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DMEA FORM 6 REFERENCE SLIP

REV. 12-56 DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO:	INITIALS	DATE
1. Mails & Files		
2.		
3.		
4.		
5.		
FROM: Code 500		7/21

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite x File

____ Instructions ____ Your information

REMARKS:

Folders 1 (contract and correspondence), 1-A (Correspondence from 12/10/57 to present) and 3-A (Maps received with Field Team's final report) will be routed through 120 and 110 to M&F with Project Summary and completion letter to the Operator.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

January 2, 1958

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

This property was inspected December 11, 1957, accompanied by Mr. M. W. Hutchinson, company geologist.

The 2000 level north crosscut had been driven approximately 2,822 feet northeasterly. The face of the crosscut was in unbleached Wallace formation. No significant mineralization had been cut since the last inspection. No. 19XCN crosscut was cut at Sta. 2032 + 123 ft. on the west side of the main northeast crosscut to a depth of 25.2 feet, for a diamond drill station. A sideswipe 13 feet long, consisting of about 494 cu. ft., was cut at the crosscut. Thirty-five rock bolts were used in the crosscut.

The west drift face was about 1,488 feet west of the main crosscut and was in bleached Wallace formation. No. 27 WS crosscut was driven southerly 17 feet at Sta. 2031 + 119 feet for a diamond drill station. A 12-ft. sideswipe consisting of 456 cu. ft. was driven at the crosscut.

DDH No. SM2003, drilled S. 17½° E. from 3E South crosscut in the 2000 East drift, was completed to a depth of 736 feet without cutting any important mineralization.

DDH No. SM2004 from the 20 WS crosscut, bearing S. 8½° W., was drilled to a depth of 601 feet and did not cut any significant mineralization.

DDH No. SM2005 was being drilled northerly from 20 WN crosscut and will bottom at about 600 feet.

The main crosscut was timbered from Sta. 2019 + (9.7 to 19.7 ft.).

The following survey data is taken from company transit surveys and the distances checked and confirmed at the time of the inspection.

2000 Level Tail Drift

No change.		103.3 ft.

2000 Level North Crosscut

Previously reported distance from shaft station to SM2030		2,202.94 ft.
SM2030 - SM2032	N 56° 28' 30" E	286.70
SM2032 - SM2034	N 56° 28' 30" E	236.84
Sm2034 to face		96
		2,822.48 ft.

Sideswiping Car Transfer at SM2032 + 123 ft. on south side

13'x4'x9.5'	494 cu. ft.

at SM2031 + 119 ft.

12'x4'x9.5'	456 cu. ft.

2000 Level West Drift

Previously reported distance from main crosscut to SM2029		962.37 ft.
SM2029 - SM2031	N 82° 48' 00" W	264.55
SM2031 to face		261
		1,487.92 ft.

Diamond drill stations

19XCN on west side at SM2032 + 123 ft.	25.2 ft.
27 WS crosscut on south side at SM2031 + 119 ft.	17 ft.

2000 Level East Drift

No change.

Rock bolts

	North Crosscut	West Drift	East Drift	D.D. Stations
Previously reported	2,372	1,283	313	14
October	361	489	—	34
November	684	666	—	35
	3,417	2,438	313	83

Total - 6,251 bolts

The status of the contract at the time of the inspection was:

Date of contract: October 21, 1954
Termination date: August 1, 1959
Amount of contract: $1,435,880.00
Amount spent: 775,653.56 (thru Nov. 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Underground diamond drilling	25,000 ft.	2,721 ft.
Assays	1,000	13
Crosscutting and drifting		
Tail drift)		103.3 ft.
North crosscut)		2,822.48 ft.
East drift)	15,820 ft.	137.5 ft.
West drift)		1,487.92 ft.
D.D. station crosscuts)		136.2 ft.
		4,687.4 ft.
Sideswiping	72,000 cu.ft.	5,104 cu.ft.
* Timbering 1/		156 ft.
* Rock bolts		
North crosscut		3,417
West drift		2,438
East drift		313
D.D. stations		83
		6,251 bolts

1/ Corrected from October 31, 1957 report.
* As necessary.

Signed: John D. Bardill

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Bardill

Form MF-104 (Rev.) (April 1958)

Budget Bureau No. 42-R1036.5

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

Month of November 1957 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, zinc, copper

Address Box 320, Wallace, Idaho

Contract Amount, $ 1,435,880.00 Government Participation 50 % Amount, $ 717,940.00

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: Units						
Surface	-0-	$ 15708.00	$ 15708.00	7/24/58	15708.00	15,708.00
Drilling Underground	$6000.00	9010.00	15010.00	6000.00	9010.00	15,010.00
Bulldozing Surface plant		43893.22	43893.22		43893.22	43,893.22
Crosscutting Pump station		8000.00	8000.00		8000.00	8000.00
Raising 2000 station		6336.00	6336.00		6336.00	6336.00
Shaft		451360.00	451360.00		451360.00	451360.00
2000 Skip pocket		3538.00	3538.00		3538.00	3538.00
(2) Labor and Supervision:						
Labor	12572.12	101609.07	114181.19	12572.12	101609.07	114181.19
Supervision	610.00	4940.79	5550.79	610.00	4940.79	5550.79
Technical Services	700.00	5552.43	6252.43	700.00	5552.43	6252.43
(3) Operating Mat'ls. and Supplies: Rock bolts	2743.40	15414.24	18157.64	2743.40	15414.24	18157.64
Timber		937.28	937.28		937.28	937.28
Explosives	1890.00	19326.89	21216.89	1890.00	19326.89	21216.89
Air & water	532.56	6040.08	6572.64	532.56	6040.08	6572.64
Pipe Ventilation	1781.78	14556.75	16338.53	1781.78	14556.75	16338.53
Track	1003.08	8944.13	9947.21	1003.08	8944.13	9947.21
Bits and rods	787.67	6505.04	7292.71	787.67	6505.04	7292.71
Mine Tools	9.15	297.81	306.96	9.15	297.81	306.96
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	1977.20	15695.61	17672.81	1977.20	15695.61	17672.81
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
A Repairs to Equipment	1855.37	18662.79	20518.16	1855.37	18662.79	20518.16
Sampling and Analysis		58.00	58.00		58.00	58.00
Payroll Taxes	151.34	1428.98	1580.32	151.34	1428.98	1580.32
Liability Insurance	440.26	4891.68	5331.94	440.26	4891.68	5331.94
B Employees Group Ins.	366.42	1798.73	2165.15	366.42	1798.73	2165.15
C Miscellaneous	816.22	6846.33	7662.55	816.22	6846.33	7662.55
(8) Contingencies (specify):						
Electric power	1145.82	6127.15	7272.97	1145.82	6127.15	7272.97
A Office expense	50.00	630.03	680.03	50.00	630.03	680.03
Less in excess of	(3615.65)	-(34272.21)	-(37887.86)	-3615.65		
TOTALS maximum	31816.74	743836.82	775653.56	31816.74	743836.82	775653.56

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

Date 12-24-57 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 15,908.37

Signature [signature] (Authorized Certifying Officer)

Date 1/9/58 Vou. No. 2100

(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. 6732 in accordance with the terms of the contract.

Signature /s/ John A. Bardill Title Metallurgist Date January 2, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ W. E. Weissenborn Title Exec. Mgr. Date Jan. 6, 1958

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. 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 this form 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

RECEIVED JAN 13 1958 D.M.E.A.

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

Month of November 1957 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 Wallace, Idaho

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
Timbering	feet	- -	(61.5)	$ 4,498.56	156.0	$ 28.84		$ 11.00
Assaying samples		- -		58.00	13	4.46	1000	
Crosscutting & Drifting	feet	23353.55	440.9	230,482.13	4468.8	51.58	15820	44.00
Raising Sideswiping	cu. ft.	565.44	950	4,253.87	6007	.71	72000	.50
Shafts		- -		451,360.00	2080	217.00	2080	217.00
Winzes Rock Bolts	bolts	5513.40	1385	30,403.64	6142	4.95		5.00
Drilling: Core surface	feet	- -		15,708.00	2244	7.00	3000	7.00
U.G.	feet	6000.00	1200	15,010.00	3002	5.00	25000	5.00
Auger								
Pump Station	cu.ft.	- -		8,000.00	16268	.49	8000	1.00
Trenching 2000 Station		- -		6,336.00				6,336.00
Test Pits 2000 skip pocket		- -		3,538.00				3,538.00
Roads and Trails								
Surface plant		- -		43,893.22				45,500.00
Total Distributed Costs		$35432.39		$813,541.42				Total Costs Authorized by Contract
Nov. 1957 minimum underages applied to Oct. 1957 excesses (see Oct. 1957 report)								
Rock Bolts		1105.24						
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
*Excess of maximums (see below)		(4720.89) -		(37,887.86) -				
Total Costs		$31616.74		$775,653.56				

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 12-24-57 Operator Hecla Mining Company

Per [signature] Title President

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)

	Actual Costs: This Month	Actual Costs: Total To Date	Maximum Costs: This Month	Maximum Costs: Total To Date	Total in Excess or (Under) Maximum: This Month	Total in Excess or (Under) Maximum: Total To Date
*Drifting & crosscutting	$23353.55	$230482.13	$19399.60	$196627.20	$3953.95	$33854.93
*Sideswiping	565.44	4253.87	475.00	3003.50	90.44	1250.37
*Rock bolts	5513.40	30403.64	6925.00	30710.00	(1411.60) -	(306.36) -
*Timbering	- -	4498.56	(676.50) -	1716.00	676.50	2782.56

/s/ John A. Bardill

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

December sixteenth
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver
Mountain Project - November 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

Progress on the Silver Mountain 2000 level during November included 234.8 feet of crosscutting, 206.1 feet of drifting, 25.0 feet of sideswiping (950 cubic feet) and 1200.0 feet of diamond drilling. A total of 1385 rock bolts were installed. 684 of these were in the Northeast crosscut, 666 in the West drift and 35 in No. 19 Crosscut North.

The Northeast crosscut advanced 209.6 feet to a point 2727.6 feet from the 2000 level station and the West drift advanced 206.1 feet to a point 1395.1 feet from the main crosscut. No. 19 crosscut North was driven 25.2 for a diamond drill station and 13.0 feet of sideswiping (494 cubic feet) for car transfer was done, both in the Northeast crosscut. 12.0 feet of sideswiping (456 cubic feet) for car transfer was done in the West drift.

As shown on the attached geologic map the advance in the Northeast crosscut was in the same type of rocks as in September and October but showed some bleaching. During most of the month, advance in the West drift was in bleached Wallace rocks. Neither heading exposed mineralization of significance.

Diamond drill hole No. SM2003 was completed to 736.0 feet for an advance of 234.0 feet and hole No. SM2004 was drilled 601.0 feet southerly from 20 W. South crosscut. No significant mineralization was encountered in either hole. The logs are included with this report.

Hole No. SM2005 is now being drilled northerly from 20 W. North crosscut and had reached a depth of 365.0 feet at the end of November.

Yours very truly,

M. W. Hutchinson

M. W. Hutchinson
Geologist

MWH:nn

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

November - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Labor				
Hecla-Silver Mountain labor				
Drift miners				
Crosscutting 209.6' @ $ 10.50	$ 2 200 80			$ 2 200 80
Drifting 206.1' @ $10.50	2 164 05			2 164 05
Diamond drill x-cut 25.2' @ $10.50	264 60			264 60
Sideswiping 25.0' @ $5.25		$ 131 25		131 25
Rock bolts 1385 @ $2.00 (hold ground)			$ 2 770 00	2 770 00
23 @ $2.00 (hang vent pipe)	46 00			46 00
Allowance for grade and caging work	121 55	3 45		125 00
Shift differential:				
80 shifts @ $0.40	31 12	88		32 00
76 shifts @ $0.80	59 12	1 68		60 80
Holiday time	240 70	6 82		247 52
Pusher allowance 59 shifts @ $0.96	55 08	1 56		56 64
Total drift miners	$ 5 183 02	$ 145 64	$ 2 770 00	$ 8 098 66
Topman				
19½ shifts @ $18.64	$ 353 46	$ 10 02		$ 363 48
Overtime	18 13	51		18 64
	$ 371 59	$ 10 53		$ 382 12
Cager				
22 shifts @ $17.68	$ 378 24	$ 10 72		$ 388 96
20 shifts @ $18.08	351 63	9 97		361 60
20 shifts @ $18.48	359 41	10 19		369 60
Overtime	69 94	1 98		71 92
	$ 1 159 22	$ 32 86		$ 1 192 08
Hoistman				
20 shifts @ $19.60	$ 381 19	$ 10 81		$ 392 00
20 shifts @ $20.00	388 97	11 03		400 00
19 shifts @ $20.40	376 91	10 69		387 60
Overtime	58 35	1 65		60 00
	$ 1 205 42	$ 34 18		$ 1 239 60
Laborer				
8 shifts @ $16.64	$ 129 59	$ 3 67		$ 133 26
3 1/8 shifts @ $17.04	54 49	1 54		56 03
12 1/16 shifts @ $17.20	202 02	5 73		207 75
Overtime	21 43	61		22 04
	$ 407 53	$ 11 55		$ 419 08

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Labor
November - 1957
Page 2

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Star labor (custom)				
Star mine payroll	$ 866 03	$ 24 55		$ 890 58
Accounting				
Hecla	$ 145 86	$ 4 14		$ 150 00
Star	194 49	5 51		200 00
	$ 340 35	$ 9 65		$ 350 00
Total labor	$ 9 533 16	$ 268 96	$ 2 770 00	$ 12 572 12
Supervision				
Hecla-Silver Mountain	$ 593 18	$ 16 82		$ 610 00
Technical				
Hecla	$ 575 35	$ 16 31		$ 591 66
Star	105 35	2 99		108 34
	$ 680 70	$ 19 30		$ 700 00
Total	$ 10 807 04	$ 305 08	$ 2 770 00	$ 13 882 12

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

November - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total	
Bits and rods					
Drill steel	$ 755 94	$ 21 43		$ 777 37	
Bit grinder repair	6 13	17		6 30	
Transportation of outside labor and freight	3 89	11		4 00	
	$ 765 96	$ 21 71		$ 787 67	
Compressed air					
Compressor supplies	$ 90 73	$ 2 57		$ 93 30	(7-A)
Drill repair					
Drill machine supplies	$ 1 019 23	$ 28 90		$ 1 048 13	(7-A)
Explosives					
6350 lbs. powder	$ 1 239 18	$ 35 13		$ 1 274 31	
2266 delays	547 61	15 53		563 14	
Annunciator wire	51 10	1 45		52 55	
	$ 1 837 89	$ 52 11		$ 1 890 00	
Hoisting					
Supplies - Hoist	$ 2 44	$ 07		$ 2 51	
- Shaft	16 65	47		17 12	
Transportation of outside labor and freight	11 26	32		11 58	
	$ 30 35	$ 86		$ 31 21	(7-A)
Ventilation					
23 roof bolts - Complete (hang vent pipe)	$ 45 56			$ 45 56	
Vent line supplies	12 79	36		13 15	
Transportation of outside labor and freight	32 65	93		33 58	
	$ 91 00	$ 1 29		$ 92 29	(7-A)
Surface miscellaneous					
Supplies - Power	$ 1 61	$ 05		$ 1 66	(7-A)
- Equipment repairs	44 49	1 26		45 75	(7-A)
Heat dry building	74 66	2 12		76 78	(7-C)
Transportation of outside labor and freight	80 89	2 29		83 18	(7-A)
Miscellaneous	81 02	2 30		83 32	(7-C)
	$ 282 67	$ 8 02		$ 290 69	
Miscellaneous - Underground					
Mine tools	$ 8 90	$ 25		$ 9 15	
Mucker supplies	148 67	4 21		152 88	(7-A)
Transportation supplies-(haulage underground)	119 56	3 39		122 95	(7-A)
Transportation of outside labor and freight	14 80	42		15 22	(7-A)
	$ 291 93	$ 8 27		$ 300 20	

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other
November - 1957
Page 4

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total	
Electric power					
182400 kilowatts	$ 1 114 23	$ 31 59		$ 1 145 82	
General expense					
Office expense	$ 48 62	$ 1 38		$ 50 00	(8-A)
Group accident insurance - Employees	302 67	8 58		311 25	(7-B)
Group life insurance - Employees	53 65	1 52		55 17	(7-B)
	$ 404 94	$ 11 48		$ 416 42	
Retirement expense					
Payroll = $12,099.04 @ 3½%	$ 411 34	$ 11 66		$ 423 00	(7-C)
Shop and payroll expense					
Star labor @ 20%	$ 173 21	$ 4 91		$ 178 12	
Wallace office @ 10%	14 59	41		15 00	
Burke office - (Star) @ 20%	38 90	1 10		40 00	
	$ 226 70	$ 6 42		$ 233 12	(7-C)
Taxes - Social security					
F.O.A.B. $5,483.56 @ 2.25%	$ 119 98	$ 3 40		$ 123 38	
Federal U. C. $4,661.03 @ .30%	13 59	39		13 98	
Idaho U. C. $4,661.03 @ .30%	13 59	39		13 98	
	$ 147 16	$ 4 18		$ 151 34	
Payloader expense					
Supplies	$ 222 49	$ 6 31		$ 228 80	
Rental to Star - 8 hours @ $7.50	(58 35)-	(1 65)-		(60 00)-	
	$ 164 14	$ 4 66		$ 168 80	(7-A)
Workmen's compensation expense					
Physicals and X-rays	$ 8 27	$ 23		$ 8 50	
Industrial Indemnity Company					
$6,320.40 @ $5.693	349 88	9 92		359 80	
20%	69 98	1 98		71 96	
	$ 428 13	$ 12 13		$ 440 26	
Air and water lines					
415.7' 4" air line	$ 311 78			$ 311 78	
415.7' 2" water line	220 32			220 32	
6 only 1" plug cocks	46			46	
	$ 532 56			$ 532 56	
Track					
415.7' rail	$ 785 67			$ 785 67	
166 ties	117 86			117 86	
111# track bolts	23 03			23 03	
55 pair splice bars	37 40			37 40	
277# track spikes	39 12			39 12	
	$ 1 003 08			$ 1 003 08	
Ventilation					
209.6' 24" vent pipe	$ 1 039 41			$ 1 039 41	
206.1' 20" vent pipe	742 37			742 37	
	$ 1 781 78			$ 1 781 78	
Rock bolts					
1385 rock bolts -Complete (hold ground)			$ 2 743 40	$ 2 743 40	

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other
November - 1957
Page 5

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Equipment depreciation (See analysis) 100% x $1,977.20	$ 1 922 69	$ 54 51		$ 1 977 20
Total supplies and other	$ 12 546 51	$ 260 36	$ 2 743 40	$ 15 550 27
Total labor and supplies to form 104-A	$ 23 353 55	$ 565 44	$ 5 513 40	$ 29 432 39

Summary of crosscutting and drifting

North crosscut	$ 12 195 41
West drift	11 158 14
	$ 23 353 55

		Depreciable	Non Depreciable
4.0	Summary of equipment		
4.1	Surface equipment - 60 month life	[illegible]	[illegible]
4.2	- 120 month life	[illegible]	[illegible]
4.3	Underground electrical - 120 month life	[illegible]	[illegible]
4.4	Ventilation - 60 month life	[illegible]	- [illegible]
4.5	Pumping - 60 month life	[illegible]	- [illegible]
4.6	Mining equipment - 60 month life	[illegible]	[illegible]
4.7	- 120 month life	[illegible]	- [illegible]
4.8	Shaft sinking equipment	-	[illegible]
	Total values	[illegible]	[illegible]

Depreciation	
Surface - 60 month life	[illegible]
- 120 month life	[illegible]
Underground electrical - 120 month life	[illegible]
Ventilation - 60 month life	[illegible]
Pumping - 60 month life	[illegible]
Mining - 60 month life	[illegible]
- 120 month life	[illegible]
Total depreciation	[illegible]

Schedule A4

[illegible] MONTHLY PROGRESS

Equipment values
Month of November 1952

Organization Name · Organization

Uniform equipment - 60 month life	
Dry house equipment (Humidicide)	[illegible]
Gas lamps	[illegible]
Gas lamps - Installation	
Drill - G/P	[illegible]
Telephone - Fire	[illegible]
Floodlights	[illegible]
Furnace	[illegible]
Grinder, tool	[illegible]
Hangers, dry	[illegible]
Heating plant installation	[illegible]
Hose, water	[illegible]
Ladder, tough	[illegible]
Pads and cover	[illegible]
Shoulders	[illegible]
Tank, hot water	[illegible]
Tape	[illegible]
Tag, shoulder	[illegible]
Tailor	[illegible]
Washbowl	[illegible]
Water hood	[illegible]
Total - 40 Class	[illegible]

1785.01 46 18

Schedule A-2

[illegible] INCOME TAX REPORT
Component Values
[illegible]

Depreciation Non Depreciation

[illegible] = [illegible]

Compressors	[illegible]	
Air receivers	[illegible]	
Compressors	[illegible]	
Compressors	[illegible]	
Installations	[illegible]	[illegible]

[illegible] = [illegible]

Pumps	[illegible]	
Motors	[illegible]	
Installations		
Bridges and cranes	[illegible]	
Motors [illegible]	[illegible]	
Ship [illegible] installations	[illegible]	

[illegible] [illegible]

Schedule A-3

[illegible]

Original Values

Month of [illegible], 1909

	Depreciable	Non-Depreciable
Underground electrical - 100 month 1909		
Electrical installation - labor	[illegible]	[illegible]
- Miscellaneous	[illegible]	[illegible]
Telephone lines		[illegible]
Electric cable	[illegible]	[illegible]
Circuit breakers	[illegible]	[illegible]
Circuit breakers	[illegible]	
Cutouts	[illegible]	[illegible]
Pole lines	[illegible]	[illegible]
Substations and panels - 2	[illegible]	
Substations	[illegible]	
Wire telephone	[illegible]	
Substations	[illegible]	
Transformer - 15 KVA	[illegible]	
Transformer - [illegible] KVA	[illegible]	
Transformer - 3-[illegible] KVA	[illegible]	
Transformer - 3-[illegible] KVA	[illegible]	
Wire		
Telephone - Wire	[illegible]	
Starter	[illegible]	
Substation - [illegible]		
G. E. 15 KVA transformer - 2	[illegible]	
West. 150 with lightning arrester - 2	[illegible]	
Transformers 100.5 cap - 2	[illegible]	
G. E. cutouts - 3	[illegible]	
50 A cutouts - 6	[illegible]	
100 A cutouts - 5	[illegible]	
200 A cutouts - 3	[illegible]	
circuit breaker - 2	[illegible]	
5 KVA transformer - 2	[illegible]	
G. E. 200 cap circuit breakers - 2	[illegible]	
Miscellaneous	[illegible]	
Labor - Silver Mountain	[illegible]	
Labor - Wire	[illegible]	
Pothouse - 2	[illegible]	

[illegible] 6.12.59

Schedule 1.4

[illegible]
Equipment Values
Month of [illegible] 1957

	Depreciable	Non Depreciable
Ventilation equipment - 60 cycle 220v		
[illegible]	[illegible]	
Fan - 1	[illegible]	
Fan repaired - 1	[illegible]	
Blower, [illegible]	[illegible]	
Pump, [illegible]	[illegible]	
Fan installation	[illegible]	

[illegible]

Schedule A.5

[illegible]

[illegible]

Schedule 1.6

Schedule A-2

Depreciable Non Depreciable

Shaft sinking equipment	
Bars - Air	[illegible]
Blasting machine	[illegible]
Blasting mat	[illegible]
Jackhammers - 5	[illegible]
Mucker - Shaft	606.[illegible]
Oxygen supplies	[illegible]
Pump - Sump	[illegible]
- Sump - 2	[illegible]
Shaft sets	66 154 40
Shaft signals and lights	[illegible]
Skips and cages	[illegible]
Small tools	[illegible]
Ventilation	[illegible]
Wedges	
Fan 1-19 portable	[illegible]
Bucket - Clamshell	[illegible]
Indirect charges	56 [illegible]

Note: No significant mineralization exposed in this hole therefore no sludges were assayed.

DIAMOND DRILL RECORD

Standpipe
Casing

Started 10-23-57
Finished 11-11-57
Hole Size BX to AX
Depth 736.0'
% Core Rec. 74.2

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5 S. = Face.
Logged by A.H.S. Date 11-12-57
Drilled by Kesl and Albertson for Nichols and Thompson Co.

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude 89 018 S.
Departure 155 358
Elevation 155.2
Bearing S.17½° E.
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		BX Core = 0.0' - 10.0' AX Core = 10.0' - 736.0'						
		0.0' - 40.0' Blchd, thin-bedded, tan-gry arg						
0-5.0	4.0	qtzite resembling Wal from 0-10 ft. Tan-gry	1083	0 - 5	5.0			
10.0	5.0	arg and qtzite resembling SR from 10-35.	84	10				
14.0	3.0	2" lt gry gg at 23.	85	15				
19.0	5.0	Finely frgmtd from 28-30.	86	20				
24.0	3.4	Sm fault at 13.	87	25				
30.0	4.5	Fracture cleavage para to core at 28 and	88	30				
35.0	3.0	33-36.	89	35				
End Box 1		About 1" gg at 29.						
		A hd, possibly silic lt gry qtzite bed 1"-2" wide at 15.						
		Sm strks and specks massive py-chpy at 32-35.						
40.0	3.0		90	40				
44.0	3.0	40.0' - 79.0' Blch, lt gry arg qtzite 36-58.	91	45				
46.0	2.0	Dk purp SR arg qtzite 58-78						
49.0	2.2	Thin blch bands as follows: 3" at 64, and						
51.0	1.5	1" at 77.	92	50				
52.0	1.0	Hd lt gry fractured qtzite at 44-46.	93	55				
57.0	3.0	Few scattered large py cubes to ½" size						
58.0	0.3	at about 44.	94	60				
62.0	3.2	About 1"-2" med gry gg at 57.	95	65				
67.0	4.3	½" lt gry gg at 52, and 75.						
72.0	3.7	Sm faults at 40, 51, 54, and 65.	96	70				
75.0	1.9	2" qtz-ank pod at 59.	97	75				
End Box 2								
79.0	3.2		98	80				
84.0	4.5	79.0' - 114.0' Dk purp SR arg qtzite except	99	85				
89.0	2.2	as follows:	1100	90				
94.0	2.4	Blchd from 79-81; 89-100.	01	95				
99.0	3.5	1"-2" gg-breccia at 98.	02	100				
104.0	4.3	1" purp gg at 108.	03	105				
109.0	5.0	Sm flts at 84, 96, 100, 113, 115.	04	110				
114.0	5.0	Numerous qtz-ank strgrs at 114.	05	115				
End Box 3								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5 S. = Face.
Logged by Date
Drilled by

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
118.0	2.9	114.0' - 157.0'	1106	115-120	5.0			
122.0	3.3	Dk purp SR arg qtzite except as follows:	07	125				
125.0	2.6	6" blch at 123, 6" blch at 137, 2" blch						
130.0	1.7	at 144.	08	130				
135.0	3.3	Other scattered very thin blch bands	09	135				
140.0	4.8	less than 2" thick. Much shrd and thinly	10	140				
145.0	4.7	sliced.	11	145				
149.0	3.4	Possible sm faults at 118, 130, 131,	12	150				
End Box 4		142, 149.						
157.0	7.8	157.0' - 187.0' Thinly sliced, dk purp	13	155				
162.0	4.8	SR arg qtzite except as follows:	14	160				
166.0	3.6	Blch 156-157; 158-160; 163-164;	15	165				
170.0	2.8	4" at 170; 1' at 175.	16	170				
175.0	5.0	Other scattered blch bands less than	17	175				
178.0	2.3	2" thick.	18	180				
183.0	4.3	Finely frgmtd 183-185, probably re-	19	185				
End Box 5		presents fault or shear.						
		Sm faults at 157, 162.						
		Thin, wht qtz-ank strgrs 153-155.						
		187.0' - 218.0' Thinly sliced, dk purp						
		arg qtzite with blch bands as follows:						
187.0	3.7	Blch from 187-190; and 8" at 211.						
190.0	2.2	Other scattered blch bands 2" or less	20	190				
195.0	5.0	in width.	21	195				
199.0	3.7	Hd, lt gry, possibly silic qtzite at	22	200				
203.0	4.0	187-189.	23	205				
208.0	4.6	Sm fault at 187, 190, and 213.	24	210				
213.0	4.8	A ½" wide qtz ank plate at 213 with sm						
End Box 6		amt dk gry sulfide.	25	215				
		Numerous wht qtz-carb strgrs to ¼" wide						
		from 209-212.						
218.0	4.8	218.0' - 254.0' Thinly sliced, dk purp	26	220				
223.0	4.3	SR arg qtzite.	27	225				
228.0	5.0	Blch bands at 230-232, and 236-237.	28	230				
232.0	4.0	Other scattered blch bands less than						
237.0	4.6	2" thick.	29	235				
242.0	4.2	½" purp gg at 241 and 243.	30	240				
247.0	4.4	Sm faults at 220, 223, 228, 230, 238,	31	245				
249.0	1.0	and 244.	32	250				
End Box 7		Numerous thin wht qtz-ank strgrs at 237.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5
S = Face.
Logged by Date
Drilled by

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
254.0	4.1							
259.0	5.0	254.0' - 285.0' Thinly sliced dk purp arg	1133	250-255	5.0			
264.0	4.7	qtzite. Blch from 253-254; 256-257;	34	260				
269.0	5.0	265-269.	35	265				
274.0	4.4	Finely frgmtd 251-252 indicating probable	36	270				
279.0	4.7	fault or shear. Sm fault at 279.	37	275				
End Box 8			38	280				
		285.0' - 315.0' Thinly sliced dk purp SR arg qtzite 279-294.						
285.0	5.5	Blchd lt gry SR 294-314.	39	285				
290.0	4.5	Transition zone about 1' wide at 294 with	40	290				
295.0	4.3	numerous thin grn sericitic shears.	41	295				
297.0	1.8	Much diss carbonate gives rock a speckled	42	300				
302.0	4.4	appearance from 283-290.	43	305				
307.0	4.7	Possible sm faults at 284, 287, 291,						
312.0	4.8	295, 297, 302, 307, 313.	44	310				
End Box 9		A well defined reddish-wht qtz-ank vein ¼"-½" wide at 301 containing angular, wht crystals of ank up to 3/8" size. Hd to very hd qtzite from 283-312.						
		315.0' - 349.0' Blch, lt to med gry, soft arg containing frgmts, inclusions, and laminae of partially blchd lavender qtzite,						
315.0	2.3	shrd and thinly sliced. Hard and qtzitic	45	315				
320.0	5.0	from 312 to 324.	46	320				
325.0	5.0	Finely frgmtd breccia mixed with gg	47	325				
330.0	5.0	from 343-344.	48	330				
335.0	4.8	Fine breccia without gg from 338-339.	49	335				
340.0	3.6	Sm fault at 324, and 328.	50	340				
End Box 10		A ¼" streak cube py at 326, and at 328, with scattered 1/8"-1/4" cubes between. A thin pyritic streak at 333. Scattered cubes and massive py streaks with some chpy in qtzite frgmts at 338.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine: SILVER MOUNTAIN
Location: 3 E. X-Cut South. Spad + 12.5 S = Face.
Logged by: Date:
Drilled by:

Hole No.: SM 2003
Level: 2000
Grid: 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
349.0	7.2	349.0' - 390.0' Blchd, gry or grnish-gry	1151	340-345	5.0			
352.0	2.3	arg qtzite from 340 to 384. Thinly sliced	52	350				
357.0	3.2	and shrd.	53	355				
362.0	1.8	About 1' of finely ground up breccia	54	360				
367.0	2.9	with lt gry gg at 348.	55	365				
372.0	4.4	Ground up breccia without gg from 364-365.	56	370				
378.0	4.5	Sm faults at 352, 357, 384, and 385.	57	375				
384.0	5.2	Fracture cleavage locally para to core	58	380				
End Box	11	at 349.	59	385				
		390.0' - 428.0' Blchd, shrd into thin slices						
		Soft, grnish-gry from 384-401.						
390.0	3.7	Gryish-wht, hard, possibly silic in	60	390				
396.0	4.5	places, and resembling Wal fm from 418	61	395				
402.0	5.0	to 425.	62	400				
407.0	3.7	Scattered very minute py cubes 401 - 425.	63	405				
413.0	4.2	2"-3" fault breccia at 406, and 407.	64	410				
418.0	4.5	Fine wht gg somewhat recemented from	65	415				
423.0	3.8	415 to 418 indicating a strong fault.	66	420				
End Box	12	Finely ground breccia mixed with gg						
		from 419 to 423.						
		Sm amt diss py and some 1/8" streaks						
		py at 408 and 409.						
		A ¼" vein mass py at 419.						
			67	425				
428.0	4.8	428.0' - 472.0' Blchd, thinly sliced,	68	430				
434.0	3.0	gryish-wht to grnish-gry possible Wal fm	69	435				
438.0	2.6	from 425 to 469.						
441.0	2.1	About 1" purple SR at 469.	70	440				
444.0	3.0	Possible sm fault at 469 but no gg.	71	445				
452.0	4.0	A 3/4" cube of py at 452.	72	450				
458.0	4.0	Two ½" cubes py at 458.	73	455				
464.0	5.1	A ¼" rounded mass py at 459.	74	460				
469.0	3.2	A 1" vein of massive and cube py at 465.	75	465				
End Box	13	Several ¼" streaks of the same at 466.	76	470				
		in hard, white, apparent Wal.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5
S = Face.
Logged by Date
Drilled by

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
472.0	2.1	472.0' - 529.0' Blchd, hd, lt gry qtzite;						
475.0	3.0	shrd and broken. Hd but dk gry 471-472.	1177	470-475	5.0			
480.0	3.4	3" soft lt gry gg at 472.	78	480				
485.0	1.4	3"-6" gg breccia at 491.	79	485				
490.0	1.2	The same at 502 but with less gg.	80	490				
496.0	4.5	2" fine breccia at 513.	81	495				
502.0	3.2	5.0 of lt to med gry gg and breccia	82	500				
508.0	3.8	from 520-525.	83	505				
513.0	1.7	3" wht qtz-ank at 471.9. Same at 488.	84	510				
518.0	0.9	Silic qtzite 497-498 and 501-502.	85	515				
525.0	5.5	3" qtz-ank at 512.	86	520				
End Box	14		87	525				
529.0	2.0	529.0' - 575.0' Purp from 525-538, and	88	530				
535.0	2.7	547-562.	89	535				
538.0	1.6	Badly shrd and broken 525-552.	90	540				
541.0	1.0	Up to 3" core lengths 552-573.						
544.0	2.8	Lt gry gg and breccia from 529-535, and	91	545				
547.0	2.2	538-544.	92	550				
552.0	3.1	2" gg-breccia at 559; 1" at 567; 2" at	93	555				
559.0	3.8	570; 5" at 571.	94	560				
564.0	4.0	Hd and silic at 543, 545, 552, and	95	565				
568.0	2.6	565-570.	96	570				
573.0	3.8	1" wht qtz-ank at 552.	97	575				
End Box	15	Diss wht carb 559-562.						
575.0	2.0	575.0' - 635.0' Blchd, med gry, containing						
579.0	3.0	much dk grn chlorite in fractures and shears	98	580				
582.0	1.3	573-632.	99	585				
588.0	2.1	The formation to which the rock belongs	1200	590				
593.0	3.0	may be doubtful, but the gryish-wht	01	595				
597.0	2.9	color and abundant chlorite seem to	02	600				
602.0	3.5	indicate that it may be Wal fm. It is	03	605				
607.0	2.9	hard, but badly broken and shrd.	04	610				
612.0	1.6	A 6" vein of wht qtz-ank with much chlorite						
617.0	1.5	is seen at 575.	05	615				
623.0	2.4	3" gg-breccia at 582, 593 and 602.	06	620				
629.0	1.2	Lt gry gg and breccia from 606 to 617,	07	625				
632.0	1.4	indicating a strong flt.	08	630				
End Box	16	3" mud and breccia at 629.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5 S = Face.
Logged by Date
Drilled by

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		635.0' - 681.0'						
635.0	1.5	Blchd, lt gry or grnish-gry 632-657,	1209	630-635	5.0			
641.0	4.3	containing occas slightly purplish or	10	640				
646.0	4.2	lavender frgmts.	11	645				
652.0	4.1	Highly chloritic lt gry or gryish-wht	12	650				
657.0	2.0	apparent Wal from 657-679.	13	655				
662.0	3.1	Finely ground up breccia from 632-644.	14	660				
665.0	2.2	1 ft. of firm, lt gry mud at 641-642.	15	665				
668.0	1.6	1" fine breccia at 664 and 668.	16	670				
673.0	3.2	1 Ft. gg-breccia at 674.	17	675				
679.0	4.5	Gouge and breccia from 677-679.	18	680				
End Box	17	Few diss py Xls up to ¼" size at 643.						
681.0	1.0							
685.0	3.2	681.0' - 717.0' Blchd, shrd and broken S.R.	19	685				
691.0	4.2	except as follows:	20	690				
697.0	4.8	Purp phyl from 699-702 and from 711-714.	21	695				
701.0	2.9	Mixed gg and breccia 679-681, from	22	700				
706.0	5.0	685-686, from 691-691.5, and 714-716.	23	705				
711.0	4.4		24	710				
716.0	4.6		25	715				
End Box	18							
717.0	0.8	717.0' - 736.0' Mostly blchd or part blchd	26	720				
722.0	3.9	SR. No visible faults.	27	725				
727.0	2.4	2" qtz-ank at 721.						
730.0	2.9	1"-2" of purp qtzite at 736 may or may	28	730				
736.0	5.0	not represent the main blchd contact.	29	736				
End Box	19							

END OF HOLE

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 3 E. X-Cut South. Spad + 12.5
S = Face.
Logged by Date
Drilled by

Hole No. SM 2003
Level 2000
Grid 3 E.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		635.0' - 681.0'						
635.0	1.5	Blchd, lt gry or grnish-gry 632-657,	1209	630-635	5.0			
641.0	4.3	containing occas slightly purplish or	10	640				
646.0	4.2	lavender frgmts.	11	645				
652.0	4.1	Highly chloritic lt gry or gryish-wht	12	650				
657.0	2.0	apparent Wal from 657-679.	13	655				
662.0	3.1	Finely ground up breccia from 632-644.	14	660				
665.0	2.2	1 ft. of firm, lt gry mud at 641-642.	15	665				
668.0	1.6	1" fine breccia at 664 and 668.	16	670				
673.0	3.2	1 Ft. gg-breccia at 674.	17	675				
679.0	4.5	Gouge and breccia from 677-679.	18	680				
End Box	17	Few diss py Xls up to ¼" size at 643.						
681.0	1.0							
685.0	3.2	681.0' - 717.0' Blchd, shrd and broken S.R.	19	685				
691.0	4.2	except as follows:	20	690				
697.0	4.8	Purp phyl from 699-702 and from 711-714.	21	695				
701.0	2.9	Mixed gg and breccia 679-681, from	22	700				
706.0	5.0	685-686, from 691-691.5, and 714-716.	23	705				
711.0	4.4		24	710				
716.0	4.6		25	715				
End Box	18							
717.0	0.8	717.0' - 736.0' Mostly blchd or part blchd	26	720				
722.0	3.9	SR. No visible faults.	27	725				
727.0	2.4	2" qtz-ank at 721.						
730.0	2.9	1"-2" of purp qtzite at 736 may or may	28	730				
736.0	5.0	not represent the main blchd contact.	29	736				
End Box	19							
		END OF HOLE						

DIAMOND DRILL RECORD

Standpipe
Casing

Started 11-11-57
Finished 11-21-57
Hole Size AX
Depth 601
% Core Rec. 73

Mine SILVER MOUNTAIN
Location 20 W. South X-Cut, Spad + 25.0' S. = Face.
Logged by A.H.S. Date 11-26-57
Drilled by Kesl and Albertson for Nichols and Thompson Co.

Hole No. SM 2004
Level 2000
Grid 20 W.
Latitude 88 849.0 S.
Departure 154 279.5 E.
Elevation 1557
Bearing S.08½° W.
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
0-5.0	3.7	0.0' - 41.0'	1229	0 - 5	5.0			
10.0	4.5	Purp arg qtzite from 0 - 20 feet.	30	10				
15.0	4.0	Blchd gry or grnish-gry from 20-41.	31	15				
20.0	3.0	Thin blchd bands from 4-6, 8-9, 11-12,	32	20				
23.0	1.9	and 17-18.						
26.0	3.0	1½ ft. of flaky breccia @ 19.	33	25				
31.0	2.0	1 ft. breccia and gg at 25.	34	30				
36.0	2.7	2'-3' of purp gg and breccia 33-36.	35	35				
41.0	4.1	Grnish-gry 31-32, and 36-38.	36	40				
End Box 1								
46.0	3.8	41.0' - 81.0'	37	45				
51.0	1.8	Blchd, shrd arg from 41-53.	38	50				
57.0	5.0	Dk purp arg-qtzite from 53-63.	39	55				
63.0	5.3	Part blchd, lavender qtzite 63-81.	40	60				
69.0	3.8	2"-4" gg-breccia @ 69; 1" @ 71, and 74.	41	65				
75.0	3.2	Few scattered tiny py cubes @ 51.	42	70				
81.0	5.0		43	75				
End Box 2			44	80				
87.0	4.0	81.0' - 123.0'	45	85				
92.0	3.7	Purp, shrd, arg-qtzite 81-92.	46	90				
97.0	3.5	Blchd, med gry to grnish-gry from 92-123.	47	95				
102.0	1.6	1"-2" wht gg and breccia @ 93.	48	100				
105.0	3.0	About 1' gg-breccia @ 103.	49	105				
108.0	2.2	Finely ground breccia mixed with gg	50	110				
114.0	4.4	from 110-120 indicating strong fault.	51	115				
119.0	4.0	Streaks and scattered cubes py up to	52	120				
123.0	3.7	¼" from 116-118.						
End Box 3								
		123.0' - 154.0' Blchd but slightly lavender						
125.0	1.6	from 123-140.	53	125				
130.0	5.0	Blchd, grnish-gry from 140-154.	54	130				
135.0	5.0	1.0 to 1.5 ft. lt tan gg-breccia @ 135-	55	135				
140.0	3.8	136.	56	140				
145.0	4.6	5 ft. gryish-wht gg-breccia from 149-154.	57	145				
150.0	4.5	A few scattered py streaks and Xls up to	58	150				
End Box 4		3/16" in size from 123-135 and 146-150.						
		Frac cleav locally perp to core for 2"						
		@ 152.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine: SILVER MOUNTAIN
Location: 20 W. South X-Cut, Spad + 25.0' S. = Face.
Logged by: Date:
Drilled by:

Hole No.: SM 2004
Level: 2000
Grid: 20 W
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		154.0' - 191.0'						
		Blchd and badly broken 154-190.						
155.0	3.9	Purp breccia 190-191.	1259	150-155	5.0			
160.0	3.9	4" wht gg @ 155.	60	160				
166.0	5.4	About 1 ft. gg-breccia @ 161.	61	165				
172.0	5.5	The same at 155 but cannot determine the	62	170				
178.0	4.8	width of the fault.	63	175				
184.0	4.0	Much gg and breccia 167-169.	64	180				
189.0	4.0	About a foot of soft, lt gry gg @ 184-185.	65	185				
End Box 5		Rocks are gry to grnish-gry from 155-167.	66	190				
		Gryish-wht resembling Wal 167-172, and						
		gry to grnish-gry 172-190.						
		Small frgmts mass py with some chpy @						
		164 and 166.						
		191.0' - 226.0'						
194.0	2.3	Blchd to partly blchd, badly broken, lt	67	195				
200.0	4.4	grnish-gry to med gry to slightly lavender	68	200				
205.0	4.7	gry SR from 191-226.	69	205				
211.0	4.9	2"-3" lt gry gg @ 194.	70	210				
216.0	4.8	6"-8" of the same @ 200 and at 205.	71	215				
221.0	5.0	1'-2' gg-breccia 211-212.	72	220				
226.0	4.3	Soft, wht gg from 216-219.	73	225				
		1' gg-breccia 221-222.						
		226.0' - 274.0'						
231.0	4.2	Blchd to partly blchd, badly broken SR	74	230				
236.0	3.2	with a few thin purp bands from 226-274.	75	235				
242.0	5.1	Rather dk grnish-gry 237-269.	76	240				
246.0	1.4	1 ft. gg-breccia @ 227.	77	245				
252.0	3.0	6" the same @ 236.	78	250				
257.0	2.8	1" @ 246. 3"-4" at 257.	79	255				
261.0	2.1	1'-2' from 270-272 indicates strong fault.	80	260				
264.0	2.4	6" purp breccia (no visible fault) @ 274.	81	265				
269.0	2.5	2"-3" wht qtz-ank @ 268.	82	270				
274.0	2.2							
End Box 7								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 20 W. South X-Cut, Spad + 25.0' S = Face.
Logged by Date
Drilled by

Hole No. SM 2004
Level 2000
Grid 20 W.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
279.0	3.9	274.0' - 313.0' Blchd, lt gry or grnish-gry	1283	270-275				
284.0	4.1	SR or Wal from 274-300. Gryish-wht blchd Wal	84	280				
290.0	5.1	from 300-310. Dk grnish-gry 310-313. 2" lt	85	285				
295.0	3.3	gry gg at 274. Lt gry gg and breccia from	86	290				
300.0	2.7	279-285. 3" gg at 279. 1" wht gg at 281.	87	295				
305.0	3.5	1"-2" lt gry gg at 285. 1" lt gry gg at 290.	88	300				
310.0	2.6	5"-8" lt gry gg at 304. 5"-8" lt gry gg at	89	305				
End Box 8		310.	90	310				
315.0	4.7		91	315				
320.0	5.0	313.0' - 347.0' Moderately to slightly blchd	92	320				
325.0	4.6	Wal fm. Dk grnish-gry from 313 - 323. Med	93	325				
330.0	2.4	gry partially blchd from 323-347. 2" gg-	94	330				
335.0	4.5	breccia 315-317. 2"-3" gg-breccia at 320	95	335				
340.0	4.2	and at 330. A 1" mass of cube py at 315.	96	340				
345.0	5.0		97	345				
347.0	1.0							
End Box 9								
		347.0' - 391.0' Partly blchd, shrd Wal fm						
351.0	3.6	347-391.	98	350				
356.0	3.0	Moderately blchd from 347-361, with some	99	355				
361.0	3.0	darker gry and grnish-gry bands at 353-361.	1300	360				
366.0	3.7	Predominantly blchd from 361-391, with some						
371.0	3.3	thin gry partially blchd bands at 371-375.	01	365				
376.0	4.0	A ¼" vein of cube py at 350 with Xls up to	02	370				
381.0	1.5	¼" size. Finely ground breccia from 361-	03	375				
384.0	1.5	363. About 1' lt gry gg-breccia at 388.	04	380				
389.0	2.3	6" of the same at 389. About 1" of qtz-ank	05	385				
End Box 10		at 367, 368, and 389. A ½" mass cube at 375.						

