 291.0	.05	5.50
	291.0 - 301.0	.05	9.60
	301.0 - 312.0	.20	6.45
	312.0 - 319.0	.15	11.55
	319.0 - 329.0	.15	12.20
	329.0 - 341.0	.02	7.25
	341.0 - 352.0	Tr	7.30
	352.0 - 362.0	.02	7.40
	362.0 - 372.0	.07	20.40
	372.0 - 388.0	.07	5.45
	388.0 - 400.0	.10	6.40
	400.0 - 410.0	.10	8.45
	410.0 - 416.0	.10	7.15
	416.0 - 426.0	.05	5.85
	426.0 - 436.0	.15	12.90
	436.0 - 446.0	.10	5.10
	446.0 - 453.0	.02	7.50
	453.0 - 463.0	.10	5.30
	463.0 - 473.0	.10	8.75
	473.0 - 483.0	.15	18.30
	483.0 - 493.0	.10	6.90
	493.0 - 503.0	.15	9.25
	503.0 - 510.0	.17	14.50

Subject: Diamond Drilling [illegible]70 Level

Redding, California
January 12, 1956

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

We have the following progress on diamond drilling to report for the month of December 1955:

Diamond Drill Hole	NX	BX	AX	Total - Month	Total Depth
872-814-H-1			45	45 ft.	578 ft.
872-811-I-1			356	356 ft.	356 ft.
872-810-J-1	5	95	346	446 ft.	446 ft.
Total	5	95	747	847 ft.	

Diamond Drill Hole 872-811-I-1
Location: 872-811 Crosscut East
Direction: South 75° West, inclination plus 5°.

This hole was completed to a depth of 356 ft. and stopped at this point since all possibilities were fairly well covered here. Sludge samples on hole I-1 show copper for practically the entire length of the hole and are most interesting. Likewise, core samples from a point 131 ft. to 259 ft. show varying amounts of copper with some very good commercial ore.

Diamond Drill Hole 872-810-J-1
Location: Breast 810 Crosscut West.
Direction: North 80° west, inclination plus 5°.

This hole was started December 14th and has now reached a depth of 446 ft. Due to unprecedented rains in Northern California and the flooding of the 870 level, it has been necessary to discontinue work here for the present. However, this hole will be continued for some considerable distance. Sludge samples from this hole have shown a small amount of copper throughout. To date core samples have not been analysed.

We are enclosing the following core and sludge analyses:

Core samples, Hole H-1	410.0 - 578.0 ft.
Sludge samples, Hole I-1	0.0 - 356.0 ft.
Core samples, Hole I-1	110.0 - 259.0 ft.
Sludge samples, Hole J-1	0.0 - 510.0 ft.

In our final report under this DMEA contract, we will compile sludge and core analyses.

Diamond Drilling, DMEA Contract - Docket No. 1219X Amended

Hole A-1	300 ft.
Hole B-1	251 ft.
Hole C-1	250 ft.
Hole D-1	508 ft.
Hole E-1	500 ft.
Hole F-1	636 ft.
Hole G-1	699 ft.
Hole H-1	578 ft.
Hole I-1	278 ft.
Total - DMEA Contract	4000 ft.

In addition to diamond drilling, the following drifting and crosscutting was done during the month of December:

772 - #24 Crosscut West. Advance for month: 56 ft. Heavy pyritic zone.

778 Drift North of #4 Crosscut East. Advance for month: 89 ft. Badly broken country with occasional bunches of copper ore.

778 Drift North-#6 Crosscut West. Advance for month: 32 ft. Unmineralized shear zone.

780 Drift South from #3 Crosscut West. Advance for month: 126. ft. This drift shows some very good copper and zinc ore and it now appears that this ore shoot will extend south for some considerable distance.

780 Drift North from #3 Crosscut West. Advance for month: 12 ft. This drift also shows some very good copper and zinc ore and undoubtedly will continue in ore until the northeast southwest fault is encountered.

We are enclosing 40 scale map of 770 level, brought up to date January 1st.

Just as soon as our analytical work on the balance of the drill holes has been completed, we will be happy to file a final brief report on the DMEA contract which has now been completed.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED JAN - 3 1956
JAN 17 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1955 Docket No. DMEA 1219X Amended Contract No. E187
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, ~~743 ft. @ 50% of 9.00 per foot (743 ft. @ 4.50 per ft.)~~ Government Participation: 50 % Amount, $3343.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	6687.00	26,406.00	33,093.00			
Bulldozing Beacon, 300 Adit		14,315.00	14,315.00			
Crosscutting Sxalor, 870 Level		112,500.00	112,500.00			
Drifting Kehab, 870 Level		12,656.00	12,656.00			
Unwatering Shaft		31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$6687.00	$197,227.00	$203,914.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 12/13/55 *Payee The Glidden Company

Per Richard L. Bulston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$3343.50

Signature
(Authorized Certifying Officer)

Date Vou. No. SF-DMEA-25

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date 1/3/56

John D. Warne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S Richer Title Executive Officer Date 1/3/56

S Richer

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

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(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

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Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED
JAN 17 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1955 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft	-	-	89,842.47	627.0			
Winzes Rehab.870 Level	Ft	-	-	61,086.34	904.0			
Drilling: Core	Ft	6705.65	743.0	34,899.38	3677.0		4000'	9.00 per ft
Churn								
Auger								
Explor.670 Level	Ft			243,457.10	2776.8			
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft			34,899.14	1022.5			
Total Distributed Costs		6705.65	743.0	464,184.43				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		6705.65		464,184.43				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 12/13/55 Operator The Glidden Company

Per Edward L. Nelson Title Manager of Mines

Remarks:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

John A. Maine

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

Month of November 1955

Docket No. DMEA
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

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JAN 17 1956

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 Level to June 30, 1954	6,328.00
Government participation - exploration 870 Level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 Level to November 30, 1955	16,546.50
Total Government Participation to Date	$125,803.99

Subject: Diamond Drilling - 870 Level

Redding, California
December 13, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

RECEIVED
JAN 17 1956

We have the following progress on diamond drilling to report for the month of November 1955:

Diamond Drill Hole	NX	BX	AX	Total-Month	Total Depth
871-2-G-1			210	210 ft.	699 ft.
872-814-H-1	5	94	434	533 ft.	533 ft.
	5	94	644	743 ft.	

Total drilled - November: 743 ft.

Diamond Drill Hole 871-2-G-1
Thus far core analyses have not been made on hole G-1 but will be made just as soon as the laboratory completes the work now under way. Sludge samples show a very wide distribution of copper and probably are a better indication than the core samples will be since the hole drilled badly, due to broken ground, and a great deal of the cores were ground up.

Diamond Drill Hole 872-814-H-1
This hole has now been completed to a depth of 578 ft. and has been abandoned for the present at least. Near the bottom of the hold a water course was encountered and due to the heavy flow of water, and an abundance of very fine, fragmentary white quarts, the hole was completely filled with this material and for this reason it was decided to stop drilling. This hole was most important and has shown a very heavy mineralization throughout, the mineralization consisting largely of highly silicified material containing a high percentage of pyrite along with some chalcopyrite. Here again a very wide distribution of copper has been noted in this pyritic zone and it now appears that it will be necessary to continue 814 Crosscut West for at least 600 ft. to further prospect this country since it is quite probable that a copper ore shoot of some magnitude will be found within this pyritic zone.

Diamond Drill Hole 872-11-I-1
Location: 872-11 Crosscut East
Direction: South 75° West, inclination plus 5°.

This hole was started December 6th from the west side of 872 Drift, directly opposite #11 Crosscut, and is now approximately 300 ft. deep.

The first 125 ft. of the hole shows mostly basic dike. A very nice copper showing was encountered at 129 ft. and the hole continued in copper ore for a distance of 9 ft., and from this point on to the breast there is a very nice showing of chalcopyrite. While it is not one continuous ore body, yet it does show rather a wide distribution of copper.

Proposed Diamond Drilling
It is now planned to diamond drill that section of ground west of 872 Drift North and 871 Drift South from Diamond Drill Hole 872-11-I-1 on the north to the south end of 871 Drift South. While an attempt will be made to space these holes at 100 ft. centers, yet wherever possible the old crosscuts to the west will be used as drill headings. These holes will be at least 250 ft. deep and some of them should go out for 1000 ft. to thoroughly prospect the basic dike to the west. That section of territory lying

between Hole H-1 on the north and Hole G-1 on the south is very highly mineralized and the expenditure for this drilling is certainly justified. Furthermore our geologists feel that there may be a parallel lens of ore west of the old workings on both 770 and 870 levels.

We are enclosing the following core and sludge analyses:

Hole H-1: Core analyses, as follows:

244.0 - 247.0'
251.0 - 261.0
264.0 - 264.5
264.5 - 265.0
293.0 - 297.0
303.0 - 305.0
308.0 - 309.0
340.0 - 347.0
452.0 - 456.0

Hole F-1: Core analyses - 557.0 - 636.0'.
Hole G-1: Sludge analyses 425.0 - 699.0'.
Hole H-1: Sludge analyses 0.0 - 578.0'. Core analyses: 128.0 - 410.0'.

The balance of core and sludge analyses will be forwarded just as soon as completed.

774 Drift South: This heading advanced 84 ft. during the month, for a total distance of 217 ft. The ore continued very good up to a point 193 ft. south. Here the basic dike to the east was encountered and the balance of the drift was along the contact.

774 Drift South #2 Crosscut East: Advance for month - 20 ft. Reported in previous report.

774 Drift South #3 Crosscut West: Advance for month - 39 ft. Reported in previous report.

774 Drift North #1 Crosscut West: Advance for month - 45 ft. This crosscut penetrated the pyritic mineralization on the west and encountered occasional bunches of chalcopyrite.

774 Drift North #4 Crosscut East: This crosscut advanced 72 ft. during the month and cut the basic dike on the east. Occasional bunches of copper ore were found in this crosscut.

778 Drift North of #4 Crosscut: This drift advanced 52 ft. during the month. A few small bunches of good copper ore were encountered in this drift. However, the ground is very badly broken due to extensive shearing and geological conditions observed here appear quite similar to those on the level below. This heading will be continued into the solid country to the north.

We are enclosing 40 scale plan map of 870 level.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1955 Docket No. DMEA 1219 Amended Contract No. 5467

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

RECEIVED NOV 23 1955

Contract Amount, $ 1007 ft. 50% of 9.00 per foot (1000 1007 ft. 4.50) Government Participation: 50 % Amount, $ 4531.50

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Diamond	9063.00	17,343.00	26,406.00			
Bonanza 300 Adit	-	14,315.00	14,315.00			
Crosscutting 870 Level	-	112,500.00	112,500.00			
Rehab. 270 Level	-	12,656.00	12,656.00			
Unwatering Shaft	-	31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$9063.00	$168,164.00	$197,227.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Nov. 11, 1955 *Payee The Glidden Company

Per [illegible] Title Manager of Mines

When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 4531.50

Signature
(Authorized Certifying Officer)

Date 11/17/55 Vou. No. SF-DMEA-18

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date 11/15/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature John D. Warne for W. Richer Title Executive Officer Date 11/15/55

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED
NOV 23 1955

Month of October 1955 Docket No. DMEA 1219X Amended Contract No. _____
Operator's Name The Glidden Company Minerals _____
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts: Unwatering shaft	Ft	—	—	89,842.47	627.0			
Rehab. 670 Level	Ft	—	—	61,086.34	904.0			
Winzes								
Drilling: Core: Diamond	Ft	9228.75	1007.0	28,193.73	2934.0		4000'	
Churn								
Auger								
Stripping: Explor. 670 Level	Ft	—	—	243,457.10	2776.8			
Trenching								
Test Pits								
Roads and Trails: Reopening 300 Adit	Ft	—	—	34,899.14	1022.5			
Total Distributed Costs		9228.75	1007.0	457,478.78				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		9228.75		457,478.78				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Nov. 11, 1955 Operator THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

Remarks: _____

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

John A Warne

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

RECEIVED
NOV 28 1955

Month of October 1955

Docket No. DMEA
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 level to October 31, 1955	13,203.00
Total Government Participation to Date	$122,460.49

Subject: Diamond Drilling - 87[illegible]evel

Redding, California
November 12, 1955

RECEIVED
NOV 15 1955

DMEA References:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

We have the following progress on diamond drilling to report for the month of October 1955:

Diamond Drill Hole	NX	BX	AX	Total-Month	Total Depth
872-819-F-1			518	518 ft.	636 ft.
871-2-G-1	5	96	388	489 ft.	489 ft.
	5	96	906	1007 ft.	

Total drilled during October: 1007 ft.

Diamond Drill Hole 872-819-F-1
This hole was completed during the month of October to a depth of 636 ft. The hole drilled very well and core recovery was good. A wide pyritic zone was encountered in this hole and while commercial ore was not cut, yet both sludge and core samples show a small amount of copper, this copper being in the form of chalcopyrite.

Diamond Drill Hole 871-2-G-1
Location: Breast 871-2 Crosscut W.
Direction: North 85° West, inclination plus 5°.

This hole has now been completed to a depth of 699 ft. Core recovery for the entire hole was very bad since the ground was badly broken. The country rock encountered here largely consisted of rhyolite and rhyolite porphyry. Sludge analyses to date show small percentages of copper, all of it being in the form of chalcopyrite. While nothing of any great importance has been found in this hole, yet it does prove copper bearing rock over a very wide area.

Proposed Drilling
Due to the copper occurrences in holes D-1 and F-1, and to a lesser degree in E-1, it has been decided to drill a hole from the breast of 814 Crosscut to a depth of at least 500 ft. Drilling here has been started. Later the drill holes will be spaced approximately 100 ft. apart and drilled from old 872 Drift North for a distance of about 250 ft., since there is a strong possibility of picking up a very good copper ore shoot behind these old stopes. Wherever possible existing crosscuts will be used for drill headings, thus eliminating the expense of cutting new drill headings. To date a total of 3144 ft. of diamond drilling has been completed.

We are enclosing core and sludge samples as follows:

D-1:	Core 0.0 - 508 ft.	Sludge: 36.0 - 76.0
E-1:	Sludge 60.0 - 489.0	
F-1:	Core 0.0 - 557.0	Sludge: 2.0 - 636.0
G-1:	Sludge 74.0 - 425.0	

The balance of sludge and core analyses will be forwarded when completed. Progress on diamond drilling during the month of October was considerably better, notwithstanding the fact that hole G-1 was very troublesome.

772 Drift North
This drift advanced 13 ft. during the month and was temporarily stopped in order to push the other work on 770 level. The breast shows very good pyritic mineralization and the western wall of this pyritic zone has not been reached.

774 Drift North
This Drift advanced 88 ft. during the month of October and has exposed a very wide shear zone with considerable faulting within the shear zone. Only occasional bunches of ore have been found here.

774 Drift North - #1 Crosscut Northwest
This crosscut, driven North 60° West from the breast of 774 Drift North, had a total length of 60 ft. The crosscut is in a pyritic zone consisting largely of quartz and pyrite with occasional bunches of very good chalcopyrite. It is a most encouraging prospect.

774 Drift Northeast of 772 Drift North
This drift advanced 46 ft. during the month in pyritic mineralization with occasional bunches of chalcopyrite.

774 Drift South of 772 Drift North
This drift advanced 133 ft. during October and now has a total depth of 148 ft. Here a very good grade of copper-zinc ore has been encountered.

774 Drift South - #2 Crosscut East
This crosscut has been driven east from a point 133 ft. south of 772 Drift North for a distance of 20 ft. For a distance of 17 ft. the crosscut is in ore, with the breast in basic dike.

774 Drift South - #3 Crosscut West
This crosscut has been driven west from the same point as No. 2 crosscut and now has a total length of 40 ft. Hence, the ore exposed in Nos. 2 and 3 crosscuts has a total width of 67 ft. The breast of No. 3 crosscut has encountered the pyritic zone exposed in 772 Drift North. This is a most important discovery and one which will afford considerable tonnage. Again extreme caution should be used in projecting this ore shoot south but should it continue for any distance, it will undoubtedly be found west of the old stopes on 770 level.

We are enclosing a map of 770 level showing this ore occurrence, also one set of assays of mine samples.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole: 872-817-874-D-1
Location: Breast 874 Drift
Direction: West — Plus 5°

CORE SAMPLES

Date	Distance	% Cu	% Zn	% Fe
9/9/55	0.0 - 3.0	.28	1.70	9.48
	3.0 - 5.0	None	None	9.37
	5.0 - 6.5	.05	0.78	11.23
	6.5 - 7.5	None	0.98	12.57
	7.5 - 11.0	None	None	12.05
	11.0 - 20.0	.05	None	11.64
	20.0 - 21.0	.05	None	20.91
	21.0 - 24.0	.05	None	12.15
	24.0 - 28.0	1.58	None	17.41
	28.0 - 31.0	None	0.48	11.77
	31.0 - 32.0	None	None	4.12
	32.0 - 34.0	None	None	3.97
	34.0 - 36.0	None	None	4.38
	36.0 - 38.0	None	None	5.20
	38.0 - 42.0	None	None	9.68
	42.0 - 47.0	None	None	4.33
	47.0 - 52.0	Tr	None	14.42
	52.0 - 58.0	None	None	14.47
	58.0 - 61.0	None	None	12.77
	61.0 - 63.5	None	None	3.40
	61.0 - 65.5	None	0.48	11.77
	65.5 - 67.0	None	0.48	9.13
	67.0 - 69.0	None	1.90	14.71
	69.0 - 71.0	None	None	28.40
	71.0 - 73.0	Tr	None	20.13
	73.0 - 76.5	None	None	18.59
	76.5 - 79.0	None	None	15.90
	79.0 - 86.0	None	None	13.70
	86.0 - 90.0	None	0.95	11.00
	90.0 - 94.0	None	1.14	15.13
	94.0 - 100.0	Tr	None	12.38
	105.0 - 110.0	None	0.85	13.75
	110.0 - 112.5	Tr	None	16.12
	112.5 - 118.0	Tr	None	12.21
	118.0 - 123.5	None	None	9.25
	123.5 - 128.5	.10	None	12.75
	128.5 - 133.5	.35	None	13.90
	133.5 - 138.5	.05	None	11.20
	138.5 - 143.5	.25	None	11.25
	143.5 - 144.5	.50	None	10.72
10/14/55	144.5 - 149.5	.10	None	10.50
	149.5 - 154.5	.10	None	10.75
	154.5 - 159.5	.10	None	13.10
	159.5 - 164.5	.45	None	18.50
	164.5 - 169.5	.05	None	12.20
	169.5 - 174.5	None	None	11.90
	174.5 - 180.5	.05	None	9.90
	180.5 - 185.5	.07	None	13.30
	185.5— 190.5	.55	None	18.90
	190.5 - 195.5	1.05	None	18.60
	195.5 - 200.5	2.40	None	18.25

GLIDDEN CONSOLIDATED ZINC MINES
Diamond Drill Hole: 872-817-87[illegible]-1
CORE SAMPLES

Date	Distance	% Cu	% Zn	% Fe
10/14/55	200.5 - 205.5	.40	None	19.90
	205.5 - 210.5	Tr	None	17.70
	210.5 - 216.0	Tr	None	14.80
	216.0 - 221.0	.50	None	14.55
	221.0 - 226.0	.05	None	14.15
	226.0 - 231.0	None	None	13.60
	231.0 - 236.5	.95	None	16.50
	236.5 - 241.5	None	None	9.25
	241.5 - 245.5	None	None	10.65
	245.5 - 251.5	None	None	15.95
	251.5 - 256.6	None	None	9.55
	256.6 - 262.5	None	None	12.75
	262.5 - 267.0	None	None	12.25
	267.0 - 272.0	None	None	14.40
	272.0 - 277.0	.20	None	15.55
	277.0 - 279.0	.05	None	19.65
	279.0 - 284.5	Tr	None	20.05
	284.5 - 289.5	None	None	14.00
	289.5 - 294.5	None	None	16.95
	294.5 - 299.5	Tr	None	8.90
	299.5 - 306.0	.65	None	15.50
10/22/55	306.0 - 311.0	None	None	18.10
	311.0 - 316.0	.05	None	8.25
	316.0 - 319.0	None	None	15.05
	319.0 - 324.0	None	None	19.40
	324.0 - 328.0	None	None	14.20
	328.0 - 330.0	.05	None	16.55
	330.0 - 334.0	None	None	12.60
	334.0 - 339.0	1.55	None	15.70
	339.0 - 344.0	None	None	11.40
	344.0 - 349.0	None	None	14.55
	349.0 - 354.0	None	None	12.25
	354.0 - 359.0	None	None	12.35
	359.0 - 364.0	None	None	8.90
	364.0 - 365.0	.85	None	21.20
	365.0 - 370.0	.30	None	10.10
	370.0 - 375.0	.20	None	8.35
	375.0 - 381.0	.20	None	9.20
	381.0 - 386.0	.05	None	13.40
	386.0 - 395.0	.30	None	12.85
	395.0 - 405.0	.10	None	11.90
	405.0 - 415.0	.05	None	13.70
	415.0 - 425.0	.15	None	13.80
	425.0 - 435.0	.30	None	16.85
	435.0 - 445.0	.05	None	11.70
	445.0 - 455.0	.10	None	13.55
	455.0 - 465.0	.05	None	16.00
	465.0 - 475.0	.40	None	16.70
	475.0 - 484.0	.15	None	12.70
	488.0 - 492.0	.20	None	14.10
	492.0 - 502.0	.25	None	14.35
	502.0 - 508.0	.07	None	15.00

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole 872-817-874-D-1
Location: Breast - 874 Drift
Direction: West - Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Zn	% Fe
8/24/55	36.0 - 52.0	None	None	4.24
	36.0 - 52.0	None	None	4.03
	36.0 - 52.0	Tr	None	3.77
	36.0 - 52.0	None	Tr	4.03
	36.0 - 52.0	Tr	None	3.69
	36.0 - 52.0	Tr	0.98	4.03
	76.0 - 90.0	Tr	None	10.96
	76.0 - 90.0	None	None	10.96
	76.0 - 90.0	None	None	10.60

MADDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole 872-822-B-1
Location: Breast 822 Crosscut
Direction: N 80° W Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Zn	% Pb
9/7/55	60.0 - 67.0	None	None	3.15
	67.0 - 74.0	None	None	3.10
	74.0 - 78.0	None	None	2.74
	78.0 - 82.0	None	None	5.12
	82.0 - 86.00	None	None	4.91
	86.0 - 90.0	None	None	4.29
	90.0 - 95.0	None	None	4.19
	95.0 - 96.0	None	None	2.89
	101.0 - 126.0	None	None	5.20
	133.5 - 140.5	None	None	6.80
	140.0 - 153.0	None	None	4.33
	153.0 - 166.0	None	None	6.23
	166.0 - 180.0	None	None	3.66
	180.0 - 201.0	None	None	4.07
	201.0 - 209.5	None	None	5.56
	209.5 - 215.0	None	None	3.30
	215.0 - 220.0	None	None	4.07
	220.0 - 224.0	None	None	3.80
	229.0 - 232.0	None	None	3.08
	232.0 - 240.0	None	Tr	3.47
	240.0 - 247.0	None	Tr	3.52
	247.0 - 271.0	Tr	None	4.40
	271.0 - 273.0	Tr	None	3.47
	273.0 - 278.0	None	None	4.29
	278.0 - 286.0	None	None	4.40
	281.0 - 291.0	None	None	4.07
	292.0 - 302.0	None	None	3.74
	302.0 - 312.0	None	None	4.62
	312.0 - 319.0	None	None	4.95
	319.0 - 328.0	None	None	5.08
	329.0 - 339.0	None	None	4.62
	337.0 - 347.0	Tr	None	9.41
	347.0 - 354.0	None	None	7.79
	354.0 - 359.0	None	None	4.24
	359.0 - 369.0	None	None	3.63
	369.0 - 377.0	None	None	4.18
	377.0 - 381.0	None	None	3.52
	381.0 - 385.0	None	None	4.29
	385.0 - 391.0	None	None	5.78
	391.0 - 405.0	None	None	3.80
	405.0 - 410.0	None	None	5.39
	410.0 - 415.0	None	None	5.90
	425.0 - 437.0	None	None	6.40
	437.0 - 446.0	None	None	8.15
	446.0 - 450.0	None	None	7.75
	450.0 - 460.0	None	None	6.05
	460.0 - 469.0	None	None	7.20
	469.0 - 479.0	None	None	4.65
	479.0 - 489.0	None	None	6.15

GARDEN CONSOLIDATED ZINC MINES
BILLY HILL MINE

Diamond Drill Hole: 872-819-F-1
Location: Breast 819 Crosscut
Direction: N 80° W Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Pb	% Zn
10/5/55	2.0 - 5.0	None	None	25.00
	5.0 - 17.0	None	None	19.10
	17.0 - 25.0	None	None	19.20
	52.0 - 79.0	None	None	20.60
	72.0 - 88.0	None	None	20.50
	98.0 - 108.0	None	None	19.40
	108.0 - 113.0	.05	None	21.50
	113.0 - 134.0	None	None	4.80
	124.0 - 133.0	None	None	13.40
	138.0 - 150.0	Tr	None	15.90
	150.0 - 155.0	None	None	11.35
	165.0 - 175.0	None	None	9.70
	175.0 - 185.0	Tr	None	17.40
	185.0 - 192.0	None	None	14.90
	192.0 - 199.0	None	None	15.70
	199.0 - 206.0	None	None	14.90
	206.0 - 212.0	None	None	20.95
	212.0 - 222.0	None	None	14.55
	222.0 - 235.0	None	None	10.70
	237.0 - 244.0	None	None	9.80
	243.0 - 251.0	.05	None	13.85
	251.0 - 257.0	.05	None	17.75
	258.0 - 269.0	.40	None	13.95
	269.0 - 279.0	.05	None	16.50
	279.0 - 289.0	Tr	None	20.40
	289.0 - 299.0	None	None	17.85
	299.0 - 309.0	Tr	None	18.80
	309.0 - 328.0	None	None	16.45
	328.0 - 338.0	.20	None	16.20
	338.0 - 348.0	.15	None	18.15
	348.0 - 358.0	.05	None	21.25
	378.0 - 388.0	.05	None	12.35
	388.0 - 398.0	.10	None	8.95
	398.0 - 408.0	Tr	None	15.25
	408.0 - 418.0	.05	None	13.15
	418.0 - 428.0	.05	None	14.00
	428.0 - 438.0	None	None	14.90
	438.0 - 448.0	.05	None	16.20
	448.0 - 458.0	.05	None	21.85
	458.0 - 468.0	.05	None	17.20
	468.0 - 478.0	.05	None	17.55
	478.0 - 488.0	None	None	17.90
	488.0 - 498.0	.20	None	13.80
	498.0 - 508.0	.12	None	16.00
	508.0 - 518.0	.12	None	19.40
	518.0 - 528.0	.15	None	20.40
	528.0 - 538.0	.05	None	17.25
	538.0 - 547.0	.15	None	14.70
	547.0 - 557.0	.10	None	14.30

GLIDDEN CONSOLIDATED ZINC MINES
Diamond Drill Hole: 872-819-F-1
Sludge Samples

Date	Distance	% Cu	% Zn	% Fe
10/15/55	557.0 - 566.0	Tr	None	12.40
	566.0 - 578.0	Tr	None	14.65
	575.0 - 587.0	None	None	11.80
	587.0 - 599.0	None	None	10.55
	599.0 - 612.0	.10	None	13.85
	612.0 - 621.0	.05		8.15
	621.0 - 627.0	.10		7.85
	627.0 - 636.0	.10		13.95

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole: 873-819-P-1
Location: Breast 819 Crosscut
Direction: North 80° West +5°

CORE SAMPLES

Date	Distance	% Cu	% Pb
10/27/55	0.0 - 5.0	Tr	4.15
	5.0 - 10.0	Tr	10.95
	10.0 - 13.0	-	12.60
	13.0 - 15.0	Tr	17.00
	15.0 - 17.0	Tr	14.50
	17.0 - 20.0	-	7.20
	20.0 - 25.0	-	19.85
	25.0 - 27.0	-	14.50
	27.0 - 32.0	Tr	14.05
	32.0 - 37.0	-	15.70
	37.0 - 45.0	-	12.50
28	45.0 - 50.0	-	10.25
	50.0 - 52.0	-	15.20
	52.0 - 62.0	-	12.55
	62.0 - 72.0	-	15.90
	72.0 - 75.0	-	14.00
	75.0 - 79.0	-	15.15
	79.0 - 80.0	-	12.10
	80.0 - 83.0	-	12.10
	83.0 - 86.0	-	13.60
	86.0 - 96.0	-	10.00
29	75.0 - 100.0	.25	11.60
	100.0 - 108.0	.50	15.15
	108.0 - 110.0	.15	11.40
	110.0 - 113.0	.25	12.50
	113.0 - 118.0	.05	7.25
	118.0 - 124.0	Tr	6.95
	124.0 - 133.0	Tr	14.05
	133.0 - 138.0	.10	13.85
	138.0 - 143.0	.50	8.65
	143.0 - 150.0	.10	12.15
	150.0 - 156.0	.30	15.75
	156.0 - 165.0	.25	9.00
	165.0 - 175.0	Tr	12.00
	175.0 - 185.0	.05	10.15
	185.0 - 192.0	Tr	19.35
	192.0 - 199.0	-	16.65
	199.0 - 206.0	.05	12.10
	206.0 - 212.0	Tr	13.15
	212.0 - 223.0	.05	14.55
	223.0 - 224.0	-	8.25
	224.0 - 228.0	Tr	11.55
	228.0 - 230.0	-	9.40
	230.0 - 237.0	.05	8.40
	237.0 - 243.0	.03	8.45
	243.0 - 251.0	.51	12.40
	251.0 - 257.0	.05	13.60
	257.0 - 258.0	.05	19.80
	258.0 - 261.0	1.08	17.20
	261.0 - 269.0	.05	19.00
	269.0 - 273.0	.05	14.25

GLIDDEN CONSOLIDATED ZINC MINES
Diamond Drill Hole: 872-819[illegible]-1
CORE SAMPLES

Date	Distance	% Cu	% Fe
11/4/55	273.0 - 279.0	.04	10.70
	279.0 - 289.0	.09	17.50
	289.0 - 299.0	.02	9.95
	299.0 - 309.0	.04	10.50
	309.0 - 319.0	-	9.75
	319.0 - 328.0	.07	7.75
	328.0 - 338.0	.33	10.45
	338.0 - 348.0	.04	11.60
	348.0 - 358.0	.04	13.20
	358.0 - 368.0	.02	9.30
	368.0 - 373.0	.04	9.70
	378.0 - 388.0	-	10.30
	388.0 - 398.0	.14	10.60
	398.0 - 408.0	-	7.90
	408.0 - 418.0	.09	11.35
	418.0 - 428.0	-	8.45
	428.0 - 438.0	.09	7.70
	438.0 - 448.0	.04	9.80
	448.0 - 458.0	.02	8.45
	458.0 - 468.0	.04	8.35
	468.0 - 478.0	.04	15.40
	478.0 - 488.0	-	9.40
	488.0 - 498.0	.04	9.30
	498.0 - 508.0	.09	11.85
	508.0 - 518.0	.02	10.00
	518.0 - 528.0	Tr	7.35
	528.0 - 538.0	.14	11.90
	538.0 - 547.0	.09	11.45
	547.0 - 552.0	Tr	10.50
	552.0 - 557.0	Tr	9.15

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole: 871-2-0-1
Location: Breast 871-2 Crosscut
Direction: North 85° W Plus 5°

SLUDGE SAMPLES

Date	Distance	% Cu	% Fe
11/9/55	74.0 - 84.0	.07	4.35
	84.0 - 93.0	.04	4.80
	93.0 - 97.0	.04	9.15
	97.0 - 101.0	.04	5.70
	97.0 - 107.0	.02	4.85
	101.0 - 107.0	.04	3.90
	107.0 - 117.0	.04	4.95
	117.0 - 126.0	.24	7.15
	116.0 - 126.0	.02	3.35
	126.0 - 133.0	.09	3.45
	133.0 - 138.0	.04	11.05
	138.0 - 141.0	.02	5.15
	141.0 - 151.0	.02	3.05
	151.0 - 161.0	.04	4.55
	161.0 - 171.0	.04	4.20
	171.0 - 181.0	.02	4.40
	171.0 - 181.0	.09	12.95
	181.0 - 187.0	.09	5.00
	207.0 - 211.0	.04	4.65
	211.0 - 216.0	.04	4.90
	226.0 - 236.0	.04	4.55
	236.0 - 246.0	.02	3.85
	246.0 - 255.0	.02	2.85
	255.0 - 265.0	.04	5.85
	265.0 - 272.0	.04	3.95
	272.0 - 280.0	.02	5.70
	280.0 - 292.0	.04	8.55
	290.0 - 299.0	-	7.80
	299.0 - 305.0	Tr	2.25
	305.0 - 312.0	Tr	6.85
	312.0 - 317.0	.02	4.85
	317.0 - 321.0	.04	4.85
	321.0 - 331.0	Tr	8.05
	331.0 - 343.0	-	4.40
	343.0 - 353.0	-	7.25
	353.0 - 363.0	Tr	4.05
	363.0 - 367.0	Tr	4.00
	370.0 - 372.0	Tr	5.30
	372.0 - 384.0	.09	7.25
	384.0 - 394.0	Tr	3.07
	394.0 - 404.0	-	4.05
	404.0 - 425.0	Tr	4.85

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1955 Docket No. DMEA 1219X Amended Contract No. E 1[illegible]7

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

Contract Amount, $ 618 ft. @ 50% of $9.00 per foot (618 ft @ $4.50) Government Participation: 50 % Amount, $ 2781.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Diamond	5562.00	$11,781.00	$17,343.00			
~~Bulldozing~~ Reopening 300 Adit	-	14,315.00	14,315.00			
~~Crosscutting~~ Explor. 870 Level	-	112,500.00	112,500.00			
~~Drifting~~ Rehab. 870 Level	-	12,656.00	12,656.00			
Unwatering Shaft	-	31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	5562.00	$182,602.00	$188,164.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Oct. 12, 1955 *Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2781.00

Signature _____ (Authorized Certifying Officer)

Date NOV 1955 Vou. No. SF-DMEA-17

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-2187 in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date 10/17/55

John D. Warne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer Date 10/17/55

G. Ricker

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

ACCOUNTS OCT 25 1955

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1955 Docket No. DMEA 1219X Amended Contract No. _____

Operator's Name The Glidden Company Minerals _____

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Sinking Shafts: Unwatering BH Shaft	Ft			89,842.47	627.0			
Rehab. 870 Level	Ft			61,086.34	904.0			
Winzes								
Drilling: Core	Ft	5512.29	618.0	18,964.98	1927.0		4000'	$9.00 ft
Churn								
Auger								
Stripping: Exploration 870 Lev	Ft			243,457.10	2776.8			
Trenching								
Test Pits								
Roads and Trails: Reopening 300 Adit	Ft			34,899.14	1022.5			
Total Distributed Costs		5512.29	618.0	448,250.03				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		5512.29	618.0	448,250.03				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Oct. 12, 1955 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Remarks:

(For Government use only)

RECEIVED
NOV 14 1955

John S. Harne

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF SEPTEMBER 1955

Docket No. DMEA
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 level to Sept. 30, 1955	8,671.50
Total Government Participation to Date	$117,928.99

Subject: Diamond Drilling 870 Level

Redding, California
October 12, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IBM-K187

We have the following progress on diamond drilling to report for the month of September 1955:

Diamond Drill Hole	NX	BX	AX	Total Depth of Hole
872-822-E-1	5	96	399	500 ft.
872-819-F-1	5	95	18	118 ft.
	10	191	417	618 ft.

Total depth drilled during September: 618 ft.

Diamond Drill Hole 872-817-874-C-1
This hole was drilled during the month of August. We are enclosing complete analyses on both sludge and cores for copper, zinc and iron. Thus far golds and silvers have not been determined but will be reported when completed.

Diamond Drill Hole 872-817-874-D-1
This hole also was completed in August, and while the analyses of the sludge samples have been completed, yet the cores are now being run in our laboratory. These results will be reported in our next report. This hole is consistently showing pyritic mineralization containing small amounts of copper, the copper being in the form of chalcopyrite. Some very interesting conditions have been brought to light here and on the strength of this unusually good showing, it was deemed advisable to drill an additional hole from the breast of 819 Crosscut.

Diamond Drill Hole 872-822-E-1
This hole was completed during the month of September and showed weak mineralization in Bully Hill rhyolite for approximately 250 ft. where pyritic mineralization was encountered. Here there were also occasional small amounts of chalcopyrite. Analyses of sludge samples have been complete but the core samples have not yet been run. This was a very troublesome hole with core recovery only fair, and due to this fact there are a great many samples to be analyzed. Results will be reported later.

Diamond Drill Hole 872-819-F-1
Location: Breast of 819 Crosscut West.
Direction: North 80° West
Inclination: Plus 5°.

This hole was started during the last week in September and has now been completed for a distance of 575 ft., it being our intention to complete at least 600 ft. This has been a highly mineralized hole within a pyritic zone, and has shown varying amounts of chalcopyrite, a most interesting condition. The hole has drilled well and core recovery has been very good.

Drilling progress during the month of September was unusually poor due largely to failure of equipment and inability to get repair parts promptly. Furthermore, the loss of one drill crew upset drilling progress for a matter of about ten days. These conditions have now been overcome and much better progress is being made. While it has been necessary to sectionalize a great many cores, for the purpose of analysis, yet core splitting has been very carefully done and the sections are retained here intact in our Bully Hill plant for inspection by your representatives. Diamond drilling will be continued during the present month and just as soon as hole F-1 has been completed,

the machine will be moved to the south side and a new hole started there. You will note from the core analyses on hole C-1 that the downward extension of the 870 ore shoot has been very well indicated and it appears quite logical that the ore deposit on a 970 level will be somewhat larger than 870 level.

772 Drift North

Drifting operations were continued here during the month of September, the total advance amounting to 322 ft. Due to the very heavy ground encountered in reopening old 772 Drift North, it was decided to abandon this project when 772-9 crosscut was reached, and drive a new heading from this point into the country to the north with a view of picking up the upward extension of 870 ore shoot. Hence, the new work was actually started at 772-9 crosscut, and while this heading passed through 772-22 and 772-15 crosscuts, yet it really amounted to a new heading since there was a very marked difference in grade. The greater portion of this new heading was in basic dike with very little, if any, mineralization. The shear zone was cut approximately 295 ft. north of 772-9 crosscut. Here showing on the contact between the basic dike and the shear zone is 11 ft. of very good copper-zinc ore quite similar to the ore encountered on the level below but probably a little more on the copper side. From this point to the breast of the heading, a very good pyritic zone has been penetrated. While this zone largely consists of quartz and pyrite, yet there are occasional showings of chalcopyrite.

774 Drift North was started on ore exposed in 772 heading but has failed to show anything of importance, yet there is a bare possibility that it is too far to the east. 774 Drift South has now encountered the ore exposed in 772 heading and is a very important discovery since it shows a considerable width of good copper zinc ore with ore still in the west breast. The heading will gradually be turned south and a drift will be driven on the ore since it appears quite likely that this ore can be followed into the old workings north of 772-14 crosscut. While it is very difficult to project shear zone ore over any great distance, yet the old company had extensive stopes north of 772-14 crosscut and the old workings north of this point are too far to the west to encounter this ore providing it continues south.

776 Drift North has also been started from a point near the breast of 772 heading. At this point there is a very noticeable showing of small stringers of chalcopyrite through the iron zone and in this drift, which has just been started, the copper appears to be increasing as the heading advances. All that can be said for this drift is that it is a very good prospect and may lead to something of value.

I am enclosing a map of 770 level. We will indeed be happy to supply a plan map showing the assays of the ore encountered here just as soon as results are received from the laboratory.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

GL[illegible]EN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole: S72-S17-S74-C-1
Location: Breast S74 Drift
Direction: East Minus 45°

CORE SAMPLES

DATE 1955	DISTANCE	% CU	% ZN	% FE
9/28	0.0 - 2.0'	.10	None	6.24
	2.0 - 5.0	.80	1.20	15.50
	5.0 - 10.5	.35	None	12.95
	10.5 - 15.5	.35	None	6.05
	15.5 - 22.5	None	1.50	5.70
	22.5 - 28.5	.05	.75	8.00
	28.5- 31.5	.70	None	11.75
	31.5 - 36.5	.15	None	6.05
	36.5 - 40.5	1.08	None	8.60
	40.5 - 43.5	.25	None	6.45
	43.5 - 48.5	.63	1.00	11.90
9/30	48.5 - 54.0	.07	Tr	7.75
	54.0 - 57.0	.35	Tr	13.10
	57.0 - 63.0	1.00	None	10.20
	63.0 - 68.0	.20	None	11.00
	68.0 - 74.0	.35	None	8.75
	74.0 - 79.0	.15	None	8.35
	79.0 - 84.0	.10	None	4.55
	84.0 - 89.0	.05	None	3.75
	89.0 - 92.0	.10	None	10.50
	92.0 - 96.0	.10	None	4.00
	96.0 - 97.0	.15	None	4.95
	97.0 - 104.0	.05	None	7.00
	104.0 - 109.0	.30	None	6.80
	109.0 - 114.0	.25	None	6.70
	114.0 - 119.0	None	None	6.70
	119.0 - 123.0	Tr	None	8.30
	123.0 - 126.0	.07	None	4.20
	126.0 - 128.0	Tr	None	3.85
	128.0 - 130.0	.45	None	5.95
	130.0 - 133.0	.10	None	4.00
	133.0 - 135.5	Tr	None	3.80
	135.5 - 139.0	None	None	8.05
	139.0 - 144.0	.05	None	7.50
	144.0 - 148.0	None	None	7.40
	148.0 - 150.5	None	None	8.60
	150.0 - 152.5	None	None	3.70
	152.5 - 157.5	None	None	12.20
	157.5 - 160.0	None	None	5.30
	160.0 - 163.0	None	None	8.55
	163.0 - 166.0	None	None	3.65
	166.0 - 168.0	Tr	None	3.30
10/8	168.0 - 170.0	.20	None	8.20
	170.0 - 171.5	None	None	7.20
	171.5 - 173.5	.75	None	9.40
	173.5 - 176.0	.10	None	7.45
	176.0 - 179.5	.05	None	6.55
	179.5 - 183.0	None	None	5.00

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE
Diamond Drill Hole: 872-817-874-C-1
Core Samples

Date	DISTANCE	% CU	% ZN	% FE
10/8	183.0 - 186.5	None	None	8.35
	186.5 - 189.5	.05	None	8.80
	189.5 - 192.0	1.50	None	20.10
	192.0 - 193.5	2.05	9.65	8.10
	193.5 - 196.0	3.05	11.25	21.30
	196.0 - 200.0	5.25	11.20	25.50
	200.0 - 204.0	2.15	15.40	9.45
	204.0 - 209.0	.10	1.30	7.10
	209.0 - 213.0	.05	None	7.10
	213.0 - 215.0	1.15	None	9.85
	215.0 - 216.0	.05	None	8.95
	216.0 - 217.5	.95	4.00	7.90
	217.5 - 218.0	2.50	3.45	11.70
	218.0 - 221.0	.65	.50	7.20
	221.0 - 224.5	.10	None	15.50
	224.5 - 227.0	Tr	None	5.55
	227.0 - 231.0	Tr	None	11.10
	231.0 - 232.0	.40	Tr	10.70
	232.0 - 237.0	Tr	None	10.45
	237.0 - 241.0	1.30	8.50	15.70
	241.0 - 246.0	.85	7.75	12.45
	246.0 - 247.0	.25	.80	4.95
	247.0 - 250.0	.75	None	16.00

GLIDDEN CONSOLIDATED ZINC MINES
BULLY HILL MINE

Diamond Drill Hole: 872-817-874-C-1
Location: Breast 874 Drift
Direction: East Minus 45°

SLUDGE SAMPLES

Date 1955 8/9	DISTANCE	% C U	% Z N	% P B
	85.0 - 89.0	None	None	2.43
	89.0 - 92.0	None	None	3.92
	92.0 - 97.0	.05	None	4.20
	97.0 - 119.0	Tr	None	4.96
	119.0 - 123.0	Tr	None	5.12
	123.0 - 126.0	Tr	None	3.65
	126.0 - 128.0	.40	None	4.08
	128.0 - 130.0	Tr	None	4.25
	130.0 - 133.0	Tr	None	4.74
	133.0 - 139.0	.05	None	3.54
	139.0 - 144.0	.05	None	3.91
	144.0 - 149.0	Tr	None	4.41
	149.0 - 157.5	None	None	4.96
	157.5 - 163.0	None	None	3.65
	163.0 - 170.0	None	None	3.65
	171.0 - 176.0	None	None	4.47
	176.0 - 179.0	.05	None	5.12
	179.5 - 183.0	None	None	5.45
	183.0 - 186.5	.05	None	2.56
	186.5 - 189.5	None	None	5.34
	189.5 - 192.0	1.00	None	5.23
	192.0 - 193.5	.05	None	4.80
	193.5 - 196.0	.50	3.65	6.21
	196.0 - 200.0	1.30	3.25	5.23
	200.0 - 204.0	.08	2.00	5.83
	204.0 - 209.0	.25	1.50	6.76
	204.0 - 209.0 b	.20	1.50	6.98
	209.0 - 215.0	.30	Tr	7.14
	209.0 - 215.0 b	.30	Tr	6.65
	218.0 - 224.5	.10	None	6.76
	218.0 - 224.5 b	.05	None	7.25
	224.5 - 231.0	.10	None	7.08
	224.5 - 231.0 b	.15	None	7.08
	231.0 - 237.0	.20	None	6.38
	237.0 - 241.0	.25	None	9.05
	241.0 - 246.0	.10	None	7.56
	246.0 - 250.0	.15	None	6.36

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS SEP 1 9 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1955 Docket No. DMEA1219X Amended Contract No. .....

Operator's Name The Glidden Company Minerals .....

Address Cleveland, Ohio

Contract Amount, $ 777 ft. @ 50% of $9.00 per foot -- 777 ft. @ $4.50 Government Participation 50 % Amount, $ 3496.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Diamond	6993.00	4,788.00	11,781.00			
Bulldozing Reopening 300 Adit	-	14,315.00	14,315.00			
Crosscutting Exploration 870 Lev.	-	112,500.00	112,500.00			
Drifting Rehab. 870 Level	-	12,656.00	12,656.00			
Unwatering Shaft	-	31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$6993.00	$175,609.00	$182,602.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Sept. 13, 1955 *Payee THE GLIDDEN COMPANY

Per Edward A. Kajosch Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 3496 50

Lloyd H. Cranmer
Authorized Certifying Officer

Signature .....
(Authorized Certifying Officer)

Date ..... Vou. No. SF-DMEA-11

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date 9/14/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker Title Executive Officer DMEA Field Team Region II Date 9/14/55

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED SEP 2 1 1955

Month of August 1955 Docket No. DMEA 1219X Amended Contract No.

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising: Unwatering	Ft	-	-	89,842.47	627.0			
Shafts: Rehab. 870 Level	Ft	-	-	61,066.34	904.0			
Winzes	Ft	6998.92	777	33,452.69	1309.0		4000	$9.00
Drilling: Core								
Churn								
Auger								
Exploration 870 Lev	Ft	-	-	243,457.10	2776.8			
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	-	-	34,899.14	1022.5			
Total Distributed Costs		6998.92	777	442,737.74				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		6998.92		442,737.74				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Sept.13, 1955 Operator THE GLIDDEN COMPANY

Per Edward L. Haleton Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

Costs shown above are Operator's actual costs & cost authorized by Contract are shown on Form 104A.

John A. Warner

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF AUGUST 1955

Docket No. DMEA

1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 level to August 31, 1955	5,890.50
Total Government Participation to Date	$115,147.99

SUBJECT: DIAMOND DRILLING 870 Level

Redding, California
September 13, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc - Copper
IDM - E187

We have the following progress on diamond drilling to report for the month of August, 1955:

Diamond Drill Hole	NX	BX	AX	Total Depth of Hole
872-820-B-1			19	251 ft.
872-817-874-C-1	2	4	244	250 ft.
872-817-874-D-1	5	195	308	508 ft.
	7	199	571	

Total depth drilled August: 777 ft.

Diamond Drill Hole 872-820-B-1
Location: Breast 820 Crosscut Northeast
Direction: East. Inclination: + 5°
August: 232 ft. to 251 ft.
Core recovery: Fair.
Basic dike.

Diamond Drill Hole 872-817-874-C-1
Location: Breast of 874 Drift.
Direction: East. Inclination: - 45°.
August: 0 - 250 ft.
Core recovery: Good.

Mineralized shear zone-encountered copper zinc ore at 186.5 ft., indicated ore downward extension of 870 ore shoot.

Diamond Drill Hole 872-817-874-D-1
Location: Breast of 874 Drift.
Direction: West. Inclination: + 5°.
August: 0 - 508 ft.
Core recovery: Good.

This hole shows pyritic mineralization throughout, with varying amounts of chalcopyrite for the entire distance. The hole should have been drilled to a greater depth. However, some little difficulty was encountered beyond the 500 ft. point and the machine in use seemed to be just a little bit too light for greater depth.

Diamond Drill Hole 872-822-E-1
Location: North breast of 872 Drift at intersection with 822 Crosscut.
Direction: North 80° West. Inclination + 5°.

This hole was started September first and has now reached a depth of 286 ft. Thus far the hole has been troublesome and core recovery has not been good. The first 247 ft. shows Bully Hill rhyolite with very little mineralization. Pyritic mineralization was encountered at a depth of 247 ft. and a small amount of chalcopyrite has also been noted beyond this point. The hole will be continued to a depth of 500 ft.

SUBJECT: DIAMOND DRILLING 870 Level (2)

Due to the fact that some little difficulty has been experienced in keeping 872 Drift North open, it has been decided to drill from the west breast of 819 Crosscut before going to the south side. Here a very intense mineralization has been exposed both in 819 Crosscut and 880 Drift Northwest. Furthermore a hole at this point will roughly bisect the distance between Holes D-1 and E-1, and is a most worthwhile exploration project. The hole will be driven North 80° West with an inclination of + 5°.

Analyses of the mineralized sections of these various drill holes have already been started and the results will be reported when completed.

772 Drift North

The reopening and rehabilitation of 772 Drift North has been completed and drifting operations along the Bully Hill shear zone have already been started from the north breast of the old workings. There is evidence of very extensive stoping on 770 level on the north end of the property and apparently all of it has not been mapped. In addition to this, remnants of very fine copper and zinc ore have been found here. It is highly probable that zinc ore bodies of considerable tonnage have been left in these old stopes and this means the reopening of some of them when mining operations are started. Our present plans call for the drifting north along the Bully Hill shear zone with the idea of exploring the upward extension of 870 ore shoot. Hence, it is purely a matter of drifting north for approximately 150 ft. and then crosscutting both east and west. This work is now well under way.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1955 Docket No. DMEA 1219X Amended Contract No. Idm E-187
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: 50 % Amount, $ 2394.00
532 ft. @ 50% of $9.00 per ft. (532 ft. @ $4.50)

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Diamond	4,788.00	-	4,788.00			
Reopening 300 Adit	-	14,315.00	14,315.00			
Exploration 870 Lev.	-	112,500.00	112,500.00			
Rehab. 870 Level	-	12,656.00	12,656.00			
Unwatering shaft	-	31,350.00	31,350.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4,788.00	170,821.00	175,609.00			

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Aug. 12, 1955 *Payee THE GLIDDEN COMPANY
By Edward F. Nelson Title MANAGER OF MINES

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2394 00

Lloyd W. Sylander
Authorized Certifying Officer
Signature
(Authorized Certifying Officer)

Date 1955 Vou. No. SF-Dmea-8

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature Henry W. Jones for John D. Evans Title Mining Engineer Date August 15, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Region II Date August 15, 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1955 Docket No. DMEA 1219X Amended Contract No.