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 20 W. South X-Cut, Spad + 25.0' S. = Face.
Logged by Date
Drilled by

Hole No. SM 2004
Level 2000
Grid 20 W.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
395.0	4.7	391.0' - 431.0'	1306	385-390	5.0			
400.0	5.0	Blchd lt gry Wal 391-405.	07	395				
405.0	4.5	Unblchd, med to dk gry Wal 405-431.	08	400				
410.0	3.7	2"-3" lt gg @ 395.	09	405				
416.0	5.3	About 2' finely ground breccia from	10	410				
420.0	1.8	411-413 with 1" soft, wht gg at 412.	11	415				
425.0	2.5	About 3" wht qtz-ank with a few specks dk	12	420				
430.0	1.5	gry sul, probable tetra, at 401.	13	425				
End Box 11			14	430				
435.0	1.5							
440.0	0.7		15	435				
446.0	4.8		16	440				
451.0	2.7		17	445				
456.0	2.7	431.0' - 492.0'	18	450				
461.0	3.0	Unblchd, med to dk gry Wal. Slightly blchd	19	455				
466.0	1.2	451-466.	31	460				
471.0	2.7	2"-3" gg @ 492.	32	465				
476.0	2.0	4" wht qtz-ank @ 476.	33	470				
481.0	1.1		34	475				
486.0	1.9		35	480				
492.0	5.0		36	485				
End Box 12			37	490				
			38	495				
		492.0' - 528.0'						
		Unblchd dk gry to blk Wal from 492-504.						
498.0	5.0	Blchd lt gry and containing numerous	39	500				
503.0	4.4	1/8" to 1/4" qtz-ank strgrs from 504-	40	505				
508.0	5.0	505.	41	510				
514.0	4.9	Dk purp SR from 505-528.	42	515				
520.0	5.4	1"-2" ground up breccia @ 504.	43	520				
526.0	4.8	Fine breccia from 508-512 but no visible	44	525				
End Box 13		gg.						
		Possible small faults @ 515, 519, and 526.						
531.0	5.0							
537.0	4.8	528.0' - 562.0'	45	530				
542.0	5.0	Dk purp SR. Slightly blchd with num	46	535				
547.0	3.8	thin, wht qtz strgrs from 552-554.	47	540				
552.0	4.1	Sm faults @ 537, 539, 543, 549, and 560.	48	545				
557.0	4.0		49	550				
562.0	4.6		50	555				
End Box 14								

DIAMOND DRILL RECORD

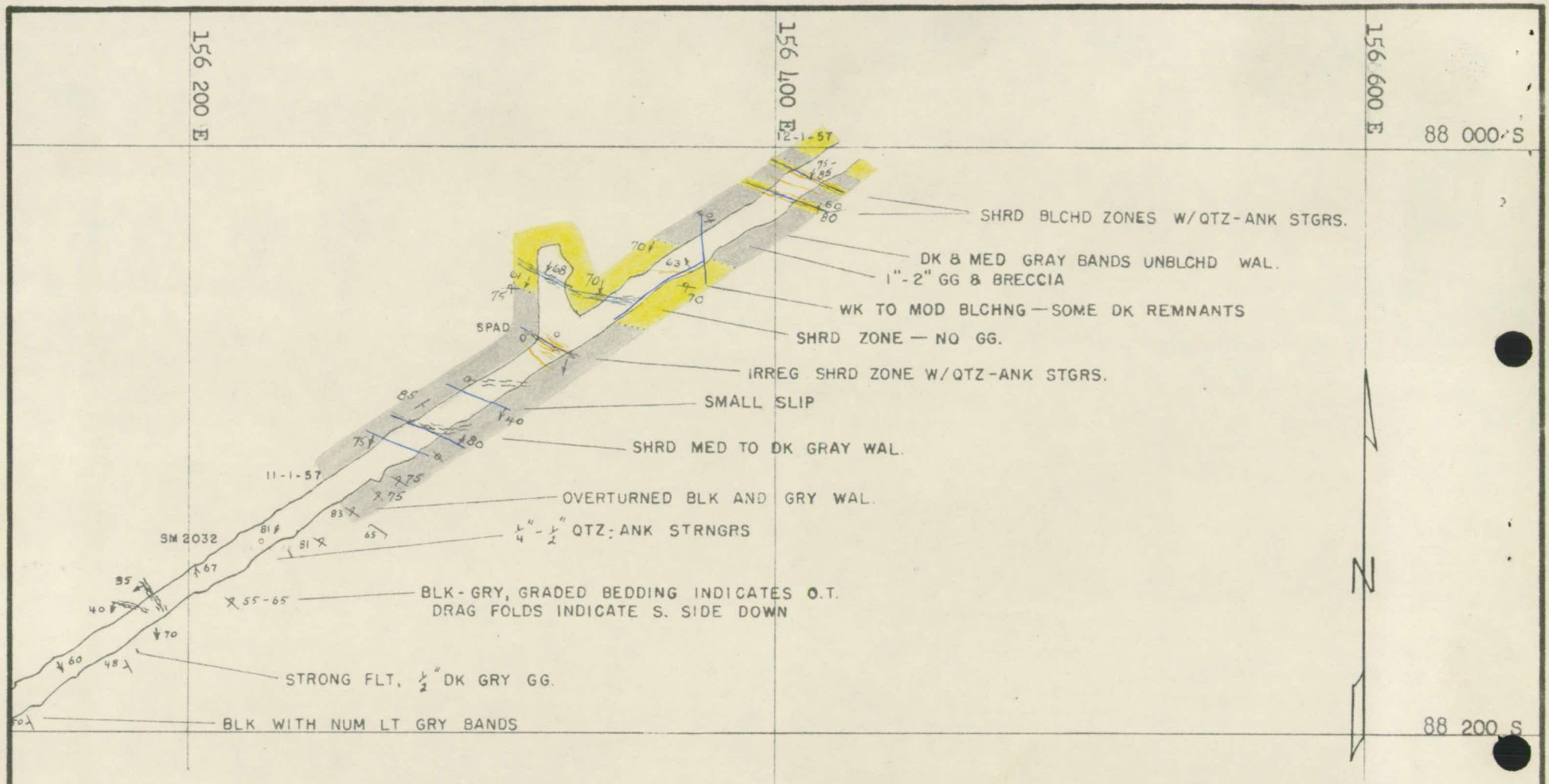
Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location 20 W. South X-Cut, Spad + 25.0' S. = Face.
Logged by Date
Drilled by

Hole No. SM 2004
Level 2000
Grid 20 W.
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		562.0' - 593.0' Partly blchd hd SR qtzite	1351	555-560	5.0			
567.0	4.3	from 562-567.	52	565				
571.0	3.7	Well blchd, hd, silic qtzite which appears	53	570				
576.0	4.2	favorable for ore from 567-575.	54	575				
581.0	4.9	Dk purp SR from 575-593.	55	580				
586.0	4.4	Partly blchd 585-586.	56	585				
591.0	5.0	1"-2" soft wht gg @ 571.	57	590				
End Box	15	Very thin wht qtz-ank strgrs @ 580, 585, 589, 590.						
596.0	4.6	593.0' - 601.0' Dk purp SR arg qtzite.	58	595				
601.0	5.0		59	601	6.0			
		END OF HOLE 2004						

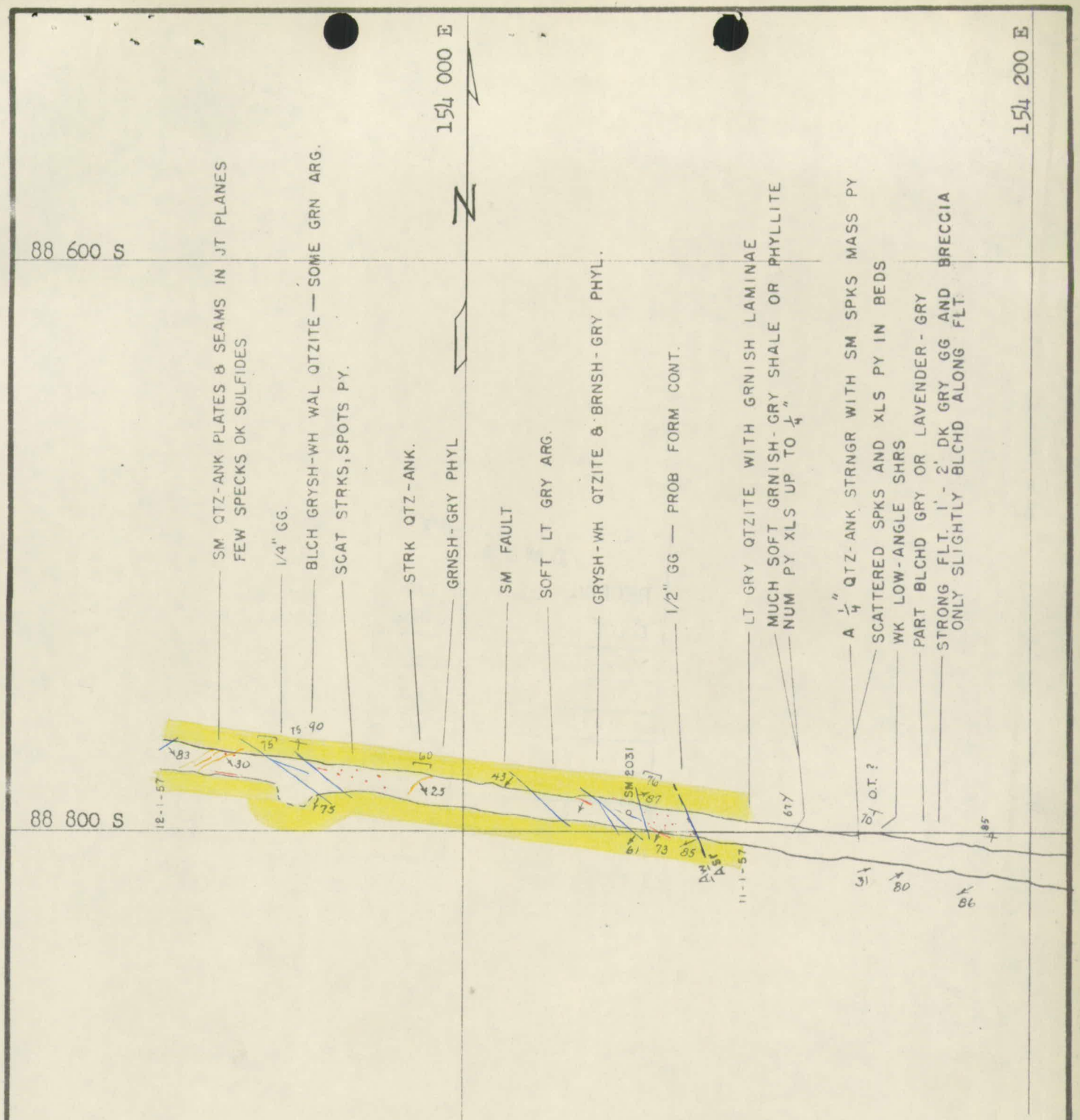


Legend

- Bleached rocks
- Unbleached Wallace Formation
- 70 Strike and dip of sulfide veins
- 72 Strike and dip of non-sulfide veins
- 65 Strike and dip of faults
- 83 Strike and dip of normal beds
- 88 Strike and dip of overturned beds
- 66 Strike and dip of cleavage

Northeast Crosscut
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' December 1, 1957
Geology by A.H.S.



Legend

- Bleached rocks
- Unbleached St. Regis Formation
- Strike and dip of sulfide veins
- Strike and dip of non-sulfide veins
- Strike and dip of faults
- Strike and dip of normal beds
- Strike and dip of overturned beds
- Strike and dip of cleavage

West Drift
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' December 1, 1957
Geology by A.H.S.

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 13 1958

DATE	INITIALS	CODE
1/13	gb	220
		110
		500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 29 1957

DATE	INITIALS	CODE
11-29	gb	220
11/2		100
		500

November 25, 1957

MEMORANDUM

To: DMEA Field Team, Region I

From: D. R. MacLaren and R. D. Sample, Geologists, U. S. Geological Survey

Subject: Interim Inspection Report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The above exploration project was visited and inspected on November 21, 1957 by the writers. Mr. N. W. Hutchinson, company geologist, accompanied the examiners through the 2000 level and explained the pertinent geological features along the main northwest crosscut and along the east and west drifts off the crosscut.

Crosscutting continues in a general N. 56° 30' E. direction through the thin-bedded calcareous, and greatly contorted beds of the Wallace formation. The total advance is now approximately 2,700 feet from the shaft or 1,600 feet from the east and west drifts. The ground near the face is becoming more firm and fewer roof bolts are required to hold the back and sides. Mr. Hutchinson believes that it will require about 1,900 feet additional advance on this crosscut to cut the Deadman fault zone.

The west drift which, according to company geologists, is within or very close to the Paymaster fault zone continues along the approximate contact between the St. Regis and Wallace formations in a general N. 82° W. direction and has advanced to about 1,300 feet from the main northwest crosscut. Diamond drill stations spaced about 200 feet apart are being cut along this west drift and diamond drilling is being carried on simultaneously with the drifting. No significant structures or mineralized areas have been found by the diamond drilling to date.

There has been no advance of the east drift since the initial advance of about 100 feet. This east drift is now being used for car storage and Mr. Hutchinson states that there is no immediate plan for continuing the drift.

Distribution:
DMEA (Orig. & 3)
USBM (2)
USBM (AD)
Docket
Sample

ACTION ON INTERIM
OR FINAL FIELD [illegible]M REPORT
Date 11-29-57

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. ~~Division~~
6. Docket Control Mails and Files
7. 500

Note comments in report regarding:

1.

2.

3.

4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams

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

RECEIVED DEC 9 1957 D.M.E.A.

~~Unsigned~~ Beety

Month of October, 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,435,880.00 Government Participation: 50 % Amount, $ 717,940.00

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 Units						
Surface		$ 15708.00	$ 15708.00	7/23/58 [illegible]	15708.00	15708.00
Drilling Underground	$ 7390.00	1620.00	9010.00	7390.00	1620.00	9010.00
Bulldozing Surface Plant		43893.22	43893.22		43893.22	43893.22
Crosscutting Pump Station		8000.00	8000.00		8000.00	8000.00
2000 Stations		6336.00	6336.00		6336.00	6336.00
Shaft		451360.00	451360.00		451360.00	451360.00
2000 Skip Pocket		3538.00	3538.00		3538.00	3538.00
(2) Labor and Supervision:						
Labor	14496.24	87112.83	101609.07	14496.24	87112.83	101609.07
Supervision	610.00	4330.79	4940.79	610.00	4330.79	4940.79
Technical Services	700.00	4852.43	5552.43	700.00	4852.43	5552.43
(3) Operating Matls. and Supplies: Rock Bolts	3519.06	11895.18	15414.24	3519.06	11895.18	15414.24
Timber		937.28	937.28		937.28	937.28
Explosives	2843.05	16483.84	19326.89	2843.05	16483.84	19326.89
Air and water Pipe	830.93	5209.15	6040.08	830.93	5209.15	6040.08
Ventilation	2543.18	12013.57	14556.75	2543.18	12013.57	14556.75
Track	1378.78	7565.35	8944.13	1378.78	7565.35	8944.13
Bits and Rods	509.85	5995.19	6505.04	509.85	5995.19	6505.04
Mine tools	31.89	265.92	297.81	31.89	265.92	297.81
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	1977.20	13718.41	15695.61	1977.20	13718.41	15695.61
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
A Repairs to Equipment	2356.61	16306.18	18662.79	2356.61	16306.18	18662.79
Sampling and Analysis	8.00	50.00	58.00	8.00	50.00	58.00
Payroll Taxes	168.79	1260.19	1428.98	168.79	1260.19	1428.98
Liability Insurance	526.64	4365.04	4891.68	526.64	4365.04	4891.68
B Employees Group Ins.	450.41	1348.32	1798.73	450.41	1348.32	1798.73
C Miscellaneous	(1959.65)	- 8805.98	6846.33	[illegible]	8805.98	6846.33
(8) Contingencies (specify):						
Electric Power	1075.33	5051.82	6127.15	1075.33	5051.82	6127.15
A Office Expense	82.78	547.25	630.03	82.78	547.25	630.03
Less in excess of Max.	46.51	(34318.72)	- (34272.21)	- 46.51		
TOTALS	$39585.60	$704251.22	$ 743836.82	39585.60	704251.22	743836.82

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Nov. 26, 1957 *Payee Hecla Mining Company
Per [signature] Title President

*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:

$ 19,792.80

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 12/6/57 Vou. No. 2086
(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. 6732 in accordance with the terms of the contract.

Signature /s/ John A. Bardill Title Metallurgist Date November 27, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Wissenborn Title Exec. Officer Date Dec. 2, 1957

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

RECEIVED DEC 9 1957 D.M.E.A.

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

Month of October 195 7 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho

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
Timbering	feet			$ 4498.56	217.5	$ 20.68		$ 11.00
~~Drilling~~ Assaying	samples	$ 8.00	2	58.00	13	4.46	1000	
Crosscutting & Drifting	feet	26377.34	621.4	207128.58	4027.9	51.42	15820	44.00
~~Raising~~ Sideswiping	cu.feet	476.69	852	3688.43	5057	.73	72000	.50
Shafts				451360.00	2080	217.00	2080	217.00
~~Winzes~~ Rock bolts		5287.06	884	24890.24	4757	5.23		5.00
Drilling: Core surface	feet			15708.00	2244	7.00	3000	7.00
~~Chum~~ U.G.	feet	7390.00	1478	9010.00	1802	5.00	25000	5.00
Auger								
~~Stripping~~ Pump station	cu.feet			8000.00	16268	.49	8000	1.00
~~Loading~~ 2000 station				6336.00				6,336.00
~~Haulage~~ Skip pocket				3538.00				3,538.00
Roads and Trails								
Surface plant				43893.22				45,500.00
Total Distributed Costs		$39539.09		$778109.03				Total Costs Authorized by Contract
Oct.1957 minimum underages applied to Sept.1957 excesses (See Sept. 1957 report)								
Crosscutting & Drifting		964.26						
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
*Excess of maximums (see below)		(917.75)	-	(34272.21)	-			
Total Costs		$39585.60		$743836.82				

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 November 26, 1957 Operator Hecla Mining Company

Per [signature] Title President

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)

	Actual Costs: This Month	Actual Costs: Total to Date	Maximum Costs: This Month	Maximum Costs: Total to Date	Total in Excess or (under) Maximum: This Month	Total in Excess or (under) Maximum: Total to Date
*Drifting & X-cutting	$26377.34	$ 207,128.58	$ 27341.60	$ 177,227.60	$ (964.26)-	$ 29,900.98
*Sideswiping	476.69	3,688.43	426.00	2,528.50	50.69	1,159.93
*Rock Bolts	5287.06	24,890.24	4420.00	23,785.00	867.06	1,105.24
*Timbering	- -	4,498.56	- -	2,392.50	- -	2,106.06

/s/ John A. Gardill

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO
November eleventh
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver Mountain Project - October 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

Progress on the Silver Mountain 2000 level during October included 407.4 feet of crosscutting, 214.0 feet of drifting, 27.6 feet of sideswiping (852 cubic feet) and 1478 feet of diamond drilling. A total of 884 rock bolts were put in. 361 of these were in the Northeast crosscut, 489 in the West drift, 9 in 3E South crosscut, 10 in 20 W South crosscut and 15 in 21 W North crosscut.

The Northeast crosscut advanced 357.4 feet to a point 2518.0 feet from the 2000 level station. The West drift advanced 214.0 feet to a point 1189.0 feet from the main crosscut. Three diamond drill crosscuts were completed. In the West drift 20 W South crosscut and 21 W North crosscut were driven 22.3 feet and 19.2 feet respectively. In the East drift 3 E South crosscut was driven 8.5 feet. 9.8 feet of sideswiping (384 cubic feet) for car transfer was done in the Northeast crosscut and 9.3 feet (298 cubic feet) in the West drift. 3.5 feet of sideswiping (80 cubic feet) was done in 20 W South crosscut and 5.0 feet (90 cubic feet) in 21 W North crosscut.

As shown on the attached 50 scale map of the Northeast crosscut, the advance in this heading was all in thin bedded, unbleached rocks of the Wallace formation. These rocks continued to be considerably sheared and crumpled. No mineralization or structures of importance were exposed.

During most of the month advance in the West drift was in unbleached purple St. Regis rocks. However, near the end of the month this drift passed through a rather strong northwesterly striking fault beyond which the rocks have all been bleached and have shown occasional small disseminated specks of tetrahedrite.

Diamond drill hole No. SM2001 was completed to a depth of 600 feet for an advance of 276 feet and hole No. SM2002 was drilled 700 feet in a southerly direction from the face 14 W South crosscut. As shown in the attached logs of these two holes no significant mineralization was encountered.

Hole No. SM2003 was started southeasterly from the face of 3E South crosscut in the East drift and had reached a depth of 502.0 feet at the end of October.

Yours very truly,

M. W. Hutchinson

M. W. Hutchinson

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

October - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Labor				
Hecla-Silver Mountain labor				
Drift miners				
Crosscutting 357.4' @ $10.50	$ 3 752 70			$ 3 752 70
Drifting 214.0' @ $10.50	2 247 00			2 247 00
Diamond drill x-cut 50.0' @ $10.50	525 00			525 00
Sideswiping 27.6' @ $5.25		$ 144 91		144 91
Rock bolts 884 @ $2.00 (hold ground)			$ 1 768 00	1 768 00
27 @ $2.00 (hang vent pipe)	54 00			54 00
Allowance for delays	34 24	76		35 00
Shift differential:				
80 shifts @ $0.40	31 30	70		32 00
81½ shifts @ $0.80	63 78	1 42		65 20
Holiday time	19 02	42		19 44
Vacations	217 88	4 84		222 72
Pusher allowance 69 shifts @ $0.96	64 80	1 44		66 24
Total drift miners	$ 7 009 72	$ 154 49	$ 1 768 00	$ 8 932 21
Topman				
4 3/4 shifts @ $18.64	$ 86 62	$ 1 92		$ 88 54
Laborer				
22 1/4 shifts @ $17.20	$ 374 38	$ 8 32		$ 382 70
9 shifts @ $16.64	146 52	3 25		149 77
	$ 520 90	$ 11 57		$ 532 47
Cager				
35 shifts @ $17.68	$ 605 36	$ 13 44		$ 618 80
18 shifts @ $18.08	318 45	7 07		325 52
21½ shifts @ $18.48	388 68	8 64		397 32
	$ 1 312 49	$ 29 15		$ 1 341 64
Hoistman				
23 shifts @ $19.60	$ 441 00	$ 9 80		$ 450 80
23 shifts @ $20.00	450 00	10 00		460 00
23 shifts @ $20.40	459 01	10 19		469 20
Vacation	114 58	2 54		117 12
	$ 1 464 59	$ 32 53		$ 1 497 12
Miner - Shaft				
Vacation	$ 254 19	$ 5 65		$ 259 84

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Labor
October - 1957
Page 2

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Star labor (custom)				
Star mine payroll	$ 1 441 75	$ 32 02		$ 1 473 77
Accounting				
Hecla	$ 146 74	$ 3 26		$ 150 00
Star	215 86	4 79		220 65
	$ 362 60	$ 8 05		$ 370 65
Total labor	$ 12 452 86	$ 275 38	$ 1 768 00	$ 14 496 24
Supervision				
Hecla-Silver Mountain	$ 596 75	$ 13 25		$ 610 00
Technical				
Hecla	$ 605 99	$ 13 46		$ 619 45
Star	78 80	1 75		80 55
	$ 684 79	$ 15 21		$ 700 00
Total	$ 13 734 40	$ 303 84	$ 1 768 00	$ 15 806 24

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

October - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total	
Bits and rods					
Drill steel	$ 495 58	$ 11 01		$ 506 59	
Bit grinder repair	3 19	07		3 26	
	$ 498 77	$ 11 08		$ 509 85	
Compressed air					
Compressor supplies	$ 231 85	$ 5 15		$ 237 00	(7-A)
Drill repair					
Drill machine supplies	$ 877 55	$ 19 49		$ 897 04	(7-A)
Explosives					
9750 lbs. powder	$ 1 923 41	$ 42 72		$ 1 966 13	
3309 delays	806 46	17 91		824 37	
Annunciator wire	51 41	1 14		52 55	
	$ 2 781 28	$ 61 77		$ 2 843 05	
Hoisting					
Sale of 2391' used 7/8" hoist cable	$ (122 27)-	$ (2 72)-		$ (124 99)-	
Supplies - Hoist	91 38	2 03		93 41	
- Shaft	264 93	5 88		270 81	
Transportation of outside labor and freight (mileage)	31 42	71		32 13	
	$ 265 46	$ 5 90		$ 271 36	(7-A)
Ventilation					
27 roof bolts - Complete (hang vent pipe)	$ 107 48			$ 107 48	
Supplies - Vent line	50 26	$ 1 12		51 38	
Transportation of outside labor and freight (mileage)	1 96	04		2 00	
	$ 159 70	$ 1 16		$ 160 86	(7-A)
Surface miscellaneous					
Miscellaneous equipment supplies	$ 54 80	$ 1 22		$ 56 02	(7-A)
Dry building supplies	51 60	1 15		52 75	(7-A)
Heat dry building	55 65	1 23		56 88	(7-C)
Miscellaneous	48 52	1 07		49 59	(7-C)
Transportation of outside labor and freight (mileage)	206 98	4 60		211 58	(7-A)
	$ 417 55	$ 9 27		$ 426 82	
Miscellaneous - Underground					
Transportation supplies (haulage underground)	$ 95 08	$ 2 11		$ 97 19	(7-A)
Mucker supplies	202 80	4 51		207 31	(7-A)
Mine tools	31 20	69		31 89	
Mileage (transportation of outside labor and freight)	20 70	46		21 16	(7-A)
	$ 349 78	$ 7 77		$ 357 55	

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other
October - 1957
Page 4

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total	
Electric power					
171,200 kilowatts	$ 1 051 97	$ 23 36		$ 1 075 33	
General expense					
Office expense	$ 48 92	$ 1 08		$ 50 00	(8-A)
Telephone and telegraph	32 07	71		32 78	(8-A)
Group accident insurance - Employees	386 65	8 59		395 24	(7-B)
Group life insurance - Employees	53 97	1 20		55 17	(7-B)
	$ 521 61	$ 11 58		$ 533 19	

Retirement expense (adjusted)	Payroll	Expense @ 3½%
February - 1957	$ 531 12	$ 19
March - 1957	9 142 23	320
April - 1957	12 552 73	439
May - 1957	10 997 57	385
June - 1957	9 200 01	322
July - 1957	12 605 17	441
August - 1957	10 773 15	377
September - 1957	13 161 51	460
October - 1957	13 295 09	466
Total adj. charge	$ 92 258 58	$ 3 229
Less prev. charged:		
July - 1957		$ 1 898
August - 1957		1 834
Sept. - 1957		1 917
Total		$ 5 649
Charge for October-1957		$(2 420)-

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total	
	$ (2 367 42)-	$(52 58)-		$(2 420 00)-	(7-C)
Shop and payroll expense					
Star labor @ 20%	$ 288 35	$ 6 40		$ 294 75	
Wallace office @ 10%	14 67	33		15 00	
Burke office (Star) @ 20%	43 17	96		44 13	
	$ 346 19	$ 7 69		$ 353 88	(7-C)
Taxes - Social security					
F.o.a.b. $6,204.00 2.25%	$ 136 56	$ 3 03		$ 139 59	
Federal U.C. $4,866.67 .30%	14 28	32		14 60	
Idaho U.C. $4,866.67 .30%	14 28	32		14 60	
	$ 165 12	$ 3 67		$ 168 79	
Payloader expense					
Supplies	$ 194 91	$ 4 33		$ 199 24	
Gasoline tax refund-State of Idaho	(53 71)-	(1 19)-		(54 90)-	
	$ 141 20	$ 3 14		$ 144 34	(7-A)
Workmen's compensation expense					
Industrial Indemnity Co.					
$7,708.94 @ $5.693 per $100	$ 429 34	$ 9 53		$ 438 87	
20% surcharge	85 86	1 91		87 77	
	$ 515 20	$ 11 44		$ 526 64	

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other
October - 1957
Page 5

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Total
Air and water lines				
571.4' 4" air line	$ 428 55			$ 428 55
571.4' 2" water line	302 84			302 84
420' 1" pipe	72 16			72 16
6 plug cocks	19 20			19 20
Miscellaneous pipe fittings	8 18			8 18
	$ 830 93			$ 830 93
Track				
571.4' rail	$ 1 079 95			$ 1 079 95
229 ties	162 59			162 59
153# track bolts	31 75			31 75
76 pair splice bars	51 68			51 68
381# track spikes	52 81			52 81
	$ 1 378 78			$ 1 378 78
Ventilation				
357.4' 24" vent pipe	$ 1 772 35			$ 1 772 35
214.0' 20" vent pipe	770 83			770 83
	$ 2 543 18			$ 2 543 18
Rock bolts				
884 rock bolts - Complete (hold ground)			$ 3 519 06	$ 3 519 06
Equipment depreciation (see analysis)				
100% x $1,977.20	$ 1 934 24	$ 42 96		$ 1 977 20
Total supplies and other	$ 12 642 94	$ 172 85	$ 3 519 06	$ 16 334 85
Total labor and supplies to form 104-A	$ 26 377 34	$ 476 69	$ 5 287 06	$ 32 141 09

Summary of crosscutting and drifting

North crosscut	$ 15 011 27
East drift	341 49
West drift	11 024 58
	$ 26 377 34

Schedule A

BECLA-S[illegible]R MOUNTAIN PROJECT

Summary of Equipment Values and Equipment Depreciation
Month of October - 1951

		Depreciable	Non-Depreciable
(A)	Summary of equipment		
A-1	Surface equipment - 60 month life	178601	4618
A-2	- 120 month life	1936729	1225898
A-3	Underground electrical - 120 month life	1684418	617589
A-4	Ventilation - 60 month life	962131	-0-
A-5	Pumping - 60 month life	2914916	-0-
A-6	Mining equipment - 60 month life	3018906	3189243
A-7	- 120 month life	2031172	-0-
A-8	Shaft sinking equipment	-0-	2294620
	Total values	16340273	14326968

Depreciation	
Surface - 60 month life	2977
- 120 month life	2497
Underground electrical - 120 month life	1403
Ventilation - 60 month life	1636
Pumping - 60 month life	4858
Mining - 60 month life	5031
- 120 month life	2581
Total depreciation	20852

Schedule 831

[illegible]LA-SILVER MOUNTAIN PROJECT

Equipment Values

Month of October - 1957

	Depreciable	Non-Depreciable
Auxiliary equipment - 60 month life		
Dry house equipment (Blacksmith)	6050	
Gas lamps	141.76	
Gas lamps - Installation		46.19
Drill - S/P	925.25	
Extinguishers - Fire	258.50	
Floodlights	204.65	
Furnace	985.57	
Grinder, bit	572.17	
Hangers, dry	104.30	
Hoisting plant installation	677.7	
Hose, water	258.5	
Loader, hough	12,490.55	
Reels and drums	600	
Stretchers	125.00	
Tank, hot water	2,704	
Vise	9.00	
Fan, electric	187.2	
Welder	100.00	
Wheelbarrow	25.76	
Timber Tunnel	6000	
Drill - 4' Electric Elev	5000	
	17,264.01	46.19

Schedule A-2

[illegible]LA-SILVER MOUNTAIN PROJECT

Equipment Values

Month of October - 1957

	Depreciable	Non-Depreciable
Surface equipment - 120 month life		
Compressor		
Air receiver	2500	
	155 96	
Compressor	402195	
Compressor	5779 67	
Installation	1671	167965
Hoist - 120 month life		
Heater	7030	
Hoist	1200000	
Installation		1057933
Skips and cages	44904	
Hoist motor	212500	
Skip dump installation	673 66	
	2936729	1225198

Schedule A-2

[redacted]A-SILVER MOUNTAIN PROJECT

Compiled values
Month of October 1957

	Depreciable	Non Depreciable
Underground electrical - 120 month life		
Electrical installation - Labor	75414	268972
- Miscellaneous	37621	110737
Bring-in lines		100000
Electric cable	5799 74	359 59
Circuit breakers	353 32	406 45
Circuit breakers	1113 86	
Cutouts	278 70	5125 59
Fuse links	210	1152
Switchboard and panel - 1	711 45	
Switchboard	30000	
Mine telephone	10000	
Switches	13660 1	
Transformer - 15 KVA	1710 0	
~~Transformers - 3-40 KVA~~		
Transformers - 3-5 KVA	12540 0	5437
Transformers - 3-1½ KVA	5300	
Wire		3458
Telephone - Mine	2435 75	
Starter	635 75	
Substation - 2000		
G. E. 45 KVA transformer - 1	7045 0	
West. 440 volt linestarter - 1	131 11	
Transformers 100,5 amp - 2	505 0	
G. E. cutouts - 3	173 25	
50 A cutouts - 8	659 2	
100 A cutouts - 5	92 15	
200 A cutouts - 1	33 35	
circuit breakers - 2	1258 7	
5 KVA transformer - 1	102 0	
G. E. 200 amp circuit breakers - 2	1500 0	
Miscellaneous	583 77	
Labor - Silver Mountain	260 76	
Labor - Star	1126 09	
Potheads - 2	103 90	
	16 844 18	6175 37

Schedule 9-A

[redacted]-SILVER MOUNTAIN PROJECT
Equipment Value
Month of October 1957

	Depreciable	Non Depreciable
Ventilation equipment - 60 month life		
~~Depreciable life four-4~~		
Fan - 1	31503	
Fan engine - 1	27888	
Blower, IR	590456	
Fan, Jay	72552	
Fan installation	229732	

Schedule A-5

[illegible]CLA-SILVER MOUNTAIN PROJECT

Equipment Value

Month of October 1951

	Depreciable	Non Depreciable
Pumping equipment - 60 month life		
1½ MXV 30 - 30 H.P. Pumps	330263	
1½ RV3 - 3 H.P. pump	22551	
Pumping installation	67724	
Motors - Pump	249817	
Pump starter - 2000 pump	110125	
~~Pump-jet~~		
Pump tanks	77000	
Pump - 2000 level	323234	
2000 Pump and dam installation	225455	
Pump	306353	
Pump starter - 2000 pump	110125	
Pump - Jet	31945	
Pump - IR	39430	
2000 Pump and dam installation	445577	
Pump - IR - Stand by	286476	
Pump motor	278800	
Tank lifter	15030	

2914916 - 0 -

Schedule A-6

MICLA-SILVER MOUNTAIN PROJECT

Equipment Value

Month of October-1957

	Depreciable	Non-Depreciable
Mining equipment - 60 month life		
Drifters - 6	4,338.32	
Hoist, 300 HP	1,150.00	
Stopers - 2	1,136.42	
Trench, Ingersoll - 2	803.50	
2000 Chute gate	1,804.17	
Jumbos	4,503.23	
Rocherchevel - 2	8,773.68	
Drill, rock	792.37	
2000 Timbers, drifts and X-Cuts		31,842.43
Transfers - Car	1,342.82	
Car replacers	73.46	
T & T Hoist	191.25	
Rail bender	116.00	
Jackhamer	785.00	
Jack, track	27.84	
Rear valves	137.70	
Battery charger	1,590.00	
Car vibrator	127.50	
Battery charger - Installation	310.77	
Battery "Hanger"	540.13	
Scraper, Pacific 70"	288.26	
Hoist, Hughes	887.40	
	30,128.06	31,842.43

Schedule A-7

CLA-SILVER MOUNTAIN PROJECT

Equipment Values

Month of October - 1957

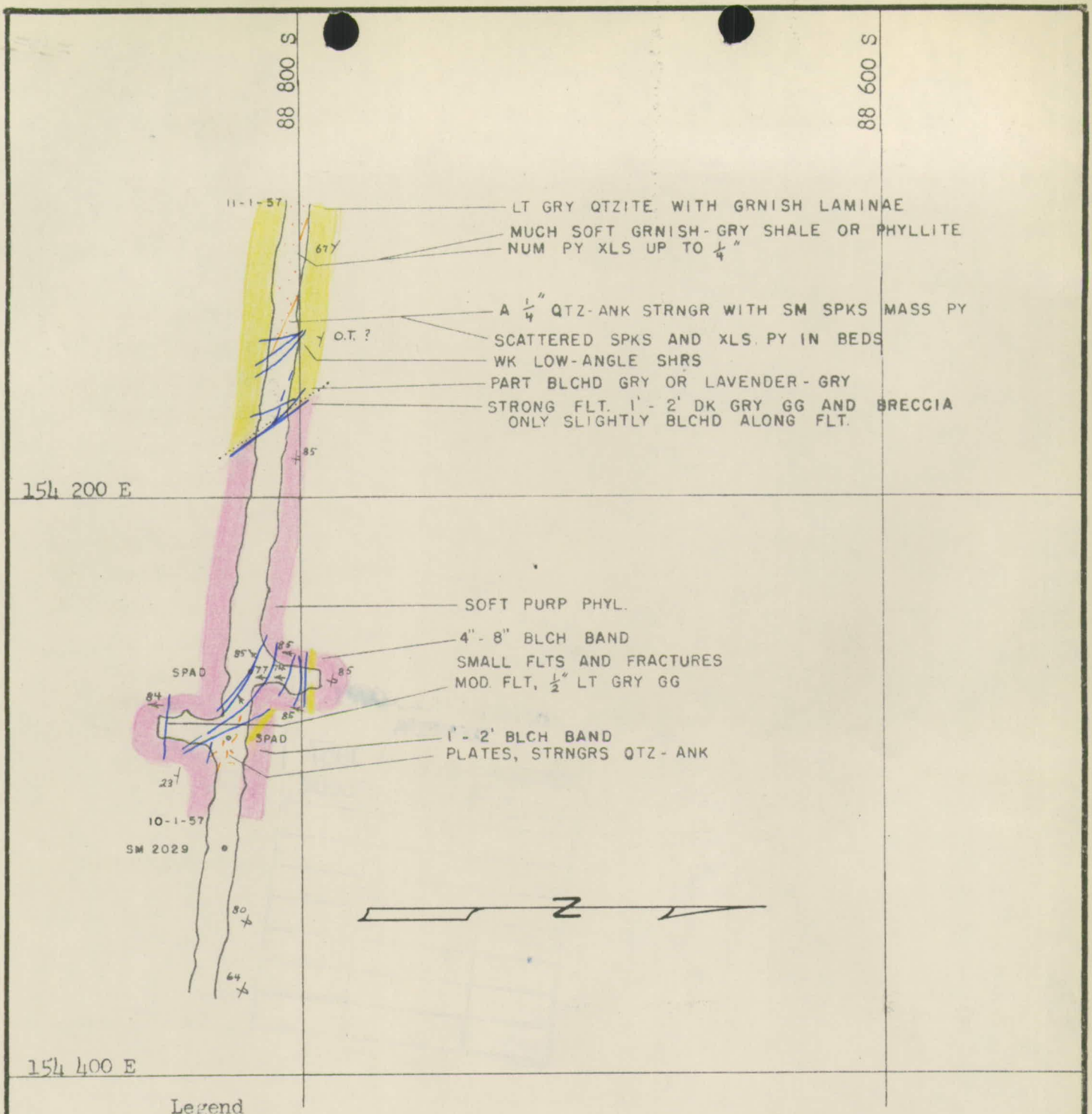
	Depreciable	Non Depreciable
Mining equipment - 120 month life		
~~Mine car~~		
Locomotive	1533392	
Batteries - Locomotive	753385	
Battery boxes	54395	
Cars - Mine	696000	

Schedule [illegible]

Shaft sinking equipment

- Bars - Air
- Blasting machine
- Blasting mat
- Jackhammers - 5
- Mucker - Shaft
- Oxygen supplies
- Pump - Sump
  - Sump - 2
- Shaft sets
- Shaft signals and lights
- Skips and cages
- Small tools
- Ventilation
- ~~[illegible]~~
- Fan 1-19 portable
- Bucket - Clamshell

Indirect charges



Legend

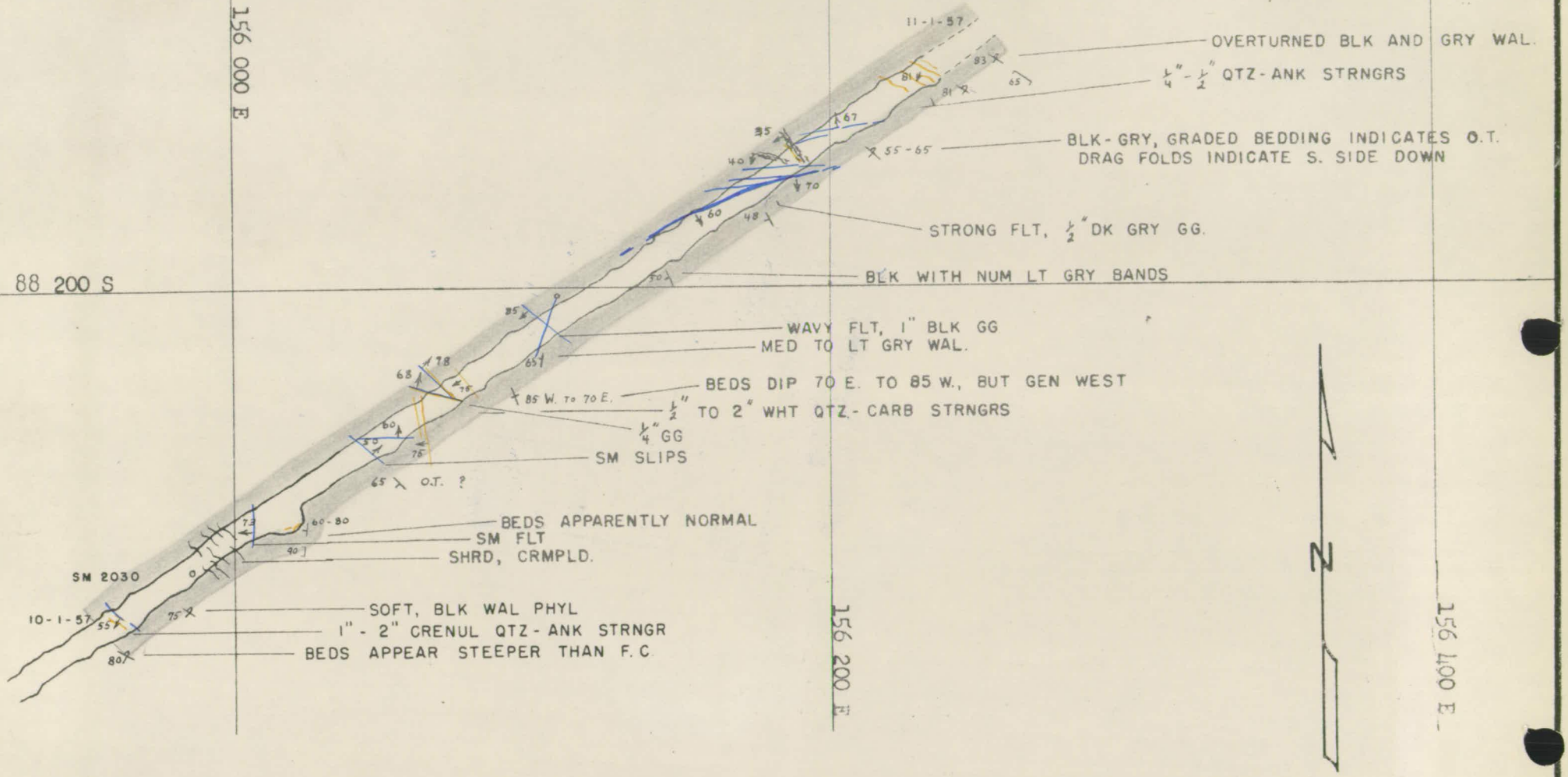
- Bleached rocks
- Unbleached St. Regis Formation
- 70 Strike and dip of sulfide veins
- 72 Strike and dip of non-sulfide veins
- 65 Strike and dip of faults
- 80 Strike and dip of normal beds
- 86 Strike and dip of overturned beds
- 65 Strike and dip of cleavage

West Drift
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' November 1, 1957
Geology by A.H.S.

OFFICIAL FILE COPY
IDMRE-AA
RECEIVED DEC 9 1957

DATE	INITIALS	CODE



Legend

- Bleached rocks
- Unbleached Wallace Formation
- Strike and dip of sulfide veins
- Strike and dip of non-sulfide veins
- Strike and dip of faults
- Strike and dip of normal beds
- Strike and dip of overturned beds
- Strike and dip of cleavage

Northeast Crosscut
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' November 1, 1957
Geology by A.H.S.

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 9 1957

DATE	INITIALS	CODE

Map for MF 104
for October -

~~DA[illegible]~~

BUREAU OF MINES
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

OFFICIAL BUSINESS

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

October 31, 1957

RECEIVED NOV 12 1957

DATE		
11-12	C	220
12	Com	100
11-29	~~[illegible]~~	SUN

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

This project was inspected October 25, 1957, accompanied by Mr. M. W. Hutchinson, company geologist.

The 2000 level North Crosscut had been driven approximately 2,428 feet from the station since the start of the contract. The face was in Wallace formation. No important mineralization or structures had been cut since the last inspection. A 15-foot section was timbered between Sta. SM2028 + 40 feet to 55.4 feet. A car transfer was side-swiped at approximately Sta. SM2030 + 37 feet.

At the end of the East Drift an 8.5-foot crosscut was driven to the south for a diamond drill station. The drill had been set up and hole No. SM2003 had been drilled to a depth of 84 feet bearing S. 15° E. The hole will probably be drilled to a depth of about 650 feet.

The 2000 level West Drift had been driven about 1,127 feet from the main crosscut. The face of the drift was in unbleached St. Regis formation. No significant structures or mineralization had been intercepted.

Two diamond drill stations, 14WS and 20 WS, had been cut south from the drift and one station, 21WN, had been cut toward the north.

Diamond drill hole SM2001 was drilled southerly from diamond drill station No. 7W south crosscut to 600 feet. At roughly 300 feet the bleached St. Regis formation was cut. At 524 feet a strong 3-inch, high grade stringer was cut. There is still some doubt which is the Paymaster fault.

Diamond drill hole No. SM2002 was drilled from 14W crosscut bearing S. 13° W. to a depth of 700 feet. No mineralization or structure of consequence was encountered.

The following survey data is taken from company transit surveys, The distances between survey stations were checked and confirmed at the time of the inspection.

2000 Level Tail Drift

No change		103.3 feet

2000 Level North Crosscut

Previously reported distance from shaft station to SM2026		1,760.91 feet
SM2026 - 2028	N 56 - 28 - 30 E	236.09
2028 - 2030	N 56 - 28 - 30 E	205.94
		2,202.94
SM2030 to face		227
		2,427.94 feet

Timbered from SM2028 + 40 ft. to 55.4 ft. 15.4 feet

Sideswiping Car Transfer at SM2030 + 37.5 ft. on east side

4' x 5' x 12' = 240.0 cu.ft.

2000 Level West Drift

Previously reported distance from main crosscut to SM2025		509.72 feet
SM2025 - 2027	N 82 - 49 - 00 W	194.45
2027 - 2029	N 82 - 48 - 00 W	260.0
		962.37
SM2029 to face		165
		1,127.37 feet

Diamond drill stations in 2000 Level West Drift

Center of Station 14 WS at SM2027 for drill hole No. 2002

Crosscut 17 feet

Center of Station 20 WS at SM2029 + 35 feet

Crosscut 22.3 feet

Center of Station 21 WN at SM2029 + 65 feet

Crosscut 19.2 feet

Additional sideswipe 9' 3" x 8 x 4 = 296 cu. ft.

2000 Level East Drift

No advance in drift.

Center of Station for diamond drill hole SM2003 to the south at the end of the drift.

Crosscut 8.5 feet

Rock bolts

	North Crosscut	West Drift	East Drift	D.D. Stations
Previously reported	2,121	906	313	0
September	251	377		14
	2,372	1,283	313	14

Total 3,982 bolts

The status of the contract at the time of the inspection was:

Date of contract: October 21, 1954
Termination date: August 1, 1959
Amount of contract: $1,435,880.00
Amount spent: 704,251.22 (thru Sept. 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Underground diamond drilling	25,000 ft.	1,384 ft.
Assays	1,000	11
Crosscutting and drifting		
Tail drift)		103.3
North crosscut)		2,428
East drift)	15,820 ft.	137.5 1/
West drift)		1,127
D.D. station crosscuts)		94
		3,889.8 ft.
Sideswiping	72,000 cu.ft.	4,154 cu. ft.
* Timbering		217.5 ft.
* Rock bolts		
North crosscut		2,372
West drift		1,283
East drift		313
D.D. stations		14
		3,982 bolts

1/ Correction from Sept. 18, 1957 report
* As necessary.

Distribution: Docket
DMEA (4) Bardill
USGS (2)
USBM (AD)

John D. Bardill

Form MF-204 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED DEC 9 1957 D.M.E.A.

Unannounced Betty

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

Month of September 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company
Address Box 320, Wallace, Idaho Mineral Lead, zinc, copper
Contract Amount, $ 1,435,880.00 Government Participation: 50 % Amount, $717,940.00

ITEMS OF COSTS	Units	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 Contrctg. Short Form: Surface					7/23/58 O.K.		
Underground		1620.00	$ 15708.00	$ 15708.00		15708.00	15708.00
Drilling				1620.00	1620.00		1620.00
Bulldozing Surface Plant			43893.22	43893.22		43893.22	43893.22
Crosscutting Pump Stations			8000.00	8000.00		8000.00	8000.00
Shaft 2000 Stations			6336.00	6336.00		6336.00	6336.00
2000 Skip Pocket			451360.00	451360.00		451360.00	451360.00
			3538.00	3538.00		3538.00	3538.00
(2) Labor and Supervision:							
Labor		14580.10	72532.73	87112.83	14580.10	72532.73	87112.83
Supervision		610.00	3720.79	4330.79	610.00	3720.79	4330.79
Technical Services		700.00	4152.43	4852.43	700.00	4152.43	4852.43
(3) Operating Mtls. and Supplies: Rock Bolts		1801.95	10093.23	11895.18	1801.95	10093.23	11895.18
Timber			937.28	937.28		937.28	937.28
Explosives Air and water		3225.94	13257.90	16483.84	3225.94	13257.90	16483.84
Pipe Ventilation		858.71	4350.44	5209.15	858.71	4350.44	5209.15
Track		2538.05	9475.52	12013.57	2538.05	9475.52	12013.57
Bits and rods		1337.34	6228.01	7565.35	1337.34	6228.01	7565.35
Mine tools		1609.77	4385.42	5995.19	1609.77	4385.42	5995.19
		33.94	231.98	265.92	33.94	231.98	265.92
(4) Operating Equipment:							
Rental							
Purchase							
Depreciation		1977.20	11741.21	13718.41	1977.20	11741.21	13718.41
(5) Initial Rehabilitation and Repairs							
(6) New Bldgs., Improvements, etc.							
(7) Miscellaneous:							
Repairs to Equipment		3515.79	12790.39	16306.18	3515.79	12790.39	16306.18
Sampling and Analysis			50.00	50.00		50.00	50.00
Payroll Taxes		152.51	1107.68	1260.19	152.51	1107.68	1260.19
B Liability Insurance Employees Group Ins.		472.13	3892.91	4365.04	472.13	3892.91	4365.04
C Miscellaneous		237.94	1110.38	1348.32	237.94	1110.38	1348.32
		2377.20	6428.78	8805.98	2377.20	6428.78	8805.98
(8) Contingencies (specify): Electric power		1094.37	3957.45	5051.82	1094.37	3957.45	5051.82
A Office expense		91.31	455.94	547.25	91.31	455.94	547.25
Less in excess of max.		(4150.85)-	(30167.87)-	(34318.72)-			
TOTALS		$34677.40	$669573.82	$704251.22	34677.40	669573.82	704251.22

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Oct. 24, 1957 *Payee Hecla Mining Company

Per John R. Matthews Title Secretary

*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:

$ 17,338.70

Signature Dorothy F. Lay
(Authorized Certifying Officer)

Date 12/6/57 Vou. No. 2086
(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. 6732 in accordance with the terms of the contract.

Signature /s/ John A. Lardell Title Metallurgist Date Oct. 31, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Wing G. Agnew Title Acting Exec. Date 11-5-57

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

RECEIVED DEC 9 1957 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1957 Docket No. DMEA 3406 Contract No. DMEA-732

Operator's Name Hecla Mining Company Minerals Lead, zinc, copper

Address Box 320, Wallace, Idaho

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
Timbering	Feet	$ 314.89	15.4	4498.56	217.5	$ 20.68		$ 11.00
Drilling: Assaying				50.00	11	4.55	1000	
Crosscutting & drifting	feet	33313.23	664.0	180751.24	3406.5	53.00	15020	44.00
Raising: Sideswiping	cu.ft.	500.18	924	3211.74	4205	.76	72000	.50
Shafts				451360.00	2080	217.00	2000	217.00
Winzes: Rock bolts		3085.95	642	19603.18	3873	5.06		5.00
Drilling: Core: surface	feet			15708.00	2244	7.00	3000	7.00
Churn: U.G.	feet	1620.00	324	1620.00	324	5.00	25000	5.00
Auger								
Stripping: Pump stations	cu.ft.			8000.00	16268	.49	8000	1.00
Trenching: 2000 station				6336.00				6336.00
Test Pits: 2000 skip pkt.				3538.00				3538.00
Roads and Trails								
Surface Plant				43893.22				45500.00
Total Distributed Costs		$30834.25		$ 738569.94				Total Costs Authorized by Contract
Aug. 1957 maximum excess applied to Sept. 1957 underages (See Aug. 1957 report)								
Rock bolts								
Operating Equipment Purchased		124.09						
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
* Excess of Max. (see below)		(4280.99)-		34318.72)-				
Total Costs		$26677.36		($704251.22				

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.

Remarks:

Date October 24, 1957 Operator Hecla Mining Company

Per John R. Matthews Title Secretary

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)

	Actual Costs: This month	Actual Costs: Total to Date	(For Government Use Only) Maximum Costs: This month	Maximum Costs: Total to Date	Total in excess or (under) maximum: This month	Total in excess or (under) maximum: Total to Date
* Drifting & Crosscutting	$ 33313.23	$ 180751.24	$ 29216.00	$ 149886.00	$ 4097.23	$ 30865.24
* Sideswiping	500.18	3211.74	462.00	2102.50	38.18	1109.24
* Rock bolts	3085.95	19603.18	3210.00	19365.00	(124.05)-	238.18
* Timbering	314.89	4498.56	169.40	2392.50	145.49	2106.06

/s/ John A. Sardell

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

October tenth
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver Mountain Project - September 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

Progress on the Silver Mountain 2000 level during September included 349.3 feet of crosscutting, 314.7 feet of drifting, 23.3 feet of sideswiping (924 cubic feet) and 324.0 feet of diamond drilling. A total of 642 rock bolts were put in, of which 251 were in the northeast crosscut, 377 in the west drift and 14 in No. 7W diamond drill crosscut.

The main northeast crosscut was advanced 332.2 feet to a point 2160.6 feet from the 2000 level station. The west drift was advanced 314.7 feet to a point 975 feet from the main crosscut. The second diamond drill crosscut (14W south crosscut) was completed with an advance of 17.0 feet. 11.8 Feet of sideswiping (487 cubic feet) for car transfer was done in the northeast crosscut and 11.5 feet (437 cubic feet) in the west drift.

As shown on the attached 50 scale map of the northeast crosscut, rocks exposed in this heading during the month were predominately thin bedded unbleached Wallace argillites with occasional narrow bleached bands. The rocks were generally sheared and somewhat contorted, and it was necessary to timber a 15.4 foot section of the crosscut.

In the west drift, advance began at the approximate contact between bleached Wallace and bleached St. Regis rocks and continued for about 120 feet in bleached St. Regis. The drift then passed into more massive unbleached St. Regis beds and continued in these purple rocks for the remainder of the month. No mineralization of significance was exposed in either the northeast crosscut or the west drift during the month.

Diamond drill hole No. SM2001 was started southerly from the face of 7W south crosscut and had reached a depth of 324.0 feet at the end of September. A log of this hole will be submitted with the report for October.

Yours very truly,

M. W. Hutchinson

M. W. Hutchinson
Geologist

MWH:hdh:jh

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

September - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Labor					
Hecla-Silver Mountain labor					
Drift miners					
Crosscutting 332.3' @ $10.50	$ 3 489 15				$ 3 489 15
Drifting 314.7' @ $10.50	3 304 35				3 304 35
Diamond drill crosscut 17.0' @ $10.50	178 50				178 50
Timbering 15.4' @ $5.00				$ 77 00	77 00
Sideswiping 23.3' @ $5.25		$ 122 33			122 33
Rock bolts 642 @ $2.00 (hold ground)			$ 1 284 00		1 284 00
27 @ $2.00 (hang vent pipe)	52 50	92		58	54 00
Shift differential:					
82 shifts @ $0.40	31 89	56		35	32 80
83-1/2 shifts @ $0.80	64 94	1 14		72	66 80
Caging, blasting & mucking allow.	38 89	68		43	40 00
Overtime	34 77	61		38	35 76
Holiday time	222 91	3 91		2 46	229 28
Pusher allowance 63 shifts @ $0.96	58 80	1 03		65	60 48
Vacations	227 73	4 00		2 51	234 24
Total drift miners	$ 7 704 43	$ 135 18	$ 1 284 00	$ 85 08	$ 9 208 69
Topman					
12-5/16 shifts @ $19.60	$ 234 59	$ 4 12		$ 2 59	$ 241 30
Overtime	31 16	54		35	32 05
	$ 265 75	$ 4 66		$ 2 94	$ 273 35
Cager					
24-3/16 shifts @ $17.68	$ 415 75	$ 7 29		$ 4 60	$ 427 64
21 shifts @ $18.08	369 13	6 48		4 07	379 68
20 shifts @ $18.48	359 33	6 30		3 97	369 60
Overtime	32 38	57		36	33 31
	$ 1 176 59	$ 20 64		$ 13 00	$ 1 210 23
Hoistman					
21 shifts @ $19.60	$ 400 16	$ 7 03		$ 4 41	$ 411 60
21 shifts @ $20.00	408 33	7 16		4 51	420 00
21 1/2 @ $20.40	426 41	7 48		4 71	438 60
Overtime	43 46	76		48	44 70
Vacation	113 86	2 00		1 26	117 12
	$ 1 392 22	$ 24 43		$ 15 37	$ 1 432 02
Miner					
2 shifts @ $19.44	$ 37 80	$ 0 66		$ 0 42	$ 38 88
1 shift @ $19.04	18 51	33		20	19 04
	$ 56 31	$ 99		$ 62	$ 57 92

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Labor - Page 2
September - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Laborer					
9 shifts @ $18.64	$ 163 10	$ 2 86		$ 1 80	$ 167 76
5 shifts @ $16.72	81 28	1 43		89	83 60
5 shifts @ $17.20	83 60	1 47		93	86 00
	$ 327 98	$ 5 76		$ 3 62	$ 337 36
Star labor (custom)					
Star mine payroll	$ 1 662 99	$ 29 18		$ 18 36	$ 1 710 53
Accounting					
Hecla	$ 145 83	$ 2 56		$ 1 61	$ 150 00
Star	194 44	3 41		2 15	200 00
	$ 340 27	$ 5 97		$ 3 76	$ 350 00
Total labor	$ 12 926 54	$ 226 81	$ 1 284 00	$ 142 75	$ 14 580 10
Supervision					
Hecla-Silver Mountain	$ 296 52	$ 5 20		$ 3 28	$ 305 00
Vacation	296 52	5 20		3 28	305 00
	$ 593 04	$ 10 40		$ 6 56	$ 610 00
Technical					
Hecla	$ 611 44	$ 10 73		$ 6 75	$ 628 92
Star	69 10	1 21		77	71 08
	$ 680 54	$ 11 94		$ 7 52	$ 700 00
Total labor	$ 14 200 12	$ 249 15	$ 1 284 00	$ 156 83	$ 15 890 10

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

September - 1957

	Drifting and Crosscutting	Side-Swiping	Rock Bolting	Timbering	Total	
Bits and rods						
Bits	$ 44 72	$ 0 78		$ 0 50	$ 46 00	
Drill steel	1 514 37	26 57		16 73	1 557 67	
Transportation of outside labor and freight -(Mileage)	5 93	10		07	6 10	
	$ 1 565 02	$ 27 45		$ 17 30	$ 1 609 77	
Compressed air						
Compressor supplies	$ 43 70	$ 0 77		$ 0 48	$ 44 95	
Transportation of outside labor and freight -(Mileage)	36 33	64		40	37 37	
	$ 80 03	$ 1 41		$ 88	$ 82 32	(7-A)
Drill repair						
Drill machine supplies	$ 1 294 69	$ 22 72		$ 14 30	$ 1 331 71	(7-A)
Explosives						
Loading sticks	$ 20 42	$ 0 36		$ 0 22	$ 21 00	
3736 delays	903 74	15 86		9 98	929 58	
10900 pounds powder	2 137 81	37 51		23 61	2 198 93	
Annuciator wire	74 30	1 30		83	76 43	
	$ 3 136 27	$ 55 03		$ 34 64	$ 3 225 94	
Hoisting						
2450' 7/8" cable	$ 818 65	$ 14 36		$ 9 05	$ 842 06	
Supplies - Hoist	44 92	79		49	46 20	
Transportation of outside labor and freight -(Mileage)	36 32	64		40	37 36	
	$ 899 89	$ 15 79		$ 9 94	$ 925 62	(7-A)
Pumping						
Pump supplies	$ 1 33	$ 0 02		$ 0 02	$ 1 37	(7-A)
Ventilation						
27 1"x4' roof bolts complete (Hang vent pipe)	$ 71 85				$ 71 85	
Supplies - Fan	43 42	$ 0 76		$ 0 48	44 66	
- Vent line	12 44	22		14	12 80	
Transportation of outside labor and freight -(Mileage)	36 32	64		40	37 36	
	$ 164 03	$ 1 62		$ 1 02	$ 166 67	(7-A)

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other - Page 4
September - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Surface miscellaneous						
Miscellaneous equipment supplies	$ 40 87	$ 0 72		$ 0 45	$ 42 04	(7-A)
Power supplies	97	02		01	1 00	(7-A)
Miscellaneous	15 46	27		17	15 90	(7-C)
Heat dry building	45 88	80		51	47 19	(7-C)
Mileage transportation of outside labor and freight -(Mileage)	123 24	2 16		1 36	126 76	(7-A)
	$ 226 42	$ 3 97		$ 2 50	$ 232 89	
Miscellaneous-Underground						
Transportation supplies - (Haulage underground)	$ 125 42	$ 2 20		$ 1 39	$ 129 01	(7-A)
Mucker supplies	5 81	10		07	5 98	(7-A)
Mine tools	33 00	58		36	33 94	
Mileage (transportation of outside labor and freight)	19 78	35		22	20 35	(7-A)
250' of 7' lagging	10 66	19		11	10 96	(7-A)
	$ 194 67	$ 3 42		$ 2 15	$ 200 24	
Electric power						
174,400 kilowatts	$ 1 063 95	$ 18 67		$ 11 75	$ 1 094 37	
General expense						
Office expense	$ 48 61	$ 0 85		$ 0 54	$ 50 00	(8-A)
Telephone and telegraph	40 16	70		45	41 31	(8-A)
Group accident insurance-Emps.	176 07	3 09		1 94	181 10	(7-B)
Group life insurance-Employees	55 26	97		61	56 84	(7-B)
	$ 320 10	$ 5 61		$ 3 54	$ 329 25	
Retirement expense						
1956 payroll $185,358.08 @ 3½% $6,487.53						
Jan. through June-1957 $64,331.18 @ 3½% 2,251.47						
Total $8,739.00						
$8,739 ÷ 6 mos.= Jan. through June-1957 charge to be amortized over remaining mos. in 1957	$ 1 416 50	$ 24 85		$ 15 65	$ 1 457 00	
September-1957 payroll $13,161.51 @ 3½%	447 21	7 85		4 94	460 00	
	$ 1 863 71	$ 32 70		$ 20 59	$ 1 917 00	(7-C)
Shop and payroll expense						
Star labor @ 20%	$ 332 60	$ 5 84		$ 3 67	$ 342 11	
Wallace office @ 10%	14 58	26		16	15 00	
Burke office -(Star) @ 20%	38 89	68		43	40 00	
	$ 386 07	$ 6 78		$ 4 26	$ 397 11	(7-C)

Hecla-Silver Mountain Project
Supplement to Form 104 and 104-A
Analysis of Supplies and Other - Page 5
September - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Taxes - Social security						
f.o.a.b. $5,525.78 @ 2.25%	$ 120 87	$ 2 12		$ 1 34	$ 124 33	
Federal U.C. $4,696.91 @ .3%	13 70	24		15	14 09	
Idaho U.C. $4,696.91 @ .3%	13 70	24		15	14 09	
	$ 148 27	$ 2 60		$ 1 64	$ 152 51	
Payloader expense						
Supplies	$ 653 32	$ 11 46		$ 7 22	$ 672 00	(7-A)
Workmen's compensation expense						
Industrial Indemnity Company						
$6,910.53 @ $5.693 per $100	$ 382 51	$ 6 71		$ 4 23	$ 393 45	
20% surcharge	76 49	1 34		85	78 68	
	$ 459 00	$ 8 05		$ 5 08	$ 472 13	
Air and water lines						
647.0' 4" air line	$ 485 25				$ 485 25	
647.0' 2" water line	227 10				227 10	
1 4" tie	2 71				2 71	
Miscellaneous fittings	1 55				1 55	
2 2" gate valves	21 90				21 90	
6 1" stop cocks	19 20				19 20	
25 1" vict. couplings	24 00				24 00	
50 2" vict. couplings	77 00				77 00	
	$ 858 71				$ 858 71	
Track						
647.0' rail	$ 1 000 26				$ 1 000 26	
259 ties	183 89				183 89	
173# track bolts	34 60				34 60	
86 pair splice bars	58 48				58 48	
431# track spikes	60 11				60 11	
	$ 1 337 34				$ 1 337 34	
Ventilation						
332.3' 24" vent pipe	$ 1 568 46				$ 1 568 46	
314.7' 20" vent pipe	969 59				969 59	
	$ 2 538 05				$ 2 538 05	
Rock bolts						
137 1" x 4' rock bolts-Complete (Hold ground)			$ 364 57		$ 364 57	
505 1" x 6' rock bolts-Complete (Hold ground)			1 437 38		1 437 38	
			$ 1 801 95		$ 1 801 95	
Equipment depreciation (see analysis)						
100% x $1,977.20	$ 1 922 24	$ 33 73		$ 21 23	$ 1 977 20	
Total supplies and other	$19 113 11	$ 251 03	$ 1 801 95	$ 158 06	$21 324 15	
Total labor and supplies to Form 104-A	$33 313 23	$ 500 18	$ 3 085 95	$ 314 89	$37 214 25	

Summary of crosscutting and drifting

North crosscut	$16 502 80
West drift	16 810 43
	$33 313 23

Schedule A

HECLA SILVER MOUNTAIN PROJECT

Summary of Equipment Values and Equipment Depreciation
Month of September - 1957

		Depreciable	Non-Depreciable
(A)	Summary of equipment		
A-1	Surface equipment - 60 month life	178801	4618
A-2	- 120 month life	2936729	1225898
A-3	Underground electrical - 120 month life	1681366	617589
A-4	Ventilation - 60 month life	962131	
A-5	Pumping - 60 month life	2714916	
A-6	Mining equipment - 60 month life	2930166	2708954
A-7	- 120 month life	3037172	
A-8	Shaft sinking equipment		9294620
	Total values	16243281	13851679

Depreciation	
Surface - 60 month life	29680
- 120 month life	24473
Underground electrical - 120 month life	14011
Ventilation - 60 month life	16036
Pumping - 60 month life	48582
Mining - 60 month life	48836
- 120 month life	25310
Total depreciation	206928

Schedule A-1

ECLA-SILVER MOUNTAIN PROJECT

Equipment Values
Month of September 1951

	Depreciable	Non-Depreciable
Surface equipment - 60 month life		
Dry house equipment (Blacksmith)	6050	
Cap lamps	141676	
Cap lamps - Installation		4618
Drill - 5/8"	42335	
Extinguishers - Fire	15850	
Floodlights	2065	
Furnace	98534	
Grinder, bit	57287	
Hangers, dry	1030	
Heating plant installation	6794	
Hose, water	2575	
Loader, hough	1247055	
Reels and drums	600	
Stretchers	1350	
Tank, hot water	2390	
Vise	900	
Fan, electric	1872	
Welder	1000	
Wheelbarrow	2576	
Timber tunnel	600	

178801 4618

Schedule A-2

CLA-SILVER MOUNTAIN PROJECT

Equipment Values
as of September 195

	Depreciable	Non-Depreciable
Surface equipment - 120 month life		
Compressor	75.00	
Air receiver	1,155.96	
Compressor	402.75	
Compressor	537.67	
Installation	16.71	169.65
Hoist - 120 month life		
Heater	7.30	
Hoist	1,200.00	
Installation		1,577.33
Skips and cages	444.04	
Hoist motor	2,125.00	
Skip dump installation	67.66	
	29,267.27	1,225.98

Schedule A-8

[illegible]ELA-SILVER MOUNTAIN PROJECT

Equipment Values
Month of September 1957

	Depreciable	Non Depreciable
Underground electrical - 120 month life		
Electrical installation - Labor	754 14	2689 72
- Miscellaneous	37 632	1107 37
Bring-in lines		10000 00
Electric cable	5799 74	359 59
Circuit breakers	353 32	406 45
Circuit breakers	1113 86	
Cutouts	278 70	512 34
Fuse links	210	11 52
Switchboard and panel - 1	711 45	
Switchboard	300 00	
Mine telephone	100 00	
Switches	1335 49	
Transformer - 15 KVA	171 00	
~~Transformers - 3-40 KVA~~		
Transformers - 3-50KVA	1254 00	54 37
Transformers - 3-1½ KVA	53 00	
Wire		34 53
Telephone - Mine	143 25	
Starter	63 75	
Substation - 2000		
G. E. 45 KVA transformer - 1	704 50	
West. 440 volt linestarter - 1	131 11	
Transformers 100.5 amp - 2	50 50	
G. E. cutouts - 3	173 25	
50 A cutouts - 8	65 92	
100 A cutouts - 5	92 15	
200 A cutouts - 1	33 75	
circuit breakers - 2	125 84	
5 KVA transformer - 1	102 00	
G. E. 200 amp circuit breakers - 2	150 00	
Miscellaneous	583 77	
Labor - Silver Mountain	26 36	
Labor - Star	1126 09	
Potheads - 2	103 90	
	16813 66	6175 89

Schedule A-4

[illegible]LA-SILVER MOUNTAIN PROJECT

Equipment Values

Month of September 1957

	Depreciable	Non Depreciable
Ventilation equipment - 60 month life		
~~Jeffrey-Dodge 5-10 fan - 1~~		
Fan - 1	81503	
Fan cappus - 1	27888	
Blower, IR	590456	
Fan, Joy	82552	
Fan installation	229732	

962131

Schedule A-5

HECLA-SILVER MOUNTAIN PROJECT

	Depreciable	Non Depreciable
Pumping equipment - 60 month life		
1½ MRV 30 - 30 H.P. Pumps	330263	
1½ RV3 - 3 H.P. pump	22551	
Pumping installation	67724	
Motors - Pump	249817	
Pump starter - 1000 pump	11125	
~~Pump, jet~~		
Pump tanks	7700	
Pump - 1000 level	323234	
1000 Pump and dam installation	225455	
Pump	30653	
Pump starter - 2000 pump	11125	
Pump - Jet	3945	
Pump - IR	34430	
2000 Pump and dam installation	445588	
Pump - IR - Stand by	28476	
Pump motor	27800	
Tank lifter	1530	

291491

Schedule A-6

HECLA-SILVER MOUNTAIN PROJECT

	Depreciable	Non Depreciable
Mining equipment - 60 month life		
Drifters - 6	477832	
Hoist, HU #21687	115000	
Stopers - 2	113642	
Wrench, impact - 2	80350	
2000 Chute gate	180419	
Jumbos	457323	
Rockershovel - 2	873368	
Drill, rock	79237	
2000 Timbers, drifts and X-Cuts		2708954
Transfers - Car	134282	
Car replacers	7746	
Y & T Hoist	19125	
Rail bender	11600	
Jackdrill	78500	
Jack, track	2784	
Ross valves	13770	
Battery charger	159000	
Car vibrator	12750	
Battery charger - Installation	31099	
BATTERY CHARGER	54018	
SCRAPER, PACIFIC 70"	28326	
	2930166	2708954

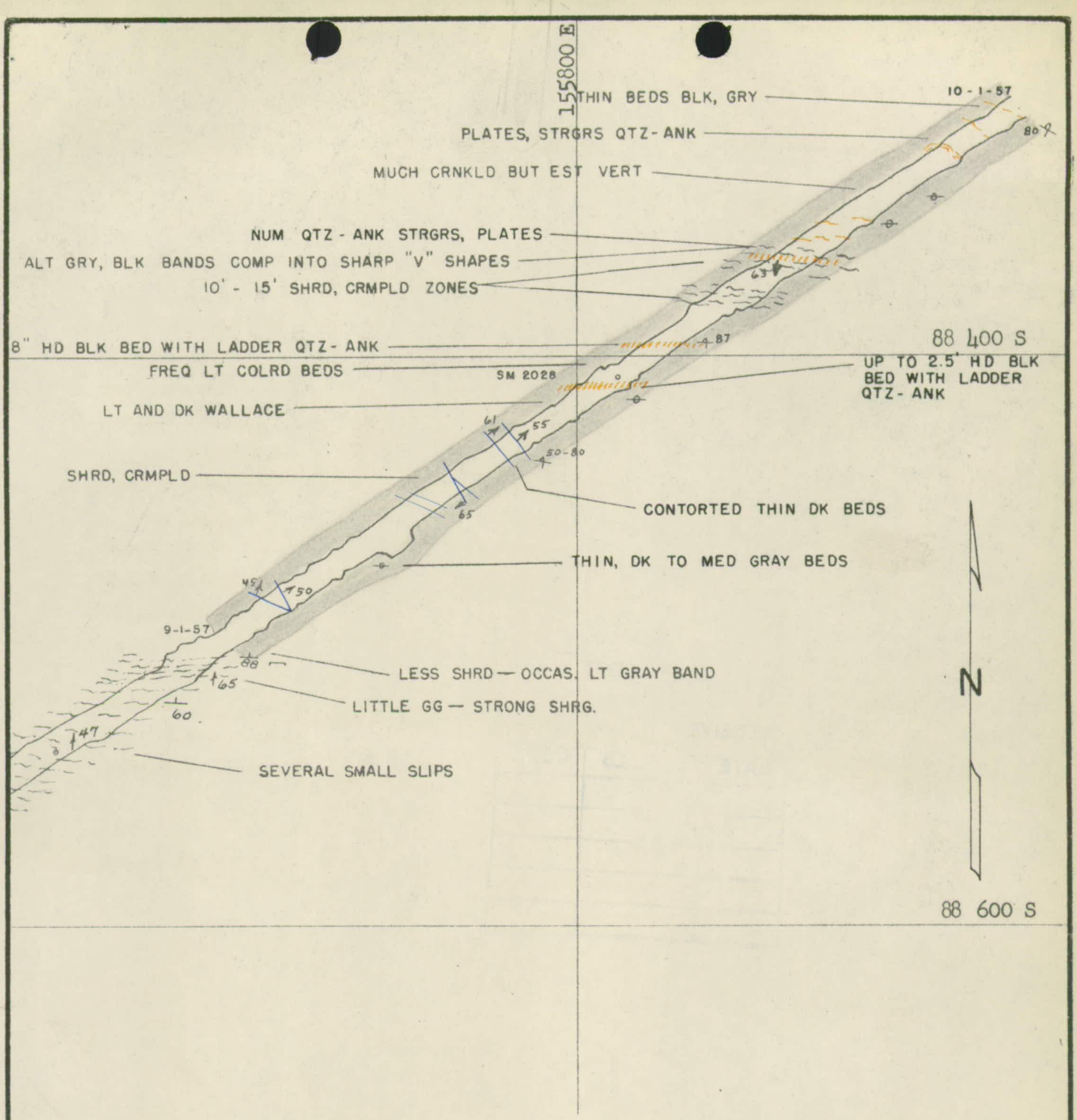
	Depreciable	Non Depreciable
Mining equipment - 120 month life		
~~Mine car - 1~~		
Locomotive - 2	153392	
Batteries - Locomotive	75.3385	
Battery boxes	54395	
Cars - Mine	696000	

Schedule A-8

[illegible] MAIN PROJECT

[illegible]

	Depreciable	Non-Depreciable
Shaft sinking equipment		
Bars - Air	2[illegible]90	
Blasting machine	28466	
Blasting mat	85628	
Jackhammers - 5	[illegible]656	
Mucker - Shaft	606165	
Oxygen supplies	9897	
Pump - Sump	35025	
- Sump - 2	7[illegible]3[illegible]	
Shaft sets	66[illegible]540	
Shaft signals and lights	441215	
Skips and cages	4[illegible]8298	
Small tools	[illegible]2[illegible]6	
Ventilation	117179	
~~Wedges~~		
Fan 1-19 portable	48996	
Bucket - Clamshell	152473	
Indirect charges	563963	
		9294620



Legend

- Bleached rocks
- Unbleached Wallace Formation
- 83 Strike and dip of sulfide veins
- 70 Strike and dip of non-sulfide veins
- 62 Strike and dip of faults
- 75 Strike and dip of normal beds
- 82 Strike and dip of overturned beds
- 78 Strike and dip of cleavage

Northeast Crosscut
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' October 1, 1957
Geology by A.H.S.

EXTRA COPY
D M E A
RECEIVED DEC 9 1957

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

September 18, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 7 1957

DATE	INITIALS	CODE
10/7	B	220
9	EBM	100
10/11	[illegible]	500

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

This project was visited September 12, accompanied by Mr. M. W. Hutchinson, company geologist.

The 2000 level north crosscut had been driven about 1,997 feet from the shaft station since the beginning of the contract. A car transfer was sideswiped between SM2022 + 129 ft. to 134.7 ft. on the southeast side of the crosscut.

The crosscut was timbered for 130.6 feet between SM2022 + 225.9 feet to SM2026 + 60 feet. North of the timbers the ground was good and did not require support. Northeast of SM2022 the crosscut is in unbleached Wallace formation.

The 2000 level east drift has not been advanced since the last inspection. A conference of company geologists was planned for the next day when it would be decided whether the drift would be continued.

The 2000 level west drift had been driven about 766 feet west from the north crosscut. No. 7W crosscut south was driven about 23 feet into the south wall at SM2021 + 140 feet for a diamond drill station. About 308 cu. ft. of sideswiping and 12.3 feet of crosscut comprised the whole station. No. 13W crosscut south, consisting of 480 cu. ft. of sideswiping and 15 ft. of crosscutting were cut at SM2025 + 188 ft. for another diamond drill station. These stations will also be used for car transfers when drilling has been completed. This drift went out of bleached Wallace formation about the end of August into bleached St. Regis formation and finally into purple St. Regis.

None of the new workings have disclosed any significant mineralization.

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 10/7/57

Referred to:

1. ~~Mr. Mittenderf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. Division
6. Docket Control Mails and Files
7. 500

Note comments in report regarding:

1. Another duplication
2. of visits by BM
3. and JS personnel.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams gb

The following survey data is taken from company transit surveys. The distances between survey stations were checked and confirmed at the time of the inspection.

2000 Level Tail Drift

No change		103.3 ft.

2000 Level North Crosscut

Previously reported:	to SM 2014	1402.99 ft.
SM 2014 - 2019	N 30° 23' 00" E	31.51 ft.
2019 - 2022	N 47° 14' 30" E	29.88 ft.
2022 - 2026	N 56° 28' 30" E	296.53 ft.
		1760.91
2026 - face		236 ft.
		1996.91

2000 Level West Drift

Previously reported:	to SM 2017	53.08 ft.
SM 2017 - 2020	N 50° 17' 30" W	72.01 ft.
2020 - 2021	N 83° 09' 30" W	89.61 ft.
2021 - 2025	N 82° 48' 30" W	295.02 ft.
		509.72 ft.
2025 - face		256 ft.
		765.72 ft.

Diamond Drill Stations & Car Transfers

	Ft. X-Cut	Cu.Ft. Sideswiping
7WXCS (SM 2021 + 140')	12.3	308
13WXCS (SM2025 + 188')	15.0	480
Car transfer (SM 2022 + 129' - 134.7')	--	165
	27.3	953
Previously reported	--	2665
	27.3	3618

Timbering

North crosscut (SM 2022 + 225.9 ft. to SM 2026 + 60.0 ft.)	130.6 ft.

Rock bolts

	North Crosscut	West Drift	East Drift
March 1957	209		
April	182		
May	534		
June	328	71	264
July	661	355	49
August	207	480	--
	2121	906	313
Sept. 1-12	0	56	0
Totals	2121	962	313

Total all bolts 3,396

The status of the contract at the time of the inspection was:

Date of contract: October 21, 1954
Termination date: August 1, 1959
Amount of contract: $1,435,880.00
Amount spent: 644,797.46 (thru July 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Crosscutting and drifting		
North crosscut)		1,997 ft.
East drift)	15,820 ft.	103
West drift)		766
D.D. station crosscuts)		27
		2,893
Sideswiping	72,000 cu.ft.	3,618 cu.ft.
* Timbering	--	130.6 ft.
* Rock bolts	--	
North crosscut		2,121
East drift		313
West drift		962
		3,396
Samples	1,000	11

*As necessary.

John D. Bardill

John D. Bardill

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Bardill

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

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DMEA
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DATE	INITIALS	CODE
10/9	Conu	100
10/11	~~copy~~	500

September 17, 1957

MEMORANDUM

TO: DMEA Field Team, Region I

From: R. D. Sample, Geologist, U. S. Geological Survey

Subject: Interim Inspection Report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project was visited and inspected on September 4, 1957 by R. D. Sample, Geologist, U. S. Geological Survey and Sui Ju Kung, Mining Engineer, Taiwan Metal Mining Corporation, Chin-Qua-Shih, Keelung, Taiwan (Formosa). Mr. Kung is on an inspection tour of mining districts in western United States under the auspices of the United States Government.

Mr. Clarence Penham, mine foreman at the Silver Mountain project, accompanied the inspectors to the 2000 level where the present contract work is being done.

Progress continues on the main northeasterly crosscut from the shaft and has advanced about 1,750 feet from the 2000 level station. At approximately 1,450 feet from the station, the crosscut was turned rather sharply from the former N. 21° E. direction to a N. 56° 30' E. direction (fig. 1). The reason for this turn was to avoid the shattered and heavy ground caused by the intersection of several small faults and bedding slips. It was necessary to timber for about 50 feet through this heavy ground. Roof bolts would not hold it.

At 1,100 feet northward from the station the easterly and westerly drifts have turned off from the main crosscut into what is believed to be the Paymaster zone. This altered and mineralized zone is known to exist on the surface and upper workings of nearby mines but is hard to distinguish at the 2000 level at the Silver Mountain project. Company geologists and officials who are very familiar with this zone through years of experience state positively that the turn-off drifts are in this zone of alteration. The examiners could see nothing which would distinguish this area from

the rest of the surrounding rock. Work on the easterly drift has been temporarily stopped after about 100 feet of drifting. It may be resumed later.

Work on the westerly drift continues and proceeds in a general N. 82° W. direction. It has advanced about 600 feet from the main northeast crosscut. A diamond drill station has been cut on the south side of this westerly drift about 350 feet from the main crosscut. Diamond drilling southward from this station is expected to start soon. According to the company geologists this westerly drift is proceeding through altered and bleached Wallace formation which is the uppermost formation of the pre-Cambrian Belt series in this immediate area. It consists of wavy, thin beds of light gray calcareous quartzite and greenish gray phyllite containing an occasional pod of quartz and ankerite in a ladderlike arrangement.

As far as the examiners could see the west drift was progressing almost in line with the strike of steep dipping beds which resulted in much crumbling and shattering of the sides. Many roof bolts were required to hold these sides. No important structure, aside from the bedding slips, or mineralization are exposed in this westerly drift.

R. D. Sample

Enclosure

Distribution:
DMEA (Orig. & 3)
USBM (2)
USBM (AD)
Docket
Sample

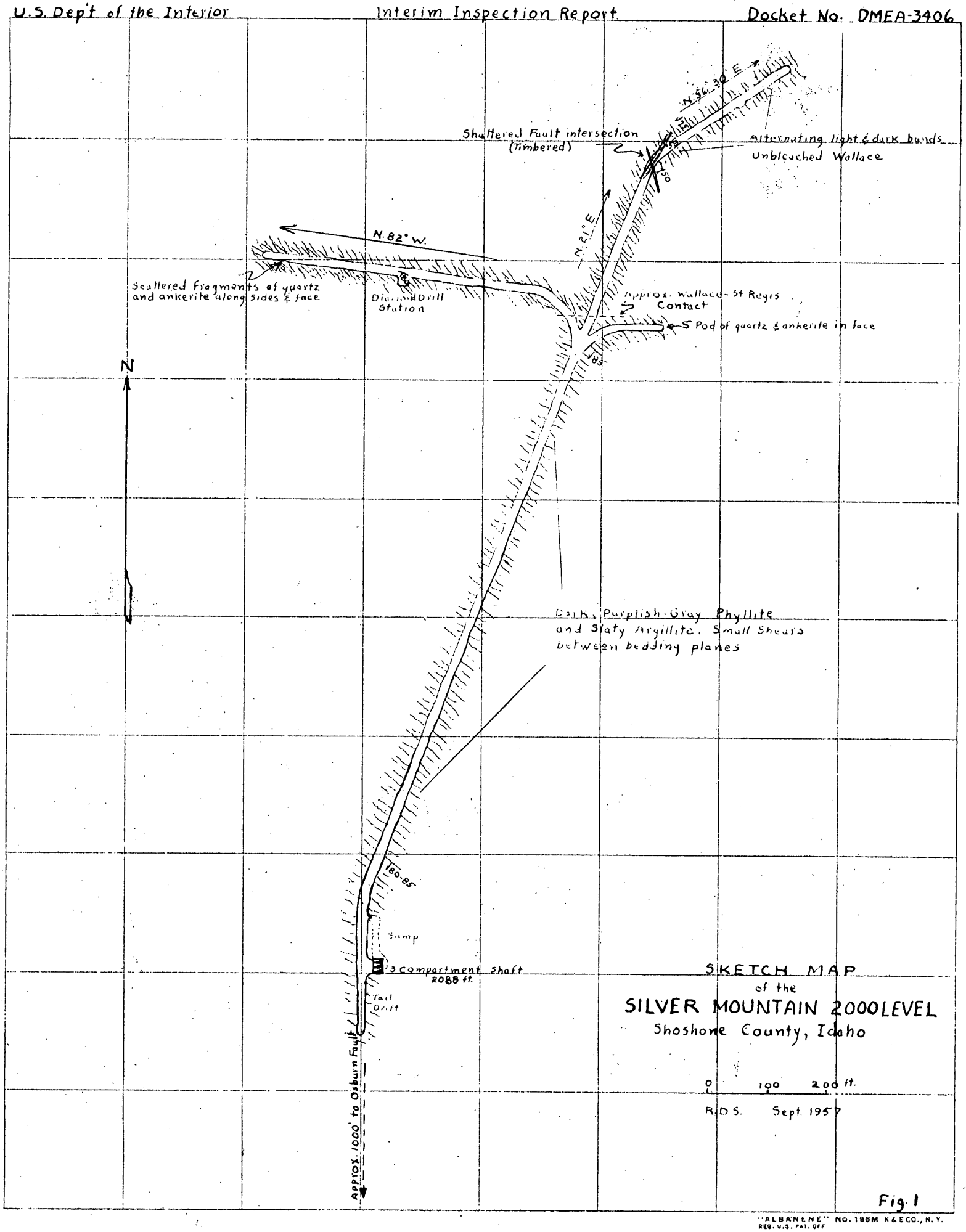

Fig. 1

"ALBANENE" NO. 186M K&E CO., N.Y.
REG. U.S. PAT. OFF.