Operator's Name THE GLIDDEN COMPANY Minerals

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts: Unwatering	Ft	-		89,842.47	627.0			
Rehab. 870 Level	Ft	-		61,086.34	904.0			
Winzes								
Drilling: Core: Diamond	Ft	6453.77	532.0	6,453.77	532.0		4000.0	
Churn								
Auger								
Stripping: Exploration 870 Lev.	Ft	-		243,457.10	2776.8			
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	-		34,899.14	1022.5			
Total Distributed Costs		6453.77	532.0	435,738.82				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		~~6453.77~~		~~435,738.82~~				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Aug. 12, 1955 Operator THE GLIDDEN COMPANY

Per Edward B. Helstein Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

Henry W. Jones for
John D. Warne

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF JULY 1955

Docket No.DMEA

1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Government participation - diamond drilling 870 level to July 31, 1955	2,394.00
Total Government Participation to Date	$111,651.49

SUBJECT: DIAMOND DRILLING 870 Level

Redding, California
August 12, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDN-K187

The contract for doing the diamond drilling on 870 Level was awarded to Boyles Bros. Drilling Co. of Salt Lake City, Utah. Under the terms of this contract, Boyles Bros. are to furnish all labor and machinery necessary to perform the work. The Glidden Co. is to cut adequate drill headings, supply air and water for drilling, handle all crews and equipment within the mine and furnish transportation for Boyles Bros. personnel across Shasta Lake. Drilling rates are as follows:

	AX	BX	NX
0 - 250 ft.	$4.60	$5.20	$5.80
250 - 500 ft.	5.20	5.80	
500 - 750 ft.	5.80		
750 -1000 ft.	6.40		

Reaming
For AX casing - $2.30
For BX casing - $2.60

Cementing
$9.00 per hour plus cost of cement and cement substitutes

Actual drilling operations were started July 13, 1955, with one shift per day. The second shift was added July 19. Thus far results have been good.

Diamond Drill Hole 872-815-A-1
Location: Breast 815 Crosscut East,
Direction: North 80° East
Inclination: + 5°

BX	6 lin. ft.
AX	294 lin. ft.
Total depth Drilled	300 lin. ft.

Core recovery: Good
This hole encountered basic dike throughout.

Diamond Drill Hole 872-820 - B-1
Location: Breast 820 Crosscut Northeast
Direction: East
Inclination: + 5°

BX	3 lin. ft.
AX	229 lin. ft.
Total Depth Drilled July	232 lin. ft.

Core recovery: Fair
This hole encountered basic dike with stringers of quartz. The hole was completed 8/1/55.

Diamond Drill Hole 872-817-874-C-1
This hole was started August 3 and has now been completed to a depth of 250 ft. Analyses

of sludge samples and sectionalized cores will be submitted in the August report.

Diamond Drill Hole 872-817-874-D-1
This hole was started today.

All exploration work, other than diamond drilling on 870 level, has been discontinued until diamond drilling can be completed. The rehabilitation and reopening of 772 drift north is well under way and should be completed within the next two weeks. It is then planned to drift in a northerly direction to explore the ore shoot exposed in 872 Drift North. The reopening of 772 drift north has exposed some very good ore and it appears quite logical that a considerable tonnage of high grade mine ore has been left on this level.

Respectfully submitted,

Edward L. Halsten - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1955 Docket No. DMEA 1219 Amended Contract No. [illegible]
Operator's Name The Glidden Company RECEIVED Minerals
Address Cleveland, Ohio JUL 25 1955
Contract Amount, $ No participation for month of June 1955 Government Participation Amount, $ None

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling 300 Adit	—	14,315.00	14,315.00			
Underground Diamond	—	31,350.00	31,350.00			
Bulldozing						
Exploration 370 Level	None	48,906.00	48,906.00			
Crosscutting 370 "	None	63,594.00	63,594.00			
Drifting						
Rehabilitation 370 "	—	12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	None	170,821.00	170,821.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date July 14, 1955 *Payee THE GLIDDEN COMPANY

Per [illegible] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ — 0 —

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

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GPO 872894

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1955 Docket No. DMEA 1219X Amended Contract No. /
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ No participation for month of June 1955 Government Participation Amount, $ None

RECEIVED JUL 25 1955

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling 300 Adit	—	$14,315.00	$14,315.00			
Unsorting Chart	—	31,350.00	31,350.00			
Bulldozing						
Exploration 870 Level	None	48,906.00	48,906.00			
Crosscutting 870 "	None	63,594.00	63,594.00			
Drifting						
Rehabilitation 870 "	—	12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	None	$170,821.00	$170,821.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date July 14, 1955 *Payee THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ — 0 —

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E-127 in accordance with the terms of the contract.

Signature John L Haine Title Mining Engineer Date 7/18/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer Date 7/18/55

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

ACCOUNTS JUL 20 1955 RECEIVED JUL 25

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1955 Docket No. DMEA 1219X Amended Contract No. _____

Operator's Name THE GLIDDEN COMPANY Minerals _____

Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting		No Government participation for month of June 1955						
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS				$29,285.05				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS				$29,285.05				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date July 14, 1955 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only) John A Warne

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

Form IF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1955 Docket No. DMEA1219X Amended Contract No. E-187

Operator's Name The Glidden Company RECEIVED Minerals

Address Cleveland, Ohio

Contract Amount $ 13.2 ft. @22.50 (50% of 45.00 per ft.) Government Participation JUN 29 1955 Amount, $ 297.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Unwatering shaft		31,350.00	31,350.00			
Drilling						
Reopening Adit		14,315.00	14,315.00			
Bulldozing		48,906.00	48,906.00			
Crosscutting						
Drifting 13.2 ft.	594.00	63,000.00	63,594.00			
Rehabilitation 870		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$594.00	$170,227.00	$170,821.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 6/11/55 *Payee The Glidden Company

By [signature] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 297.00

Signature [signature] (Authorized Certifying Officer)

Date Vou. No. SF-DMEA-35

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature John H. Warne Title Mining Engineer Date 6/21/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature J. Richter Title Executive Officer DMEA Field Team Region II Date 6/21/55

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED
JUN 29 1955

Month of May 195 5 Docket No. DMEA 1219X Amended Contract No. _____
Operator's Name The Glidden Company Minerals _____
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft			$89,842.47	627.0			
Winzes Rehab. 870 Level	Ft			61,036.34	904.0			
Drilling: Core Explor. 870 Level	Ft	23282.03		243,457.10	2776.8			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft			34,899.14	1022.5			
TOTAL DISTRIBUTED COSTS		$23282.03		$429,285.05				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$23282.03		$429,285.05				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 6/11/55 Operator The Glidden Company

By Edward L. Halston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Johnson Moore

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF MAY 1955

Docket No.

1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

RECEIVED
JUN 29 1955

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to May 31, 1955	56,250.00
Total Government Participation to Date	$109,257.49

SUBJECT: EXPLORATION 870 Lev

Re[illegible]ng, California
June 11, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

RECEIVED
JUN 29 1955

Advances for May

819 Crosscut West	93 ft.
880 Drift	36 ft.
821 Crosscut West	6 ft.
872 Drift North of 815 Crosscut	69 ft.
822 Crosscut East	86 ft.

819 Crosscut West
This crosscut continued in very broken shear zone material to a point 150 ft. west of 872 Drift. Here strong pyritic mineralization was encountered, and the heading continued in this material to the breast. This mineralization consisted largely of pyrite and quartz, with small amounts of chalcopyrite, and thus far sphalerite has not been found. Due to the extreme hardness and the difficulty in drilling this heading, it was stopped and 880 Drift northwest of 819 crosscut was started.

880 Drift Northwest from 819 Crosscut
This drift, driven on a small shear zone from a point 145 ft. west of 872 drift north, and roughly N 20° West, advanced 36 ft. during the month and is now 69 ft. west of 819 crosscut. A very dense pyritic mineralization has been encountered in this drift, the iron content varying from 3.5% to 24%. To date only a very small amount of copper has been found and zinc, with one exception, has been negligible. However, it is an exceptionally strong mineralized zone and probably a mantle for a copper-zinc ore shoot to the west. While progress has been very slow here due to the extremely hard ground and the difficulty of drilling it, this heading will be continued with the idea of ultimately breaking through and prospecting the country to the west for a zinc ore body indicated in drill hole No. 5.

Drill Hole No. 5
This drill hole has been picked up in 880 Drift Northwest. The coordinates of this hole projected to the 870 level, as reported by Mayer G. Hansen of the Longyear Co., were 20120 north and 18822 east, whereas the true location of the hole is 20170 north and 18840 east. Due to the length of the hole and the difficulty in drilling it, we consider this very good work on the part of the Longyear people.

821 Crosscut West
Only one round was blasted in this crosscut during the month and work here has been abandoned since 880 Drift from 819 Crosscut will pass within 30 ft. of the breast of this crosscut. There is a bad water condition here and it is far better not to disturb it.

872 Drift North
This drift advanced 69 ft. during the month. Considerable faulting was encountered here and also a few stringers of aphanitic andesite were cut, yet the drift failed to show any ore with the exception of a small amount of drag ore in one of the cross faults. Drifting here was temporarily discontinued in order to start 822 Crosscut East.

822 Crosscut East
This crosscut, driven N 85° East from the breast of 872 drift North, advanced 86 ft. in May and is now 154 ft. east of the drift. Here a very badly broken country rock, highly silicified rhyolite, has been encountered. The purpose of driving this drift was to locate the basic dyke on the east since practically all ore occurrences are in shear zones near the contact of the andesite and the rhyolite porphyry. Thus far only a few small

SUBJECT: EXPLORATION 870 Level

stringers of andesite have been cut in the crosscut but near the breast of the crosscut a heavy shear zone has been encountered, and it now appears that the andesite to the east is very close. This crosscut will be continued until the basic dyke is reached.

772 Drift North

The reopening of this old drift has been continued during May and the work has progressed to a point 135 ft. north of 770 crosscut. The zinc ore showing on the west wall has been continuous, thus affording a very nice prospect for a zinc ore body. It is now planned to mechanize this level and step up progress while diamond drilling is under way on the 870 level.

The total lineal footage of drifting and crosscutting left under our DMEA contract amounted to 13.2 ft. Hence, this part of the contract is now complete and there only remains the diamond drilling on the 870 level. We hope to have this drilling under way in the very near future.

We are enclosing maps of the 870 level which were brought up to date June first.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

Form DIF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April 1955 Docket No. DMEA 1219X Amended Contract No. [illegible]
Operator's Name The Gibson Company Minerals [illegible]
Address Cleveland, Ohio
Contract Amount, $ 289.8 ft. @ 50% of 45 per ft. or 289.8 ft. @ 22.50 Government Participation: 50 % Amount, $ 6520.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Rehabilitation 300 Adit		$14,315.00	$14,315.00			
Drilling Unwatering Shaft		31,350.00	31,350.00			
Bulldozing 147.8 ft.	6,651.00	42,255.00	48,906.00			
Crosscutting 142 ft.	6,390.00	56,610.00	63,000.00			
Drifting Rehabilitation 870		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Totals	$13,041.00	$157,186.00	$170,227.00			
~~Totals~~						

I certify that the above bill is correct and just and that payment therefor has not been received.

Date May 12, 1955 *Payee THE GIBSON COMPANY

Per [illegible] Title MANAGER OF MINES

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 6520.50

Lloyd H. Sjolander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

Date MAY 23 1955 Vou. No. SF DMEA-31

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible]-E187 in accordance with the terms of the contract.

Signature John D. Wayne Title Mining Engineer Date May 16, 1955

John D. Wayne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker Title Executive Officer DMEA Field Team Region II Date May 16, 1955

S. Ricker

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1955 Docket No. DMEA 1219? Amended Contract No. x Idm-2167
Operator's Name The Gladden Company Minerals Zinc-Copper
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts: Dewatering Shaft	Ft	-	-	89,842.47	627.0	50.00	650	50.00
Winzes: Rehab. 870 Level	Ft	-	-	61,036.34	904.0	14.00	1000	14.00
Drilling: Core: Exploration 870 Level	Ft	22102.06	289.8	220,175.07	2486.8	45.00	2500	45.00
Churn								
Auger								
Stripping						9.00	5279.35	9.00
Trenching						9.00	9000	9.00
Test Pits								
Roads and Trails: Reopening 300 Adit	Ft	-	-	34,899.14	1022.5	14.00	975	14.00
Total Distributed Costs		$22102.06	289.8	$406,003.02				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$22102.06		$406,003.02				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 12, 1955 Operator The Gladden Company

Richard L. Hilston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

The costs and quantity of reopening the 300 adit exceed allowable amount of contract - 975 ft @ $14.00 allowed; but 1022.5 ft performed, or $665.00 excess. Sufficient balance on other items will cover this excess.

John D Warne

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF APRIL 1955

Docket No.
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to April 30, 1955	55,953.00
Total Government Participation to Date	$108,960.49

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
May 12, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

Advances for April	Month	Total Distance
819 Crosscut West	12 ft.	101 ft.
821 Crosscut West	135.8 ft.	145.8 ft.
872 Drift North	142 ft.	436 ft.
Previously reported North Side		1486.8 ft.
Balance due under DMEA Contract		13.2 ft.

819 Crosscut West
89 - 101 ft. Advance for the month: 12 ft. Crosscutting was resumed here the last week in the month. The water had then drained out sufficiently so that our pumping equipment was not overtaxed. The crosscut continued in a very badly broken shear zone where iron and quartz with a small sprinkling of chalcopyrite was encountered.

821 Crosscut West
10 - 145.8 ft. Advance for the month: 135.8 ft. This crosscut, driven roughly N 15° W, shows a very badly broken, highly altered shear zone in the first 100 ft. From this point to the breast of the crosscut, a considerable amount of pyrite and quartz was encountered, also a very heavy flow of water near the breast, thus necessitating suspension of operations here until the water could drain out. As soon as possible, operations will be resumed here and the crosscut will be continued until the low grade copper found in the breast of 819 Crosscut is cut. Drifting to the northwest on this ore will then be undertaken and work in 819 Crosscut will be abandoned for the present.

872 Drift North of 815 Crosscut
This drift had a total advance of 142 ft. during the month. Here a very heavy unmineralized shear zone was penetrated with the idea of picking up the contact between the basic dike and the alaskite porphyry on the west. Nothing of any great importance was encountered in this portion of the drift. However, it is necessary to continue this heading in a general northerly direction for at least another 100 ft. When this point is reached, it is planned to drive a crosscut in a due westerly direction to prospect the copper ore exposed in drill hole No. 4.

772 Drift North
Work of reopening this old drift has continued during the month. Here a small amount of very good zinc ore has been found on the west wall of the drift. This old heading is very badly caved, resulting in very slow progress.

We are enclosing maps of the 870 Level which were brought up to date May first.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-304 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Amended

Month of March 1955 Docket No. DMEA 1219 Amended Contract No. Idm-E187
Operator's Name The Glidden Company Minerals Zinc-copper
Address Cleveland, Ohio
Contract Amount $ 247 ft. @ 50% of 225.00 per 100% of 247 ft. @ 22.50 per ft. Government Participation: 50 % Amount, $ 5557.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Deepening 300 Adit		14,315.00	14,315.00			
Drilling						
Sinking shaft		31,350.00	31,350.00			
Bulldozing						
Crosscutting 112 ft.	5040.00	37,215.00	42,255.00			
Drifting 135 ft.	6075.00	50,535.00	56,610.00			
Rehab. 670 Level		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	11115.00	146,071.00	157,186.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 12, 1955 Payee The Glidden Company

Per [signature] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 5557.50

[signature]
Authorized Certifying Officer

Signature (Authorized Certifying Officer)

Date APR 2 1 1955 Vou. No. SF-DMEA-30

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-C197 Amended in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date April 14, 1955

John D. Warne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature J. Ricker Title Executive Officer DMEA Field Team Region II Date April 14, 1955

J. Ricker

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Amended

Month of March 1955 Docket No. DMEA 129K Amended Contract No. Idm-E187

Operator's Name The Glidden Company Minerals Zinc-copper

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft			89,842.47	627'	143.29	650'	32,500.00
Rehab. 870 Level	Ft			61,086.34	904'	67.59	1000	14,000.00
Exploration 870 level	Ft	21480.66	247'	198,073.01	2197'	90.16	2500'	112,500.00
Drilling: Core								
Churn								
Diamond Drilling:								
Auger								
Stripping Stage II							5299.93	47,699.94
Trenching Stage II							4000	36,000.00
Test Pits								
Roads and Trails								
Reopening 300 Drift	Ft			34,899.14	1022.5'	34.13	975	13,650.00
Total Distributed Costs		21480.66	247'	383,900.96				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial, Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		21480.66		383,900.96				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date April 12, 1955 Operator The Glidden Company

By Edward J. Barber Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

Costs as submitted above by operator are actual operating costs. His unit actual costs, authorized contract units and costs are inserted in pencil.

Edmund Harris

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF: MARCH 1955

Docket No.
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to March 31, 1955	49,432.50
Total Government Participation to Date	$ 102,439.99

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
April 12, 1955

DMEA Reference:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

Advances for March	Month	Total Distance
819 Crosscut West	49 ft.	89 ft.
820 Crosscut Northeast	53 ft.	53 ft.
821 Crosscut West	10 ft.	10 ft.
872 Drift North	96 ft.	292 ft.
876 Drift South	27 ft.	74 ft.
878 Drift North	12 ft.	12 ft.
Total for month	247 ft.	

819 Crosscut West
40 - 89 ft. This crosscut advanced 49 ft. during the month of March, making the total length of the crosscut 89 ft. The ground encountered was very badly broken, showing considerable quartz and iron, with a very small amount of zinc. Due to a very heavy flow of water, it was necessary to discontinue work here for a period of one week in order to let the water drain out. Crosscutting will be resumed here in the very near future.

820 Crosscut Northeast
0 - 53 ft. This crosscut, driven in a northeasterly direction from a point 227 ft. north of 815 crosscut was in typical shear zone material throughout. The basic dike on the east shows in the breast of the crosscut. The only thing of importance encountered here was 8 ft. of copper and zinc ore showing on the north side of the crosscut, approximately 35 ft. east of the drift. Later developments proved that this ore was an inclusion and was not continuous.

821 Crosscut West
0 - 10 ft. This crosscut was started from a point roughly 290 ft. north of 815 crosscut East and during the month of March advanced 10 ft., showing shear zone throughout. Nothing of importance was encountered here but the crosscut will be continued well into the country to the west until the solid alaskite porphyry is cut.

872 Drift North of 815 Crosscut East
196 - 292 ft. This drift advanced 96 ft. during the month, making a total of 292 ft. north of the crosscut. The drift was driven in a roughly northerly direction, showing shear zone throughout. This shear zone is highly altered and is badly cut with faulting. No ore was encountered in this portion of the drift. The present plan is to drive the drift north until the basic dike is cut and then to drift on the contact between the dike and the shear zone.

876 Drift South
47 - 74 ft. This drift was continued during the month but since it failed to show any ore of importance, work here was discontinued and the heading abandoned.

878 Drift North
0 - 12 ft. This drift was started on the ore exposed in 820 crosscut northeast, it being our idea to determine whether or not this ore was continuous or just a little bunch of ore in the shear zone. The ore only continued a short distance north of the drift and was completely cut out so the heading was abandoned.

This north country presents rather a complex problem and one which will take a little time to solve since it is necessary to get out sufficient headings to determine the extent of the shearing in this locality. It now appears that the shear zone, is very much larger here than it was farther south, and while it has shown very little mineralization thus far

yet it is highly altered and badly faulted. No.4 drill hole, approximately 200 ft. to the north, showed a sulphide zone at a slightly higher elevation and for this reason it is quite necessary to continue 872 drift in this north country.

772 Crosscut East

The reopening of this crosscut has been completed to 772 drift north and work is now under way on the rehabilitation of the drift. The pump station on 770 level has also been retimbered and the pump now in use on 770 station will be installed in the pump station, thus providing more room for the handling of cars on 770 station. This work is not part of our DMEA contract but is carried entirely by The Glidden Company.

We are enclosing maps of 870 level which were brought up to date April 3rd. We are also enclosing complete assays for 872 Drift North of 814 Crosscut West. The missing gold and silver assays are included in this statement.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 195 5 Docket No. DMEA 1219X Amended Contract No. Idw EE87

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

Contract Amount $ 268 ft. @ $45.00 per ft. $12,060.00 Government Participation: 50 % 50% 268 ft. @ $22.50 Amount $ 6030.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Reopening 300 Adit		14,315.00	14,315.00			
Unwatering Shaft		31,350.00	31,350.00			
Crosscutting 75 ft.	3,375.00	33,840.00	37,215.00			
Drifting 193 ft.	8,685.00	41,850.00	50,535.00			
Rehab. 870 Level		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	12,060.00	134,011.00	146,071.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date March 12, 1955 Payee THE GLIDDEN COMPANY

Per Robert L. Nelston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 6030.00

Signature
(Authorized Certifying Officer)

Date MAR 22 1955 Vou. No. SF-WMCA-26

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature John D. Warne Title Mining Engineer Date March 16, 1955

John D. Warne

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Region II Date March 18, 1955

S. Ricker

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R51.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1955 Docket No. DMEA1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising Unwatering	Ft			89,842.47	627'			
Shafts Rehab. 870 Level	Ft			61,086.34	904'			
Winzes Exploration 870 "	Ft	21414.00	268'	176,592.35	1950'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails Reopening 500 Adit	Ft			34,899.14	1022.5			
TOTAL DISTRIBUTED COSTS		21414.00	268'	362,420.30				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		21414.00		362,420.30				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

March 12, 1955 The Glidden Company
Date Operator

Edward L. Malston Manager of Mines
Title

REMARKS:

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF: FEBRUARY 1955

Docket No.
1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to February 28, 1955	43,875.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$96,882.49

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
March 12, 1955

DMEA REFERENCE
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-X187

Advances for the month of February	Month	Total Distance
817 Crosscut West	26 ft.	87 ft.
818 Crosscut East	9 ft.	9 ft.
819 Crosscut West	40 ft.	40 ft.
872 Drift North of 815 Crosscut East	86.5 ft.	195.50 ft.
874 Drift Northwest	59 ft.	59 ft.
876 Drift South	47.5 ft.	47.50 ft.
Total - February	268.0 ft.	

817 Crosscut West
61 - 87 ft. - advance 26 ft. This portion of the crosscut continued to show very low grade copper and zinc ore with nothing of any great importance. Near the breast of the crosscut there was a rather encouraging showing so it was decided to drift to the northwest on this stringer. The breast of this crosscut offers a very good location for a diamond drill hole for some considerable distance to the west.

874 Drift Northwest of 817 Crosscut
0 - 59 ft. This drift was driven to the northwest for a total distance of 59 ft. and showed some low grade copper and zinc ore the entire distance. Copper assays varied from .05% to 1.3%, and zinc assays from .27% to 1.20%. However, the ore failed to improve as the drift advances so it was abandoned. It is interesting to note that this drift is within 15 ft. of the projection of one of the diamond drill holes and judging by the water encountered here, it is quite apparent that the diamond drill hole is actually close at hand.

818 Crosscut East of 872 Drift North.
0 - 9 ft. This crosscut was driven into the footwall of the ore shoot from a point 165 ft. north of 815 crosscut for the purpose of prospecting hanging wall stringers. Nothing of importance was encountered here so the crosscut was abandoned.

819 Crosscut West of 872 Drift North. 0 - 40 ft.
This crosscut was also driven in a northwesterly direction from a point approximately 165 ft. north of 815 crosscut east for the purpose of providing a car pocket to expedite tramming and also to prospect the adjacent territory. Some low grade copper and zinc ore has been found but it is too low to be of any great importance. This crosscut will be continued due west from the present breast since it is more than 200 ft. north of 817 crosscut and this territory should be fully explored. By extending this crosscut west 120 ft. it will be very close to diamond drill hole No. 3. Considerable water has been encountered here but thus far it has not caused any difficulty in drifting operations.

872 Drift North of 815 Crosscut East.
86.5 ft. - 195.50 ft. This drift continued on ore for the entire distance showing some exceptionally good copper-zinc ore. From 819 crosscut north to the breast, the ore was very badly broken and considerable faulting has been encountered here. The total length of the ore shoot from 814 crosscut north is approximately 300 ft. The drift is now passing through a very badly broken up section of ground but it appears that the heading has now been driven far enough north so that crosscuts can be driven both east and west to pick up the extension of the ore shoot north of the faulting. This work is now well under way.

[illegible]

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

[redacted]

876 Drift South of 814 Crosscut West
0 - 47.5 ft. This drift was started from a point roughly 40 ft. west of 872 drift north and was driven in a southerly direction from 814 crosscut west. The breast is now 69 ft. south of the crosscut. A few bunches of good copper-zinc ore were found yet the ore was not continuous and did not improve as the work advanced, so drifting here has been abandoned.

572 Drift North of 570 Station
The work of reopening this old drift was continued during the month and the drift is now open to the north breast. It is now planned to reopen one of the old crosscuts in order to sample an exposure of zinc ore reported at this point. Our findings to date are that the old company had sorted out a considerable amount of zinc ore and left it in the gobs during the copper mining days and the old reports outlining zinc ore bodies on this level have been somewhat verified. This is not part of our DMEA contract but the work is carried entirely by The Glidden Company.

770 Crosscut South
The reopening of 770 Crosscut South and 772 drift North has been started since it is our plan to reopen the old drift for a distance of 750 ft. to the north breast, and then attempt to pick up the ore shoot exposed in 872 drift north on the 770 level. This will mean drifting to the northwest for a distance of approximately 200 ft. to get directly under the 872 ore body. However, the ore shoot exposed in 872 Drift north is dipping to the north and should this dip continue up to the 770 level, the new work will be much less. This is also not part of the DMEA contract but is for the account of The Glidden Company.

We are enclosing maps of the 870 Level which were brought up to date March 6.

We are also including assays results which are complete up to 149 ft. north of 815 crosscut and copper and zinc assays from this point to a point 206 ft. north. The missing gold and silver assays will be reported in our next monthly report.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

MIE-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 23 1955

Month of January, 1955 Docket No. DMEA1219X Amended Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address CLEVELAND, OHIO
Contract Amount, $ 273 ft. @ $45 per foot $12,285.00. 50% (22.50 per ft.) Government Participation: 50 % Amount, $ 6142.50 $6142.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Reopening 300 Adit		14,315.00	14,315.00			
Unwatering shaft		31,350.00	31,350.00			
Crosscutting 164 ft.	7380.00	26,460.00	33,840.00			
Drifting 109 ft.	4905.00	36,945.00	41,850.00			
Rehabilitation		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	12,285.00	121,726.00	134,011.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Feb. 11, 1955 Payee THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

* When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$6142 50

Signature Lloyd H. Stewart, Authorized Certifying Officer
(Authorized Certifying Officer)

Date FEB 21 1955 Vou. No. SF-DMEA-4

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Dm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Supervising Mining Engineer Date Feb/ 15, 1955.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker Title Executive Officer DMEA Field Team Region II Date February 17, 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED FEB 28 1955

Month of January 1955 Docket No. DMEA 1219X Amended Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address CLEVELAND, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft			89,842.47	627'			
Winze Rehab. 870 Level	Ft			61,086.34	904'			
Drilling: Core Exploration 870 Dev.	Ft	22903.18	273'	155,178.35	1682'			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft			34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		22903.18	273'	341,006.30			TOTAL COSTS AUTHORIZED BY CONTRACT	
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$22903.18		$341,006.30				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Feb. 11, 1955 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MONTH OF JANUARY 1955

Docket No.
1219X Amended

Operator: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to January 31, 1955	37,845.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$90,852.49

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
February 11, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E 187

Advances for the month of January	Month	Total Distance
872-14 Crosscut West of 872 Drift North	47 ft.	242 ft.
817 Crosscut West of 872 Drift North	61 ft.	61 ft.
815 Crosscut East	44 ft.	44 ft.
816 Crosscut South	12 ft.	12 ft.
872 Drift North of 815 Crosscut East	109 ft.	109 ft.
Total - January	273 ft.	

872-14 Crosscut West from 872 Drift North
195 ft. - 242 ft. From a point 202 ft. south where a mineralized fault was encountered, the direction of the crosscut was changed from South 85° West to roughly S 65° West in order to follow this mineralization. There was no appreciable increase in the amount of copper and zinc encountered here, the copper assaying from 0.10% to 0.50%, the zinc from 0.07% to 1.00%, with gold at .01 oz. and silver about .20 oz. Work here was discontinued in the early part of the month in order to start 817 crosscut but should be resumed at a later date since there is a possibility of encountering a parallel ore shoot within the alaskite porphyry. This is a very good heading for diamond drilling since it is of utmost importance to explore the contiguous ground to the west.

817 Crosscut West of 872 Drift North
0 - 61 ft. This crosscut was started from a point in 872 drift north, roughly 80 ft. from 814 crosscut and was driven in a general direction of North 75° West. The purpose of the crosscut was to prospect the ground directly west of the heavy pyritic mineralization encountered in 872 drift north. With the exception of a small stringer of copper ore showing on the south side of the crosscut, a short distance west of 872 drift, little of importance has been encountered here notwithstanding the fact that this shear zone does show some copper and zinc throughout. A drift on low grade copper-zinc ore has now been started from the breast of the crosscut and this will be continued to the north for some little distance.

815 Crosscut East from 872 Drift North of 872-14 Crosscut West
0 - 44 ft. This crosscut was driven in the early part of January and was fully discussed in our narrative of January 12.

816 Crosscut South
0 - 12 ft. This crosscut was driven in a southeasterly direction for a distance of 12 ft. southeast of 814 crosscut. Only hard, barren quartz and iron was encountered here, so the crosscut has been abandoned.

872 Drift North of 815 Crosscut East
0 - 109 ft. This drift, driven in a northerly direction from 815 crosscut, has uncovered some very good copper and zinc ore and, as a matter of fact, we consider it the most important discovery in the Bully Hill area since 1910. This is virgin territory and it appears quite logical that an ore body of some magnitude has been found. The breast of the drift is now 149 ft. north of the crosscut and the breast is in very good ore. While very low grade spots have been encountered in our drifting operations, due to the fact that the work was carried too far to the west, yet the ore from 814 crosscut north is continuous and is now 250 ft. long. Considerable faulting has been encountered here, and while the displacements have not been great, yet it has resulted in rather a hazardous heading, requiring very close timbering, since the open ground very quickly air slakes, resulting in the falling

[illegible]

[illegible]

[illegible]

of large slabs of ore and waste. Crosscuts will immediately be started from the breast of this drift to prospect the surrounding contiguous ground since it has not been possible in drifting operations at all times to break the full width of the ore.

Rehabilitation and reopening of 572 Drift North has been continued and has now reached a point 200 ft. North of 570 station. To date some very good zinc ore has been found and it is quite apparent that the old company in the mining of copper sorted out and gobbed the zinc ore, and made no attempt to mine zinc ore which did not contain copper. It is now planned to reopen the 770 level to the north with the idea of continuing 772 drift north into the country directly above the ore deposit in 872 drift north.

We are enclosing maps showing the new work on the north side of 870 level. Also, one copy of all samples analyzed to date from 872 drift north, 814 crosscut, 815 crosscut and 817 crosscut. Copper and zinc determinations were made here in our laboratory and silver and gold determinations by Abbot A. Hanks, San Francisco. The latter are not complete but the balance of the samples are now being sent to San Francisco for gold and silver determinations and will be presented as soon as received. While the silver values are quite characteristic of typical Bully Hill ore, yet gold values in this area have been exceptionally high. In discussing the matter with your Mr. Warne, he said it would be a very easy matter to make copies of these assay reports so we will depend on you to make sufficient copies to accompany the enclosed maps.

Respectfully submitted,

Edward L. Ralston, Manager of Mines

ELR:HM

Form MF-194 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB - 1 1955

Month of December, 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: 50 % Amount, $6165.00
~~274 ft. @ 50% of $45.00 per ft. or 274 ft. @ $22.50 ft.~~

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Reopening 300 Adit		14,315.00	14,315.00			
Unwatering BH Shaft		31,350.00	31,350.00			
Crosscutting 169 ft.	7605.00	18,855.00	26,460.00			
Drifting 105 ft.	4725.00	32,220.00	36,945.00			
Rehabilitation 870		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$12,330.00	109,396.00	$121,726.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 12, 1955 Payee THE GLIDDEN COMPANY

Per Edward L. Balaton Title MANAGER OF MINES

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 6165 00

Lloyd H. Sjolander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

JAN 26 1955 Date Vou. No. SF-DMEA-19

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature R. E. Johnson Title Mining Engineer Date Jan. 17, 1955.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Micker Title Executive Officer DMEA Field Team Region II Date January 18, 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MV-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB - 1 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1954 Docket No. DMEA 1219X Amended Contract No. _____
Operator's Name The Glidden Company Minerals _____
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering BH	Ft			$89,842.47	627'			
Rehabilitation 870	Ft			61,086.34	904'			
Winzes								
Exploration 870 Level	Ft	21979.65	274'	132,275.17	1409'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft			34,899.14	1022.5'			
Total Distributed Costs		21979.65	274'	318,103.12			Total Costs Authorized by Contract	
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$21979.65		$318,103.12				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Jan. 12, 1955 Operator The Glidden Company

By Edward L. Ralston Title Manager of Mines

Remarks: _____

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF DECEMBER 1954

Docket No.
DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

THE INTERIOR
Administration
1 1955

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to December 31, 1954	31,702.50
TOTAL GOVERNMENT PARTICIPATION TO DATE	$84,709.99

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
January 12, 1955

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-H187

Advances for the month of December:	Month	Total Distance
872 Drift North of 870 Station	8 ft.	845 ft.
872-14 Crosscut West from 872 Drift North	169 ft.	195 ft.
872 Drift North of 872-14 Crosscut West	97 ft.	97 ft.
Total - December	274 ft.	

872 Drift North of 870 Station
837 ft. - 845 ft. Drift in basic dike (aphanitic andesite). Nothing of importance was encountered here and drifting was discontinued the first week in December.

872-14 Crosscut West from 872 Drift North
26 ft. - 195 ft. This crosscut continued in basic dike up to a point 74 ft. west of the drift where the shear zone was encountered. The crosscut passed through 55 ft. of shearing and then penetrated alaskite porphyry, and continued in this material for the remaining distance. The shear zone was slightly mineralized, showing very small amounts of copper and some zinc. The first ten feet on the north side of the crosscut analyzing 0.62% copper and 3.29% zinc. Silver and gold assays have not been made but will be determined later. This crosscut has been continued west to a point 202 ft. west of 872 drift where a slightly mineralized fault zone was encountered. At this point the crosscut was turned slightly to the southwest to follow the fault zone and the breast is now 229 ft. south of the drift. The material encountered here shows considerable quartz, some pyrite and full width breast samples analyzed from .10 to .40% copper and 0.75 to 1.13% zinc.

The alaskite porphyry has not been prospected for a distance of approximately 500 ft. north of the shaft and it is highly essential that a heading be run out here for some considerable distance. The finding of this slightly mineralized material is important and may lead to a highly mineralized zone. This heading will be continued.

872 Drift North of 872-14 Crosscut West
0 - 97 ft. This drift was started on the hanging wall of the shear zone from a point 74 ft. west of 872 drift north of 870 station, and driven roughly North 25° West for 85 ft. The hanging wall (basic dike) at this point bears North 10° West, thus the drift as it advanced was leaving the basic dike. Some very good copper and zinc ore was encountered in the drift and the drift continued in ore to a point approximately 66 ft. northwest of the crosscut. From this point to the breast, a very dense mineralized zone was encountered, the mineralization consisting largely of quartz and pyrite but showing very small percentages of copper and zinc. In the very near future a crosscut will be started from the breast of this drift in a due westerly direction to prospect the shear zone to the west of the pyritic zone. Copper assays for this ore vary from 1.66% to 4.66%, and zinc assays from 4.28% to 13.58%.

872-15 Crosscut East from 872 Drift North of 872-14 Crosscut West
This crosscut was started in a general North 30° East direction from a point 93 ft. north of 872-14 crosscut during the first week in January and is now 50 ft. long. The west 22 ft. of the crosscut is in very hard material consisting largely of quartz and pyrite with very low percentages of copper and zinc. From a point 22 ft. east to the breast of the crosscut, some very fine copper and zinc ore was encountered, the north side of the crosscut showing ore throughout. On the south side of the crosscut, the basic dike was encountered 49 ft. east. The north side of the crosscut shows 20 ft. of ore which analyzes 2.84% copper and 10.26% zinc. A width of 10 ft. included in this 20 ft. belt analyzes 4.67% copper and 19.15% zinc. This ore is typical fault ore and there is considerable

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

evidence of strike faulting. Drifting to the north has already been started but has not advanced far enough to make an accurate determination of the character or size of this ore deposit. Hence, before a definite statement can be made, considerable drifting to the north should be done, and since this discovery is in virgin territory, 772 drift north should be reopened and continued on into this territory and an upraise should be driven between the two levels. While this discovery is very important, yet in a fault zone of this type good engineering practice does not permit the projection of the ore above or below 870 sill.

The rehabilitation and reopening of old 572 drift north has been started since there is very strong evidence at hand that a zinc ore body of some magnitude was uncovered there in the early operating days of the Bully Hill Mining and Smelting Co. While this is not a part of the DMEA contract, yet we feel that the matter should be called to your attention.

We are enclosing plan maps of the north end of 870 level. An attempt has been made to follow out the old numbering system established around the turn of the century by the old Bully Hill Mining and Smelting Co., yet due to so much crosscutting, this system is becoming somewhat ambiguous and future work may necessitate the changing of this system.

Respectfully submitted,

Edward L. Ralston — Manager of Mines

ELR:HM

Form [illegible]-104 (Rev.)
(April 19[illegible])

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 30 1954

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November 195 4 Docket No. DMEA 1219X Amended Contract No. E-187
Operator's Name THE GLIDDEN COMPANY Minerals Zinc - Copper
Address CLEVELAND, OHIO
Contract Amount, $ 212 ft. @ 50% of $45. per ft. (212 ft. @ $22.50) Government Participation 50 % Amount, $ 4770.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contracts:						
Short Form Drilling						
Reopening 300 Adit		$14,315.00	$14,315.00			
Unwatering Shaft		31,350.00	31,350.00			
Bulldozing 86 ft.	3,870.00	14,985.00	18,855.00			
Crosscutting 126 ft.	5,670.00	26,550.00	32,220.00			
Drifting						
Rehab. 870 Level		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$ 9,540.00	$99,856.00	$109,396.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Dec. 13, 1954 *Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 4770 00

Signature Wm. J. Sleicher
Authorized Certifying Officer
(Authorized Certifying Officer)

Date DEC 21 1954 Vou. No. SF-DMEA-16

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Mm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div., Region III Date Dec. 16, 1954.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer Date 12/17/54

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MM-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEC 17 1954
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 30 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering bil	Ft			89,842.47	627'			
Winzes XX Rehab. 870 Level	Ft.			61,086.34	904'			
Drilling: Core Exploration 870 "	Ft.	19732.30	212'	110,295.52	1135'			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails Reopening 300 adit	Ft			34,899.14	1022.5'			
Total Distributed Costs		19732.30	212'	$296,123.47				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		~~$19732.30~~		~~$296,123.47~~				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Dec. 13, 1954 Operator THE GLIDDEN COMPANY

By Edward L. Fulton Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF NOVEMBER 1954

Docket No.
DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to November 30, 1954	25,537.50
TOTAL GOVERNMENT PARTICIPATION TO DATE	$78,544.99

4

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
December 13, 1954

DMEA REFERENCE:
Docket No. 1219x Amended
Commodity: Zinc-Copper
IDM-K187

871 Drift South of 870 Crosscut
590 ft. - 607 ft. This portion of the drift, which is along the shear zone, shows very little mineralization. It appears that there has been a splitting up of the shear zone in this locality since there is a very abrupt change in the strike of the drift, that is, from slightly northwest to North 40° West. On resumption of operations here, it will be necessary to crosscut to the southwest.

871-4 Crosscut NW
0 - 54 ft. This crosscut was driven from a point 600 ft. south of 870 crosscut and was driven for the purpose of exploring a heavily mineralized zone. The breast shows a parallel shear zone across the crosscut. The mineralization encountered here consisted largely of quartz and iron, with a very small amount of chalcopyrite. At a later date, this crosscut will be continued on through the shear zone showing in the breast of the crosscut.

871-4-1 Crosscut NE
0 - 12 ft. This crosscut was driven from a point 40 ft. northeast of 871 drift south and was driven in a southeasterly direction for a distance of 12 ft. to prospect stringers of quartz and iron showing in 871-4 crosscut. Nothing of any great importance was encountered here.

871-4-2 Crosscut NW
0 - 11 ft. This crosscut was driven from a point 40 ft. northeast of 871 drift south, directly opposite 871-4-1 crosscut. Rather a dense mineralization was encountered in the crosscut, yet it was mostly quartz and iron with very little copper.

Exploration work south side of 870 Level
Since July first, when this work was undertaken, the following advances have been made:

871 drift south	607 ft.
871-1 Crosscut West	94 ft.
871-2 Crosscut West	150 ft.
871-3 Crosscut East	89 ft.
871-4 Crosscut NW	54 ft.
871-4-1 Crosscut NE	12 ft.
871-4-2 Crosscut NW	11 ft.
Total	1017 ft.

Under our DMEA contract, 1000 ft. of work was authorized on the south side of 870 level. This work was undertaken July first and the following advances have been reported under the DMEA Contract:

July	209 ft.
August	237 ft.
September	250 ft.
October	227 ft.
November	77 ft.
Total charged under DMEA Contract 1219X	1000 ft.

While our total advance on the south side was actually 94 ft. for the month of November, only 77 ft. is charged.

SUBJECT: EXPLORATION 870 Le
Bully Hill Mine

870 Drift North from 870 Crosscut

728 ft. - 837 ft. Drifting operations were resumed here the first week in November, from the breast of the old drift which was then 728 ft. north of 870 crosscut. The old company had followed in on a very small shear zone which, in our opinion, was much too far to the east in order to explore the shear zone on which the old copper stope occurred. Hence, in our drifting operations, the drift was gradually turned in a general North 50° West direction. This drift first penetrated a very hard, cherty porphyry for approximately 25 ft. and then into basic dike. The drift was continued within a few feet of the projection of A1-2 drill hole, and while the drill hole was not found, yet there is evidence, due to a flow of water, that it is very close at hand. Drifting operations were discontinued here in the early part of December. The footage of drift reported during November amounted to 109 ft.

872-14 Crosscut West

0 - 26 ft. This crosscut was driven South 85° West from a point 88 ft. north of 872-11 crosscut East. The crosscut was driven for the purpose of cutting the shear zone. At this date (12/13/54) it has been driven 115 ft. The shear zone was cut 74 ft. west of the drift and to date the crosscut has not reached the footwall of the shear zone which has now penetrated for a distance of 41 ft. At this point the shear zone is very well mineralized, showing quartz, some gypsum, pyrite, with some chalcopyrite and sphalerite. Drifting along the hanging wall of the shear zone has already been started. For the various headings driven during the month of November, the following are included in the form MF 104:

871 drift south and crosscuts	77 ft.
872 drift north	109 ft.
872-14 crosscut west	26 ft.
Total advance November	212 ft.

It is our plan to do sufficient repair work on the south side of 870 level, where the ground is exceptionally heavy, to keep the workings open and in good condition so that diamond drilling can be undertaken here. On the north side, 872 drift north of 872-14 crosscut west will be continued along the hanging wall of the shear zone, with occasional crosscuts into the shear zone. 872-14 crosscut west will be continued until the footwall of the shear zone has been reached.

We are enclosing plan map showing the 870 level brought up to date December 5th.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

M

Form [redacted] (Rev.) [redacted]7(1 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6[illegible]0-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

DEC 1 1954

Month of October 1954 Docket No. DMEA 1219X Amended Contract No. M

Operator's Name THE GLIDDEN COMPANY Minerals

Address CLEVELAND, OHIO

Contract Amount, $ 227 ft. @ 50% of $45.00 per foot Government Participation: 50 % Amount, $ 5107.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Reopening Adit		$14,315.00	$14,315.00			
Unwatering shaft		31,350.00	31,350.00			
37' Crosscutting 871-3 E	$1665.00	13,320.00	14,985.00			
190' Drifting 871 Drift S	$550.00	18,000.00	26,550.00			
Rehabilitation 870		12,656.00	12,656.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$10,215.00	$89,641.00	$99,856.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 11/11/54 *Payee THE GLIDDEN COMPANY

Signature [illegible] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$5107.50

Signature Lloyd H. Stelander, Authorized Certifying Officer (Authorized Certifying Officer)

Date DEC 1 1954 Vou. No. SF-DMEA-13

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-2107 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Date Nov. 15, 1954.

A. C. Johnson

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Region III Executive Officer DMEA Field Team Region III Date November 16, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MEF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS — DEPARTMENT OF THE INTERIOR — Defense Minerals Administration — NOV 16 1954 — DEC - 6 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1954 Docket No. DMEA 1219X Amended Contract No. _____

Operator's Name THE GLIDDEN COMPANY Minerals _____

Address CLEVELAND, OHIO

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft			89,842.47	627'			
Rehabilitation 870	Ft			61,086.34	904'			
Exploration 870 Level	Ft	22,638.72	227'	90,563.22	923'			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft			34,899.14	1022.5'			
Total Distributed Costs		$22,638.72	227	$276,391.17				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$22,638.72		$276,391.17				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 11/11/54 Operator THE GLIDDEN COMPANY

Per Edward L. Halston Title Manager of Mines

Remarks: _____

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF OCTOBER 1954

Docket No.
DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - Exploration 870 level to October 31, 1954	20,767.50
TOTAL GOVERNMENT PARTICIPATION TO DATE	$73,774.99

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

Redding, California
November 11, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

871 Drift South of 870 Crosscut
400 ft. to 590 ft.

Advance for October: 190 ft. This drift has been driven along the hanging wall shear zone, the general direction being slightly southwest, with the exception of the southern portion which bears off very sharply to the southwest. A considerable portion of this drift has shown very nice mineralization, consisting largely of quartz, pyrite, with varying amounts of chalcopyrite. Very little sphalerite has been noted. Daily breast samples have been taken for the entire distance and are now being analyzed in our laboratory. Results will be reported at a later date when an assay plan map will be filed. Near the south breast of the drift a very heavy mineralized zone has been encountered, and also some cross fractures. A crosscut from a point 600 ft. south of 870 crosscut has been started in a northwesterly direction to explore this mineralized zone, and this is now well under way.

871-3 Crosscut East of 871 Drift South
52 ft. to 89 ft.

Advance for October - 37 ft. This crosscut was continued well into the hanging wall of the shear zone. Nothing of importance was encountered here, the crosscut having passed through the alaskite porphyry into what appears to be quartzite. The meta basalt encountered north of 870 crosscut has not been found here. All possibilities of uncovering an additional ore shoot to the east of 871 drift south have been pretty well covered. However, the crosscut does provide a very nice cross-section of this country and will be valuable in mapping the geology.

872 Drift North of 870 Crosscut.
Drifting operations were resumed here on November first with the idea of exploring the country exposed in drill hole A1-2 and other drill holes to the north and west of this drift. The drift has been turned slightly to the northwest with the idea of cutting the shear zone exposed in the old copper stope. When these shear zones are encountered the drift will be driven along the hanging wall shear zone since nearly all ore shoots thus far worked in the mine have been along this shear zone.

Appended maps show the work done on the 870 level up to November seventh.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $5625.00

50% of $45.00 per ft. 250 ft. = $22.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent / Short Form } Contracts:						
Drilling 870 Level						
Bulldozing						
871-2 Crosscut U Crosscutting 82 ft	3,690.00	7,290.00	10,980.00			
871-3 Crosscut S Drifting 52 ft	2,340.00	-	2,340.00			
871 Drift S 116 ft	5,220.00	12,780.00	18,000.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	11,250.00	20,070.00	31,320.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Oct. 13, 1954 Payee The Glidden Company

Per Edward L. Jackson Title Manager of Mines

When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$5625.00

Floyd M. Sjoberg
Authorized Certifying Officer

Signature (Authorized Certifying Officer)

Date Vou. No. SF-DMEA-9

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title Chief, Mining Div Date October 14, 1954.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: A. [illegible] Johnson Region III Executive Officer

Signature [illegible] Title DMEA Field Form Date October 15, 1954

Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

OCT 26 1954

Month of September 1954 Docket No. DMEA 1219X Amended Contract No. _____
Operator's Name THE GLIDDEN COMPANY Minerals _____
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Sinking: Collar								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Unwatering 3H Shaft	Ft	-	-	89,842.47	627'			
Rehabilitation 870	Ft	-	-	61,086.34	904'			
Exploration 870 Level	Ft	21,511.21	250'	67,924.50	696'			
Reopening 300 Adit	Ft	-	-	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		21,511.21	250'	253,752.45				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		21,511.21	250	253,752.45				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Oct. 13, 1954 Operator THE GLIDDEN COMPANY
By Edward L. Halston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS: Form MF 104 has been corrected in accordance with Mr. H. C. Miller's letter of Sept. 28, 1954.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF SEPTEMBER 1954

Docket No.
DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1951 - December 1952	$23,846.99
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government participation - rehabilitation 870 Level to June 30, 1954	6,328.00
Government participation - Exploration 870 Level to September 30, 1954	15,660.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$68,667.49

SUBJECT: EXPLORATION 870 Lev
Bully Hill Mine

Redding, California
October 13, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

871 Drift South of 870 Crosscut
284 ft. to 400 ft.

Advance September: 116 ft. This drift has continued along the hanging wall shear zone, the general direction being South 15° West. A very nice mineralized zone was exposed for the entire distance, the mineralization consisting largely of quartz, pyrite, and chalcopyrite, with some very good showings of chalcopyrite. Daily breast samples have been taken and results will be reported just as soon as they can be analyzed. Drifting south will be continued during the month of October.

871-2 Crosscut West of 871 Drift South
68 ft. to 150 ft.

September advance: 82 ft. This crosscut continued to show some mineralization up to a point 130 ft. west of 871 drift. Mineralization consisted largely of quartz, pyrite and stringers of chalcopyrite. From a point 130 ft. west to the breast of the crosscut there is very little mineralization, the countryrock consisting largely of alaskite porphyry. All possibility of uncovering a parallel ore shoot to the ore exposed in 871 drift south was very well covered and crosscutting here was stopped Sept. 20th.

871-3 Crosscut East of 871 Drift South
0 - 52 ft.

This crosscut driven in a southeasterly direction from a point 350 ft. south of 870 crosscut advanced 52 ft. during the month. The crosscut first penetrated the talc on the hanging wall side of 871 drift and through a body of gypsum approximately 20 ft. wide, the balance being alaskite porphyry. Nothing of importance was cut here during the month other than the same geological structure.

Underground Mapping
The underground surveys were completed during the month and maps of the 300 adit level and the 870 level are attached. The geology will be mapped in the very near future.

Chemical Laboratory
The work on the chemical laboratory has just about been completed and should go into service within the next week. All samples will then be analyzed and the reports brought up to date.

Method of Reporting
Mr. Miller, Executive Officer of DMEA Field Team, Region III, has asked us to change our method of reporting, which we are doing on this report. We were advised at Washington to show total advances on our DMEA reports, on which there would be an allowance of $22.50 per foot for crosscutting and drifting. However, Mr. Miller feels that we should turn the footage in at $45 per linear foot and show 50% of this amount as government participation. We are compiling this report and all future reports as requested. However, we do wish to call attention to the fact that $45 is not the true cost of either the crosscutting or the drifting since it is far in excess of $45 per foot.