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DATE	INITIALS	CODE

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED OCT 14 1957 D.M.E.A.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, zinc, copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,435,880.00 Government Participation: 50 % Amount, $ 717,940.00

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 units ~~Contract~~				11/14/57		
2000 skip pocket		$ 3538.00	$ 3538.00		3538.00	3538.00
Drilling		15708.00	15708.00		15708.00	15708.00
~~Bulkhead~~ surf. plant		43893.22	43893.22		43893.22	43893.22
~~Crosscutting~~ pump stations		8000.00	8000.00		8000.00	8000.00
~~Drifting~~ 2000 stations		6336.00	6336.00		6336.00	6336.00
Shaft		451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
Labor	$ 11932.35	60600.38	72532.73	11932.35	60600.38	72532.73
Supervision	610.00	3110.79	3720.79	610.00	3110.79	3720.79
Technical Services	695.88	3456.55	4152.43	695.88	3456.55	4152.43
(3) Operating Metals and Supplies:						
Rock bolts	2445.94	7647.29	10093.23	2445.94	7647.29	10093.23
Timber	937.28	--	937.28	937.28	—	937.28
Explosives	2119.34	11138.56	13257.90	2119.34	11138.56	13257.90
Pipe Air and water	582.20	3768.24	4350.44	582.20	3768.24	4350.44
Ventilation	1638.18	7837.34	9475.52	1638.18	7837.34	9475.52
Track	913.20	5314.81	6228.01	913.20	5314.81	6228.01
Bits and rods	1390.16	2995.26	4385.42	1390.16	2995.26	4385.42
Mine tools	26.92	205.06	231.98	26.92	205.06	231.98
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	1977.20	9764.01	11741.21	1977.20	9764.01	11741.21
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
A Repairs to Equipment	2501.74	10288.65	12790.39	2501.74	10288.65	12790.39
Sampling and Analysis	--	50.00	50.00	—	50.00	50.00
Payroll Taxes	132.28	975.40	1107.68	132.28	975.40	1107.68
Liability Insurance	442.10	3450.81	3892.91	442.10	3450.81	3892.91
B Employees group ins.	222.02	888.36	1110.38	222.02	888.36	1110.38
C Miscellaneous	2291.57	4137.21	6428.78	2291.57	4137.21	6428.78
(8) Contingencies (specify):						
Electric power	848.04	3109.41	3957.45	848.04	3109.41	3957.45
A Office expense	107.76	348.18	455.94	107.76	348.18	455.94
Less in excess of maximums	(7037.80)	(23124.07)	(30161.87)			
TOTALS	24776.36	644797.46	669573.82	24776.36	644797.46	669573.82

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Sept. 25, 1957 Payee Hecla Mining Company
Per D. W. Marsons Title Assistant Secretary

*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:

$ 12,388.18

Signature Dorothy T. Lang
(Authorized Certifying Officer)

Date 10/7/57 Vou. No. 2049

(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. E 732 in accordance with the terms of the contract.

Signature /s/ John D. Bardill Title Metallurgist Date Sept. 27, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date Oct. 3, 1957

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

RECEIVED OCT 14 1957 D.M.E.A.

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

Month of August 1957 Docket No. DMEA 3406 Contract No. 10-C-732

Operator's Name Hecla Mining Company Minerals Lead, zinc, copper

Address Box 320, Wallace, Idaho

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
Timbering	feet	$ 3610.52	130.6	$ 4183.67	202.1	$ 20.70		$ 11.00
Assaying				50.00	11	4.55	1000	
Drifting & Crosscutting	feet	2424.44	405.5	14743.01	2702.5	53.74	1520	44.00
Sidesweeping	cu. ft.	137.26	143	2711.56	3231	.83	72000	.50
Raising				451360.00	2080	217.00	2000	217.00
Shafts								
Winzes								
Rock bolts		3301.94	678	16517.23	3231	5.11		5.00
Drilling: Core surface	feet			15708.00	2244	7.00	3000	7.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface plant				43593.22				45500.00
Total Distributed Costs		$ 31614.16		$ 699735.69				Total Costs Authorized by Contract
Aug. 1957 Maximum excesses applied to July-1957 underages (See July-1957 report)								
Rock bolts		49.71						
Operating Equipment Purchased Timber		213.35						
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Excess or Maximum (see below)		(7300.86)-		(30141.07)-				
Total Costs		$ 24576.36		$ 669573.92				

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. 25-1957 Operator Hecla Mining Company

Per D. W. Warbauer Title Assistant Secretary

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

	Actual Costs: This Month	Actual Costs: Total to Date	Maximum Costs: This Month	Maximum Costs: Total to Date	Total in excess of (under) maximum: This Month	Total in excess of (under) maximum: Total to Date
Drifting & Crosscutting	$ 2424.44	$ 14743.01	$ 1915.20	$ 12070.00	$ 1649.24	$ 2673.01
Sidesweeping	137.26	2711.56	71.50	1040.50	65.76	1671.06
Rock Bolts	3301.94	16517.23	3390.00	16155.00	411.94	362.23
Timbering	3610.52	4183.67	1436.60	2023.10	2173.92	2160.57

/s/ John A. Bardell

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

September ninth
1957

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Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver Mountain Project - August - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

Progress on the Silver Mountain 2000 level during August included 173.0 feet of crosscutting, 272.8 feet of drifting and 5.8 feet of sideswiping (143.0 cubic feet). 678 rock bolts were put in, 207 of which were in the northeast crosscut and 471 in the west drift.

The northeast crosscut was advanced 169.0 feet to a point 1828.3 feet from the 2000 level station. The west drift was advanced 272.8 feet to a point 660.3 feet from the main crosscut. There was no advance in the east drift during August.

The first diamond drill crosscut (7W south crosscut) was completed with an advance of 4.0 feet.

As shown on the attached 50 scale map of the northeast crosscut, rocks exposed in this heading during the month continued to be predominately thin beeded, unbleached Wallace argillites. For the most part, these rocks were sheared and beds were often contorted. About 130 feet of the crosscut was timbered in one zone of more intense shearing. At the end of the month, the rocks were becoming considerably more firm and showed occasional bleached light grey bands.

The west drift continued in bleached alternating thin beds of light greenish-grey phyllite and light grey calcareous quartzite. Some of these beds contained occasional streaks and lenses of pyrite with a few specks of tetrahedrite, but no mineralization of significance was exposed.

Yours very truly,

M. W. Hutchinson

M. W. Hutchinson
Geologist

MWH:nw

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

August - 1957

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Labor					
Hecla-Silver Mountain Labor					
Drift miners					
Crosscutting 169.0' @ $10.50	$ 1 774 50				$ 1 774 50
Drifting 272.8' @ $10.50	2 864 40				2 864 40
Dia. drill x-cut 4.0' @ $10.50	42 00				42 00
Timbering 60.2' @ $4.00				$ 240 80	240 80
70.4' @ $5.00				352 00	352 00
Sideswiping 5.8' @ $5.25		$ 30 45			30 45
Rock bolts 678 @ $2.00 (hold ground)			$ 1 356 00		1 356 00
9 @ $2.00 (hang vent pipe)	15 88	10		2 02	18 00
Allowance for delays	406 44	2 64		51 48	460 56
Shift differential:					
84 shifts @ $0.40	29 65	19		3 76	33 60
71 shifts @ $0.80	50 13	33		6 34	56 80
Overtime	134 49	87		17 04	152 40
Holiday time	16 80	11		2 13	19 04
Pusher allowance 62 shifts @ $0.96	52 53	34		6 65	59 52
Vacations	302 84	1 97		38 35	343 16
Total drift miners	$ 5 689 66	$ 37 00	$ 1 356 00	$ 720 57	$ 7 803 23
Topman					
4-5/8 shifts @ $18.64	$ 76 00	$ 0 49		$ 9 63	$ 86 12
Overtime	4 11	03		52	4 66
Vacation	115 15	75		14 58	130 48
	$ 195 26	$ 1 27		$ 24 73	$ 221 26
Cager					
12½ shifts @ $17.68	$ 195 03	$ 1 27		$ 24 70	$ 221 00
15¼ shifts @ $18.08	243 32	1 58		30 82	275 72
15 shifts @ $18.48	244 63	1 59		30 98	277 20
Overtime	18 13	12		2 29	20 54
	$ 701 11	$ 4 56		$ 88 79	$ 794 46
Hoistman					
22-1/8 shifts @ $19.60	$ 382 70	$ 2 49		$ 48 46	$ 433 65
21-1/4 shifts @ $20.00	375 06	2 44		47 50	425 00
19-1/8 shifts @ $20.40	344 31	2 24		43 60	390 15
Overtime	29 80	19		3 79	33 78
	$ 1 131 87	$ 7 36		$ 143 35	$ 1 282 58

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

August - 1957

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Miner					
1 shift @ $18.64	$ 16 45	$ 0 11		$ 2 08	$ 18 64
1 shift @ $19.44	17 16	11		2 17	19 44
1/4 shift @ $19.04	4 20	03		53	4 76
Overtime	2 10	01		27	2 38
	$ 39 91	$ 0 26		$ 5 05	$ 45 22
Star labor (custom)					
Star Mine payroll	$ 1 266 91	$ 8 24		$ 160 45	$ 1 435 60
Accounting					
Hecla	$ 132 37	$ 0 86		$ 16 77	$ 150 00
Star	176 50	1 15		22 35	200 00
	$ 308 87	$ 2 01		$ 39 12	$ 350 00
Total labor	$ 9 333 59	$ 60 70	$ 1 356 00	$ 1 182 06	$ 11 932 35
Supervision					
Hecla-Silver Mountain	$ 538 32	$ 3 50		$ 68 18	$ 610 00
Technical					
Hecla	$ 546 25	$ 3 55		$ 69 18	$ 618 98
Star	67 86	44		8 60	76 90
	$ 614 11	$ 3 99		$ 77 78	$ 695 88
Total all labor	$ 10 486 02	$ 68 19	$ 1 356 00	$ 1 328 02	$ 13 238 23

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

August - 1957

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Bits and rods						
Drill steel	$ 1 212 32	$ 7 89		$ 153 53	$ 1 373 74	
Bit grinder repair	14 49	09		1 84	16 42	
	$ 1 226 81	$ 7 98		$ 155 37	$ 1 390 16	
Compressed air						
Compressor supplies	$ 3 79	$ 0 02		$ 0 48	$ 4 29	(7-A)
Drill repair						
Drill machine supplies	$ 811 05	$ 5 28		$ 102 71	$ 919 04	(7-A)
Explosives						
7250 lbs. powder	$ 1 291 65	$ 8 40		$ 163 58	$ 1 463 63	
2499 delays	548 17	3 57		69 42	621 16	
30# wire	27 84	18		3 53	31 55	
42 loading sticks	2 65	02		33	3 00	
	$ 1 870 31	$ 12 17		$ 236 86	$ 2 119 34	
Hoisting						
Supplies - Hoist	$ 17 27	$ 0 11		$ 2 19	$ 19 57	
- Shaft	8 45	05		1 08	9 58	
	$ 25 72	$ 0 16		$ 3 27	$ 29 15	(7-A)
Pumping						
Pump supplies	$ 23 70	$ 0 15		$ 3 00	$ 26 85	(7-A)
Ventilation						
9 1" x 4' roof bolts complete (hang vent. pipe)	$ 22 99				$ 22 99	
Repair main blower	363 77	$ 2 37		$ 46 07	412 21	
Mileage (Transportation of outside labor and freight)	111 31	72		14 10	126 13	
	$ 498 07	$ 3 09		$ 60 17	$ 561 33	
Miscellaneous - Underground						
Transportation supplies (haulage underground)	$ 282 09	$ 1 84		$ 35 72	$ 319 65	(7-A)
Mucker supplies	59 54	39		7 54	67 47	(7-A)
Mine tools	23 76	15		3 01	26 92	
Mileage (Transportation of outside labor and freight)	51 45	33		6 52	58 30	(7-A)
	$ 416 84	$ 2 71		$ 52 79	$ 472 34	

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

August - 1957

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Surface miscellaneous						
Miscellaneous equipment supplies	$ 84 39	$ 0 55		$ 10 69	$ 95 63	(7-A)
Miscellaneous	6 34	04		80	7 18	(7-C)
Mileage (Transportation of outside labor and freight)	96 73	63		12 25	109 61	(7-A)
Heat dry building (fuel oil)	91 91	60		11 64	104 15	(7-C)
	$ 279 37	$ 1 82		$ 35 38	$ 316 57	
Electric power						
134,371 kilowatts	$ 748 39	$ 4 87		$ 94 78	$ 848 04	
Engineering and surveying						
Indirect	$ 3 64	$ 0 02		$ 0 46	$ 4 12	(7-C)
General expense						
Office expense	$ 44 13	$ 0 28		$ 5 59	$ 50 00	(8-A)
Telephone and telegraph	50 97	33		6 46	57 76	(8-A)
Group accident insurance - Employees	156 14	1 02		19 77	176 93	(7-B)
Group life insurance - Employees	39 79	26		5 04	45 09	(7-B)
	$ 291 03	$ 1 89		$ 36 86	$ 329 78	
Retirement exp. - Employees						
1956 payroll $185,358.08 @ 3½% $ 6 487 53						
Jan. through June - 1957 $ 64,331.18 @ 3½% 2 251 47						
Total $ 8 739 00						
$8,739 ÷ 6 months = Jan. 1956 through June-1957 charge to be amortized over remaining months in 1957	$ 1 285 80	$ 8 36		$ 162 84	$ 1 457 00	
August-1957 payroll $10,773.15 @ 3½%	332 70	2 16		42 14	377 00	
	$ 1 618 50	$ 10 52		$ 204 98	$ 1 834 00	(7-C)
Shop and payroll expense						
Star labor @ 20%	$ 253 38	$ 1 65		$ 32 09	$ 287 12	
Wallace office @ 10%	13 24	09		1 67	15 00	
Burke office (Star @ 20%)	35 30	23		4 47	40 00	(7-C)
	$ 301 92	$ 1 97		$ 38 23	$ 342 12	

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

August - 1957

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Taxes - Social Security					
F.O.A.B. $4,792.89 @ 2.25%	$ 95 18	$ 0 62		$ 12 04	$ 107 84
Federal U.C. $4,073.96 @ .30%	10 78	07		1 37	12 22
Idaho U.C. $4,073.96 @ .30%	10 78	07		1 37	12 22
	$ 116 74	$ 0 76		$ 14 78	$ 132 28
Payloader expense					
Supplies	$ 273 94	$ 1 78		$ 34 70	$ 310 42 (7-A)
Workmen's compensation expense					
Industrial Indemnity Co. $6,347.37 @ $5.693 per $100	$ 318 87	$ 2 07		$ 40 39	$ 361 33
20% surcharge	63 78	41		8 08	72 27
1 X-ray and physical	7 50	05		95	8 50
	$ 390 15	$ 2 53		$ 49 42	$ 442 10
Air and water lines					
441.8' 4" air line	$ 331 35				$ 331 35
441.8' 2" water line	155 07				155 07
4 4" tees	10 84				10 84
1 3/4" 3-way valve	5 72				5 72
1 1¼" #H-9000 Mueller pressure	49 23				49 23
3 2" stop cocks	26 46				26 46
2 2 x 3 pipe nipples	34				34
2 bushings	49				49
1 2" tee	99				99
2 2 x ¼ pipe reducers	1 43				1 43
2 1¼ x 4 nipples	28				28
	$ 582 20				$ 582 20
Track					
441.8' rail	$ 683 02				$ 683 02
177 ties	125 67				125 67
117# track bolts	23 40				23 40
59 pair splice bars	40 12				40 12
295# track spikes	40 99				40 99
	$ 913 20				$ 913 20
Ventilation					
169.0' 24" vent. pipe	$ 797 68				$ 797 68
272.8' 20" vent. pipe	840 50				840 50
	$ 1 638 18				$ 1 638 18

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

	Drifting & Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Rock bolts					
160 1" x 4' rock bolts - complete (ground support)			$ 408 64		$ 408 64
518 1" x 6' rock bolts - complete (ground support)			2 037 30		2 037 30
			$ 2 445 94		$ 2 445 94
Timbers (Ground support)					
344 bd. ft. 5' lagging				$ 669 71	$ 669 71
456 ln. ft. 8" stull				127 29	127 29
192 ln. ft. 12" stull				101 47	101 47
Miscellaneous				38 81	38 81
				$ 937 28	$ 937 28
Equipment depreciation - (See analysis) 100% x $1,977.20	$ 1 744 87	$ 11 35		$ 220 98	$ 1 977 20
Total supplies and other	$ 13 778 42	$ 69 07	$ 2 445 94	$ 2 282 50	$ 18 575 93
Total labor and supplies to Form 104-A	$ 24 264 44	$ 137 26	$ 3 801 94	$ 3 610 52	$ 31 814 16

Summary of crosscutting and drifting	
North crosscut	$ 9 305 48
West drift	14 958 96
	$ 24 264 44

Schedule A

[illegible]CIA-SILVER MOUNTAIN PROJECT

Summary of Equipment Values and Equipment Depreciation
Month of August -1957

		Depreciable	Non Depreciable
(A)	Summary of equipment		
A-1	Surface equipment - 60 month life	$ 178081.	$ 9618
A-2	- 120 month life	197367.29	12258.95
A-3	Underground electrical - 120 month life	168136.66	8175.89
A-4	Ventilation - 60 month life	962131.	—
A-5	Pumping - 60 month life	287986	—
A-6	Mining equipment - 60 month life	292837	22355.44
A-7	- 120 month life	3037172	
A-8	Shaft sinking equipment	—	98976.20
	Total values	$ 162262.80	1272262.67

Depreciation	
Surface - 60 month life	$ 296.80
- 120 month life	2447.92
Underground electrical - 120 month life	140.11
Ventilation - 60 month life	160.36
Pumping - 60 month life	4831.31
Mining - 60 month life	4882.02
- 120 month life	1511.10
Total depreciation	$ 10666.42

Schedule A-1

HECLA-SILVER MOUNTAIN PROJECT

Equipment Values
Month of August-1957

	Depreciable	Non Depreciable
Surface equipment - 60 month life		
Dry house equipment (Blacksmith)	$ 6550.	
Cap lamps	141676.	
Cap lamps - Installation		$ 4618.
Drill - 5/8"	42235.	
Extinguishers - Fire	25850.	
Floodlights	2065.	
Furnace	95534.	
Grinder, bit	57289.	
Hangers, dry	10950.	
Heating plant installation	6997.	
Hose, water	2525.	
Loader, hough	1247055.	
Reels and drums	600.	
Stretchers	135.00	
Tank, hot water	23900.	
Vise	9000.	
Fan, electric	1872.	
Welder	100.00	
Wheelbarrow	2576.	
Tool trailer	600.	
	$ 1750201	$ 4618

Schedule A-2

HECLA-SILVER MOUNTAIN PROJECT

Equipment Values
Month of August - 1957

	Depreciable	Non Depreciable
Surface equipment - 120 month life		
Compressor		
Air receiver	2500	
	15596	
Compressor	402195	
Compressor	577967	
Installation	1671	167965
Hoist - 120 month life		
Heater	7030	
Hoist	1200000	
Installation		1057933
Skips and cages	999904	
Hoist motor	212500	
Skip dump installation	67766	
	2936239	1225898

Schedule A-3

MICLA-SILVER MOUNTAIN PROJECT

Equipment Values
As of end of August - 1957

	Depreciable	Non-Depreciable
Underground electrical - 120 month life		
Electrical installation - Labor	$ 95914	$ 268972
- Miscellaneous	37622	110737
Bring-in lines		100000
Electric cable	579934	35957
Circuit breakers	35232	90645
Circuit breakers	111386	
Cutouts	27870	51234
Fuse links	210	1152
Switchboard and panel - 1	711 45	
Switchboard	300 00	
Mine telephone	100 00	
Switches	123547	
Transformer - 15 KVA	171 00	
~~Transformers - 3-40 KVA~~		
Transformers - 3-50KVA	1257 00	5437
Transformers - 3-1½ KVA	5200	
Wire		3457
Telephone - Mine	34375	
Starter	6275	
Substation - 2800		
G. E. 45 KVA transformer - 1	7450	
West. 440 volt linestarter - 1	1311	
Transformers 100.5 amp - 2	5050	
G. E. cutouts - 3	17325	
50 A cutouts - 8	6592	
100 A cutouts - 5	9245	
200 A cutouts - 1	3235	
circuit breakers - 2	1258	
5 KVA transformer - 1	1020 00	
G. E. 200 amp circuit breakers - 2	150 00	
Miscellaneous	58377	
Labor - Silver Mountain	26-36	
Labor - Star	112609	
Potheads - 2	1037 00	
	$ 1421366	$ 612587

Schedule A-4

[redacted]

Original Values
In mill of August 1957

	Depreciable	Non Depreciable
Ventilation equipment - 60 month life		
~~Joy model 3-19 fan - 1~~		
Fan - 1	21569	
Fan copper - 1	27877	
Blower, IR	59456	
Fan, Joy	32652	
Fan installation	237732	

[redacted]

Equipment Values
Month of [illegible]

	Expenditure	Non-Expenditure
Pumping equipment - 60 month life		
1½ MV 30 - 30 H.P. Pumps	[illegible]	
1½ EV3 - 3 H.P. pump	[illegible]	
Pumping installation	[illegible]	
Meters - Pump	[illegible]	
Pump starter - 1000 pump	[illegible]	
~~Pump jet~~		
Pump tanks	[illegible]	
Pump - 1000 level	[illegible]	
1000 Pump and dam installation	[illegible]	
Pump	[illegible]	
Pump starter - 2000 pump	[illegible]	
Pump - Jet - J	[illegible]	
Pump - IR	[illegible]	
2000 Pump and dam installation	[illegible]	
Pump - IR - Stand by	[illegible]	
Pump meter	[illegible]	

[illegible]

Equipment Villa

Month of August 1987

[illegible]

HECLA-SILVER MOUNTAIN PROJECT

Equipment Values
by end of August - 1957

	Depreciable	Non-Depreciable
Mining equipment - 120 month life		
~~Mine car - 2~~		
Locomotives - 2	15333 92	
Batteries - Locomotive	7533 85	
Battery boxes	543 95	
Cars - Mine - 72	6960 00	

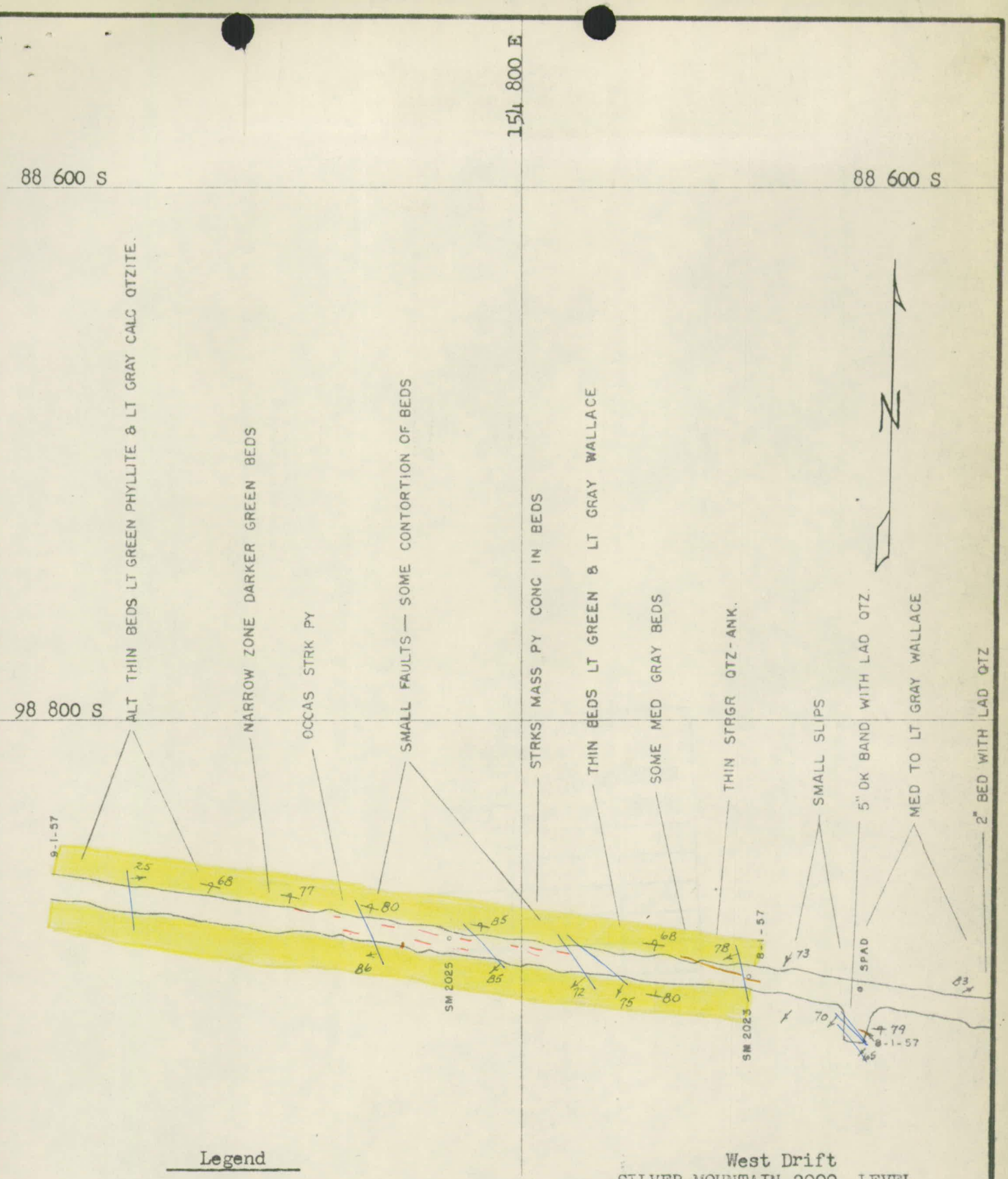
20 371 32

Schedule A-8

Equipment Values
Month of August - 1957

	Depreciable	Non Depreciable
[illegible]		
[illegible]		21690
[illegible]		28466
[illegible]		85628
[illegible]		70656
[illegible]		606165
Oxygen [illegible]		9897
Pump - Sump		35025
- Sump - [illegible]		71313
Shaft [illegible]		6615440
Shaft [illegible]		441215
Ship and [illegible]		418298
Small tools		7216
[illegible]		113179
W-[illegible]		
[illegible]		48996
[illegible]		157433
Indirect charges		563967

9294620



Legend

- Bleached rocks
- Unbleached Wallace Formation
- 80 Strike and dip of sulfide veins
- 75 Strike and dip of non-sulfide veins
- 76 Strike and dip of faults
- 82 Strike and dip of normal beds
- 85 Strike and dip of overturned beds
- 70 Strike and dip of cleavage

West Drift
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' September 1, 1957
Geology by A.H.S.

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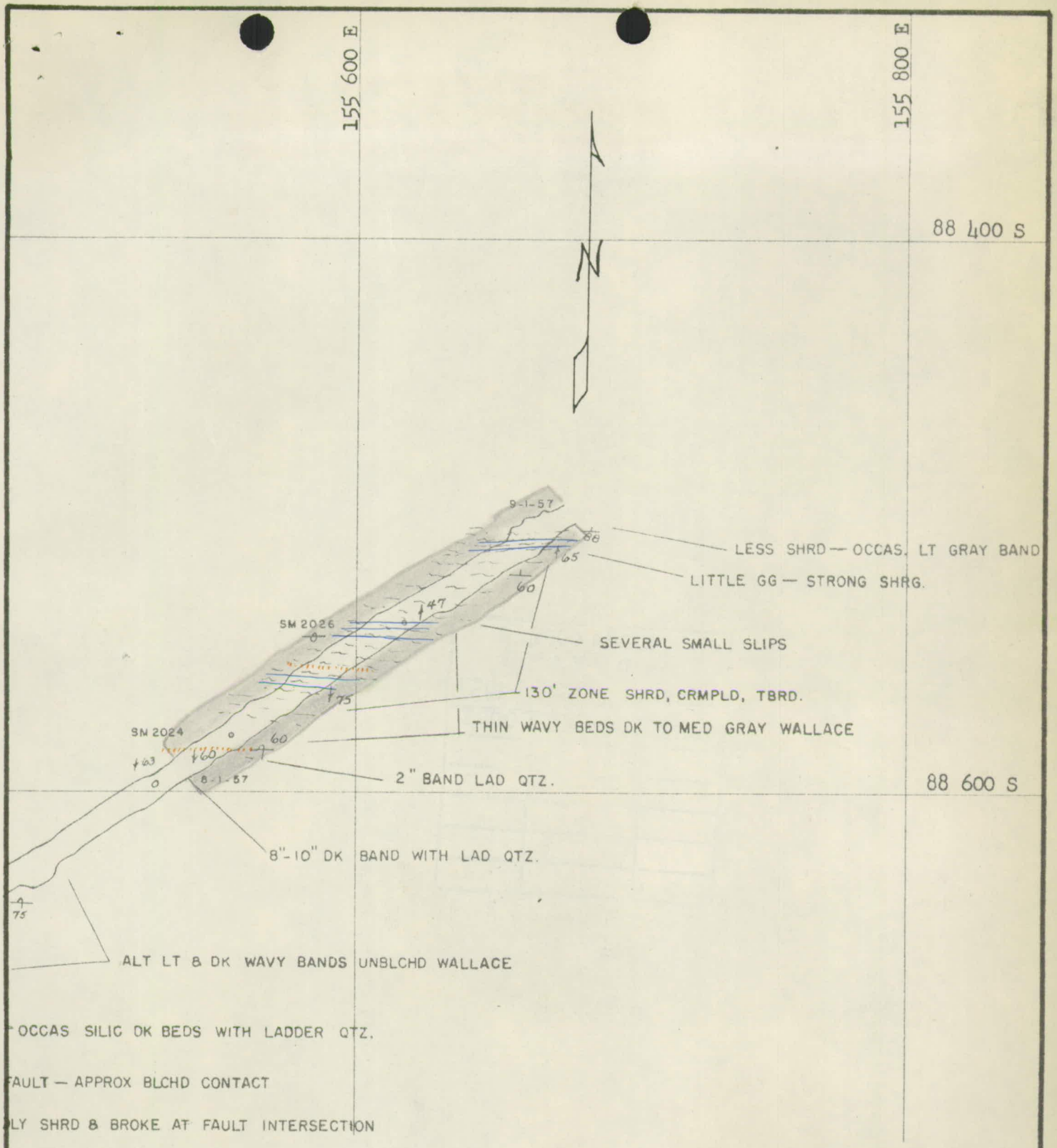

Legend

- Bleached rocks
- Unbleached Wallace Formation
- 80 Strike and dip of sulfide veins
- 75 Strike and dip of non-sulfide veins
- 78 Strike and dip of faults
- 85 Strike and dip of normal beds
- 82 Strike and dip of overturned beds
- 70 Strike and dip of cleavage

Northeast Crosscut
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' September 1, 1957
Geology by A.H.S.

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RECEIVED OCT 14 1957

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

August 23, 1957

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mt. Project, Shoshone County, Idaho, Contract No. Idm-E732

This project was visited August 21, 1957.

The project was shut down while the 200 HP electric motor driving the ventilation fan is being repaired. This is the third time in less than 10 days that this motor has burned out. Cause was unknown at the time.

An underground inspection will be made as soon as normal operations are resumed.

John D. Bardill

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Bardill

OFFICIAL FILE COPY
DMEA
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DATE		CODE
9-17	C	220
9/18		SUC

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

RECEIVED SEP 6 1957 D.M.E.A.

Approved Betty

Month of July, 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,435,880.00 Government Participation: 50 % Amount, $ 717,940.00

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 Drilling	units					
2000 skip pocket	-	$ 3538.00	$ 3538.00	11/14/57	3538.00	3538.00
Surface plant	-	15708.00	15708.00		15708.00	15708.00
pump stations	-	43893.22	43893.22		43893.22	43893.22
2000 station	-	8000.00	8000.00		8000.00	8000.00
Shaft	-	6336.00	6336.00		6336.00	6336.00
	-	451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
Labor	$14429.77	46170.61	60600.38	14429.77	46170.61	60600.38
Supervision	610.00	2500.79	3110.79	610.00	2500.79	3110.79
Technical Services	700.00	2756.55	3456.55	700.00	2756.55	3456.55
(3) Operating Mat'ls. and Supplies:						
Rock bolts	3121.00	4526.29	7647.29	3121.00	4526.29	7647.29
Explosives	3547.96	7590.60	11138.56	3547.96	7590.60	11138.56
Pipe Air & water	743.47	3024.77	3768.24	743.47	3024.77	3768.24
Track Ventilation	2034.58	5802.76	7837.34	2034.58	5802.76	7837.34
	1111.64	4203.17	5314.81	1111.64	4203.17	5314.81
Bits and rods	853.45	2141.81	2995.26	853.45	2141.81	2995.26
Mine tools	30.13	174.93	205.06	30.13	174.93	205.06
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	1977.20	7786.81	9764.01	1977.20	7786.81	9764.01
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
A Repairs to Equipment	4090.62	6198.03	10288.65	4090.62	6198.03	10288.65
Sampling and Analysis		50.00	50.00	—	50.00	50.00
Payroll Taxes	108.57	866.83	975.40	108.57	866.83	975.40
Liability Insurance	578.62	2872.19	3450.81	578.62	2872.19	3450.81
B Employees group ins.	174.55	713.81	888.36	174.55	713.81	888.36
C Miscellaneous	2414.29	1722.92	4137.21	2414.29	1722.92	4137.21
(8) Contingencies (specify):						
Electric power	950.68	2158.73	3109.41	950.68	2158.73	3109.41
A Office expense	50.00	298.18	348.18	50.00	298.18	348.18
Less in excess of max.	(7413.19)	(15710.88)	(23124.07)	[illegible]	[illegible]	[illegible]
TOTALS	$30113.34	$614684.12	$644797.46	30113.34	614684.12	644797.46

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

Date August 23, 1957 Payee Hecla Mining Company
D. W. Morehouse
Per D. W. Morehouse Title Assistant Secretary

*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:

$ 15,056.67

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 8/30/57 Vou. No. 2031

(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. E732 in accordance with the terms of the contract.

Signature /s/ John D. Gardiel Title Metallurgist Date August 26, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date Aug. 27, 1957

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

RECEIVED SEP 6 1957 D.M.E.A.

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

Month of July 1957 Docket No. DMEA 3406 Contract No. IDM E-732

Operator's Name Hecla Mining Company Minerals Lead, zinc, copper

Address Box 320, Wallace, Idaho

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
Timbering	feet	$ 573.15	71.5	$ 573.15	71.5	8.02		$ 11.00
Assaying				50.00	11	4.55	1000	
Crosscutting & drifting	feet	31321.62	546.1	123173.57	2296.7	53.63	15820	44.00
Sideswiping	cu. ft.	418.76	473	2574.30	3138	.82	72000	.50
Shafts	feet			451360.00	2080	217.00	2080	217.00
Rock bolts		5213.00	1065	12715.29	2553	4.98		5.00
Drilling: Core	feet			15708.00	2244	7.00	3000	7.00
Churn								
Auger								
Pump station	cu. ft.			8000.00	16268	.49	8000	1.00
2000 Station				6336.00				6336.00
2000 Skip pocket				3538.00				3538.00
Roads and Trails								
Surface plant				43893.22				45500.00
TOTAL DISTRIBUTED COSTS		$37526.53		$667921.53				TOTAL COSTS AUTHORIZED BY CONTRACT
June maximum excesses applied to July-1957 underages (See June-1957 report)								
Rock bolts		62.29						
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
*Excess of maximums (See below)		(7475.48)-		(23124.07)-				
TOTAL COSTS		$30113.34		$644797.46				

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 August 23, 1957 Operator Hecla Mining Company

Per D. W. Morehouse Title Assistant Secretary

D. W. Morehouse

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)

	Actual Costs This Month	Actual Costs Total to Date	Maximum Costs This Month	Maximum Costs Total to Date	Total in Excess or (Under) Maximum This Month	Total in Excess or (Under) Maximum Total to Date
*Drifting & crosscutting	$ 31321.62	$ 123173.57	$ 24028.40	$ 101054.80	$ 7293.22	$ 22118.77
*Sideswiping	418.76	2574.30	236.50	1569.00	182.26	1005.30
Rock bolts	5213.00	12715.29	5325.00	12765.00	(112.00)	(49.71)
Timbering	573.15	573.15	786.50	786.50	(213.35)	(213.35)

/s/ John A. Gardill

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

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DMEA
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DATE	INITIALS	CODE

August fourteenth
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver
Mountain Project - July - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

Progress on the Silver Mountain 2000 level during July included 238.7 feet of crosscutting, 307.4 feet of drifting and 16.7 feet of sideswipe (473 cubic feet). A total of 1065 rock bolts were put in.

The northeast crosscut was advanced 230.4 feet to a point 1,659.3 feet from the 2000 level station. The west drift was advanced 287.3 feet to a point 387.5 feet from the northeast crosscut, and the east drift advanced 20.1 feet.

A diamond drill crosscut was started in the south wall of the west drift, approximately 349 feet west of the northeast crosscut as measured around the curve. This short crosscut was advanced 8.3 feet.

5.7 feet of the sideswiping (165 cubic feet) was done in the main northeasterly crosscut and 11.0 feet (308 cubic feet) in the west drift at the site of the diamond drill crosscut. 661 rock bolts were installed in the main crosscut, 355 in the west drift and 49 in the east drift.

When work in the northeast crosscut was temporarily suspended at the end of May, the crosscut was in the process of being turned to a bearing of N. 56° 28' 30" E. The face at that time stood in a strongly sheared and broken area. Upon resuming work in the crosscut, this sheared and broken area was timbered.

The disturbed nature of the ground in the vicinity of the turn to the new bearing has resulted from the intersection of a number of faults. One strong fault, containing from 1" to 3" of soft, white and dark gray gouge, strikes almost north-south and dips 46° E. This fault strikes transversely across the tunnel, then curves sharply and strikes N. 34° E. The west wall of the crosscut almost parallels the fault for a distance of about 45 feet. A second strong fault, displaying from 2" to 3" of gouge, strikes N. 20° W. and dips 50° north-easterly. This fault intersects the first one at the bend of the crosscut. There appears to be a slight amount of offset of the first fault by the second.

On the northeast side of the complex of intersecting faults just described, the crosscut has entered unbleached Wallace rocks. The transition from bleached Wallace to unbleached Wallace is gradual. The boundary of the bleached zone has been arbitrarily assigned as shown on the accompanying map. All of the rock exposed in the northeast crosscut during July consists of alternating thin beds of gray quartzite and grayish-black argillite. The beds are wavy and undulating, and locally crumpled or crenulated.

Occasional bands, from 2" to 12" wide, of dark gray calcareous quartzite contain numerous thin parallel plates of quartz and ankerite in a ladder-like arrangement. A very fine, silvery-white variety of sericite is associated with the quartz-ankerite plates.

The west drift has exposed moderately bleached rocks of the Wallace formation. These consist of alternating thin beds of light gray calcareous quartzite and greenish gray phyllite. Mineralization consists of occasional dark gray bands containing thin parallel plates of quartz and ankerite in a ladder-like arrangement, and occasional irregularly shaped masses of quartz-ankerite. Silvery-white sericite is frequently associated with the quartz-ankerite.

No important structures were exposed by either the east or west drift during the month.

Yours very truly,

A. H. Sorensen

A. H. Sorensen
Geologist

AHS:nn

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HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Labor					
Hecla-Silver Mountain labor					
Drift miners					
Crosscutting 230.4' @ $10.50	$ 2 419 20				$ 2 419 20
Drifting 315.7' @ $10.50	3 314 85				3 314 85
Sideswiping 16.7' @ $5.25		$ 87 68			87 68
Rock bolts 1046 @ $2.00 (hold ground)			$ 2 092 00		2 092 00
19 @ $2.00 (hang vent pipe)	36 67	56		77	38 00
Caging allowance-4 shifts @ $17.68	68 25	1 04		1 43	70 72
Timbering allowance				120 00	120 00
Shift differential:					
95 shifts @ $0.40	36 67	56		77	38 00
83 shifts @ $0.80	64 08	98		1 34	66 40
Holiday time	220 11	3 37		4 60	228 08
Overtime	159 23	2 43		3 34	165 00
Pusher allowance-66 shifts @ $0.96	61 15	93		1 28	63 36
Total drift miners	$ 6 380 21	$ 97 55	$ 2 092 00	$ 133 53	$ 8 703 29
Topman					
15½ shifts @ $18.64	$ 278 82	$ 4 26		$ 5 84	$ 288 92
Overtime	35 98	55		75	37 28
	$ 314 80	$ 4 81		$ 6 59	$ 326 20
Cager					
31 shifts @ $17.68	$ 528 92	$ 8 09		$ 11 07	$ 548 08
21 shifts @ $18.08	366 41	5 60		7 67	379 68
13 shifts @ $18.48	231 84	3 54		4 86	240 24
Overtime	25 98	40		54	26 92
	$ 1 153 15	$ 17 63		$ 24 14	$ 1 194 92
Hoistman					
22 shifts @ $19.60	$ 416 13	$ 6 37		$ 8 70	$ 431 20
23 shifts @ $20.00	443 92	6 79		9 29	460 00
21 shifts @ $20.40	413 43	6 32		8 65	428 40
Overtime	96 31	1 47		2 02	99 80
Vacation	339 08	5 18		7 10	351 36
	$ 1 708 87	$ 26 13		$ 35 76	$ 1 770 76

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Star labor-(Custom)					
Star mine payroll	$ 2 011 74	$ 30 76		$ 42 10	$ 2 084 60
Accounting					
Hecla	$ 144 76	$ 2 21		$ 3 03	$ 150 00
Star	193 01	2 95		4 04	200 00
	$ 337 77	$ 5 16		$ 7 07	$ 350 00
Total labor	$ 11 906 54	$ 182 04	$ 2 092 00	$ 249 19	$ 14 429 77
Supervision					
Hecla-Silver Mountain	$ 588 68	$ 9 00		$ 12 32	$ 610 00
Technical					
Hecla	$ 574 70	$ 8 79		$ 12 03	$ 595 52
Star	100 83	1 54		2 11	104 48
	$ 675 53	$ 10 33		$ 14 14	$ 700 00
Total all labor	$ 13 170 75	$ 201 37	$ 2 092 00	$ 275 65	$ 15 739 77

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Bits and rods						
Drill steel	$ 823 62	$ 12 59		$ 17 24	$ 853 45	
Compressed air						
Compressor supplies	$ 6 31	$ 10		$ 13	$ 6 54	(7-A
Drill repair						
Drill machine supplies	$ 438 57	$ 6 71		$ 9 17	$ 454 45	(7-A
Explosives						
9200 pounds powder	$ 1 777 15	$ 27 17		$ 37 20	$ 1 841 52	
3090 delays	740 29	11 32		15 49	767 10	
2078' #6-2 portable cord (blasting line)	832 27	12 73		17 41	862 41	
1 primer box	19 30	30		40	20 00	
50# wire	50 74	78		1 06	52 58	
Mileage-(Transportation of outside labor and freight)	4 20	06		09	4 35	
	$ 3 423 95	$ 52 36		$ 71 65	$ 3 547 96	
Hoisting						
Supplies - Headframe	$ 37 39	$ 56		$ 79	$ 38 74	
- Hoist	10 20	16		21	10 57	
- Shaft	41 61	64		87	43 12	
- Hoist room	5 31	08		11	5 50	
Mileage-(Transportation of outside labor and freight)	16 82	26		35	17 43	
	$ 111 33	$ 1 70		$ 2 33	$ 115 36	(7-A
Pumping						
Pump supplies	$ 3 33	$ 06		$ 06	$ 3 45	
Mileage-(Transportation of outside labor and freight)	20 77	31		44	21 52	
	$ 24 10	$ 37		$ 50	$ 24 97	(7-A
Ventilation						
19 1"x4' roof bolts, complete (hang vent pipe)	$ 44 71				$ 44 71	
Repair main blower (lightning damage)	1 761 21	$ 26 93		$ 36 86	1 825 00	
Main blower supplies	128 48	1 96		2 69	133 13	
Vent line supplies	38 57	59		81	39 97	
Mileage-(Transportation of outside labor and freight)	81 43	1 25		1 70	84 38	
	$ 2 054 40	$ 30 73		$ 42 06	$ 2 127 19	(7-A

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Miscellaneous-Underground						
Transportation supplies-(Haulage underground)	$ 284 72	$ 4 36		$ 5 95	$ 295 03	(7-A)
Mucker supplies	631 53	9 66		13 22	654 41	(7-A)
Mine tools	29 08	44		61	30 13	
Mileage-(Transportation of outside labor and freight)	12 67	19		27	13 13	(7-A)
	$ 958 00	$ 14 65		$ 20 05	$ 992 70	
Surface miscellaneous						
Miscellaneous equip. supplies	$ 89 34	$ 1 37		$ 1 86	$ 92 57	(7-A)
Miscellaneous	17 82	27		38	18 47	(7-C)
Mileage-(Transportation of outside labor and freight)	131 54	2 01		2 75	136 30	(7-A)
Heat dry building-(Fuel oil)	24 99	38		53	25 90	(7-C)
	$ 263 69	$ 4 03		$ 5 52	$ 273 24	
Electric power						
150839 kilowatts	$ 917 45	$ 14 03		$ 19 20	$ 950 68	
General expense						
Office expense	$ 48 25	$ 74		$ 1 01	$ 50 00	(8-A)
Group accident insurance - Employees	118 49	1 81		2 48	122 78	(7-B)
Group life insurance - Emps.	49 96	76		1 05	51 77	(7-B)
	$ 216 70	$ 3 31		$ 4 54	$ 224 55	
Retirement expense-(Employees)						
1956 payroll $185,358.08 @ 3½% $6,487.53						
Jan. thru June 1957 $64,331.18 @ 3½% 2,251.47						
Total $8,739.00						
$8,739 ÷ 6 mos.= Jan. 1956 thru June 1957 charge to be amoritized over remaining months in 1957	$ 1 406 07	$ 21 50		$ 29 43	$ 1 457 00	
July-1957 payroll $12605.17 @ 3½%	425 59	6 51		8 90	441 00	
	$ 1 831 66	$ 28 01		$ 38 33	$ 1 898 00	(7-C)
Shop and payroll expense						
Star labor @ 20%	$ 402 35	$ 6 15		$ 8 42	$ 416 92	
Wallace office @ 10%	14 48	22		30	15 00	
Burke office-(Star @ 20%)	38 60	59		81	40 00	
	$ 455 43	$ 6 96		$ 9 53	$ 471 92	(7-C)

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies and Other

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total	
Taxes-Social security - (Adjusted)						
F.O.A.B. 2.25%	$ 136 06	$ 2 08		$ 2 85	$ 140 99	
Federal U.C. .3%	(15 64)-	(24)-		(33)-	(16 21)-	
Idaho U.C. .3%	(15 64)-	(24)-		(33)-	(16 21)-	
	$ 104 78	$ 1 60		$ 2 19	$ 108 57	
Payloader expense						
Supplies	$ 164 70	$ 2 52		$ 3 45	$ 170 67	(7-A)
Workmen's compensation expense						
Industrial Indemnity Company $7,972.08 @ $5.693 per $100	$ 437 99	$ 6 70		$ 9 16	$ 453 85	
20% surcharge	87 60	1 34		1 83	90 77	
4 x-rays and physicals	32 81	50		69	34 00	
	$ 558 40	$ 8 54		$ 11 68	$ 578 62	
Air and water lines						
537.8' 4" air line	$ 403 36				$ 403 36	
230.4' 2" water line	80 87				80 87	
307.4' 1" water line	52 87				52 87	
1 6" Gate valve-(Used)	55 06				55 06	
50 2" couplings	77 00				77 00	
8 6" couplings	43 12				43 12	
Miscellaneous fittings	31 19				31 19	
	$ 743 47				$ 743 47	
Track						
537.8' rail	$ 831 44				$ 831 44	
215 ties	152 65				152 65	
143# track bolts	28 60				28 60	
72 pair splice bars	48 96				48 96	
359# track spikes	49 99				49 99	
	$ 1 111 64				$ 1 111 64	
Ventilation						
230.4' 24" vent pipe	$ 1 087 48				$ 1 087 48	
307.4' 20" vent pipe	947 10				947 10	
	$ 2 034 58				$ 2 034 58	
Rock bolts						
286 1"x4' rock bolts, complete (ground support)			$ 672 95		$ 672 95	
760 1"x6' rock bolts, complete (ground support)			2 448 05		2 448 05	
			$ 3 121 00		$ 3 121 00	

HECLA-SILVER MOUNTAIN PROJECT

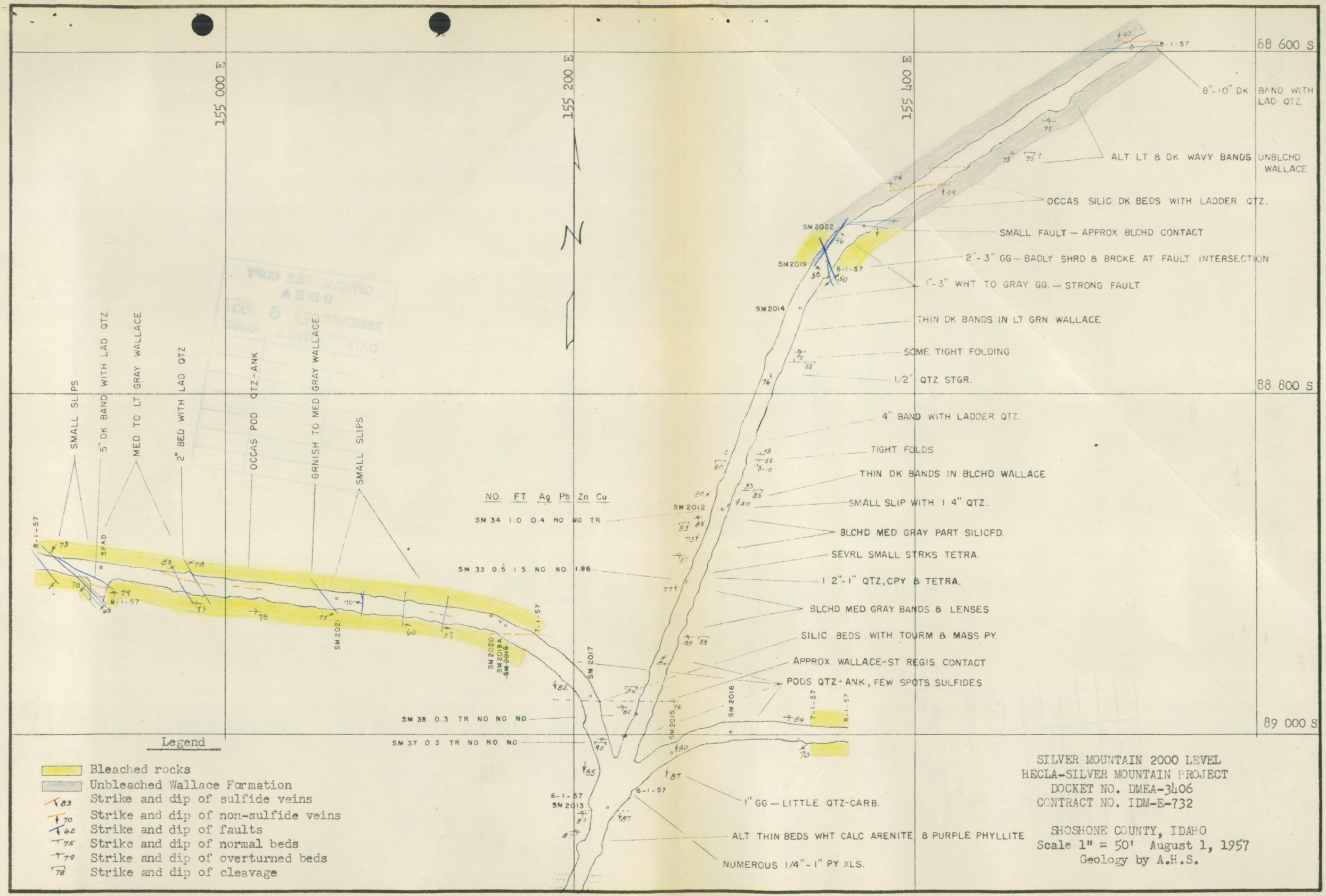
Supplement to Form 104 and 104-A

Analysis of Supplies and Other

July - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Timbering	Total
Equipment depreciation 100% x $1,997.20	$ 1 908 09	$ 29 18		$ 39 93	$ 1 977 20
Total supplies and other	$ 18 150 87	$ 217 39	$ 3 121 00	$ 297 50	$ 21 786 76
Total labor and supplies to form 104-A	$ 31 321 62	$ 418 76	$ 5 213 00	$ 573 15	$ 37 526 53

Summary of crosscutting and drifting	
North crosscut	$ 12 888 43
East drift	1 156 48
West drift	17 276 71
	$ 31 321 62


155 000 E
155 200 E
155 400 E
88 600 S
88 800 S
89 000 S
N
SMALL SLIPS
5" DK BAND WITH LAD QTZ.
MED TO LT GRAY WALLACE
2" BED WITH LAD QTZ
OCCAS POD QTZ-ANK
GRNISH TO MED GRAY WALLACE
SMALL SLIPS
8"-10" DK BAND WITH LAD QTZ.
ALT LT & DK WAVY BANDS UNBLCHD WALLACE
OCCAS SILIC DK BEDS WITH LADDER QTZ.
SMALL FAULT — APPROX BLCHD CONTACT
2"-3" GG — BADLY SHRD & BROKE AT FAULT INTERSECTION
1"-3" WHT TO GRAY GG. — STRONG FAULT
THIN DK BANDS IN LT GRN WALLACE
SOME TIGHT FOLDING
1/2" QTZ STGR.
4" BAND WITH LADDER QTZ.
TIGHT FOLDS
THIN DK BANDS IN BLCHD WALLACE
SMALL SLIP WITH 1 4" QTZ.
BLCHD MED GRAY PART SILICFD.
SEVRL SMALL STRKS TETRA.
1 2"-1" QTZ, CPY & TETRA.
BLCHD MED GRAY BANDS & LENSES
SILIC BEDS WITH TOURM & MASS PY.
APPROX WALLACE-ST REGIS CONTACT
PODS QTZ-ANK, FEW SPOTS SULFIDES
1" GG — LITTLE QTZ-CARB.
ALT THIN BEDS WHT CALC ARENITE & PURPLE PHYLLITE
NUMEROUS 1/4"-1" PY XLS.
NO. FT Ag Pb Zn Cu
SM 34 1.0 0.4 NO NO TR
SM 33 0.5 1.5 NO NO 1.96
SM 38 0.3 TR NO NO NO
SM 37 0.3 TR NO NO NO
SM 2022
SM 2019
SM 2014
SM 2012
SM 2021
SM 2020
SM 2018A
SM 2017
SM 2015
SM 2016
SM 2013
SPAD
8-1-57
6-1-57
7-1-57
Legend
Bleached rocks
Unbleached Wallace Formation
Strike and dip of sulfide veins
Strike and dip of non-sulfide veins
Strike and dip of faults
Strike and dip of normal beds
Strike and dip of overturned beds
Strike and dip of cleavage
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732
SHOSHONE COUNTY, IDAHO
Scale 1" = 50' August 1, 1957
Geology by A.H.S.

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DATE	INITIALS	CODE

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DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

August 9, 1957

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DMEA
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DATE	INITIALS	CODE
14	Conn	100
8/21	copy	500

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Routine inspection report, Docket ~~No. DMEA-3406 (lead-~~ zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

This project was inspected July 11, 1957, accompanied by Mr. M. W. Hutchinson, company geologist.

The 2000 level north crosscut had been driven 1,467 feet from survey point SM2003 which is located at the north end of the station and is the beginning of the crosscut. The face was in a badly crushed zone suspected to be faulted. A considerable number of rock bolts are required to prevent extensive caving.

A fault zone about 15 feet thick with a footwall strike of N. 55°-60° W. and 80° S. dip, approximately 904 feet north of the station is believed to be the Paymaster fault. The zone is a complex of minor intersecting faults, dominated by the strong fault.

Approximately 1,103 feet north of the shaft or 15 feet north of SM2013 is the starting point for the east and west drifts having a radius of about 100 feet each. The east drift will parallel the Paymaster fault zone about 225 feet north of the fault, and the west drift will parallel it approximately 285 feet north.

The east drift had been driven about 138 feet from the crosscut. The face of the east drift was said to be in overturned beds of the uppermost St. Regis formation. Disseminated pyrite grains and veinlets of pyrite were exposed in the drift.

The west drift had been driven about 156 feet from the crosscut with the face reported to be in St. Regis-Wallace formational boundary zone. Disseminated pyrite grains were evident in the drift.

The following survey data is given to facilitate reporting future progress. The data is taken from the company transit surveys. The distance between survey stations was checked and confirmed.

2000 Level Tail Drift

Starting point of tail drift going south at SM2004 + 1.3 ft.

Sta. SM2004 + 1.3 ft.	- SM2002	S. 37° W.	35.4 ft.
SM2002	- face	S. 37° W.	67.9 ft.
Length of tail drift			103.3 ft.

2000 Level North Crosscut

Starting point of North Crosscut at SM2003

SM2003	- SM2001	N. 0° 39' 30" E.	50.40 ft.	
SM2001	- SM2005	N. 0° 39' 30" E.	44.99 "	
SM2005	- SM2006	N. 10° 39' 00" E.	35.53 "	
SM2006	- SM2007	N. 20° 56' 00" E.	128.34 "	
SM2007	- SM2008	N. 20° 56' 00" E.	260.61 "	
SM2008	- SM2009	N. 20° 56' 00" E.	238.64 "	
SM2009	- SM2011	N. 20° 56' 00" E.	271.79 "	
SM2011	- SM2012	N. 20° 56' 00" E.	245.19 "	
SM2011	- SM2013	N. 20° 56' 00" E.		(57.85 ft.)
SM2012	- SM2014	N. 20° 55' 30" E.	127.50 "	
			1402.99 ft.	
SM2014	- face		63.70 "	
			1466.69 ft.	

2000 Level East Drift

Starting point of East drift was at SM2013 + 17.0 ft. going NE

Sta. SM2013 - 2015	N. 48° 15' 30" E.	48.77 ft.
SM2013 + 17, starting point		17.00 "
		31.77 "
SM2015 - 2016	N. 70° 50' 00" E.	37.25 "
		69.02 "
SM2016 - face		68.5 "
Total to July 11, 1957		137.52 ft.

2000 Level West Drift

Starting point of West drift was at SM2013 + 14.0 ft. going NW

Sta. SM2013 - 2017	N. 9° 00' 30" W.	67.08 ft.
SM2013 + 14, starting point		14.00 "
		53.08 "
SM2017 - 2018		62.50 "
		115.58 "
SM2018 - face		40.0 "
Total to July 11, 1957		155.58 ft.

The status of the contract at the time of the inspection was:

Date of contract: October 21, 1954
Termination date: August 1, 1959
Amount of contract: $1,435,880.00
Amount spent: 614,684.12 (thru June 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Crosscutting and drifting	15,820 ft.	1,864 ft.
Sideswiping	72,000 cu.ft.	2,665 cu.ft.
Underground drilling	25,000 ft.	none
* Timbering	--	none
* Rock bolting	--	1,547
Samples	1,000	11

*Timbering and rock bolting as necessary; no specific number authorized.

Note: Only incompleted work is reported above.

John D. Bardill

John D. Bardill

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Bardill

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICE		
DMEA		
RECEIVED AUG 1 1957		
DATE	INITIALS	CODE
8/1	C	220
8/1	COM	100
8/2	~~[illegible]~~	500

July 12, 1957

MEMORANDUM

To: DMEA Field Team, Region I

From: R. D. Sample, Geologist, U. S. Geological Survey

Subject: Interim inspection report, Docket No. DMEA-3406 (Lead-Zinc-Copper) Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project was visited and inspected on July 9, 1957, by R. D. Sample and William Prinz, Geologists, U. S. Geological Survey. All of the present workings are on the 2,000-foot level which is serviced by the 2,088-foot, 3-compartment, vertical shaft. A crosscut approximately 1,500 feet northward (see attached sketch map) has been driven at about right angles to the strike of the beds and cleavage of the St. Regis formation of the Belt Series of Precambrian rocks. At 1,100 feet northward from the shaft an easterly and westerly drift has been turned off from the main crosscut to follow along what was believed to be the Paymaster fault zone. Work on the easterly drift had been discontinued at the time of the visit, but the westerly drift, as well as the extension of the main crosscut, was continuing.

Work on the easterly drift was temporarily stopped at about 100 feet because of lack of sufficient structural or mineralized features to follow. The last drifting in this turnoff was about parallel with the bedding of the St. Regis formation and showed only scattered pods and pieces of siliceous calcite with no mineralization. The dark-gray, shaly and steep dipping phyllites of the St. Regis is very crumbly and tends to cave when the drifting is parallel to the bedding, requiring many roof bolts.

The westerly drift had extended for about 75 feet and had not quite approached the strike of the beds. No structure or mineralization was observed in this west face although the same scattered siliceous calcite pods were present along the walls and face.

The northerly extension of the crosscut was about 1,500 feet from the shaft and at the time of visit was in badly crushed and

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 8-1

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. Division
6. Docket Control Mails and Files

1,500

Note comments in report regarding:

1. looks like trouble ahead!
2.
3.
4.

and take appropriate action.

- - - - - - - - -

Action taken by Division:

Robert E. Adams

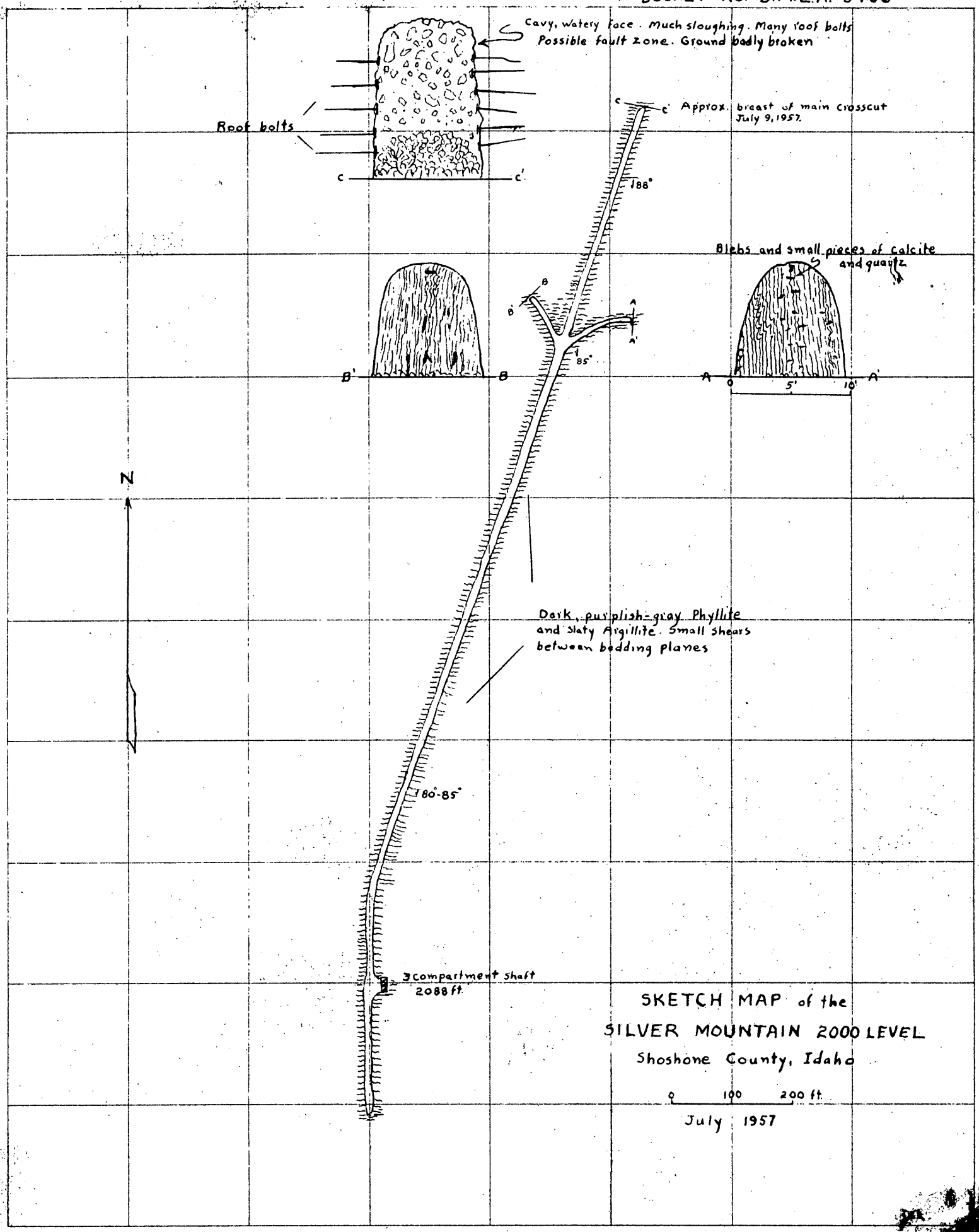
water-soaked rock. A fault zone or water course was suspected. This face was requiring many roof bolts on the sides and back to prevent extensive caving.

Work on the northerly extension appears to be progressing satisfactorily but may be slowed somewhat if the area of caving is extensive. The work on the westerly drift may be temporarily halted in a short time unless a significant structure or mineralized area is contacted.

Enclosure

Distribution:
DMEA (Orig. & 2)
USBM (2)
USBM (AD)
Docket
Sample

DOCKET NO. D.M.E.A. 5406



"ALBANENE" NO. 1050 RECORD
REG. U.S. PAT. OFF.

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DATE	INITIALS	CODE

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

Approved

Month of June, 195 7 Docket No. DMEA 3406 Contract No. 10M-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $ 1,435,880.00 Government Participation: 50% Amount, $ 717,940.00

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 Contractor: Units				8/15/57		
Short Term: 2000 Skip Pocket	$ --	$ 3538.00	$ 3538.00		3538.00	3538.00
Drilling	--	15708.00	15708.00		15708.00	15708.00
Surface Plant	--	43893.22	43893.22		43893.22	43893.22
Pump Stations	--	8000.00	8000.00		8000.00	8000.00
2000 Station	--	6336.00	6336.00		6336.00	6336.00
Shaft	--	451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
Labor	11191.57	34979.04	46170.61	11191.57	34979.04	46170.61
Supervision	635.00	1865.79	2500.79	635.00	1865.79	2500.79
Technical Services	700.00	2056.55	2756.55	700.00	2056.55	2756.55
(3) Operating Mat'ls. and Supplies:						
Rock Bolts	2139.94	2386.35	4526.29	2139.94	2386.35	4526.29
Explosives	1087.19	6503.41	7590.60	1087.19	6503.41	7590.60
Air and Water	383.04	2641.73	3024.77	383.04	2641.73	3024.77
Pipe Ventilation	672.27	5130.49	5802.76	672.27	5130.49	5802.76
Track	906.55	3296.62	4203.17	906.55	3296.62	4203.17
Bits and Steels	614.01	1527.80	2141.81	614.01	1527.80	2141.81
Mine Tools	111.45	63.48	174.93	111.45	63.48	174.93
(4) Operating Equipment:						
Rental	--	--	--			
Purchase	--	--	--			
Depreciation	1977.20	5809.61	7786.81	1977.20	5809.61	7786.81
(5) Initial Rehabilitation and Repairs	--	--	--			
(6) New Bldgs., Improvements, etc.	--	--	--			
(7) Miscellaneous:						
A Repairs to Equipment	1548.51	4649.52	6198.03	1548.51	4649.52	6198.03
Sampling and Analysis	16.00	34.00	50.00	16.00	34.00	50.00
Payroll Taxes	88.39	778.44	866.83	88.39	778.44	866.83
Liability Insurance	597.24	2274.95	2872.19	597.24	2274.95	2872.19
B Employees group ins.	170.91	542.90	713.81	170.91	542.90	713.81
C Miscellaneous	665.43	1057.49	1722.92	665.43	1057.49	1722.92
(8) Contingencies (specify):						
Electric Power	494.34	1664.39	2158.73	494.34	1664.39	2158.73
A Office Expense	78.33	219.85	298.18	78.33	219.85	298.18
Less in excess of max.	(10357.36)	- (5353.52)	- (15710.88)	-10357.36	-5353.52	-15710.88
TOTALS	$13720.01	$ 600964.11	$ 614684.12	13720.01	600964.11	614684.12

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

Date July 2b, 1957 Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 6,860.00

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 8/6/57 Vou. No. 2016

(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. E 732 in accordance with the terms of the contract.

Signature /s/ John A. Bardill Title Metallurgist Date July 29, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Executive Officer Date July 31, 1957

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 June 1957 Docket No. DMEA 3406 Contract No. ITM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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
Assaying		$ 10.00	4	$ 50.00	11	$ 4.55	1000	
Drifting: Crosscutting & Drifting	feet	19081.63	218.4	91851.95	1750.6	52.47	15820	$ 44.00
Raising: Sidesnipe	cu.ft.	1525.00	1068	2155.54	2665	.81	72000	.50
Shafts	feet	--	--	451360.00	2080	217.00	2000	217.00
Winzes: Rock Bolts		3453.94	657	7502.29	1488	5.04	--	5.00
Drilling: Core	feet	--	--	25708.00	2244	7.00	3000	7.00
Churn								
Auger								
Sinking: Pump Stations	cu.ft.	--	--	6000.00	16268	.49	6000	1.00
Trenching: 2000 Station		--	--	6336.00	--	--	--	6336.00
Test Pits: 2000 Skip Pocket		--	--	3538.00	--	--	--	3538.00
Roads and Trails								
Surface Plant		--	--	43893.22	--	--	--	45500.00
Total Distributed Costs		$21077.37		$ 630395.00				Total Costs Authorized by Contract
June maximum excess applied to prior months underages (See May 1957 Report):								
Sidesnipe		150.76		--				
Equipment Purchased		106.65		--				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Excess of maximums (See below)		(10632.77)-		(15710.00)-				
Total Costs		$10720.03		$ 614684.34				

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 July 24, 1957 Operator Hecla Mining Company

Per J. D. Bordill Title President

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)

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	Actual Costs: This Month	Actual Costs: Total To Date	Maximum Costs: This Month	Maximum Costs: Total To Date	Total In Excess Or (Under) Maximum: This Month	Total In Excess Or (Under) Maximum: Total To Date
*Drifting and Crosscutting	$19081.63	$91851.95	$9609.60	$77026.40	$ 9472.03	$ 14825.55
*Sidesniping	1525.00	2155.54	534.00	1332.50	991.00	823.04
*Rock Bolts	3453.94	7502.29	3285.00	7440.00	168.94	62.29

/s/ John D. Bordill

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

July eighth
1957

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DATE	INITIALS	CODE

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver Mountain Project - June - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of June, the east and west drifts were advanced 118.2 feet and 100.2 feet from the north crosscut, respectively.

A total of 28 feet of sideswiping (1,068 cubic feet) was completed and 663 rock bolts were put in.

At the end of June, the face of the east drift was in overturned beds of the uppermost St. Regis formation. The west drift had penetrated the St. Regis - Wallace formational boundary zone about 62 feet from the north crosscut. Both drifts are in bleached rock.

Mineralization exposed in the drifts consists of occasional 1" to 2" beds of quartzite containing disseminated pyrite crystals, several $\frac{1}{4}$" to $\frac{1}{2}$" veins of massive pyrite, and occasional zones, about one foot wide, paralleling bedding or fracture cleavage, containing irregularly shaped masses of quartz-ankerite which sometimes contain traces of chalcopyrite. Thin plates of quartz and ankerite also occur as fillings in nearly horizontal joint planes.

Yours very truly,

A. H. Sorensen

A. H. Sorensen
Geologist

AHS:nn

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HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total
Labor					
Hecla-Silver Mountain labor					
Drift miners					
Drifting 218.4' @ $10.50	$ 2 293 20				$ 2 293 20
Sideswiping 39.5' @ $5.25		$ 207 39			207 39
Rock bolts-657 @ $2.00 (hold ground)			$ 1 314 00		1 314 00
6 @ $2.00 (hang vent pipe)	12 00				12 00
Caging allowance-59 shifts @ $17.20	930 64	84 16			1 014 80
Pusher allowance-69 shifts @ $0.96	60 75	5 49			66 24
Allowance for shaft repair, switch work, pipework, air receiver work, bolting, charging, etc.	754 84	68 27			823 11
Shift differential:					
61 shifts @ $0.40	22 38	2 02			24 40
56 shifts @ $0.80	41 08	3 72			44 80
Overtime	225 73	20 41			246 14
Vacation	204 25	18 47			222 72
Total drift miners	$ 4 544 87	$ 409 93	$ 1 314 00		$ 6 268 80
Topman					
22 shifts @ $18.16	$ 366 39	$ 33 13			$ 399 52
Overtime	24 98	2 26			27 24
	$ 391 37	$ 35 39			$ 426 76
Cager					
4 shifts @ $17.60	$ 64 56	$ 5 84			$ 70 40
Hoistman					
24 shifts @ $19.12	$ 420 82	$ 38 06			$ 458 88
21 shifts @ $19.52	375 92	34 00			409 92
24 shifts @ $19.92	438 43	39 65			478 08
Overtime	71 60	6 48			78 08
	$ 1 306 77	$ 118 19			$ 1 424 96

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Labor

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total
Miner					
2 shifts @ $17.60	$ 32 28	$ 2 92			$ 35 20
Hecla labor					
Hecla payroll	$ 41 96	$ 3 79			$ 45 75
Star labor (custom)					
Star mine payroll	$ 2 335 83	$ 211 25			$ 2 547 08
Accounting					
Hecla	$ 137 56	$ 12 44			$ 150 00
Star	204 16	18 46			222 62
	$ 341 72	$ 30 90			$ 372 62
Total labor	$ 9 059 36	$ 818 21	$ 1 314 00		$ 11 191 57
Supervision					
Hecla-Silver Mountain	$ 582 34	$ 52 66			$ 635 00
Technical					
Hecla	$ 550 91	$ 49 82			$ 600 73
Star	91 04	8 23			99 27
	$ 641 95	$ 58 05			$ 700 00
Total labor	$ 10 283 65	$ 928 92	$ 1 314 00		$ 12 526 57

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Bits and rods						
Drill steel	$ 541 20	$ 48 94			$ 590 14	
Bit grinder repair	21 89	1 98			23 87	
	$ 563 09	$ 50 92			$ 614 01	
Compressed air						
Compressor supplies	$ 3 14	28			$ 3 42	(7-A)
Drill repair						
Drill machine supplies	$ 160 99	$ 14 56			$ 175 55	(7-A)
Explosives						
1263 delays	$ 286 25	$ 25 89			$ 312 14	
3900 lbs. powder	710 77	64 28			775 05	
	$ 997 02	$ 90 17			$ 1 087 19	
Hoisting						
Supplies - hoist	$ 52 08	$ 4 71			$ 56 79	
- shaft	9 92	90			10 82	
Mileage (transportation of outside labor and freight)	21 50	1 94			23 44	
	$ 83 50	$ 7 55			$ 91 05	(7-A)
Pumping						
Pump supplies	$ 67 98	$ 6 15			$ 74 13	(7-A)
Ventilation						
6 1" x 4' roof bolts, complete (hang vent pipe)	$ 15 20				$ 15 20	
1 keg chain (hang vent pipe)	220 85				220 85	
Vent line supplies	244 76	$ 22 14			266 90	
	$ 480 81	$ 22 14			$ 502 95	(7-A)
Miscellaneous - underground						
Transportation supplies-(haulage underground)	$ 170 59	$ 15 43			$ 186 02	(7-A)
Mucker supplies	156 23	14 13			170 36	(7-A)
Mine tools	102 21	9 24			111 45	
Mileage (transportation of outside labor and freight)	68 39	6 18			74 57	(7-A)
	$ 497 42	$ 44 98			$ 542 40	

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Surface miscellaneous						
Mileage (transportation of outside labor and freight)	$ 133 29	$ 12 05			$ 145 34	(7-A)
Miscellaneous equipment supplies	43 29	3 91			47 20	(7-A)
Power supplies	64 88	5 87			70 75	(7-A)
Heat dry building (fuel oil)	49 55	4 48			54 03	(7-C)
Miscellaneous	21 38	1 93			23 31	(7-C)
	$ 312 39	$ 28 24			$ 340 63	
Electric power						
78191 kilowatts	$ 453 34	$ 41 00			$ 494 34	
General expense						
Office supplies	$ 45 85	$ 4 15			$ 50 00	(8-A)
Telephone and telegraph	25 98	2 35			28 33	(8-A)
Group accident insurance-Employees	109 26	9 88			119 14	(7-B)
Group life insurance-Employees	47 48	4 29			51 77	(7-B)
	$ 228 57	$ 20 67			$ 249 24	
Shop and payroll expense						
Star labor @ 20%	$ 467 17	$ 42 25			$ 509 42	
Wallace office @ 10%	13 76	1 24			15 00	
Burke office (Star) @ 20%	40 83	3 69			44 52	
Hecla labor @ 20%	8 39	76			9 15	
	$ 530 15	$ 47 94			$ 578 09	(7-C)
Taxes-Social Security						
F.O.A.B. 2.25% x $3,348.00	$ 69 08	$ 6 25			$ 75 33	
Federal U.C. .3% x $2,176.67	5 99	54			6 53	
Idaho U.C. .3% x $2,176.67	5 99	54			6 53	
	$ 81 06	$ 7 33			$ 88 39	

HECLA-SILVER MOUNTAIN PROJECT

Supplement to Form 104 and 104-A

Analysis of Supplies

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Payloader expense						
Gas tax refund-State of Idaho	$ (37 64)-	$ (3 40)-			$ (41 04)-	
Supplies	44 21	4 00			48 21	
	$ 6 57	$ 60			$ 7 17	(7-A)
Workmen's compensation expense						
Industrial Indemnity Co.						
Audit adjustment - (Prior month)	$ 91 29	$ 8 26			$ 99 55	
$7,284.67 @ $5.693 per $100	380 34	34 40			414 74	
20% surcharge	76 07	6 88			82 95	
X-ray	9 17	83			10 00	(7-C)
	$ 556 87	$ 50 37			$ 607 24	
Air and water lines						
50 1" couplings	$ 46 50				$ 46 50	
6 6" couplings	32 34				32 34	
712# scrap pipe	14 24				14 24	
7 6" ells	69 21				69 21	
Miscellaneous	16 56				16 56	
218.4' 4" air line	164 83				164 83	
218.4' 1" water line	39 36				39 36	
	$ 383 04				$ 383 04	
Track						
2 switch points	$ 236 40				$ 236 40	
Miscellaneous	3 25				3 25	
2 switches	215 88				215 88	
218.4' rail	337 16				337 16	
87 ties	62 03				62 03	
58# track bolts	11 65				11 65	
29 pair splice bars	19 80				19 80	
146# track spike	20 38				20 38	
	$ 906 55				$ 906 55	

HECLA-SILVER MOUNTAIN PROJECT

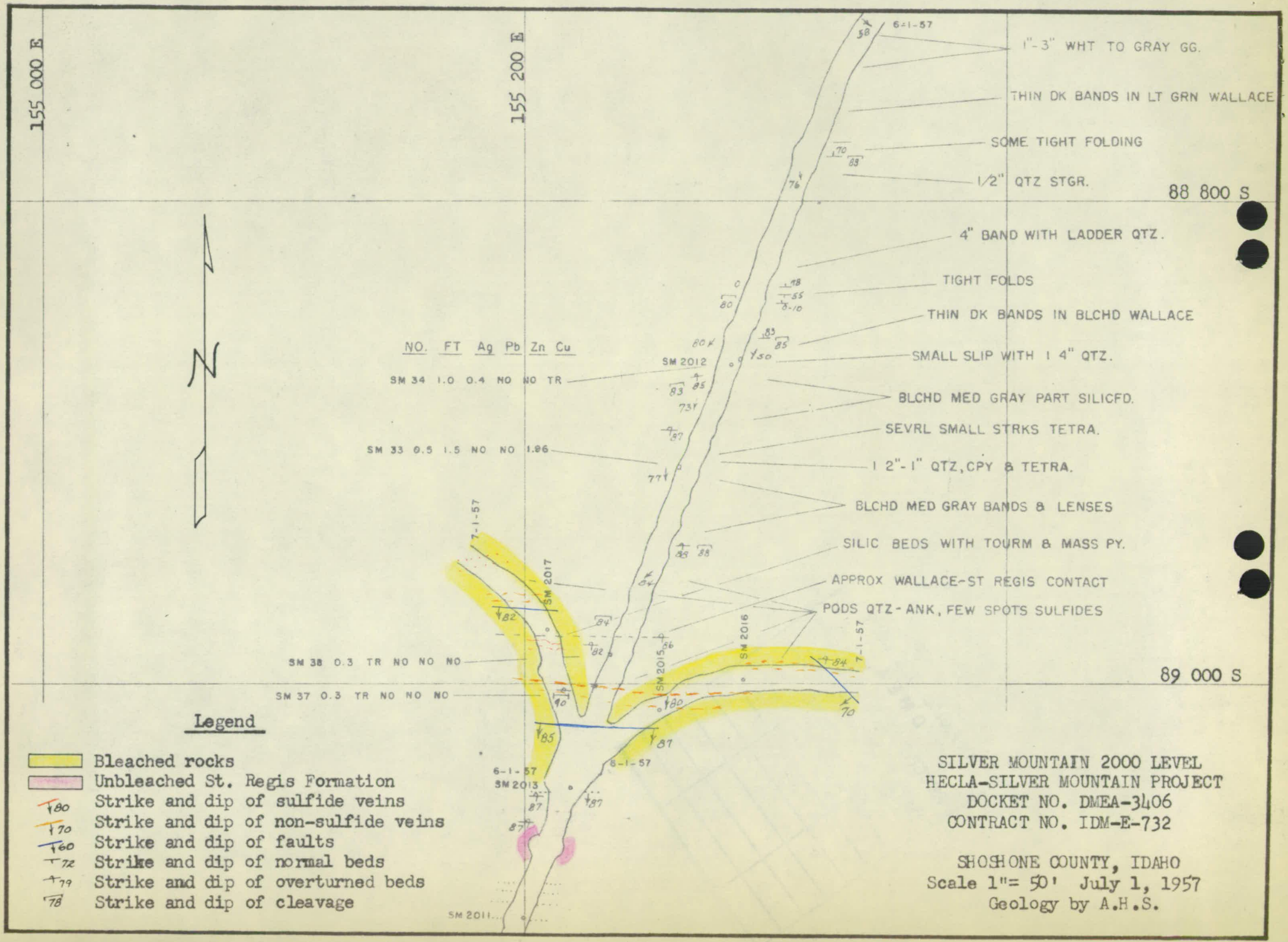
Supplement to Form 104 and 104-A

Analysis of Supplies

June - 1957

	Drifting and Crosscutting	Side-swiping	Rock Bolting	Assaying	Total
Ventilation					
218.4' 20" vent pipe	$ 672 27				$ 672 27
Rock bolts					
67 1" x 4' rock bolts, complete (ground support)			$ 169 84		$ 169 84
590 1" x 6' rock bolts, complete (ground support)			1 970 10		1 970 10
			$ 2 139 94		$ 2 139 94
Assaying					
4 samples				$ 16 00	$ 16 00
Equipment depreciation					
100 % x $1,977.20	$ 1 813 22	$ 163 98			$ 1 977 20
Total supplies and other	$ 8 797 98	$ 596 88	$ 2 139 94	$ 16 00	$ 11 550 80
Total labor and supplies to form 104-A	$ 19 081 63	$ 1 525 80	$ 3 453 94	$ 16 00	$ 24 077 37

Summary of crosscutting and drifting	
North crosscut	$ 461 80
East drift	10 062 88
West drift	8 556 95
Total	$ 19 081 63


155 000 E
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N
1"-3" WHT TO GRAY GG.
THIN DK BANDS IN LT GRN WALLACE
SOME TIGHT FOLDING
1/2" QTZ STGR.
4" BAND WITH LADDER QTZ.
TIGHT FOLDS
THIN DK BANDS IN BLCHD WALLACE
SMALL SLIP WITH 1 4" QTZ.
BLCHD MED GRAY PART SILICFD.
SEVRL SMALL STRKS TETRA.
1 2"-1" QTZ, CPY & TETRA.
BLCHD MED GRAY BANDS & LENSES
SILIC BEDS WITH TOURM & MASS PY.
APPROX WALLACE-ST REGIS CONTACT
PODS QTZ-ANK, FEW SPOTS SULFIDES
NO. FT Ag Pb Zn Cu
SM 34 1.0 0.4 NO NO TR
SM 33 0.5 1.5 NO NO 1.86
SM 38 0.3 TR NO NO NO
SM 37 0.3 TR NO NO NO
SM 2012
SM 2017
SM 2016
SM 2015
SM 2013
SM 2011
6-1-57
7-1-57
8-1-57
Legend
Bleached rocks
Unbleached St. Regis Formation
Strike and dip of sulfide veins
Strike and dip of non-sulfide veins
Strike and dip of faults
Strike and dip of normal beds
Strike and dip of overturned beds
Strike and dip of cleavage
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732
SHOSHONE COUNTY, IDAHO
Scale 1"= 50' July 1, 1957
Geology by A.H.S.

OFFICIAL FILE COPY
D M E A
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DATE	INITIALS	CODE

Standard Form No. 1034a—Revised
Form prescribed by
Comptroller General, U. S.
September 7, 1950
(Gen. Reg. No. 51, Supp. No. 11)

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

D. O. Vou. No. .....

Bu. Vou. No. 2014

U. S. .....
(Department, bureau, or establishment)

Voucher prepared at Spokane, Washington 8/1/57
(Give place and date)

THE UNITED STATES, Dr., Payee's Account No. Idm-E732

To Hecla Mining Company
(Payee)

Box 320 Wallace Idaho
(Address) (City) (State)

PAID BY
Guaranteed
[redacted]
Berg
(For use of Paying Office)

No. and Date of Order	Date of Delivery or Service	ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary) Discount Terms	QUANTITY	UNIT PRICE Cost	UNIT PRICE Per	AMOUNT Dollars	AMOUNT Cts.
		MF-104's					
		Amended Jan-Feb. $5,278.00				11,456	14
		" March 8,134.29					
		" April 15,285.90					
		May 12,303.26 $41,001.45					
		Less Payments on original Forms MF-104					
		Jan-Feb. 5,302.88					
		March 8,183.85					
		April 16,058.58 29,545.31					
		Check $11,456.14					
		Use continuation sheet(s) if necessary					
					Total	11,456	14

PAYMENT:
Complete ☐
Partial ☐
Final ☐

Shipped from to Weight Government B/L No.

(Payee must NOT use this space)
Differences .....
Account verified; correct for 11,456 14
(Signature or initials) A. L.

RECEIVED AUG 5 1957 D.M.E.A.

Contract No. Requisition No. Date Invoice Rec'd.

MEMORANDUM

ACCOUNTING CLASSIFICATION (For completion by Administrative Office)

Appropriation, limitation, or project symbol	Appropriation title	Limit'n. or Proj't. Amount	Appropriation Amount

Allotment symbol	Amount	Obligations liquidated	COST ACCOUNT Symbol	COST ACCOUNT Amount	OBJECTIVE CLASSIFICATION Symbol	OBJECTIVE CLASSIFICATION Amount

Paid by { Check No. ..... dated ....., 19....., for $..... } on Treasurer of the United States in favor of payee named above.
{ Cash, $....., on ....., 19.....

16—22900a-2

METHOD OF OR ABSENCE OF ADVERTISING

METHOD OF ADVERTISING

1. Advertising in newspapers Yes ☐ No ☐.
2. (*a*) Advertising by circular letters sent to ..... dealers.
   (*b*) And by notices posted in public places Yes ☐ No ☐.

   (If notices were not posted in addition to advertising by circular letters sent to dealers, explanation of such omission must be made below.)

ABSENCE OF ADVERTISING

3. Without advertising, under an exigency of the service which existed prior to the order and would not admit of the delay incident to advertising.
4. Without advertising in accordance with .....
5. Without advertising, it being impracticable to secure competition because of .....

.....

.....

.....

.....

(Here state in detail the nature of the exigency or circumstances under which the securing of competition was impracticable under 3 and 4)

NOTE.—The above form "Method of or Absence of Advertising" is to be used when purchases are made or services secured under proper authority without written agreement in any form. In case of a written agreement (formal contract, proposal, and acceptance, or less formal agreement) Standard Form No. 1036—Revised should be used for abstracting the method of or absence of advertising and award of contract. (See General Regulations No. 51, as amended.)

☆ U. S. GOVERNMENT PRINTING OFFICE : 1950 O—75805

16—22900a-2

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 May, 1957 Docket No. DMEA 306 Contract No. [illegible]-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $1,435,000.00 Government Participation: 50 % Amount, $ 717,500.00

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:						
[illegible] Drilling	-	$ 3538.00	$ 3538.00	8/13/57 [illegible]	3538.00	3538.00
[illegible]	-	15708.00	15708.00		15708.00	15708.00
[illegible] surface plant	-	43893.22	43893.22		43893.22	43893.22
[illegible] stations	-	8000.00	8000.00		8000.00	8000.00
[illegible] station	-	6336.00	6336.00		6336.00	6336.00
Shaft	-	451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
A. Labor	11314.04	23665.00	34979.04	11314.04	23665.00	34979.04
Supervision	635.00	1230.79	1865.79	635.00	1230.79	1865.79
Technical Services	700.00	1356.55	2056.55	700.00	1356.55	2056.55
(3) Operating Mat'ls. and Supplies:						
Timber [illegible] bolts	1381.27	1005.08	2386.35	1381.27	1005.08	2386.35
Explosives	2079.66	4423.75	6503.41	2079.66	4423.75	6503.41
Pipe [illegible]	1069.86	1571.87	2641.73	1069.86	1571.87	2641.73
[illegible]	1757.04	3373.45	5130.49	1757.04	3373.45	5130.49
Track	1063.75	2232.87	3296.62	1063.75	2232.87	3296.62
[illegible] and rods	669.85	857.95	1527.80	669.85	857.95	1527.80
[illegible] tools	35.83	27.65	63.48	35.83	27.65	63.48
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	1977.20	3832.41	5809.61	1977.20	3832.41	5809.61
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
A. Repairs to Equipment	1711.35	2938.17	4649.52	1711.35	2938.17	4649.52
Sampling and Analysis	18.00	16.00	34.00	18.00	16.00	24.00
Payroll Taxes	145.03	633.41	778.44	145.03	633.41	778.44
Liability Insurance	751.32	1523.63	2274.95	751.32	1523.63	2274.95
B. Employees Group Ins.	181.94	360.96	542.90	181.94	360.96	542.90
C. Miscellaneous	286.79	770.70	1057.49	286.79	770.70	1057.49
(8) Contingencies (specify):						
Electric power	585.27	1079.12	1664.39	585.27	1079.12	1664.39
A. Office expense	99.28	120.57	219.85	99.28	120.57	219.85
Loss in excess of maximum	(1855.90)	(3497.56)	(5353.52)	[illegible]	[illegible]	[illegible]
TOTALS	$24606.52	$576357.59	$600964.11	24606.52	576357.59	600964.11

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

Date JUL 2 1957 *Payee Hecla Mining Co.