Mr. Miller has also called to our attention the fact that we were reporting government participation on diamond drilling in the amount of $21,924.10, whereas it should be $23,846.99. A check of our records confirmed the amount of $23,846.99 as reported by

SUBJECT: EXPLORATION 870 Level
Bully Hill Mine

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

Mr. Miller and this figure will be used on all future reports of government participation on diamond drilling.

To date (10/13) a total of 802 ft. of crosscutting and drifting has been done on the south side of 870 level. Under our DMEA contract of 1000 ft. on the south side, there remains 198 ft. to be driven, which will be completed in the early part of November. No more crosscutting is planned on the south side but 871 drift will be extended to a point approximately 667 ft. south of 870 crosscut. When this has been completed, work on 872 drift north can be undertaken and diamond drilling can also be started on the south side.

Respectfully submitted,

Edward L. Ralston - Manager of Mines.

ELR:HM

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

Defense Minerals Administration
RECEIVED
OCT - 4 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1954 Docket No. DMEA 1219-X Amended Contract No. E-187
Operator's Name [illegible] Minerals
Address [illegible]
Contract Amount, $ [illegible] per foot Government Participation: ____% Amount, $ 5,332.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent / Short Form Contracts:						
Drilling						
Bulldozing 871-2 W 63'	1,530.00	2,115.00	3,645.00			
Crosscutting 871 S 169'	3,802.50	2,587.50	6,390.00			
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$5,332.50	$4,702.50	$10,035.00			

I certify that the above bill is correct and just and that payment therefor has not been received. Date 13, 1954

*Payee [illegible] Co. [illegible]

Per Ward J. [illegible] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$5332.50

Signature _____
(Authorized Certifying Officer)

Date SEP 28 1954 Vou. No. SF-DMEA-7

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Km-2107 in accordance with the terms of the contract.

Signature George H. Holmes, Jr. Title Mining Methods Research Engineer Date Sept. 17, 1954.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date September 20, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT - 4 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1954 Docket No. DMEA 1219X Amended Contract No. _____
Operator's Name THE GLADDEN COMPANY Minerals _____
Address CLEVELAND, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft	-	-	89,842.47	627'			
Rehab. 870 Level	Ft	-		61,086.34	904'			
Winzes Exploration 870 Level	Ft	20,352.89	237'	46,413.29	446'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails Reopening 300 Adit	Ft	-	-	34,899.14	1022.5'			
Total Distributed Costs		20,352.89	237'	232,241.24				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		20,352.89		232,241.24				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Sept. 13, 1954 Operator THE GLADDEN COMPANY

By Edward L. Hilton Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Remarks:

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF AUGUST 1954

Docket No. DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government participation - rehabilitation 870 level to June 30, 1954	6,328.00
Government participation - exploration 870 level to August 31, 1954	10,035.00
Total Government Participation to Date	$61,119.60

SUBJECT: EXPLORATION 870 LEVEL
BULLY HILL MINE

Redding, California
September 13, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

871 Drift South of 870 Crosscut
115 ft. to 284 ft.

Advance, August, 169 ft. This drift was continued along the shear zone and shows some mineralization for the entire distance, the minerals consisting largely of pyrite, with varying amounts of sphalerite and chalcopyrite, with some very good showings of chalcopyrite. The ground to the south is getting much harder and the mineralized area appears to be getting wider as the drift advances. There is also a noticeable increase in the width of talc along the hanging wall side of the drift.

871 drift south today (9/13) looks most encouraging and shows about 5 ft. of ore. This ore is a very high sulphide ore, with pyrite predominating, yet showing a considerable amount of copper in the form of chalcopyrite.

871-2 Crosscut West of 871 Drift South.
0 - 68 ft.

This crosscut, driven in a general westerly direction from a point 205 ft. west of 870 crosscut, advanced 68 ft. during the month and showed some mineralization throughout. Stringers of pyrite and quartz were very common, with some very good stringers of chalcopyrite. It is now possible to map the geology exposed in Nos. 1 and 2 crosscuts and definitely correlate the mineralization encountered here, thus making it possible to do better planning on exploration work to the south.

Underground Mapping
The underground survey has been completed and the maps are now being compiled. In the future, maps will be brought up to date on the first of the month and copies mailed to you.

Chemical Analyses
The old mill laboratory has been rehabilitated and will be used as a chemical laboratory. J. F. Harrigan, formerly with Coronado Copper and Zinc Co., will be in charge of all analytical work, thus making it possible to compile weekly progress reports showing the advances and the character of ore encountered.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

OCT - 4 1954

Month of July 1954 Docket No. DMEA 1219X Amended Contract No. E-187

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

Contract Amount, $ 209 Ft. @ $22.50 per foot Government Participation: ____% Amount, $ 4702.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contracts:						
Exploration 870 Level						
Drilling						
Bulldozing						
871-1 Crosscut West	2,115.00	-	2,115.00			
Crosscutting 94'						
871 Drift So. 115'	2,587.50	-	2,587.50			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4,702.50	-	4,702.50			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug. 13, 1954 *Payee THE GLIDDEN COMPANY

Per Edward C. Nelson Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 4702.50

Signature Lloyd H. Sjolander
Authorized Certifying Officer
(Authorized Certifying Officer)

Date Vou. No. SF-DMEA-9

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Region III Date August 17, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date August 19, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS AUG 1 9 1954
Department of the Interior
Defense Minerals Administration
RECEIVED

OPERATOR'S UNIT COST AND PROGRESS REPORT

OCT - 4 1954

Month of July 1954 Docket No. DMEA 1219X Amended Contract No. _____

Operator's Name The Glidden Company Minerals _____

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering BH	Ft	-	-	89,842.47	627'			
Rehab. 870 Level	Ft	-	-	61,086.34	904'			
Exploration 870 Level	Ft	19,011.39	209'	26,060.40	209'			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	-	-	34,899.14	1022.5'			
Total Distributed Costs		19011.39	209'	211,888.35				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		19011.39		211,888.35				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Aug. 13, 1954 Operator THE GLIDDEN COMPANY

By Edward L. Halsten Title Manager of Mines

Remarks: _____

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Month of July 1954

Docket No. DMEA 1219X Amended

Operator: The Glidden Company
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government participation - rehabilitation 870 Level to June 30, 1954	6,328.00
Government participation - exploration 870 level to July 31, 1954	4,702.50
Total Government Participation to Date	$55,787.10

SUBJECT: EXPLORATION 870 Level Bally Hill Mine

Redding, California
August 13, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
ID36-K187

EXPLORATION - 870 Level
871 Drift South of 870 Crosscut: 0 - 115 ft.

This drift was started from a point 91.5 ft. south of the shaft and advanced 115 ft. during the month of July. The drift was purposely started in gypsum since the ground was much harder at this point, thus facilitating the starting of a new heading. A short distance south, the gypsum cut out and the drift went into a typical shear zone. This drift, south of the gypsum, has shown heavy mineralization, consisting largely of pyrite with small amounts of chalcopyrite and sphalarite. The ground is badly broken and blocky, requiring timbering throughout. This is an encouraging prospect.

870-1 Crosscut east of 871 Drift South
Advance: 0 - 94 ft.

This crosscut, driven in a general westerly direction from a point 100 ft. south of 870 crosscut, advanced 94 ft. during the month of July. The crosscut was driven for the purpose of prospecting the ground between the hanging wall and the footwall of the shear zone and it was planned to continue the crosscut until the quartzite exposed in the shaft was encountered. The whole crosscut shows mineralization, largely consisting of quartz and pyrite with inclusions of chalcopyrite and small amounts of sphalarite. While the ore is not continuous, yet the work done to date has exposed a heavy mineralized zone, and a very good cross-section of this country has been provided. This crosscut was stopped in order to resume operations on 871 drift south but should be taken up at a later date.

871 Drift South has been advanced an additional 100 ft. since the first of August and 871-2 Crosscut West will be started this week. This will provide two crosscuts into the shear zone from which accurate geological mapping can be done. Thus far the hanging wall has not been crosscut but will be in the very near future since there is a possibility of an ore occurrence on the contact between the basalt and the porphyry on the shear zone.

UNDERGROUND MAPPING
Due to the fact that this mine has been closed down since 1918, there are very few records available regarding the original surveys, and in addition to this, very few rock points have been located underground. Hence, it will be necessary to immediately have an underground survey made and this will be started next week. Since virgin territory is also being opened, it will be necessary to have the geology brought up to date. Consequently we plan on having a reliable part time geologist do this work. In the future, geological maps will be submitted with monthly reports.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 21 1954 Defense Minerals Administration RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ 296 ft. @ $7.00 per ft. Government Participation: % Amount, $ 2072.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent / Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
REHABILITATION & EXPLORATION 870 Level						
(2) Labor and Supervision:						
Labor	11,441.55	88,756.87	100,198.42			
Supervision	525.00	7,120.00	7,645.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	1,536.51	14,935.69	16,472.20			
Explosives	65.54	91.50	157.04			
Pipe	339.18	5,400.88	5,740.06			
Track	629.08	1,319.89	1,948.97			
Power, Misc.Supplies Diesel Fuel,Gas, etc	3,098.69	24,736.33	27,835.02			
(4) Operating Equipment:						
Rental	403.47	4,744.16	5,147.63			
Purchase	4,064.90	10,863.44	14,928.34			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	1,447.02	11,357.26	12,804.28			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	23,550.94	169,326.02	192,876.96			

I certify that the above bill ~~is correct and~~ just and that payment therefor has not been received.

Date 7/12/54 *Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2072.00

Lloyd H. Sjolander
Authorized Certifying Officer

Signature (Authorized Certifying Officer)

Date AUG 5 1954 Vou. No. SF-DMEA-3

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Id-1137 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div., Region III Date July 19, 1954.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date July 21, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

ACCOUNTS JUL 21 1954

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1954 Docket No. DMEA 1219X Amended Contract No. 1-0-1954

Operator's Name THE GLIDDEN COMPANY Minerals

Address CLEVELAND, OHIO

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Unwatering BH Shaft	Ft	-	-	89,842.47	627'			
Rehab. 870 Level	Ft.	16,501.93	296'	61,086.34	904'			
Drilling: Core								
Churn								
Auger								
Stripping								
Exploration 870 Level - Prelim.Wk	Ft.	7,049.01	-	7,049.01	-			
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft.	-	-	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		23,550.94	296'	192,876.96				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		23,550.94		192,876.96				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 7/12/54 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Month of June 1954 Decl[illegible] No. DMEA 1219K Amended

Operator: THE GLIDDEN COMPANY
Cleveland, Ohio

Government Participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government Participation - reopening 300 Adit to July 31, 1953	7,157.50
Government Participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government Participation - Rehabilitation 870 Level to June 30, 1954	6,328.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$51,084.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT
REHABILITATION 870 LEVEL
EXPLORATION 870 LEVEL

Redding, California
July 12, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

REHABILITATION - 870 Level
872 Drift North from 870 Crosscut: 476 ft. to 732 ft.

871 Crosscut East: 0 - 40 ft.

Total Advance for month: 296 ft.

The work in connection with the rehabilitation of the 870 level was completed on June 30th. 872 Drift north was reopened, retimbered where necessary, and track laid to the north breast. 871 Crosscut East, from a point approximately 30 ft. south of the north breast was rehabilitated for a distance of 40 ft. This crosscut is to be used for car storage when drifting operations are resumed from the north breast of 872 drift. This completes the rehabilitation of the 870 level. Under our DMEA Contract 1219X, the maximum footage allowed on rehabilitation of the 870 level was 1000 lin. ft. Hence, the actual job of 904 lin. ft. was considerably less than the 1000 lin. ft. allowed.

The north section of the old drift, while showing a very strong shear zone, was not heavily mineralized. However, there is small mineralization in the various crosscuts worthy of future development.

Exploration Work - 870 level - more particularly 871 drift south, was started July 1st. This work has progressed far enough now so that drifting operations on 872 drift north can be resumed at any time, and as a matter of fact, it is our intention to resume drifting operations here just as soon as an air locomotive can be delivered from Salt Lake since the distance is too great for hand tramming. Hence, 871 drift south and 872 drift north will be driven simultaneously.

The other work done during the month of June was the reopening of 302 drift north from the adit level to provide a second exit from the mine. The work on this level has been completed and 472 drift north from 470 level is now being reopened and retimbered. This work will be continued until No. 5 raise is reached and then the raise will be reopened to the adit level above. This work has no connection whatever with the DMEA contract but is necessary since a second exit is required in California.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1954 Docket No. DMEA 1219X Amended Contract No. E 187 W
Operator's Name The Glidden Company Minerals Zinc + Copper
Address Cleveland, Ohio
Contract Amount, $ 235 ft. @ $7.00 per ft. Government Participation: ____% Amount, $1645.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Rehabilitation 870 Level						
(2) Labor and Supervision:						
Labor	11,945.98	76,810.89	88,756.87			
Supervision	525.00	6,595.00	7,120.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	1,681.95	13,253.74	14,935.69			
Explosives	20.84	70.66	91.50			
Pipe	1,255.94	4,144.94	5,400.88			
Track	638.43	681.46	1,319.89			
Power, Misc. Mine Sup.						
Gasoline, Diesel	2,077.44	22,658.89	24,736.33			
(4) Operating Equipment:						
Rental	253.47	4,490.69	4,744.16			
Purchase		10,863.44	10,863.44			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	1,480.27	9,876.99	11,357.26			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	19,879.32	149,446.70	169,326.02			

I certify that the above bill is correct and just and that payment therefor has not been made.

Date June 12, 1954 *Payee THE GLIDDEN COMPANY

Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1645 00

Lloyd H. Sjolander
Authorized Certifying Officer

Signature _____
(Authorized Certifying Officer)

Date JUN 21 1954 Vou. No. SF-DMEA-45

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Date June 16, 1954

A. C. Johnson

Region III

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Executive Officer

Signature G. Micker for H. C. Miller Title DMEA Field Team Date June 17, 1954

Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

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Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1954 Docket No. DMEA 1219X Amended Contract No. E-187

Operator's Name The Glidden Company Minerals Zinc & Copper

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts: Unwatering Mi Shaft	Ft	-	-	89,842.47	627			
Winzes: Rehabilitation 870 Level	Ft	19,879.32	235	44,584.41	608			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails: Reopening 300 Adit	Ft	-	-	34,899.14	1022.5			
Total Distributed Costs		19,879.32	235	169,326.02				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		19,879.32		169,326.02				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date June 12, 1954 Operator THE GLIDDEN COMPANY

Per Edward L. Ruiston Title Manager of Mines

Remarks:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF MAY 1954

Docket No. DMEA 1219X Amended

Operator: THE GLIDDEN COMPANY
Cleveland, Ohio

Government Participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government Participation - reopening 300 Adit to July 31, 1953	7,157.50
Government Participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government Participation - rehabilitation 870 Level to May 31, 1954	4,256.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$49,012.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT
REHABILITATION #70 LEVEL

Redding, California
June 12, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
LD6-H187

REHABILITATION - #70 LEVEL

#72 Drift North of #70 Crosscut
241 ft. to 476 ft.

This retimbering job advanced 235 ft. for the month of May. Some very heavy ground was encountered in the north section of this drift, especially around old #72 stope. This required spiling practically the entire distance. It is very apparent that the former operators experienced considerable difficulty in holding the ground since in many instances solid timber supporting bulkheads were encountered, and as a matter of fact, practically all of the timbering was quite heavy.

Some very good ore, mostly remnants from the former operation, was found in these old workings, the ore largely consisting of Chalcopyrite, Pyrite, with small amounts of Bornite and Barite. Also some very good sphalerite was found in these old workings.

This work has now reached a point north of the old #72 stope and the remaining distance to the north breast should not be difficult to reopen. Drifting south from #70 crosscut will also be started immediately.

Respectfully submitted,

Edward L. Halston - Manager of Mines

ELH:BM

Form [illegible] (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April 1954 Docket No. DMEA 1219X Amended Contract No. [illegible]
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount: Government Participation: 329 ft. @ $7.00 per foot % Amount, $ 2303.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Rehabilitation 870 Level						
(2) Labor and Supervision:						
Labor	10,224.69	66,586.20	76,810.89			
Supervision	525.00	6,070.00	6,595.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	974.47	12,279.27	13,253.74			
Explosives	26.11	44.55	70.66			
Pipe	479.74	3,665.20	4,144.94			
Track	223.64	457.82	681.46			
Power, Misc.Supplies, Gasoline, Diesel, etc.	2978.88	19,680.01	22,658.89			
(4) Operating Equipment:						
Rental	353.47	4,137.22	4,490.69			
Purchase	731.89	10,131.55	10,863.44			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	1,246.62	8,630.37	9,876.99			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	17,764.51	131,682.19	149,446.70			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date May 12, 1954 *Payee THE GLIDDEN COMPANY

Edward L. Hutton Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2303 00

Lloyd H. Siglander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

Date Vou. No. SF-DMEA 43

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Date May 17, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. C. Miller Title Region III Executive Officer DMEA Field Team Region III Date May 20, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form M-164A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 13 1954

Month of April 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering BH								
Mine Shaft	Ft.	—	—	89,842.47	627'			
Drilling: Core								
Rehab. 870 Level	Ft.	17,764.51	329'	24,705.09	373'			
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft.	—	—	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		17,764.51	329'	149,446.70				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		17,764.51		149,446.70				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 12, 1954 Operator THE GLIDDEN COMPANY

By [signature] Title Manager of Mines
Edward L. Ralston

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF APRIL 1954 | Docket No. DMEA 1219X Amended

Operator: THE GLIDDEN COMPANY
Cleveland, Ohio

Government Participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government Participation - reopening 300 Adit to July 31, 1953	7,157.50
Government Participation - Rehabilitation 870 Level to April 30, 1954	2,611.00
Government Participation - unwatering Bully Hill Shaft to March 1954	15,675.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$47,367.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT
REHABILITATION 870 LEVEL

Redding, California
May 12, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc Copper
IDM-K187

REHABILITATION - 870 Level

870 Crosscut South of Shaft
44 ft. to 132 ft.

The reopening and retimbering of this crosscut was completed during the month. Ground encountered here was quite heavy, most of it requiring careful timbering. The south end of the crosscut is in basic dike and is very hard.

872 Drift North of 870 Crosscut
0 - 241 ft. north.

Reopening and retimbering of this old drift from 870 crosscut was completed for a distance of 241 ft. The south portion of the drift was in exceptionally hard rock requiring no timber. The drift penetrated a shear zone about 120 ft. north of the crosscut, where the ground was found to be very blocky and the back somewhat dangerous. From this point the remaining distance had to be timbered. Much of this country is open, yet the old working, undoubtedly driven for a haulage way, was too small to accommodate a mucking machine, which made it necessary to enlarge to accommodate this type of equipment. 872-2 crosscut west is only open for a very short distance. It is planned to continue along the east drift rather than to attempt to reopen the old drifts to the north along the shear zone since it should be much easier to clean up and retimber here rather than farther west due to the fact that a great deal of this drift is in the harder dike material. However, the geological sheets compiled by Hansen, which were largely taken from the old maps, have been found to be somewhat inaccurate since a great portion of this drift is in shear zone and not in the basic dike.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of MARCH, 1954 Docket No. DMEA 1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $ TOTAL: $2108.00
~~72 ft. @ $25.00 per ft. $1800.00. 44 Ft. @ $7.00 per ft. $308.00~~

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						m
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Unwatering B.H.Mine Shaft & Rehabilitating 870 Level						
(2) Labor and Supervision:						
Labor	8,236.24	58,349.96	66,586.20			
Supervision	525.00	5,545.00	6,070.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	136.13	12,143.14	12,279.27			
Explosives		44.55	44.55			
Pipe	88.31	3,576.89	3,665.20			
Track		457.82	457.82			
Power, Gas, Diesel & Mis. Supplies	2,296.62	17,383.39	19,680.01			
(4) Operating Equipment:						
Rental	375.00	3,762.22	4,137.22			
Purchase	2,869.29	7,262.26	10,131.55			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	1,050.14	7,580.23	8,630.37			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	15,576.73	116,105.46	131,682.19			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 4/13/54 *Payee THE GLIDDEN COMPANY

Per EDWARD T. RAYSTON Its Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$2108.00

Signature Lloyd H. Sjolander
Authorized Certifying Officer
(Authorized Certifying Officer)

Date MAY 4 1954 Vou. No. 5F-DMCA-39

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Date April 23, 1954.

A. C. Johnson Region III

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Date April 26, 1954

H. C. Miller Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 195 Docket No. DMEA 1219X Awarded Contract No. _____
Operator's Name The Glidden Company Minerals _____
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Underreaming Drill ~~xxx. Ohio Shaft~~	Ft	8,636.15	72	89,842.47	627			
Winzes								
Drilling ~~Rehabilitation~~ ~~xxx. 870 Level~~	Ft	6,940.58	44	6,940.58	44			
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails Reopening 300 Adit	Ft	-	-	34,899.14	1022.5			
TOTAL DISTRIBUTED COSTS		15,576.73	116	131,682.19				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		15,576.73		131,682.19				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 4/13/54 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

REMARKS:

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF MARCH 1954

Docket No. DMEA 1219X Amended

Operator: THE GLIDDEN COMPANY
Cleveland, Ohio

Government Participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government Participation - reopening 300 Adit to July 31, 1953	7,157.50
Government Participation - unwatering Bully Hill Shaft to March 1954	15,675.00
Government Participation - Rehabilitation 870 Level to March 1954	308.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$ 45,064.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT
REHABILITATION 870 LEVEL

Redding, California
April 13, 1954

DMEA REFERENCE
Docket No. 1219X Amended
Commodity: Zinc Copper
IDM-K187

UNWATERING BULLY HILL MINE SHAFT
515 ft. to 587 ft. below 300 sill
627 ft. from back of shaft above 300 station.

The unwatering job was completed March 19th, total progress for March being 72 ft. This provided the 20 ft. sump below the 870 level. Hence, the total footage charged to the government for the completed job amounted to 627, the distance from the back of the station to the bottom of the sump. The estimated footage under the DMEA contract was 650 ft.

REHABILITATION - 870 LEVEL
870 Crosscut southeast of shaft. The retimbering of the 870 station and the reopening of 870 crosscut south from the station was started on completion of the unwatering job and had reached a point 44 ft. south of the shaft as of April 1st. Considerable retimbering was found necessary here since the crosscut in places was completely filled due to caving. Some spilling ground was encountered in this reopening. At this time there remains approximately 35 ft. of repair work, all heavy ground, to be completed before 872 drift is reached. To date three separate shear zones have been uncovered and a considerable amount of gypsum has been found in the crosscut.

PRESENT OPERATIONS
At the present time two shifts are employed in rehabilitation on the 870 level. While there has been a marked decrease in the amount of water handled, yet it is necessary to keep one pump on the 770 running 24 hours per day to handle the water coming from the 670 level. On the graveyard shift all pumps are operated for 8 hours. Now that the end of the rainy season is close at hand, little difficulty is expected in keeping the water out of the mine, and as a matter of fact, there should be a marked decrease in the gallonage handled. All available maps of the 870 level indicate that 872 drift is largely in dike material and granting this to be the case, the greater portion of this level should be open and rehabilitation should be an easy job providing the drift is not on shear zones. In order to complete the job as quickly as possible, it has been decided not to open any of the old crosscuts in the shear zones and to confine rehabilitation operations to the east drift on the 870 level.

Respectfully submitted,

Edward L. Ralston, Manager of Mines.

ELR:HM

For[redacted] (Rev.)
[redacted] 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1954 Docket No. DMEA1219X Amended Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ 46 ft. @ $25.00 per ft. Government Participation: % Amount, $ 1150.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Unwatering Bully Hill Shaft						
(2) Labor and Supervision:						
Labor	7,510.01	50,839.95	58,349.96			
Supervision	525.00	5,020.00	5,545.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	34.64	12,108.50	12,143.14			
Explosives		44.55	44.55			
Pipe	305.60	3,271.29	3,576.89			
Track		457.82	457.82			
Oil, Diesel, Grease Gasoline, Misc. Sup.	2,322.60	15,060.79	17,383.39			
(4) Operating Equipment:						
Rental		3,762.22	3,762.22			
Purchase	1,236.00	6,026.26	7,262.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	963.63	6,616.60	7,580.23			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	12,897.48	103,207.98	116,105.46			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date March 12, 1954 Payee THE GLIDDEN COMPANY

Edward [illegible] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1150.00

Signature [illegible] Authorized Certifying Officer
(Authorized Certifying Officer)

Date [illegible] Vou. No. 3F-DMEA-34

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature George H. Holmes, Jr. Title Mining Methods Research Engr. Date March 16, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date March 17, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

For[redacted] C4A
(Apr. 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED

Month of February 1954 Docket No. DMEA 1219 Amended Contract No. 1954

Operator's Name The Glidden Company Minerals

Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes	ft	12,897.46	46	81 206.32	555			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Rehabilitation and Repairs	ft	-	-	34 899.14	1028.5			
TOTAL DISTRIBUTED COSTS		12,897.46	46	116 105.46				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		12,897.46		116 105.46				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date March 12, 1954 Operator THE GLIDDEN COMPANY

Per Marlin W. Jackson Title Manager of Mines

REMARKS:

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF FEBRUARY 1954

Docket No. DMEA 1219X Amended

OPERATOR: THE GLIDDEN COMPANY
CLEVELAND, OHIO

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to February 28, 1954	13,875.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$42,956.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT

Redding, California
March 12, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

UNWATERING BULLY HILL MINE SHAFT
469 ft. to 515 ft. below 300 sill
555 ft. from back of shaft above 300 station

Progress on unwatering operations during the month of February was considerably better than the previous month, the total advance being 46 ft. The weather was somewhat better with considerably less surface waters to handle. The water at this time stands 15 ft. above the 870 level and the unwatering job should be completed within the next 15 days.

The rearrangement of pumping equipment gave very satisfactory results. The 14-7-13 Cameron was left in the shaft at the 770 station and is handling water from the sump on the 770 to the 300 adit. An additional Cameron station pump has also been installed on this station and is handling water from the sump. The small duplex pump was installed in the south end of the station to pump water coming from the south drifts on the 770 into the sump on this level. The #7 Cameron sinking pump is delivering water from the bottom of the shaft to the 770 sump and is lowered as the water goes down. There is still a heavy flow of water coming from the 670 level. No difficulties are anticipated in completing the unwatering job with this equipment.

The shaft continues in good condition, with the ground very good.

Respectfully submitted,

Edward L. Ralston, Manager of Mines

ELR:HA

Form [illegible] (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1954 Docket No. DMEA 1219X Amended Contract No. Idm 3 187

Operator's Name THE GLIDDEN COMPANY Minerals Zinc & Copper

Address Cleveland, Ohio

Contract Amount, $ Government Participation: % Amount, $175.00

7 ft. @ $25.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
UNWATERING MOLLY HILL SHAFT						
(2) Labor and Supervision:						
Labor	8,274.99	42,564.96	50,839.95			
Supervision	525.00	4,495.00	5,020.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	3.55	12,104.95	12,108.50			
Explosives		44.55	44.55			
Pipe	523.97	2,747.32	3,271.29			
Track		457.82	457.82			
Power, Gasoline, Oil						
Diesel, Misc. Sup.	2,108.11	12,952.68	15,060.79			
(4) Operating Equipment:						
Rental	729.17	3,033.05	3,762.22			
Purchase		6,026.26	6,026.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	1,001.32	5,615.28	6,616.60			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	13,166.11	90,041.87	103,207.98			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 2/12/54 *Payee THE GLIDDEN COMPANY

By Edward L. Walston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$175.00

Signature Lloyd H. Sjolander
Authorized Certifying Officer
(Authorized Certifying Officer)

Date MAR 1 1954 Vou. No. SF-DMEA-31

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title A. C. Johnson, Chief, Mining Division, Region III Date Feb. 15, 1954

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date February 17, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1954 Docket No. DMEA 1219 Contract No.
Operator's Name [illegible] Minerals
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts [illegible]	Ft	13,166.11	7'	68,308.84	509'			
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
[illegible]	-	—	-	34,[illegible]77.14	1022.5'			
Total Distributed Costs		13,166.11		193,207.98				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		13,166.11		193,207.98				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 2/12/54 Operator [illegible]
By [illegible] Title Manager of Mines

Remarks:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH: JANUARY 1954

Docket No. DMEA 1219X Amended

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to January 31, 1954	12,725.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$41,806.60

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT

Redding, California
February 12, 1954

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
LDM-R187

UNWATERING BULLY HILL MINE SHAFT
462 ft. to 469 ft. below 300 sill
908 ft. from back of shaft above 300 station.

Progress on unwatering operations during the month of January was exceptionally slow due to the necessity of unwatering very extensive workings on the 770 level. In addition to this, the very heavy rains in Northern California resulted in heavy surface flows coming in from the old workings from the grass roots down, it not being possible to capture any of this water except a small amount on the 300 adit, which was open. Hence, there was a very heavy flow coming in from the 670 level.

This additional water necessitated the installation of another sinking pump. At this time the 770 has been completely unwatered and the shaft between the 770 and 670 is already being pumped out.

The 770 station was found to be in fair condition, also the pump station and sump to the east. However, drifts 771 and 772, off 770 station, are caved. There is an appreciable flow of water coming out of these old drifts on the 770 level.

It is now planned to leave the larger sinking pump at the 770 and the Cameron sinking pump will also be installed on this station. All water coming from the levels above will be caught here and piped into the sump below the 770 level, and the two pumps left on the 770 station will handle all water from the 770 and above. The balance of the unwatering will be done with a No. 7 Cameron pump, which, under this low head, should make very good progress. Some little difficulty has been encountered with power failures due to heavy storms and this has resulted in keeping two standby diesel compressors ready for service on very short notice.

NEW EQUIPMENT
The only new equipment added during the month was one No. 7 Cameron (12-5-13) sinking pump. It is quite obvious that the equipment on the job will unwater the mine to the 870 level, and this should not be a big job providing February and March are not too wet. However, surface waters are a serious consideration since it is not possible to pick up any of this water above the 770 due to the fact that all of these old drifts are closed, and in addition, the 670 station is caved.

Generally speaking, the shaft was found to be in very good condition.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 9 1954

Month of December, 1953 Docket No. DMEA 1219X Amended Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address Box Cleveland, Ohio
Contract Amount, $ Government Participation: %
Amount, $ 2300.00

92 ft. at $25.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
UNWATERING BULLY HILL SHAFT						
(2) Labor and Supervision:						
Labor	6,133.92	36,431.04	42,564.96			
Supervision	525.00	3,970.00	4,495.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	142.56	11,962.39	12,104.95			
Explosives		44.55	44.55			
Pipe	392.62	2,354.70	2,747.32			
Track		457.82	457.82			
Misc. Supplies inc. Diesel Fuel, Gas, Oil	1,766.55	11,186.13	12,952.68			
(4) Operating Equipment:						
Rental	86.00	2,947.05	3,033.05			
Purchase		6,026.26	6,026.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	823.71	4,791.57	5,615.28			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	9,870.36	80,171.51	90,041.87			

I certify that the above bill ~~is correct and~~ just and that payment therefor has not been received.

Date 1/12/54 *Payee THE GLIDDEN COMPANY

Per Edward L. Kaiser Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2300 00

Lloyd H. Sielander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

Date Vou. No. SF-DMEA-29

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature R. C. Johnson Title Chief, Mining Div. Region III Date Jan. 22, 1954.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker for H. C. Miller Title Executive Officer DMEA Field Team Region III Date January 25, 1954

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 9 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1953 Docket No. DMEA 1219X Amended Contract No. _____

Operator's Name THE GLADDEN COMPANY Minerals _____

Address CLEVELAND, OHIO

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering	Ft	9,870.36	92'	55,142.73	502'			
Winzes Daily Mill Chart								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit		-	-	34,899.14	1022.5'			0
TOTAL DISTRIBUTED COSTS		$9,870.36	92'	$90,041.87				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$9,870.36		$90,041.87				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 1/12/54 Operator THE GLADDEN COMPANY

Edward L. Hilston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Redding, California
January 12, 1954

SUBJECT: REHABILITATION BULLY HILL MINE
UNWATERING BULLY HILL MINE SHAFT

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

UNWATERING BULLY HILL MINE SHAFT
370 ft. to 462 ft. below 300 sill.
302 ft. from back of shaft above 300 station.

Unwatering operations were continued without interruption during the month of December, the total advance being 92 ft. The water on January 1st was slightly below the 770 station cap. There was a very decided increase in the amount of water pumped near the 770 level, the increase being due to two causes: Very extensive workings on the 770 level and a considerable amount of water coming from behind barriers on the 670 level. Actually two levels were being unwatered simultaneously. The shaft continues in excellent condition, requiring only a small amount of repair work.

EQUIPMENT
The installation of the Imperial Type 10 belt driven compressor was completed during the month of December and this machine went into service January 1st, making it possible to discontinue the use of the diesel compressors. This compressor has a rated capacity of 1100 cu. ft. of free air per minute and is quite adequate for all pumping and hoisting operations. An additional pump, Cameron 12" x 5 " x 13" is now being installed to speed up unwatering operations.

It has been called to our attention that progress reports, such as the narrative and MF-104A, do not agree on the total distance the shaft has been unwatered. This comes about through the fact that report MF 104A shows the complete distance from the back of the shaft above the 300 station to the water level, whereas the narrative report shows the distance from the 300 station sill, the difference in footage between the two reports being 40 ft. The unwatering operation under the contract approved the unwatering of the shaft and the mine from the back of the shaft above the 300 station to the 870 level and is so reported in MF104A.

Respectfully submitted,

Edward L. Ralston, Manager of Mines

ELR:HM

MONTH OF DECEMBER 1953

Docket No. DMEA 1219X Amended

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to December 31, 1953	12,550.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$41,631.60

Form 7-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1953 Docket No. DMEA 1219X Amended Contract No. Idm-E187
Operator's Name The Glidden Company Minerals zinc-copper
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $ 2075.00
~~83 ft. @ $25.00 per foot~~

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Unwatering Bully Hill Shaft						
(2) Labor and Supervision:						
Labor	5,478.40	30,952.64	36,431.04			
Supervision	157.50	3,812.50	3,970.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	401.09	11,561.30	11,962.39			
Explosives	-	44.55	44.55			
Pipe	1,050.91	1,303.79	2,354.70			
Track		457.82	457.82			
Misc. Supplies, inc. Diesel Fuel, Grease	2,015.89	9,170.24	11,186.13			
(4) Operating Equipment:						
Rental	1,625.00	1,322.05	2,947.05			
Purchase		6,026.26	6,026.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	697.18	4,094.39	4,791.57			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	11,425.97	68,745.54	80,171.51			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 12/12/53 *Payee THE GLIDDEN COMPANY

Pay to the order of Edward A. Nelson Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2075 00

Signature Lloyd R. Stanley Authorized Certifying Officer
(Authorized Certifying Officer)

Date DEC 28 1953 Vou. No. SF-DMEA-26

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Reg. III Date Dec. 15, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature S. Ricker for H. C. Miller Title Executive Officer DMEA Field Team Region III Date December 16, 1953

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-164A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1953 Docket No. DMEA 1219X Amended Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address CLEVELAND, OHIO

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering Bully Hill Shaft	Ft	11425.97	83'	45,272.37	410'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	-	-	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		$11425.97	83'	$80,171.51				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$11425.97		$80,171.51				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 12/12/53 Operator THE GLIDDEN COMPANY

By Edward L. Ralston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Month of November 1953 Docket No. DMEA 1219X Amended

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to November 30, 1953	10,250.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$39,331.60

Redding, California
December 12, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Unwatering Bully Hill Mine Shaft

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

UNWATERING BULLY HILL SHAFT
286 feet to 370 feet below 300 sill.

Pumping operations were continued during the month of November. Some little delay was caused by difficulties with the diesel compressors. The 670 station was found to be in a very bad state of repair since it was caved and completely filled. Hence, it was bulkheaded and bypassed for the time being. It is quite apparent that the upraise from the 770 to the 670 has either caved or been sealed off since all drainage from the 670 level is coming down the shaft. However, this water has been confined to one corner of the shaft and is not doing any particular damage to pumping operations. The shaft has been found to be in very good condition, resulting in only a moderate amount of repair work.

Thus far an increase in underground water has not been noted, and while the rainy season has already set in, yet there is no apparent incoming water due to this situation. Generally speaking, the work is progressing in a satisfactory manner.

EQUIPMENT
No new equipment was added to unwatering operations during the month. However, an Imperial type 10 compressor, with a capacity of 1100 cu.ft. of free air per minute, is now being installed to replace the diesel compressors. This machine should go into operation very shortly.

Respectfully submitted

Edward L. Ralston, Manager of Mines

ELR:HM

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

Month of October, 1953 Docket No. DMEA 1219X (Amended) Contract No. [illegible] 1953
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $ 1500.00
60 ft. @ $25.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
UNWATERING BULLY HILL SHAFT						
(2) Labor and Supervision:						
Labor	5,726.93	25,225.71	30,952.64			
Supervision	500.00	3,312.50	3,812.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	629.63	10,931.67	11,561.30			
Explosives	-	44.55	44.55			
Pipe	-	1,303.79	1,303.79			
Track	-	457.82	457.82			
Oil, Diesel Fuel, Misc. Supplies	4,534.34	4,635.90	9,170.24			
(4) Operating Equipment:						
Rental	555.43	766.62	1,322.05			
Purchase	412.00	5,614.26	6,026.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	763.24	3,331.15	4,094.39			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	13,121.57	55,623.97	68,745.54			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 11/23/53 *Payee THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

*When Payee is signed in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1500.00

Signature A. J. Renner
Authorized Certifying Officer
(Authorized Certifying Officer)

Date Vou. No. SF-DMEA-25

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature [signature] Title Mining Methods Research Engineer Date November 18, 1953.

George H. Holmes, Jr.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [signature] Title Executive Officer DMEA Field Team Region III Date November 19, 1953

H. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS NOV 24 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED

DEC 8 1953

Month of October 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering Bully Hill Shaft	Ft	13,121.57	60'	33,846.40	327'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	-	-	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		$13,121.57		$68,745.54				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$13,121.57		$68,745.54				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 11/12/53 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title MANAGER OF MINES

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

MONTH OF OCTOBER 1953

Docket No. DMEA 1219X (Amended)

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill Shaft to October 31, 1953	8,175.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$ 37,256.60

Redding, California
November 12, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Unwatering Bully Hill Mine Shaft

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-E187

UNWATERING BULLY HILL SHAFT

Pumping operations were continued during the month of October without interruption due to mechanical difficulties. A total of 60 ft. of shaft was unwatered. The 570 level was also unwatered and due to the extensive workings on the 570 level progress was slow. While the shaft was found in an excellent condition, yet it was necessary to do considerable relagging, also to install new 4 x 6 guides for the entire distance. There is considerable retimbering to be done on the 570 station since the ground is quite heavy here. However, the only work done at this time will be retimbering where necessary in the shaft and on the stations since it is not our intention to reopen the 570 at this time. Apparently the mine is not making very much water and it now appears that there is very little water held behind caves and other barriers, it being quite possible that some of the raises are still open and the water is lowered in the various workings as the shaft is unwatered.

EQUIPMENT

The only equipment added during the month was one 12" x 6" x 13" Cameron Station pump. To date this pump has not been installed but will be installed on the 570 or 670 levels. It is now ready to go into service.

Respectfully submitted,

Edward L. Ralston, Manager of Mines

ELR:HM

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT - 6 1953

Mr. George Mavor
DMEA Auditor
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: The Glidden Company
Idm-E187, DMA-1219X

Dear Mr. Mavor:

It is noted that the Glidden Company, Operator of the above-cited project prepares a detailed MF-104 voucher each month. I don't know whether the Company realizes that this detail is not necessary on an agreed unit costs contract.

You might want to discuss the matter with Mr. Miller and see whether he would like to tell the Company that it is not necessary to detail their vouchers.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

JLChambers/wb
October 5, 1953

Copy to: Docket
Admr. Reading File
Mr. Chambers
Mr. Griswold

Form MF-104 (Rev.)
April 1952

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS OCT 22 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ 226 ft. @ $25.00 per ft. Government Participation: % Amount, $ 5650.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Unwatering Bully Hill Shaft						
(2) Labor and Supervision:						
Labor	5,263.32	19,962.39	25,225.71			
Supervision	500.00	2,812.50	3,312.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	687.69	10,243.98	10,931.67			
Explosives	-	44.55	44.55			
Pipe	535.40	768.39	1,303.79			
Track	-	457.82	457.82			
Oils, Grease, Gas, Diesel, Misc. Sup.	2,399.27	2,236.63	4,635.90			
(4) Operating Equipment:						
Rental	559.25	207.37	766.62			
Purchase	3,412.12	2,202.14	5,614.26			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	680.11	2,651.04	3,331.15			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	14,037.16	41,586.81	55,623.97			

I certify that the above bill ~~is correct~~ and just and that payment therefor has not been received.

Date 10/14/53 Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 5650 00

Lloyd H. Sjolander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

Date OCT 26 1953 Vou. No. SF-DMEA-22

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Date October 21, 1953.
A. C. Johnson Region III

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Date October 22, 1953
H. C. Miller Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

ACCOUNTS OCT 22 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering B.H.								
Winze Shaft	FT	14,037.16	226'	20,724.83	267'			
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	FT	-	-	34,899.14	1022.5'			
TOTAL DISTRIBUTED COSTS		14,037.16	226'	55,623.97				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		14,037.16		55,623.97				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 10/14/53 Operator The Glidden Company

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF SEPTEMBER 1953

Docket No. DMEA 1219X (Amended)

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to September 30, 1953	6,675.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$35,756.60

Redding, California
October 14, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Unwatering Bully Hill Mine Shaft

DMEA REFERENCE:

Docket No. 1219X Amended
Commodity: Zinc-Copper
IDM-K187

Unwatering Bully Hill Shaft

Actual pumping operations were started September 7th and were continued without interruption during the month. The shaft was unwatered for a distance of 226 ft. below the 300 station sill, and the 370 and 470 levels were also unwatered. All workings on the 370 and 470 levels, with the exception of the stations, were bulkheaded after unwatering, a precautionary measure in case of a flash flood from water held back. It is planned to continue unwatering with the present pumping equipment to the 570 level, where a station pump will be installed in order to cut down the pumping head. Due to inaccessibility of the levels which have been unwatered, it is not possible to tell just how much water the mine is making but apparently it is not great.

Hoisting Equipment

A 10" x 14" Vulcan steam hoist was installed on the 300 Station to handle the unwatering operations. This hoist is operated by compressed air and is giving very satisfactory results.

Respectfully submitted,

Edward L. Ralston, Manager of Mines.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS SEP 18 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1953 Docket No. DMEA 1219X (Amended) Contract No. E-187
Operator's Name [illegible] Minerals
Address [illegible], Ohio
Contract Amount, $ Government Participation: % Amount, $ 1025.00

41 ft. @ 25.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
[illegible]						
(2) Labor and Supervision:						
Labor	1,998.99	17,963.40	19,962.39			
Supervision	500.00	2,312.50	2,812.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	1,094.53	9,149.45	10,243.98			
Explosives		44.55	44.55			
Pipe		768.39	768.39			
Track		457.82	457.82			
[illegible], Inc.						
[illegible]	581.54	1,655.09	2,236.63			
(4) Operating Equipment:						
Rental	29.62	177.75	207.37			
Purchase	2,202.14	-	2,202.14			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	280.85	2,370.19	2,651.04			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6,687.67	34,899.14	41,586.81			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 9/11/53 *Payee [illegible] Company

Per [illegible] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1025.00

Lloyd H. Sjolander
Authorized Certifying Officer

Signature (Authorized Certifying Officer)

Date SEP 21 1953 Vou. No. SF-DMEA-17

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature A. C. Johnson Title [illegible] Date Sept. 16, 1953

A. C. Johnson

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Region III

Signature [illegible] Title Executive Officer DMEA Field Team Date Sept. 17, 1953

G. Dieter for E. C. Miller Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF–104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF–104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF–104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF–104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF–200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF–200; and delete word "Independent" if the contract reported is on Form MF–200 (A). Also, report work paid for on a unit basis under contract Form MF–200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF–104 when submitted for reimbursable expenses incurred under contract Form MF–200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF–200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF–104 is required to be documented. The four copies of Form MF–104 are not to be thus supported.

Form MF–104 submitted for reimbursement under fixed price contracts on Form MF–200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF–104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS SEP 18 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1953 Docket No. DMEA 1219X (Amended) Contract No.

Operator's Name THE GLIDDEN COMPANY Minerals

Address CLEVELAND, OHIO

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts Unwatering BH Shaft	Foot	6687.67	41'	6,687.67	41'			
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Foot	-	-	34,899.14	1022.5'			
Total Distributed Costs		6687.67	41'	41,586.81				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		~~6687.67~~		~~41,586.81~~				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 9/14/53 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

MONTH OF AUGUST 1953

Docket No. DMEA 1219X (Amended)

OPERATOR: THE GLIDDEN COMPANY
Cleveland, Ohio

Government participation - diamond drilling December 1950 to December 31, 1952	$21,924.10
Government participation - reopening 300 Adit to July 31, 1953	7,157.50
Government participation - unwatering Bully Hill shaft to August 31, 1953	1,025.00
TOTAL GOVERNMENT PARTICIPATION TO DATE	$30,106.60

Redding, California
September 14, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Reopening 300 Bully Hill Adit
Unwatering Bully Hill Mine Shaft

DMEA REFERENCE:

Docket No. 1219X Amended
Commodity: Zinc-Copper
Idm-E187

302 Drift Southwest:
Advance for month: 164 ft. Total advance: 177 ft.
This job was completed during the month and the entire distance is now open and in good condition to the west side of the station.

300 Station:
All retimbering has been completed on 300 Station and it is now ready for service.

300 Shaft above 300 Adit:
All retimbering here was completed during the month. Also, the raise from the back of 300 adit to the sheave wheel was retimbered.

Unwatering Bully Hill Shaft:
Preparation for the unwatering of the Bully Hill shaft from the 300 Adit to the 870 level was completed during the month and actual unwatering operations started September 7th.

The only equipment added during the month was one 14-7-13 Cameron Sinking pump put in for the purpose of unwatering the Bully Hill shaft.

Progress to date on unwatering operations has been good.

Respectfully submitted,

Edward L. Ralston, Manager of Mines

MMcHill

Form MF-12 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS AUG 24 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address CLEVELAND, OHIO
Contract Amount, $ Government Participation: % Amount, $3010.00

430 ft. @ $7.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Reopening, 333 Adit						
(2) Labor and Supervision:						
Labor	5,339.58	12,623.82	17,963.40			
Supervision	500.00	1,812.50	2,312.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	1,891.62	7,558.43	9,449.45			
Explosives	44.55		44.55			
Pipe	768.39		768.39			
Track	390.71	67.05	457.82			
Oils, Grease, Misc. Supplies	373.00	1,282.09	1,655.09			
(4) Operating Equipment:						
Rental	59.25	118.50	177.75			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	693.81	1,676.38	2,370.19			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	9,751.17	25,147.97	34,899.14			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 8/18/53 *Payee THE GLIDDEN COMPANY

Per [signature] Title MANAGER OF MINES

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$3010.00

Signature
(Authorized Certifying Officer)

Date AUG 24 1953 Vou. No. SF-DMEA-7

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idr-107 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Reg. III Date August 20, 1953.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date August 24, 1953

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS AUG 24 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Calhoun Company Minerals
Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 adit	ft.	9751.17	430'	634,899.14	1022½'			
Total Distributed Costs		9751.17	430'	634,899.14	1022½'			Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		9751.17		634,899.14				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 8/14/53 Operator The Calhoun Company

By Edward L. Galston Title Manager of Mines

Remarks:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

MONTH OF JULY 1953 DOCKET NO. DMEA 1219X (Amended)

OPERATOR: THE GLIDDEN COMPANY
CLEVELAND, OHIO

Government participation - diamond drilling, December 1950 to December 31, 1952	21,924.99	$21,924.10
Government participation - Reopening 300 adit, to date (7/15/53)	7,157.50	7,157.50
TOTAL GOVERNMENT PARTICIPATION TO DATE	29,082.49	$29,081.60

Redding, California
August 14, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Reopening 300 Bully Hill Adit

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
Idm-E187

Reopening 300 Adit
Advance July: 348½ ft. Total to date: 941 ft.
300 Adit Southwest of shaft - 75 ft. - total advance 75 ft.
Reached east side of shaft last week of July.

302 Drift SW
Advance - month: 13 ft. Total to date: 13 ft.
Necessary to reopen this drift to shaft in order to capture water from south side of shaft.

Timber
Back spiling only necessary on short stretches. Reduced cross-section of adit to 7 ft. caps, 7 ft. 6 in. posts.

300 Station
Ground not heavy but timber in bad state of repair. Necessary to do considerable retimbering before pumping operations can be started.

No new equipment added during the month.

You will please find appended a statement showing government participation to date on diamond drilling; also government participation to date on reopening 300 adit. The total, amounting to $29,081.60, represents government expenditures at Bully Hill.

Respectfully submitted,

Edward L. Ralston, Manager of Mines.

ELR:HM

Form [illegible] (Rev.)

Budget Bureau No. 42-R1036
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 22 [illegible]

OPERATOR'S MONTHLY REPORT AND VOUCHER

E187

Month of June, 1953 Docket No. DMEA 1219X Amended Contract No. [illegible]

Operator's Name The Golden Co. Inc. Minerals

Address Cleveland, Ohio

Contract Amount, $ Government Participation: % Amount, $ 1592.50

227.5 ft. @ $7.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
RD. RDG 300 Adit						
(2) Labor and Supervision:						
Labor	5417.45	7,206.37	12,623.82			
Supervision	500.00	1,312.50	1,812.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	3094.28	4,474.15	7,568.43			
Explosives						
Pipe						
Track	67.05		67.05			
Oils, Greases						
Misc. Supplies	463.57	817.72	1,281.29			
(4) Operating Equipment:						
Rental	59.25	59.25	118.50			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	710.42	965.96	1,676.38			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10,312.02	14,835.95	25,147.97			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date July 13, 1953 *Payee The Golden Company

By Edward L. Nikolov Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1592.50

Signature (Authorized Certifying Officer)

Date AUG 12 1953 Vou. No. SF-DMEA-6

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title [illegible] Date July 29, 1953

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 22 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1953 Docket No. DMEA1219 (Amended) Contract No.

Operator's Name THE GLIDDEN COMPANY Minerals

Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Foot	10312.02	227.5'	25,147.97	592.5'	$42.444		
TOTAL DISTRIBUTED COSTS		10312.02	227.5'	$25,147.97				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$10312.02		$25,147.97				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date July 13, 1953 Operator THE GLIDDEN COMPANY

By Edward L. Ralston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Redding, California
July 13, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
Reopening 300 Bully Hill Adit

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
Idm-E187

Reopening 300 Adit:

Advance - June: 227.5 feet. Total to date: 592.5 feet.

Little change in condition of adit, completely filled, with ground badly broken. Slighty less flow of water.

Timber: Continued use of back spiling necessary with occasional side spiling and some breast boards. Ground not heavy after being retimbered.

No new equipment added during month.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

Form MEA 104 (Rev.)
(Apr. 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 17 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

E187

Month of May, 1953 Docket No. DMEA 1219X (Amended) Contract No. [illegible]
Operator's Name THE GLIDDEN COMPANY Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $ $1596.00
228 ft. @ $7.00 per foot

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
REOPENING 300 ADIT						
(2) Labor and Supervision:						
Labor	$4479.73	$2726.64	$ 7,206.37			
Supervision	687.50	625.00	1,312.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	2837.07	1637.08	4,474.15			
Explosives						
Pipe						
Track						
Misc. Supplies: Oils, Grease, Diesel Fuel	231.87	585.85	817.72			
(4) Operating Equipment:						
Rental	59.25	-	59.25			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	639.17	326.79	965.96			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$8934.59	5901.36	$14,835.95			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 6/13/53 *Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1596.00

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date June 30, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Region III Date July 2, 1953

H. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 17 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1953 Docket No. DMEA 1219X (Amended) Contract No. _____

Operator's Name The Glidden Company Minerals _____

Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft.	8934.59	228 ft	14835.95	365'	$40.646'		
TOTAL DISTRIBUTED COSTS		8934.59	228 ft	14835.95	365'			TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$8934.59	228 ft	$14835.95				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date June 13, 1953 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse).