Per [signature] Title President

*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:

$ 12303.26

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 8/1/57 Vou. No. 2014

(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. E732 in accordance with the terms of the contract.

Signature /s/ John A. Bardill Title Metallurgist Date July 29, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date July 30, 1957

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 May 1957 Docket No. DMEA 3[illegible] Contract No. [illegible]-732

Operator's Name Bunker Hill Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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
Drilling Assaying	-	$ 18.00	4	$ 34.00	7	$ 4.86	100	$ -
Crosscutting	feet	23627.10	404.0	72770.32	1532.2	47.49	1500	44.00
Drifting Sidewalls	cu. ft.	474.05	1252	629.74	1597	.39	72000	.50
Shafts	feet	-	-	45130.00	200.0	217.00	200	217.00
Raises Rock Bolts	-	2343.27	481	4040.35	831	4.87	-	5.00
Drilling: Core	feet	-	-	15700.00	2244	7.00	3000	7.00
Churn	-	-	-	-	-	-	-	-
Auger	-	-	-	-	-	-	-	-
Stripping Pre-production	cu. ft.	-	-	[illegible]	1[illegible]	.[illegible]	[illegible]	1.00
Crosscuts 2300 station	-	-	-	6336.00	-	-	-	6336.00
Raises 2000 skip pocket	-	-	-	3530.00	-	-	-	3530.00
Roads and Trails	-	-	-	-	-	-	-	-
Surface Plant	-	-	-	4[illegible]	-	-	-	15900.00
TOTAL DISTRIBUTED COSTS		2[illegible]		260,317.43				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		-		-				
Initial Rehabilitation and Repairs		-		-				
New Buildings, Improvements, etc.		-		-				
Excess of Extras		(1555.90)-		(5353.52)-				
TOTAL COSTS		2[illegible]		2[illegible]				

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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 JUL 2 1957 Operator Bunker Hill Company

Per J. D. Bardill Title President

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)

	Actual Costs This Month	Actual Costs Total to Date	Maximum Costs This Month	Maximum Costs Total to Date	Total in Excess or (Under) Maxima This Month	Total in Excess or (Under) Maxima Total to Date
Crosscutting	$23 627.10	$ 72 770.32	$ 21 771.20	$ 67 416.50	$ 1 855.90*	$ 5 353.82*
Sidewalls	474.05	629.74	641.00	790.50	(166.95)-	(160.76)-
Rock Bolts	2 343.27	4 040.35	2 405.00	4 155.00	(61.73)-	(114.65)-

/s/ John D. Bardill

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

HECLA-SILVER MOUNTAIN PROJECT

Analysis of labor

May - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Hecla-Silver Mountain labor						
Drift miners						
Crosscutting-491.3' @ $10.50	$ 5 158 71				$ 5 158 71	
Sideswiping-24.0' @ $5.25		$ 126 00			126 00	
Rock bolts-481 @ $2.00 (Hold ground)			$ 962 00		962 00	
Rock bolts-53 @ $2.00 (Hang vent pipe)	106 00				106 00	
Shift differential						
63 shifts @ $0.40 (#2 shift diff.)	24 60	60			25 20	
65 shifts @ $0.80 (#3 shift diff.)	50 76	1 24			52 00	
Overtime	547 23	13 37			560 60	
Holiday time	198 90	4 86			203 76	
Pusher allowance-75 shifts @ $0.96	70 28	1 72			72 00	
Caging allowance-55½ shifts @ $17.20	931 84	22 76			954 60	
Total drift miners	$ 7 088 32	$ 170 55	$ 962 00		$ 8 220 87	
Hoistman						
26 shifts @ $19.12	$ 485 27	$ 11 85			$ 497 12	
26 shifts @ $19.52	495 42	12 10			507 52	
23 shifts @ $19.92	447 24	10 92			458 16	
Overtime	180 63	4 41			185 04	
	$ 1 608 56	$ 39 28			$ 1 647 84	
Topman						
20 shifts @ $18.16	$ 354 54	$ 8 66			$ 363 20	
Overtime	37 82	92			38 74	
	$ 392 36	$ 9 58			$ 401 94	
Star labor (custom)						
Star mine payroll	$ 676 86	$ 16 53			$ 693 39	
Total labor	$ 9 766 10	$ 235 94	$ 962 00		$ 10 964 04	(2-A)
Supervision						
Hecla-Silver Mountain	$ 619 86	$ 15 14			$ 635 00	
Technical						
Hecla	$ 623 23	$ 15 22			$ 638 45	
Star	60 08	1 47			61 55	
	$ 683 31	$ 16 69			$ 700 00	
Accounting						
Hecla	$ 146 42	$ 3 58			$ 150 00	
Star	195 23	4 77			200 00	
	$ 341 65	$ 8 35			$ 350 00	(2-A)
Total labor	$ 11 410 92	$ 276 12	$ 962 00		$ 12 649 04	

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HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

May - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Bits and rods						
Drill steel	$ 652 27	$ 15 93			$ 668 20	
Bit grinder repair	1 61	04			1 65	
	$ 653 88	$ 15 97			$ 669 85	
Compressed air						
Compressor supplies	$ 52 53	$ 1 28			$ 53 81	(7-A)
Drill repair						
Drill machine supplies	$ 433 06	$ 10 58			$ 443 64	(7-A)
Explosives						
2254 delays	$ 549 13	$ 13 41			$ 562 54	
7200 pounds powder	1 397 03	34 12			1 431 15	
Wire	83 92	2 05			85 97	
	$ 2 030 08	$ 49 58			$ 2 079 66	
Hoisting						
Supplies - headframe	$ 13 94	$ 34			$ 14 28	
- hoist	71 59	1 75			73 34	
- shaft	42 88	1 05			43 93	
- hoist room	134 67	3 29			137 96	
Mileage (transportation of outside labor and freight)	11 95	29			12 24	
	$ 275 03	$ 6 72			$ 281 75	(7-A)
Ventilation						
94 1"x4' roof bolts, complete (hang vent pipe)	$ 222 36				$ 222 36	
Vent line supplies	57 47	$ 1 40			58 87	
Mileage (transportation of outside labor and freight)	2 50	06			2 56	
	$ 282 33	$ 1 46			$ 283 79	(7-A)
Miscellaneous-underground						
Mileage (transportation of outside labor and freight)	$ 4 03	$ 10			$ 4 13	(7-A)
Lagging	24 73	60			25 33	(7-A)
Transportation supplies (haulage)	46 47	1 14			47 61	(7-A)
Mucker supplies	102 02	2 49			104 51	(7-A)
Mine tools	34 98	85			35 83	
	$ 212 23	$ 5 18			$ 217 41	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

May - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Surface-miscellaneous						
Mileage (transportation of outside labor and freight)	$ 237 08	$ 5 79			$ 242 87	(7-A)
First aid	5 86	14			6 00	(7-C)
Miscellaneous equipment supplies	33 38	82			34 20	(7-A)
Miscellaneous	32 12	78			32 90	(7-C)
Power supplies	38 72	95			39 67	(7-A)
Head dry building (fuel oil)	52 92	1 29			54 21	(7-C)
	$ 400 08	$ 9 77			$ 409 85	
Electric power						
92539 Kilowatts	$ 571 32	$ 13 95			$ 585 27	
General expense						
Office supplies	$ 48 80	$ 1 20			$ 50 00	(8-A)
Telephone and telegraph	48 10	1 18			49 28	(8-A)
Group accident insurance-Employees	127 07	3 10			130 17	(7-B)
Group life insurance-emps.	50 54	1 23			51 77	(7-B)
	$ 274 51	$ 6 71			$ 281 22	
Shop and payroll expense						
Star labor @ 20%	$ 135 37	$ 3 31			$ 138 68	
Wallace office @ 10%	14 64	36			15 00	
Burke office @ 20%	39 05	95			40 00	
	$ 189 06	$ 4 62			$ 193 68	(7-C)
Taxes social security						
F.O.A.B. 2.25% x $5,493.78	$ 120 66	$ 2 95			$ 123 61	
Federal U.C. .3% x $3,570.00	10 45	26			10 71	
Idaho U.C .3% x $3,570.00	10 45	26			10 71	
	$ 141 56	$ 3 47			$ 145 03	
Payloader expense						
Supplies	$ 67 56	$ 1 65			$ 69 21	(7-A)
Workmen's compensation expense						
Industrial Indemnity Co. $10,997.89 @ 5.693%	$ 611 18	$ 14 93			$ 626 11	
20% surcharge	122 22	2 99			125 21	
	$ 733 40	$ 17 92			$ 751 32	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

May - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Air & water line						
90 2" couplings	$ 135 60				$ 135 60	
26 6" couplings	114 14				114 14	
494.8' 2" pipe	173 67				173 67	
494.8' 6" pipe	628 40				628 40	
Miscellaneous	18 05				18 05	
	$ 1 069 86				$ 1 069 86	
Pumping						
Pump supplies	$ 78 90	$ 1 93			$ 80 83	(7-A)
Track						
989.5' rail	$ 764 96				$ 764 96	
256 ties	181 52				181 52	
132# track bolts	26 39				26 39	
66 pair splice bars	44 86				44 86	
330# track spike	46 02				46 02	
	$ 1 063 75				$ 1 063 75	
Ventilation						
494.8' vent pipe	$ 1 757 04				$ 1 757 04	
Rock bolts						
481 1" x 6' rock bolts, complete			$ 1 381 27		$ 1 381 27	
Equipment depreciation						
100% x $1,977.20	$ 1 930 06	$ 47 14			$ 1 977 20	
Assaying						
4 samples				$ 18 00	$ 18 00	
Total supplies and other	$ 12 216 24	$ 197 93	$ 1 381 27	$ 18 00	$ 13 813 44	
Total labor and supplies to form 104-A	$ 23 627 16	$ 474 05	$ 2 343 27	$ 18 00	$ 26 462 48	

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

June sixth
1957

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 5 1957

DATE	INITIALS	CODE

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver
Mountain Project - May - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of May, the north crosscut was advanced 494.8 feet to a point 1428.9 feet north of the 2000 level station. Crosscutting has been temporarily halted and east and west lateral work has been started.

A total of 40 feet of sideswiping (1,282 cubic feet) was completed and 534 rock bolts were put in.

At the end of April, the face of the crosscut was in purple St. Regis rocks. These purple rocks were found to continue with the exception of occasional thin bleached bands, for a distance of 155 feet. A new bleached zone was then encountered which is continuous at least to the end of the crosscut, a distance of 344 feet.

No major faults were exposed during the month's crosscutting. The complex of intersecting faults, dominated by a strong fault which dips 80° S.W., that was described as lying 25 feet south of last month's face has been tentatively identified as the Paymaster fault.

At the 2000 level, the Paymaster fault lies in purple St. Regis rock on the south flank of a tightly folded anticline which has been overturned toward the north. On both sides of the fault, the beds dip normally from 70° to 72° S., and strike roughly E - W.

At a distance of 105 feet north of the Paymaster fault, beds are seen dipping 85° S. The relations between fracture cleavage and bedding, evidences of graded bedding, and the increase in dip of the beds, indicate that at this point the beds have been overturned and the tops of the beds face toward the north.

The axis of the anticline presumably lies at a point between the Paymaster fault and the above mentioned overturned beds. Its axis has been tentatively drawn on the accompanying map approximately 60 feet north of the Paymaster fault. The anticlinal axis is overturned, at the level of the crosscut, and dips about 80° S. as indicated by the fracture cleavage.

Approximately 250 feet north of the Paymaster fault zone the rocks consist of interbedded grayish-green phyllites and medium to rather dark gray calcareous quartzites which very much resemble bleached Wallace formation. The formational contact is tentatively placed at that locality.

A 1 inch to 1½ inch wide vein of quartz and massive pyrite containing chalcopyrite and tetrahedrite was found 324 feet north of the Paymaster fault. The vein, striking N. 85° E. and dipping 77° S., occurs in a 60 foot wide zone of semi-silicified, calcareous, gray Wallace quartzite. A 0.5 foot wide sample across this structure assayed 1.5 ounces silver, 1.96 percent copper, no lead and no zinc.

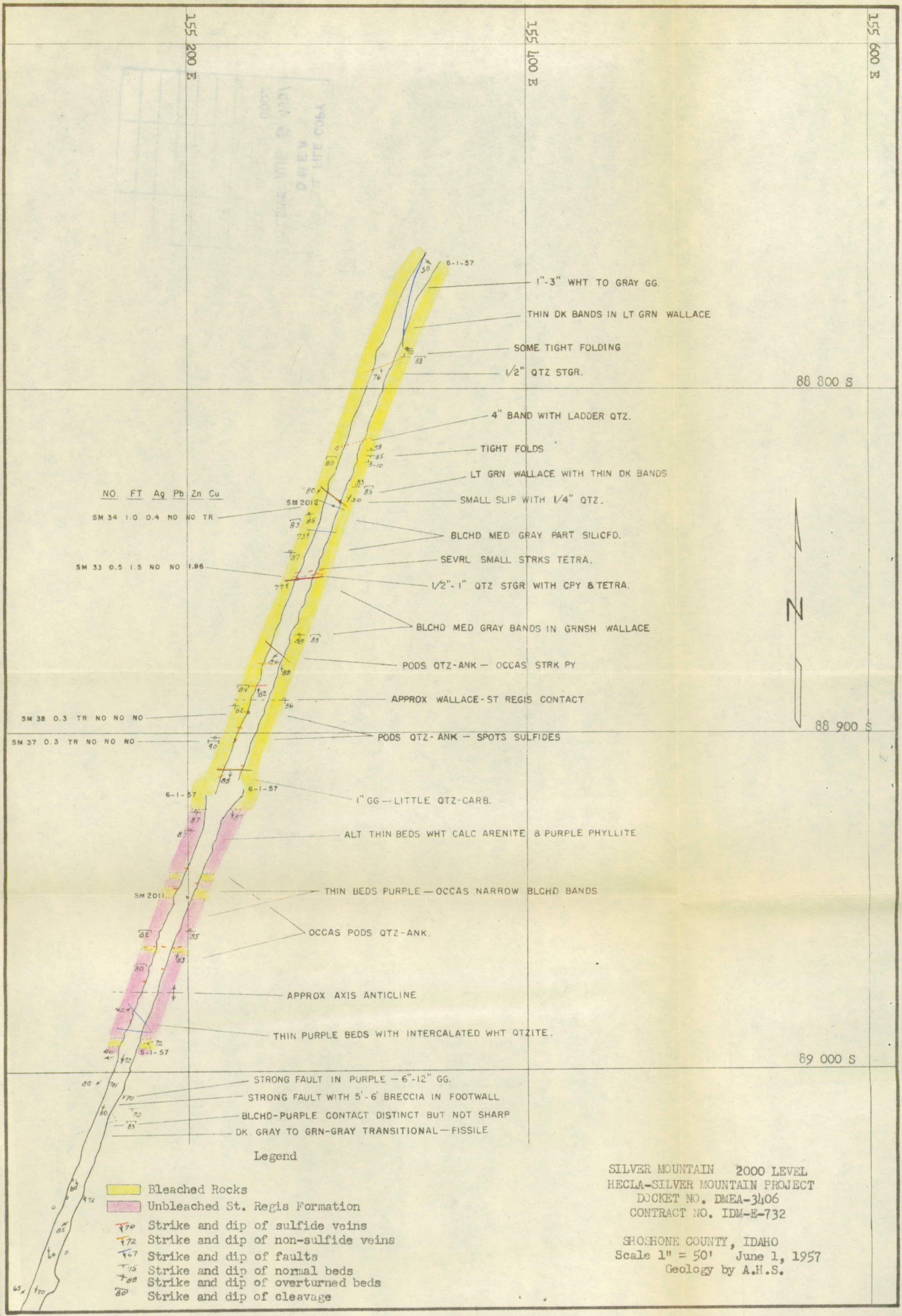
At a distance of 377 feet north of the Paymaster fault, the beds dip steeply north. From this point on to the end of the crosscut, occasional thin, black bands of crenulated Wallace argillite indicate that the beds are tightly compressed into small folds and wrinkles.

Yours very truly,

A. H. Sorensen

A. H. Sorenson
Geologist

AHS:mm


155 200 E
155 400 E
155 600 E
88 800 S
88 900 S
89 000 S
6-1-57
1"-3" WHT TO GRAY GG.
THIN DK BANDS IN LT GRN WALLACE
SOME TIGHT FOLDING
1/2" QTZ STGR.
4" BAND WITH LADDER QTZ.
TIGHT FOLDS
LT GRN WALLACE WITH THIN DK BANDS
SMALL SLIP WITH 1/4" QTZ.
NO. FT Ag Pb Zn Cu
SM 34 1.0 0.4 NO NO TR
SM 2012
BLCHD MED GRAY PART SILICFD.
SEVRL SMALL STRKS TETRA.
SM 33 0.5 1.5 NO NO 1.96
1/2"-1" QTZ STGR WITH CPY & TETRA.
BLCHD MED GRAY BANDS IN GRNSH WALLACE
PODS QTZ-ANK — OCCAS STRK PY
APPROX WALLACE-ST REGIS CONTACT
SM 38 0.3 TR NO NO NO
SM 37 0.3 TR NO NO NO
PODS QTZ-ANK — SPOTS SULFIDES
1" GG — LITTLE QTZ-CARB.
ALT THIN BEDS WHT CALC ARENITE & PURPLE PHYLLITE
SM 2011
THIN BEDS PURPLE — OCCAS NARROW BLCHD BANDS
OCCAS PODS QTZ-ANK.
APPROX AXIS ANTICLINE
THIN PURPLE BEDS WITH INTERCALATED WHT QTZITE.
STRONG FAULT IN PURPLE — 6"-12" GG.
STRONG FAULT WITH 5'-6' BRECCIA IN FOOTWALL
BLCHD-PURPLE CONTACT DISTINCT BUT NOT SHARP
DK GRAY TO GRN-GRAY TRANSITIONAL — FISSILE
N
Legend
Bleached Rocks
Unbleached St. Regis Formation
Strike and dip of sulfide veins
Strike and dip of non-sulfide veins
Strike and dip of faults
Strike and dip of normal beds
Strike and dip of overturned beds
Strike and dip of cleavage
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732
SHOSHONE COUNTY, IDAHO
Scale 1" = 50' June 1, 1957
Geology by A.H.S.

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DATE	INITIALS	CODE

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED AUG 5 1957 D.M.E.A.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April 1957 Docket No. DMEA 3106 Contract No. [illegible]-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $ 1,435,000.00 Government Participation: 50 % Amount, $ 717,500.00

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:						
Shaft Formation Skip Rocket	$ -	$ 3538.00	$ 3538.00		3538.00	3538.00
Drilling	-	15708.00	15708.00		15708.00	15708.00
Surface Plant	-	43893.22	43893.22		43893.22	43893.22
Bulldozing Pump Stations	-	8000.00	8000.00		8000.00	8000.00
Crosscutting 2000 Station	-	6336.00	6336.00		6336.00	6336.00
Drifting Shaft	-	451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
A Labor	13685.45	9979.55	23665.00	13685.45	9979.55	23665.00
Supervision	635.00	595.79	1230.79	635.00	595.79	1230.79
Technical Services	700.00	656.55	1356.55	700.00	656.55	1356.55
(3) Operating Mat'ls. and Supplies:						
Rock Bolts	404.90	600.18	1005.08	404.90	600.18	1005.08
Timber	2735.56	1688.19	4423.75	2735.56	1688.19	4423.75
Explosives & Water	1571.87	-	1571.87	1571.87	—	1571.87
Pipe Ventilation	3373.45	-	3373.45	3373.45	—	3373.45
Track	2232.87	-	2232.87	2232.87		2232.87
Pits and Rods	214.07	643.88	857.95	214.07	643.88	857.95
Mine Tools	-	27.65	27.65	—	27.65	27.65
(4) Operating Equipment:						
Rental	-	-	-			
Purchase	-	-	-			
Depreciation	1977.20	1855.21	3832.41	1977.20	1855.21	3832.41
(5) Initial Rehabilitation and Repairs	-	-	-			
(6) New Bldgs., Improvements, etc.	-	-	-			
(7) Miscellaneous:						
A Repairs to Equipment	1417.65	1520.52	2938.17	1417.65	1520.52	2938.17
Sampling and Analysis	16.00	-	16.00	16.00	—	16.00
Payroll Taxes	357.73	275.68	633.41	357.73	275.68	633.41
Liability Insurance	857.64	665.99	1523.63	857.64	665.99	1523.63
B Employees Group Ins.	185.36	175.60	360.96	185.36	175.60	360.96
C Miscellaneous	433.40	337.30	770.70	433.40	337.30	770.70
(8) Contingencies (specify):						
Electric Power	657.47	421.65	1079.12	657.47	421.65	1079.12
Office Expense	50.00	70.57	120.57	50.00	70.57	120.57
Less in excess of maximums	(933.83) -	(2563.73) -	(3497.56) -	-		
TOTALS	$30571.79	$ 545785.80	$ 576357.59	30571.79	545785.80	576357.59

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

Date JUL 2 1957 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 15,285.90

Signature [signature] (Authorized Certifying Officer)

Date 8/1/57 Vou. No. 2014

(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. 6737 in accordance with the terms of the contract.

Signature /s/ John D. Bardell Title Metallurgist Date July 29, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date July 30, 1957

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 1957 Docket No. DMEA 3406 Contract No. [illegible]-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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
Assaying		$ 16.00	3	$ 16.00	3	$ 5.33	1000	$ -
Drifting	feet	3064.03	675.3	4913.16	1037.4	4.37	15020	4.00
Crosscutting	Cu.feet	155.69	315	155.69	315	.49	72000	.50
Raising	feet	-	-	451300.00	2080	217.00	2080	217.00
Shafts		685.90	141	1705.08	350	4.87	-	5.00
Winzes	feet	-	-	15708.00	2244	7.00	3000	7.00
Rock Bolts								
Drilling: Core		-	-	-	-	-	-	-
Churn		-	-	-	-	-	-	-
Auger		-	-	-	-	-	-	-
Stripping	Cu.feet	-	-	8000.00	16260	.49	8000	1.00
Trenching		-	-	6336.00	-	-	-	6336.00
Test Pits		-	-	3538.00	-	-	-	3538.00
Roads and Trails		-	-	-	-	-	-	-
Surface Plant		-	-	45893.22			-	45500.00
Pump Stations								
2000 Station								
2000 Skip Pocket								
Total Distributed Costs		$31505.62		$579855.15				Total Costs Authorized by Contract
Operating Equipment Purchased		-		-				
Initial Rehabilitation and Repairs		-		-				
New Buildings, Improvements, etc.		-		-				
* Excess of maximum		(933.03)	-	(3497.56)	-			
Total Costs		$30572.79		$576357.59				

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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 JUL 2 1957 Operator Hecla Mining Company

Per [signature] Title President

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)

	Actual Costs: This Month	Actual Costs: Total to Date	Maximum Costs: This Month	Maximum Costs: Total to Date	Total in Excess or (Under) Maximum: This Month	Total in Excess or (Under) Maximum: Total to Date
* Crosscutting	$ 3064.03	$ 4913.16	$ 29713.20	$ 45245.60	$ 933.83	$ 3497.56
* Sidesniping	155.69	155.69	157.50	157.50	(1.81)	(1.81)
* Rock Bolts	685.90	1705.08	705.00	1750.00	(19.10)	(44.92)

/s/ John D. Bardill

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

HECLA-SILVER MOUNTAIN PROJECT

Analysis of labor

April - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Hecla-Silver Mountain labor						
Drift miners						
Crosscutting-676.0' @ $10.50	$ 7 098 00				$ 7 098 00	
Rock bolts-141 @ $2.00 (Hold ground)			$ 282 00		282 00	
41 @ $2.00 (Hang vent pipe)	82 00				82 00	
Sideswipe-9.0' @ $5.25		$ 47 25			47 25	
Caging allowance 76½ shifts @ $17.20	1 307 10	8 70			1 315 80	
Shift differential						
76 shifts @ $0.40 (No. 2 shift diff.)	30 20	20			30 40	
78 shifts @ $0.80 (No. 3 shift diff.)	61 99	41			62 40	
Overtime	651 80	4 34			656 14	
Pusher allowance 78 shifts @ $0.96	74 38	50			74 88	
Total drift miners	$ 9 305 47	$ 61 40	$ 282 00		$ 9 648 87	
Hoistman						
28½ shifts @ $19.12	$ 541 32	$ 3 60			$ 544 92	
26 shifts @ $19.52	504 16	3 36			507 52	
26 shifts @ $19.92	514 50	3 42			517 92	
Overtime	140 09	93			141 02	
Total hoistmen	$ 1 700 07	$ 11 31			$ 1 711 38	
Topman						
25½ shifts @ $18.16	$ 460 02	$ 3 06			$ 463 08	
Overtime	35 38	24			35 62	
	$ 495 40	$ 3 30			$ 498 70	
Star Labor (custom)						
Star mine payroll	$ 1 466 74	$ 9 76			$ 1 476 50	
Total labor	$ 12 967 68	$ 85 77	$ 282 00		$ 13 335 45	(2-A)
Supervision						
Hecla-Silver Mountain	$ 630 80	$ 4 20			$ 635 00	
Technical						
Hecla	$ 636 61	$ 4 24			$ 640 85	
Star	58 76	39			59 15	
	$ 695 37	$ 4 63			$ 700 00	
Accounting						
Hecla	$ 149 01	$ 99			$ 150 00	
Star	198 68	1 32			200 00	
	$ 347 69	$ 2 31			$ 350 00	(2-A)
	$ 14 641 54	$ 96 91	$ 282 00		$ 15 020 45	

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HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

April - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Bits and rods						
Drill steel	$ 208 29	$ 1 39			$ 209 68	
Bit grinder repair	4 36	03			4 39	
	$ 212 65	$ 1 42			$ 214 07	
Compressed air						
Compressor supplies	$ 4 09	$ 03			$ 4 12	(7-A)
Drill repair						
Drill machine supplies	$ 775 74	$ 5 16			$ 780 90	(7-A)
Explosives						
3203 delays	$ 791 88	$ 5 27			$ 797 15	
9600 pounds powder	1 898 56	12 64			1 911 20	
Wire	27 03	18			27 21	
	$ 2 717 47	$ 18 09			$ 2 735 56	
Hoisting						
Supplies-Headframe	$ 2 16	$ 01			$ 2 17	
-Hoist	6 78	05			6 83	
- Shaft	21 70	14			21 84	
-Hoist room	1 15	01			1 16	
Mileage (transportation of outside labor and freight)	9 57	06			9 63	
	$ 41 36	$ 27			$ 41 63	(7-A)
Pumping						
Pump supplies	$ 23 42	$ 16			$ 23 58	(7-A)
Ventilation						
Vent line supplies	$ 245 05	$ 1 63			$ 246 68	
Mileage (transportation of outside labor and freight)	23 53	16			23 69	
	$ 268 58	$ 1 79			$ 270 37	(7-A)
Miscellaneous underground						
Mileage (transportation of outside labor and freight)	$ 6 81	$ 05			$ 6 86	
Transportation (haulage)	31 32	21			31 53	
Mucker supplies	59 49	40			59 89	
	$ 97 62	$ 66			$ 98 28	(7-A)
Surface miscellaneous						
Mileage (transportation of outside labor and supplies)	$ 35 36	$ 24			$ 35 60	(7-A)
Miscellaneous equipment supplies	81 46	54			82 00	(7-A)
Miscellaneous	24 48	16			24 64	(7-C)
Heat dry building	58 07	39			58 46	(7-C)
	$ 199 37	$ 1 33			$ 200 70	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

April - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total	
Electric power						
104378 Kilowatts	$ 653 12	$ 4 35			$ 657 47	
General expense						
Office supplies	$ 49 67	$ 33			$ 50 00	
Group accident insurance-Employees	131 05	87			131 92	(7-B)
Group life insurance-Employees	53 09	35			53 44	(7-B)
	$ 233 81	$ 1 55			$ 235 36	
Shop and payroll expense (on outside labor)						
Star labor @ 20%	$ 293 35	$ 1 95			$ 295 30	
Wallace office-accounting @ 10%	14 90	10			15 00	
Burke office-accounting @ 20%	39 74	26			40 00	
	$ 347 99	$ 2 31			$ 350 30	(7-C)
Taxes-Social Security						
F.O.A.B. @ 2.25% x $12,551.56	$ 280 54	$ 1 87			$ 282 41	
Federal U.C. @ .3% x $12,553.33	37 41	25			37 66	
Idaho U.C. @ .3% x $12,553.33	37 41	25			37 66	
	$ 355 36	$ 2 37			$ 357 73	
Payloader expense						
Supplies	$ 80 63	$ 54			$ 81 17	(7-A)
Workmen's compensation expense						
Industrial Indemnity Co. $12,554.18 @ 5.693%	$ 709 98	$ 4 73			$ 714 71	
20% surcharge	141 98	95			142 93	
	$ 851 96	$ 5 68			$ 857 64	
Air and water lines						
950' 2" pipe (new)	$ 333 45				$ 333 45	
950' 6" pipe (new)	1 238 42				1 238 42	
	$ 1 571 87				$ 1 571 87	
Track						
1 switch	$ 107 94				$ 107 94	
2075' 30# rail	1 603 98				1 603 98	
453 ties	321 75				321 75	
277# track bolts	55 33				55 33	
69 pair splice bars	47 03				47 03	
692# track spikes	96 84				96 84	
	$ 2 232 87				$ 2 232 87	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of supplies

April - 1957

	Crosscutting	Side-swiping	Rock Bolting	Assaying	Total
Ventilation					
950' 24" Vent pipe (new)	$ 3 373 45				$ 3 373 45
Rock bolts					
141 1" x 6' rock bolts, complete			$ 404 90		$ 404 90
Assaying					
3 samples				$ 16 00	$ 16 00
Equipment - depreciation					
100% x $1,977.20	$ 1 964 13	$ 13 07			$ 1 977 20
Total supplies and Other	$ 16 005 49	$ 58 78	$ 404 90	$ 16 00	$ 16 485 17
Total labor, supplies and other to form 104-A	$ 30 647 03	$ 155 69	$ 686 90	$ 16 00	$ 31 505 62

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE
5/27	C	R-20
"	Com	100
5/29	~~[illegible]~~	500

May 8, 1957

MEMORANDUM

From: Verne C. Fryklund, Jr., Geologist, U. S. Geological Survey

To: DMEA Field Team, Region I, Northwest District

Subject: Interim Inspection Report, Docket No. DMEA-3406 (Lead-Zinc-Copper), Hecla Mining Company, Hecla-Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

I visited the Silver Mountain project the morning of May 2, 1957, and discussed the geology with Art Sorenson, project geologist, in the afternoon.

The face was approximately 946 feet north from Station SM 2003 (see company map). As far as I can tell the entire 2000 level is in St. Regis formation. Much of it is bleached; much, including the face, has a strong purple color. The crosscut has cut a number of faults of varying degrees of importance and the ground is generally "sheared". Although there is now no timber and only a few places where there are rock bolts, I suspect that some timber will soon be needed.

There is a fairly strong fault at 900 feet. Mineralization, as was expected, consists of minor stringers of recrystallized quartzite replaced by ankerite.

Distribution:
DMEA (Orig. & 3)
USBM (2)
USBM (AD)
Docket
Fryklund
Sample

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE
5/31	~~[illegible]~~	500

May 3, 1957

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The exploration project was inspected May 1, 1957, accompanied by Mr. Hjalmar Lindfors, mine foreman.

The north crosscut had been advanced 185.5 feet beyond survey station No. S.M. 2009, for a total advance of 942 feet. The Operator has tried to hold the rock section to approximately 7'x9' but because of the loose ground the average rock section in the north crosscut is about 8'x10'. The total crosscutting to date, including the 103-ft. south crosscut for "tail track" is 1,045 feet.

During the month of April a total of 675.3 feet of crosscutting was completed in 26 working days, 3 shifts per day, with a drift crew of 3 men per shift except for a couple of shifts when a man was believed to have been absent. The average rate of advance was 26 feet per day. The exceptional advance was made possible by good ground conditions. The ground drilled and broke good with less than average powder, bit and steel consumption. The crosscut is on a course about normal to the bedding and shearing, which is the best condition for "pulling" rounds in this type of formation with no "bootlegging" of holes. The nearness to the shaft made it possible to clear the heading of smoke and dust quickly enough to allow 4 rounds per 3 shifts rather than the customary round in and out cycle.

A cost analysis was made for the crosscutting through the month of March 1957 and is presented in a separate memorandum to the Field Team.

No significant mineralization has been exposed to date. The formation is argillaceous quartzites. The Paymaster fault is expected to be reached in the next 500 feet and the rate of advance indicates this will be accomplished during the latter part of May 1957.

The status of the contract is:

Date of contract: October 21, 1954
Termination date: January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: 545,934.68 (thru March 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,224 ft.
Shaft sinking	2,080 ft.	2,080 ft.
Pump stations	8,000 cu.ft.	8,000 cu.ft.
Shaft station	5,760 cu.ft.	5,760 cu.ft.
Skip pocket	3,216 cu.ft.	3,216 cu.ft.
Crosscutting and drifting	8,415 ft.	1,045 ft.
Sideswiping	36,000 cu.ft.	315 cu.ft.
Underground core drilling	15,000 ft.	none
Timbering	1,600 ft.	none
Rock bolting	1,152 bolts	350 bolts

E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

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 March 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $529,185.00

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:				5/28/57 WPK.		
Drilling		$ 15,708.00	$ 15,708.00		15,708.00	15,708.00
Bulldozing						
Crosscutting 254.40@47.21	12010.22	212.45	12,222.67	16367.70	731.76	17,099.46
Drifting 92.30@47.21	4357.48	519.31	4,876.79			
Shaft		451,360.00	451,360.00		451,360.00	451,360.00
(2) Labor and Supervision:						
Labor						Examined
Supervision						Clerg
Technical Services						Recdy
(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. Surface plant		43,893.22	43,893.22		43,893.22	43,893.22
(7) Miscellaneous:						
Mining Equipment Pump Stations		8,000.00	8,000.00		8,000.00	8,000.00
Supplies and Supplies 2000 Station		6,336.00	6,336.00		6,336.00	6,336.00
Payroll Taxes 200 skip pocket		3,538.00	3,538.00		3,538.00	3,538.00
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$16367.70	$529,566.98	$545,934.68	16367.70	529,566.98	545,934.68

RECEIVED APR 25 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 4/8/57 *Payee Hecla Mining Company
Per [signature] Title President

*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:

$ 8183.85

Signature [signature] (Authorized Certifying Officer)

Date 4/18/57 Vou. No. 1968

(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. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

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 872893

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED APR 25 1957 DMEA

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1957 Docket No. DMEA 3406 Contract No. IIM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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
			346.7	1709941	3612			
Drifting	feet	$4357.48	92.3	$ 4,876.79	96.8	$ 47.21	8415	$ 47.21
Crosscutting	feet	12010.22	254.4	12,222.67	265.4	47.21		
Raising								
Shafts	feet			451,360.00	2080.0	217.00	2080	217.00*
Winzes								
Drilling: Core	feet			15,708.00	2244	7.00	3000	7.00*
Churn								
Auger								
~~Stripping~~ Pump station	cu.ft.			8,000.00	16268	.49	8000	1.00*
~~Trenching~~ 2000 station				6,336.00				6336.00*
~~Test Pits~~ 2000 skip pocket				3,538.00				3538.00*
Roads and Trails								
Surface plant				43,893.22				45500.00*
TOTAL DISTRIBUTED COSTS		16367.70	346.7	545934.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		16367.70		545934.68				

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 4/8/57 Operator Hecla Mining Company

Per [signature] Title President

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)

* Maximum allowed by contract

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

EXTRA COPY
DMEA
RECEIVED 1957

DATE	INITIALS	CODE

April eighth
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - March - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of March, the north crosscut was advanced 254.4 feet to a point 258.9 feet north of the 2000 level station, and the tail drift south of the station was advanced 92.3 feet to a completed length of 103.3 feet.

The excavation for installation of a substation and battery changing and charging was completed. A switch and siding was also installed in the north crosscut and was completed. At month's end, work had started on forming the dams and doing the other concrete work necessary on the 2000 level.

Crosscutting is well underway and should progress steadily from this point on with the operation on a three shift, six-day per week basis.

As indicated on the accompanying 50-scale geologic map, dark purplish-gray argillite typical of the St. Regis formation is present in the end of the tail drift and also in a wide band north of the shaft. Because of only slight variations in the bleached rocks in the lower portion of the shaft, it was earlier believed that the shaft was all in Wallace formation. With the greater exposures of typical purple St. Regis in the lateral work now, however, it is considered most likely that all of the work thus far on 2000 level is in the St. Regis formation and that the normal Wallace-St. Regis contact, obscured by bleaching and strong shearing, lies above the level within the lower one-third of the shaft.

The section of strongly bleached, sericitic rocks in the shaft area is bounded by purple rocks to the north and south of the station along fault contacts. In the tail drift south of the station, the fault marking the sharp contact between bleached and unbleached rocks strikes N. 55° W. and dips about 70° to the northwest. North of the station, the change in color from greenish-gray to purple is more gradational but for the most part occurs at a fairly strong fault and shear zone which strikes northwesterly and dips about 50° to the southwest.

The strong persistent shearing and bleaching have obliterated most of the original bedding features. In the few areas where weak, somewhat crenulated color banding, and partings suggestive of bedding can be seen, it appears that the beds vary in dip from 0 to about 30 degrees, but for the most part are nearly horizontal. Bedding features at the face of the north crosscut as shown on the map, and in further crosscutting since April 1 show a southerly dip of the beds and indicate that the heading may have crossed through the axis and into the north flank of the syncline.

A few $\frac{1}{4}$ to $\frac{1}{2}$ inch wide quartz-carbonate veinlets are present in the bleached areas and in one of these near the face of the north crosscut, a few specks of galena, pyrite and chalcopyrite were observed.

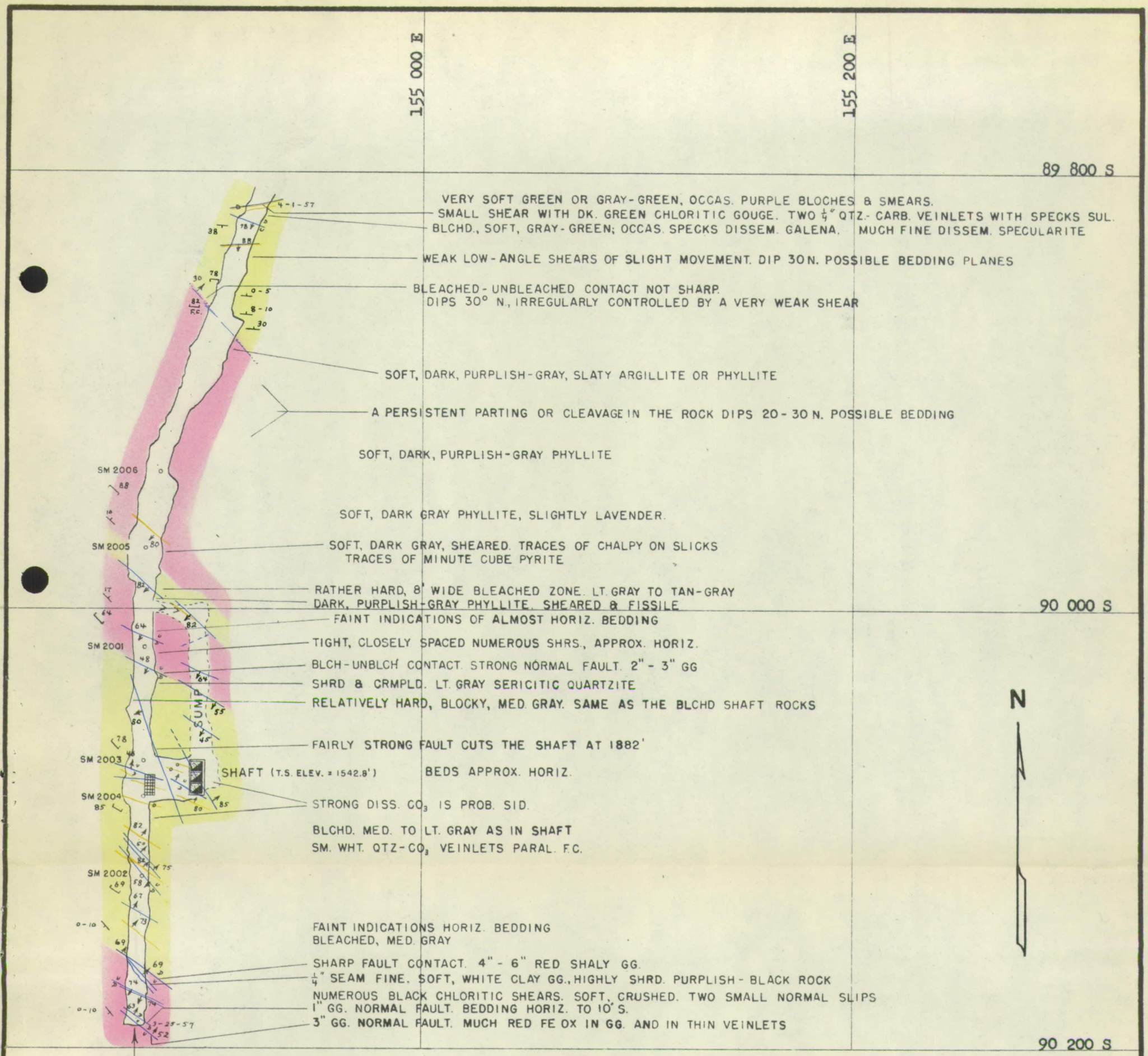
The geology will be mapped currently on 50-scale and a geologic map showing each month's work will accompany the regular monthly report.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm



Legend

- Bleached Rocks
- Unbleached St. Regis Formation
- Strike and dip of sulfide veins
- Strike and dip of non-sulfide veins
- Strike and dip of faults
- Strike and dip of beds
- Strike and dip of overturned beds
- Strike and dip of cleavage

SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' April 1, 1957
Geology by A.H.S.

EXTRA COPY
D M E A
RECEIVED APR 25 1957

DATE	INITIALS	CODE

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED AUG 5 1957 D.M.E.A.

OPERATOR'S MONTHLY REPORT AND VOUCHER

AMENDED

Month of March 1957 Docket No. DMEA 3406 Contract No. DM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $1,435,880.00 Government Participation: 50 % Amount, $717,940.00

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 Units ~~Contracts~~	-	3538.00	3538.00		3538.00	3538.00
Short Form: 2000 Skip Pocket	-	15708.00	15708.00		15708.00	15708.00
Drilling						
~~Blindzing~~ ~~Surface Plant~~	-	43893.22	43893.22		43893.22	43893.22
~~Crosscutting~~ ~~Pump Stations~~	-	8000.00	8000.00		8000.00	8000.00
~~Raising~~ 2000 Station	-	6336.00	6336.00		6336.00	6336.00
Shaft	-	451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
A Labor	9468.50	511.05	9979.55	9468.50	511.05	9979.55
Supervision	560.88	34.91	595.79	560.88	34.91	595.79
Technical Services	618.30	38.25	656.55	618.30	38.25	656.55
(3) Operating Mat'ls. and Supplies:						
~~Timber~~ Rock Bolts	600.18	-	600.18	600.18	—	600.18
Explosives	1610.49	77.70	1688.19	1610.49	77.70	1688.19
Pipe						
Track						
Bits and Rods	638.22	5.66	643.88	638.22	5.66	643.88
Mine Tools	27.58	.07	27.65	27.58	.07	27.65
(4) Operating Equipment:						
Rental	-	-	-			
Purchase	-	-	-			
Depreciation	1746.46	108.75	1855.21	1746.46	108.75	1855.21
(5) Initial Rehabilitation and Repairs	-	-	-			
(6) New Bldgs., Improvements, etc.	-	-	-			
(7) Miscellaneous:						
A Repairs to Equipment	1487.34	33.18	1520.52	1487.34	33.18	1520.52
Sampling and Analysis	-	-	-		—	
Payroll Taxes	260.54	15.14	275.68	260.54	15.14	275.68
Liability Insurance	624.48	41.51	665.99	624.48	41.51	665.99
B Employees Group Ins.	165.15	10.45	175.60	165.15	10.45	175.60
C Miscellaneous	325.06	12.24	337.30	325.06	12.24	337.30
(8) Contingencies (specify):						
Electric Power	405.28	16.37	421.65	405.28	16.37	421.65
A Office Expense	66.42	4.15	70.57	66.42	4.15	70.57
Less in excess of maximum	(2336.30) -	(227.43) -	(2563.73) -			
TOTALS	$16268.58	$529517.22	$545785.80	16268.58	529517.22	545785.80

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

Date JUL 2 1957 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 8134.29

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 8/1/57 Vou. No. 2014

(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. E 732 in accordance with the terms of the contract.

Signature /s/ John D. Bardill Title Metallurgist Date July 29, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ W. E. Weissenborn Title Exec. Mine Date July 30, 1957

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 1957 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	feet	$17586.70	346.6	$ 18496.13	362.1	$ 51.08	15820	$ 44.00
~~Raising~~ Rock Bolts		1018.18	209	1018.18	209	4.87	-	5.00
Shafts	feet	-	-	451360.00	2080	217.00	2080	217.00
Winzes		-	-	-	-	-	-	-
Drilling: Core	feet	-	-	15708.00	2244	7.00	3000	7.00
Churn		-	-	-	-	-	-	-
Auger		-	-	-	-	-	-	-
~~xxxxx~~ Pump station	Cu.feet	-	-	8000.00	16268	.49	8000	1.00
~~xxxxx~~ 2000 station		-	-	6336.00	-	-	-	6336.00
~~xxxxx~~ 2000 skip pocket		-	-	3538.00	-	-	-	3538.00
Roads and Trails		-	-	-	-	-	-	-
Surface plant		-	-	43893.22	-	-	-	45500.00
TOTAL DISTRIBUTED COSTS		$18604.88		$ 548349.53				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		-		-				
Initial Rehabilitation and Repairs		-		-				
New Buildings, Improvements, etc.		-		-				
* Excess of maximums		(2336.30) -		(2563.73) -				
TOTAL COSTS		$16268.58		$ 545785.80				

RECEIVED AUG 5 1957 D.M.E.A.

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 JUL 2 1957 Operator Hecla Mining Company

Per J. D. Bardill Title President

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)

	Actual Costs This Month	Actual Costs Total to Date	Maximum Costs This Month	Maximum Costs Total to Date	Total in Excess or (Under) Maximum This Month	Total in Excess or (Under) Maximum Total to Date
* Crosscutting	$ 17586.70	$ 18496.13	$ 15250.40	$ 15932.40	$ 2336.30	$ 2563.73
* Rock Bolting	1018.18	-	1045.00	-	(26.82)	(26.82)

/s/ John A. Bardill

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 AUG 5 1957 D.M.E.A.

HECLA-SILVER MOUNTAIN PROJECT

Analysis of labor

March - 1957

		Crosscutting	Rock Bolting	Total	
Hecla-Silver Mountain labor					
Drift miners					
Crosscutting-157 15/16 shifts @ $31.78 - 346.71		$ 5 019 42		$ 5 019 42	
209 rock balls @ $42.00			$ 418 00	418 00	
Pusher allowance		66 18		66 18	
Hoisting, pumping, pulling muck-allowance		870 62		870 62	
Total drift miners		$ 5 956 22	$ 418 00	$ 6 374 22	
Topman					
22.01 shifts @ $18.16		401 01		401 01	
Overtime		32 08		32 08	
Hoistman					
24.18 shifts @ $19.12		462 32		462 32	
22.97 shifts @ $19.52		448 28		448 28	
22.97 shifts @ $19.92		457 47		457 47	
Overtime		158 17		158 17	
Total Hecla-Silver Mountain		$ 7 915 55	$ 418 00	$ 8 333 55	
Star labor (custom)					
Star mine payroll		825 80		825 80	
Total labor		$ 8 741 35	$ 418 00	$ 9 159 35	(2-A)
Supervision					
Hecla-Silver Mountain		$ 560 88		$ 560 88	
Technical					
Hecla labor	$ 534 03				
Star labor	84 27	$ 618 30		$ 618 30	
Accounting					
Hecla labor	$ 132 50				
Star labor	176 65	$ 309 15		$ 309 15	(2-A)
Total labor		$ 10 229 68	$ 418 00	$ 10 647 68	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of Supplies and Other

March - 1957

	Rock Bolting	Crosscutting	Total	
Bits and rods				
Mileage (transportation of outside labor and freight)		$ 9 27	$ 9 27	
Drill steel		603 57	603 57	
Bit grinder repair		25 38	25 38	
		$ 638 22	$ 638 22	
Compressed air				
Compressor supplies		$ (35 40)-	$ (35 40)-	(7-A)
Drill repair				
Drill machine supplies		$ 560 94	$ 560 94	(7-A)
Explosives				
2088 delays		$ 521 90	$ 521 90	
5250 pounds powder		1 045 57	1 045 57	
Wire		24 03	24 03	
Mileage (transportation of outside labor and freight)		3 53	3 53	
Loading sticks		15 46	15 46	
		$ 1 610 49	$ 1 610 49	
Hoisting				
Shaft supplies		$ 223 38	$ 223 38	
Mileage (transportation of outside labor and freight)		56 90	56 90	
		$ 280 28	$ 280 28	(7-A)
Pumping				
Pump supplies		$ 58 08	$ 58 08	(7-A)
Ventilation				
Vent line supplies		$ 6 35	$ 6 35	(7-A)
Underground miscellaneous				
Mine tools		$ 27 58	$ 27 58	
Mileage (transportation of outside labor and freight)		12 88	12 88	(7-A)
Transportating (haulage)		74 78	74 78	(7-A)
Mucker supplies		269 71	269 71	(7-A)
		$ 384 95	$ 384 95	

HECLA-SILVER MOUNTAIN PROJECT

Analysis of Supplies and Other

March - 1957

	Rock Bolting	Crosscutting	Total	
Surface miscellaneous				
Mileage (transportation of outside labor and freight)		$ 24 82	$ 24 82	(7-A)
Miscellaneous equipment supplies		181 79	181 79	(7-A)
Heat dry building (fuel oil)		111 32	111 32	(7-C)
		$ 317 93	$ 317 93	
Electric power				
64436 Kilowatts		$ 405 28	$ 405 28	
General expense				
Office supplies		$ 44 17	$ 44 17	(8-A)
Telephone and telegraph		22 25	22 25	(8-A)
Group accident insurance - employees		120 90	120 90	(7-B)
Group life insurance - employees		44 25	44 25	(7-B)
		$ 231 57	$ 231 57	
Shop and payroll expense (on outside labor)				
Star labor @ 20%		$ 165 16	$ 165 16	
Wallace office accounting @ 10%		13 25	13 25	
Burke office accounting @ 20%		35 33	35 33	
		$ 213 74	$ 213 74	(7-C)
Taxes - Social Security				
F.O.A.B. 2.25% x $9,141.33		$ 205 68	$ 205 68	
Federal U.C. .3 % x $9,143.33		27 43	27 43	
Idaho U.C. .3 % x $9,143.33		27 43	27 43	
		$ 260 54	$ 260 54	
Payloader expense				
Supplies		$ 53 11	$ 53 11	(7-A)
Workmen's compensation expense				
Industrial Indemnity Co.				
$9,140.87 x 5.693%		$ 520 39	$ 520 39	
20% surcharge		104 09	104 09	
		$ 624 48	$ 624 48	
Equipment depreciation				
88.33% x $1,977.20		$ 1 746 46	$ 1 746 46	
Rock Bolts				
209 1"x 6' Rock bolts, complete	$ 600 18		$ 600 18	
Total supplies and other	$ 600 18	$ 7 357 02	$ 7 957 20	
Total labor and supplies to form 104-A	$ 1 018 18	$ 17 586 70	$ 18 604 88	

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 April, 1957 Docket No. DMEA 3406 Contract No. [illegible]-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,636,370.00 Government Participation: 90% Amount, $ [illegible],185.00

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:				8/13/57 WPK		
Drilling		357.00	15708.00		15,708.00	15,708.00 ✓
Building	1750.00		1750.00			
Crosscutting 675.3 47.21	31880.91	17099.46	48980.37	31,880.91	17,099.46	48,980.37 ✓
Drifting						
Microwave 315 cu.yd. 0.75	236.25		236.25	236.25		236.25 ✓
(2) ~~Labor and Supervision~~:						
~~Labor~~ Staff		451360.00	451360.00		451,360.00	451,360.00 ✓
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. Surface Plant		43893.22	43893.22		43,893.22	43,893.22 ✓
(7) Miscellaneous: Pump Stations						
Repairs to Equipment 2000 [illegible]		8000.00	8000.00		8,000.00	8,000.00 ✓
Sampling and Analysis		6336.00	6336.00		6,336.00	6,336.00 ✓
Payroll Taxes 2000 [illegible] Pocket		3538.00	3538.00		3,538.00	3,538.00 ✓
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	33867.16	545934.68	579801.84	32,117.16	545,934.68	578,051.84

RECEIVED MAY 22 1957 D.M.E.A.

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

Date 4-5-57 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 16,058.58

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 5/20/57 Vou. No. 1982
(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. 8732 in accordance with the terms of the contract.

Signature /s/ Eric G. Erickson Title Mining Engineer Date 9/5/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ W. E. Weissenborn Title Exec Officer Date 9/17/57

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 1957 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	feet							
Crosscutting	feet	31880.91	675.3	$ 48980.37	1037.5	$ 47.21	8415	$ 47.21*
~~Raising~~ Sideswipe	cu.ft.	236.25	315.0	236.25	315.0	.75	36000	.75
Shafts	feet			451360.00	2080.0	217.00	2080	217.00*
~~Winzes~~ Rock Bolts		1750.00	350	1750.00	350	5.00	1152	5.00*
Drilling: Core				15708.00	2244	7.00	3000	7.00*
Churn								
Auger								
~~Stripping~~ Pump Stations	cu.ft.			8000.00	16268	.49	8000	1.00*
~~Trenching~~ 2000 Station				6336.00				6336.00*
~~Test Pits~~ 2000 Skip Pocket				3538.00				3538.00*
Roads and Trails								
Surface Plant				$ 43893.22				$ 45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 4-5-57 Operator Hecla Mining Company

Per [signature] Title President

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)

* Maximum Allowed by Contract

/s/ E. L. Erickson, Mining Engineer

RECEIVED MAY 27 1957 D.M.E.A.

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE

May seventh
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane, Washington

Re: Progress Report Hecla-Silver Mountain Project - April - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of April, the north crosscut was advanced 675.2 feet to a point 934.1 feet north of the 2000 level station. Nine feet of sideswiping (315 cubic feet) was completed and 182 rock bolts were put in.

Crosscutting continues on a three shift, six-day per week basis.

The work done during the month was entirely in the St. Regis formation. The rock consists of soft, fissile, highly sericitic phyllites containing numerous, thin, resistant quartzite beds intercalated.

Bedding for the most part strikes from N. 65° E. to E-W, and occasionally slightly north of west. The dip is from 70° to 80° S. Fracture cleavage dips from 80° to 85° S.

The bleached zone which had been penetrated to a distance of 60 feet by the end of March continued for a total width of 135 feet.

The crosscut then passed through a 175 foot long succession of medium to light greenish-gray bands alternating with dark purplish-gray bands. The alternating bands are a few feet to 15 feet in width and are apparently conformable to the bedding. It is uncertain whether the greenish bands are primary green bands or are the result of hydrothermal alteration. The contacts between the bands are for the most part gradational but some sharp contacts coincide with faults.

After passing through the zone of alternating green and purple bands, the crosscut then traversed a 385 foot bleached zone consisting of badly sheared, soft, fissile, greenish-gray rock. At month's end, the face was again in dark purplish rock containing frequent 1 inch to 3 inch beds of white quartzite.

The purplish rock at the face seems somewhat firmer than the highly sheared rock in the 385 foot bleached zone. The presence of an increasing number of white quartzite beds may indicate that the crosscut is getting into the more quartzitic portion of the middle St. Regis formation, which is generally more favorable toward ore-deposition than is the upper St. Regis.

The dominant structural feature thus far encountered is the large syncline whose axis is intercepted by the crosscut 225 feet north of the shaft. Where bedding dips steeply, it is a strong factor in determining the attitude of many of the faults. This apparently accounts for the fact that the majority of the faults seen in the north crosscut dip toward the south, whereas in the more gently-dipping beds in the vicinity of the shaft, the faults dip in conflicting directions.

Three rather strong faults were encountered during the month. The first, dipping 70° to 80° S. occurs 488 feet north of the shaft. It is in purple rock in the hangingwall of the 385 foot bleached zone. It is actually a 5 foot zone of intense shearing bounded by two parallel faults.

The second fault, which may be the strongest of the three here described, is located well within the 385 foot bleached zone. This fault dips 77° S. and contains from 1½ to 3 inches of soft, dark gouge.

The third fault actually is a complex of intersecting faults dominated by a strong fault which dips 80° S. This fault-complex lies in purple rocks in the footwall of the bleached zone.

Mineralization consists of ¼ inch to 1 inch wide quartz-ankerite veinlets associated with faults and irregularly shaped, scattered quartz-ankerite "pods". The highly contorted pods are conformable to the disturbed fracture cleavage and have apparently been formed by filling of spaces caused by the deformation. There is no silicification adjacent to the pods.

Similarly shaped pods of granular pyrite occur in a manner similar to the quartz-ankerite pods. Most of the pyrite pods are independent of the quartz-ankerite, but a few pods are combinations of quartz-ankerite-pyrite. Pods of both types occur in both bleached and purple rock. The pods frequently contain a little chalcopyrite, galena, black sphalerite, tetrahedrite, and specularite.

The quartz-ankerite veinlets contain the same assorted sulphides in small but variable amounts. The veinlets are identical to the quartz-ankerite pods except that they are conformable to faults and are presumably continuous for some distance.

The carbonate was designated "ankerite" because qualitative chemical tests showed that it contains much ferrous iron and some magnesium. The iron is in excess of magnesium. No siderite has been found.

Occasional, scattered, cubic crystals of pyrite from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch in size are seen in the green phyllitic rocks.

Thin quartzite beds intercalated in phyllite sometimes contain disseminated pyrite and chalcopyrite. Some such beds, although small features, are mineralized strongly enough to be termed "veins".

Assays were run on five samples, the results of which are shown on the accompanying 50-scale map. Although none of the metallization seen thus far is of itself important, it is conceivable that some of the veinlets may represent the peripheries of more strongly mineralized structures, e.g., the veinlets sampled at SM #31 and SM #32.

Yours very truly,

Arthur H. Sorensen

A. H. Sorenson
Geologist

AHS:mm

DMEA Field Team, Region I, NW District May 20, 1957

DMEA Certifying Officer, Region I

Contract I&m-E732, Hecla Mining Company
Monthly operating report for April 1957

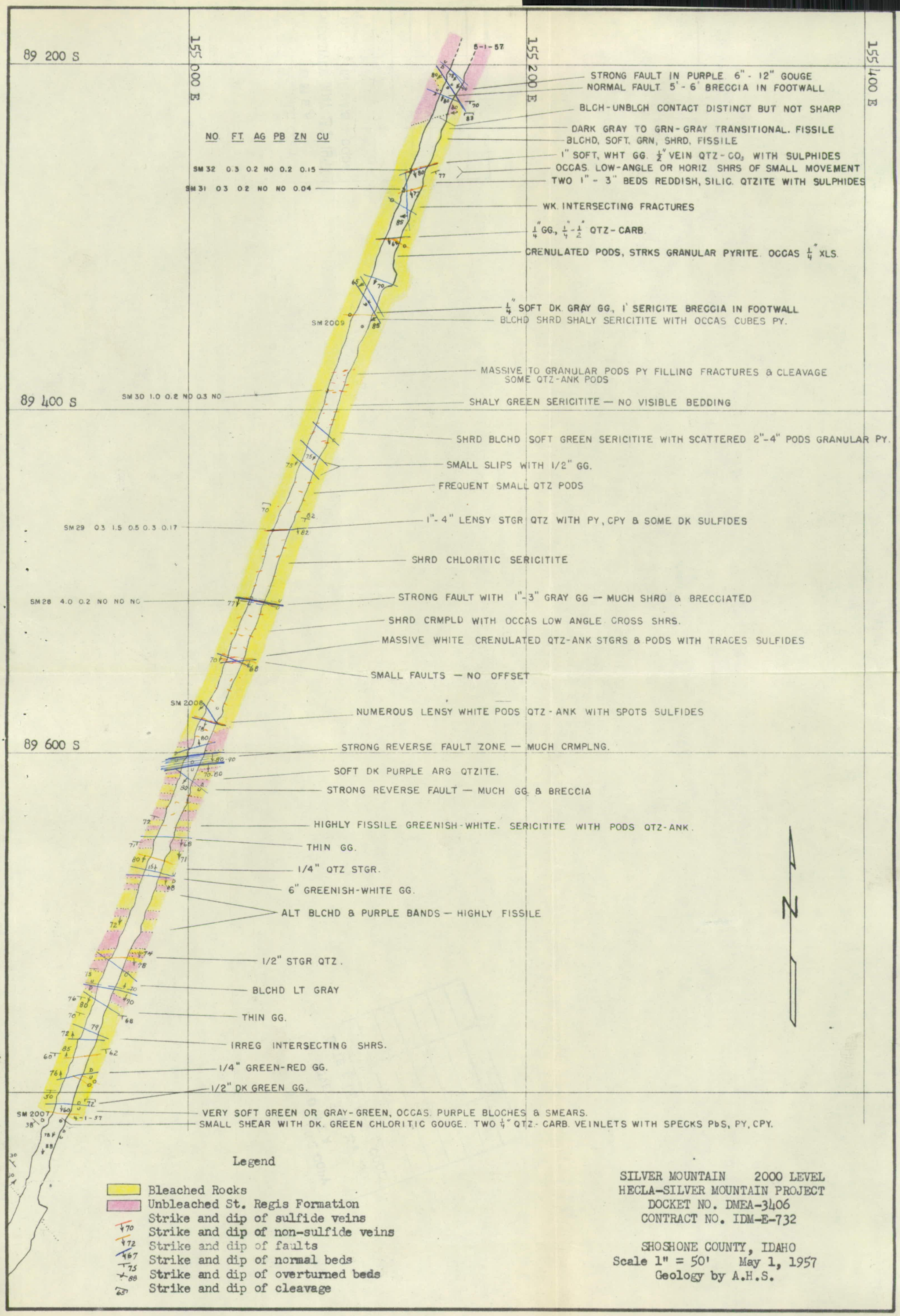
The subject operating report has been processed and forwarded to the Disbursing Officer for payment.

A disallowance of $1,750.00 has been made covering costs claimed for 350 rock bolts at $5.00/bolt. The contract provides for 960 feet of rock bolting at $6.00/linear feet. A recommendation has been forwarded to the Washington office for the purpose of an amendment to clarify the rock bolting item in the existing contract. In the event an amendment is approved, the Operator may reclaim this item upon receipt of his signed copy of the amendment.

OFFICIAL FILE COPY
D M E A
RECEIVED MAY 27 1957
DATE | INITIALS | CODE

Dorothy F. Long

cc: DMEA (2)
USGS (2)
Contract Admin. (2)
EGE
AD



Legend

- Bleached Rocks
- Unbleached St. Regis Formation
- Strike and dip of sulfide veins
- Strike and dip of non-sulfide veins
- Strike and dip of faults
- Strike and dip of normal beds
- Strike and dip of overturned beds
- Strike and dip of cleavage

SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' May 1, 1957
Geology by A.H.S.

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RECEIVED MAY 27 1957

DATE	INITIALS	CODE

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D M E A
RECEIVED MAY 27 1957

DATE	INITIALS	CODE

3406

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 4-12

Referred to:

1. ~~Mr. McDonald~~
2. ~~Mr. Gibson~~
3. ~~Mr. Chambers~~
4. ~~Mr. Adams Central Mails and Files~~
5. ~~Mr. Adams~~
6. ~~Mr. Adams Central Mails and Files~~

7. 500

Note comments in report regarding:

1.

2.

3.

4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Audit scheduled for April.
Talbut
4/12/57

Robert E. Adams

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

1201 N. Division St.
Spokane 2, Washington

April 2, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED APR 12 1957

DATE	INITIALS	CODE
4/12	C	220
"	CJM	100
"	FJ	
4/12	[illegible]	500

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim audit, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The contract calls for an interim audit and it has been suggested by the DMEA Operating Committee, with concurrence of the Contract and Audit Division, that the audit be made after 300 or 400 feet of crosscutting from the shaft has been completed. As of March 19, 1957, 270 feet of crosscutting had been completed and by April 1, 1957, it was indicated that well over 300 feet would be completed.

The Operator usually has the previous month's costs computed by about the 15th of the current month; therefore, it is suggested that the audit be made during the latter part of April 1957 if the auditor's schedule will permit.

It is indicated that the true costs for crosscutting during the first 300-400 feet may be hard to ascertain because crosscutting in the beginning stage and some of the finishing work on the station, sump, etc. are being done concurrently. However, if the costs through March 1957 do not reflect a representative cost for crosscutting, the audit may be extended to include April 1957 costs. It is indicated that about 800 feet of crosscutting will be completed by May 1, 1957.

E. G. Erickson
E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Turner
Erickson

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

1201 N. Division St.
Spokane 2, Washington

March 26, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED APR 1 1957

DATE	INITIALS	CODE
4/1	C	220
1/2	CDM	100
4/4	[illegible]	500

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The exploration project site was inspected March 19, 1957 accompanied by the miners.

The 2000 level station timbering had been completed since the last visit on February 20, and crosscutting was in progress. The crosscut had been extended 103 feet south of the station for tail track, etc. and the north crosscut had been driven 167 feet, making a total of 270 feet of crosscutting to date. The incline from the north end of the pump sump to the crosscut level was "holed" about 70 feet north of the station. Sideswiping along the north crosscut about 80 feet north of the stations for electric and motor rooms was started.

A block of purple quartzites is exposed in a large portion of the present north and south crosscuts. There is evidence of considerable folding and faulting. The crosscut is over the minimum size of 8'x8' due to overburden in the fractured ground. The back of the crosscut is 12 to 14 feet high in one place. Rock bolts with head boards have been placed in lieu of standard timber sets and they appear to be holding the ground. It is possible some timber may have to be placed later.

The Operator invoiced 15.5 feet of crosscutting and drifting for February 1957 and it was paid at the present agreed price of $47.21 per foot; however, if the present proposal to explore additional targets is approved, the agreed unit cost will be $43.92 (subject to audit) and payment at the present price will be adjusted downward.

Status of the contract is:

Date of contract: October 21, 1954
Termination date: January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: 529,566.98 (thru Feb. 1957)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,224 ft.
Shaft sinking	2,080 ft.	2,080 ft.
Pump stations	8,000 cu.ft.	8,000 cu.ft.
Shaft station	5,760 cu.ft.	5,760 cu.ft.
Skip pocket	3,216 cu.ft.	3,216 cu.ft.
Crosscutting & drifting	8,415 ft.	270 ft.
Sideswiping	36,000 cu.ft.	none
Underground core drilling	15,000 ft.	none
Timbering	1,600 ft.	none
Rock bolting	960 ft.	60 ft.

E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

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

RECEIVED AUG 5 1957 D.M.E.A. Minerals

Month of [illegible] 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible]
Address [illegible]
Contract Amount, $[illegible] Government Participation: [illegible]% Amount, $[illegible]

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				3,538.00		3,538.00
Drilling					15,708.00	15,708.00
Bulldozing					43,893.22	43,893.22
Crosscutting					8,000.00	8,000.00
Drifting				6,336.00	—	6,336.00
					451,360.00	451,360.00
(2) Labor and Supervision:						
Labor				511.05	—	511.05
Supervision				34.91	—	34.91
Technical Services				38.25	—	38.25
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives				77.70	—	77.70
Pipe						
Track						
				5.66	—	5.66
				.07	—	.07
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation				108.75	—	108.75
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
(A) Repairs to Equipment				33.18	—	33.18
Sampling and Analysis						
Payroll Taxes				15.14	—	15.14
Liability Insurance				41.51	—	41.51
				10.45	—	10.45
				12.24	—	12.24
(8) Contingencies (specify):						
				16.37	—	16.37
				4.15	—	4.15
					—	
TOTALS				10,556.40	518,961.22	529,517.22

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

Date JUL 2 1957 *Payee [illegible]

Per [signature] Title [illegible]

*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:

$ 5278.00

Signature [signature]
(Authorized Certifying Officer)

Date 8/1/57 Vou. No. 2004

(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. E 732 in accordance with the terms of the contract.

Signature /s/ John D. Bardill Title Metallurgist Date July 29, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date July 30, 1957

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 [illegible] 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Crosscutting	feet	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Raising	feet			[illegible]	[illegible]	[illegible]	[illegible]	217.00
Shafts								
Winzes	feet			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Drilling: Core								
Churn								
Auger								
[illegible] station	cu. ft.			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Stripping								
[illegible] 2000 station		[illegible]		[illegible]				[illegible]
Trenching								
[illegible] 2000 skip pocket		[illegible]		[illegible]				[illegible]
Test Pits								
Roads and Trails				[illegible]				[illegible]
[illegible] plant								
TOTAL DISTRIBUTED COSTS		[illegible]		[illegible]				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		--		--				
Initial Rehabilitation and Repairs		--		--				
New Buildings, Improvements, etc.		(227.43)		(227.43)				
TOTAL COSTS		[illegible]		[illegible]				

RECEIVED AUG 5 1957 D.M.E.A.

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 JUL 2 1957 Operator [illegible] Mining Company

Per [signature] Title President

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)

	Actual Unit Cost	Maximum Cost	Total to Exceed of Maximum Cost
Crosscutting	[illegible]	[illegible]	227.43

/s/ John D. Bardill

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

HECLA-SILVER MOUNTAIN PROJECT

Analysis of Labor

February - 1957

		Crosscutting	
Hecla-Silver Mountain labor			
Drift miners			
Crosscutting-11 shifts @ $33.10-15.5'		$ 364 10	
Pusher allowance		3 81	
Total drift miners		$ 367 91	
Topman			
1.32 shifts @ $18.16		$ 23 97	
Overtime		2 00	
Hoistman			
1.32 shifts @ $19.12		25 24	
1.32 shifts @ $19.52		25 77	
1.32 shifts @ $19.92		26 29	
Overtime		7 54	
Total Hecla-Silver Mountain		$ 478 72	
Star labor (custom)			
Star mine payroll		$ 13 08	
Total labor		$ 491 80	(2A)
Supervision			
Hecla-Silver Mountain		$ 34 91	
Technical			
Hecla labor	$ 35 75		
Star labor	2 50	$ 38 25	
Accounting			
Hecla labor	$ 8 25		
Star labor	11 00	$ 19 25	(2A)
Total labor		$ 584 21	

RECEIVED AUG 5 1957 D.M.E.A.

HECLA-SILVER MOUNTAIN PROJECT

Analysis of Supplies and Other

February - 1957

	Crosscutting	
Bits and rods		
Drill steel	$ 5 66	
Drill repair		
Drill machine supplies	$ 8 02	(7-A)
Explosives		
150 delays	$ 37 55	
200 pounds powder	39 40	
Wire	75	
	$ 77 70	
Hoisting		
Shaft supplies	$ 1 71	
Mileage (freight and transportation of outside labor)	76	
	$ 2 47	(7-A)
Pumping		
Pump supplies	$ 4 97	(7-A)
Ventilation		
Vent line supplies	$ 09	(7-A)
Underground miscellaneous		
Mine tools	$ 07	
Surface miscellaneous		
Mileage (freight and transportation of outside labor)	$ 2 63	(7-A)
Surface equipment supplies	1 01	(7-A)
Miscellaneous	13 63	(7-A)
Heat dry building (fuel oil)	5 40	(7-C)
	$ 22 67	
Electric power		
2596 Kilowatts	$ 16 37	
Engineering and surveying		
Supplies	$ 25	(7-C)

HECLA-SILVER MOUNTAIN PROJECT

Analysis of Supplies and Other

February - 1957

	Crosscutting	
General expense		
Office supplies	$ 2 84	(8-A)
Telephone and telegraph	1 31	(8-A)
Group accident insurance - employees	7 74	(7-B)
Group life insurance - employees	2 71	(7-B)
	$ 14 60	
Shop and payroll expense (On outside labor)		
Star payroll @ 20%	$ 2 62	
Hecla office accounting - 10%	83	
Burke office accounting - 20%	2 20	
	$ 5 65	(7-C)
Taxes - Social Security		
F.O.A.B. 2.25% x $ 531.56	$ 11 96	
Federal U.C. .3 % x $ 530.00	1 59	
Idaho U.C. .3 % x $ 530.00	1 59	
	$ 15 14	
Payloader expense		
Supplies	$ 36	(7-A)
Workmen's compensation expense		
Industrial Indemnity Co.		
$607.61 x 5.693%	$ 34 59	
20% surcharge	6 92	
	$ 41 51	
X-rays and physical exams - employees	94	(7-C)
	$ 42 45	
Equipment depreciation		
5.5% of $1,977.20	$ 108 75	
Total supplies and other	$ 325 22	
Total labor and supplies to form 104-A	$ 909 43	

Form MF-194 (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 January-February, 1957 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho
Contract Amount, $1,058,370.00 Government Participation: 50 % Amount, $529,185.00

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:				5/3/57 P.K.		
Drilling		$15708.00	$ 15708.00		15708.00	15708.00
Bulldozing						
Crosscutting 4.5@$47.21	$ 212.45		212.45	212.45	—	212.45
Drifting 11.0 @$47.21	519.31		519.31	519.31	—	519.31
Shaft		451360.00	451360.00		451360.00	451360.00
(2) Labor and Supervision:						
Labor						
Supervision						~~[illegible]~~
Technical Services						
(3) Operating Mat'ls. and Supplies:						~~[illegible]~~
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) Surface Plant, Improvements, etc.		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Pump stations		8000.00	8000.00		8000.00	8000.00
2000 station	6336.00		6336.00	6336.00	—	6336.00
2000 skip pocket	3538.00		3538.00	3538.00	—	3538.00
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$10605.76	$518961.22	$529566.98	10,605.76	518,961.22	529,566.98

RECEIVED MAR 22 1957 D.M.E.A.

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

Date 3-8-57 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 530.28

Signature [signature]
(Authorized Certifying Officer)

Date 3/19/57 Vou. No. 1956

(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. E-737 in accordance with the terms of the contract.

Signature /s/ Eric G. Erickson Title Mining Engineer Date 3/15/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature A. E. Weissenborn Title Executive Officer Date 3/19/57

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 Jan. - Feb. 1957 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 Wallace, Idaho

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	feet	212.45	4.5	212.45	4.5	47.21	8415	47.21
Crosscutting	feet	519.31	11.0	519.31	11.0	47.21		
Raising								
Shafts	feet			451360.00	2080.0	217.00	2080	217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	7.00	3000	7.00*
Churn								
Auger								
~~Stringer~~ Pump stations	cu. ft.			8000.00	16268	.49	8000	1.00*
~~Tracker~~ 2000 station		6336.00		6336.00				6336.00*
~~Tracker~~ 2000 skip Pocket		3538.00		3538.00				3538.00*
Roads and Trails								
~~Surface~~ plant				43893.22				45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 3-8-57 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract

/s/ Eric G. Erickson, Mining Engineer

RECEIVED MAR 22 1957 D.M.E.A.

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

EXTRA COPY
D M E A
RECEIVED MAR 22 1957

DATE	INITIALS	CODE

March eleventh
1957

Defense Minerals Exploration Administration
United States Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - February - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of February, 13 additional sets were reblocked to complete the repair work in the shaft, and the 2000 level station, pocket and pump room were completed.

Excavation during February amounted to 525 cubic feet in the station and 5711 cubic feet in the pocket bringing the total excavation for the station and pocket to 8799 and 7170 cubic feet respectively. A total of 161 rock bolts were placed in the pocket and station during the period.

Lateral work on the 2000 level was started with an advance of 11.0 feet in the tail drift and 4.5 feet in the north crosscut. This work will be shown on a 50-scale progress map of the station area which will accompany next month's report.

The geology of the shaft is shown on the enclosed 100-scale section.

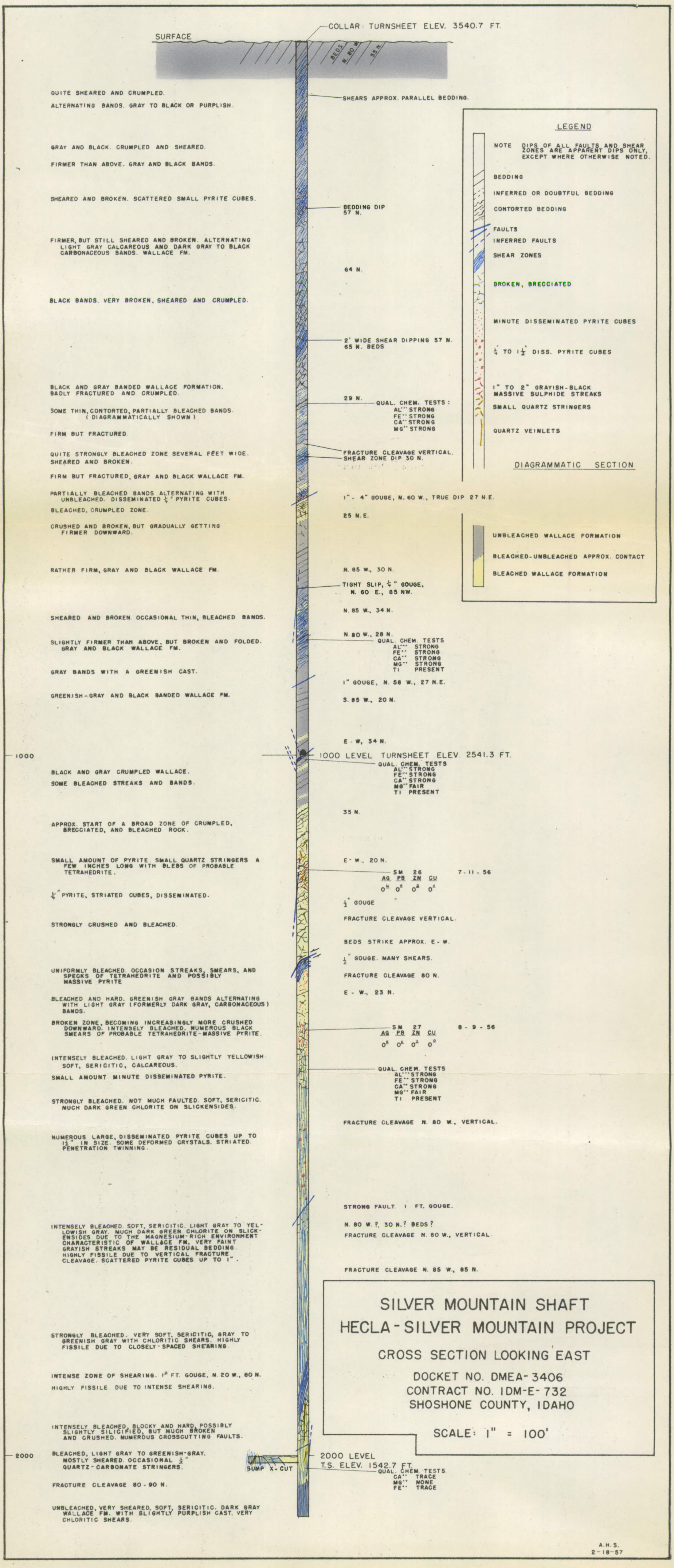
Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

Enclosure


COLLAR: TURNSHEET ELEV. 3540.7 FT.
SURFACE
BEDS N. 80 W. 55 N.
QUITE SHEARED AND CRUMPLED.
ALTERNATING BANDS. GRAY TO BLACK OR PURPLISH.
SHEARS APPROX. PARALLEL BEDDING.
GRAY AND BLACK. CRUMPLED AND SHEARED.
FIRMER THAN ABOVE. GRAY AND BLACK BANDS.
SHEARED AND BROKEN. SCATTERED SMALL PYRITE CUBES.
BEDDING DIP 57 N.
FIRMER, BUT STILL SHEARED AND BROKEN. ALTERNATING LIGHT GRAY CALCAREOUS AND DARK GRAY TO BLACK CARBONACEOUS BANDS. WALLACE FM.
64 N.
BLACK BANDS. VERY BROKEN, SHEARED AND CRUMPLED.
2' WIDE SHEAR DIPPING 57 N. 65 N. BEDS
BLACK AND GRAY BANDED WALLACE FORMATION. BADLY FRACTURED AND CRUMPLED.
29 N.
QUAL. CHEM. TESTS: AL+++ STRONG FE++ STRONG CA++ STRONG MG++ STRONG
SOME THIN, CONTORTED, PARTIALLY BLEACHED BANDS. (DIAGRAMMATICALLY SHOWN)
FIRM BUT FRACTURED.
FRACTURE CLEAVAGE VERTICAL.
QUITE STRONGLY BLEACHED ZONE SEVERAL FEET WIDE. SHEARED AND BROKEN.
SHEAR ZONE DIP 30 N.
FIRM BUT FRACTURED, GRAY AND BLACK WALLACE FM.
PARTIALLY BLEACHED BANDS ALTERNATING WITH UNBLEACHED. DISSEMINATED 1/4" PYRITE CUBES.
1" - 4" GOUGE, N. 60 W., TRUE DIP 27 N.E.
BLEACHED, CRUMPLED ZONE.
25 N.E.
CRUSHED AND BROKEN, BUT GRADUALLY GETTING FIRMER DOWNWARD.
RATHER FIRM, GRAY AND BLACK WALLACE FM.
N. 85 W., 30 N.
TIGHT SLIP, 1/4" GOUGE, N. 60 E., 85 NW.
N. 85 W., 34 N.
SHEARED AND BROKEN. OCCASIONAL THIN, BLEACHED BANDS.
N. 80 W., 28 N.
QUAL. CHEM. TESTS AL+++ STRONG FE++ STRONG CA++ STRONG MG++ STRONG TI PRESENT
SLIGHTLY FIRMER THAN ABOVE, BUT BROKEN AND FOLDED. GRAY AND BLACK WALLACE FM.
GRAY BANDS WITH A GREENISH CAST.
1" GOUGE, N. 58 W., 27 N.E.
GREENISH-GRAY AND BLACK BANDED WALLACE FM.
S. 85 W., 20 N.
E - W, 34 N.
1000
1000 LEVEL TURNSHEET ELEV. 2541.3 FT.
QUAL. CHEM. TESTS AL+++ STRONG FE++ STRONG CA++ STRONG MG++ FAIR TI PRESENT
BLACK AND GRAY CRUMPLED WALLACE.
SOME BLEACHED STREAKS AND BANDS.
35 N.
APPROX. START OF A BROAD ZONE OF CRUMPLED, BRECCIATED, AND BLEACHED ROCK.
E - W., 20 N.
SMALL AMOUNT OF PYRITE. SMALL QUARTZ STRINGERS A FEW INCHES LONG WITH BLEBS OF PROBABLE TETRAHEDRITE.
SM 26 7-11-56
AG PB ZN CU
0.4 0.2 0.2 0.2
1/4" PYRITE, STRIATED CUBES, DISSEMINATED.
1/2" GOUGE
STRONGLY CRUSHED AND BLEACHED.
FRACTURE CLEAVAGE VERTICAL.
BEDS STRIKE APPROX. E - W.
1/2" GOUGE. MANY SHEARS.
UNIFORMLY BLEACHED. OCCASION STREAKS, SMEARS, AND SPECKS OF TETRAHEDRITE AND POSSIBLY MASSIVE PYRITE
FRACTURE CLEAVAGE 80 N.
E - W., 23 N.
BLEACHED AND HARD. GREENISH GRAY BANDS ALTERNATING WITH LIGHT GRAY (FORMERLY DARK GRAY, CARBONACEOUS) BANDS.
BROKEN ZONE, BECOMING INCREASINGLY MORE CRUSHED DOWNWARD. INTENSELY BLEACHED. NUMEROUS BLACK SMEARS OF PROBABLE TETRAHEDRITE-MASSIVE PYRITE.
SM 27 8-9-56
AG PB ZN CU
0.5 0.4 0.3 0.2
INTENSELY BLEACHED. LIGHT GRAY TO SLIGHTLY YELLOWISH. SOFT, SERICITIC, CALCAREOUS.
SMALL AMOUNT MINUTE DISSEMINATED PYRITE.
QUAL. CHEM. TESTS AL+++ STRONG FE++ STRONG CA++ STRONG MG++ FAIR TI PRESENT
STRONGLY BLEACHED. NOT MUCH FAULTED. SOFT, SERICITIC. MUCH DARK GREEN CHLORITE ON SLICKENSIDES.
FRACTURE CLEAVAGE N. 80 W., VERTICAL.
NUMEROUS LARGE, DISSEMINATED PYRITE CUBES UP TO 1 1/2" IN SIZE. SOME DEFORMED CRYSTALS. STRIATED. PENETRATION TWINNING.
STRONG FAULT. 1 FT. GOUGE.
N. 80 W.?, 30 N.? BEDS?
FRACTURE CLEAVAGE N. 80 W., VERTICAL.
INTENSELY BLEACHED. SOFT, SERICITIC. LIGHT GRAY TO YELLOWISH GRAY. MUCH DARK GREEN CHLORITE ON SLICKENSIDES DUE TO THE MAGNESIUM-RICH ENVIRONMENT CHARACTERISTIC OF WALLACE FM. VERY FAINT GRAYISH STREAKS MAY BE RESIDUAL BEDDING. HIGHLY FISSILE DUE TO VERTICAL FRACTURE CLEAVAGE. SCATTERED PYRITE CUBES UP TO 1".
FRACTURE CLEAVAGE N. 85 W., 85 N.
STRONGLY BLEACHED. VERY SOFT, SERICITIC, GRAY TO GREENISH GRAY WITH CHLORITIC SHEARS. HIGHLY FISSILE DUE TO CLOSELY-SPACED SHEARING.
INTENSE ZONE OF SHEARING. 1.2 FT. GOUGE, N. 20 W., 80 N.
HIGHLY FISSILE DUE TO INTENSE SHEARING.
INTENSELY BLEACHED, BLOCKY AND HARD, POSSIBLY SLIGHTLY SILICIFIED, BUT MUCH BROKEN AND CRUSHED. NUMEROUS CROSSCUTTING FAULTS.
2000
BLEACHED, LIGHT GRAY TO GREENISH-GRAY. MOSTLY SHEARED. OCCASIONAL 1/2" QUARTZ-CARBONATE STRINGERS.
SUMP X-CUT
2000 LEVEL T.S. ELEV. 1542.7 FT.
QUAL. CHEM. TESTS CA++ TRACE MG++ NONE FE++ TRACE
FRACTURE CLEAVAGE 80 - 90 N.
UNBLEACHED, VERY SHEARED, SOFT, SERICITIC. DARK GRAY WALLACE FM. WITH SLIGHTLY PURPLISH CAST. VERY CHLORITIC SHEARS.
LEGEND
NOTE DIPS OF ALL FAULTS AND SHEAR ZONES ARE APPARENT DIPS ONLY, EXCEPT WHERE OTHERWISE NOTED.
BEDDING
INFERRED OR DOUBTFUL BEDDING
CONTORTED BEDDING
FAULTS
INFERRED FAULTS
SHEAR ZONES
BROKEN, BRECCIATED
MINUTE DISSEMINATED PYRITE CUBES
1/4" TO 1 1/2" DISS. PYRITE CUBES
1" TO 2" GRAYISH-BLACK MASSIVE SULPHIDE STREAKS
SMALL QUARTZ STRINGERS
QUARTZ VEINLETS
DIAGRAMMATIC SECTION
UNBLEACHED WALLACE FORMATION
BLEACHED-UNBLEACHED APPROX. CONTACT
BLEACHED WALLACE FORMATION
SILVER MOUNTAIN SHAFT
HECLA-SILVER MOUNTAIN PROJECT
CROSS SECTION LOOKING EAST
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732
SHOSHONE COUNTY, IDAHO
SCALE: 1" = 100'
A.H.S.
2-18-57

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D M E A
RECEIVED MAR 22 1957

DATE	INITIALS	CODE

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

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DMEA
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DATE	INITIALS	CODE
3/7	CAM	100

1201 N. Division St.
Spokane 2, Washington

February 26, 1957

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mt. Project, Shoshone County, Idaho, Contract No. Idm-E732

Final shaft measurement was made February 20, with the aid of Mr. G. Rice, mine engineer, and an assistant. Although the shaft sinking was completed in mid-December 1956, extensive shaft repairs which started December 19 delayed final measurement until repairs were completed and bulkheads removed.

The distance from the turn sheet at the shaft collar to the bottom of the last regular set of timber was 2,083.15 feet by our measurement. The Operator had reported 2,083 feet in his progress report for December 1956. The Government participates in the cost of 2,080 feet of shaft. The total distance to the bottom (high end of bench) was 2,086.07 feet by our measurement. The Operator reported 2,088.3 feet to the bottom. Measurement to the lower end of the bench was not considered pertinent and was not made because of water and spill pocket partition.

Most of the shaft repairing was reported to have been done below the 1000-ft. level. During December 1956 and January 1957, 84 sets were reblocked and others relined. The shaft rode smoothly during the time of measurement, which was just after repair work was completed; however, it is too soon to tell how much the maintenance cost will be.

The contract calls for the Government to participate in the cost of a maximum excavation of 5,760 cu. ft. for the 2000 level station. More than 5,760 cu. ft. have been excavated to date and present plans indicate the completed station excavation will total about 8,000 cu. ft.

The pocket excavation and timbering were essentially completed. Gate cylinders for chute lips were being connected and pocket lining was being completed. Total excavation of the pocket is about 7,100 cu. ft. which is considerable more than the original estimate of 3,216 cu. ft. allowed by the contract. The pocket was excavated by a modified top-slice method using square-set timbering. All the ground for the width of the two hoisting compartments was excavated back to the dump track, whereas it was originally planned to excavate raise pockets using no timber.

No sump other than the shaft bottom sump and four intermediate pump stations was provided for in the contract; however, the Operator has excavated a pump room and sump two sets below the 2000 level station. Total excavation to date is about 9,000 cu. ft. and it is almost completed.

A 1152 cu. ft. spill pocket was excavated near the bottom of the shaft.

Crosscutting is expected to be on cycle early in March 1957.

The status of the contract is:

Date of contract: October 21, 1954
Termination date: January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: 518,961.22 (thru Dec. 1956)

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,224 ft.
Shaft sinking	2,080 ft.	2,080 ft.
Pump station	8,000 cu. ft.	8,000 cu. ft.
Shaft station	1	75%
Skip pocket	1	1

E. G. Erickson

E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

HECLA MINING COMPANY

P. O. Box 320
WALLACE, IDAHO

February eighteenth
1957

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DMEA
RECEIVED MAR 4 1957

DATE	INITIALS	CODE
3/5/57	FEJ	110
3/5	~~HEH~~	500
	Klug.	