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

THE GLIDDEN COMPANY

TIME-TESTED

Box 430, Redding, California

June 13, 1953

Mr. A. C. Johnson,
Chief, Mining Division,
Bureau of Mines, Region III,
P. O. Box 1551,
Reno, Nevada.

Re: Docket DMEA 1219X (Amended)
Exploration Project Contract
Idm-R187

Dear Mr. Johnson:

We are enclosing original and four copies of Operator's Monthly Reports and Vouchers, Operator's Unit Costs and Progress Reports, and certified copies of invoices covering the reopening and retimbering of the 300 Adit, Bully Hill Mine. These reports cover the months of March, April and May.

Under the terms of our amended contract with the DMEA, the government was to participate to a maximum of $7.00 per foot on the reopening and retimbering of the 300 adit. This amended contract was executed during the month of May and according to Mr. Griswold, Chairman of the DMEA Board, would be retroactive on the work in reopening this 300 adit. Hence, this is the reason the reports were not mailed you during the months of March and April. However, they are now up to date and we will mail them each month before the 15th of the month.

Will you kindly have some additional report forms, MF 104 and MF 104-A, mailed to us since our supply is getting rather short.

Respectfully yours,

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

ELR:HM
Encls.

QUALITY Glidden PRODUCTS

Redding, California
June 13, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
REOPENING 300 BULLY HILL ADIT

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
Idn-K187

Reopening 300 Adit:
Advance - May: 228 feet. Total to date: 365 feet.

Adit badly caved, completely filled, ground blocky and badly broken. Heavy flow of water.

Timber: Necessary to use spiling in back for entire distance with some side spiling and occasional breast boards. No difficulty experienced in holding adit open after timbering.

Equipment added: Kohler portable electric light plant on rental basis until power lines can be run in from substation.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

Form [illegible]-204 (Rev.)
April 1952)

Budget Bureau No. 42-R102[illegible]
Approval expires 6-30-53

ACCOUNTS JUL 17 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1953 Docket No. DMEA 1219X (Amended) Contract No. [illegible]
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: % Amount, $ $819.00
117 ft. @ $7.00 per ft.

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
REOPENING 300 ADIT						
(2) Labor and Supervision:						
Labor	2316.75	409.89	2,726.64			
Supervision	625.00	-	625.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	1172.08	465.00	1,637.08			
Explosives						
Pipe						
Track						
Misc. Supplies: Oils						
Grease, Diesel Fuel	585.85		585.85			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	286.83	39.96	326.79			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4986.51	$ 914.85	$ 5,901.36			

I certify that the above bill is correct and just and that payment therefor has not been received.
Date June 12, 1953 *Payee The Glidden Company
Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 819.00

Signature Lloyd H. Sjolander
Authorized Certifying Officer
(Authorized Certifying Officer)

Date AUG 26 1953 Vou. No. SF-DMEA-6

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature R. C. Johnson Title Chief, Inly. Sec. Date June 30, 1953.
R. C. Johnson Region II

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date July 2, 1953.
H. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form [illegible]-104A
([illegible]il 1952)

Budget Bureau No. 42-R116
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JUL 17 1953
RECEIVED

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1953 Docket No. DMEA 1219X (Amended) Contract No. _____
Operator's Name The Glidden Company Minerals _____
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft	4986.51	117'	5901.36	137'	$43.0732'	137	
TOTAL DISTRIBUTED COSTS		4986.51	117'	5901.36	137'			TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4986.51	117'	5901.36				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date June 13, 1953 Operator The Glidden Company

Per [signature] Title Manager of Mines
Edward L. Ralston

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

Redding, California
May 14, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
REOPENING 300 BULLY HILL ADIT

DMEA REFERENCE:
Docket No. 1219X Amended
Commodity: Zinc-Copper
Idm-K187

Reopening 300 Adit:
Advance - April: 117 feet. Total to date: 137 ft.

Adit badly caved, completely filled. Heavy flow of water.

Timber:	Posts and caps	10 x 10's - fir
	Girts	4 x 6's - fir
	Spiling	4 x 6's - fir
	Lagging	2 x 8's and 2 x 10's - fir

Necessary to use spiling in back for entire distance, with occasional side spiling and breast boards. Heavy flow of water continued.

Rails: 25 lb.

Equipment: 320 ft. Diesel compressor. Model 12-B KIMCO shovel loader.

Second shift added April 27, 1953.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

Form [illegible] (Rev.) April 1950)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-[illegible]
Approval expires 8-30-53.

ACCOUNTS JUL 17 1953
RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

E 187

Month of March, 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ 20 ft. @ $7.00 per ft. Government Participation: % Amount, $ 140.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
Reopening 300 Adit						
(2) Labor and Supervision:						
Labor	409.89		409.89			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	465.00		465.00			
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	39.96		39.96			
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$914.85		$ 914.85			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 13, 1953 Payee The Glidden Company

Per Edward T. Ralston Title Manager of Mines

*When a voucher is signed for receipt in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 140.00

Signature (Authorized Certifying Officer)

Date AUG 12 1953 Vou. No. SF-DMca-6

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date July 2, 1953

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form [illegible]F-10[illegible]A
(A[illegible] 1952)

Budget Bureau No. 42-[illegible]1
Approval expires 6-30-53.

ACCOUNTS JUL 17 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1953 Docket No. DMEA 1219X (Amended) Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reopening 300 Adit	Ft.	914.85	20'	914.85	20'	$45.743'		
TOTAL DISTRIBUTED COSTS		$914.85	20'	$914.85	20'			TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		$914.85	20'	$914.85				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date June 13, 1953 Operator The Glidden Company

Per Edward L. Ralston Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

Redding, California
April 14, 1953

SUBJECT: REHABILITATION BULLY HILL MINE
REOPENING 300 BULLY HILL ADIT

DMEA Reference:
Docket No. 1219 X Amended
Commodity: Zinc-Copper
Idm-E187

Reopening 300 Adit:
The work comprised reopening the 300 Adit which had been closed since about 1920. Adit badly caved and completely filled.

Work started: March 23, 1953.

Advance - March: 20 feet.

Portal timbers: 8 x 16's.

Sets: 5 ft. centers.

Opening: 8 ft. high by 8 ft. wide, in the clear.

Respectfully submitted,

Edward L. Ralston - Manager of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

JUN 3 1953

Mr. George Mavor
c/o Mr. Robert M. Hull
1201 North Division Street
Spokane 2, Washington

Re: DMEA-1219, Idn-E187
The Glidden Company

Dear Mr. Mavor:

In the comments portion of your work report for the month of May you request advice as to the type of audit report, if any, required for the referenced project.

If it is your opinion that a site audit is not necessary for the reasons usually given for issuing a Report of Review in lieu of making a site audit, no further action on your part is required at this time. Since the original contract was amended and superseded by a new contract, dated April 30, 1953, which provides for part of the work on an agreed unit cost basis and part on an actual cost basis, it appears that an interim site audit may be deferred until a substantial portion of the new work has been performed.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
June 3, 1953

cc: Docket
Admr. Reading File
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

800

MAY 22 1953

Mr. George Mavor
DMEA Auditor
1012 Flood Building
870 Market Street
San Francisco 2, California

AIR MAIL

Re: Idm-8187, DMA-1219X
The Glidden Company

Dear Mr. Mavor:

Receipt is acknowledged of your letter of May 15, 1953, relative to the settlement of the referenced project's operation through the month of December, 1952.

The original contract, as amended on November 1, 1951, was on an actual cost basis, but provided that (1) "the Government will not participate in costs exceeding $9.00 per foot for diamond drilling and for geological work", (2) the allowance for the geological work "is not to exceed $1.00 per foot of the actual footage drilled, and this is to be included in the total cost which is not to exceed $9.00 per foot", and (3) "all costs of rehabilitation and engineering are to be borne by the Operator".

It appears that the Operator has always claimed costs in excess of the maximum of $9.00 per foot allowable under the contract and, therefore, payment has been effected each month on the basis of this rate of $9.00 per foot. Accordingly, if the certifying officer's files include sufficient and satisfactory documentation of costs, exclusive of rehabilitation and engineering, equal to or in excess of the costs allowable at the rate of $9.00 per foot, I see no reason for requesting the Operator to furnish information relative to the costs in excess of the amount allowable. Of course, the $9.00 per foot allowed must not include costs for geological work in excess of $1.00 per foot.

It appears that during the first six months of the project the Operator billed only for the costs in which the Government was to participate, (i. e., all costs except rehabilitation and engineering), but thereafter he reported all costs including those in which the Government did not participate. The probable explanation is that, with the promulgation of the revised Form MF-104, Technical Services and Rehabilitation and Repairs were stated on the report format as items of costs for the first time and the Operator concluded that these costs should be shown.

Since this contract has since been amended and superseded by a new contract dated April 30, 1953, I believe it would be pertinent to request, through the Field Team, that the Operator be advised to indicate the total costs, in which the Government has participated ($47,693.98) under the original contract, as the "Totals previously reported" on the first MF-104 submitted for work under the new contract. This action will result in future forms MF-104 depicting the true project costs.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
May 22, 1953

Copy to: Docket
Admr. Reading File
Mr. Chambers

San Francisco, Calif.
May 15, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 18 1953

Mr. Jay L. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Washington 25, D.C.

RE: E187-DMA-1211AX
The Glidden Co.

Dear Mr Chambers:

Subject operator has been paid on a footage basis, and listed below is a summary of payments and costs taken from the MF-104's.

1952	Footage	Rate	Amount	50% Paid	Monthly Distrib. Cost	To Date
Jan	497	$9.00	$4.473.00	$2.236.50	$7.117.12	$7.117.12
Feb	634	✓	5.706.00	2.853.00	8.569.03	15.686.15
Mch	637	✓	5.733.00	2.866.50	9.622.63	25.308.78
Apr	558	✓	5.022.00	2,511.00	9.263.22	34.572.00
May	574	✓	5.166.00	2,583.00	11.090.90	45.662.90
June	478	✓	4.302.00	2.151.00	21.283.91	Not given
July	740	✓	6.660.00	3.330.00	17.098.21	165.468.42
Aug	329'4"	✓	2.963.98	1.481.99	19.941.82	185,410.24
Sept	196.	✓	1.764.00	882.00	17.098.59	202.508.83
Oct	211	✓	1.899.00	949.50	15.403.20	217.912.03
Nov	74	✓	666.00	333.00	13.548.87	231.460.90
Dec	391	✓	3.339.00	1.669.50	14.051.44	245.512.34
TOTALS	5,299'4"	✓	$47.693.98	$23.846.99	$164.088.74	$245.512.34

You will note there is a difference between the "Monthly Totals" and the "To Date Total" of $81.423.60. This difference appears in the accumulated total costs commencing with the month of July 1952. There was no conversion

statement attached for the month of June 1952 and most of difference appears in the July 1952 accumulated totals for Technical Services and Rehabilitation and Repairs.

The contract states that the Government will not participate in costs exceeding $9.00 per foot for the diamond drilling, any additional costs will be borne by the operator. Contract further state that costs of rehabilitation, engineering, geology, etc. are to be borne by the operator.

As the monthly MF-104's were supported by certified invoices and payrolls which agreed with the monthly costs and as settlement was made on a footage basis or approximately 29% of actual monthly costs. I was wondering whither or not we should get an explanation from the operator covering the difference of $81.423.60 which was inserted into the accumulated costs on the MF-104 for July 1952. As previously stated most of this difference is Technical Services and Rehabilitation and Repairs. Then there would be the question of obtaining supporting invoices and payrolls. If the details have to be obtained, it would have no bearing on the method of settlement.

Your opinion in this matter will be appreciated.

Sincerely yours
George Mavor
auditor

{Dec. 1952 was last mo. of operation
new contract now being
prepared on footage basis}

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

ACCOUNTS JAN 16 1953

Month of December, 1952 Docket No. DMEA 1219-X Contract No. E-187
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio
Contract Amount, $ Government Participation: 11.88% Amount, $ 1669.50
(371 ft. @ 50% of 9 per ft.)

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	132.50		3,067.50			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	2,272.00		42,090.57			
Supervision	550.00		6,600.00			
Technical Services	4,009.06		94,177.42	X		
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Rock Pipe			797.28			
Bits, Shells, etc.	1,796.69		23,822.20			
(4) Operating Equipment:						
Rental	2,782.31		41,258.90			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	555.28		48,550.58	X		
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Travel & Living			2,809.70			
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	66.24		1,811.82			
Liability Insurance	323.58		4,476.39			
Cookhouse & Townsite	997.36		15,429.96			
Miscellaneous	46.42		629.42			
(8) Contingencies (specify):						
Totals	$14,051.44		$245,512.34			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 1/14/53 *Payee THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1669.50

Signature Hope M. Schender
Authorized Certifying Officer
(Authorized Certifying Officer)

Date JAN 2 1 1953 Vou. No. SF-Dmea. 32

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div., Date January 15, 1953

A. C. Johnson
Boston [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. O. Miller Title Executive Officer DMEA Field Team Region III Date January 16, 1953

H.O. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due, "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III

Form MF-101A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS JAN 16 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1952 Docket No. DMEA 1219-X Contract No. _____

Operator's Name The Glidden Company Minerals _____

Address Cleveland, Ohio

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft.	$13496.16	371*	$196,961.76	5299			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$13496.16		$196,961.76				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		555.28		48,550.58				
New Buildings, Improvements, etc.								
Total Costs		$14051.44		$245,512.34				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 1/14/53 Operator THE GLIDDEN COMPANY

By Edward L. Ralston Title Manager of Mines

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Remarks: * Included in Footage of 371 ft. is 106 ft. of redrilling as set forth in Mr. M.G.Hansen's letter of 12/4/52 to Mr. A.C. Johnson, Reno, Nevada.

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
1963 JAN 16 AM 8:4
SAN FRANCISCO, CALIFORNIA

Redding, California
January 7, 1953

Subject: Exploration Project Contract
Bully Hill and Rising Star Mines
Shasta County
California

B.L.M. Reference:
Docket No. [illegible] 1919M
Commodity: Zinc-Copper
Idn-F-1[illegible]7

Geological Engineering Report - Month of December, 1952

I. Diamond Drilling

The footage drilled to date on this project totals 5299 feet, as of the end of the work day December 31, 1952. Reference is made to the attached page 1 of Tabulation No. I.

The following tabulation summarizes the drilling progress for the month of December 1952.

Hole #5-Drill [illegible]24-Dec.footage 19[illegible]',size [illegible],Total Depth 1000'
Hole #6-Drill 1147-Dec.footage 68',size 4",Total Depth 68'
Total footage 8[illegible]' for December

Hole #5 (A1-5) continued in Bully Hill tuffaceous rhyolite. It was sparsely mineralized with fine grained pyrite with occasional grains and seatings of chalcopyrite. At 1030.5' there is a very small amount of a black mineral, coating the edges of pyrite cubes and chalcopyrite which is suggestive of secondary chalcocite.

Drilling was suspended on December 31st, in conformance with instructions from the Hidden Company.

Hole #6 (A6-1) was spudded in as the first hole in Area 6, which covers the area to the south of the main Bully Hill Mine. A tri-cone rock bit was used to drill to a depth of 68 feet, in which 4 inch heavy duty pipe was set as casing. NX casing with bit attached was also set inside to a depth of 68 feet. The hole was stopped on December 17th, upon receipt of a wire from our Minneapolis office based upon a cancellation of the drilling program effective December 31, 1952. Since it was apparent that this hole could not be completed by that time, nor even reach interesting ground, it was decided by Mr. Walston that we stop it immediately.

Vertical sections are attached which show the geology and location of mineralization in holes #5 (A1-5) and #6 (A3-1).

Hole #5 was surveyed three times before a satisfactory reading was obtained. This was necessary because the ground water at depth was warm, and the gelatin set too fast or not at all on the first two attempts before a proper concentration could be computed. A surveying record is enclosed.

On the first of December 1952, a letter was received by the Longyear Company from the Glidden Company advising that as of December 31, 1952, diamond drilling and engineering geological work was to be suspended. It is believed by the latter company that sufficient encouraging information has been obtained in the drilling done to date to justify reopening the Bully Hill Mine. It was further decided that all geological information, including diamond drill hole sections, assays, surface mapping, etc., should be assembled on maps and drawings for presentation to the D.M.E.A. Committee in Washington, D.C., for consideration in granting a modification of the existing contract called "Docket No. D. .A. 1219X". This work will be done during the month of January 1953. Simultaneously, the drills and equipment will be prepared for shipment to our home warehouse in Marquette, Michigan.

In hole #5 (A1-5), 33 runs or pulls were made during the month, of which 26 recovered 100% of the core.

II. Diamond Drill Hole Description

Detailed descriptions of the drill cores from holes number A1-5 and A3-1 are given in the attached logs. As has been our custom in reporting, each trip or run of the corebarrel into the hole, together with the amount of core recovered and the percentage is shown.

Hole #5 (A1-5) was drilled from [illegible] to 1010 feet. A small amount of sulfide mineralization persisted to the end of the hole, variable in amount but averaging about 5 percent. Of this, small grains or veinlets of chalcopyrite occur scattered throughout the portion drilled.

Samples were taken to a depth of 903' and shipped to Abbot A. Hanks, Inc., Assayer, on December 2[illegible], 1952. The balance of the hole will also be sampled.

Hole #6 (A3-1) was drilled with a tri-cone bit and the cuttings caught as sludges. These are not to be sent as samples.

Hole #4 (A1-4) was also sampled throughout its mineralized portion and sent to the assayer.

III. Camp Rehabilitation

No major work was undertaken this month.

A Bean #435 gasoline operated pump was installed which pumped water from the line near the houses in Circle City up to the tank on the south point of Bully Hill. This would take care of the drilling planned in Areas 2, 3, 4 and 5. The pump was adequate.

Additional leaks in the roofs of houses occurred, which were repaired.

Unusually heavy rainfall hampered hauling at the drill sites and only the caterpillar tractor was able to travel on the upper road.

The elevation of Shasta Lake Reservoir raised from 1020.7 to 1029.1, a raise of 8.4 feet. 16.34 inches of rain fell, bringing the total to 21.8 inches, which compares with a normal average to date of 12.75 inches. Temperature ranges were between the high of 55° and the low of 34°.

IV. Other Surveys or Construction

Nothing new was started.

The drills, pumps, casing, rods, and all other equipment were being collected in the machine shop, some for crating, but all for preparation for shipping back to our warehouse in Marquette, Michigan. It is roughly estimated that railroad car loading will be made during the fourth week in January.

V. Safety

There were no lost time accidents this month.

VI. Visitors

There were no visitors this month from the Government Agencies.

The writer spent the time from December tenth thru the twentieth in San Francisco and Oakland working with Mr. Ralston, preparing a tabulation of footages of tunnel and drifts to be reopened, and the amount of drifting, crosscutting and raising necessary to prospect the mineralized zones indicated by the drilling in Area 1, on a two level development program.

Costs were also estimated for performing this work. The data was presented to Mr. A. C. Miller, Executive Officer, D.M.M.A. Field Team, Region III, in San Francisco on December 17, 1952.

VII. Geological and Engineering Work

Most of the month was spent on drafting in the preparation of 40 and 100 scale, geological and assay maps. Also the plane table geological data is being transferred to Surface Exposure maps. It has been our thought to spend the days during the dry season in the field mapping and gathering data which would be assembled later during the rainy season, onto finished maps. The same applies to the 40 scale diamond drill hole sections which show geology and assays.

These are not sufficiently completed to include with this report.

Attached are tabulations showing the sludge recovery data for Hole #5 (A1-5). It is of particular interest to note that from 392 feet to the end of the hole there was no return of sludge or water. Yet, when the rods were removed from the hole, water overflowed at the collar. From this it may be deduced that an open water course exists into which the drilling water and the cuttings flowed, because (?) the water passing thru the rods under pressure from the pumps found less resistance passing thru the water course than returning up the pipe column between the rods and casing. The core recovery in this interval was 100 percent.

VIII. Maps

The maps which have been in process will be the sole subject for our attention until completed.

Unless otherwise notified, this report is the last to be submitted on this project.

Respectfully submitted

Mayer G. Hansen

Mayer G. Hansen

Form N.P.-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 23 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1952 Docket No. DMEA 1219X Contract No. E 187

Operator's Name The Oliver Company Minerals Zinc & Copper

Address Cleveland, Ohio

Contract Amount, $ (74 ft. @ 50% of 49.00 per ft.) Government Participation: 2.45% Amount, $ 333.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	$ 90.00		2,935.00			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	2,697.04		32,818.57			
Supervision	550.00		6,050.00			
Technical Services	4,032.20		42,568.36			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe			797.28			
Track						
Line, Shells, etc.	627.96		22,025.51			
(4) Operating Equipment:						
Rental	2,634.50		38,498.19			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	1,050.95		47,995.30			
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous: Travel Living			2,809.70			
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	72.27		1,745.58			
Liability Insurance	369.94		4,152.81			
Commissary & Townsite	1,347.92		14,492.60			
Miscellaneous	76.03		574.00			
(8) Contingencies (specify):						
TOTALS	$13,548.87		$231,460.90			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 12/23/52 Payee The Oliver Company

By [signature] Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 333.00

Signature
(Authorized Certifying Officer)

Date Vou. No. SF-DmEa-30

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E187 in accordance with the terms of the contract.

Signature R. C. Johnson Title Chief, Mining Div., Region III Date Dec. 15, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date Dec. 18, 1953

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-1044
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 23 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1952 Docket No. DMEA 1219X Contract No.
Operator's Name THE GLADDEN COMPANY Minerals
Address CLEVELAND, OHIO

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft	$12,420.32	74	$183,388.00	4928			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$12,420.32		$183,388.00				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		1,128.55		48,072.90				
New Buildings, Improvements, etc								
Total Costs		$13,548.87		$231,460.90				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 12/13/52 Operator THE GLADDEN COMPANY

By [signature] Title Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Remarks:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

COPY

Invoice
E. J. LONGYEAR COMPANY
Mining Engineers
Minneapolis, Minnesota

December 8, 1952

The Glidden Company
% Mr. Edward D. Ralston
The Chemical & Pigment Company
766-50th Avenue, Oakland 1, California

Charges in connection with exploration at the Bully Hill Mine, Shasta County, California during the month of November, 1952, as per the terms of our agreement dated May 3, 1951.

Engineering Fees			
November 1 - 30, 1952	1 month	@ $2,000.00 per month	$2,000.00
November 1 - 30, 1952	30 days	@ 35.00 per day	1,050.00
			$3,050.00
Car Expenses			137.25
Living Expenses			
M. G. Hansen		329.57	
A. Lutenko		137.87	467.44
Expenses			
Telephone & Telegraph Charges		27.32	
Office Supplies		81.32	
Rental of Typewriter, including adjustment		10.50	
Stove for L. Pierce		25.00	144.14
Wages paid to Office Staff at Redding, California			
November 1 - 30, 1952		200.00	
F.I.C.A. Insurance	200.00 @ 1.5%	3.00	
Unemployment Insurance	200.00 @ 3%	6.00	
Compensation, P.D. & PL Insurance	200.00 @ 12.83%	24.37	233.37
			$4,032.20

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY

Manager of Mines

COPY

Invoice
E. J. Longyear Company
Diamond Core Drilling Contractors
Minneapolis, Minnesota

December 9, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical and Pigment Company
Oakland 1, California

Invoice No. 115259

Diamond core drilling during the month of November 1952 on your property known as Bully Hill, Shasta County, California, as per the terms of our agreement dated April 27, 1951.

Total footage drilled during November, 1952 74.0 feet.

Hole No.	Compensation	From	To	Footage	Rate	
4		1083.0	1106.0	23.0		
"		943.0	1049.0	106.0		
5		813.0	864.0	51.0		
				180.0	.50	90.00

Equipment rental					
1 drill	14/30 month	(3 shifts)	@ 675.00	315.00	
	16/30 month	(2 shifts)	@ 600.00	320.00	
1 drill	1 "	(1 shift)		475.00	
Truck	1 "			100.00	1,210.00

Depreciation of Rods and Casing	From	To	Footage	(1-10)	Rate	Amount	
4 E Rods	1083.0	1106.0	23.0	2.3	1.32	3.04	
5 E Rods	813.0	864.0	51.0	5.1	1.32	6.73	9.77

Casing left in Hole #4					
60 ft. AX Cas. less Depr.	6.0 - 54 ft.		1.33	71.82	
50 ft. BX Cas. less Depr.	5.0 45 ft.		1.70	76.50	148.32

Payroll (See enclosed payroll sheets)				
November, 1952			3,732.00	
FICA Insurance	1902.00	@ 1.5%	28.53	
Unemployment Insurance	1878.00	@ 3%	56.34	
Compensation, PD & PL Ins	3474.00	@ 12.83%	423.24	4,240.11

Credit due you for board of workmen at Redding, California				
Axel Augustson	29 days	@ 2.00	58.00	
Arne Maki	25 days	@ 2.00	50.00	
Floyd Heyborne	25 days	@ 2.00	50.00	
Edward Beesley	25 days	@ 2.00	50.00	
Howard Graves	25 days	@ 2.00	50.00	
William Buchholz	25 days	@ 2.00	50.00	
Leslie M. Marvel	23 days	@ 2.00	46.00	
Henry Wilgren	1 day	@ 2.00	2.00	
Dennis Burke	9 days	@ 2.00	18.00	
Louis Gizinos	8 days	@ 2.00	16.00	(390.00)

COPY

Invoice
E. J. Longyear Co.
Invoice No. 115259

Hold Harmless insurance charges for October 1952		2.97
Fire and Theft Insurance		12.10
Freight, Express and postage		284.16
Telephone and Telegraph		22.61
Food Supplies		392.35
Camp Expense		
Kitchen and Mess hall supplies	9.88	
Bedding supplies	215.29	225.17
Fuel and Oil		
12 cyl. Standard Flamo		67.36
Supplies used		
Stationery Supplies	13.23	
1 cn - 3 in 1 oil	.26	
1 - Phillip screw driver	.77	
1 Arvin heater	15.30	
1 - plug	.20	
20 sks. Aquagel	40.33	
1 - Q - 12 - B Gasket Set	3.77	
1 - EX 10 ft. S.T. Core Barrel	21.90	
1 Fan belt for XAH motor	2.24	
2 - 1" x 90' hemp rope	13.85	
2 - 1/2 x 75' L.L. cable with clevis	28.25	
4 - EXL core lifters	8.40	
1 - tripod clevis bolt	5.20	
2 - Hook jaws - 24" ~~2x~~ pipe wrench	7.30	
2 - Heel jaws - 24" pipe wrench	2.00	
1 - BX casing to 2½" pipe pin	13.50	
2 - Coleman lantern generators	2.64	
2 - Coleman lantern mantles	2.06	
2 - Coleman lantern globes	1.70	
2 - Water pails	1.28	
1 lb. Acid Core solder	1.09	
1 - AXL Type C Diamond bit	11.00	
1 - BX Type C Diamond Reaming Shell	281.80	408.07

Bortz Wear	Type C	Type CC	Type T
Actual wear previous month	87.59	2.67	-0-
Add. This month's suspension chg.	14.00	2.00	-0-
	101.59	4.67	-0-
Less: Last month's suspension chg	58.00	5.00	3.00
	43.59	(.33)	(3.00)

43.59 carats Type C Bortz	@ 11.00	479.49	
(.33) Carats Type CC Bortz	@ 8.50	(2.81)	
(3.00) Carats Type T Bortz	@ 11.00	(33.00)	443.68
Bortz salvaged from Diamond Reaming Shells			
(33.65) Carats Type C Bortz	@ 11.00		(370.15)
			$6,796.52

A CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY
By
Manager of Mines

Redding, California
December 5, 1952

Subject: Exploration Project Contract
Bully Hill and Rising Star Mines
Shasta County
California

D. M. A. Reference:
Docket No. DMA 12102
Commodity: Zinc-Copper
IdA-F-137

Geological Engineering Report - Month of November, 1952

I. Diamond Drilling

The footage drilled to date on this project totals 8074 feet as of the end of the work day November 30, 1952. Reference is made to the attached page 1 of Tabulation No. I.

The following tabulation summarizes the drilling progress for the month of November, 1952.

Hole #4-Drill #1147-Nov.footage 23',size NX,Total depth 1106'
Hole #4-Drill #1147-Nov.footage 106',size NX,Total depth 1049'
(The latter covers the redrilled portion from 943 to 1049)
Hole #5-Drill #1184-Nov.footage 51',size NX,Total depth 184'
Total footage 180' for November

The average number of runner shifts worked per drill per day for the 25 day (including Armistice and Thanksgiving Day) work month was 1.50. Early in the month Henry Wilgren, drill runner, left for San Francisco to have an operation on hand for the removal of a growth.

Hole #4 (A1-4) located on the old tennis court, continued in broken rhyolite breccia. As described in last months report, a cave at 943 feet invariably closed the hole each time the rods were withdrawn. The bit and corebarrel would never freely pass this point on the way down and required drilling from a few inches to a few feet each time in passing. Attempts were made to survey beyond this depth, which is only 7 feet beyond the bottom of the NX casing, but each time the clinometer barrel reached the cave it was impossible to pass. Core drilling reached a depth of 1106 feet having passed thru a mineralized zone containing essentially pyrite, but also containing small amounts of chalcopyrite, extending from 943 to 107[illegible] feet. On November third, the bit encountered solid rock at 943 and continued

without re-entering the hole to 1049. This gave a second crossing of the mineralized zone and at 1049 it was decided to abandon the hole. The redrilling gave us a good check on the zone and indicated a slightly lower percentage of sulfide. On November 13th, we started pulling casing. Sixty feet of AX casing broke off and was left in the hole. The BX also stuck and the bottom 50 feet was cut off and left in the hole. The BX and 4 inch casing came out with out much trouble. The tripod and drill set-up was rigged down and moving to the new location started. The latter is located at the south end of the Bully Hill Mine in Area 3 and will hereafter be referred to as Consecutive #6, (A3-1).

Hole #5 (A1-3) was not worked the first half of the month as it was desired to work 3 shifts daily on #4. On November 18th, drilling commenced again on #5 which had filled up with caved material to a depth of 710 feet. It was necessary to chop and drill and use a casing bit on the AX casing, which was set to the previous bottom at 713 feet. From the twentieth on, about six feet a shift was obtained. The rock penetrated was broken up tuffaceous rhyolite. It contained disseminated pyrite varying in places up to 15% but averaging closer to a 5% content. There is a slight amount of chalcopyrite present, increasing in depth but never reaching ore grade. A few small veinlets of barite were observed. The possibility of one entering more intense mineralized still exists, and the hole should be continued.

Vertical sections are attached which show the geology and location of mineralization in holes #4 (A1-4) and #5 (A1-5).

A final attempt to survey in the redrilled portion of #4 (A1-4) was made on November 1 th, which was unsuccessful. As a last resort we pulled the AX casing up 5[illegible] feet to try for a survey at 03[illegible]. Loose material followed up with the casing and it was impossible to get the Haas compass below the influence of the tools. On November 24th Hole #5 (A1-5) was surveyed for both bearing and dip at a depth of 432 feet. The condition of both the gelatin and acid was excellent and a bearing of [illegible] and a dip of 5[illegible] was obtained.

In hole #4 (A1-4), 23 runs or pulls were made during the month of which 11 recovered 100% of the core. Only five runs were under 50% core recovery.

In hole #5 (A1-5), 12 runs or pulls were made during the month of which 10 recovered 100% of the core and the other two runs recovered 91 and 67% respectively.

II. Diamond Drill Hole Descriptions

Detailed descriptions of the drill cores from holes number A1-4 and A1-5 are given in the attached logs. As is our custom in reporting, each trip or run of the corebarrel into the hole, together with the amount of core recovered and the percentage, is shown.

The extent of the sulfide mineralization in hole #4 (A1-4) was fully described in last months report. The pyritic mineralization ended at about 1073 and thereafter only a few stringers appeared at 1090. Following an inspection by the A.E.C.A. field team, the core will be sacked as samples and sent to Albert A. Hanks, Inc. for assaying. It is doubtful if any samples will exceed 4 percent copper, although two, one foot samples may reach this figure.

The mineralization in hole #5 is not as good as that found in hole #3, although the similarity is apparent. The chalcopyrite appears more as a coating and the amount of pyrite present is less. Because the slight amount of chalcopyrite present seems to be increasing with depth, there still is a chance that a more intense amount may yet occur. It is still planned to continue this hole to a thousand foot depth.

III. Camp Rehabilitation

No major work was done this month.

The first rain storm on November 13th indicated a few leaking roofs which were repaired.

A D7 Caterpillar bulldozer was moved to the mine via Bureau of Reclamation barge and stations out on the south end of Bally Hill mine. Access roads were cut and drill rods, casing, tripod poles and other equipment was hauled to the first site.

Due to the absence of power it is planned to install a Dean 435 gasoline operated pump near the houses at Circle City, to pump water to the tank above the proposed holes in Area 3. The pipe line and tank is installed and a line was placed leading from the tank to the first hole in Area 3.

With the advent of the rainy season the water supply increased and the supply tanks are overflowing.

The elevation of Shasta Lake Reservoir dropped from 1022 feet to 1020.7 feet, a drop of 1.3 feet. The lake elevation is being held at the latter elevation. This yields a total drop in elevation of about 45 feet

below the June crest. The high temperatures were in the seventies during the first week of the month and dropped to the fifties by the end of the month. The daily low temperature is currently in the twenties. About 4 inches of rain fell, which brings the total this season to [illegible].04 inches which compares with a normal average to date of 7.41 inches.

IV. Other Surveys or Construction

A landing dock was constructed, consisting of two pontoons, size 6½ x 24 feet, spaced 12 feet apart, joined across with 8 x 8 joists. It is double decked with tar paper in between layers. A small, simple derrick remains to be installed and possibly an overhead cross-brace for rigidity on the open end.

V. Safety

There were no lost time accidents this month.

VI. Visitors

On November 1[illegible]th and 19th, Mr. Jacques F. Robertson of the U.S. Geological Survey, visited the mine on one of his routine U.N.A. inspection trips. He was accompanied by Mr. Grant Goodwin, Geologist, California State Division of Mines. The morning of the 20th was spent with Mr. Robertson studying maps and sections.

VII. Geological and Engineering Work

Considerable time was spent on surveying by plane table and alidade, with special emphasis on the south end of the Sully Hill Mine area in connection with the drilling in Area 3.

Attached are tabulations showing the sludge recovery data for hole #4 (A1-4). The high figures of percent recovered (up to 2000%) indicates the caved and broken conditions of the rocks drilled.

VIII. Maps, Newly Made

The geological surface mapping is in process of being transferred to tracings in both 100 and 40 scale. When completed, the various contacts will be projected across areas where no exposures exist. Sincerely,

gossanized areas and alteration effects are noted with the thought in mind of yielding indications of new or additional zones of mineralization. Together with fault structures, these will eventually yield complete geological maps.

40 Scale level maps of the Bully Hill Mine are also in process, as are a set of 100 scale maps.

Respectfully submitted,

Mayer G. Hansen

Mayer G. Hansen

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.
Defense Minerals Administration

OPERATOR'S MONTHLY REPORT AND VOUCHER

NOV 2 1952

Month of October 1952 Docket No. DMEA 1219X Contract No. Idm E-187

Operator's Name The Glidden Company Minerals Zinc + Copper

Address Cleveland, Ohio

Contract Amount, $ (211' @ 50% of $9.00 per foot) Government Participation: ~~6.683%~~ % Amount, $ 949.50

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	$ 105.50		$ 2,845.00			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	2,984.00		37,121.53			
Supervision	550.00		5,500.00			
Technical Services	4,941.64		45,536.16			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe			797.28			
Track						
Bits, Shells, etc.	1,712.12		21,397.55			
(4) Operating Equipment:						
Rental	2,309.52		35,861.63			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	1,195.55		46,944.35			
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Travel & Living			2,809.70			
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	97.68		1,673.31			
Liability Insurance	402.77		3,782.87			
Cookhouse & Townsite	1,071.45		13,144.68			
Miscellaneous	32.97		497.97			
(8) Contingencies (specify):						
TOTALS	$15,403.20		$217,912.03			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Nov. 13, 1952 Payee THE GLIDDEN COMPANY

Per [signature] Title MANAGER OF MINES

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: $ 949.50

Signature A. J. Renner
Authorized Certifying Officer
(Authorized Certifying Officer)

Date NOV 20 1952 Vou. No. 3E-Dm Ca-27

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible]-187 in accordance with the terms of the contract.

Signature A. C. Johnson Title Chief, Mining Div. Region III Date November 17, 1952.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date Nov. 18, 1952

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Mineral Administration
NOV 20 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1952 Docket No. DMEA 1219X Contract No.
Operator's Name The Glidden Company Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft	$14,207.65	211	$170,967.68				
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$14,207.65		$170,967.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		1,195.55		46,944.35				
New Buildings, Improvements, etc.								
TOTAL COSTS		$15,403.20		$217,912.03				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Nov. 13, 1952 Operator THE GLIDDEN COMPANY

Per [signature] Manager of Mines

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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U. S. GOVERNMENT PRINTING OFFICE 205676

Redding, California
November 4, 1952

Subject: Exploration Project Contract
Bully Hill and Rising Star Mines
Shasta County
California

D.M.A. Reference:
Docket No. DMA 1219X
Commodity: Zinc-Copper
Idm-F-187

Geological Engineering Report - Month of October, 1952

I. Diamond Drilling

The footage drilled to date on this project totals 4854 feet as of the end of the work day October 31, 1952. Reference is made to the attached page 1 of Tabulation No. 1.

The following tabulation summarizes the drilling progress for the month of October, 1952:

Hole #4-Drill #1147-Oct.footage 147.0',size EX,Total depth 1083'
Hole #5-Drill # 824-Oct. footage 64.0',size AX,Total depth 813'

The average number of shifts worked per drill per day for the 27 day work month was 1.31. There were two lost time accidents and one helper scheduled to become a runner during the month quit after a prolonged drinking spell.

To be further described elsewhere is the encouraging fact that mineralized zones were encountered in both holes.

Drilling continued to be difficult in both holes. Hole #4 (A1-4), located on the old tennis court, continued in broken rhyolite and encountered additional high flows of water. Currently 4 inch casing is set to a depth of 167 feet, NX casing set to 240 feet, BX casing set to 600 feet, AX casing set to 824 feet and EX casing is set to 936 feet. There has been a persistent cave at 943 feet, which resists cementing and which always closes the hole when the rods and corebarrel are withdrawn. It is necessary to redrill about 6 inches to 2 feet almost every time the bit and corebarrel are lowered into the hole. It is evident that a large boulder is moving at that point as sometimes it is even difficult to withdraw the rods. Once we pass the 943-945 foot point, drilling continues at an almost normal rate of

progress considering the depth. Sulfide mineralization began coming in at 982 and the core recovery thruout this zone was excellent. During the month 59 runs or pulls were made, of which 32 recovered 100% of the core. Only 3 runs were under 50% in core recovery.

Hole #5 (A1-5) which is located near the southeast corner of the group of three houses in Circle City, advanced 64 feet, mostly in Bully Hill Rhyolite. It was altered and chloritic and started bearing small amounts of sulfide at about 730 feet. The hole was continually caving, particularly at a depth of 712. Circulation of Aquagel and baroid failed to hold up the walls. Previously cementing had failed to help. The length of caving exceeded 50 feet and it frequently happened that the corebarrel would fill up with broken material before reaching bottom. A single tube corebarrel is currently being successfully used. In this hole 4 inch casing is set to a depth of 71 feet, NX casing set to 301 feet, BX casing set to 600 feet and AX casing is set to 679 feet. It is planned to set EX casing as soon as we can clear up the hole and reach bottom. The core recovery was fair only, as there were 25 runs of which 6 recovered 100% core.

Hole #4 was surveyed twice but in each case the gelatin set before reaching bottom and the bearing reading was not considered good. The hydrofluoric etching showed the hole to flatten to 28½ degrees.

100 scale sections are submitted for holes #4 and #5, which show the geology posted to date.

II. <u>Diamond Drill Hole Descriptions</u>

Detailed descriptions of the drill cores from holes number A1-4 and A1-5 are given in the attached logs. As is our custom in reporting, each trip or run of the corebarrel into the hole, together with the amount of core recovered and the percentage, is shown.

Hole #4 (A1-4) encountered a mineralized zone containing sufficient quantities of sulfide to make it desirable to investigate further by underground workings such as drifts and crosscuts and drilling to determine its vertical extent. There is a core length of some hundred feet including zones containing up to 15% sulfides, mostly pyrite, but with some chalcopyrite showing. The bedding and mineralization cuts across the core at from 30° to 55°. The mineralization persists to the present bottom of the hole which will be continued at least to 1150 feet if not more, depending upon results. The flattening of the hole has yielded a good crosscutting effect and obviates the

necessity of going to the anticipated depth of 1400 feet as mentioned the last two months. A brief description of the sulfide content follows: (Sulfide content estimated)

982.2	-	983	slight disseminated chalcopyrite
983.5	-	983.7	slight disseminated chalcopyrite
985.0	-	985.3	slight disseminated chalcopyrite
987.3	-	988.1	15% chalcopyrite plus 10% pyrite
988.1	-	1002.0	10% chalcopyrite plus 5% pyrite
1009.5	-	1011.0	15% chalcopyrite plus 10% pyrite
1017.0	-	1020.0	some chalcopyrite plus some pyrite
1020	-	1025	some pyrite
1025	-	1038.5	some pyrite
1038.5	-	1041	about 15% pyrite
1041	-	1049	barren
1071.7	-	1072.7	5% chalcopyrite plus 10% pyrite

Hole #5 (A1-5) is also entering a mineralized zone and by the end of the month had about 30 feet of core length with bedding planes and mineralization cutting the core at from 60° to 85°. The mineralization is not intense and because it looks a great deal like that encountered in Hole #3, may have a better showing with continued depth. A brief description of estimated sulfide mineralization follows:

786	-	789	15 to 20% sulfide
789	-	791	barren
791	-	797	2 to 3% sulfide
797	-	799	15% plus sulfide
799	-	804	10 to 15% sulfide
804	-	810	10% sulfide
810	-	813	About 2% sulfide

Some chalcopyrite is visible but the amount present is too indefinite to guess.

It is planned to continue this hole to at least 1000 feet of depth, its ultimate depth to be decided upon the appearance of the rock penetrated as the hole progresses.

III. <u>Camp Rehabilitation</u>

No major work was done this month.

No stations for drill sites nor access roads were cut.

The water supply was adequate and increased as the weather turned cooler. Both tanks are full but both drills are still conserving the supply by recirculation.

The elevation of Shasta Lake Reservoir dropped from 1026 to 1022, a drop in October of 4 feet, or a total

of 44 feet since the crest was reached in June. Afternoon temperatures decreased this month and varied from 76° to 105°. The night or low temperatures averaged in the fifties. The total rainfall thus far this season (starting in July) has only been 0.96 inches, which is considerably below normal.

IV. Other Surveys or Construction

No new surveys, construction or unusual major work was performed.

V. Safety

There were two lost time accidents this month. Mr. Beezley, a drill runner, had a piece of metal fly into and stick onto his eyeball while breaking drill rod connections. He was off work about five days. Mr. Cunningham, a drill helper, dislocated a vertebrae or injured his back while lifting drill rods. He has been off work about 10 days and still has not reported back.

VI. Visitors

On October 21st, Mr. Edward J. Matson, Engineer, Reno office, U.S. Bureau of Mines, visited the mine on a routine inspection trip.

VII. Geological and Engineering Work

Much time was spent on the plane table mapping in Areas 1 and 3. We are endeavoring to get as much field work of this type done as soon as possible before the rains start. Much of it is routine and does not yield startling results. It is desired to study the alteration areas from the south end of the Bully Hill Mine over to and including the Rising Star Area.

The writer spent considerable time preparing a summary report covering the first ten months of exploration work. The purpose of the report was to help the Glidden Company reach a decision as to the future program of development.

VIII. Maps, Newly Made

The set of 100 scale geological maps are still in process covering the Bully Hill Mine. The current geology obtained from sections of the diamond drill holes is transferred to these. With this information available, it will be possible to better interpret the old geological

mapping to make it correspond with the classification of rocks now being used. These are most useful in planning future exploration work as well as for determining the depth of the drilling as it progresses.

40 scale sections are also in process on each of the diamond drill holes. When completed, these will show both the geology and the assay values of samples of the mineralization.

40 Scale level maps are also being started to show detailed geology and assays.

Respectfully submitted

Mayer G. Hansen

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September 2 195 Docket No. DMEA 1219X Contract No. E-187

Operator's Name THE GLIDDEN COMPANY Minerals Zinc & Copper

Address Cleveland, Ohio

Contract Amount, $ 196 ft. @ 50% of $9.00 per foot Government Participation: 5.158% Amount, $ $882.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	$142.33		$ 2,739.50			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	3,078.00		34,137.53			
Supervision	550.00		4,950.00			
Technical Services	4,299.61		40,594.52			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe			797.28			
Track						
Bits, Shells, etc.	2,124.46		19,685.43			
(4) Operating Equipment:						
Rental	4,595.10		33,552.11			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	572.88		45,748.80			
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous: Travel & Living			2,809.70			
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	89.78		1,575.63			
Liability Insurance	314.53		3,380.10			
Cookhouse & Townsite	1,297.19		12,073.23			
Miscellaneous	34.71		465.00			
(8) Contingencies (specify):						
TOTALS	$17,098.59		$202,508.83			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Oct. 14, 1952 Payee THE GLIDDEN COMPANY

Per Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 882.00

Signature A. J. RENNER
(Authorized Certifying Officer)

Date OCT 21 1952 AUTHORIZED CERTIFYING OFFICER

Vou. No.

(See other side)

ACCOUNTS OCT 16 1952

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer Date October 16, 1952.

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-204A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1952 Docket No. DMEA 1219X Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft.	$16,525.71	196	$156,760.03				
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$16,525.71	196	$156,760.03				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		572.88		45,748.80				
New Buildings, Improvements, etc.								
TOTAL COSTS		$17,098.59		$202,508.83				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Oct. 14, 1952 Operator THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

COPY

Invoice
E. J. LONGYEAR COMPANY
Mining Engineers
1701 Foshay Tower
Minneapolis, Minnesota

October 9, 1952

The Glidden Company
c/o Mr. Edward D. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

Invoice No. 95203

Charges in connection with exploration at the Bully Hill Mine, Shasta County, California, during the month of September, 1952, as per the terms of our agreement dated May 3, 1951.

Engineering Fees			
September 1 - 30, 1952	1 month	@ $2,000.00 per month	$2,000.00
September 1 - 30, 1952	30 days	@ 35.00 per day	1,050.00
			$3,050.00
Car Expenses			100.00
Living Expenses			
M. G. Hansen		369.64	
A. Lutenko		100.00	469.64
Expenses			
Office supplies		124.96	
Rental of typewriter		7.00	
Postage charges		13.20	
Telephone and telegraph charges		34.39	
Office rental for 11 months		220.00	
Sample sacks		53.00	452.55
Wages paid to Office Staff at Redding, California			
September 1-30, 1952		200.00	
F.I.C.A. Insurance	$200.00 @ 1.5%	3.00	
Unemployment insurance	200.00 @ 3 %	6.00	
Compensation, PD & PL Insurance	200.00 @ 9.213%	18.42	227.42
			$4,299.61

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY
BY
Manager of Mines

C O P Y

Invoice
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1701 Foshay Tower
Minneapolis 2, Minnesota

October 9, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical and Pigment Company
766-50th Avenue
Oakland 1, California

Invoice No. 95243

Diamond core drilling during the month of September 1952, on your property known as Bully Hill, Shasta County, California, as per the terms of our agreement dated April 27, 1951.

Total footage drilled during September 1952 195' 8"

Hole No.		From	To	Footage	Rate	
	Compensation					
4	Diamond Drilling	823'10"	936.0	112'2"		
5	"	665' 6"	749.0	83'6"		
"	Reaming	535.0	564.0	29.0		
"	"	580.0	600.0	20.0		
"	"	630.0	670.0	40.0		
				284'8"	.50	$142.33

Equipment Rental

1 drill	6/30	month	(3 shifts)	@ 675.00	135.00	
	11/30	"	(2 shifts)	@ 600.00	220.00	
	13/30	"	(1 shift)	@ 475.00	205.83	
1 drill	9/30	"	(3 shifts)	@ 675.00	202.50	
	16/30	"	(2 shifts)	@ 600.00	320.00	
	5/30	"	(1 shift)	@ 475.00	79.17	
Truck	1	month			100.00	1,262.50

Depreciation of Rods and Casing

		From	To	Footage	(1-10%	Rate	Amount	
4	AU Rods	823'10"	936.0	112'2"	11.2	1.65	18.48	
"	AX Casing	800.0	824.0	24.0	2.4	1.33	3.19	
"	4" Casing	0.0	167.0	167.0	16.7	2.15	35.91	
5	AU Rods	665'6"	749.0	83'6"	8.3	1.65	13.70	
"	BX Casing	535.0	600.0	65.0	6.5	1.70	11.05	
"	AX Casing	614.0	679.0	65.0	6.5	1.33	8.65	
"	4" Casing	0.0	71.0	71.0	7.1	2.15	15.27	106.25

Payroll (See enclosed payroll sheets)				
September, 1952			4,296.00	
FICA Insurance	3,393.17	@ 1.5%	50.90	
Unemployment Insurance	2,298.00	@ 3%	68.94	
Compensation, PD & PL Ins.	4,082.00	@ 9.213%	376.07	4,791.91

Credit due you for board of workmen at Redding, Calif.

Axel Augustson	30 days @ 2.00	60.00
Curtis England	26 days @ 2.00	52.00
Arni Maki	22 days @ 2.00	44.00
Floyd Heyborne	25 days @ 2.00	50.00
Henry Wilgren	23 days @ 2.00	46.00
Earl Trusty	17 days @ 2.00	34.00
Arthur R. Kinkel	23 days @ 2.00	46.00
Harold E. Osborne	4 days @ 2.00	8.00
Don A. Fisher	13 days @ 2.00	26.00

Invoice
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1701 Foshay Tower
Minneapolis 2, Minnesota

THE GLIDDEN COMPANY

October 9, 1952

Invoice No. 95243

Credit due you for board of workmen at Redding, Calif.			
Delbert Briggs	28 days @ $2.00	56.00	
Leslie M. Marvel	25 days @ 2.00	50.00	
Roy Cunningham	14 days @ 2.00	28.00	(500.00)
Hold harmless insurance charges for August, 1952			4.11
Fire and Theft insurance			12.10
Freight, express and postage			264.31
Telephone and telegraph charges			3.25
Food supplies			619.10
Camp expense			
Kitchen and mess hall supplies			115.65
Fuel and oil			
12 cyl. Standard flamo		67.36	
1270 gals. Gasoline		312.42	379.78
Supplies used			
Stationery supplies		3.21	
6 Timken bearings		25.62	
1 Timken bearing		5.70	
6 cap seals		.12	
1 set pullers		34.97	
2 Wisconsin faucets		2.06	
1 UC Crank Nut		1.87	
2 compressor rings		.62	
1 tire gauge wrench		2.16	
19 sks. Lumnite cement		133.46	
2 sks. wiping rags		56.65	
1 AXL 10 ft. D.T. Core barrel		93.30	
1 AX 10 ft. D.T., R.T. Core Barrel		80.95	
1 BX 10 ft. S.T. Core barrel		33.25	
8 spark plugs		6.80	
6 AXL Core lifters		12.60	
2 B Rod Box to BX Casing pin Subs		24.20	
2 AX Casing pin to 2" pipe pin Subs		24.20	
1 set "A"Chuck jaws		10.10	
1 repair kit for light plant		16.50	
1 Set gaskets - Wisc. engine		3.24	
1 coupling, short type water swivel		11.15	
4 oil seals for short type water swivel		5.30	
1-600 lb. pressure gauge		12.50	
1-1/2 in. x 70 ft. L.L. cable with clevis		28.25	

Copy

Invoice
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1701 Foshay Tower
Minneapolis 2, Minnesota

October 9, 1952

THE GLIDDEN COMPANY

Supplies used:		
1 - 12 " Crescent wrench	4.00	
1 - 3/4" x 25 ft. swivel hose with fittings	28.45	
1-3" malleable tee	3.00	
5 AXL "Type C" Diamond Reaming Shells @ 69.90	349.50	
1 BX "Type C" " " "	205.75	
1 NX "Type C" " " "	137.75	
2 BXL "Type C" Diamond Bit @ 11.00	22.00	
3 BX "Type C" Diamond Bit @ 11.00	33.00	
1 AX "Type C" Diamond Bit	9.00	
7 AXL "Type C" Diamond B it @ 9.00	63.00	
1 BX "Type CC" Diamond Bit	11.00	
2 BX "Type C" Diamond Casing Bits @ 17.50	35.00	
1 BX "Type T" " " "	17.50	1,547.73

Bortz Wear	Type S	Type T	Type C	Type CC
Actual wear previous month	6.25	3.20	267.19	20.60
Add:				
This month's suspension chge	-0-	5.00	58.00	3.00
	6.25	8.20	325.19	23.60
Less:				
Last month's suspension chge	3.00	5.00	103.00	15.00
	3.25	3.20	222.19	8.60

3.25 carats - "Type S" Bortz	@ 11.00	35.75	
3.20 carats - Type T "	@ 11.00	35.20	
222.19 carats - Type C "	@ 11.00	2,444.09	
8.60 carats - Type CC "	@ 8.50	73.10	2,588.14
Bortz salvaged from Diamond Reaming Shells			
13.55 carats "Type C" Bortz	@ 11.00		(149.05)
			11,188.21

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY

Manager of Mines

COPY

SHASTA NAVIGATION CORP.
P. O. Box 690 Project City, Calif.

September 30, 1952

Glidden Consolidated Zinc Mines
Glidden Paint Co.
Oakland, California

Statement for September 1952

				Passengers	Freight	
Sept. 1st	New-Chris	2 trips	$10.50 per hr	$21.00		2 hrs.
Sept. 2nd	New-Chris	1 trip	10.50 per hr	10.50		1 hr
Sept. 2nd	Garwood	1 trip	12.00 per hr	12.00		1 hr.
Sept. 3rd	Garwood	1 trip	12.00 per hr	12.00		1 hr.
Sept. 3rd	Christina	1 trip	10.50 per hr	15.75		1½ hrs
Sept. 4th	Christina	1 trip	10.50 per hr	15.75		1½ hrs.
Sept. 4th	Garwood	1 trip	12.00 per hr	12.00	~~1xhr.~~	1 hr.
Sept. 5th	New-Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 6th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 7th	New Chris	1 trip	10.50 per hr.	10.50	~~1~~	1 hr
Sept. 8th	New Chris	1 trip	10.50 per hr.	10.50		~~1~~ hr.
Sept. 8th	Christina	1 trip	10.50 per hr.		15.75	1½ hrs.
Sept. 9th	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 9th	Christina	1 trip	10.50 per hr.	15.75		1½ hrs.
Sept. 10th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 11th	New Chris	3 trips	10.50 per hr.	21.00	10.50	3 hrs.
Sept. 12th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 13th	Christina	2 trips	10.50 per hr.	31.50		3 hrs.
Sept. 14th	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 15th	New Chris	2 trips	10.50 per hr.	21.00	~~2~~	2 hrs.
Sept. 16th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 16th	Christina	1 trip	10.50 per hr.	15.75		1½ hrs.
Sept. 17th	Christina	2 trips	10.50 per hr.	15.75	15.75	3 hrs.
Sept. 18th	Christina	1 trip	10.50 per hr.	15.75	~~1½~~	1½ hrs.
Sept. 18th	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 19th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 20th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 21st	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 22nd	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 22nd	Garwood	1 trip	12.00 per hr.	12.00		1 hr.
Sept. 23rd	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 23rd	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 24th	New Chris	3 trips	10.50 per hr.	31.50		3 hrs.
Sept. 25th	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 25th	Christina	1 trip	10.50 per hr.	15.75		1½ hrs.
Sept. 26th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 27th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
Sept. 28th	New Chris	1 trip	10.50 per hr.	10.50		1 hr.
Sept. 29th	New Chris	2 trips	10.50 per hr.	21.00		2 trips
Sept. 30th	New Chris	2 trips	10.50 per hr.	21.00		2 hrs.
				641.25	42.00	
		15% Trans. Tax		96.19		
		3% Frt. Tax			1.26	
				737.44	43.26	
				Total		$780.70
				Outboard Motor Gas		6.56
						$787.26

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY
By
Manager of Mines

C O P Y

Redding Lumber Company
Box 580
Redding, California

9/2/52

The Glidden Company
Oakland, Calif.
For Squaw Creek Job.

Inv. No. 11020

6 rolls 65# roofing	@ $3.50	$21.00
	Sales Tax	.63
		$21.63

A correct copy of the original invoice

THE GLIDDEN COMPANY

By

Manager of Mines

C O P Y

Greene Rental Tools and Equipment
Route 1, Box 4992
Redding, California

Inv. 2166
9/2/52

The Glidden Company
Oakland, California

Rental Floor Sander and Edger $20.00

A correct copy of the original invoice

THE GLIDDEN COMPANY

By
Manager of Mines

C O P Y

Pacific Gas & Electric Company
Redding, California

California Zinc Co.
Bully Hill, Shasta Co., Calif.

Power - 8/11 to 9/12/52 $49.12

A correct copy of the original invoice

THE GLIDDEN COMPANY

By
Manager of Mines

C O P Y

GENE GRANCK SERVICENTER
Redding, California

9/30/52

Glidden Consolidated Zinc Mines

Invoice No. 18414

Cylinder Days Demurrage for September

90 days @ 3¢ $2.70

A correct copy of the original invoice

THE GLIDDEN COMPANY

By
Manager of Mines

C O P Y

THE GLIDDEN COMPANY
San Francisco, Calif.

9/2/52

Glidden Consolidated Zinc Mines
Redding, California

15 gals	Spred Satin Pinefrost Green	@ $2.85	$42.75
		Tax	1.28
			$44.03

A correct copy of the original invoice

THE GLIDDEN COMPANY

By

Manager of Mines

Redding, California
October 4, 1952

Subject: Exploration Project Contract
Bully Hill and Rising Star Mines
Shasta County
California

D.M.A. Reference:
Docket No. DMA 1219X
Commodity: Zinc-Copper
Idm-F-187

Geological Engineering Report - Month of September 1952

I. Diamond Drilling

The footage drilled to date on this project totals 4643 feet as of the end of the work day September 30, 1952. Reference is made to the attached page 1 of Tabulation No. 1 (which was completely submitted in last months report for August). Only the page that shows the currently changing figures will be submitted hereafter.

The following tabulation summarizes the drilling progress for the month of September, 1952.

Hole #4-Drill #1147-Sept.footage 112.2',size AX,EX,Total depth 936'
Hole #5-Drill # 824-Sept.footage 83.5',size AX ,Total depth 749'
Total footage of Sept. 195.7'

The average number of shifts worked per drill per day for the 25 day work month was 2.04. Two drillers left voluntarily near the end of the month and one drill helper was called into the Army. Replacements have been effected.

Both holes continued in bad ground with drilling advance very low. Hole #4 (A1-4), located on the old tennis court, continued in broken, caving rhyolite breccia. AX casing was set to a depth of 824 feet and the hole continued with AX size. If continued further this hole may reach 1400 feet and it is therefore necessary to keep it as large as possible, just as long as possible to insure its completion. It is planned to set EX casing early in October and continue EX size. Cementing was resorted to very frequently and ten shifts were spent either cementing or drilling out cement. In between times aquagel and baroid drilling mud was also used in an effort to hold up the walls and prevent caving. There was only 112 feet advance from 27 "runs" or trips of the corebarrel into the hole in fresh rock. Of these only four trips yielded 100% core recovery.

Hole [illegible] (A1-8) is located near the west end of the group of three houses in Circle City. As reported last month, the drilling then was proceeding [illegible] when the wall rock shifted and bent the casing in the hole. Drilling was stopped [illegible] casing broke [illegible] and the hole was reamed [illegible] to pass over the [illegible] casing. We were delayed [illegible] days waiting the arrival of [illegible] casing. Currently hole [illegible], 4 inch casing is set to a depth of 71 feet, [illegible] casing to 301 feet, [illegible] casing to 600 feet and [illegible] casing to 990 feet. Drilling is proceeding [illegible] size. The rock drilled is [illegible] and contains a slight increase in amount of pyrite present, but not enough to be considered a mineral zone. The depth of the hole at the end of the month was [illegible] feet and [illegible] mineral zone encountered in hole [illegible] contains, it will be found between 900 and 1000 feet. [illegible] sizes left with which to complete the hole. Because of the delay in reaming and loss of casing, the advance this month was [illegible] feet. Core recovery varied from 80 to 100% with 7 out of 21 runs yielding 100%.

No new plan maps will be submitted this month.

Both holes were surveyed this month with results showing on the attached tabulation.

Sections are also submitted for holes 4 and 5, which show the geology posted to date.

Diamond drill hole descriptions

Detailed descriptions of the drill cores from hole number A1-4 and A1-5 are attached to the attached logs. As in our earlier [illegible] of the core barrel into the [illegible], together with the amount of core recovered and percentage, is shown.

[illegible] amount of contact [illegible] the required [illegible] A1-4, it is indicated [illegible].

[illegible] were received [illegible]. The [illegible] must be informed [illegible] thin layers [illegible] to pyrite. [illegible] of sulfide present [illegible]. [illegible] have been [illegible]. [illegible] office of the [illegible] the writer in selecting [illegible] and [illegible] wood.

[illegible] attached [illegible] is [illegible] tabulation [illegible] of the sludge samples, taken from the first five holes. These show the weight recovered, compared with the theoretical weight and yield a figure for percentage of sludge recovered. A study of these figures will quickly indicate the reason for not wishing to use assays of sludge samples to combine with or change core assays. As is shown in hole 73 (1-3), one sample had 46 times the weight of cuttings and caved material than the theoretical weight. It was not infrequent to have more than 10 [illegible] as the theoretical amount. Conversely, this hole also shows that in some samples the amount of sludge or cuttings recovered was only [illegible] of the 100% theoretical weight.

However, as stated in previous reports, selected samples will be chosen to send to the commercial assayer to check against the assay results of the equivalent core sample.

While on the subject of sludges, the writer wishes to compliment the designers and makers of the Bureau of Mines sludge collecting device. It is operated by a water pump which controls the speed of revolution, which in turn controls the number of sweeps per minute of the sample arm and cutter. The size of the cutter openings determines the percentage of the total sample desired. It is almost fool-proof and besides obtaining an accurate sample of the material brought to the surface, does so very economically. We are [illegible] indebted to Messrs [illegible], designer, and [illegible] Johnson, Chief, Mining Division, [illegible], U.S. Bureau of Mines, for their use.

[illegible]

[illegible] major [illegible] was [illegible].

[illegible] completed in six [illegible].

[illegible] were cut.

[illegible] water supply [illegible] large [illegible] however, [illegible] drills [illegible] conserving [illegible] recirculation.

[illegible] level [illegible] from [illegible] September [illegible], [illegible] total [illegible] in June, [illegible] varied from an average [illegible] 0.[illegible] inches, which is [illegible].

IV Other Surveys or Construction

No new surveys, construction or unusual major work was performed.

V Safety

There were no lost time accidents this month.

VI Visitors

On September 15, Mr. Jacques F. Robertson of the U.S. Geological Survey arrived and spent the following three days examining the drill cores, or was with the writer studying maps at the office.

On September 16, Mr. Edward J. Matson, Engineer, Reno Office, U.S. Bureau of Mines, arrived and inspected the drilling and map work with the writer and Mr. Robertson.

On September 24, Mr. Dwight Joyce, President of Glidden Company accompanied by Mr. Edward L. Ralston, Manager of the Chemical and Pigment Company of Oakland - a subsidiary plant - visited the mine and property.

VII Geological and Engineering Work

Considerable plane table work was finalized during the month and much of the area to the north of the Bully Hill Line up to the McClure Tunnel, was tied in. This is all north of the mapping previously done by members of the Geological Survey. In this area many points had been previously set at strategic locations from which the area immediately surrounding the point was mapped by brunton and tape. Of particular interest is the result which shows the bedding of the flows and also the schistosity of the shear zones to be turning in a northwesterly direction. This is contrary to the old belief that the shear zones trended in a north northeasterly direction. It is the cause for lengthening holes # A1-4 and A1-5 to greater depths in order to exhaust the possibility of mineralized zones continuing in a northerly direction. Topographic surveying for use in making contour maps was not done at this time.

A sizeable swath was also mapped on the south end of the Bully Hill Mine area, which is in the zone called Area 3. It is useful in comparing our mapping with that of the Survey and also for planning the drilling in Area 3.

Prints of these maps will not be attached until sufficiently completed so as not to require duplicating work in printing and coloring. For the present, the surface map submitted in May will suffice.

VIII. Maps, Spring 1930

A set of 1" scale geological maps has been in process for some time, covering the Tally Hill law. The consulting problem was to establish a coordinate system which would be identical for surface and underground work. This was accomplished last month, and the results are believed to be very accurate. Plans for the better use of existing information from underground workings in conjunction with surface geology, projection of mineralized areas and planning of drill holes. The workings of the 770, 870, 970 and 1070 levels have been transferred to this set and a composite of the tunnel levels has also been prepared. This set will be completed as time permits and will be given precedence over other work.

An adequate number of 40 scale geologic maps, with contour lines and surface lines printed, were also prepared for use in making up the base of topographic, showing detailed geology on the other side, with a place name.

These will also be completed as time permits.

Respectfully submitted,

Mayer H. Hansen

Mayer H. Hansen

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1952 Docket No. DMEA 1219 X Contract No. E-187

Operator's Name THE GLIDDEN COMPANY Minerals Zinc + Copper

Address Cleveland, Ohio

Contract Amount, $ 329'4" @ 50% of $9.00 per foot Government Participation: 7.43% Amount, $ 1481.99

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	275.17		$2,597.17			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	3,966.00		31,059.53			
Supervision	550.00		4,400.00			
Technical Services	5,493.00		36,294.91			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe			797.28			
Track						
Bits, Shells, etc.	2,196.03		17,560.97			
(4) Operating Equipment:						
Rental	4,540.91		28,957.01			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	1,289.63		45,175.92			
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous: Travel & Living			2,809.70			
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	156.23		1,485.85			
Liability Insurance	384.18		3,065.57			
Cookhouse & Townsite	1,042.90		10,776.04			
Miscellaneous	47.77		430.29			
(8) Contingencies (specify):						
TOTALS	$19,941.82		$185,410.24			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug. 12, 1952 *Payee THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1481.99

Signature _____
(Authorized Certifying Officer)
AUTHORIZED CERTIFYING OFFICER

Date 9/30/52 Vou. No. SF-DMEA-16

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date Sept. 30, 1952.

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Date Sept. 22, 1952

H. C. Miller Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 '52

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1952 Docket No. DMEA 1219X Contract No.

Operator's Name THE GLIDDEN COMPANY Minerals

Address Cleveland, Ohio

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft	$18652.19	329'4"	$140,234.32				
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$18652.19		$140,234.32				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		1289.63		45,175.92				
New Buildings, Improvements, etc.								
TOTAL COSTS		$19941.82		$185,410.24				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Aug. 12, 1952 Operator THE GLIDDEN COMPANY

Per Edward L. Ralston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

R. A. CORROON & CO.

August 1952

The Glidden Company
Chemicals-Pigments-Metals Division
Oakland, California

Insurance on use of barges on Shasta Lake (Gasoline, fuel oil and supplies)	$25.00

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY _____
Edward L. Ralston, Manager of Mines

THE GLIDDEN COMPANY
San Francisco, Calif.

Inv. 14-12603 August 1952

Glidden Cons. Zinc Mines
Redding, California

Paint for camp use $73.39

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY
Edward L. Ralston, Manager of Mines

Copy

Pacific Gas & Electric Co.
Redding, California

August 30, 1952

California Zinc Co.
(Glidden Cons. Zinc Mines)
c/o 766-50th Avenue
Oakland, California

Power - Bully Hill	6/11 - 7/12/52	$138.19
" - Bully Hill	7/12 - 8/12/52	23.75
		$161.94

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

By
Edward L. Ralston, Manager of Mines

C O P Y

REDDING LUMBER COMPANY
Redding, California

8/15/52

The Glidden Company
766-50th Avenue
Oakland, California

Date: 8/8/52
Order No. 10855
Shipped: Our Truck

2 x 4 #2 & Btr. S4S DF	1995'	@ $95.00	$189.53
1 x 8 #3 S4S DF	2020'	80.00	161.60
2 x 6 #2 " S4S DF	500#	95.00	47.50
2 x 12 #2 " Rgh Dry DF	496'	90.00	44.64
1 x 12 Clear S4S DF) 1 x 12 " " ")	200'	306.00	61.20
1 x 8 Clear Heart Rustic Redwood	359'	294.00	105.55
4 x 4 S4S Redwood	80'	150.00	12.00
1 pc plywood	32'	.35	11.20
			$ 633.22
	Sales Tax		19.00
	Cartage		75.00
			$ 727.22

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

By
Edward L. Ralston, Manager of Mines

C O P Y

J. J. LeFebvre & Son
1449 Market Street
Redding, California

The Glidden Company
766-50th Avenue
Oakland 1, California

49115

8/2	Drills	$4.06	
8/4	1 pt. Decoret	.95	
			$5.01

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

By
Edward L. Ralston, Manager of Mines

C O P Y

AMES HARRIS NEVILLE COMPANY
2800 Seventeenth Street
San Francisco, California

Date: Aug. 6, 1952
Inv.No 13611
Shipped Aug. 4, 1952
Order 4887

The Glidden Company
766-50th Avenue
Oakland, California

105	Ore bags 12" x 8" Ex 36" #10 Duck ½ width cut 24" Hem Top All seams double sewed	351.25 M	35.13
		PP & INS	1.49
			36.62
	Plain bags		

Mark: Glidden Consolidated Zinc Mines
Redding, Calif.

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

By
Edward L. Ralston, Manager of Mines

C O P Y

GENE FRANCK'S SERVICENTER
Redding, California

GLIDDEN CONST. ZINC MINES

8/31/52	Inv. 18264	Cylinder Days Demurrage for August 1952 @ 3¢ per day	
		71 days @ 3¢	$2.13

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY _____
Edward L. Ralston
Manager of Mines

C O P Y

SHASTA NAVIGATION CORP.

P. O. Box 690 Project City, California

August 31, 1952

Glidden Consolidated Zinc Mines
Glidden Paint Co.
Oakland, California

Statement for August 1952

					Passengers	Freight
Aug. 1st	New-Chris	2 trips	2 hours	$10.50 per hr.	$21.00	
Aug. 2nd	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 3rd	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 4th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 5th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 6th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 7th	New-Chris	2 trips	2 hours	10.50 per hr	21.00	
Aug. 8th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 9th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 9th	Garwood	1 trip	1 hour	12.00 per hr.	12.00	
Aug. 10th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 11th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 11th	Christina	1 trip	1½ hours	10.50 per hr.		15.75
Aug. 11th	Garwood	1 trip	1 hour	12.00 per hr.	12.00	
Aug. 12th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 13th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 14th	Christina	2 trips	3 hours	10.50 per hr.	15.75	15.75
Aug. 15th	Christina	1 trip	1½ hours	10.50 per hr.		15.75
Aug. 15th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 16th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 17th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 18th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 19th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 19th	Christina	1 trip	2 hours	10.50 per hr.		21.00
Aug. 20th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 21st	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 22nd	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 23rd	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 24th	Garwood	1 trip	1 hour	12.00 per hr.	12.00	
Aug. 25th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 25th	Garwood	1 trip	1 hour	12.00 per hr.	12.00	
Aug. 26th	New-Chris	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 27th	New-Chris	1 trip	1 hour	10.50 per hr.	10.50	
Aug. 27th	Christina	1 trip	1½ hours	10.50 per hr.	15.75	
Aug. 28th	Christina	2 trips	3 hours	10.50 per hr.	31.50	
Aug. 29th	Garwood	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 30th	Garwood	2 trips	2 hours	10.50 per hr.	21.00	
Aug. 31st	Garwood	1 trip	1 hour	12.00 per hr.	12.00	
					$606.00	$68.25
			15% Trans. Tax		90.90	
			Frt. Tax			2.05
			1 hr waiting time 8/31		5.00	
					$701.90	$70.30

A TRUE AND CORRECT COPY OF THE
ORIGINAL INVOICE
THE GLIDDEN COMPANY

TOTAL $772.20

BY _____
Edward L. Ralston
Manager of Mines

COPY

INVOICE

E. J. LONGYEAR COMPANY
Mining Engineers
1701 Foshay Tower
Minneapolis, 2, Minnesota

September 8, 1952

The Glidden Company
c/o Mr. Edward D. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

INVOICE NO. 85207

Charges in connection with exploration at the Bully Hill Mine, Shasta County, California, during the month of August, 1952, as per the terms of our agreement dated May 3, 1951.

Engineering Fees				
August 1 - 31, 1952	1 month	@ $2,000.00 per month	2000.00	
August 1 - 31, 1952	31 days	@ $35.00 per day	1085.00	3085.00
Car expense				124.18
Living Expenses				
M. G. Hansen			323.92	
A. Lutenko			100.00	423.92
Expenses				
Telephone & Telegraph charges			78.24	
Assaying			1248.00	
Office supplies			64.73	
Rental of typewriter			7.00	
Field supplies			17.58	1415.55
Wages paid to office staff at Redding, California				
June 16 - July 14 & August 1-31, 1952			390.77	
FICA Insurance		390.77 @ 1.5%	5.86	
Unemployment Insurance		390.77 @ .3	11.72	
Compensation, PD & PL Insurance		390.77 @ 9.213%	36.00	444.35
				5493.00

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston, Manager of Mines

C O P Y

Invoice
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1701 Foshay Tower
Minneapolis 2, Minnesota

Sept. 9, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical and Pigment Company
766 - 50th Avenue
Oakland 1, California

Invoice No. 85245

Diamond core drilling during the month of August, 1952, on your property known as Bully Hill, Shasta County, California, as per the terms of our agreement dated April 27, 1951.

Total footage drilled during August, 1952 329' 4" feet

Hole No.		From	To	Footage	Rate	
	Compensation					
4	Diamond Drilling	680.0	823'10"	143'10"		
5	" "	480.0	665'6"	185' 6"		
"	Reaming	568.0	614.0	46.0		
"	"	360.0	535.0	175.0		
				550' 4"	.50	275.17

Equipment Rental

1 drill	14/31 month	(3-shifts)	@	675.00	304.84	
	17/31 "	(2-shifts)	@	600.00	329.03	
1 drill	13/31 "	(3-shifts)	@	675.00	283.06	
	18/31 "	(2-shifts)	@	600.00	348.39	
Truck rental 1 month					100.00	1,365.32

Depreciation - Rods & Casing

		From	To	Footage	(1-10)	Rate	Amount	
4	AU Rods	680.0	823'10"	143'10"	14.4	1.65	23.76	
"	AX Casing	0.0	800.0	800.0	80.0	1.33	106.40	
5	Au Rods	480.0	643.0	173.0	17.3	1.65	28.55	
"	E Rods	653.0	665'6"	12'6"	1.3	1.32	1.72	
"	AX Casing	0.0	614.0	614.0	61.4	1.32	81.66	
"	EX Casing	0.0	647.0	647.0	64.7	1.27	82.17	
"	BX Casing	360.0	535.0	175.0	17.5	1.70	29.75	354.01

Payroll (See enclosed payroll sheets)				
August, 1952			5,204.00	
FICA Insurance	4,654.00	@ 1.5%	69.81	
Umemployment Ins.	3,652.67	@ 3.0%	109.58	
Comp. RD & PL Ins.	4,818.00	@ 9.213%	443.88	5,827.27

Credits due you for board of workmen at Redding, Calif.

Axel Augustson	30 days	@ 2.00	(60.00)	
Curtis England	29 days	@ 2.00	(58.00)	
Arni Maki	26 days	@ 2.00	(52.00)	
Floyd Heyborne	25 days	@ 2.00	(50.00)	
Henry Wilgren	27 days	@ 2.00	(54.00)	
Earl Trusty	29 days	@ 2.00	(58.00)	
Arthur R. Kinkel	27 days	@ 2.00	(54.00)	
Robert H. Chappel	21 days	@ 2.00	(42.00)	
William McCandlish	22 days	@ 2.00	(44.00)	
Clarence O. Olsen	12 days	@ 2.00	(24.00)	
Harold E. Osborne	18 days	@ 2.00	(36.00)	
Don A. Fisher	14 days	@ 2.00	(28.00)	
Delbert Briggs	11 days	@ 2.00	(22.00)	
Leslie M. Marvel	1 day	@ 2.00	(2.00)	(584.00)

Copy

Invoice
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1701 Foshay Tower
Minneapolis 2, Minnesota

Sept. 9, 1952

Invoice No. 85245

Held Harmless insurance charges for July, 1952			3.91
Fire and Theft Insurance			12.10
Freight and Express & Postage charges during August 1952			115.54
Telephone and telegraph charges			31.76
Crating equipment at Marquette, Michigan for shipment to Redding, California			17.28
Fuel & Oil			
12 cyl Standard flamo		67.36	
1270 Gal. gasoline		312.42	
20 cans machine oil		13.39	393.17
Food supplies			542.12
Camp Expenses			
Kitchen & Mess Hall Supplies		13.13	
1 O'Cedar mpp		3.49	16.62
Supplies used			
72 - 100 W. bulbs		10.37	
6 - 24" hook jaws		21.92	
6 - 18" hook jaws		13.81	
6 - 24" hook jaws		6.01	
6 - 18" hook jaws		5.42	
1 - 5/16 camp valve		1.66	
1 - 5/16 x ¼ camp valve		2.10	
1 - 1/2 gal bushing		.23	
1 - copper tube cutter		2.32	
1 - BXL 10 ft. core barrel		129.75	
1 - AXL 10 ft. core barrel		93.30	
1 BXL 10 ft. outer tube		30.20	
1 - BX 10 ft. R.T. core barrel		102.80	
2 - NX core lifters		6.00	
2 - BX core lifters		5.10	
4 - BXL core lifters		10.20	
2 - AXL core lifters		4.20	
1 set gaskets f/ve - 4 Wisc engine		3.24	
1 oxygen pressure gauge		5.93	
1 AXL "Type C" diamond reaming shell		69.90	
3 - BXL "Type C" " " "	@ 98.50	295.50	
1 NX "Type E" " " "		149.41	
1 NX "Type C" " " "		146.11	
1 AX "Type T" diamond casing bit		14.00	
1 BX "Type T" " " "		17.50	
2 - NX "Type C" " " "	@ 22.00	44.00	
5 - BXL "Type CC"" Bits	@ 12.10	60.50	
4 - BXL "Type C" " "	@ 11.00	44.00	
12 - RX "Type C" " "	@ 11.00	132.00	
3 - AXL "Type C" " "	@ 9.00	27.00	1,454.48

Bortz Wear	Type S	Type T	Type C	Type CC	
Actual wear previous month	2.05	12.53	131.20	-0-	
Add: This mo. suspension chg.	3.00	5.00	103.00	15.00	
	5.05	17.53	234.20	15.00	
Less: last mo. suspension chg.	6.00	3.00	85.00	-0-	
	(.95)	14.53	149.20	15.00	
(.95) carats - type S Bortz		@	11.00	(10.45)	
14.53 carats - type T bortz		@	11.00	159.83	
149.20 carats - type C Bortz		@	11.00	1,641.20	
15.00 carats - type CC Bortz		@	8.50	127.50	1,918.08
					$11,742.83

A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY

Edward L. Ralston, Manager of Mines

Redding, California
September 3, 1952

Subject: Exploration Project Contract
Bully Hill and Rising Star Lines
Shasta County
California

D. M. A. Reference:
Docket No. DMA 1819
Commodity: Zinc-Copper
Id-F-127

Geological Engineering Report - Month of August 1952

I. Diamond Drilling

Footage drilled to date on this project totals 4440 feet as of the end of the work day August 31, 1952. Reference is made to the attached tabulation No. 1 which shows the number of drill holes, listed by areas, their location and [illegible] Case, as planned and as actually performed. The tabulation is self explanatory.

The following tabulation summarizes the drilling [illegible] for the month of August 1952.

Hole [illegible] - Drill [illegible] 147-Aug. Footage 148', size [illegible] Total depth [illegible]
Hole No. [illegible] 124-Aug. Footage 185', size BX, AX, EX, Total Depth 665'
Total footage of August 333'

The average number of shifts worked per drill per day for the 26 day work month was 3.[illegible]. One driller left and two helpers returned to continue University studies at the end of the month. Four new drill helpers were hired. Footage drilled averaged a little over 2.5 feet per shift, including reaming, cementing and surveying time. Five full crews are working at the present time.

Both holes encountered unusually bad ground, crossing fault zones, open cavities and sand. Hole [illegible], (A1-4) was drilled thru rhyolite breccia (Alaskite) and rhyolite tuff. This hole is located on the old tennis court in the Circle City area and has 4 inch casing set to a depth of 167 feet, BX casing to 240 feet, EX casing to 600 feet and AX casing to 800 feet. After reaching the contact the hole started caving at about 735 feet. From 735 to 805 there was an open hole from which, of course, no core was obtained. A bottom depth of 823 feet ten inches was reached. The hole was cemented and recemented three times, because the cement would not hold or

stick to some of the gouggy areas. Aquagel and baroid mud was circulated in an attempt to hold up walls in these places to no avail. On Friday, August 20nd, the wall rock shifted and the hole recollared in solid rock at 506 feet. This was not a deviation from the old hole as the new core was absolutely round and not wedge-shaped as when a deflection occurs. The third cement job permitted continuing the hole and setting AX casing to the new depth of 203 feet. Obviously, sludge samples from the last 100 feet are neither good nor reliable. The core recovery varied from 0 to 100% with 48% of the runs or pulls yielding 100% core recovery. The rock drilled may be classed as poor or very mean drilling. The hole is making a small amount of water, which started coming in at 300 to 400 feet.

Hole #5 (A1-5) is located near the west end of the group of three houses in Circle City. The drilling this month started in rhyolite breccia (Alaskite) and ended in rhyolite tuff. In this hole 6 inch casing was set to a depth of 71 feet, BX casing to 301 feet, EX casing to 360 feet, AX casing to 615 feet and BX casing to 653 feet. A heavy gouge from a major fault was first encountered at 575 feet and continued carrying clay gouge to 615 feet. During the AX drilling, the casing was advanced every day to endeavor to stay close to the bottom of the AX corebarrel drilling. At one time when the chuck nuts were loosened to take a fresh hold with the swivel head chuck jaws, the weight of the casing caused the casing bit to sink a foot beyond the bottom of the hole. In the course of withdrawing the AX casing to install a new bit, the bottom 50 feet of casing broke off and remained in the bottom of the hole. Currently we removed the BX casing, put on a reaming bit and are advancing the BX casing to drill over the AX casing. It is planned to set about 620 feet of BX casing and continue BX drilling. It is anticipated that this hole will go to a depth of 1100 feet in order to completely test for the presence of sulfide mineralization. The core recovery varied from 0 to 100% with 50% of the runs yielding 100%. The hole is making considerable water and started running at 60 to 70 feet. The drilling conditions of this hole are classed as very bad or as difficult drilling.

The new 100 scale map is not ready for this months report and the plan map submitted in May must again be used as a reference. It should be pointed out that the indicated trend of the mineralized zone to the month north-east as originally thought before the drilling commenced, has been demonstrated by the actual drilling and our plane table mapping, to be north westerly. This means that Hole #4 which was planned to go about 750 feet will actually reach nearer 1400 feet. Hole #5 will no doubt exceed 1000 or 1100 feet.

A goniometer was designed and made, which enables us to read both bearings and dips resulting from the surveying in the drill holes much more accurately. The readings are tabulated with comments as to reliability of said reading and attached hereto.

Because corrections or changes in readings were made, new diamond drill hole sections were drawn on 100 scale, colored to show geology, and are submitted for each of the drill holes.

It was reported last month that Hole #4 had deflected so much in a more northerly direction as to cause serious consideration as to discontinuance of the hole. Fortunately, check surveys with the Haas compass and hydrofluoric acid reduced the amount of deviation previously reported and, best of all, the bottom of the hole as surveyed was found to be swinging in a more westerly direction and the last reading was N 24° 48' W at 700 feet, which compares with N 26° W at the collar.

It is currently planned that should either of holes number 4 and 5 (A1-4 and A1-5) encounter mineralization, that another hole be drilled in Area 1. Regardless, upon the completion of those two holes, one drill will be moved over to Area III to commence the prospecting of the southerly extensions of the Bully Hill Mine.

II Diamond Drill Hole Descriptions

Detailed descriptions of the drill cores from holes number A1-4 and A1-5 are given in the attached logs. As is our custom in reporting, each trip of the corebarrel into the hole, together with the amount of core recovered and percentage, is shown.

So far as mineralization is concerned, there was nothing outstanding this month in the rocks drilled. Only a very slight amount of scattered fine grained pyrite was observed which is meaningless. The redeeming feature of the broken condition of the drill cores together with the fault zones just crossed, is that it may be indicative of approaching mineralized zones. There is an appreciable amount of chlorite present.

It might be well to point out here that, although the core recovery is not as good as desired in certain sections of the drill holes, there is no grinding or destruction of core. Sometimes, and not infrequently, a cave or cavity is encountered where the rods may pass several feet without touching rocks. Naturally in these instances, the core recovered and the percentage of core recovered is

reported as core. Other times we enter soft, clayey fault zones in which there is not sufficient binding material to withstand washing out in suspension in the circulating water. In hole #5, for instance, where we endeavored to keep the casing close to the bottom of the hole, the weight of the casing caused them to sink a foot ahead of the bit. It may be observed from the drill logs which show the pulling intervals, that in most instances where core recovery is not up to our standard, the run was a short one - usually from 1 to 4 feet. If core were being destroyed by grinding, it would be apparent in this record of distance drilled before pulling rods. Every effort is made by virtue of frequent cementing and by carrying the larger sized casing as far as possible to obtain the maximum core recovery. This detailed explanation is mentioned here, to alleviate fears in this regard. It might also be mentioned that the use of the newly-developed "L" corebarrel, which is outstanding in obtaining core recovery under adverse drilling conditions, is resorted to every time fractured and bad ground is encountered. All sizes of "L" barrels are available on the job.

Sludge samples of the cuttings of the core have been carefully taken. Early in our drilling campaign all cuttings were caught in a series of wash tubs. As has been reported, in recent months we have been using a pair of automatic samplers obtained from the Reno office of the Bureau of Mines. The operation of this sampler is carefully watched and it is believed we are obtaining a good true sample of all of the material coming out of the hole. Those samples are dried and weighed and, using the average specific gravity of the rocks drilled, a percent recovery of sludge is obtained.

However, in most cases we have found that there has been so much caving or working down of the wall rocks of the hole as to prohibit their use as a representative sample. Some times we have not obtained any cuttings to speak of while at other times we have obtained 3 to 4 times the amount that should have resulted.

Consequently no sludge samples have been sent to the assay office for quantitative analysis. At a cost of $12.00 per sample (as paid for our core samples), it would be folly to send them. It is planned, however, to take a few select sludge samples to check against the core samples analyzing for copper and zinc only ($6.00).

Attached is a list of the assay returns from Abbot T. Banks, Inc., which covers all of the mineralized portion of Hole #2 and part of the mineralization of Hole #3. The balance of Hole #3 was shipped during the month of August and should be available next month.

In the drill logs previously submitted, an estimated copper content was given. As an average our estimates were a little high but not objectionably so. Even though all concerned are anxious to quickly learn even approximately what the copper content might be in the pyritic zones, it is felt that the chance for error is too great and consequently, no estimates will be given in the future.

A comparison of estimated copper content with actual assays follows:

Hole #2

Albert A. Banks, Assayer					Estimated			
Interval From	To	Length Sample	% Cu	Zinc	Interval From	To	Length Sample	% Cu
773.5	781	2.5	2.01	25.00	773.5	778	7.5	5.0
781	786	5.0	3.26	10.41				
786	787	1.0	2.31	7.45	786	787	1.0	2.0
787	791	4.0	1.75	16.02	787	791	4.0	4.0
791	794	3.0	0.02	1.12	791	799	8.0	2.0
794	799	5.0	0.20	0.06				
-	-							
-	-							
877	882	5.0	4.40	0.36	877	882	5.0	2.0
882	883	1.0	0.50	5.04	882	883	1.0	1.0 or less

Hole #3

Interval From	To	Length Sample	% Cu	Zinc	Interval From	To	Length Sample	% Cu
541.5	546.5	5.0	6.12	0.05	541.5	546.5	5.0	7.0
-	-							
-	-							
712.5	715	2.5	1.42	0.09	712.5	715	2.5	3.0
731	734	3.0	0.63	0.05	731	734	3.0	3.0
749	752.5	3.5	3.16	0.05	749	752	3.0	7.0
752.5	756	3.5	0.11	0.05	752	761	9.0	0.25
756	761	5.0	0.02	0.04				
(last of assay results)								

It is evident that although a considerable width of pyritic mineralization was encountered, the actual copper and zinc content was not equally as widespread. This is not to be considered particularly disappointing because it can not be determined from a few exploratory holes whether or not we are cutting the top or bottom or either end of an ore zone. The drilling did show that new mineralized zones as well as continuations of old ones were encountered in virgin territory, which will have to be explored further by underground drifts, crosscuts and diamond drill holes.

III Camp Rehabilitation

No major work was done this month.

A new porch was constructed as an entrance to the dining room of the boarding house. Linoleum was laid on all of the floors of the six houses in lower camp and part of one house at Circle City.

No access roads or drill sites were cut.

The water supply was adequate, although a marked diminution was apparent. The water flow decreases appreciably in mid-afternoon but picks up surprisingly over night. There was one day in mid-August when the tanks ran completely dry, necessitating shutting down the drills. All personnel affected helped clean out about two feet of mud sediment which had accumulated in the bottoms of the two tanks. All major leaks were plugged with wooden wedges and some areas were covered with quick setting cement. Two dams were constructed or repaired which further increased our water recovery. Since this work there has been no shortage of water. However, since that occurrence, both drills have been recirculating the drilling water.

The elevation of Shasta Lake Reservoir dropped from 1050 to 1035 feet, a drop in August of 15 feet, or a total of 31 feet since the crest was reached. Afternoon temperatures continued to vary between 98 and 99 degrees, but night temperatures went into the low fifties.

IV Other Surveys or Construction

No new surveys, construction or unusual major work was done.

V Safety

There were no lost time accidents this month.

VI Visitors

On August 19th, Mr. Jacques F. Robertson of the U.S. Geological Survey arrived and spent the following two days with the writer at the mine and office.

On August 26th, Mr. Ed. J. Watson, Engineer from the Reno, Nevada office of the Bureau of Mines, arrived in Redding and spent a day inspecting the operation at the mine site and another day with the writer discussing methods and procedures and examining the data and sections now in process.

VII Geological and Engineering Work

Plane table mapping and geological mapping continued mostly in the Jennie June Claim area. Several stakes which were set in strategic locations and from which geology was mapped with brunton and tape, were tied in to the plane table system.

Considerable time was spent in tying-in and converting the coordinates of the underground maps to our coordinate system. A map showing an old base line had been found whose terminals had copper rods set in concrete, which indicated one terminal was the original zero zero point of the old mine system of coordinates. We have adopted this same point as our 10,000N and 10,000E coordinate. Evidently, subsequent to establishing this base line, the mines - both Rising Star and Bully Hill - used separate and different coordinate systems. With all portals caved and access to underground workings impossible, it has been a difficult problem to convert the old maps to the new coordinate system. This is most essential in order to use the mapping of underground stopes, workings, ore occurrences and geology to best advantage. It is necessary in order to plan the best location of drill holes, their bearings, dips and length. During the month, this problem was successfully solved and we are in process of making a set of 100 scale maps which will show the relationship of current diamond drilling to old workings and geology. These are very necessary in planning our drilling campaign.

After this set is completed, a set each of 40 scale maps covering geology and also assays, will be drawn. There is considerable good information available from the old maps and records which will be invaluable and most useful in planning the reopening and working of the two mines, as well as for computing tonnages of ore reserves.

No changes or amendments to the contract were necessary.

VIII Maps

As stated above, 100 scale geological maps are in process, but are not sufficiently completed to justify inclusion with this months report.

Geological sections on a scale of 100 feet to the inch were remade to correct for the changes or additions resulting from the surveying in the drill holes. They supercede those previously submitted.

Respectfully submitted

Mayer G. Hanson

Mayer G. Hanson

Form 7-104 (Rev.) April 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1952 Docket No. DMEA 1219X Contract No. E-187

Operator's Name THE GLIDDEN COMPANY Minerals Zinc & Copper

Address CLEVELAND, OHIO

Contract Amount, $ 740 Ft. @ 50% of $9.00 per foot Government Participation 19.47% Amount, $ $3,330.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	$466.50		$ 2,322.00		1,835.50	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	3,538.00		27,093.53		28,279.57	
Supervision	550.00		3,850.00			
Technical Services	4,488.41		30,801.91			
(3) Operating Mat'ls. and Supplies:						
Timber					12,491.29	
Explosives						
Pipe	175.51		797.28			
Track						
Bits, shells, etc.	2,067.97		15,364.94			
(4) Operating Equipment:						
Rental	4,068.17		24,416.10		17,335.89	
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	591.45		43,886.29		2,006.80	
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Travel & Living			2,809.70		0	
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	160.82		1,329.62		1,097.32	
Liability Insurance	355.47		2,681.39		2,183.23	
Cookhouse & Townsite	581.81		9,733.14		1,672.62	
Miscellaneous	34.10		382.52		44.39	
(8) Contingencies (specify):						
TOTALS	$17,078.21		$155,468.42		66,946.61	

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug. 14, 1952 Payee THE GLIDDEN COMPANY

Per [signature] Title Manager of Mines

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 3,330 00

Signature _____
(Authorized Certifying Officer)

Date 9/30/52 Vou. No. SF-DMEA-16
(See other side)

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 3d-307 in accordance with the terms of the contract.

Signature R. C. Johnson Title Chief, Mining Div. Region III Date August 15, 1952.

R. C. Johnson

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Region III Date August 22, 1952

H. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF–104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF–104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF–104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF–104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF–200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF–200; and delete word "Independent" if the contract reported is on Form MF–200 (A). Also, report work paid for on a unit basis under contract Form MF–200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF–104 when submitted for reimbursable expenses incurred under contract Form MF–200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF–200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF–104 is required to be documented. The four copies of Form MF–104 are not to be thus supported.

Form MF–104 submitted for reimbursement under fixed price contracts on Form MF–200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF–104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1952 Docket No. DMEA 1219X Contract No.
Operator's Name THE GLIDDEN COMPANY Minerals
Address CLEVELAND, OHIO

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core Diamond	Ft.	$16506.76	740	$121,582.13	4118			
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$16506.76		$121,582.13				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		591.45		43,886.29				
New Buildings, Improvements, etc.								
TOTAL COSTS		$17098.21		$165,468.42				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Aug. 14, 1952 Operator THE GLIDDEN COMPANY

Per Edward L. Kalston Title Manager of Mines

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

ACCOUNTS AUG 22 1952

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

Redding, California
August 2, 1952

Subject: Exploration Project Contract
Bully Hill and Rising Star Mines
Shasta County
California

D.M.A. Reference:
Docket No. DMA 1219X
Commodity: Zinc-Copper
Idm-F-187

Geological Engineering Report - Month of July, 1952

I. Diamond Drilling

The footage drilled to date on this project totals 4083 feet as of the end of the work day July 31, 1952. Holes number A1-1, A1-2 and A1-3 are completed, bottoming at 1010, 1038 and 905 feet respectively. Five holes in all were planned in Area I. Of the original five holes planned, one is temporarily abandonded and another has been substituted because of finding ore mineralization in holes number A1-2 and A1-3. Should we encounter continued mineralization in Hole number A1-5, we no doubt will plan additional holes to develope the continuity of the ore zone.

The following tabulation shows the drilling progress for the month of July 1952.

Hole #4-Drill #1147-July footage 402' size NX & BX Total depth 680'
Hole #5-Drill #824-July footage 308' size NX & BX Total depth 450'
Total footage for July 710'

The avera e number of shifts worked per drill per day for the 25 day work month was 2.32. Two more drill helpers returned to Michigan. Currently we are short of helpers and have one driller assigned that work. Another driller will report early in August on the job and we expect to get two more helpers next week. Footage drilled averages a little over six feet per shift, including reaming, cementing and surveying time.

Hole #4 (A1-4) continued in a satisfactory manner thru somewhat broken rhyolite breccia - (Alaskite). It is located on the old tennis court in the Circle City area and has 4 inch heavy duty pipe set to a depth of 167 feet. NX casing is set to a depth of 240 feet, BX casing is set to a depth of 600 feet and drilling currently is BX size. The rock drilled

may be classed as medium drilling and the core recovery varied from 25 to 100% with half of the runs or pulls yielding 100% core recovery. The hole is in good condition.

Hole #5 (A1-5) was added to the original program to prospect the ore zones indicated in holes number 2 and 3. It encountered Bully Hill rhyolite breccia (Alaskite). It is located about 150 feet north of Hole #3 and is drilling in a westerly direction. Four inch heavy duty pipe has been set as casing to a depth of 71 feet with NX casing set to 301 feet, BX casing set at 360 feet and drilling currently is BX size. The rock drilled may be classed as poor to medium drilling and the core recovery varied from zero to 100% with only one fourth of the runs or pulls yielding 100% core recovery. Time was lost when two new corebarrels twisted off in the hole, one resulting is a several shifts fishing job. Both were recovered and the hole is in good condition.

Drilling mud was not used during the month and casing was extended successfully each time a cave was encountered.

The plan map submitted in May can be referred to again this month as no revisions are to be made. This is the 100 scale map showing Diamond Drill Hole locations in Area I and III.

Diamond Drill Hole cross sections submitted for holes number 4 and 5 (A1-4 and A1-5). Though slight mineralization has been encountered, the holes have not yet reached the ore zones indicated in holes A1-2 and A1-3.

Hole #4 (A1-4) was surveyed for both dip and bearing by Maas compass and hydroflueric acid etching. The results are as follows:

<u>Hole #4</u>

Collared @ 45° Bearing N 86 W

Surveyed @ 300 feet, dip reading 46°, Corrected to 40° 30'.
Surveyed @ 460 feet, dip reading 45°, Corrected to 40°
Surveyed @ 660 feet, dip reading 40°, Corrected to 35°

Bearing @ 300 feet N 86 W
Bearing @ 460 feet N 65 W
Bearing @ 660 feet N 65 W

Obviously this hole has deflected considerably to the north and is beginning to parallel the ore zone which is apparently turning to the west on the north end. Should the

hole turn more in the next two hundred feet, it may be advisable to discontinue the hole and move westerly and recollar to drill in a W.S.W. direction.

II Diamond Drill Hole Descriptions

Detailed descriptions of the drill cores from Holes number A1-4 and A1-5 are given in the attached logs. As is our custom in reporting, each trip of the corebarrel into the hole, together with the amount of core recovered and percentage, is also shown.

There was nothing particularly outstanding this month in the rocks drilled. There were a few spots in which megascopic chalcopyrite, sphalerite as well as pyrite occurred. There was also chloritic alterations present and some kaolinization and also introduced silicification. The main targets or mineralized zones lie ahead of us.

During the month, holes number A1-2 and A1-3 were skeletonized and the mineralized portion of Hole A1-2 sacked and sent to Abbot A. Hanks, Assayer, San Francisco, California for determination of copper, lead, zinc, gold and silver. A portion of Hole A1-3 was also sent for the same determinations. In all, 76 samples were sent, and there still remains a portion of the latter hole to sample. No returns have yet been received.

III Camp Rehabilitation

No major or new work was done this month.

The old sewage lines burst, collapse or plug up necessitating much attention and occasional replacement. The water lines also required a bit of attention.

Since the drills worked continuously on the same holes, it was not necessary to bring in a bulldozer, consequently no new stations or access roads were cut.

The Forest Service road via Round Mountain and the Madrone Field Campsite, was in good condition. Supplies for the mine were trucked in over this road instead of using the Bureau of Reclamation barge service.

The water supply continued to more than meet the drilling and domestic requirements. There is, however, a perceptible diminution that becomes apparent in the afternoons. Always in the morning the flow has increased and the two storage tanks are constantly overflowing. It seems that we should be able to continue throughout the month of August without even making any effort to conserve water.

The Shasta Lake Reservoir which reached a surface elevation of 1066 feet and overflowed the Dam's drum gates has lowered considerably and now is 1050 feet, a drop of 16 feet. The summer temperatures reached highs for the year and official temperatures exceeded 110 degrees, with unofficial temperatures exceeding 115 degrees.

IV Other Surveys or Construction

No extra transit work was required.

No other or new contracts were made.

Eighteen hundred feet of two inch pipe was installed from the pipe line back of the houses at Circle City up the mountain to a water tank placed at the south end of Bully Hill. This is to provide a water supply for the drilling to be done in Areas 3, 4, 5 and part of 6. It is planned to install a pump to the pipeline coming from the water tanks near the houses.

V. Safety

There were no lost time accidents this month. One case of poison oak required medical attention.

VI Visitors

On July 7, 1952, Messrs. John F. Albers and Jacques F. Robertson of the U.S. Geological Survey, arrived in Redding to complete portions of the district mapping to the east of us. We held a conference to discuss progress, development and procedures at the Bully Hill mine.

On July 9th, Mr. Ed. J. Matson, Engineer from the Reno, Nevada office of the Bureau of Mines, visited the mine on his regular tour of inspection.

Messrs. Albers and Robertson visited the mine on July 14th. Mr. Albers accompanied me to the Afterthought Mine, which lies in the southeasterly part of the district. Here, thru the courtesy of and accompanied by Mr. Ken Richman, General Superintendent, we visited several stopes underground, and also made a general trip thru the workings to study the geology. Later, access was made to inspecting some of the drill cores and also geological maps and sections. This trip was very beneficial to the writer as it gave a good insight into the ore forming conditions of some of the ore bodies in the district.

On July 19, Messrs. John H. Weeks, Edward L. Ralston and Robert Grove, all of the Glidden Company, also made an

inspection trip at the mine.

Mr. John C. Franz, Safety Engineer, State of California, Department of Industrial Relations, visited Redding on July 29th and 31st.

VII Geological and Engineering Work

Plane table mapping and geological mapping continued with special emphasis on the area over the current drilling in the Jennie June claim. It is becoming increasingly apparent that the favorable zone in which ore may be expected is turning in a northwesterly direction. This being the case and considering that drill hole A1-4 is turning to the north away from it, it may be desirable to discontinue the hole and move to a new location, recollar and use a west-south-westerly bearing. As previously stated, this hole has been surveyed for bearing at 3 locations and it is now planned to take 2 or 3 more readings in between the former as a check, before proposing a change.

While there is still a good chance of crossing the zone in which the ore may be hoped for, it will be increasingly more distant and the hole will cut it at too flat an angle to be most satisfactory.

Tunnel openings or portals were located and plotted on the new 100 scale map now in progress. Two more claim corners were found and will be tied in promotly. Photostat copies of the patent surveys are to be obtained from the office of the Cadastral Engineer in San Francisco, which will further help accurately locate the tunnel portal from which the underground shaft and workings can be plotted. It is to be remembered that all tunnel portals are caved in and consequently difficult to accurately locate, and also that no underground workings are accessible. When the shaft can be accurately plotted, it may be used as a guide in properly orienting and locating the workings of the succeeding levels. These in turn, will be used to locate, plot and project geological data in conjunction with the diamond drill core information.

VIII Maps

No new plan maps are sufficiently completed to submit with this month's reports.

Two sections; one for Drill hole A1-4 and one for drill hole A1-5, are attached.

Respectfully submitted

Mayer G. Hansen

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1952 Docket No. DMEA 1219X Contract No. E-187
Operator's Name The Gladden Company Minerals
Address
Contract Amount, $ Government Participation 10.11% Amount, $ 2151.00
476 ft. drilled at 4.50 per ft.

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	297.00					
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	4,315.03					
Supervision	550.00					
Technical Services	3,823.54					
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe	842.64					
Track						
Bits, shells, etc.	1,276.37					
(4) Operating Equipment:						
Rental	5,828.95					
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs	2,006.80					
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes	210.68					
Liability Insurance	415.69					
Cookhouse & Tomsite	1,672.62					
Miscellaneous	44.39					
(8) Contingencies (specify):						
TOTALS	21,283.71					

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 7/14/52 *Payee The Gladden Company

Per Edward L. Nulston Title Manager of Mines

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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(Instructions on reverse).

ACCOUNTS JUL 22 1952

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2151.00

Signature Lloyd L. Norvell
Authorized Certifying Officer

Date AUG 18 1952 (Authorized Certifying Officer)

Vou. No. SF-DMEA-7

(See other side)

AUG 25 1952

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Region III Date Aug. 13, 1952

H. C. Miller

MONTHLY REPORT OF OPERATOR

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Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit; that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

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U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1952 Docket No. DMEA 1219 X Contract No. _____
Operator's Name THE GLIDDEN COMPANY Minerals _____
Address _____

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft. ~~478~~	$19276.91	478					
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$19276.91	478					TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs		2006.80						
New Buildings, Improvements, etc.								
TOTAL COSTS		$21283.71	478					

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date July 14, 1952 Operator THE GLIDDEN COMPANY

Per [signature] Title [signature]

Edward L. Ralston Manager of Mines

REMARKS: _____

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

Copy

Invoice

L. J. LONGYEAR COMPANY

July 9, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

INVOICE NUMBER 65201

Charges in connection with exploration at the Bully Hill Mine, Shasta County, California, during the month of June, 1952, as per the terms of our agreement dated May 3, 1951.

Engineering fees				
June 1-30, 1952	1 month	@ $2,000.00 per month	2,000.00	
June 1-30, 1952	30 days	@ $35.00 per day	1,050.00	3,050.00
Car Expenses				101.00
Living Expenses				
L. C. Armstrong			49.70	
A. Lutenko			100.00	149.70
Expenses				
Postage & express charges			8.49	
Telephone & Telegraph charges			3.68	
Office supplies			61.56	
Rental of Typewriter			7.00	80.73
Wages paid to Office Staff at Redding, California				
April 13 - May 31, 1952	(Frances Hopper)		362.46	
June 23 - 30, 1952	(Mary Jane Warlaw)		25.34	
F.I.C.A. Insurance	388.80 @ 1.5%		5.83	
Unemployment Insurance	388.80 @ 3%		11.66	
Compensation, F.D. & F.L. Insurance	388.80 @ 5.215%		35.82	442.11
				3,823.54

M. G. Hansen's expenses will be billed in July, due to the fact that they were not received in Minneapolis in time for the June invoice.

CERTIFIED TO BE A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston, Manager of Mines

COPY

Invoice

E. J. LONGYEAR COMPANY

July 5, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

INVOICE NUMBER 65239

Diamond core drilling during the month of June, 1952, on your property known as Bully Hill, Shasta County, California, as per the terms of our agreement dated April 27, 1951.

Total footage drilled during June, 1952 476 feet.

Hole No.		From	To	Footage	Rate	
	Compensation					
3	Diamond Drilling	845.0	905.0	60.0		
4	" "	2.0	278.0	276.0		
4	Reaming	10.0	18.0	8.0		
4	"	19.0	40.0	21.0		
4	"	167.0	240.0	73.0		
5	Diamond Drilling	0.0	142.0	142.0		
5	Reaming	71.0	85.0	14.0		
				594.0	.50	$297.00
	Equipment Rental					
	1 drill 26/30 month		(3-shifts)	@ 675.00	585.00	
	4/30 "		(2-shifts)	@ 600.00	80.00	
	1 drill 10/30 "		(3-shifts)	@ 675.00	225.00	
	17/30 "		(2-shifts)	@ 600.00	340.00	
	3/30 "		(1-shift)	@ 475.00	47.50	
	Truck rental 1 month				100.00	1,377.50

Depreciation Rods & Casing

		From	To	Footage	(1-10)	Rate	Amount	
3	A Rods	845.0	905.0	60.0	6.0	1.32	7.92	
4	AU Rods	2.0	278.0	276.0	27.6	1.65	45.54	
4	AX Casing	0.0	240.0	240.0	24.0	2.30	55.20	
5	AU Rods	0.0	142.0	142.0	14.2	1.65	23.43	
5	AX Casing	0.0	85.0	85.0	8.5	2.30	19.55	151.64

Casing Left in Hole #3

AX Casing	50.0 ft.		
Less Depr.	8.0 ft.		
	42.0 ft.	1.33	55.86

Payroll (See enclosed payroll sheets)

June, 1952			5,271.00	
F.I.C.A. Indurance	5,271.00	1.5%	79.06	
Unemployment Insurance	4,996.00 @	3%	149.88	
Compensation, F.D. & F.L. Insurance	4,916.00	9.213%	452.91	5,952.85

Credit due you for board of workmen at Redding, California

Copy

Invoice

. J. LONGYEAR COMPANY

July 9, 1952 Page 2.

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

INVOICE NUMBER 61239

Alex Augustson	30 days	@	2.00	(60.00)	
Curtis England	29 "	@	2.00	(58.00)	
Arni Maki	26 "	@	2.00	(52.00)	
Frank Shewmaker	23"	@	2.00	(46.00)	
Floyd Meyborne	20 "	@	2.00	(40.00)	
Henry Wilgren	28 "	@	2.00	(56.00)	
Billy Wardlaw	24 "	@	2.00	(48.00)	
Arthur Rinkel	12 "	@	2.00	(24.00)	
Robert Venn	14 "	@	2.00	(28.00)	
Chas. Mattson	30 "	@	2.00	(60.00)	
Donald Mattson	30 "	@	2.00	(60.00)	
James Warlin	14 "	@	2.00	(28.00)	
Earl Trusty	22 "	@	2.00	(44.00)	
Robert Chappell	10 "	@	2.00	(20.00)	
Wm. McCandlish	10 "	@	2.00	(20.00)	(644.00)

Hold harmless insurance charges for May, 1952 4.53

Camp Expenses
Kitchen & Mess hall supplies 88.77

Food supplies 564.41

Freight, express and postage charges during June, 1952 146.59

Hauling, drilling equipment from Redding to site site 130.29

Fire & Theft insurance 12.10

Telephone & Telegraph charges 15.67

Fuel & Oil
2 cases Machine Oil 7.21
12 cyls Standard Palmo. 67.36 74.57

Supplies Used
1 - 1,000 gal. storage tank 101.48
1,017 ft. 2" Blk. pipe 797.28
1 - 2" swing check valve 11.26
6 - 2" ells 5.84
8 - 2" unions 19.76
2 - 2" ells 1.90
4 - 2" plugs 1.50
8 - 2 x 6 nipples 4.00
2 - NX 10 ft. Rigid type outer tubes 101.00

Copy

Invoice

L. J. McGOVERN COMPANY

July 9, 1952 Page 3.

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766 - 10th Avenue
Oakland 1, California

INVOICE NUMBER 65239

2 - BX Carboloy casing bits		90.70	
2 - Extra heavy 3" jar stuffs		44.50	
1 - 6000 pressure gauge		6.45	
1 - 3/4" x 25 ft. swivel hose		28.45	
1 - 3" tee		4.50	
2 - BX Core lifters		9.00	
1 - AX Core lifters		2.10	
2 sets of cutters for AX casing cutter		16.80	
1 AQ rod sub		4.14	
9 - AX - "Type C" Diamond Bits @	7.00	63.00	
1 - BX - "Type CC" Diamond Bits		7.00	
1 - BX - "Type C" Reaming Shell		153.00	
5 - BX - "Type C" Diamond Bits @	15.40	77.00	
1 - BX - "Type T" " Casing Bit		22.00	
1 - BX - "Type C" " Reaming Shell		215.60	
2 - AX - "Type C" " Bits @	9.00	(18.00)	1,775.07

Borts Wear	"Type T"	"Type CC"	"Type C"	"Type S"
Actual Wear Previous Month	-0-	67.39	216.34	67.03
Add: This months suspension chg.	3.00	2.00	38.00	- 0 -
	3.00	69.39	254.34	67.03
Less: Last months suspension chg.	- 0 -	24.00	78.00	10.00
	3.00	45.39	176.34	57.03

3.00 carats "Type T" Borts @	11.00	33.00		
45.39 " "Type CC" " @	8.50	385.82		
176.34 " "Type C" " @	11.00	1,939.74		
57.03 " "Type S" " @	8.50	484.76	2,842.32	
Borts Salvaged from Diamond Reaming Shells				
24.40 carats "Type C" Borts @		11.00	(268.40)	
			11,681.65	

CERTIFIED TO BE A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston, Manager of Mines

C O P Y

R REDUCTION PACIFIC COMPANY
1485 Park Avenue
Emeryville, California

5/29/52 4758 Terms: Net 30

Date of Invoice: 6/3/52 Inv. No. B 56354

Sold to Chemical and Pigment Co.
The Glidden Company
766 - 50th Avenue
Oakland, California

Ship to Redding

6/3/52 Valley Exp Shipped from Emeryville

1	ea	Acet Reg	01	806-8402	1	35.50	$35.50
1	ea	Oxy Reg	01	806-8456	1	37.75	37.75
1	ea	750 torch	01	818-0750	1	18.25	18.25
1	ea	Mixer	01	810-0781	1	2.50	2.50
1	ea	Tip	01	811-9801	1	2.00	2.00
1	ea	Tip	01	811-9803	1	2.00	2.00
1	ea	Tip	01	811-9807	1	2.25	2.25
1	ea	Cutt Torch	01	822-9066	1	43.00	43.00
1	ea	Tip Cutt	01	854-4499	1	3.85	3.85
1	ea	Cutt tip	01	854-4400	1	3.85	3.85
1	ea	Cutt tip	01	854-4401	1	3.85	3.85
2	ea	Nut	01	803-0003	2	.15	
2	ea	Nut	01	803-0004	2	.15	
4	ea	Gland	01	803-0008	4	.15	
50 ft		1/4 Twin Hose w/conn	04	908-4108	50	.30	15.00
		Tax	65				5.09
						Total	174.89

A CORRECT COPY OF THE ORIGINAL ENVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O p y

PACIFIC GAS AND ELECTRIC COMPANY
1304 Market Street
Redding, California

Electric Power or Gas Heating Bill
Current Month Charge
Meter Readings

This Month	Last Month	Difference	Constant	Units, etc.		
4300	4257	43	100	4300	@ .0307	132.01

Service Min. Chg. $86.34

Schedule P-2 Conn. Load 34.15

			Month	Year to Date		
Service Min charge 143.90 per yr	Quantity	M	4300	4300	Total	218.35
	Commodity Energy chg	M	132.01	132.01		
	Service Min chg	M	86.34	86.34	Amount due this month	218.35
	as billed	M	218.35	218.35		

May 12
June 11 1952

A CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

KROMKE CO.
3212 San Pablo Avenue
Oakland 8, California

THE GLIDDEN CONSOLIDATED ZINC MINES
c/o E. J. Longyear Co.
P. O. Box 430
Redding, California

Sold to
The Glidden Company
Chemical Pigment Division
766-50th Avenue
Oakland, California

June 9, 1952

Order No. 4768
Our order No. 4315
Terms: Net Cash - No Discount

4 only new stationary awnings	$87.50
State tax	2.63
	$90.13

A CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

MENZEL AND KIMBALL
HOTEL LORENZ
REDDING, CALIFORNIA

5/31/52

GLIDDEN CONSOLIDATED ZINC MINES

			Equipment Rental	Labor	Materials, Etc.	Totals
5/12	Foreman	10 @ 3.10		31.00		
	Working Supervisor	8 @ 3.12½		25.00		
	Power wagon	8 @ 3.50	28.00			
	Pickup	4 @ 2.50	10.00			
5/13	1 foreman	9 @ 3.10		27.90		
	1 working supervisor	9 @ 3.12½		28.13		
	1 lineman	9 @ 2.75		24.75		
	1 helper	9 @ 2.05		18.45		
	Wittner Electric				88.97	
	1 power wagon	8 @ 3.50	28.00			
	1 pickup	4 @ 2.50	10.00			
	Boat hire 5/12-5/13		41.40			
	1 serv Knob				.40	
	1 - 502 strainer				.35	
	12 - #6 Conn				1.08	
	1# tape				1.20	
	Redding Industrial Electric				125.31	
	Travel time			45.00		
			117.40	200.23	217.31	534.94
	Payroll Ins. & Taxes on Labor @ 12.23					24.49
	Plus 15% on material, Labor etc. of 442.03					66.30
						625.73

A CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

MENZEL AND KIMBALL
HOTEL LORENZ
REDDING, CALIFORNIA

June 27, 1952

E. J. Longyear Co.
P. O. Box 430
Redding, California

Cat Hire - Bully Hill Mines

1 cat skinner 5 days	40 hours @ 2.65	$106.00
2 days standby time @ 4 hours waiting for barge	8 hours @ 2.65	21.20
1 caterpillar and dozer 5 days	30 hours @ 11.00	330.00
		$457.20

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

Bill for Collection

Bill No. 276
Date June 30, 1952

Interior-Reclamation-Central Valley Project
P. O. Box 471, Redding, California

PAYER: THE GLIDDEN COMPANY
766 - 50th Avenue
Oakland, California

This bill is in accordance with Contract between the United States and The Glidden Company for barge service across Shasta Reservoir, Symbol 175r-3905 dated December 26, 1951, paragraph 8:

6-19-52 - Receipt #8 - from Bureau Boat Docks at Turntable to Landing at Bully Hill, 4 hours @ $12.00 per hour or $48.00

Please make check payable to:
"Treasurer of the United States
and mail to:
"Bureau of Reclamation
P. O. Box 471
Redding, California

AMOUNT DUE THIS BILL $48.00

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

MENZEL AND KIMBALL
Hotel Lorenz
Redding, California

May 31, 1952

E. L. Longyear Co.
P. O. Box 430 1607 Market Street
Redding, California

Attention of Mr. Armstrong

CAT HIRE AND GENERATORS - BULLY HILL MINES

9 days D7 Cat Rental		54 hrs	@ 11.00	594.00	
Haul cat (Hein Trucking)				22.66	
Pick up		2 hrs	2.50	5.00	
Labor: 5/22 to 5/31 straight time		72 hrs	2.65		190.80
	Overtime	2½ hrs	2.65		5.96
5/24	Overtime	4	2.65		10.60
5/30	"	4	2.65		10.60
5/31	"	4	2.65		10.60
Supervisor		2	3.125		6.25
				621.66	234.81
Payroll taxes and insurance					28.72
				621.66	263.53
Plus 15%					39.53
				621.66	303.06

Total 924.72

A correct copy of the original invoice

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

AIR REDUCTION PACIFIC COMPANY
1485 Park Avenue
Emeryville 8, California

C O P Y

5/29/52 4758

Net 30
Date of invoice 6/3/52 Invoice No. 56355

Sold to Chemical and Pigment Co.
The Glidden Co
766 50th St.
Oakland Calif

Ship to Same

6/3/52 Valley Express

4	eax	Nut	01	803-0003	4	.15	
4	ea	Nut	01	803-0004	4	.15	
8	ea	Gland	01	803-0010	8	.15	
25 ft		3/16 Twin Hose w/c 2x12 1/2	04	908-4106	25	.26	6.50
1	ea	Cut tip	01	813-0503	1	3.85	3.85
1	ea	Y Conn W/O Valves OXY	01	899-1276	1	2.50	2.50
1	ea	Y Conn W/O Valves Acet	01	899-1277	1	2.50	2.50
1	ea	Cyl Truck	01	815-2524	1	23.00	23.00
		Tax 65					1.15
					Total		39.50

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

THE AMERICAN RUBBER MANUFACTURING CO.
1145 Park Avenue
Oakland, California

Invoice No. 75867-C

Invoice Date 6-12-52

Customers No 4654

Terms: 2% 10 prox

Sold to: The Glidden Company
766-50th Avenue
Oakland 1, California

Shipped to:
Glidden Consolidated Zinc Mines, c/o Mayer Hansen, Golden Eagle Hotel, Redding, Calif.

350 ft.	2" I. D. SJCRL BEAR Arcolized fire hose, coupled in 50 ft. lengths		$.72 ft.	Net	$252.00
		Treatment	$.06 ft.	Net	21.00
		(7 sets)	10.25 set	Net	71.75
		Calif. State Sales Tax			10.34
					$355.09

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

LeFevbre Supply Co.
1424 Pine Street
Redding, California

The Glidden Company
766 50th Ave
Oakland, 1, Calif.

15621

5	3½" sanding disks	.50	$2.50
1#	2½" belt	.15	.15
3	3½" belt	.15	.45
1	¾" bell reducer		.26
1	½" half union		1.06
			4.42
		tax	.14
			4.56
	Rent for sander and edger		5.00
			9.56

A correct copy of the original invoice

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

C O P Y

SHASTA NAVIGATION CORP.
P. O. box 690
Project City, California

July 1st, 1952

GLIDDEN CONSOLIDATED ZINC MINES
Chemical and Pigment Company

JUNE 1952 STATEMENT

June 1	Garwood	2 trips	2 hrs	$12.00	$24.00
June 2	"	2 trips	2 hrs	12.00	24.00
June 3	"	2 trips	2 hrs	12.00	24.00
June 4	"	2 trips	2 hrs	12.00	24.00
June 5	"	1 trip	1 hr	12.00	12.00
June 5	Christina	1 trip	1½ hours	10.50	15.75
June 6	Garwood	2 trips	2 hrs	12.00	24.00
June 7	Garwood	2 trips	2 hrs	12.00	24.00
June 8	Garwood	1 trip	1 hr	12.00	12.00
June 9	Garwood	2 trips	2 hrs	12.00	24.00
June 10	Garwood	1 trip	1 hr	12.00	12.00
June 10	Christina	1 trip	1½ hrs	10.50	15.75
June 11	Garwood	2 trips	2 hrs	12.00	24.00
June 12	Garwood	1 trip	1 hr	12.00	12.00
~~June 12~~	~~Christina~~	~~1 trip~~	~~1 hr~~	~~12.00~~	~~12.00~~
June 12	Christina	1 trip	1½ hrs	10.50	15.75
June 13	Garwood	2 trips	2 hrs	12.00	24.00
June 14	Garwood	1 trip	1 hr	12.00	12.00
June 15	Garwood	1 trip	1 hr	12.00	12.00
June 16	Christina	1 trip	1½ hrs	10.50	15.75
June 16	New-Chris	1 trip	1 hr	10.50	10.50
June 17	Garwood	2 trips	2 hrs	12.00	24.00
June 18	Garwood	2 trips	2 hrs	12.00	24.00
June 19	Garwood	1 trip	1 hr	12.00	12.00
June 19	Christina	1 trip	1½ hrs	10.50	15.75
June 20	Garwood	2 trips	2 hrs	12.00	24.00
June 21	Christina	2 trips	3 hrs	10.50	31.50
June 22	Christina	1 trip	1½ hrs	10.50	15.75
June 23	Christina	2 trips	3 hrs	10.50	31.50
June 24	Garwood	2 trips	2 hrs	12.00	24.00
June 25	Garwood	2 trips	2 hrs	12.00	24.00
June 26	Garwood	2 trips	2 hrs	12.00	24.00
June 27	Garwood	1 trip	1 hr	12.00	12.00
June 27	Christina	1 trip	1½ hrs	10.50	15.75
June 28	Christina	1 trip	1½ hrs	10.50	15.75
June 28	Garwood	1 trip	1 hr	12.00	12.00
June 29	Christina	1 trip	1½ hrs	10.50	15.75
June 30	Garwood	1 trip	1 hr	12.00	12.00
June 30	Christina	1 trip	1½ hrs	10.50	15.75
					711.00
			Trans. Tax		106.65
					$ 817.65

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

COPY

Copy

GENE FRANCK'S SERVICENTER
P. O. Box 1750
Redding, California

To: Glidden Const. Zinc Mines
The Glidden Co.
Chemical Division
766-50th Avenue
Oakland 1, Calif.

6/6/52	1 spark lighter		1.05	
	1 arco Goggles		2.45	
			3.50	
		Tax	.11	3.61
	1#4 Acetylene @ 3.96		4.87	
	1 #122 Oxygen 1.95		2.38	
		Tax	.22	7.47
	1 12" Crescent		3.24	
	1 Vise Grip		1.67	
		Tax	.15	5.06
	1 #244 Oxygen		4.76	
	1 #122 Oxygen		2.38	
		Tax	.21	
	Deliver to Bridge Bay		1.00	10.35
				$26.49

A CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

COPY

R. A. CAROON & CO, INC.
Insurance Brokers and Adjusters
92 William Street

THE GLIDDEN COMPANY
CLEVELAND, OHIO

INSURANCE: CONTINENTAL INSURANCE COMPANY - Marine Open Policy No. 670

Shasta Reservoir Navigation for the month of February 1952:

	Amt. Insured	Rate	Premium
Barge Service 1 trip		25.00	$25.00
Cargo	700.00	.20	1.40
			$26.40

Shasta Reservoir Navigation for the month of March 1952

Barge Service - 3 trips		25.00	$75.00
Cargo	4090.00		8.18
			$83.18

Shasta Reservoir Navigation for the month of April 1952

Barge Service - 2 trips		25.00	$50.00
Cargo	2100.00	.20	4.20
			$54.20

A CORRECT COPY OF THE ORIGINAL INVOICE $ 163.78

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

Copy

R. A. Corroon & Co., Inc. Dr.
Insurance Brokers and Adjusters
92 William Street
New York

6/23/52

TO: THE GLIDDEN COMPANY
Cleveland, Ohio

Insurance: The Continental Insurance Co. - Marine Open Policy #670

Shasta Reservoir Navigation for the month of May 1952

	Amt. Insured	Rate	Premium
Barge Service - 1 trip			25.00
Cargo	400.00	.20	.80
			$25.80

A correct copy of the original invoice

THE GLIDDEN COMPANY

Edward L. Ralston
Manager of Mines

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

07. Dmca - 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 4 1952

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

THE GLIDDEN COMPANY
(Name of Company)

By [signature]
(Signature of Authorized Official)
Edward L. Ralston

June 13, 1952
(Date)

Manager of Mines
(Title)

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

16—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X Idm-E187
Total contract amount
Government participation percent 23.29%

Government participation maximum amount 50% of $9.00 per foot - $4.50 per foot drilled

Distribution of Expenditures for Month of May 1952

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	$4938.00	$14,653.00	$19,591.00			
Equipment purchase [1]						
Equipment rental [2]	2981.78	8,525.16	11,506.94			
Buildings						
Explosives						
Repair parts						
Other supplies	2236.31	8,135.97	10,372.28			
Power						
Transportation						
Withholding taxes	222.21	664.43	886.64			
Compensation insurance	413.50	1,302.34	1,715.84			
Other insurance	12.10	39.60	51.70			
Contract work	287.00	1,251.50	1,538.50			
Other (specify)						
Total	$11090.90					
Totals previously reported	$	34,572.00				
Totals to date	$		45,662.90			

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by R. C. Johnson
Amount approved for payment
Remarks

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF May 1952

Name of operator The Glidden Company
Project No. DMA 1219 X
Total contract amount
Government participation percent 23.29%

TYPE	NUMBER	MAN-SHIFTS	RATE	TOTAL
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners	5	110	2.00 per hr	$2360.00
Drill helpers	5	90	1.50 per hr.	2028.00
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists				
Bookkeeper				
Foreman	1		550.00 mo.	550.00
Clerks				
Stenographers				
Other				
TOTAL	11	200		$4938.00

NOTE.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by A. C. Johnson
Remarks $2,583.00

Lloyd L. Norvell
Authorized Certifying Officer

JUL 22 1952

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF May 1952

Name of operator The Glidden Co.
Project No. DMA 1219 X
Total contract amount
Government participation, percent 23.29% - 574 ft. Drilled at
(50% of $9.00 per foot) $4.50 per ft. $2583.00

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	$4938.00	$2981.78	$2236.31	$934.81	$11,090.90	Ft.	574	2326	2900	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	$4938.00	$2981.78	$2236.31	$934.81	$11090.90	Ft.	574	2326	2900	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by
Remarks

C
O
P
Y

INVOICE
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1700 Foshay Tower
Minneapolis 2, Minnesota

June 6, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766 - 50th Avenue
Oakland 1, California

Invoice Number 55251

Diamond core drilling during the month of May, 1952, on your property known as the Bully Hill, Shasta County, California, as per the terms of our agreement dated April 27, 1951.

Total footage drilled during May, 1952 574 feet.

Hole No.		From	To	Footage	Rate	
	Compensation					
1	Diamond Drilling	850.0	1015.0	165.0		
3	Diamond Drilling	438.0	845.0	407.0		
4	Diamond Drilling	0.0	2.0	2.0		
				574.0	.50	287.00
	Equipment Rental					
	1 Drill 1 month (double shifts)				600.00	
	1 drill 1 month (3 - shifts)				675.00	
	Truck rental 1 month				100.00	1,375.00

Depreciation Rods & Casing

		From	To	Footage	(1-10)	Rate	Amount	
1	E Rods	850.0	1015.0	165.0	16.5	1.32	21.78	
3	AU Rods	438.0	576.0	138.0	13.8	1.65	22.77	
"	E Rods	576.0	845.0	269.0	26.9	1.32	35.50	
"	AX Casing	265.0	520.0	255.0	25.5	1.33	33.92	
"	EX Casing	0.0	576.0	576.0	57.6	1.27	73.15	
4	AU Rods	0.0	2.0	2.0	.2	1.65	.33	187.45

Rods and Casing Left in Hole #1

E Rods	190.0 ft.				
Less Depr.	19.0 ft.				
	171.0 ft.	@	1.32	225.72	
AX Casing	280.0 ft.				
Less Depr.	28.0 ft.				
	252.0 ft.	@	1.33	335.16	560.8

Payroll (See enclosed payroll sheets)

May, 1952		5,622.00	
FICA Insurance	5,622.00 @ 1.5%	84.33	
Unemployment Ins.	5,622.00 @ 3%	168.66	
Compensation, PD & PL Insurance	5,110.00 @ 9.213%	470.78	6,345

[illegible]

[illegible]

[illegible]

COPY

INVOICE
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1700 Foshay Tower
Minneapolis 2, Minnesota

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766-50th Avenue
Oakland 1, California

Invoice Number 55251

Credit due you for board of workmen at Redding, Calif.					
Alex Augustson	31 days	@	2.00	(62.00)	
Curtis England	31 days	@	2.00	(62.00)	
Arni Maki	30 days	@	2.00	(60.00)	
Frank Sheumaker	27 days	@	2.00	(54.00)	
Floyd Heyborne	27 days	@	2.00	(54.00)	
Henry Wilgren	31 days	@	2.00	(62.00)	
Billy Wardlay	24 days	@	2.00	(48.00)	
Arthur Kinkel	26 days	@	2.00	(52.00)	
Robert Venn	30 days	@	2.00	(60.00)	
Chas. Mattson	15 days	@	2.00	(30.00)	
Donald Mattson	15 days	@	2.00	(30.00)	
James Warlin	15 days	@	2.00	(30.00)	(604.00)
Travel Expenses of Workmen to Redding, California					
James Warlin - from Republic, Mich.				158.92	
Chas. Mattson - from Republic, Mich.				160.42	
Donald Mattson - from Republic, Mich.				159.37	478.71
Charges in connection with crating equipment at Marquette, Michigan, for shipment to Redding, Calif.					5.40
Hold harmless insurance charges for April, 1952					3.91
Camp Expenses					
Kitchen and mess hall supplies					150.09
Food Supplies					595.30
Telephone charges					7.38
Freight, express and postage charges during May, 1952 (Includes shipments from Marquette, Michigan)					306.13
Hauling drilling equipment from Redding to drill site					138.80
Fire and Theft Insurance charges					12.10
Fuel and Oil					
6 - 35# Grease				25.10	
2 cases machine oil				7.35	
8 cyls. Standard flamo				44.91	
1270 gals. gasoline				312.42	389.78

[illegible]

C O P Y

INVOICE
E. J. LONGYEAR COMPANY
Diamond Core Drilling Contractors
1700 Foshay Tower
Minneapolis, Minnesota
2
June 6, 1952

The Glidden Company
c/o Mr. Edward L. Ralston
The Chemical & Pigment Company
766-50th Avenue
Oakland 1, California

Invoice Number 55251

Supplies Used			
1 - Bearing		2.83	
40 sacks aquagel		179.94	
Rod grease		8.31	
Recharging fire extinguisher		2.83	
Folding chair		5.68	
Spark plugs		13.18	
Lumber		18.33	
2 Mans Compasses	@ 40.00	80.00	
1-BX 10' Double Tube Core Barrel		102.80	
1-AX 10' Double Tube Core Barrel		80.95	
1-EX 10' Double Tube Core Barrel		57.60	
1-EX 10' Double Tube Outer Tube		35.20	
1 - 600 lb. pressure gauge		6.46	
1 - U.G. drill clutch		126.05	
1 - AX casing B.H. male tap		31.15	
2 - EX core lifters	@ 2.55	5.10	
1-AX core lifter		2.10	
4 - EX core lifters	@ 2.10	8.40	
2 oil seals for water swivel		2.65	
1 - AX Cross chopping bit		17.15	
1 - EX Cross chopping bit		24.20	
2 - Bolts for pipe tongs	@ 1.55	3.10	
2 - screws for pipe tongs	@ 1.55	3.10	
2 - BX type CC Diamond Bits	@ 12.10	24.20	
12 - BX Type C Diamond bits	@ 7.00	84.00	
1 - EX Type C Reaming shell		72.24	
3 - AX Type C Diamond bit	@ 9.00	27.00	
2 - AX Type CC Diamond bit	@ 9.00	18.00	
7 - BX Type C Diamond bit	@ 12.10	84.70	
1 - AX Type C Casing bit		14.00	
1 - AX Type C. Reaming shell		91.90	
6 - BX Type S Diamond bits	@ 8.75	52.50	1,285.65

Bortz Wear	"Type CC"	"Type C"	"Type S"
Actual Wear previous month	7.67	33.09	-0-
Actual Wear this month	-0-	28.59	18.00
This month suspension chg.	24.00	78.00	10.00
	31.67	139.68	28.00
Less:			
Last Month's suspension chg	18.00	35.00	-0-
	13.67	104.68	28.00

13.67 Carats "Type CC" Bortz	@	8.50	116.20	
104.68 Carats "Type C" Bortz	@	11.00	1151.48	
28.00 Carats "Type S" Bortz	@	8.50	238.00	1,505.68

Bortz Salvaged from Diamond Reaming Shells			
7.85 Carats "Type C" Bortz	@	11.00	(86.35)
			$12,964.68

CERTIFIED TO BE A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE
THE GLIDDEN COMPANY
BY
Edward L. Ralston, Manager of Mines

[illegible]

C
O
P
Y

INVOICE
E. J. LONGYEAR COMPANY
Mining Engineers
1700 Foshay Tower
Minneapolis, Minnesota

June 5, 1952

The Glidden Company
c/o Mr. Edward D. Ralston
The Chemical & Pigment Company
766-50th Avenue
Oakland 1, California

Invoice No. 55203

Charges in connection with exploration at the Bully Hill Mine, Shasta County, California, during the month of May, 1952, of senior geological engineers (M. G. Hansen and L. C. Armstrong) and junior engineer (A. Lutenko) as per terms of our agreement dated May 3, 1951.

Engineering Fees				
May 1 - 31, 1952	1 month	@ $2,000.00 month	$2,000.00	
May 1 - 31, 1952	30 days	@ $35.00 per day	1,050.00	$3,050.00
Car Expenses				193.33
Living Expenses				
M. G. Hansen			92.40	
L. C. Armstrong			186.59	
A. Lutenko			124.42	403.41
Other Expenses				
Telephone & Telegraph			47.51	
Postage			6.85	
Office Supplies			96.11	
Field Supplies			33.26	
Rental of typewriter and repairing same			27.00	210.73
				3,857.47

CERTIFIED TO BE A TRUE AND CORRECT COPY OF THE ORIGINAL INVOICE

THE GLIDDEN COMPANY

BY

Edward L. Ralston, Manager of Mines

[illegible]

Creek
Contract Name

Minneapolis, Minn

For Period Ending May 1- 15 1952 State California

Employee	Position	Total Hours	Rate	Pay Per.	Total Hours	S.T.	O.T.	GROSS
Axel Augustson	Foreman		275.00	5/15		275.00		275.00
Betty Augustson	Cook		200.00	5/15		200.00		200.00
Curtis England	Runner	16/88	2.00	5/15	104	208.00	16.00	224.00
Arne W. Maki	"	16/88	2.00	5/15	104	208.00	16.00	224.00
Frank R. Shewmaker	"	16/88	2.00	5/15	104	208.00	16.00	224.00
Floyd Heyborne	"	16/88	2.00	5/15	104	208.00	16.00	224.00
[illegible]ary Wilgren	"	16/88	2.00	5/15	104	208.00	16.00	224.00
Billy M. Wardlaw	Helper	72/88	1.50	5/15	160	240.00	54.00	294.00
Arthur R. Kimbel	"	72/96	1.50	5/15	168	252.00	54.00	306.00
Robert Venn	"	80/88	1.50	5/15	168	252.00	60.00	312.00
Mattelyn Trusty	Cook's Helper	32/88	1.00	5/15	120	120.00	16.00	136.00
						2379.00	264.00	2643.00

This is a certified copy of Payroll Summary of E.J. Longyear Co. for Diamond Drilling - Glidden Company Properties.

THE GLIDDEN COMPANY

BY [signature]

Edward L. Ralston, Manager of Mines

e E. J. Longyear Co.
1701 Foshay Tower
Minneapolis, Minn.

Squaw Creek
Contract Name

For Period Ending May 16-31 1952 State California

EMPLOYEE	Position	HOURS Total	Rate	Pay Per.	Total Hours	S.T.	O.T.	GROSS
Axel Augustson	Foreman	275.00		5/31		275.00		$275.00
Betty Augustson	Cook	200.00		5/31		200.00		200.00
Curtis England	Runner	24/88	2.00	5/31	112	224.00	24.00	248.00
Arne Maki	"	24/88	2.00	5/31	112	224.00	24.00	248.00
Frank R. Shewmaker	"	24/88	2.00	5/31	112	224.00	24.00	248.00
Floyd Heyborne	"	24/88	2.00	5/31	112	224.00	24.00	248.00
[illegible]ry Wilgran	"	24/88	2.00	5/31	112	224.00	24.00	248.00
Billy M. Wardlaw	Helper	32/80	1.50	5/31	112	168.00	24.00	192.00
Arthur R. Kinkel	"	32/80	1.50	5/31	112	168.00	24.00	192.00
Robert Venn	"	32/80	1.50	5/31	112	168.00	24.00	192.00
Charles R. Mattson	"	16/96	1.50	5/31	112	168.00	12.00	180.00
Donald E. Mattson	"	16/96	1.50	5/31	112	168.00	12.00	180.00
James W. Warlin	"	16/96	1.50	5/31	112	168.00	12.00	180.00
Mattelyn Trusty	Cook's Helper	40/88	1.00	5/31	128	128.00	20.00	148.00
						2731.00	248.00	2979.00

This is a certified copy of Payroll Summary of E.J. Longyear Co. for Diamond Drilling - Glidden Company Properties.

THE GLIDDEN COMPANY

By [signature]

Edward L. Ralston, Manager of Mines

A. C. Johnson, Chief, Mining Div., Reg. III June 16, 1952

E. J. Matson, Mining Engineer, Bureau of Mines, Reg. III

Glidden Co., Shasta County, Calif. (zinc-copper) Contract Idm-2187

Report of inspection - June 4, 5, 1952.

Hole Al-1 was completed to a depth of 1,088 feet. No mineralization was encountered in the hole. Note angle of deflection of hole after being surveyed. (See fig. 1).

Hole Al-3 was down to a depth of 869 feet. It had encountered mineralization at 841.5 feet and was still in it at the 869 feet depth. The mineralization consisted of chalcopyrite and pyrite. No zinc or lead mineralization was visible to the naked eye. The chalcopyrite was confined chiefly to small fractures, some paralleling the core and others crisscrossing it. Some very finely disseminated chalcopyrite was also visible. No assays have been made of the mineralized section yet. Some sections of it may go 5% copper. Mineralization is spotty. Core recovery in Hole Al-3 has been about 50 percent in the ore zone. Some places no core, other places 90-100% recovery.

Sludges are very erratic. The hole has been making water practically all the way down and at time of inspection was making about 50 gallons per minute. During drilling, sometimes no cuttings come up out of the hole; then when the rods are pulled a big surge of cuttings comes out, chiefly cave material. An automatic sampler is being used to catch cuttings from each drilling interval. (See view No. 2.).

The hole is getting dangerous to drill. It has from 15 to 60 feet of cave in it all the time from 529 feet down. It has been impossible to seal the cave off due to the hole making water. After each run, the driller must drill through the cave first before drilling new ground. When the rods are pulled out, the hole fills up again. Therefore, too much credence cannot be given to sludge samples.

The hole has been drilled thus:

NX size to 210 and cased.
5/8 BX " " 529 " "
1/8 AX " " 576 " "
1/8 EX " from 576 down

Hole Al-4 (see fig. 1, was down to a depth of 10 feet. It was just through to bed rock. The hole was first started 40 feet westerly in the same plane, but due to large boulders in the overburden, it had to be moved back in order to cellar it. The plan and longitudinal projections of the drill hole arrangement are shown in figures 2 and 1.

Hole Al-1 did not encounter ore. It did not reach out far enough.

Hole Al-2 encountered the ore zone at 778 feet, or 460 feet vertically below the collar and 870 feet in elevation. Note all collars are relatively near 1,500 feet in elevation.

Hole Al-3 encountered the ore zone at 541.5 feet or 460 feet vertically below the collar and 955 feet in elevation.

Hole Al-4 is designed to encounter the hole at about the same elevation as hole Al-2.

Hole Al-5 is designed to encounter the zone at about the same elevation as hole Al-3.

The planning gives a sort of parallelogram in the ore zone with two holes spaced about 150 feet apart horizontally intersecting the ore zone at vertical intervals of about 300 feet.

Hole Al-6, see plan fig. 1, may not be drilled, depending on the outcome of holes Al-4 and Al-5. It may be better to drill Hole Al-6 north along the zone beyond Hole Al-5.

A monthly summary of drilling to date is as follows:

Month	Al-1	Al-3	Al-5	Al-4	Totals
Dec.	82				82
Jan.	290	125			415
Feb.	223	394			617
Mar.	135	519			654
Apr.	130		428		558
May	165		407		572
Totals	1,015	1,038	845		2,898

Hole Al-4 had two feet at the end of the month. However, the hole was moved back to another location as previously stated, and started anew on June 1. Therefore, no footage for hole Al-4 can be credited for the month of May. Otherwise, it would be 574 feet (total) for the month.

E. J. Matson

E. J. Matson

View 1. Drill rig set-up at Hole A1-3. Building at left is an old abandoned dwelling used for housing former company employees.

View 2. Close-up of automatic sludge sampler at Hole A1-3. A uniform portion of drill cuttings are caught in muslin sack during each drilling interval.

View 3. Portion of old zinc oxide plant foremerly operated by the Bully Hill Mining Company.

Idm-E187

SF-DMEA-29
6-20-52

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

E-187

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

MAY 27 1952

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

THE GLIDDEN COMPANY
(Name of Company)

By Edward L. Ashton
(Authorized Official)

May 13, 1952
(Date)

Manager of Mines
(Title)

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

16—64068-1

ACCOUNTS MAY 15 1952

MONTHLY SUMMARY COST STATEMENT

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $9263.22
Government participation percent 27.11

Distribution of Expenditures for Month of April 1952

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	$4572.00	$10,081.00	$14,653.00			
Equipment purchase [1]						
Equipment rental [2]	2152.46	6,372.70	8,525.16			
Buildings						
Explosives						
Repair parts						
Other supplies	1587.99	6,547.98	8,135.97			
Power						
Transportation						
Withholding taxes	205.74	458.69	664.43			
Compensation insurance	388.93	913.41	1,302.34			
Other insurance	12.10	27.50	39.60			
Contract work	344.00	907.50	1,251.50			
Other (specify)						
Total	$9263.22					
Totals previously reported		$25,308.78				
Totals to date			$34,572.00			

FOR GOVERNMENT USE ONLY

Checked by fh
Entered by
Approved by A. E. Johnson
Amount approved for payment $2511.00
Remarks

JUN 20 1952

A. J. RENNER
AUTHORIZED CERTIFYING OFFICER

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF April 1952

Name of operator: THE GLIDDEN COMPANY
Project No. DMA: 1219 X
Total contract amount: $9263.22
Government participation percent: 27.11

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters	5	110	$2.00 hr.	$2240.00
Drill runners	6	83	1.50 hr.	1782.00
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists				
Bookkeeper	1		550.00 mo.	550.00
Foreman				
Clerks				
Stenographers				
Other				
Total	12	193		$4572.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

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Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF April 1952

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $9263.22
Government participation, percent 27.11%

558 ft. drilled at $4.50 per ft. (50% of $9.00) $2511.00

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	$4572.00	$2152.46	$1587.99	$950.77	$9263.22	Ft.	558	1768	2326	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	$4572.00	$2152.46	$1587.99	$950.77	$9263.22	Ft.	558	1768	2326	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

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Remarks

A. C. Johnson, Chief, Mining Division, Reg. III May 13, 1952

L. J. Matson, Mining Engineer, Bureau of Mines, Region III

Glidden Co., Shasta Co., Calif. (zinc-copper) Contract Idm-E187

Report of examination May 5 and 6, 1952

The property was visited on the above dates. Work at the property was progressing satisfactorily.

Work is still confined to Area No. 1, which is the northward extension of the Bully Hill ore zone. One hole (A1-2) has been completed to date and work is progressing on two others (A1-1 and A1-3).

Hole A1-1, EX size, was down to a depth of 891 feet on May 5 and is still in rhyolite flow rock. No mineralization has been encountered in the hole to date. The hole will probably be advanced to about 1,050 feet and will be bottomed at that depth if no ore is encountered. Drilling advance on the hole has been greatly retarded due to caving ground.

Hole A1-2 was completed last month to a depth of 1,038 feet. It encountered mineralization from 778 to 883 feet, some of which was massive sulphide containing galena, chalcopyrite, sphalerite, (possibly some marmatite), and pyrite. No assays have been made up of the mineralized section to date, however, the company intends to send all samples to Abbot A. Hanks at San Francisco, Calif., for analysis. A copy of the drill hole log for hole A1-2, made by the resident geologist, is attached to this report.

Hole A1-3, which was started in April, has reached a depth of 493 feet on May 5, 1952. No ore was encountered to date in this hole.

A monthly summary of drill footages since start of project is as follows:

	Hole No. A1-1			Hole No. A1-2			Hole No. A1-3			Monthly Totals
	From	To	Footage	From	To	Footage	From	To	Footage	
Dec.	0 -	82	82							82
Jan.	82 -	372	290	0 -	125	125				415
Feb.	372 -	595	223	125 -	519	394				617
Mar.	595 -	730	135	519 -	1038	519				654
Apr.	730 -	850	120				0 -	438	438	558
							Total to date			2,326

Two mechanical sludge sampling machines were taken to the property on April 5 for catching sludge samples. The machines are the same as those developed by the Bureau of Mines and used on Bureau work. They will be used for the duration of the diamond drilling work on this project.

Mayer G. Hanson, engineer in charge of the work for the E. J. Longyear Co., plans to take a 30-day vacation starting May 11, 1952. He will be replaced by Lee Armstrong of the E. J. Longyear Co.

E. J. Matson

E. J. Matson

Redding, California

Drill Hole Al-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
0	45	45	0	0	0-45	No core.
45	55	10	8.5	8.5	45-57	Andesitic Tuff, fine grained, gray greenish, in upper part also blue gray greenish, mostly weathered, with brownish and dark brownish iron-oxide spots, especially on the slickenside faces and along fissures and fractures. Calcite and quartz amygdules fill the lava holes. The calcite amygdules are mostly dissolved out and quartz amygdules remain. The upper part of core is squeezed and has many slickenside planes. Chlorite is present. White soft kaoline occurs in the fractures. In very few places fresh pyritic mineralization can be observed. Near 54' there is 1-2" thick, black, silicified mudstone layer. The core is very broken.
57	61	4	0	0	57-61	No core.
61	68	7	2.1	30	61-68.5	Same andesitic tuff, blue gray greenish, but almost unweathered, silicified. Little pyrite mineralization along very small fissures. Also disseminated pyrite as very fine grains in the rock itself. Quartz-calcite fills the fissure openings, as veinlets. The core is less broken than above.
68	71	3	0.5	20	68.5-71	Same andesitic tuff as between 45-57, except larger fragments. A brecciated character of the material can be observed. Piece of mudstone in the contact with the tuffaceous rock was seen. Little mineralization spots and groups occur along the contact at 68.5'. The contact (bedding) is parallel to the hole.
71	81	10	0	0	71-81	No core.
81	87	6	2	30	81-100	Andesitic tuffaceous fine breccia. The size of quartz-phenocrysts is about 1/5 mm. Sharp-cornered pieces of black mudstone are present. (size 2 mm and less). Also bigger components up to 1 mm. The breccia components are larger in one direction than in another. The rock is broken, being cut by many fissures with manganese-oxides and limonite. Some pyrite grains.
87	95	8	3.6	45		
95	100	5	3	60		
100	103	3	0	0	100-103	No core. Sandy cave.

Redding, California

Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		
103	107	4	0.5	10	103-107	Same fine breccia as before, only with more manganese-oxides in the fissures and fractures. The rock is very soft and broken, of greenish buff color. Cavities and holes formerly calcite-filled. The altered feldspar phenocrysts are of the size of 2-3 mm. No mineralization.
107	115	8	0	0	107-115	No core.
115	120	5	0.3	6	115-120	Andesitic tuff of uniform fine crystalline texture, dark bluish gray, unweathered. The core is very broken; no pieces over 3/4". The rock is quite hard. No porphyritic inclusions. Fine disseminations of pyrite, also pyrite films. Little hard black mudstone layer in contact with tuff. Hairline quartz-calcite veinlets cut the core at 40°.
120	121	1	0.9	90	120-121	Andesitic tuff of trachitic texture and grey greenish color. Planes of schistosity at 75°. Chlorite is present. Pyrite scattered thru the core in form of little lenses and spots along the quartz-carbonate veinlets or near them. The quartz-carbonate cut the core at 75° parallel to the schistosity. The lower part of the rock is not crystalline but of almost crypto-crystalline texture. No phenocrysts.
121	125	4	3.5	90	121-124	Same andesitic fine crystalline tuff as between 115-120. Change of flow material can be observed. 1/2 cm layers of probably cherty mudstone. The angle of schistosity is 75°. No phenocrysts. Direction of pitch (measured on cleavage planes) or slickenside is about 25° (angle measured on the cleavage face between striae and core). Few porphyritic inclusions in the rock are calcite crystals. Their orientation along schistosity indicates their possible late-hydrothermal origin. Hairthin quartz-carbonate veinlets of younger age cut the core and older calcite veinlets at an angle of 10-12°. Both vein systems have pyrite. At 124' there is a concordant black mudstone layer.
125	127	2	1.5	75	124-126	Aphanitic, partly vesicular rhyolite tuff. On the contact with mudstone continuous change from mixed mud and rhyolite tuff flow to pure rhyolitic material can be seen. The rhyolite tuff is of light muddy greenish color. White porphyritic inclusions, 1 mm in size or so, are calcite crystals. The quartz-phenocrysts, mostly smoky quartz, are about 1/10 mm or less (can be seen better with the lens). At 126' there is a small fracture, filled with the quartz-carbonate and broken mudstone

Redding, California

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Drill Hole A1-2
Consecutive #2

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
						material (so-called tectonic breccia). It is possible this is a zone of small local dislocation. Jointing, slickensiding, displacement in small scale occur.
127	131	4	4	100	126-157.5	Same vesicular rhyolite tuff as above only with more developed
131	133	2	2	100		crystallinity of the matrix. The size of black xenoliths less as
133	135	2	2	100		1 mm. These are longer in one direction than in another (along flow
135	137	2	1.5	75		direction). Calcite phenocrysts are 1-2 mm. in size. The rock is
137	141	4	4	100		massive, no bedding or cleavage can be recognized. The xenoliths are
141	142	1	1	100		aligned at an angle of 70° with the core. At 132 there is a 2"
142	144	2	1.5	75		quartz-carbonate vein at 10-12° to the core. More veins at 137',
144	147	3	2.8	90		149', 150.5'. Fractures filled with tectonic breccia and cemented
147	151	4	4	100		by quartz-carbonate can be seen at 137.5, 139 and between 140-141.5.
151	154	3	3	100		Latter is brecciated throughout and is refilled with hydrothermal
						cementing material. The zone has very little pyrite mineralization,
						whereas at the following depths there is significant pyrite mineral-
						ization: at 133, 146.5-147, 148. The rock between 143-148 has only
						a few calcite amygdules. The core is cut by many quartz-carbonate
						fissures and veinlets of irregular shape, direction and size. At
						the depth of 150' there is a cracked zone, filled with idiomorphic
						calcite of tabular and equidimensional rhombic shape with some clay.
154	161	7	7	100	157.5-161	Tuffaceous rhyolite vitrophyr. A change in flow material can be seen
						at 157.5. The tuffaceous rock is almost glassy (hyaline). The quartz-
						phenocrysts are at first very little, and of very small size, less
						than 1/4 mm. They are rounded and have globulite form. Then follows
						a zone where quartz-phenocrysts are 1/4 to 1/2 mm. Also xenoliths
						(possible xenocrysts too) of 1/2 to 1 mm. in size. They are dark
						green, brownish green and black in color, rounded to angular. Zones
						of quartz-phenocrysts, of rock fragments, and of calcite amygdules lie
						at angles of 65° to core. At 158° small veinlets cut the core at 45°
						causing a displacement of 1/4". Also here two ages of hydrothermal
						attackings can be recognized. The oldest one generally follows flow
						direction and has fine-grained pyrite films and is cut by another

Redding, California

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Drill Hole A1-2
Consecutive #2

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
						younger vein at an angle of 70° (or at an angle with the core of 45°). The older one is filled with black muddy material, the younger is pure quartz-calcite. An increase in crystallinity can be observed from depth of 159-161'.
161	163	2	1.5	75	161-170	Same rhyolite tuff as between 126-157.5. At 162' there is a quartz-carbonate vein 1.5-2" thick that contains a few grains and cubes of pyrite 1 mm. and less in size and also black glassy and very brittle obsidian inclusions.
163	165	2	1.5	75		
165	168	3	3	100		
168	171	3	1.5	50		
171	171.5	0.5	0.5	100	170-181	Almost same rhyolite vitrophyr as between 157.5-161. It is light greenish gray, hard rock. Quartz phenocrysts and calcite amygdules irregularly scattered. Size of latter is up to 3-4 mm; quartz phenocrysts are 0.1-0.9 mm. in size. Little pyrite mineralization along the fissures, also small amount of disseminated pyrite thru the core. Quartz-CO_2 veinlets and fissures of irregularly shape, size and direction cut the core at different angles. Two ages of Qtz.-CO_2 outpouring can be recognized. The oldest took place as rock was not hardened yet. Younger quartz calcite intersect the core at different angles (at 180.8 at 40-45°). The core interval between 177-178 is very typical for studying of this kind of mineralization. The interval is a breccia with irregularly mixed Qtz.-CO_2 and Rhyolite material. Pyrite was deposited with Qtz-CO_2 at same time. At 177 there is 1x3" piece of mudstone in the Rhyolite material.
171.5	176	4.5	4.2	93		
176	181	5	5	100		
181	182	1	0.1	10	181-182	Rhyolite felsophyr, dark gray, hard, pyrite containing, with no $CaCO_3$ amygdules.
182	184	2	0.2	10	182-184	Rhyolite vitrophyr, light greenish, hard, broken. Qtz. phenocrysts of very minimum size, less than 0.1 mm. Mudstone fragments can be seen in the material (0.75 cm wide and over 4 cm long). Little fine grained pyrite occurs. Core is broken with limonitic clayey material in between some of cracks.
184	185	1	0.2	20	184-184.2	Rhyolite felsophyr, light grayish with few pyrite stringers, also scattered pyrite.

Redding, California
April 10, 1952
Drill Hole A1-8
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
186	187	2	0.4	20	184.2-188	Rhyolite vitrophyr, light greenish gray to gray, hard, with and with-
187	189	2	0.2	10		out calcite amygdules (as between 170-181). In upper part with less
189	190	1	0.8	80		developed crystallinity of the matrix. Between 196-196.5 there is
190	195	5	1.1	22		some mixed flow breccia material as above between 177-178. Some
195	197	2	2	100		mudstone fragments and inclusions occur. Qts. phenocrysts of mini-
197	198	1	0.9	90		mum size. Little pyrite scattered throughout the core.
198	201	3	1.8	60	198-209.7	Rhyolite felsophyr, greenish gray to gray, with Qts. phenocrysts
201	205	2	1.4	70		(up to ½mm and 1-2mm), calcite amygdules (up to 0.5cm), and with
205	209	6	6	100		xenoliths (up to 1-2mm), with fine crystalline matrix. Little pyrite
						is scattered in the matrix and along the fissures. At 206 there is
						a small barite lense with fine grained pyrite around it and in the
						surrounded rhyolite material. Few Qts.-CO_3 veinlets, slickensides.
						The interval ends with Qts.-CO_3 vein, 2-3cm thick.
209	216	7	3.5	50	209.7-216	Rhyolite vitrophyr, light greenish gray to light gray, medium hard.
						Typically is the often change in the flow material. Darker and
						lighter layers of same material repeat. Light material predominant.
						Core is cut by many young Qts.-CO_3 veinlets and veins. Very little
						or no pyrite.
216	221	5	3.5	70	216-301	Rhyolite felsophyr, gray, grayish, light greenish gray, light grayish
221	226	5	4.5	90		blue-green, etc. Qts. phenocrysts up to 1-2mm. oftener less. They
226	236	10	8	80		are long in direction of material flow. Xenoliths and xenocrysts up
236	239	3	2.7	90		to 2mm, also mudstone fragments. Some Qts.-CO_3 amygdules up to
239	246	7	6.6	94		
246	251	5	5	100		0.5cm in size here and there. The bedding is similar to direction of
251	252	1	1	100		flow. Schistosity can be seen in upper portion of core at
252	257	5	4	80		Matrix is very fine grained and of light color. In some places it is
257	263	6	5.9	98		holocrystalline and the material may be called Rhyolite vitrophyr.
263	269	6	2.4	40		(See intervals 263-264.5 285-289. etc.). So sharp and rapidly change
269	276	7	5	70		in the flow material was observed. Coarse pyrite mineralization can
276	277	1	1	100		be seen at 226,257, etc. Also some galena and chalcopyrite was ob-
277	280	3	3	100		served here to first time in form of little veinlets filling. (see

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
SULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
280	285	5	4.5	90		end of cored interval or pul 221-226). Some sericite and kaoline in
285	290	5	3.5	70		the cracks and fissures. Core between 246-248.5; 295-301 is typical
290	295	5	2	46		thru regular size of Qtz.-CO_2 amygdules (½-1mm) and their large
295	301	6	6	100		Quantity. Core is cut by two systems of veins: elder and younger as above. At 246 there is 10cm thick Qtz.-CO_2 vein without any pyrite, also at 277, etc., but of smaller size. At 289.5 there is about 2.5-3" thick zone refilled with brecciated wall rock and cemented by Qtz.-CO_2 - Baryte hydrothermal solution. This contains only few grains of pyrite.
301	309	8	7.2	90	301-307	Rhyolitic fine flow breccia, gray to dark greenish gray. Breccia fragments up to 1-2cm. Rock is hard, what gives solid core. Few slickensides. Direction of movement can be read as upper part downwards, lower part upwards. Slickenside scratchings at to the core. No or unsignificant pyrite occurrence.
309	314	5	4.2	84	307-310.5	Rhyolite felsophry as before.
					310.5-311.4	Rhyolitic fine breccia flow as above.
314	319	5	5	100	311.4-327.4	Same Rhyolite felsophyr as above, only with base partly crystalline,
319	321	3	1.8	60		partly holocrystalline to glassy. The core is cut by many veins and
321	326	5	3.2	65		veinlets of Qtz.-CO_2 material. Only few of them are of young age. Most of them are mixed with Rhyolite. Core is partly broken more intensively in lower portion. Few slickensides. Very little or no pyrite mineralization.
326	333	7	5	70	327.4-346	Rhyolitic flow breccia. Flow lines are very good recognizable and at
333	335	2	2	100		to core. Size of fragments up to 1-2cm, otherwise much less.
335	340	5	1	20		Core is partly broken. Little fine grains of pyrite at 334.5.
340	346	6	3	50		Rhyolite felsophyr to Rhyolite vitrophyr, as above. Few Qtz.-CO_2
346	350	4	2.8	70	346-351	amygdules up to 1-1.5mm.
350	356	6	3	50	351-394	Rhyolite flow and Rhyolitic flow breccia. It is rhyolitic flow
356	362	6	3	50		material of vitrophyric, seldom of felsophyric character of the ground-
362	366	4	2	50		mass, but of different mineralogical composition and color of the
366	370	4	2.4	60		flow layers and fragments. Brecciated character of material will be

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%
370	377	7	3.1	43
377	381	4	2.6	65
381	387	6	5.3	85
387	389	2	2	100
389	394	5	4	80
394	398	4	2	50
398	401	3	0.9	30
401	406	5	1.2	24
406	408	2	0.6	30
408	412	4	1.6	40
412	416	4	0.8	20
416	421	5	0.5	10
421	428	7	0.5	7
428	432	4	0.5	12
432	437	5	0.5	10
437	441	4	0.5	12
441	446	5	0.3	6
446	451	5	0	0
451	453	2	0.5	25
453	455	2	0.6	30
455	458	3	1.2	40
458	461	3	0.9	30
461	463	2	1.5	75
463	466	3	2.5	83
466	468	2	0.1	5
468	470	2	1/4	70
470	473	3	0.6	20
473	478	5	0.8	16
478	481	3	1	33
481	487	6	1.5	25
487	493	6	0	0

Description

last downwards, where rock is rather vitrophyr to felsophyr. Core is very broken between 350-356, 382-462, and elsewhere. No or very little pyrite occurs. More pyrite in form of very fine grains in the rhyolite itself and also as up to 1cm large black lenses and spots of fine grained pyrite occur from 545 down. These mudy lenses and concretions of pyrite have no age relation to the posterior hydrothermal outpour of minerals and are deposited in the flow primarily. Chlorite and sericite are present. Slickensides in several places. Core is generally not very often cut by Qtz.-CO_3 veinlets. Whole interval is slightly, on some places more intensively silicified. This silicification is rather primary. Very few white feldspar phenocrysts and Qtz.-CO_3 amygdules were seen.

Redding, California
April 10, 1962
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
493	498	5	0.8	16		
498	503	5	0.8	16		
503	506	3	0.7	23		
506	510	4	0.4	10		
510	514	4	0.2	5		
514	521	7	1.4	20		
521	526	5	2	40		
526	529	3	2.7	90		
529	536	7	0.7	10		
536	541	5	1	20		At 541 end of AX core and start of BX core.
541	545	4	2	50		
545	555	10	7	70		
555	563	8	6	85		
563	569	6	6	100		
569	574	5	4.5	90		
574	581	7	7	100		
581	587	6	4.8	80		
587	589	2	1.4	70		
589	594	5	1.6	32		
594	596	2	1	50	594-821	Rhyolite felsophyr and Rhyolite vitrophyr, Rhyolite flow breccia and Rhyolite eruption breccia, mixed together or stratified after each other. Rhyolite outflow accompanied by an intensive hydrothermal outpouring of Qts.-CO_2 material, so that calcite became mixed with the Rhyolite flow material, volcanic mud, etc.,- if the outpouring was at same time. But if the out-pouring of the Qts.-CO_2 material was afterwards, it played a role of a cemented medium for not yet completely hardened Rhyolite flow material in form of brecciated fragments, etc. (see also intervals between 177-178, etc.). Little pyrite mineralization occurs. Slickensides along bedding. Chlorite, sericite are present.
596	606	10	9	90		
606	616	10	10	100		
616	621	5	5	100		

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
621	631	10	9	90	621-622	Rhyolite felsophyr. Solid rock. Upper contact with breccia can be seen. Lower contact is not rapidly but thru the rhyolite vitrophyr of light greenish color.
					622-624	Rhyolite flow breccia with less or no calcite interflow.
					624-627.4	Rhyolite felsophyr, gray or greenish gray with some calcite amygdules. Solid rock. Xenocrysts and xenoliths up to 1 mm.
					627.4-626.5	Rhyolite flow breccia as above, see 622-624.
631	640	9	9	100	626.5-647	Rhyolite, green to grayish green, solid, with very few calcite amygdules (up to 2-4mm), with many xenocrysts and xenoliths up to 2-4 mm (see section 626-645). Rock is relatively more basic as can be suspected from rhyolitic material. Downwards it takes on the darker components and passes into the material of almost andesitic composition. Close to 638, 641, 646 etc. there are little veinlets of light flesh colored Qts.-CO_3 material.
640	650	10	10	100	647-656	Same probably rhyolite material as above, only broken to breccia and recemented with Qts.-CO_3 solution (See also 594-621). $CaCO_3$ amygdules in size up to 4mm can be seen here and there. The calcite in the veins is black due to presence of the volcanic mud in hydrothermal solution. In some vein material a black very brittle obsidian inclusions occur. No or very little pyrite as disseminated grains.
650	660	10	10	100	656-660	Rhyolite, green or grayish green, with many xenoliths and xenocrysts (up to 2mm in size). Some are long in flow direction, what is at 10° to the core. Clear quartz phenocrysts as seen in some rhyolite cannot be seen here. These almost round or elliptical phenocrysts, 1-2mm in size, are dark to light green grains of probably more siliceous composition as the matrix itself. Rock is rather intermediate between andesitic and rhyolitic lava. Downwards, already below 660 material is more acidic. Quartz phenocrysts are less as 1mm. Matrix is holocrystalline. Rock is firm, medium hard to hard.

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
660	670	10	7.4	74	660-670	Anhydrite (?) and porphyritic rhyolite. Fine grained grayish green rock formed by precipitation of hydrothermal solutions in cavities, open shear zones and as replacement of rhyolite. At beginning, near 660, it seems to hold a broken area together as cementing material and intermittently thereafter contains rock fragments. Scratches easily with knife. Took specimen at 663.
670	680	10	10	100		
680	686	6	4.6	76		
686	696	10	10	100		
696	704	8	5.9	75		
704	714	10	10	100		
714	724	10	9.9	99		
724	734	10	9.9	99		
734	739	5	5	100	670-684	Porphyritic rhyolite flow breccia. Soft, altered, chloritized, re-cemented breccia. Rock is beginning to be sheared and schistose from pressure. Some of the rock inclusions or fragments are beginning to show a maroon color - do not know why - but it increased in amount rapidly to about 680. This could be a characteristic bed and a horizon marker. Fragments are soft.
739	749	10	10	100		
749	756	7	7	100		
756	763	7	5.5	80		
763	773	10	10	100		
773	779	6	5	85		
779	786	7	7	100		
786	793	7	7	100	684-696	Mixed porphyritic rhyolite and anhydrite (?) Rock takes on a schistose appearance containing wavy, green, soft mineral in the shear planes. Schistosity crosses core at from 10° to 45° in a ten inch length of core (see 888) (can not be bedding) and also has the maroon colored material which can make the fine maroon shale found on surface above Bully Hill tunnel #1. Rock is slippery like soapstone and is presumably chloritic, sericitic and altered from ore solutions.
793	799	6	3.3	55		
799	801	2	1.2	60		
801	811	10	9.0	90		
811	821	10	8.8	88		
821	826	5	3.5	70		
826	828	2	1.4	70		
828	833	5	5.0	100		
833	834	1	0.6	60		
834	840	6	2.4	40	696-698	Breccia fault. Mixed gray, green, soft, kaolinized rock. Solution or fault breccia contains considerable quantity of calcite veinlets.
840	844	4	1.5	37		
844	849	5	3.7	74		
849	855	6	3.0	50	698-701	Green schist - slippery, greasy feel. Chloritized, sericitic and contains considerable clay and calcite.
855	858	3	1.6	53		

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
858	864	6	3.3	55	701-734	Andesite Dike (?) Gray-green, solid fine grained with no bedding.
864	874	10	8	40		Took specimen at 723. Contains considerable calcite - with flash
874	879	5	5	100		effervescence with HCl.
879	882	3	2.4	80		This may be a tuff similar to next portion.
882	884	2	2	100	734-778.5	Andesite tuff. Green, mottled, vesicular, fine grained. Vesicules
884	888	4	1.6	40		are filled with calcite. Many later veinlets of calcite. Rock solid,
888	894	6	1.4	23		good core recovery. Unusual quantity of calcite present - flash
894	898	4	12	30		effervescence.
898	901	3	0	0		Becomes brecciated, broken, schistose, slippery, chloritic and
901	911	10	0.2	2		sericitic. Bedding or banding is not readily apparent and in a few
911	918	7	1.1	16		places suggests cutting 45° to 50° across core. Specimen at 771 feet.
918	925	7	2.2	31		
925	930	5	2.1	42	778.5-786	Massive sulphide. At start, in a distance of about six inches, the
930	936	6	2.4	40		rock becomes increasingly replaced by sulfides until no schistosity
936	940	7	1.5	37		planes remain. In first few inches the core shows mostly pyrite and
940	946	6	4.5	75		chalcopyrite with a little zinc and possibly galena or some other
946	951	5	5.3	100		fine grained silver gray mineral (tetrahedrite (?)) The sulfide is
951	957	6	0.2	3		very fine grained and brassy and shows considerable chalcopyrite.
957	961	4	1	25		The schistosity, if not the bedding, cuts 30 degrees across the core.
961	967	6	1.7	28		Sometimes it runs parallel to the hole, but in such cases, I believe
967	971	4	0.7	17		schistosity or sulfide is circling an inclusion or rock fragment.
971	975	4	0.6	15		At 784 schistosity crosses at 45°. Believe the true bedding would
975	980	5	1.6	32		be about 35° in this area. At 784 is considerable galena. Would
980	985	5	4.9	98	786-787	estimate the 7.5 feet to run 5% copper. Chloritic black schist
985	996	11	0.6	5		(derived from porphyritic rhyolite). Contains about 10% sulfide,
996	1002	6	0	0		half of which is chalcopyrite. Also contains visible galena and
1002	1007	5	0.4	8		sphalerite. Would estimate this foot to run 2% copper.
1007	1014	7	0.8	11		
1014	1022	8	1.9	24		
1022	1031	9	0.7	8		

Redding, California
April 18, 1963
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
1031	1038	7	0	0	787-791	Massive sulfide. Probably contains 35% unreplaced porphyritic rhyolite, chlorite or quartz carbonate. Very favorable host rock for chalcopyrite replacement. Contains sphalerite and galena. Would estimate this footage to run 4% copper.
					791-799	Mineralized porphyritic rhyolite breccia. Contains about 35% mixed sulfide as replacement material and filling in and around brecciated fragments. Rock contains considerable chlorite. Most of the replacement bands cross core at from 20 to 40 degrees. Estimated copper content about 2%.
					799-858	Porphyritic rhyolite contains secondary quartz, is altered and contains about 5% sulfide to about 822. It is still in a mineralized zone. Rock is less chloritic and schistose in here but still is a favorable host rock. In places it is very brecciated. A gray rock with black schistose spots, quite soft and altered. Shearing is about 45° across core. From 822 to 858 rock contains less than 5% sulfide. This portion 799-858 is less broken than most of hole. Would estimate this footage to contain less than ½ of one percent copper.
					858-877	Bully Hill porphyritic rhyolite. It is a medium hard gray colored rock with about an average amount of silica. Slickensides cross the core at 30° in two places, indicating more of a shear than fault plane. Mineralization varies quickly. 860 to 862 contains probably 5% pyrite. 862 to 864 contains probably 15% pyrite. This strip also contains more silica. Quartz phenocrysts are 1 mm average with none over 2 mm. Sulfide is either uniformly disseminated or also serves as cementing material in brecciated areas. There does not seem to be any single direction to sulfide replacement. A generalized range would be from 0° to 45°. Judging from the core and slickensides, and pyrite feeders at 865 it may be deduced that the faulting ran north and south; that the sulfide stringers ran about north 20°-30° west; that the

Redding, California
April 10, 1962
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%	Description
					fault dipped east, and that the west side moved north. Most of the rock is brecciated and at 869 there is an inclusion of mudstone (?). The number of sharp cornered rock fragments seem to increase at 870. There is a small amount of chloritic alteration and some clay. Overall rock is not badly broken.
		877-882			Massive sulfide (Note whenever the rock contains over 50% sulfides, it will be classified as massive sulfide). Rock originally was a porphyritic rhyolite breccia. First foot contains about 50% sulfide, pyrite and chalcopyrite and may run 2% copper. From 878 to 882 the sulfide content may average 80% sulfide, mostly pyrite, chalcopyrite and possibly some zinc. This 4 foot length may run 4 or 5% copper. Mineralization seems to be parallel to core.
		882-883			Bully Hill porphyritic rhyolite. Rock is very mineralized, about 35% sulfide. Rock is chloritized, kaolinized, and sericitized. Contains sphalerite or black marmatite - some chalcopyrite. Would estimate 1% copper or less.
		883-918			Bully Hill porphyritic rhyolite. Rock is gray, schistose, medium soft, slippery, chloritized, sericitized and altered with very little sulphide mineralization. There is a slight increase in pyrite at from 917 - 918. Rock is very broken and from 884 to 918, the core recovery is very poor. May be in a shear zone as broken core is also vuggy. Medium amount of silica. Shearing seems to favor about 45° to core. Small amount of pyrite disseminated throughout. Phenocrysts small, less than 2mm. Core more brecciated from 911 to 918. Hole should continue at least 100 feet.
		918-921			Bully Hill porphyritic rhyolite. Very siliceous fg. practically solid quartz grayish white in color. Broken and but say a piece has rolled in the bit.

Redding, California
April 10, 1952
Drill Hole A1-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%	Description
					921-930 Bully Hill porphyritic rhyolite. Gray to grayish green - chloritic - rather soft, very altered. Beginning of gypsum zone. At first only interstices, vugs, shear zones, etc., are filled with gypsum. All takes on a 30° bedding or shear plane across core. The gypsum gives the appearance (to me) of replacing porphyritic rhyolite. No sulfide mineralization. End of AX core. AX casing set to 925 feet.
					930-933 Gypsum or anhydrite. Relatively clean (80%) gypsum, with inclusions of unreplaced slivers of porphyritic rhyolite. Has rough surface like pieces of harder material (porphyritic rhyolite) standing out farther than softer gypsum matrix.
					933-980 Porphyritic rhyolite, gray, soft, altered, greenish tinge, chloritic, feldspars white and altered. All space, pores, vugs, shear planes, are filled with gypsum. In places as at 944, 957 to 961, are solid gypsum. At 951 rock is very clayey and is evidently in a strong major fault zone. Core is broken, but is more solid than previous or following portions. This is probably part of the zone in which ore can be expected and the SO_4, may have been derived from an earlier phase of pyrite mineralization. Either that or there might have been SO_2 gas seeping thru the shear zones following the outpouring of the rhyolite and after the folding.
					980-985 Bully Hill porphyritic rhyolite (AX size). Gray soft, kaolinized, broken, splintery rock. Core is rarely 2 inches long. It is chloritized, sericitized and kaolinized. Quartz phenocrysts which do not exceed 5 mm, in places stick out like frog eyes. All core has coating of clay which helps drilling. At 985 is a fault, and core is a gouge - sticky clay with pieces of porphyritic rhyolite in it. Very slight mineralization, practically barren - fine grained pyrite. Hole should continue to 1025.

Redding, California
April 10, 1952
Drill Hole Al-2
Consecutive #2

LOG OF DRILL HOLE NO. 2
BULLY HILL & RISING STAR MINES

Interval Drilled From	To	Feet	Core Recovered Feet	%	Description
					986-1038 Bully Hill porphyritic rhyolite. Slightly harder - more silicified - less kaolinized, slight pyritic mineralization. Increased amount of small specks of limonite from pyrite skeletons. Sandy fault at 996 to 1002. Evidently another fault at 1031 to 1038. Stopped hole 3-24-52. Broke off and left bit and shell in hole.

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 5 1952

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

THE GLIDDEN COMPANY
(Name of Company)

By [signature]
(Signature of Authorized Official)
Edward L. Ralston

April 12, 1952
(Date)

Manager of Mines
(Title)

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

16—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator: The Glidden Company
Project No. DMA: 1219 X
Total contract amount: $9622.63
Government participation percent: 29.79

Distribution of Expenditures for Month of March 1952

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	$3986.00	$6095.00	$10,081.00			
Equipment purchase [1]						
Equipment rental [2]	2483.07	3889.63	6,372.70			
Buildings						
Explosives						
Repair parts						
Other supplies	2277.46	4270.52	6,547.98			
Power						
Transportation						
Withholding taxes	179.37	279.32	458.69			
Compensation insurance	367.23	546.18	913.41			
Other insurance	11.00	16.50	27.50			
Contract work	318.50	589.00	907.50			
Other (specify)						
Total	$9622.63					
Totals previously reported		$15686.15				
Totals to date			$25,308.78			

APR 21 1952

FOR GOVERNMENT USE ONLY

Checked by fk
Entered by
Approved by O. C. Johnson
Amount approved for payment $2866.50
Remarks

Lloyd L. Worvell
Authorized Certifying Officer

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF March 1952

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219X
Total contract amount $9622.63
Government participation percent 29.79

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners	6	85	$2.00 per hr	$1864.00
Drill helpers	8	97	1.50 per hr	1572.00
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists				
Bookkeeper				
Foreman	1		550.00 mo.	550.00
Clerks				
Stenographers				
Other				
Total	15	182		$3986.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by R. C. Johnson
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF March 1952

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $9622.63
Government participation, percent 29.79%

637 ft. drilled at $4.50 per ft. (50% of $9.00) $2866.50

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	$3986.00	2483.07	2277.46	876.10	9622.63	Ft.	637	1131	1768	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	$3986.00	2483.07	2277.46	876.10	9622.63	Ft.	637	1131	1768	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

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Checked by
Entered by
Approved by A. C. Johnson
Remarks

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 5 1952

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

THE GLIDDEN COMPANY
(Name of Company)

By Edward L. Robertson
(Signature of Authorized Official)

March 14, 1952
(Date)

Manager of Mines
(Title)

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or ag the United States as to any matter within its jurisdiction.

16—6

MONTHLY SUMMARY COST STATEMENT

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $8569.03
Government participation percent 33.29

Distribution of Expenditures for Month of February 1952

634 ft. drilled at $4.50 per ft. (50% of $9.00) $2853.00

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	$3830.00	$2265.00	$6095.00			
Equipment purchase [1]						
Equipment rental [2]	1767.29	2122.34	3889.63			
Buildings						
Explosives						
Repair parts						
Other supplies	2106.45	2164.07	4270.52			
Power						
Transportation						
Withholding taxes	177.39	101.93	279.32			
Compensation insurance	345.15	201.03	546.18			
Other insurance	8.25	8.25	16.50			
Contract work	334.50	254.50	589.00			
Other (specify)						
Total	$8569.03					
Totals previously reported		$7117.12				
Totals to date			$15686.15			

APR 21 1952

FOR GOVERNMENT USE ONLY

Checked by fh
Entered by
Approved by A. C. Johnson
Amount approved for payment $2853.00
Remarks

Lloyd L. Norvell
Authorized Certifying Officer

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF February 1952

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $8569.03
Government participation percent 33.23

634 ft. Drilled @ $4.50 per ft. (50% of $9.00) $2853.00

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners	6	88	$2.00 per hr.	$1744.00
Drill helpers	7	107	1.50 per hr.	1536.00
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists				
Bookkeeper				
Foreman	1		550.00 month	550.00
Clerks				
Stenographers				
Other				
Total				$3830.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by L. C. Johnson
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF February 1952

Name of operator THE GLIDDEN COMPANY
Project No. DMA 1219 X
Total contract amount $8569.03
Government participation, percent 33.29

634 Ft. Drilled @ $4.50 per foot (50% of $9.00) $2853.00

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	$3830.00	$1767.29	2106.45	865.29	$8569.03	Ft.	634	497	1131	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	$3830.00	$1767.29	2106.45	865.29	$8569.03	Ft.	634	497	1131	*

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

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Checked by
Entered by
Approved by A. C. Johnson
Remarks

A. C. Johnson, Chief, Mining Division, Reg. III March 10, 1952

E. J. Matson, Mining Engineer, Region III

Glidden Co., Shasta County, Calif. (Zinc and Copper) Contract Idm-E187

Report of examination March 4 and 5, 1952.

The property was visited on the above dates accompanied by J. F. Robertson and A. R. Kinkel, geologists of the U. S. Geological Survey. The property is reached by driving north from Redding about 15 miles along U. S. Highway 89 to a point about one quarter of a mile south of the Pitt bridge, a landing on the south side of the Shasta reservoir. Thence, travel is by boat northeasterly for an estimated distance of 8 miles to the Bully Hill landing on the north side of the reservoir at this point. Total distance from Redding to Bully Hill landing is about 23 miles via automobile and boat. The mine area is about two miles northwesterly by road from the landing.

The U. S. Geological Survey has made an extended and comprehensive study of the area supplemented with a compilation of the old company records and maps. To compile all these old records and company maps has apparently been a painstaking job, as most of the old maps had no coordinate lines and very little other information for orientation. Much credence is due them for their endeavors.

A copy of the original report by A. R. Kinkel and J. F. Albers of the U. S. Geological Survey, giving a description of the geology and ore deposits is attached to this report.

On March 5, the drilling was progressing satisfactorily. Work at present is confined in area No. 1, to explore the northward extension of the Bully Hill ore zone.

Hole No. A1-1 was down to a depth of 626 feet. It was cased down to a depth of 602 feet and drilling from that point is continuing with an AX bit.

Hole No. A1-2 was down to a depth of 631 feet. It was cased down to a depth of 541 feet and drilling from that point is continuing with an AX bit, also. No ore was encountered to date in either hole. Both holes are at an inclination of -70° and are expected to reach a depth of about 1,000 feet. Ore formations are expected to be encountered in the next 300 feet. A plan showing locations of the holes is attached to this report.

The Glidden Company is continuing the rehabilitation of the property. The cook house and living quarters for the drill personnel are completed. Further rehabilitation is in progress, such as, building roads, preparing drill sites, developing water supply, etc.

The E. J. Longyear Co. has two U.G. Model diamond drills, powered by Waukesha gasoline motors, equipped with twin cylinder hydraulic heads. Each tripod has one 40-foot leg, and two 50-foot legs, made of single poles for each leg. The drillers are using 10-foot coreborrels and are rigged up to connect and disconnect the rods at 20-foot intervals for lowering or hoisting.

The company is operating on a three-shift basis on each drill at present. Plans are, however, to use two shifts on each rig and then have one shift to alternate on each rig to allow for delays caused by cementing. That is, there will at least be the equivalent of at least three shifts per day on one machine and two shifts per day on the other.

Core recovery is good so far. It appears from the nature of the ore, and from the opinion of the resident geologist, Mayer Hansen, core recovery on the ore zone will be good. Mr. Hansen has proposed that all core in ore zone be ground and quartered, one quarter to be assayed, others saved. Cores are kept in 5-foot core boxes and are stored in racks in the core shed. Core space is being taken up gradually in the core shed and before long something will have to be done about future storage. The Longyear Company has not planned to save them for posterity. It may be advisable to bring the cores to the Reno warehouse for storage. They probably should be skeletonized before transportation.

The original exploration contract, dated April 27, 1951, item No. 2, mentions vertical holes, varying from 500 to 1,000 feet and averaging 800 feet in length. Holes are being drilled at -70° and not vertical. Apparently this contract has been amended or superseded. It would be advisable to have a copy of the present working contract in the Reno files.

Chief personnel at the project includes the following:

a. Mayer G. Hansen, Mining Geologist in charge of operations for E. J. Longyear Co., with address at Golden Eagle Hotel, Redding, Calif., Phone 700.

b. Alex Lutenko, geologist and assistant to Mr. Hansen. (E. J. Longyear Co.)

c. Axel Augustuson, drill foreman, for E. J. Longyear Co.

d. Roy McDowel, foreman for Glidden Co.

E. J. Matson

E. J. Matson

View 1.
Christina, motor launch used for transporting employees to and from work. Pit bridge can be seen at right center. Owned by Shasta Navigation Company. Rental charge is $10.50/hour. Glidden Company also rents barges from U. S. Bureau of Reclamation. Cost of water transportation varies from $1000 to $1800 per month.

View 2.
Al-1 drill hole set-up at lower center. Al-2 drill hole can be faintly seen at left side of draw. Houses are part of Circle City (camp buildings of Bully Hill Mine).
Note heavy overburden. Main haulage level of Bully Hill Mine is at left of Al-1 drill site, totally obscured by detritus and soil.

View 3.
Looking at Rising Star Mine area from Bully Hill area. Rising Star shaft is at upper road. Main haulage level is at lower left. Numerous dumps from other adits dot the area.

View 4.
Ruins of Bully Hill smelter and mill. Part of Shasta reservoir in right center.

View 5.
Showing caved condition of No. 4 Adit at Rising Star mine.
J. F. Robertson and M. G. Hansen standing at left of portal.

View. 6.
Showing caved condition of portal of main haulage level at Rising Star mine. Mayer Hansen is standing on top of adit portal. Building at skyline is power and hoist room for Rising Star shaft. See View No. 3.

Note- All mine entrances are in same condition in both the Rising Star and Bully Hill mines.

Copied from our original report. (Signed) Art

Proposed exploration at the Bully Hill & Rising Star mines,

Shasta County, California

A. R. Kinkel J. P. Albers

Recommendations

The drilling program proposed by the Glidden Paint Co. for their Rising Star and Bully Hill mines in Shasta County, Calif., and as shown on the composite plan of these two mines, is approved by the writers. It is justified by the high copper and zinc content of the ore which has been produced by these mines, and by the numerous areas that may contain ore but which were not prospected by the owners at the time the mines were in operation. The proposed holes will prospect all of the favorable areas within a reasonable depth from the surface, and although the spacing between holes is large at some places in relation to the length of ore shoots, any major ore zone should be located by the proposed holes.

Some unmined ore is known to occur in the mines, and some areas could be more easily explored by holes from underground if the mines were unwatered. However, as most of the favorable areas could not be reached by underground drilling, and as entirely new ore shoots must be found to encourage reopening of the mines, exploration by surface drilling is justified at this time.

Data pertinent to the exploration proposal

Location and Accessibility

The Bully Hill-Rising Star mine area is 18 miles air-line northeast of Redding, in secs. 16 and 21, T. 34 N., R. 5 W., Shasta County, California. It lies on the north side of Shasta Reservoir at an approximate altitude of 1500 feet. The property is most easily reached by boat or barge on Shasta Reservoir; it is also possible to drive from Redding to the mine area, but the driving distance is 70 miles, half of which is over a Forest Service dirt road that is adequate in the summer but almost impassable in the winter.

General geology

The areal geology in the vicinity of the Bully Hill-Rising Star mine area has recently been mapped by Survey geologists and the following information is based upon that work.

The rocks in the general vicinity of the mine are volcanic and sedimentary rocks of Triassic age. Three formations are represented. The oldest is the Dekkas andesite, a series of andesitic flows, tuffs, and tabular intrusive bodies of andesite porphyry. The ore bodies in the Bully Hill mine are in sheared portions of the tabular intrusive bodies. The Bully Hill rhyolite overlies the Dekkas andesite and is locally intruded by facies of the andesite. The Bully Hill rhyolite consists of a series of rhyolitic flows, breccias, and tuffs. It is commonly light gray in color and has a porphyritic texture with coarse 1-2 mm. quartz phenocrysts. Most of the ore bodies in the Rising Star mine are in the Bully Hill rhyolite.

The Pit formation, which consists of interbedded shale and crystal-lithic tuff conformably overlies the Bully Hill rhyolite. No sulfide bodies have been found in the Pit formation near Bully Hill.

The rocks in the vicinity of Bully Hill have been folded into a series of southward plunging anticlines and synclines. Bully Hill itself is essentially an anticline plunging south at an angle of 50 degrees. The folds are well outlined by the contact between the Bully Hill rhyolite and the overlying Pit sediments to the south, east, and west of Bully Hill. North of Bully Hill, however, the contact between the rhyolite and underlying Dekkas andesite is less intensely folded and dips are essentially homoclinal to the southeast.

Small faults and shear zones are very numerous in the immediate mine area, but elsewhere they are much less abundant and are of little structural importance.

Much of the area north and east of Bully Hill is covered by alluvial fan material and by landslide debris. Likewise, the geology on the eastern slopes of Bully Hill is obscured by a thick mantle of slope wash containing large boulders. In many places these boulders are so large that it is difficult to determine whether or not the rock is in place.

Geology of the mine area

The surface geology of most of the Bully Hill-Rising Star area was mapped during the spring of 1951 by the U. S. Geological Survey, and is shown in generalized form on the accompanying map (fig. 1). The underground workings are inaccessible and all information on underground geology is taken from company maps and sections.

Three geologic features that appear to be related to the sulfide mineralization are the dike-like bodies of andesite porphyry, the shear zones, and the strongly silicified areas.

The andesite porphyry dike in which the Bully Hill ore bodies are localized crops out along the strike of the ore zone about 1200 feet north of the northernmost known ore body. The intervening area is covered by wash. If the dike continues under the covered area, as seems likely, there is a good chance of more sulfide ore shoots being localized in it. The same condition occurs to the south along the strike of the Bully Hill ore zone. A zone of moderately well silicified rhyolite and a small amount of gossan is found along the ore zone on the surface.

The Rising Star shear zone, and the Middle shear zone are the chief geologic structures in the Rising Star ore zone. Each shear zone measures several tens of feet wide on the surface, and according to company maps and sections some of the ore bodies occur as pods within the shear zones. A third shear zone farther east has also been productive. It extends for several hundred feet north of the known ore bodies, and this northward extension appears to be a worthwhile area to prospect (Fig. 2, south end of Area 6, east end of Area 2). All of the shear zones seem to converge in the vicinity of the Rising Star dump (Fig. 2, Area 2).

The Rising Star ore bodies are capped on the surface by very highly silicified rhyolite and rhyolite breccia. A small amount of limonite, in the form of stringers and knots, is present in the silicified rhyolite.

The area between the Bully Hill and Rising Star areas is underlain by rhyolite with is cut by many small faults and one strong shear zone (Fig. 2, south end Area 6, east end Area 2). Much of the rhyolite is highly silicified, and has the same general appearance as the silicified rhyolite over the Rising Star ore bodies. Therefore, the silicified areas, especially the large area trending northward along the axis of the hill, are considered good prospecting ground, (Fig. 2, Area 6).

Ore Deposits

The Bully Hill and Rising Star mines have a combined total production of approximately 500,000 tons of copper-zinc sulfide ore, about 60 percent of which was from the Rising Star. The average assay of Rising Star ore was .02 oz. Au, 2.5 oz. Ag, 2.8% Cu, and 20.6% Zn. The average grade of Bully Hill ore was approximately .10 oz. Au, 4.5 oz. Ag, and 3.5% Cu. No reliable zinc assays are available because all mining at Bully Hill was done prior to 1917 and zinc ore was not recovered in direct smelting. However, from the scant data at hand, it is evident that some of the Bully Hill ore bodies carried as much as 15 percent zinc.

The Bully Hill ore zone strikes about N. 5 E. and is composed of several ore shoots that pitch steeply northeast. The zone has a strike length of about 1000 feet, and a known vertical extent of 1000 feet (Fig. 3). The lowest known ore bodies are at 607 elevation, and the highest are at 1610 elevation. Individual shoots have a pitch length several times greater than their strike length. They seem to occur, according to company maps, in shear zones in the andesite porphyry dikes.

The Rising Star ore zone trends slightly west of north and is likewise composed of several ore sheets. The ore zone is about 700 feet long by 250 feet wide. It has a known vertical extent of 700 feet, and has a moderately steep pitch to the south (Figs. 4-9). Individual ore bodies have a rather definite N. 30-45 W. trend, and some of them appear to be related to two strong shear zones. A curious feature of the Rising Star mine is that the country rock in the lower levels is gypsum. Pods of massive sulfide ore occur in the gypsum.

Both the Bully Hill and Rising Star mines were still in ore at the lowest levels.

SF-Dmla-18

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 14 1952

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

REGISTERED FEB 19 1952

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

THE GLIDDEN COMPANY
(Name of Company)

By Edward L. Ralston
(Signature of Authorized Official)

Feb. 13, 1952
(Date)

Manager of Mines
(Title)

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

16—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator: The Glidden Company
Project No. DMA: 1219 X
Total contract amount: $7117.12
Government participation percent: 31.424%
Government participation: Maximum Amount: 50% of $9.00 per ft. or 497 ft. @ $4.50 $2236.50

Distribution of Expenditures for Month of January 1952

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	$ 2,265.00					
Equipment purchase [1]						
Equipment rental [2]	2,122.34					
Buildings						
Explosives						
Repair parts						
Other supplies	2,164.07					
Power						
Transportation						
Withholding taxes	101.93					
Compensation insurance	201.03					
Other insurance	8.25					
Contract work	254.50					
Other (specify)						
Total	$ 7,117.12					
Totals previously reported						
Totals to date						

FOR GOVERNMENT USE ONLY

Checked by: fh
Entered by:
Approved by: A. C. Johnson
Amount approved for payment: $ 2236.50
Remarks:

FEB 27 1952

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

Lloyd L. Norvoll
Authorized Certifying Officer

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF January 1952

Name of operator The Glidden Company
Project No. DMA 1219 X
Total contract amount $7117.12
Government participation percent 31.424%

Government participation: Maximum Amount: 50% of $9.00 per ft. or 497 ft. @ $4.50 $2236.50

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners	2	37	2.00 per hr	688.00
Drill helpers	2	42	1.50 per hr	642.00
Teamsters	1	19	1.75 per hr	385.00
Manager				
Superintendent				
Engineers				
Geologists				
Bookkeeper				
Foreman	1		550.00 mo.	550.00
Clerks				
Stenographers				
Other				
Total				$ 2 265.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by A. C. Johnson
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF January 1952

Name of operator: The Glidden Company
Project No. DMA: 1219 X
Total contract amount: $7117.12
Government participation, percent: 31.424%

Government participation - maximum amount: 50% of $9.00 per ft., or 497 ft. @ $4.50 ft. $2236.50

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	2 265.00	2 122.34	2 164 07	565.71	7 117.12	Foot	497		497	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	2 265.00	2 122.34	2 164.07	565.71	7 117.12	Foot	497		497	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by A. C. Johnson
Remarks

COPY

THE CHEMICAL and PIGMENT COMPANY
Division of the Glidden Company

GLIDDEN
Brand

766 Fiftieth Avenue Oakland 1, California

February 13, 1952

Mr. A. C. Johnson, Chief,
Mining Division,
Bureau of Mines, Region III,
P. O. Box 1551,
Reno, Nevada.

Re: Docket DMA-1219X
Exploration Project Contract
Idm-E187

Dear Mr. Johnson:

I am enclosing, in quadruplicate, form MF-104, covering January diamond drilling operations at our Bully Hill property, Shasta County, California.

Our reason for presenting the actual cost of the drilling operation, exclusive of rehabilitation costs, barge service costs, and other expenditures incidental to this project, is to substantiate our claim for the amount which the government has agreed to pay on this contract. In this connection I wish to advise that there is no contract between the Government and E. J. Longyear Co., since this contract was made between the Glidden Company and the Longyear Co. Hence, the government contract is between the Government and The Glidden Company and under the terms of this contract the Government will participate up to $9.00 per foot for the actual footage drilled, and any additional cost above $9.00 per foot is to be borne by The Glidden Company. Consequently in making out form MF-104, the only thing really to be considered is the actual footage drilled, yet to substantiate our claim for government participation, we feel that it is quite necessary to present our actual drilling costs. On this form we show a total cost against this drilling operation of $7,117.12, but we are not asking the government to participate to the extent of 50% of this amount, but are claiming 50% of the actual footage drilled at $9.00 per foot, or 497 feet at $4.50 per foot, the total amounting to $2,236.50. In the event that the cost of drilling drops below $9.00 per foot, a thing quite possible after the job gets well under way, you can readily understand that it would be necessary for us then to present the actual cost, otherwise the government would be participating to the extent of 50% of the actual cost. While form MF-104 hardly covers the scope of our operations, yet I believe we are presenting sufficient facts to meet all of the requirements of the Defense Minerals Administration.

Respectfully yours,

THE GLIDDEN COMPANY
/s/ Edward L. Ralston
Edward L. Ralston
Manager of Mines

ELR:HM

Redding, California

Log of Drill Hole Al-1

Bully Hill & Rising Star Mines

Bearing: Due West

Inclination: -70°

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
0	10	10	0	0	0-10	Bully Hill Rhyolite "gravel". Mostly as fragments of rock averaging 2 cm (¾ in.) size with maximum 1½ cm (3/4 in.) size, Quartz phenocrysts are few and small. Rock is gray with brown spots. Medium hard.
10	20	10	0	0	10-20	Bully Hill Rhyolite sand, with grains mostly 1mm or smaller in size. Greenish gray color. Grains are mostly quartz. This may be a fault zone but no clay apparent.
20	24	4	0	0	20-24	Same as 0-10, perhaps smaller size average.
24	27	3	0.5	15	24-27	Bully Hill Rhyolite. Mostly black, a few pieces of leached white. Hard and silicified. No phenocrysts, no mineralization.
27	30	3	0	0	27-30	Bully Hill Rhyolite sand, same as between 10-20.
30	34.7	4.7	1.3	20	30-42	Bully Hill porphyritic Rhyolite. Brownish tinge on gray rock.
34.7	39	4.3	0.7	15		Phenocrysts plus or minus 2mm. Small scattered grains of Mn stain
39	42	3	0.7	25		are present. Medium hard, Slightly silicified. A few veinlets of Quartz-Carbonate (¼ in.) cuts the core. Slightly vuggy.
42	47.3	5.3	3.7	70	42-45	Bully Hill porphyritic Rhyolite, gray to black with white altered feldspar grains. Core is more solid, harder and more silicified. Phenocrysts are very few and small plus or minus 1mm. A very little fine grained pyrite scattered. Some slight scattered fine grained black Mn (?) specs. Also several small gash veinlets and some ¼ in. seams of Quartz-Carbonate
					45-48	Rhyolite Breccia, hard cemented, silicified broken, gray in color. An increased amount but still slight amount of fine grained pyrite. Fragments in rock are up to ½ in. size.

Interval Drilled			Core Recovered			Description
From	To	Feet	Feet	%		
47.3	52	4.7	4.7	100	48-52	Mixed porphyritic Rhyolite and Rhyolite breccia (this could even be a silicified tuff), gray mottled with white feldspars showing. At 51 to 51½ is considerable pyrite, perhaps 3% of rock for a few inches
52	56.7	4.7	3.5	70	52-65	Mixed porphyritic Rhyolite and Rhyolite breccia-somewhat more altered and broken than between 48-52
56.7	65.7	9	6.7	75	65-82	Bully Hill porphyritic Rhyolite, gray with white grains of feldspar
65.7	68	2.3	1.8	80		The core is more solid but still broken. There are a few scattered spots of fine grained pyrite. A few seams of calcite cuts the core mostly at 60°. The phenocrysts
68	76.1	8.1	0.5	5		are few & small. It does not have much if any added quartz or silica. The size of the grains of
76.1	82	5.9	4.3	75		the feldspar is also small. There are quite a few limonite stained cubical cavities indicating leached pyrite. From 76 ft. the phenocrysts are becoming larger plus or minus up to 3mm.
82	85	3	2.7	90	82-85	Rhyolite breccia, cemented. Part of core is vuggy from being incompletely cemented. No pyrite.
85	89	4	0	0	85-98	Same as between 65-82, this is
89	93	4	0.8	20		Bully Hill porphyritic Rhyolite,
93	97	4	4	100		all gray, medium hard. Occasional
97	98	1	1	100		spots of slight pyritic mineralization
98	102	4	3.8	95	98-124	Bully Hill porphyritic Rhyolite. Fairly fresh but still quite broken
102	106	4	3.8	95		To 113 no piece longer than 6 in.
106	109	3	3	100		Some late Quartz-Carbonite veinlets
109	113	4	2.5	60		most cut core at 60° but some at
113	117	4	4	100		45°. An occasional veinlet is pale
117	120.5	3.5	3.5	100		green colored suggesting fluorite
120.5	124	3.5	2.5	70		It also contains chlorite. In general the rock is average rhyolite grayish colored, getting more solid as depth is gained. It is medium grained. Small phenocrysts of quartz are present.
124	125	1	1	100	124-139.5:	Bully Hill porphyritic Rhyolite medium grained, fresh, gray, mottled
125	128.5	3.5	3.1	90		with white feldspars. Small amount of fine grained scattered pyrite (or marcasite?)
128.5	135	6.5	6.5	100		Quartz-Carbonite cuts core at plus or

Interval Drilled From	To	Feet	Core Recovered Feet	%	Description
					minus 2 ft. intervals at 55°
135	139	4	4	100	to 70° to core, but does not seem to carry extra amounts of pyrite
139	145	6	5.3	90	139.5-143.5; Rhyolite breccia. Rock is very similar to above described but has angular fragments of about 3/8 to ½ in. maximum size. Appears to be a flow breccia. It contains an increased amount of Quartz-Carbonite veinlets but no extra mineralization, and in fact contains less pyrite. Fragments are generally more basic and might be a volcanic breccia interbedded with Rhyolite flow. It is too coarse to be a tuff.
145	154	9	7.8	85	143.5-155; Bully Hill porphyritic Rhyolite same as between 124-139. No mineralization.
154	161	7	6.2	90	155-170 Rhyolite breccia, same as between 139.5-143.5. Slight mineralization Some chlorite.
161	163	2	1.2	60	
163	169	6	5	85	
169	173	4	2.6	65	170-177 Bully Hill porphyritic Rhyolite, same as before (see interval 124-139). This portion seems to be a normal occurrence with small phenocrysts, and few if any inclusions of fragments.
173	177	4	3.3	85	
177	179	2	1.9	95	177-204 Volcanic breccia. Light grayish green, medium hard rhyolite breccia Fragments are in general too large (up to 25mm) to be a tuff. However there are many smaller lapilli 1x5mm in size. There does not seem to be definite bed or parting and suggests that a flow was still liquid when airborn volcanic fragment where drop into the still plastic flow. The fragments for the most part are sharp cornered and very few are rounded, though some are.
179	182	3	2.7	90	
182	188	6	6	100	
188	191	3	3	100	
191	194	3	3	100	
194	201	7	6	85	
201	204	3	3	100	
					204-371 Bully Hill Rhyolite.

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
102 Old Mint Building
San Francisco 3, California

February 8, 1952

Mr. A. C. Johnson
U. S. Bureau of Mines
P. O. Box 1551
Reno, Nevada

Dear Mr. Johnson:

The week of January 28 to February 1 I visited the diamond drilling exploration project, DMA 1219, Idm E 187, Bully Hill and Rising Star mines near Redding, Shasta County, California. My understanding from Mr. E. H. Bailey is that Mr. Matson of your office was assigned to make inspections on this project, and that he was scheduled to make a trip to Redding the week of January 28. I am sorry that Mr. Matson was not able to make this trip, for I expected to discuss with him the information desired for the inspection reports on this particular project.

The government's contract with the Glidden Company calls for payments of the loan on the basis of footage drilled. This condition appears to eliminate most of the items such as costs of material, labor, operation, etc., usually reported and simplifies the task of inspection. I collected data pertinent to the contract, and following is a report of progress as of January 31.

Diamond drilling was begun on the first phase of this project December 17. The first two holes are in the process of being drilled in the area designated No. 1 (shown on the sketch map accompanying the DMA contract). E. J. Longyear Company is doing the drilling under a contract agreement with The Glidden Company and Mr. Mayer Hansen, mining geologist, is supervising the operations. Rock encountered, as of the date of this report, was expected from the surface geology, but drilling has not proceeded far enough toward the target to indicate either presence or absence of zinc and copper ore.

The map accompanying the DMA contract shows the approximate layout of drill holes and areas of exploration. Five holes are initially proposed for area No. 1, but they are shown as unnumbered. The system decided upon is to number the holes consecutively in the order drilled within each area; they are designated thus; DDH A1-2 (Area 1-number 2). DDH A1-1 is equivalent to the first hole at the south end of area 1. DDH A1-2 is the same as the third hole from the south end of area 1. The remaining three holes are as yet unnumbered.

A brief resumé of drilling for the months of December and January follow:

DDH A1-1 Bearing: Due West
Inclination: -70°

Date	
Dec. 16	Moving and rigging up
Dec. 17	Commence drilling NX casing to 24'
Dec. 31	Down to 68'3", 24' to 68' BX
Jan. 31	" " 371' BX

DDH A1-2 Bearing: S80°W
Inclination: -70°

Jan. 2	Rigging up
Jan. 9	Down to 57' NX casing
Jan. 31	" " 125', 57' to 125' BX

Two drill rigs are employed, with only one crew each at present. Mr. Hansen advised me that three more crews are due to arrive shortly, which will enable him to operate the drills continuously.

Enclosed are logs of the drill cores for the lengths reached at the end of January. The cores are well marked, kept in compartmented wooden trays, 5 feet long and a core shed is being erected to house them. Mr. Hansen logged the core of drill hole A1-1. I reviewed it with him and found his descriptions to be excellent. The geology of DDH A1-2 was noted briefly, but a more detailed review will be made. Some pyrite was observed throughout DDH-A1-1, but no ore has been encountered. Considerable caving and broken ground has been encountered in DDH A1-2 requiring cementing and reaming several times, with consequent slow down of progress. Plans were underway to pull the casing on this hole, put on a casing bit, and then sink the casing to considerable depth to avoid as much as possible excessive caving.

The map accompanying the DMA contract was derived from an old survey and is not accurate. Therefore, Mr. Hansen has re-surveyed the drill hole locations b plane table. DDH A1-2 had to be relocated 15 to 20 feet because it plotted out on the side of a dump, and other holes in area 1 will have to be moved a few feet to facilitate setting up the drilling equipment. The enclosed sketch map was taken and reduced from Mr. Hansen's 1"-40' survey. His survey was made before the drill rigs were set up. Consequently, there may be an error of a foot, plus or minus, in the location of drill holes A1-1 and A1-2. The approximate locations of the other three are indicated by X's circumscribed by a circle. Another survey will be made later to locate all the holes exactly with reference to coordinates.

COPY

Mr. Hansen intends to check the accuracy of available company maps by control traverses, and will re-survey the whole mines area if necessary. It is probable that coordinates will have to be redrawn or changed, but the location of drill holes will correspond as closely as possible to locations shown on the contract map.

Sincerely yours,

/s/ J. F. Robertson
J. F. Robertson

Enclosures

Redding, California

Log of Drill Hole Al-1

Bully Hill & Rising Star Mines

Bearing: Due West

Inclination: -70°

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
0	10	10	0	0	0-10	Bully Hill Rhyolite "gravel". Mostly as fragments of rock averaging 2 cm (¾ in.) size with maximum 1½ cm (3/4 in.) size. Quartz phenocrysts are few and small. Rock is gray with brown spots. Medium hard.
10	20	10	0	0	10-20	Bully Hill Rhyolite sand, with grains mostly 1mm or smaller in size. Greenish gray color. Grains are mostly quartz. This may be a fault zone but no clay apparent.
20	24	4	0	0	20-24	Same as 0-10, perhaps smaller size average.
24	27	3	0.5	15	24-27	Bully Hill Rhyolite. Mostly black, a few pieces of leached white. Hard and silicified. No phenocrysts, no mineralization.
27	30	3	0	0	27-30	Bully Hill Rhyolite sand, same as between 10-20.
30	34.7	4.7	1.3	20	30-42	Bully Hill porphyritic Rhyolite. Brownish tinge on gray rock.
34.7	39	4.3	0.7	15		Phenocrysts plus or minus 2mm. Small scattered grains of Mn stain.
39	42	3	0.7	25		are present. Medium hard, Slightly silicified. A few veinlets of Quartz-Carbonate (¼ in.) cuts the core. Slightly vuggy.
42	47.3	5.3	3.7	70	42-45	Bully Hill porphyritic Rhyolite, gray to black with white altered feldspar grains. Core is more solid, harder and more silicified. Phenocrysts are very few and small plus or minus 1mm. A very little fine grained pyrite scattered. Some slight scattered fine grained black Mn (?) specs. Also several small gash veinlets and some ¼ in. seams of Quartz-Carbonate
					45-48	Rhyolite Breccia, hard cemented, silicified broken, gray in color. An increased amount but still slight amount of fine grained pyrite. Fragments in rock are up to ¾ in. size.

Interval Drilled From	To	Feet	Core Recovered Feet	%		Description
47.3	52	4.7	5.7	100	48-52	Mixed porphyritic Rhyolite and Rhyolite breccia (this could even be a silicified tuff), gray mottled with white feldspars showing. At 51 to 51½ is considerable pyrite, perhaps 2% of rock for a few inches
52	56.7	4.7	3.5	70	52-65	Mixed porphyritic Rhyolite and Rhyolite breccia-somewhat more altered and broken than between 48-52
56.7	65.7	9	6.7	75	65-82	Bully Hill porphyritic Rhyolite, gray with white grains of feldspar
65.7	68	2.3	1.8	80		The core is more solid but still broken. There are a few scattered spots of fine grained pyrite. A few seams of calcite cuts the core mostly at 60°. The phenocrysts
68	76.1	8.1	0.5	5		are few & small. It does not have much if any added quartz or silica. The size of the grains of
76.1	82	5.9	4.3	75		the feldspar is also small. There are quite a few limonite stained cubical cavities indicating leached pyrite. From 78 ft. the phenocrysts are becoming larger plus or minus up to 3mm.
82	85	3	2.7	90	82-85	Rhyolite breccia, cemented. Part of core is vuggy from being incompletely cemented. No pyrite.
85	89	4	0	0	85-98	Same as between 65-82, this is
89	93	4	0.8	20		Bully Hill porphyritic Rhyolite,
93	97	4	4	100		all gray, medium hard. Occasional
97	98	1	1	100		spots of slight pyritic mineralization
98	102	4	3.8	95	98-124	Bully Hill porphyritic Rhyolite.
102	106	4	3.8	95		Fairly fresh but still quite broken To 115 no piece longer than 6 in.
106	109	3	3	100		Some late Quartz-Carbonite veinlets
109	113	4	2.5	60		most cut core at 60° but some at
113	117	4	4	100		45°. An occasional veinlet is pale
117	120.5	3.5	3.5	100		green colored suggesting fluorite
120.5	124	3.5	2.5	70		It also contains chlorite. In general the rock is average rhyolite grayish colored, getting more solid as depth is gained. It is medium grained. Small phenocrysts of quartz are present.
124	125	1	1	100	124-139.5:	Bully Hill porphyritic Rhyolite medium grained, fresh, gray, mottled
125	128.5	3.5	3.1	90		with white feldspars. Small amount of fine grained scattered pyrite (or marcasite?)
128.5	135	6.5	6.5	100		Quartz-Carbonite cuts core at plus or

Interval Drilled From	To	Feet	Core Recovered Feet	%	Description
					minus 2 ft. intervals at 55°
135	139	4	4	100	to 70° to core, but does not seem to carry extra amounts of pyrite
139	145	6	5.3	90	139.5-143.5: Rhyolite breccia. Rock is very similar to above described but has angular fragments of about 3/8 to ½ in. maximum size. Appears to be a flow breccia. It contains an increased amount of Quartz-Carbonite veinlets but no extra mineralization, and in fact contains less pyrite. Fragments are generally more basic and might be a volcanic breccia interbedded with Rhyolite flow. It is too coarse to be a tuff.
145	154	9	7.8	85	143.5-155: Bully Hill porphyritic Rhyolite same as between 124-139. No mineralization.
154	161	7	6.2	90	155-170 Rhyolite breccia, same as between 139.5-143.5. Slight mineralization Some chlorite.
161	165	2	1.2	60	
165	169	6	5	85	
169	173	4	2.6	65	170-177 Bully Hill porphyritic Rhyolite, same as before (see interval 124-139). This portion seems to be a
173	177	4	3.3	85	normal occurrence with small phenocrysts, and few if any inclusions of fragments.
177	179	2	1.9	95	177-204 Volcanic breccia. Light grayish green, medium hard rhyolite breccia
179	182	3	2.7	90	Fragments are in general too large
182	188	6	6	100	(up to 25mm) to be a tuff. However
188	191	3	3	100	there are many smaller lapilli
191	194	3	3	100	1x5mm in size. There does not seem
194	201	7	6	85	to be definite bed or parting and suggests that a flow was still
201	204	3	3	100	liquid when airborn volcanic fragment where drop into the still plastic flow. The fragments for the most part are sharp cornered and very few are rounded, though some are.
					204-371 Bully Hill Rhyolite.

[illegible]ing, California
January 31, 1952

Log of Drill Hole A1-2

Bully Hill & Rising Star Mines

Bearing: S.80°W. Inclination: -70°

Interval Drilled			Core Recovered		Description
From	To	Feet	Feet	%	
0	45	45	0	0	No core, all sand
45	55	10	8.5	85	45-115 Andesite Tuff (?)
55	57	2	1.5	70	
57	61	4	0	0	
61	68	7			
68	71	3			
71	78	7	0	0	
78	87	9			
87	95	8			
95	100	5			
100	103	3			
103	107	4			
107	115	8			
115	120	5			115-120 Tuffaceous mudstone
120	121	1			120-121 Rhyolitic rock, probably tuff.

g, California
ary 31, 1952

Log of Drill Hole A1-2

Bully Hill & Rising Star Mines

Bearing: S.80°W. Inclination: -70°

Interval Drilled			Core Recovered		Description
From	To	Feet	Feet	%	
0	45	45	0	0	No core, all sand
45	55	10	8.5	85	45-115 Andesite Tuff (?)
55	57	2	1.3	70	
57	61	4	0	0	
61	68	7			
68	71	3			
71	78	7	0	0	
78	87	9			
87	95	8			
95	100	5			
100	103	3			
103	107	4			
107	115	8			
115	120	5			125-120 Tuffaceous mudstone
120	121	1			120-121 Rhyolitic rock, probably tuff.

MAY 7 - 1964

The Glidden Company
900 Union Commerce Building
Cleveland 14, Ohio

Re: EMEA-1219 (Zinc-Copper)
The Glidden Company
Bully Hill and Rising Star Mines
Shasta County, California
Amended Contract Idm-E187

Gentlemen:

By the terms of the subject Amended Exploration Project Contract, as amended, and the certification of discovery or development dated October 19, 1956, all minerals mined or produced from April 30, 1953, to April 30, 1964, were subject to the Government's royalty as set forth in said amended contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the amended contract or any future production therefrom. We, therefore, are closing our books and records on this amended contract. Your attention, however, is called to the provisions of the amended contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

George Fumich, Jr.

Acting Director

MMerrithew/mm
5/7/64
cc: Director's Reading File
CA&A Division
Region II
Docket
Code 500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

CERTIFICATION BY THE UNITED STATES OF AMERICA OF A DISCOVERY OR DEVELOPMENT UNDER AN EXPLORATION PROJECT CONTRACT

To: Mr. Dwight P. Joyce, President
The Glidden Company
1396 Union Commerce Building
Cleveland 14, Ohio

Pursuant to the provisions of Amended Exploration Project Contract No. Idm-2187, dated April 30, 1953, Docket No. DMEA-1219, hereinafter called the "contract", between The Glidden Company, a corporation, and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows: Diamond drilling from the surface and from the 870 level, and drifting and crosscutting on the north end of the 870 level of the Bully Hill mine has shown the existence of lenses of copper-mine ores occurring in a shear zone in rhyolite.

Dated OCT 19 1956

WPKlugescheid/er 10/11/56

THE UNITED STATES OF AMERICA

By C. A. Mattenson
Administrator, Defense Minerals Exploration Administration

Copy to:
Docket
Mr. C. A. Fredell, Dr.,Tec.Ser D.
Mr. Lamb, USBM
Mr. Killagaard, USGS
Admr R File
Op. Committee
Base Metals
Cont.Adm&Audit Div.
Finance Office
Region II (2)
Mr. F.E.Johnson
Mr. W.H. Griswold
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Dwight P. Joyce, President
The Glidden Company
1396 Union Commerce Building
Cleveland 14, Ohio

Re: Docket No. DMEA-1219 (Copper-Zinc)
The Glidden Company
Bully Hill Mine
Shasta County, California
Amended Contract No. Idm-E187

Dear Mr. Joyce:

Transmitted herewith is a certification of discovery or development related to the Amended Exploration Project Contract No. Idm-E187, dated April 30, 1953, on the lands described in the contract.

By the terms of the Amended Exploration Project Contract and of the Certification, all production from the land described in the contract from April 30, 1953, the date of the amended contract, is subject to the Government's percentage royalty as set forth in the said contract until the sum which the Government has advanced as its participating interest is repaid, or until April 30, 1964, whichever occurs first.

Payments should be made to Mr. Spangler Hicker, Executive Officer, DMEA Field Team, Region II, 1605 Evans Avenue, Reno, Nevada. Checks should be drawn in favor of the Defense Minerals Exploration Administration. The purchaser should be advised to deduct royalties from the amount due on each shipment and forward the checks to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Ricker of any changes in ownership and production rights that might affect the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period please notify Mr. Ricker at six-month intervals that such is the case.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosures

WPKlugescheid/er 10/11/56
Copy to:
Docket
Mr. C. A. Fredell, Dr. TSD, DMS.
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Admr R File
Operating Committee
Cont. Adm & Audit Div.
Finance Office
Base Metals
Region II (2)
Mr. F. E. Johnson
Mr. W. R. Griswold
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 22 1956

Mr. Clarence A. Fredell, Acting Director
Technical Services Division
Defense Materials Services
General Services Administration
7th and D Street, S. W.
Washington 25, D. C.

Re: Docket No. DMEA-1219 (Copper-Zinc)
The Glidden Company
Bully Hill Mine
Shasta County, California
Amended Contract No. Idm-K187

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development related to Amended Exploration Project Contract No. Idm-K187.

The contract was dated April 30, 1953, with the Government participating to the extent of 50 per cent in an exploration project estimated to cost $256,343.98. Actual expenditures, subject to audit, were $254,514.98, with the Government's share being half of such amount, or $127,257.49.

The total amount of work provided for under the contract consisted of underground rehabilitation, 2,500 feet of drifting and crosscutting, 5,299.33 feet of surface diamond drilling, and 4,000 feet of diamond drilling underground. All work specified in the contract was actually completed.

The discovery consists of copper-zinc ores occurring in a shear zone in rhyolite. Estimated measured ore reserves were 9,000 tons, indicated ore reserves were 30,000 tons, and inferred ore reserves were 66,000 tons. The total ore reserves were 105,000 tons averaging 1.99 per cent copper, 9.50 per cent zinc, 5.29 ounces of silver per ton, and 0.15 ounces of gold per ton.

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosure

WPKlugescheid/er 10/11/56
Copy to: Docket
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Admr R File
Op. Committee
Base Metals
Region II (2)
Cont.Adm & Audit Div.
Mr. Johnson
Mr. Griswold
Chron.

Government's copy

RECEIVED

DEC 12 1955

AMENDMENT NO. 1
To
AMENDED EXPLORATION PROJECT CONTRACT Idm-E187 (DOCKET NO. DMA-1219X)
Between
UNITED STATES OF AMERICA and THE GLIDDEN COMPANY

The United States of America and the Glidden Company, parties to Contract Idm-E187 (Docket No. DMA-1219X), agree as follows:

1. The time fixed in Article 3 of the Contract for completion of the work is extended to January 18, 1956.

2. The maximum period for royalty payments and lien for the payment thereof, provided for in the Contract, is increased from 10 to 11 years.

3. This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, or the cost of any item of work.

Executed in sextuplicate this 10th day of November, 1955.

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense
Minerals Exploration
Administration

THE GLIDDEN COMPANY

By [signature]

Title President

Contract No. Idm-E 187

Docket No. 1219

DEPARTMENT OF THE INTERIOR

Terminated contract

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
October 18, 1951	II	California	Lead-Zinc-Copper

Name and Address of Operator: The Glidden Company
1396 Commerce Bldg.
Cleveland, Ohio

	Reserve	Obligation
Prior Amount	0	$128,171.99
Increase	0	0
Decrease	0	914.50
Revised Amount	0	$127,257.49

Remarks:

(Name)
Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 11/29/56

98963

Docket No. [illegible]

Commodity [illegible]

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

AMENDED CONTRACT

Contract No. Idm-E [illegible]

Date of ~~Contract or~~ Amendment: April 30, 1953

Name and Address of Operator:

The Glidden Company
1336 Commerce Bldg.,
Cleveland, Ohio

Amount of Government participation ____ $ [illegible],171.00

Percent of Government participation ____ 50%

Region: [illegible] State: Calif.

Note: This document establishes the obligation shown above and cancels the previous obligation of $[illegible],[illegible].00

(Name)

J. L. Charboro,
Chief, Contract Administration and Audit Division
(Title)

Date Delivered to Bureau of Mines, Washington. May 7, 1953 13808

MF-200
(June 1951)
(Revised Feb. 1952)

DOCKET ~~NO.~~ ~~XXXX~~ DMA-1219X

COMMODITY Zinc-Copper

Government's copy

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 6 1953

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
AMENDED
EXPLORATION PROJECT CONTRACT[1]

IT IS AGREED this 30th day of April, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] The Glidden Company, 1396 Commerce Building, Cleveland 14, Ohio, a corporation duly organized and existing under and by virtue of the laws of the State of Ohio, hereinafter called the "Operator," as follows: and as set forth in Annex I attached hereto and made a part hereof

~~hereinafter called the "Operator" as follows:~~

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of California, County of Shasta, described as follows:[3] as indicated in Appendix I attached to the Prior Contract, and made a part hereof

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

~~(b) That the Operator is a lessee to possession and entitled to possession, and that the Owner's Consent to Lien is attached.~~

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, ~~XXXX~~ shall continue ~~diligently and in good faith~~ work on a project of exploration for[5] Zinc and Copper in or upon the described land; and shall bring the project to completion ~~within the time fixed~~ prior to October 18, 1955. ~~XXXX~~ The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following: and also the costs referred to in Article 13

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related ~~initial~~ allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance and payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) The Government's payments in [illegible] cases will be based on actual, necessary co[illegible] (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes) or any other indirect costs, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of costs incurred on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) Compliance with requirements.—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay 50 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $128,171.99, which is 50 percent of $256,343.98, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

(For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

ARTICLE 10. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 11. *Title to and disposition of property.*—All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

ARTICLE 12. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* To the extent that costs are set forth in Exhibit "A" Amended as agreed unit costs they are in lieu of the actual costs of the project as provided in Article 6(a) of the contract form.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense Minerals Exploration Administration

THE GLIDDEN COMPANY
(Operator)

By [signature]
Chairman of the Board of Directors

I, R. D. Horner, certify that I am the --- secretary of the corporation named as Operator herein; that Adrian D. Joyce, who signed this contract on behalf of the Operator, was then Chairman of the Board of Directors of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[signature]

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66328-1

EXPLORATION PROJECT CONTRACT
GLIDDEN COMPANY
DOCKET NO. DMA-1219X

ANNEX I

WHEREAS, the parties to this amended agreement are also parties to Contract Idm-E187, Docket No. DMA-1219X, dated October 18, 1951, executed on Form MF-200 (June 1951), as amended, hereinafter called the Prior Contract; and

WHEREAS, 5,299'-4" of diamond drilling specified in the Prior Contract has been completed but the parties desire to alter the work provided for in the Prior Contract and to make the basis for the payment of some of the additional work provided hereunder on a unit cost instead of an actual cost basis, and to restate their agreement on the new contract form, MF-200 (revised February 1952);

NOW THEREFORE, it is mutually agreed as follows:

1. Effective as of the date of its execution, the Prior Contract is amended and superseded by this amended contract executed on Form MF-200 (revised February 1952), which shall govern the Government's claim and lien for percentage royalties and in which the rights and obligations of both parties are fully merged.

2. All work performed under the Prior Contract, having been fully paid for, the Operator hereby releases and agrees to save harmless the Government from all claims and demands arising out of the Prior Contract.

3. The description of the work and the costs thereof, and the costs of the entire project and the Government's participation therein, shall be as stated in Exhibit "A" Amended, attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
GLIDDEN COMPANY
DOCKET NO. DMA-1219X

EXHIBIT "A" AMENDED

Description of the Work

The work in the Bully Hill Mine as indicated on the two maps attached hereto and made a part hereof and entitled "Map #1, Geologic Map, 300 Level, Bully Hill Mine, Shasta County, California," and"Map #2, Geologic Map, 870 Level, Bully Hill Mine, Shasta County, California," is to be in two stages.

STAGE I

The work in this stage consists of the work described in Exhibit "A" attached to the Prior Contract, which was performed prior to the date of this Amended Contract, and consisted of 5,299'-4" of diamond drilling.

STAGE II

In this stage the work is to consist of the following:

1. Rehabilitate 975 feet of drift on the 300 level from the portal of the adit to the vertical shaft as shown on Map No. 1

2. Unwater and rehabilitate the vertical shaft a distance of 650 feet from the 300 level to the 870 level, as shown on Map No. 1.

3. Rehabilitate a total of 1,000 feet of drift on the 870 level from the aforesaid vertical shaft to the north end of the old workings, as shown on Map No. 2.

4. Drift and crosscut a distance of 1,500 feet from the north end and 1,000 feet from the south end of the old working on the 870 level, as shown on Map No. 2.

The location and direction of the drifts and crosscuts shall be mutually agreeable to the Operator and the Government Field Team. The drifts and crosscuts shall be timbered where necessary and be not less than 5' x 7' in the clear.

5. As tentatively shown on Map No. 2, to prospect the ore zone, diamond drill 4,000 feet from the drifts and crosscuts of the 870 level, the length and size of the holes, their location, direction, and inclination being subject to the approval of the Government Field Team.

Estimated Cost of the Project
(*Indicates allowable maximum)

Stage I

The completed 5,299'-4" of diamond drilling indicated in Exhibit "A" of the Prior Contract		$ 47,693.98

Stage II

Agreed Unit Costs

2,500 ft. of drifting and cross-cutting @ $45.00/ft.	$112,500.00	
4,000 ft. of diamond drilling @ $9.00/ft.	36,000.00	
Total Agreed Unit Cost		148,500.00

The Government will contribute to the costs of the above drifting, crosscutting, and diamond drilling on the basis of these agreed unit costs per foot as they accrue for units of work actually performed in lieu of actual costs. These unit costs include all costs of the work except those scheduled below to which the Government will contribute on the basis of actual costs as set forth in Article 6 of the contract.

Estimated Actual Costs

Rehabilitate 300 level,--975 ft. @ $14.00*/ft. 1/	13,650.00

1/ Of the eight categories of costs set forth in Article 6 of the contract form, all are allowable costs except (4) Operating Equipment (which the Operator shall furnish without cost) and (6) New buildings, improvements, installations. All other schedules are waived. However, the cost of a supervisor (for all the rehabilitation work under this project) shall not exceed $750 a month, [illegible] In making its monthly reports, the Operator shall distribute the costs among the allowable categories thereof. Should the actual cost of the work exceed the price per foot here set forth, the parties may by agreement increase the allowable cost thereof.

Unwater and rehabilitate vertical shaft,--650 ft. @ $50.00*/ft.2/	$ 32,500.00	
Rehabilitate 870 level,--1,000 ft. @ $14.00*/ft.2/	14,000.00	
Total Estimated Cost of Rehabilitation and Unwatering		$ 60,150.00*

S U M M A R Y

Total Cost, Stage I	$ 47,693.98*	
Total Estimated Cost, Stage II	208,650.00*	
Total Estimated Cost of Project		$256,343.98*
Government Participation @ 50%		$128,171.99*

2/ Same as footnote 1/

E-189

Contract Index

AMENDMENT NO. 1

It is agreed this 1st day of November 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration and The Glidden Company, an Ohio Corporation, 1396 Commerce Building, Cleveland 14, Ohio

each acting in consideration of the agreement of the other to the terms hereinafter set forth, that the Exploration Project Contract Idm-E-187 of October 18, 1951 between the parties hereto be modified and amended as described in Exhibit "F", attached hereto, which, with any maps or drawings attached thereto, is made a part of this agreement. The effective date of this amendment shall be October 18, 1951.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be obligated to pay, or the percentage of costs which the Government may be obligated to pay, under the provisions of Article 13 of the contract form.

Executed in sectuplicate the day and year first above written.

The Glidden Company
(Operator)

By Dwight P. Joyce
President

The United States of America

By Frank E. Johnson
Acting Administrator
Defense Minerals Administration

Docket No. DMA - 1219X
The Glidden Company

EXHIBIT "F"

Changes and Modifications:

In Exhibit "A" of the contract, page 2, last two paragraphs delete:

"The Government will not participate in costs exceeding $9.00 per foot for the diamond drilling; any additional cost will be borne by the Operator. Payment at this rate allowed only for actual footage drilled.

"All costs of rehabilitation, engineering, geology, etc., are to be borne by the Operator"

and substitute the following:

"The Government will not participate in costs exceeding $9.00 per foot for diamond drilling and for geological work performed in connection with this Exploration Contract; any additional cost will be borne by the Operator. Payment at this rate allowed only for actual footage drilled.

"The geological work to include the location and direction of the diamond drill holes, the examination of the diamond drill core, and the recording and mapping of all pertinent information relative to these drill holes. The allowance for this work is not to exceed $1.00 per foot of the actual footage drilled, and this is to be included in the total cost which is not to exceed $9.00 per foot. Any additional geological cost will be borne by the Operator.

"All costs of rehabilitation and engineering are to be borne by the Operator.

"The drilling contract must be approved by the Government."

C O P Y

E. J. LONGYEAR COMPANY
Mining Engineers
General Office
Foshay Tower
Minneapolis 2, Minnesota

April 27, 1951

Mr. Adrian D. Joyce, Chairman of the Board
The Glidden Company
1396 Union Commerce Building
Cleveland 14, Ohio

Dear Mr. Joyce:

We are pleased to submit herewith our proposal for your contemplated diamond core drilling program to be carried out in Shasta County, California. We have been delayed in submitting our proposal to you due to critical material shortages and also personnel shortages which have developed during the past few months, but now believe we have made sufficient progress so that we will be in a position to proceed with the work in accordance with our proposal.

As indicated in our proposal, we would expect to furnish a crew consisting of 4 to 5 drillers, an equal number of drill helpers, a drill foreman, truck driver, camp cook and cook's helper,. We expect that it would be necessary to pay wages approximately as follows:

Foreman	$500 to $550 per month
Drill runners	$2.00 per hour
Drill helpers	$1.50 to $1.75 per hour
Truck Driver	$1.75 per hour
Cook	$350 to $400 per month
Cook's Helper	Going rate for common labor

At the time our Mr. P. W. Donovan called on your Mr. Edward L. Ralston at Oakland, California, it was learned that you desire that we furnish a geologist for the purpose of supervising the sampling procedures and to assist in the planning of the locations of the drill holes and generally superintend the drilling operation. We have asked Dr. D. M. Davidson, Manager of our Mining Division to submit to you under separate cover proposal for the provision of this service. Dr. Davidson's proposal should be in the mail during the early part of the week of April 30.

We appreciate very much the opportunity of considering this work and should our proposal be acceptable we will make every effort to get the drilling operations under way at the earliest possible date.

Very truly yours,

/s/ V. N. Burnhart
V. N. Burnhart, Manager
Contract Drilling Section

VNB:LT
cc: Mr. Edward L. Ralston

COPY

E. J. LONGYEAR COMPANY
Mining Engineers
General Office
Foshay Tower
Minneapolis 2, Minnesota

April 27, 1951

The Glidden Company
1396 Union Commerce Building
Cleveland 14, Ohio

Attention: Mr. Adrian D. Joyce, Chairman of the Board

Gentlemen:

1. In accordance with our previous correspondence, we are pleased to submit below cost and rental agreement for your contemplated diamond core drilling program to be carried out at your property known as the Bully Hill Mine, Shasta County, California.

2. We understand that the preliminary phase of the drilling program will consist of a series of vertical holes to be drilled to depths varying from 600 to 1,000 feet and averaging probably around 800 feet; that if the results of the initial phase of the work are favorable, the old workings may be reopened and arrangements made for drilling from underground stations. We also understand that water required for drilling purposes would have to be hauled 1½ to 2 miles to secondary storage points where water could be pumped to the drill hole locations; and that it will be necessary to operate a camp for the accommodation of the drill crews. We further understand that there are two possible routes by which the property may be reached but that the most desirable means of transport to and from the property would depend upon the results of a further reccaissance of the old truck road from Redding bypassing the northeast end of Shasta Lake to the Bully Hill property or whether satisfactory arrangements could be made with the Federal Government for the rental of a barge for the transport of equipment and supplies to the property.

3. For this work, we propose

a. To furnish two Longyear diamond core drilling units together with the necessary bortz bits, supplies, spares and other equipment required for recovering cores of BX, AX AND EX sizes, approximately 1-5/8", 1-1/8" and 7/8" respectively, as required by drilling conditions for holes to a maximum depth of approximately 1,000 feet.

b. Core boxes will be furnished by the Longyear Company, if desired, as a supply item.

c. To provide the necessary crew of carefully selected men to operate the two drilling units on 2 or 3-shift basis, 6 days per week, the contemplated drill crew to consist of the following: 1 foreman, 4 to 5 drill runners, 4 to 5 drill helpers, and 1 truck driver. We will also furnish one competent camp cook and cook's helper as required.

d. To furnish one 1-ton pickup truck to transport supplies to and from Redding or other nearby points to camp or dock from which said supplies may be transported to a point which is accessible to the camp.

e. To provide all camp equipment required, including cook stove, all culinary equipment, beds, mattresses and other fixtures as required to operate camp.

4. We will carry public liability insurance covering personal injury and property damage; Workmen's Compensation, Old Age Benefit, Unemployment and any other insurance on our employees required by state or federal laws; also, all-risk insurance on the drilling equipment protecting against loss by theft, fire, flood, land-slides and other similar hazards, and special endorsement or coverage for marine hazard. Certificates showing the coverage referred to will be furnished, if desired.

5. COSTS

It is agreed that you will reimburse the Longyear Company for or pay directly the expenses of the Longyear Company in the performance of this contract as follows: all wages of workmen and their traveling expenses from the nearest available points to the scene of the work and return, also the board of the workmen less $1.50 per man per day, except cook and cook's helper whose board will be furnished without cost to them; all freight, express and trucking charges; food and all other supplies used; repairs and replacements; fuel; oil; bortz bits and bortz reaming shells at our listed retail prices less credit received for salvaged stones, Carboloy or other special bits at list price as used, mechanically-set bits and reaming shells; cost of compensation or other employee insurance as required by law; miscellaneous expenses; rods and casing to be charged at the rate of one foot of rods or casing for each ten feet drilled or cased, plus payment in full for any rods or casing lost in drill holes or discarded on account of damage due to causes other than ordinary wear and tear.

You will also pay for all expenses incurred in connection with rental of barge or other water transport as may be required for the delivery of drill equipment or the maintenance of drilling operations.

6. RENTAL:

In addition to all costs outlined above, you will pay the sum of $475.00 per drill per month for single shift operation, or $600.00 per drill per month for double shift operation, or $675.00 per drill per month for 3-shift operation, this charge to cover rental of drill outfit, interest, depreciation and overhead expense. This rental charge is to commence at the time the drill outfit and crew are delivered at Redding, California, and continue until drill outfit is returned to Redding for return shipment to Marquette, Michigan, or equivalent point.

You will also pay the sum of $100.00 per month for the use of truck plus gas, oil and maintenance.

7. COMPENSATION.

In addition to all costs outlined in the preceding paragraph 6, you will pay us as compensation the sum of 50¢ per foot drilled. It is understood that the charge of 50¢ per foot drilled covers total compensation for overburden drilling, diamond core drilling, and reaming or other work pertaining to the execution of this drilling program.

8. It is agreed that in the event drilling operations are temporarily terminated at your request, retaining the drill and equipment at the drilling site on standby basis, the rental charge for the complete outfit less personnel will be $250.00 per drill per month or fractional part thereof.

9. It is agreed that deductions for board as specified in paragraph 5 will be credited against expense on our monthly invoices.

10. It is agreed that the Longyear Company will be reimbursed for all camp equipment when purchased and that following the completion of the drilling program, the camp equipment may be disposed of in accordance with your instructions.

11. It is agreed that you will be responsible for or furnish the following: adequate housing required for kitchen, mess hall, housing for all employees of the Longyear company; repair and maintenance of all roads leading to the property, to and from drilling sites; lights and water required for camp facilities and our operation of camp; transport of water required for drilling purposes from source of supply to storage tanks to be provided by the Longyear Company to be located not over 1,500 feet from any planned drill hole location; construction of docks or dock facilities which may be required for the transport of equipment and supplies to the property.

12. TERMINATION OF CONTRACT AND MINIMUM RENTAL:

It is agreed that should the results of the exploration make it seem advisable, you may terminate the drilling at any time provided that if rentals paid or accrued under paragraph 6 do not amount to a total of $2,000.00, you will pay such additional sum as may be necessary to make that amount.

13. Statements are to be rendered as promptly as possible after the first of the month and are to be accompanied by copies of the payroll and such other supporting data as may be desired by you.

14. We understand that it is your desire to have this work commenced as soon as possible. We are prepared to proceed with this objective in mind realizing it will be necessary first to determine the most accessible route to the property to provide adequate transport of supplies and equipment, also to purchase or otherwise supply camp equipment necessary to feed and properly accommodate the drill crew. It is suggested that such preparations for mobilization be carried out with the assistance of Mr. Edward L. Ralston. To assist on the mobilization phase, we would send one of our field superintendents on the basis of $650.00 per month or fractional part thereof, plus travel expenses. Based upon the information at hand, we would endeavor to commence drilling operations on or about June 1, 1951.

Yours very truly,

E. J. LONGYEAR COMPANY

/s/ V. N. Burnhart
Manager, Contract Drilling Division

LT
ED:
LIDDEN COMPANY

an D. Joyce, Chairman of the Board
ance subject to the commencement of drilling operations on or before December 17,

MF-200
(June 1951)

Indexed
No. Cards
Cards
Reviewed
12/21/51

Docket No. DMA 1219X
Commodity Zinc-Copper
Idm-E-187

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

30

It is agreed this 18th day of October, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] The Glidden Company, an Ohio Corporation
1396 Commerce Building
Cleveland 14, Ohio

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of Shasta described as follows: [3] ~~in Sections~~ 16 and 21, T. 34N., R. 3W.

See Appendix I

NOV 1 1950
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with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) ~~That he is a lessee in possession and entitled to possession and the subordination agreement of the lessor is attached~~

3. *Exploration project.* The Operator, within sixty (60) days from the date of this contract shall commence work on a project of exploration for [5] zinc and copper; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] two (2) years from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 50 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $147,150.00, which is 50 percent of the agreed estimated total cost of this project, $294,300.00.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

The Glidden Company
(Operator)

By Dwight P. Joyce
Vice President

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Administrator
Defense Minerals Administration

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

APPENDIX I

LEGAL DESCRIPTION OF PROPERTY COVERED BY THIS CONTRACT

1. The following properties located and lying in Shasta County, California:

(a) The mining claim known as the Aqueous Mine Lode Mining Claim, as more particularly described and set forth in United States Patent dated November 19, 1904, and recorded in Book 9, Patents, page 30, Shasta County Records.

(b) All surface rights within the mining claim known as the Boulder Lode Mining Claim, as more particularly described and set forth in United States Patent dated November 25, 1924, and recorded in Book 2 Official Records, page 310, Shasta County Records.

(c) The mining claim known as the Potter Quartz Lode Mining Claim, consisting of the Popejoy, Bully Hill, and Jennie June Lode Mining Claims, as more particularly described and set forth in United States Patent dated November 19, 1890, and recorded in Book 5 Patents, page 264, Shasta County Records.

(d) The mining claim known as Diamond Fraction Lode Mining Claim, as more particularly described and set forth in United States Patent dated June 18, 1930, and recorded in Book 58 Official Records, page 218, Shasta County Records.

(e) The mining claims known as the Rising Star and Hillside Lode Mining Claims, as more particularly described and set forth in United States Patent dated March 27, 1907, and recorded in Book 11 Patents, page 124, Shasta County Records.

(f) The mining claim known as the Redding Consolidated Quartz Mining Claim, consisting of the Redding, Shasta, and Keswick Lode Mining Claims, as more particularly described and set forth in United States Patent dated August 8, 1904, and recorded in Book 7 Patents, page 354, Shasta County Records.

(g) The mining claim known as the Northern Light Quartz Lode Mining Claim, as more particularly described and shown in United States Patent dated October 7, 1896, and recorded in Book 5 Patents, page 295, Shasta County Records.

2. All surface rights within the boundaries of the following mining properties lying above the 1070-foot contour above mean sea level, and all subsurface rights, and all mineral rights (including the right to mine and extract minerals and all extralateral rights) under existing mining law, in the following mining properties whether above or below said 1070-foot contour, all said properties located and lying in Shasta County, California:

(a) The mining claim known as the Sanders Quartz Lode Mining Claim, as more particularly described and set forth in United States Patent dated June 18, 1930, and recorded in Book 58 Official Records, page 218, Shasta County Records.

(b) The mining claim known as the Howard Quartz Lode Mining Claim, as more particularly described and set forth in United States Patent dated June 18, 1930, and recorded in Book 58 Official Records, page 218, Shasta County Records.

(c) The mining claim known as the Excelsior Lode Mining Claim, as more particularly described and set forth in United States Patent dated February 15, 1883, and recorded in Book 2,Patents, page 46, Shasta County Records.

(d) The mining claim known as the Baxter Quartz Lode Mining Claim, as more particularly described and set forth in United States Patent dated February 17, 1898, recorded in Book 7 Patents, page 21, Shasta County Records.

(e) The mining claim known as the Brown Lode Mining Claim, as more particularly described and set forth in United States Patent dated August 8, 1904, and recorded in Book 7 Patents, page 361, Shasta County Records.

(f) The placer mining claim known as the Popejoy Placer Mining Claim, as more particularly described and set forth in United States Patent dated April 18, 1890, and recorded in Book 4 Patents, page 352, Shasta County Records.

EXHIBIT A

Exploration Project

To explore for zinc and copper by diamond drilling from surface the Glidden Company's properties, the Rising Star and Bully Hill Mines, in Shasta County, California. The drilling is to be done in six areas as indicated on the attached map and is to be divided into two phases. The locations of the diamond drill holes shown on the map are tentative in most holes and will depend on the most convenient drill setup that can be utilized to reach the areas to be explored. In addition, it may be advisable to concentrate drilling around any hole that encounters ore and drill either above or below the ore to follow the ore shoot along its plunge.

The areas to be explored by diamond drilling are shown on the accompanying map.

Proposed Work

Phase I

Area 1: Five diamond drill holes to explore the northward extension of the Bully Hill ore zone. The two most southerly holes will explore along the line of plunge of known ore and the three northerly holes in this area will prospect for new ore shoots.

Area 3: Seven diamond drill holes to explore for new ore shoots.

Area 5: South half of this area, five holes are to be drilled to explore under known ore in the upper levels which was not explored by lower level workings.

Area 2: Six diamond drill holes to explore for new ore shoots.

Twenty-three holes to be drilled and total footage diamond drilled not to exceed 17,000 feet.

At the completion of Phase I, the drilling results are to be reviewed to see if the more speculative drilling of Phase II, in Areas 4 and 6, and the north end of Area 5 are justified. This shall be determined by the Operator with the approval of the Government.

If it is agreeable to both the Government and the Operator, then the proposed work in the second phase will consist of:

Phase II

Area 4: Four diamond drill holes to explore the northward extension of the west run of ore in the Rising Star Mine. The location of the holes is not shown because the topography has not been mapped in this area.

Area 6: Eight diamond drill holes are to be drilled in this area where there is no known ore at surface. The hole locations are not given because no topography is available at present.

Area 5: North end of this area: four diamond drill holes will explore the extension of the ore zone which is marked by a strong shear zone on the surface. The three most northerly holes of Area 5 are shown on the map only by an "X" at the point at which the drill hole should cross the ore zone, and the elevation is marked at which the hole should cross at that point. No topography is available at present in north end of Area 5.

Sixteen holes to be drilled and total footage diamond drilled not to exceed 15,700 feet.

Estimated Cost of Project

Phase I

17,000 feet of diamond drilling at $9.00 per foot	$153,000.00

Phase II

15,700 feet of diamond drilling at $9.00 per foot	141,300.00
Total estimated cost of Phase I and Phase II	$294,300.00

Fixtures and Improvements

None

Operating Equipment

None

Labor andSSupervision

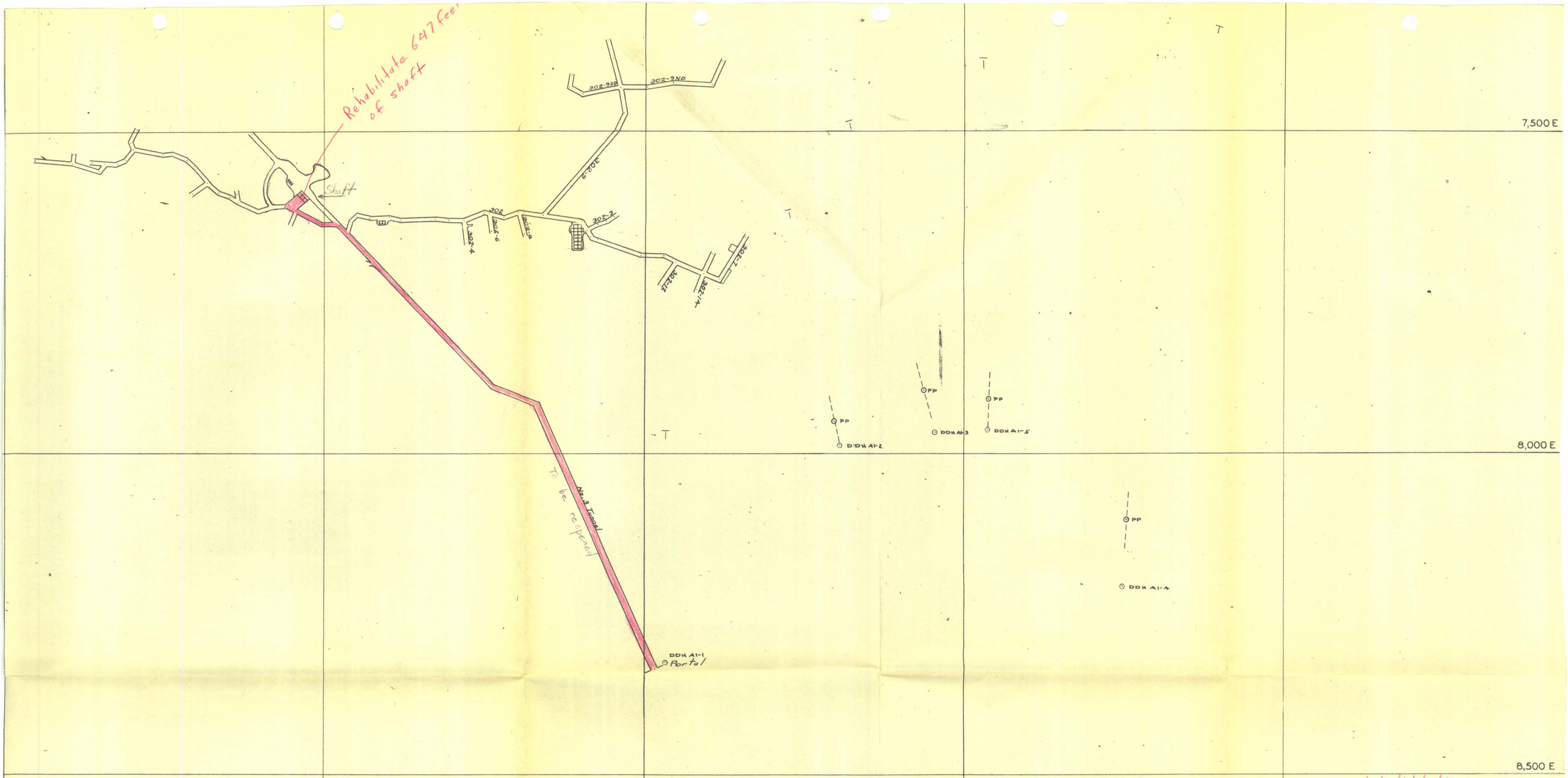
None

Rehabilitation and Repairs

None

The Government will not participate in costs exceeding $9.00 per foot for the diamond drilling; any additional cost will be borne by the Operator. Payment at this rate allowed only for actual footage drilled.

All costs of rehabilitation, engineering, geology, etc. are to be borne by the Operator.



Map No. 1.
4-9-53

GEOLOGIC MAP

300 LEVEL

BULLY HILL MINE, SHASTA COUNTY, CALIFORNIA

THE GLIDDEN COMPANY

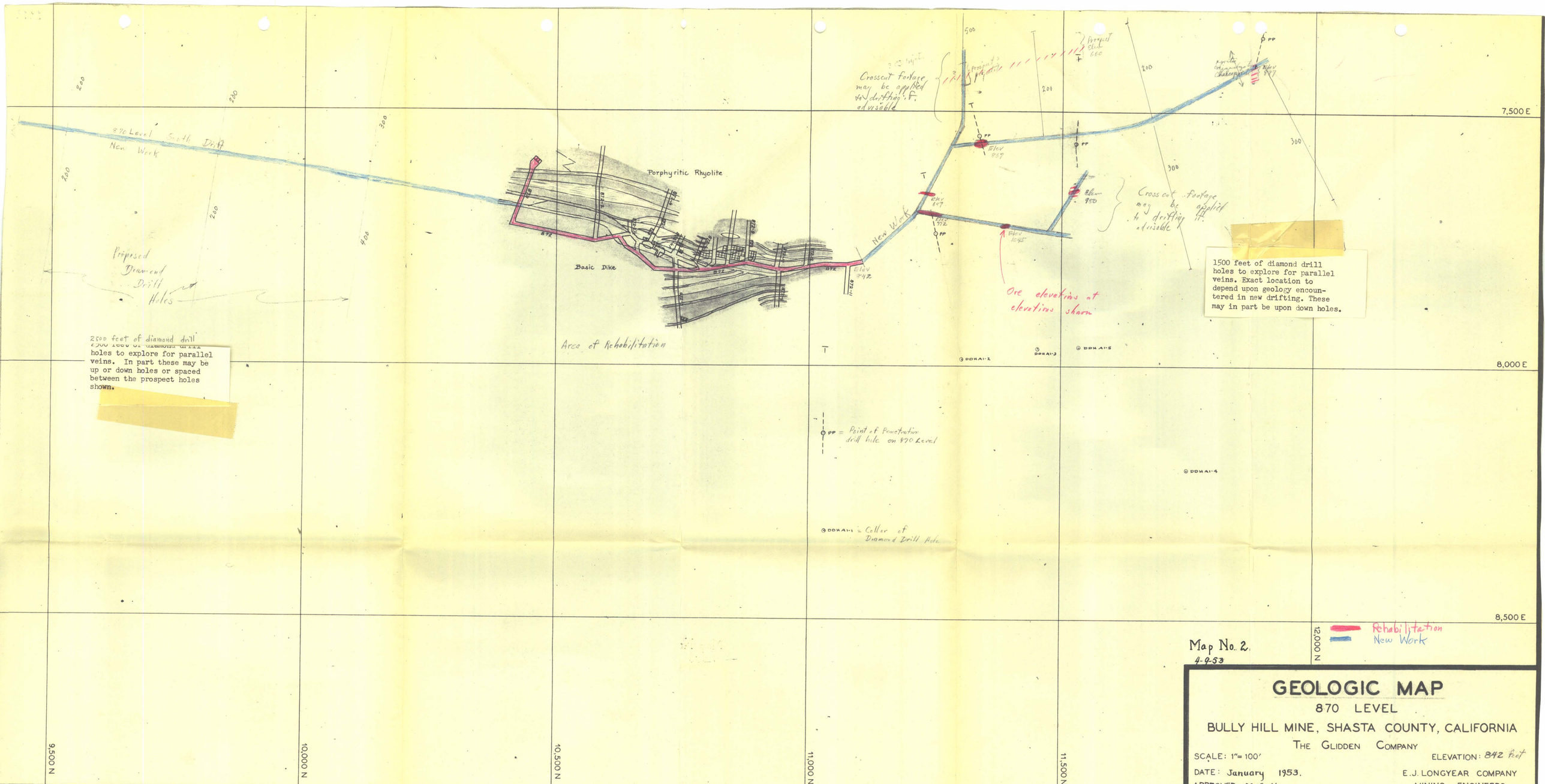
SCALE: 1"=100'

DATE: January 1953.

APPROVED: M.G.H.

ELEVATION:

E.J. LONGYEAR COMPANY
MINING ENGINEERS



Map No. 2.
4-9-53

GEOLOGIC MAP

870 LEVEL

BULLY HILL MINE, SHASTA COUNTY, CALIFORNIA

THE GLIDDEN COMPANY

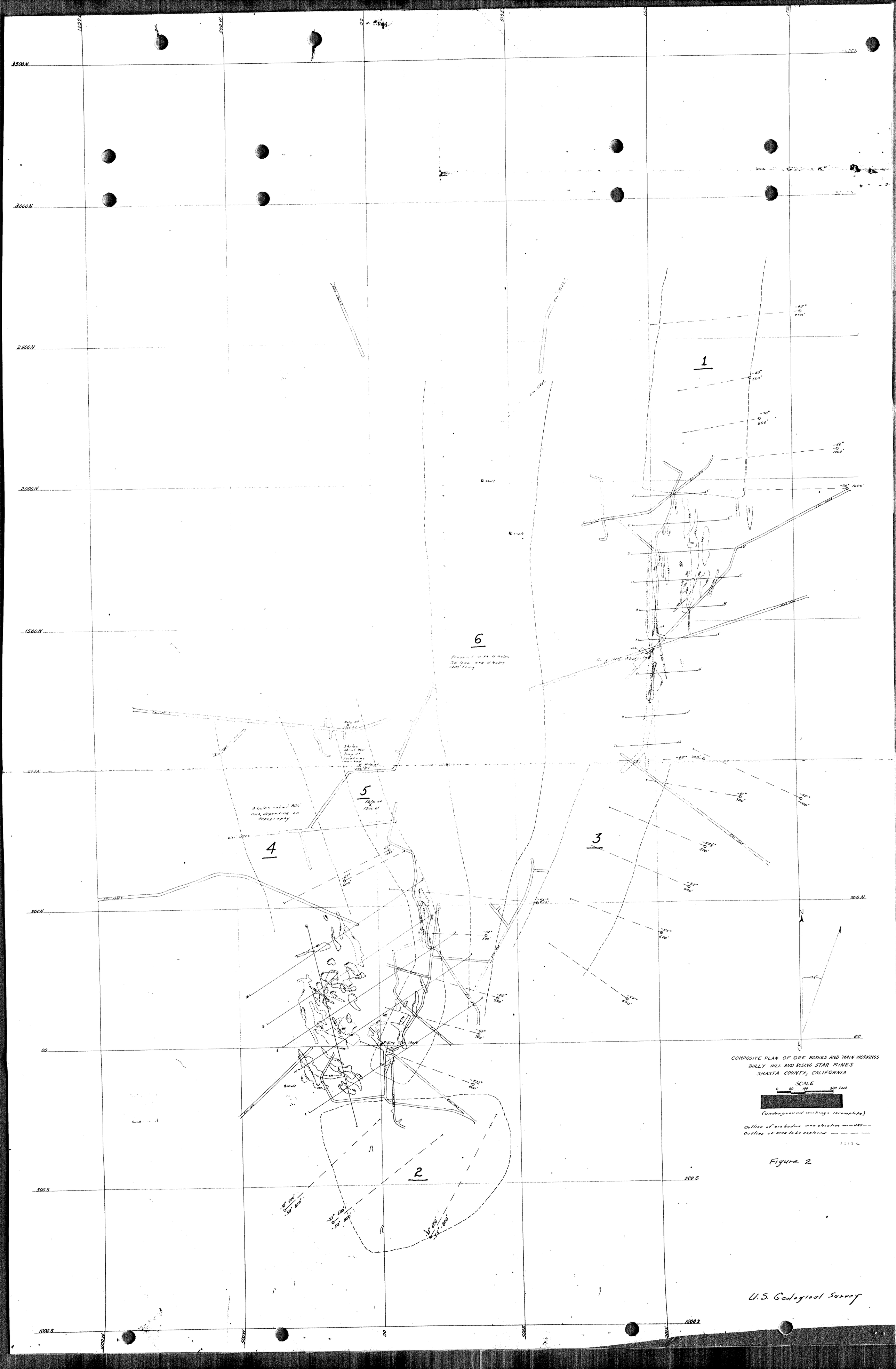
SCALE: 1" = 100'

ELEVATION: 842 feet

DATE: January 1953.

APPROVED: M. G. H.

E. J. LONGYEAR COMPANY
MINING ENGINEERS


COMPOSITE PLAN OF ORE BODIES AND MAIN WORKINGS
BULLY HILL AND RISING STAR MINES
SHASTA COUNTY, CALIFORNIA
SCALE
0 50 100 200 feet
(underground workings incomplete)
Outline of ore bodies and elevation
Outline of area to be explored
Figure 2
U.S. Geological Survey
1
2
3
4
5
6
3500N
3000N
2500N
2000N
1500N
500N
00
500S
1000S
1000W
500W
00
500E
1000E
500 N
500 S
1000 S
N