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - January - 1957
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

During the month of January, 50 sets of timber were reblocked completing the shaft repair work to the crown set of the 2000 station.

Following this work, the remaining excavation on 2000 station was made with a total of 4,099 cubic feet of rock being removed. The five long station caps were put in place and the back of the station lagged and bulkheaded. The station was fully rockbolted and a few stulls placed to steady the ground during the cutting of the pocket.

The pocket excavation was started and 1,459 cubic feet of rock was removed. The ground is badly sheared and soft and the work is progressing slowly, but it is expected that the installation will be completed during the month of February.

A total of 86 rockbolts were placed during the period, most of which were in the 2000 station.

A geologic section of the shaft is now in preparation and will be included in next month's report.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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 November, 1956 Docket No. DMEA 3406 Contract No. IMI - E - 732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 - Wallace, Idaho

Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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:				1/9/57 OPK		
Drilling		$ 15,708.00	$ 15,708.00		15708.00	15708.00
Pump Station Rock 16263 cu. ft.	8,000.00		8,000.00	8000.00	— 0 —	8000.00
Crosscutting						
Drifting						
Shaft 121.3 @ $217.	26,322.10	409,739.40	436,061.50	26322.10	409739.40	436061.50
(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						
Surface Plant		43,893.22	43,893.22		43893.22	43893.22
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$34,322.10	$469,340.62	$503,662.72	34322.10	469340.62	503662.72

RECEIVED DEC 1956 D.M.E.A.

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

Date 12-11-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 17161 05

Signature [signature]
(Authorized Certifying Officer)

Date 12-20-56 Vou. No. 1912
(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. E 7 32 in accordance with the terms of the contract.

Signature /s/ Eric G Erickson Title Mining Engr Date 12-18-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Wing G Agnew Title Acting Exec Date 12-19-56

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.

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

RECEIVED
DEC 26 1956
D.M.E.A.

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

Month of November 1956 Docket No. DMEA 3406 Contract No. Tom-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho

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	feet	$26322.10	121.3	$436061.50	2009.5	217.00	2000	217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	$ 7.00	3000	7.00*
Churn								
Auger								
~~Supply~~ Pump Stations	Cu.Ft.	8000.00	6134	8000.00	16268	.49	6000	1.00*
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 12-11-56 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract

/s/ Eric G Erickson

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

RECEIVED
DEC 26 1956
D.M.E.A.

December thirteenth
1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - November - 1956
Docket DMEA - 3406
Contract No. IDM-E732

Gentlemen:

During November the Silver Mountain shaft was advanced 118.1 feet to depth of 2018.3 feet and timber was advanced 121.3 feet to a depth of 2009.5 feet.

A total of 25 days were worked during the period; 18 3/4 days were spent in actual sinking for an average advance of 6.3 feet per day. Two days were spent on shaft repair and the remaining 4 1/4 days were used in cutting station, pumproom and sump on 2000 level.

An eight-foot round was taken out of 2000 station three sets high and, in addition, a crosscut was driven 27 feet from the shaft timber to the west end of the station. Total excavation for this work was 4175 cubic feet.

Ten feet below 2000 level sill a room was cut for pump installation and a sump (approximately 8.5 feet wide by 12.5 feet high and 70 feet long) was driven north from the shaft. A small incline (4' x 4' x 22' long) will connect the north end of the sump with the 2000 level crosscut. About six feet of this incline remains to be driven. Total excavation for this work during November was 6134 cubic feet.

The rock is strongly sheared and difficult to hold and required the placement of 243 six-foot rock bolts in the shaft, 2000 station, and pumproom and sump.

It is expected that sinking will be completed in December.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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 December, 1956 Docket No. DMEA 3406 Contract No. DMA-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 - Wallace, Idaho
Contract Amount, $1,058,370.00 Government Participation: 50 % Amount, $529,185.00

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:				3/28/57		
Drilling		$ 15708.00	$ 15708.00		15708.00	15708.00
Pump stations ~~Bandcoing~~		8000.00	8000.00		8000.00	8000.00
Crosscutting						
Drifting						
Shaft 70.50$217.00	$15298.50	436061.50	451360.00	15298.50	436061.50	451360.00
(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. Surface plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$15298.50	$503662.72	$518961.22	15298.50	503662.72	518961.22

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

Date 1/7/57 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 7649.25

Signature [signature] (Authorized Certifying Officer)

Date 2-1-57 Vou. No. 1936

(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. E-732 in accordance with the terms of the contract.

Signature /S/ Stephen W. Zoldok Title Mining Engr. Date 2-1-57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Wing H. Agnew Title Acting Exec Date 2-1-57

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

RECEIVED FEB 15 1957 D.M.E.A.

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

Month of December 195 6 Docket No. DMEA 3406 Contract No. IDI-F-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 - Wallace, Idaho

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	feet	$15298.50	70.5	$451360.00	2080.0	217.00	2080	217.00*
Winzes								
Drilling: Core	feet			$ 15708.00	2244	$7.00	3000	7.00*
Churn								
Auger								
~~Stripping~~ Pump Stations	cu.ft.			$ 8000.00	16266	.49	8000	1.00*
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$ 43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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.

REMARKS:

Date 1/7/57 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by Contract (For Government use only)

/s/ Stephen W. Zoldok, Mining Engr.

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

January seventh
1957

EXTRA COPY
DMEA
RECEIVED FEB 15 1957

DATE	INITIALS	CODE

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - December - 1956
Docket DMEA - 3406
Contract No. IDM-E732

Gentlemen:

During the month of December the Silver-Mountain shaft was completed at a depth of 2088.3 feet. Ground advance during the month was 70.0 feet and timber was advanced 73.5 feet to a total depth of 2083.0 feet.

A total of 24 days were worked during the period. The 2000 level pumproom and sump were completed with 2934 cubic feet of excavation and a two-set spill pocket (1152 cubic feet) was completed. A total of 270 rock bolts were placed in the shaft, pumproom and sump.

Shaft repair work was started on December 19 and at the end of the month 34 sets had been reblocked. Reblocking has been completed to a depth of about 1650 feet and it is estimated that approximately three weeks of January will be occupied in further shaft repair before work on the 2000 station can be resumed.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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

1201 N. Division St.
Spokane 2, Washington
November 19, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim inspection report, Docket No. DMEA-3406 (lead-zinc-copper), Silver Mountain Project, Hecla Mining Company, Shoshone County, Idaho, Contract No. Idm-E732

Mr. Hjalmer Lindfors, shaft foreman, was contacted at the shaft site on November 13, 1956. Shaft sinking had been resumed on November 1 after a two weeks recess. Badly sheared and talcy ground conditions had broken some shaft timbers and squeezed sections out of line which made it necessary to stop sinking and make needed repairs and alignment.

The shaft had been advanced a total of 371 sets for a linear distance of 1951.5 feet. The shaft bottom was at 1962 feet. The Operator plans to sink a total of 397 sets or 2088 ± feet although the Government participation in shaft sinking under the contract ends at 2080 feet.

The shaft section from set No. 330 to 360 was retimbered and above set No. 215 some repair was made on 20 sets. Some sets in the bad ground were jacketed on both sides and some only on the west side. Use of jacket-sets was stopped on set No. 369 but rock bolting with 1"x6' bolts started on set No. 361 is being continued. To date 109 bolts have been placed.

The ground at set No. 370 is firm and has improved down to the present bottom. If present ground conditions continue no difficult support problems are anticipated when station and pockets are excavated at the 2000-foot level.

The rate of advance has dropped from 9 feet per day to about 6.5 feet, and because a pilot drift for the station will be driven on the 2000 level and a few rounds of the pocket raise will be excavated as they go by, the shaft sinking is not expected to be completed before January 1, 1957.

The status of the contract is:

Date of contract: October 21, 1954
Expiration date: January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: 469,340.62 (thru Oct. 1956)

Work Items	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 feet	2,224 feet
Shaft sinking	2,080 "	1,951.5 "
Pump station	8,000 cu.ft.	8,000 cu.ft.
Shaft station, 2000 level	1	none
Skip pocket " "	1	none
Crosscuts and drifts	8,415 feet	none
Sideswiping	36,000 cu.ft.	none
Core drilling, underground	15,000 ft.	none
Rock bolting	960 ft. *	none
Timbered drift	1,600 ft.	none

* $5/bolt and a maximum of 6 bolts per any 5-ft. section.

Eric G. Erickson
E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

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

Budget Bureau No. 42-R1036.5

W

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

Month of October, 1956 Docket No. DMEA 3406 Contract No. Idm-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho
Contract Amount, $1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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:				1/8/57	OPK	
Drilling		$ 15708.00	$ 15708.00		15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 89.5 @ $217.00	$19421.50	390317.90	409739.40	19421.50	390317.90	409739.40
(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. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$19421.50	$449919.12	$469340.62	19421.50	449919.12	469340.62

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

Date 11-8-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

9710 25

$ 9710 25

Signature MJP
(Authorized Certifying Officer)

Date 11-20-56 Vou. No. 1894

(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. E732 in accordance with the terms of the contract.

Signature /S/ Eric G. Erickson Title Mining Engr Date 11-16-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ A. E. Weissenborn Title Exec Officer Date 11-20-56

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 October 6 195 Docket No. DMEA 3406 Contract No. Idm-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 Wallace, Idaho

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	feet	$19421.50	89.5	$409739.40	1888.2	$217.00	2080	$217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	$ 7.00	3000	$ 7.00*
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant			$	43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 11-8-56 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by Contract

/S/ Eric G Erickson

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

November ninth
1956

RECEIVED
NOV 26 1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - October-1956
Docket DMEA - 3406
Contract No. IDM-E 732

Gentlemen:

During October the Silver Mountain shaft was advanced 91.5 feet to a total depth of 1900.2 feet. Timber was advanced 89.5 feet to a depth of 1888.2 feet.

A total of 27 days were worked during the period. Eleven days were occupied in actual sinking for an advance of 8.14 feet per day. The other sixteen days were occupied in shaft repair.

About 40 sets had to be reblocked in areas where the ground is strongly sheared and difficult to hold at the ends of the shaft. Part of this repair work was between 1100 and 1200 feet and the remainder in the section from 1500 feet to the bottom. Some additional repair work will be required during November.

The ventilation raise near the hoist room was advanced 27 feet to completion. The total length of the raise is 52 feet.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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

RECEIVED
OCT 30 1956

1201 N. Division St.
Spokane 2, Washington
October 18, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was visited October 10. Progress was discussed with Mr. Hjalmer Lindfors, shaft foreman. Several sets have had to be reblocked and a few timbers replaced during October. The ground has become more sheared and talcy. Progress had dropped from 9 feet to about 6 feet per day. If the ground continues to be loose and talcy it will cause trouble when the 2000 level station is excavated.

A total of 353 sets had been timbered, making the total shaft advance 1856.5 feet. The shaft sinking is expected to be completed in November 1956 if ground conditions do not get worse.

Following is a tabulation of the work items authorized and completed:

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Shaft sinking	2,080 ft.	1,856.5 ft.
Pump stations	4	3 1/
Shaft station, 2000 level	1	none
Skip pocket " "	1	"
Crosscuts and drifts	8,415 ft.	"
Sideswiping	36,000 cu.ft.	"
Core drilling, underground	15,000 ft.	"
Rock bolting	960 ft. *	"
Timbered drift	1,600 ft.	"

* $5/bolt and a maximum of 6 bolts per any 5-ft. section.

Date of contract: October 21, 1954
Expiration date: January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: 449,919.12 (thru Sept. 1956)

1/ A more efficient 3-pump station system was installed by the Operator in lieu of the 4-station system originally planned. Small stations were excavated on the 500 and 1500 levels where 608 and 846 cubic feet, respectively, were excavated. The 1000 level station was made larger to accommodate permanent pumps for a 1000-ft. lift, thereby eliminating the 500 station. The 1000-ft. station was not completed when last measured; however, a total of 6,880 cu. ft. had been excavated, making a total of 8,354 cu. ft. for the 3 stations.

A Field Team letter was prepared and forwarded to Washington recommending that the total of 8,000 cubic feet for pumping stations as set forth in the contract be allowed at $1/cu. ft.

Eric G. Erickson

Eric G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

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

RECEIVED BUREAU OF MINES OCT 10 1956 SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED OCT 22 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1956 Docket No. DMEA 3406 Contract No. [illegible]-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $ 1,058,370.00 Government Participation: 50% Amount, $ 529,185.00

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		$ 15708.00	$ 15708.00	11/6/56 MPK	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 220.6 @ 217.00	47870.20	342447.70	390317.90	47870.20	342447.70	390317.90
(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. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	47870.20	402048.92	449919.12	47870.20	402048.92	449919.12

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

Date 10-8-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 23935.10

Signature [signature]
(Authorized Certifying Officer)

Date 10/16/56 Vou. No. 1896
(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. E732 in accordance with the terms of the contract.

Signature 151 Eric G. Erickson Title Mining Engr Date 10/15/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 151 A. E. Weissenborn Title Executive Officer Date 10/16/56

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 ME-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
OCT 22 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1956 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	Feet	$47870.20	220.6	$390317.90	1798.7	$217.00	2000	$ 217.00 *
Winzes								
Drilling: Core	Feet			$ 15708.00	2244	$ 7.00	3000	$ 7.00 *
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$ 43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 10-8-56 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum Allowed by Contract

151 Eric G Erickson

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

RECEIVED
OCT 22 1956
RECEIVED
BUREAU OF MINES
OCT 10 1956
SPOKANE, WASH.

October ninth
1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla - Silver Mountain Project - September, 1956
Docket DMEA - 3406
Contract No. IDM-E 732

Gentlemen:

Ground and timber advance in the Silver Mountain shaft for the month of September was 220.6 feet. This placed the bottom of the shaft at a depth of 1808.7 feet and the bottom of timber at 1798.7 feet. Twenty-five days were occupied in sinking for an advance of 8.82 feet per day.

No significant structures were encountered during the month's advance. The rock is bleached argillaceous quartzite with well developed vertical shearing and fracturing.

A 50 foot ventilation raise is being driven to the surface from the tunnel a short distance east of the hoistroom. This will ventilate the hoistroom and dissipate the heat from the generators. Advance on the raise during September was 25 feet.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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

1201 N. Division St.
Spokane 2, Washington
September 18, 1956

RECEIVED
OCT - 3 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The exploration project site was inspected September 13, 1956. The shaft had reached a depth of 1,684 feet and 318 sets of timber, totaling 1,673 feet, had been placed.

A small (846 cu. ft.) pump station (shaft set #285) had been excavated at the 1500-foot level. The rate of advance remains a bit over 9 feet per day. The formation has become harder and steep fracture cleavages and shearing have caused the rounds to pull harder. The standard of work remains good.

Following is a tabulation of the work items authorized and completed:

	Authorized	Completed
Surface plant	$45,500.00	$43,893.22
Surface core drilling	3,000 feet	2,244 feet
Shaft sinking	2,080 "	1,673 "
Pump stations	4	3 1/
Shaft station, 2000 level	1	none
Skip pocket " "	1	"
Crosscuts and drifts	8,415 ft.	"
Sideswiping	36,000 cu.ft.	"
Core drilling, underground	15,000 ft.	"
Rock bolting	960 ft.*	"
Timbered drift	1,600 ft.	"

* $5/bolt and a maximum of 6 bolts per any 5-ft. section.

Effective date of contract: October 21, 1954
Expiration " " " : January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: $ 402,048.92

1/ Although 3 pump stations have been completed, the Operator has not invoiced for them. It was initially planned to excavate intermediate pump stations on the 400,800, 1200 and 1600 levels but it was decided to have a large pump station on the 1000 level with crosscut sump and smaller stations on the 500 and 1500 levels. Although there are only 3 stations instead of 4, the total excavation for the 3 stations is greater than the total allowed for the 4 stations.

In the contract, on page 3 of Exhibit "A", last paragraph, it is stated that the Government has the option of continuing its participation in the costs of the project on a "fixed cost" basis or converting to participation in the actual costs. The conversion may be made at the Government's option when two years have elapsed from the date of the contract or when the crosscut has been advanced 500 feet from the shaft. The two-year period will be reached October 21, 1956 and the progress indicates the crosscut will be 500 feet from the shaft some time in February 1957.

E. G. Erickson

E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson
Turner

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

RECEIVED
SEP 12 1956

1201 N. Division St.
Spokane 2, Washington
September 4, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Co., Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project was last visited August 14, 1956, accompanied by the shaft foreman. The project had also been visited July 25 since the last interim report dated June 25.

The shaft had been advanced to a total depth of 1,440 feet on August 14 of which 1,430.65 feet had been timbered with a total of 272 sets.

The rate of advance continues to be exceptional at about 9 feet per day. Bench rounds of 30 holes drilled with 7' 10" steel break about 6½ feet. Room for 2 sets of timber is made with 3 blasts. Occasionally it is necessary to drill and blast a few plugs or short holes with the regular round to make room for timber when interim rounds did not break as planned. Atlas gelatin powder, 45% strength, 1-1/8"x8", "ready slit" sticks averaging about 144 sticks to the box is used. An average of one box and 107 sticks of powder are consumed with each regular round.

The regular crew on day shift includes 4 shaft miners, 1 hoistman, 1 surface man, and 1 shaft boss. There is no regular boss or surface man on other shifts although they may be called out occasionally. Electricians, mechanics, etc. are on call from Hecla shops at Burke, Idaho.

Shaft sinking may be completed by mid-November 1956. The station sump and pockets may be completed in December 1956, depending on the final design, and crosscutting will be started by January 1957.

Following is a tabulation of work items authorized and completed:

	Authorized	Completed
Surface plant	$45,550.00	$43,893.22
Surface core drilling	3,000 ft.	2,244 ft.
Shaft sinking	2,080 ft.	1,431 ft.
Pump stations	4	none
Shaft station, 2000 level	1	"
Skip pocket " "	1	"
Crosscuts and drifts	8,415 ft.	"
Sideswiping	36,000 cu.ft.	"
Core drilling, underground	15,000 ft.	"
Rock bolting	960 ft.*	"
Timbered drift	1,600 ft.	"

* $5/bolt and a maximum of 6 bolts per any 5-ft. section.

Effective date of contract: October 21, 1954
Expiration " " " : January 1, 1958
Amount of contract: $1,058,370.00
Amount spent: $ 347,256.42

Eric G. Erickson
E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Erickson

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

W

Budget Bureau No. 42-R1036.5

Approved
Klugscheid
Betty

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

Month of July, 1956 Docket No. DMEA 3106 Contract No. ID-E-732
Operator's Name Hecla Mining Company Mineral Lead, Zinc, Copper
Address Box 320 Wallace, Idaho
Contract Amount, $1,058,370.00 Government Participation: 50% Amount, $ 529,185.00

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		$ 15708.00	$ 15708.00	10/16/56	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 225.4 @$217.00	$48911.80	238743.40	287655.20	48911.80	238743.40	287655.20
(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.~~ Surface Plant, Improvements, etc.		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$48911.80	$298344.62	$347256.42	48911.80	298344.62	347256.42

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

Date 8-7-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 24455 90

Signature MJP
(Authorized Certifying Officer)

Date 8-20-56 Vou. No. 1827

(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. E-732 in accordance with the terms of the contract.

Signature /S/ Eric G Erickson Title Mining Engr Date 8-16-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Wing G Agnew Title Acting Exec Date 8-20-56

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 1956 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 Wallace, Idaho

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	feet	$18911.80	225.4	$ 2 876[illegible].20	1325.6	217.00	2080	$ 217.00 #
Winzes								
Drilling: Core	feet			15708.00	2244	$ 7.00	3000	7.00 #
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$43893.22				$45500.00 #
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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.

REMARKS:

Date 8-7-56 Operator Hecla Mining Company

Per [signature] Title President

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)

151 Eric G Erickson

RECEIVED
AUG 27 1956

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

DMEA

HECLA MINING COMPANY

P. O. BOX 320
WALLACE, IDAHO

August ten
1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - July, 1956
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

The timbered advance of the Silver Mountain shaft for July was 225.4 feet. Ground advance was 220.4 feet which placed the shaft bottom at 1335.6 feet. The bottom of timber was 1325.6 feet; twenty-four days were occupied in actual sinking or an advance of 9.39 feet per day.

The concrete floor of the 1000 level substation and pump-room was poured during the first week of July and the substation panel was installed. A ringdam was constructed in the shaft above the 1000 level.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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

Budget Bureau No. 42-R1036.5

RECEIVED SEP 24 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August 1956 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320 Wallace, Idaho

Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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		$ 15708.00	$ 15708.00	10/16/56	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 252.5@$217.00	$54792.50	287655.20	342447.70	54792.50	287655.20	342447.70
(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. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$54792.50	$347256.42	$402048.92	54792.50	347256.42	402048.92

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

Date 9-10-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 27396.25

Signature [signature]
(Authorized Certifying Officer)

Date 9-21-56 Vou. No. 1873

(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. E7332 in accordance with the terms of the contract.

Signature 151 Eric G. Erickson Title Mining Engr Date 9-18-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 151 A. E. Weissenborn Title Exec Officer Date 9-20-56

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

RECEIVED
SEP 24 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 195 6 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho

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	feet	$54792.50	252.5	$342447.70	1578.1	$217.00	2080	$ 217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	7.00	3000	7.00*
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 9-10-56 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract

151 Eric G Erickson

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

DMEA

HECLA MINING COMPANY

P. O. Box 320
WALLACE, IDAHO
September eleventh
1956

RECEIVED
SEP 24 1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla - Silver Mountain Project - August, 1956
Docket DMEA - 3406
Contract No. IDM-E 732

Gentlemen:

Ground advance in the Silver Mountain shaft for the month of August was 252.5 feet which placed the bottom of the shaft at a depth of 1588.1 feet. Timber advance for August was also 252.5 feet; the bottom of timber at the end of the month was 1578.1 feet. Twenty-seven days were occupied in actual sinking for an advance of 9.35 feet per day. A pump station (846 cubic feet) was cut on 1500 level.

No structures of consequence were encountered in the shaft during this period. The rock is greenish-gray argillaceous quartzite of the Wallace formation, becoming somewhat more quartzitic near the present bottom of the shaft. Steeply, north dipping to vertical fracture cleavage and shearing is pronounced and the rocks are strongly bleached below 1100 feet. Bedding in the dark, banded Wallace in the upper part of the shaft varied from about 40 to 60 degrees to the north and the last observed bedding was 23 degrees to the north at about 1400 feet below the collar.

Yours very truly,

H. E. Harper

H. E. Harper
Chief Geologist

HEH:mm

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

RECEIVED
JUL 19 1956

1201 N. Division St.
Spokane 2, Washington
June 25, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project was inspected June 12, 1956, accompanied by the shaft foreman. The project was visited again on June 19, accompanied by Mr. George C. Selfridge, Chairman, DMEA Operating Committee, Washington, D.C., and Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, NW Dist.

On June 12 a total of 190 sets of timber (5.25 ft. c. to c.) had been placed and ground was out about 9 feet below the last set. The "creep" on the timber causes the sets to average 5.26 feet center to center. The top of the bottom wall plate of the 190th set at 999.4 feet is the sill for the 1000-ft. pump station which was being excavated at the time of the inspection. It was planned to excavate a station 20'x14'x10' high but a mud seam caused the ground to slough and the station was about 20'x18'x12' when visited June 19. Another set of shaft timber had been placed at this time and a 40-foot, 8'x8' crosscut had been driven easterly from the station for a water sump. The ground was bad and it ended up about 9'x9'.

Sinking progress has been exceptional and conditions have been very near ideal. Each crew on the three shifts mucks, drills and blasts a 6-ft. plus bench round and timbers as necessary, keeping timber 8 to 12 feet from the bottom. An average of 28 holes are drilled per round and about 1½ to 2 boxes of powder are used. Sinker drills and integral steel are employed. The complete cycle sought is 2 sets per 3-shift day. To date 11 sets in a 2-week period is the best attained.

The sinking bucket is attached to the bottom of the cage by two 27½-ft. chains. The mucker has to be moved after each timber cycle because of the lack of headroom for dumping.

Present progress indicates that crosscutting from the bottom level will be started in December 1956. Standard of work is high.

Following is a tabulation of the work items authorized and completed:

	Authorized	Completed
Surface plant	$45,550.00	$43,893.22
" drilling	3,000 ft.	2,244 ft.
Shaft sinking	2,080 "	1,005 "
Pump stations	4	none
Shaft station, 2000 level	1	"
Skip pocket " "	1	"
Crosscuts and drifts	8,415 ft.	"
Sideswiping	36,000 cu.ft.	"
Core drilling, underground	15,000 ft.	"
Rock bolting	960 " *	"
Timbered drift	1,600 "	"

* $5 per bolt and a maximum of 6 bolts per any 5-ft. section.

E. G. Erickson

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Docket
Engr
M/D

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

Budget Bureau No. 42-R1036.5

RECEIVED
MAY 21 1956

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

Month of April, 1956 Docket No. DMEA 3406 Contract No. IDM-E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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		$ 15708.00	$ 15708.00	7/13/56 W.P.K.	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 236.5 @ $217.	$51320.50	92702.40	144022.90	51320.50	92702.40	144022.90
(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. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$51320.50	$152303.62	$203624.12	51320.50	152303.62	203624.12

I certify that the above bill is correct and just and that payment therefor has not been received.
Date MAY 9 1956 *Payee Hecla Mining Company
Per [signature] Title President

*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:

$ 25660.25

Signature [signature]
(Authorized Certifying Officer)

Date 5/17/56 Vou. No. 1777
(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. E732 in accordance with the terms of the contract.

Signature 1st Eric G. Erickson Title Mining Engr Date 5/15/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 1st Wing G. Agnew Title Acting Exec Officer Date 5/15/56

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

RECEIVED
MAY 21 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1956 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	feet	$51320.50	236.5	$144022.90	663.7	217.00	2080	217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	7.00	3000	7.00*
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$ 43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		51320.50		803624.12				

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 MAY 9 1956 Operator Hecla Mining Company

Per [signature] Title President

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)

*maximum allowed by contract

(For Government use only)

/s/ Eric G Erickson

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

DMEA

Hecla Mining Company

RECEIVED
MAY 21 1956

Wallace, Idaho

May eighth
1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - April, 1956
Docket No. DMEA - 3406
Contract No. IDM-E732

Gentlemen:

The timbered advance of the Silver Mountain shaft for April was 236.5 feet bringing the total timbered advance to 663.7 feet. At month end the shaft bottom was at 674 feet. A pump station was cut on the 500 level, and the sump tank and pump were installed. Twenty-six days were worked during April.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:cb
Encs.

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

RECEIVED
JUL 12 1956

Month of May, 1956 Docket No. DMEA 3406 Contract No. IDM - E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho
Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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		$ 15708.00	$ 15708.00	NPK.	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 262.7 @ $ 217.00	$ 57005.90	144022.90	201028.80	57005.90	144022.90	201028.80
(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. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$ 57005.90	$203624.12	$260630.02	57005.90	203624.12	260630.02

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

Date JUN 11 1956 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 28502.95

Signature [signature]
(Authorized Certifying Officer)

Date 7-6-56 Vou. No. 1811
(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. E732 in accordance with the terms of the contract.

Signature 151 Eric G. Erickson Title Mining Eng. Date 6/30/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 151 A. E. Weissenborn Title Exec. Officer Date 7/2/56

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

RECEIVED
JUL 12 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1956 Docket No. DMEA 3406 Contract No. IBM - E-732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320 Wallace, Idaho

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	feet	$57005.90	262.7	$ 201028.80	926.4	$ 217.00	2080	$ 217.00*
Winzes								
Drilling: Core	feet			15708.00	2244	7.00	3000	7.00*
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$ 43893.22				$ 45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 JUN 11 1956 Operator Hecla Mining Company

Per [signature] Title President

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)

* Maximum allowed by contract

/S/ Eric G Erickson

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

HECLA MINING COMPANY
P. O. BOX 320
WALLACE, IDAHO

RECEIVED
JUL 12 1956

June twenty-sixth
1 9 5 6

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - May-1956
Docket No. DMEA - 3406
Contract No. IDM-E-732

Gentlemen:

The timbered advance of the Silver Mountain shaft for May was 262.7 feet bringing the total timbered advance to 926.4. At month end the shaft bottom was at 936.4 feet. The new road to the dump was also constructed and the extending dump has cut off the old roads used prior to this time. Twenty-seven days were worked during May.

Yours very truly,

John R. Matthews

John R. Matthews
Secretary

JRM:cb
Encs.

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

W

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUL 23 1956
IDM-E732

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1956 Docket No. DMEA 3406 Contract No.

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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		$ 15,708.00	$ 15,708.00	7/27/56	15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 173.8 @ $217.00	$37,714.60	201,028.80	238,743.40	37714.60	201028.80	238743.40
(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. Surface plant		43,893.22	43,893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$37,714.60	$260,630.02	$298,344.62	37714.60	260630.02	298344.62

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

Date 7-9-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 18 857 30

Signature M.A.P.
(Authorized Certifying Officer)

Date 7-20-56 Vou. No. 1824

(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. 6732 in accordance with the terms of the contract.

Signature /S/ Eric G Erickson Title Mining Engr Date 7-18-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Wing G Agnew Title Acting Exec Date 7-19-56

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 June 195 6 Docket No. DMEA 3406 Contract No. DMA-E732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	feet	$37714.60	173.8	$238,743.40	1100.2	217.00	2080	$217.00*
Drilling: Core								
Churn	feet			15,708.00	2244	7.00	3000	7.00*
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				43,893.22				$45,500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		37714.60		298344.62				1058370.00

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 7-9-56 Operator Hecla Mining Company

Per [signature] Title President

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)

* Maximum allowed by contract

151 Eric G Erickson

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

DMEA

HECLA MINING COMPANY

P. O. BOX 320
WALLACE, IDAHO

July tenth
1 9 5 6

RECEIVED
JUL 23 1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver Mountain Project - June, 1956
Docket DMEA-3406
Contract No. IDM-E732

Gentlemen:

The timbered advance of the Silver Mountain shaft for June was 173.8 feet. At the end of June the bottom of timber was 1100.2 feet and the shaft bottom was 1115.2 feet. Eighteen days were occupied in actual sinking or an advance of 9.64 feet per day.

Eight days were occupied in preparing a 1000 level sump and pump station. A 300 gallon per minute 1000 foot head pump will be installed there and provision has been made for an extra pump on this level in case it is needed later.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson
Vice President

RES:cb

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

1201 N. Division St.
Spokane 2, Washington
April 16, 1956

RECEIVED
MAY 4 - 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper), Hecla Mining Co., Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was visited April 12, accompanied by Mr. C. E. Fisher, auditor, DMEA Contract Administration and Audit Division, Washington, D. C.

The shaft excavation had been advanced a total of 525 feet, and 98, 5'-3" sets had been placed for a total of 514.5 feet of timbered shaft. The shaft progress is very good and present indications are the district shaft sinking rate of 8 feet per day (3 shifts) set at the Crescent shaft will be exceeded. Present rate is approximately 9.5 feet per day. A cycle of 2 sets or 10.5 feet per day is the present objective but it has not been attained as a set or two is lost per 2-week period. A mud seam encountered in one round caused 2 sets of timber to be blasted out because the effect was not anticipated. The mucker was damaged when it fell to the bottom of the shaft, and two days were lost making repairs.

Mr. Fisher took several pictures of the surface plant installations and underground hoist and compressor rooms, and they will be made available to the Washington and field offices.

E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

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

W

Budget Bureau No. 42-R1036.5

RECEIVED
APR 23 1956

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

Month of March, 1956 Docket No. DMEA 3406 Contract No. IDM-E732
Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho
Contract Amount, $1,058,370.00 Government Participation: 50 % Amount, $529,185.00

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:				4/26/56 WPK		
Drilling		$15708.00	$15708.00		15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 241.9 @ $217.00	$2492.30	40210.10	92702.40	52492.30	40210.10	92702.40
(2) Labor and Supervision:						
Labor						
Supervision						Grossvold
Technical Services						~~Hagenbeck~~
(3) Operating Mat'ls. and Supplies:						Betty
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc. Surface Plant		43893.22	43893.22		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$52492.30	$99811.32	$152303.62	52492.30	99811.32	152303.62

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

Date 4-11-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 26246.15

Signature [signature]
(Authorized Certifying Officer)

Date 4-18-56 Vou. No. 1753
(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. 6732 in accordance with the terms of the contract.

Signature /S/ Eric G Erickson Title Mining Engr Date 4/16/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ A. E. Wessenborn Title Exec Officer Date 4/16/56

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

RECEIVED
APR 23 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1956 Docket No. DMEA 3406 Contract No. IDM-E732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	feet	$52492.30	241.9	$92702.40	427.2	217.00	2080	217.00 *
Winzes								
Drilling: Core	"			$15708.00	2244	$7.00	3000	7.00 *
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface Plant				$43893.22				$45500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 4-11-56 Operator Hecla MiningCompany

Per [signature] Title President

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:

*Maximum allowed by contract

(For Government use only)

151 Eric G Erickson

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

DMEA

Hecla Mining Company

RECEIVED
APR 23 1956

Wallace, Idaho
April twelfth
1 9 5 6

Defense Minerals Exploration Administration
U.S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - March-1956
Docket No. DMEA - 3406
Contract No. IDM-E732

Gentlemen:

The timbered advance of the Silver Mountain shaft for March was 241.9 feet making a total of 427.2 feet timbered. The bottom of the shaft was 441.2 feet. The ground was good all the way and practically no water has been encountered. Twenty-six days were worked in shaft sinking.

Also during March a concrete ring was poured about sixty-five feet below the collar to catch surface water. It is working successfully. No other work was done on the project.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:eel
Encs.

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

1201 N. Division St.
Spokane 2, Washington
March 13, 1956

RECEIVED
MAR 19 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was inspected March 8, accompanied by Mr. A. F. Robertson, Bureau of Mines engineer, and the shaft foreman.

The final electrical hook-ups, hoist and headframe alignment, and surface plant installations had been completed, and actual shaft sinking started February 1. The shaft had been excavated 257 feet and 47 sets (5'-3" c.to c.) placed, totaling 247 feet of timbered shaft.

The shaft sinking is on a 3-shift per day operation, and a 2-set per day cycle has been maintained for the past two weeks. The shaft foreman believes they will be able to maintain this cycle for the most part.

A bench round consisting of 21 to 27 seven-foot holes is drilled using 2 sinker drills. A 45 percent powder is used and rounds are detonated by electric delays. The benches advance an average of 6 feet per round. The ground excavation is kept 8 to 10 feet ahead of timber. A steel "Battleship" is used for protecting timber from blast and as a staging for timbering.

A Rydell shaft mucker is used and the mucking time is about 2 hours. Good ventilation is maintained, which allows the miners to start mucking 20 to 30 minutes after a blast.

The standard of work is good and the present rate of advance indicates the shaft will be completed by December 1, 1956. Following is a tabulation of work items in progress and the numbers authorized and approved:

	Authorized	Approved
Surface plant	1	1
Shaft sinking	2,080 ft.	247 ft. (timbered shaft)

Orig. & 3 cys - Wash.
USGS (2)
DMEA--M/D--AD
EGE/he

E. G. Erickson
E. G. Erickson

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

W

Budget Bureau No. 42-R1036.5

RECEIVED
APR 2 - 1956

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

Month of February, 1956 Docket No. DMEA 3406 Contract No. Idm - E732
Operator's Name Hecla Mining Company Minerals lead, zinc, copper
Address Box 320 Wallace, Idaho
Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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:				4/3/56.		
Drilling $	- -	$ 15708.00	$ 15708.00		15708.00	15708.00
Bulldozing						
Crosscutting						
Drifting						
Shaft 157.8 @ $217.00	34242.60	5967.50	40210.10	34242.60	5967.50	40210.10
(2) Labor and Supervision:						
Labor						Received
Supervision						
Technical Services						~~Disapproved~~
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Surface plant Bldgs., Improvements, etc.		45500.00	45500.00		43893.22	43893.22
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS $	34242.60	$ 67175.50	$ 101418.10	34242.60	65568.72	99811.32

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

Date 3-8-56 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 17121 30

Signature [signature]
(Authorized Certifying Officer)

Date 3/22/56 Vou. No. 1734
(See other side)

~~*See attached statement for details.~~

(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. E732 in accordance with the terms of the contract.

Signature 151 Eric G. Erickson Title Mining Engr Date 3/19/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 151 A. E. Weissenborn Title Exec. Officer Date 3/19/56

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

RECEIVED
APR 8 - 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1956 Docket No. DMEA 3406 Contract No. Idm - E732

Operator's Name Hecla Mining Company Minerals lead, zinc, copper

Address Box 320 Wallace, Idaho

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	feet	$ 34,242.60	157.8	$ 40,210.10	185.3	$ 217.00	2,080	$ 217.00
Winzes								
Drilling: Core	"			15,708.00	2244	7.00	3,000	7.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Surface plant		$ 45,500.00		$ 45,500.00				$ 45,500.00*
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 3-8-56 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract.

/s/ Eric G. Erickson

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

DMEA

Hecla Mining Company

RECEIVED
APR 2 - 1956

Wallace, Idaho

March ninth
1 9 5 6

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - February-1956
Docket No. DMEA - 3406
Contract No. Idm-E732

Gentlemen:

As reported by Mr. Neyman, shaft sinking went on a three shift basis in the bottom the morning of February 7th. At that time it was 27.5 feet from the top turnsheet to bottom of timber. Thirty sets were placed during the balance of February and the bottom of timber at the end of the month was 185.3 feet and the bottom of the shaft was 204.0 feet. Although ice formation gave some difficulty during the first part of the month the greater depth of the shaft now should eliminate further trouble from ice.

Two minor jobs remain to be done on the surface, a door at the entrance to the hoist room to control ventilation and some corrugated iron in the rope raise to catch drip from the surface.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:EEL

D. M. E. A.

RECEIVED

MAR - 8 1956

Hecla Mining Company

Wallace, Idaho

February twenty-seventh
1956

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver Mountain
Project - January, 1956
Docket No. DMEA - 3406
Contract No. IDM-E732

Gentlemen:

As previously reported, considerable delay was experienced by Washington Water Power Company in installing power lines and transformers, but power was available on January 20th. During the remainder of the month dump irons and guides were installed, ropes were placed on the drums and cages were hung. Other electrical work, which was awaiting connection by Washington Water Power, was completed and the compressors and electrical controls on the hoist were checked in operation. Actual sinking began February 1st. Operations will be on a six day, three shifts per day, basis. Sinking is progressing satisfactorily.

Since all major installations are now complete, a tentative statement of expenditures has been prepared. As previously arranged, a study of revision of some of the allocations may now be made by the Field Representative of D.M.E.A.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/rmr

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

1201 N. Division St.
Spokane 2, Washington
March 21, 1955

MEMORANDUM

To: DMEA Field Team, Region I, NW District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406, Hecla Mining Company, Silver Mountain Mine, Shoshone County, Idaho, Contract No. Idm-E732

Diamond drilling under the exploration project contract has been completed. Two holes aggregating a total of 2244 feet were drilled under the contract, and a third hole was drilled on company account prior to the date of the contract. Drill logs, plan and section maps of all holes were submitted with the Operator's February progress report. Cores are boxed and stored on the top floor of the Star mill building located at Burke, Idaho.

The second of the two holes drilled under the DMEA contract was drilled to a depth of 640 feet to test the rock formation at the proposed shaft site. This latest, and probably the final, proposed shaft location is on the Cyringa claim and the 640-ft. diamond drill hole was also collared on the Cyringa claim.

The Cyringa claim was not included in the Operator's property rights in the contract, but Mr. R. E. Sorenson, vice-president of the company, stated that the company has acquired the claim and prior to performing work on it had taken steps to include it in the contract. At the time the contract was signed the Operator agreed that the Cyringa claim would be included in their property rights under the contract when negotiations for acquiring the claim had been completed.

Mr. Sorenson was informed that payment for diamond drill hole collared on the Cyringa claim and any other work performed on the claim would be withheld until the property was officially included in the contract. ?

Construction of the surface plant is expected to start as soon as the weather moderates and the snow has melted.

E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
M/D
EGE/he

Hecla Mining Company

Wallace, Idaho

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
RECEIVED
APR 25 1955

U. S. BUREAU OF MINES
RECEIVED
APR 18 1955
SPOKANE, WASHINGTON

April fourteenth
1 9 5 5

Betty

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane 4, Washington

Re: Progress Report Hecla-Silver
Mountain Project
March-1955
Docket No. D.M.E.A.-3406
Contract No. I.D.M.-E 732

Gentlemen:

There is little to report on the subject contract since most of the month was occupied in planning and engineering work in connection with the preparation for sinking the shaft. During the last few days of the month some progress was made in surface clean-up and bull dozing in preparation for the shaft collar and buildings. This work is now progressing satisfactorily.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:abs

NOTE: No forms MF-104 or MF-104A submitted

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

1201 N. Division St.
Spokane 2, Washington
April 27, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

MEMORANDUM

To: DMEA Field Team, Region I, NW District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was inspected April 20, 1955. There were two workmen enlarging and retimbering the old adit, rerouting the creek flow, and leveling the surface plant site by bulldozer.

Present plans are to enlarge the old adit tunnel run into the mountain near the east end line of the Cyringa claim and cut an underground hoist and compressor room. A rope raise will be excavated to the surface and the headframe and shaft collar location is outside.

Mr. Ralph Neyman, general manager for the company, has been out of the district and could not be contacted regarding the change in plans for the surface plant. The plans will be discussed in detail as soon as he returns. Discussions with other officials of the company brought up questions regarding costs to the project. On page 3 of Exhibit "A" the costs of the surface plant are set forth as total estimated cost and net cost to the project. The net cost was determined by deducting the salvage or liquidation value. The change in plans will change the estimated costs and net costs of a few items, namely, main buildings, water system, and hoist installation. It is possible that the actual costs will be lower but underground hoist and compressor rooms will have a questionable salvage value. As soon as the costs of the revised plans are discussed in detail with Mr. Neyman, any proposed amendments will be presented with recommendations. The cost of any proposed changes in the surface plant will be limited to the maximum total net cost of $45,500 to the project.

The new location for the shaft will necessitate approximately 1200 feet of crosscutting northerly from the shaft instead of 1015 feet set forth as a maximum in Exhibit "A", item 5, under Exploration Work. The surface diamond drilling was concluded, and $10,269 of this item, or enough for 217.5 feet of crosscutting @ $47.21/ft., remains unexpended, and could be made available for necessary additional crosscutting.

8406

[illegible]

OR FINAL FILE SEN REPORT

MAY 1 2 1955

Date _____

Referred to:

1. ~~Mr. Waterman~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. ~~Docket Control Mails and Files~~
5. Base Metals Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Results of surface
2. drilling ?
3. don't
4. details

and take appropriate action.

- - - - -

Action taken by Division:

Nothing much
W.P.Y.

ROBERT E. ADAMS

Initials

Work is progressing satisfactorily in view of the wet condition of the terrain due to melting snow and inclement weather.

There will be a lag in the Operator's monthly MF-104's until major items of work included in the surface plant are completed, but he will submit narrative progress reports.

Following is a tabulation of work items approved by the contract, number of units, and units completed:

	Authorized	Completed
Surface plant	$45,500	none
Surface diamond drilling	3,000 feet	1,533 feet 1/
Shaft sinking	2,080 "	none
Intermediate pump stations	4	"
Shaft station (2000 level)	1	"
Skip pocket " "	1	"
Crosscutting and drifting	8,415 feet	"
Sideswiping	36,000 cu.ft.	"
Diamond drilling (2000 level)	15,000 feet	"
Rock bolting	960 "	"
Timbering	1,600 "	"

1/ No more surface diamond drilling is anticipated.

E. G. Erickson

Origl & 3 cys - Wash.
USGS (2)
DMEA
M/D
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EGE/he

Hecla Mining Company

Wallace, Idaho

U. S. BUREAU OF MINES
RECEIVED
MAY 17 1955
SPOKANE, WASHINGTON

May sixteenth
1955

DEPARTMENT OF
Defense Minerals
RECEIVED
MAY 23 1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane 4, Washington

Re: Progress Report Hecla-Silver Mountain
Project - April 1955
Docket No. DMEA - 3406
Contract No. IDM - E732

Gentlemen:

Progress of work during April was:

1. Dump Area was cleared of timber.
2. Old house moved and converted to tool shed.
3. Creek was moved west of its former site.
4. Road to site was about 1/2 completed by bulldozer.
5. Shaft collar site was prepared by bulldozing adjacent hillside.
6. Five sets of timber were placed in portal of the tunnel which will be used as entrance to underground hoist room and powder magazine.

Since none of the projects were entirely finished a statement of the account covering the work will be submitted upon completion of projects.

Work is progressing in a satisfactory manner.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/mg

W DMEA

Hecla Mining Company

RECEIVED
BUREAU OF MINES
JUN 13 1955
SPOKANE, WASH.

Wallace, Idaho
June ninth
1 9 5 5

Betty

RECEIVED
JUN 20 1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - May 1955
Docket No. DMEA 3406
Contract No. IDM-E 732

Gentlemen:

The progress of the Silver Mountain project work is well summarized in the following information provided by Mr. R. W. Neyman, General Manager:

"During the month of May the creek diversion mentioned in the report for April was put through a culvert where it passes through the dump area. Timber and rubbish around the site is sufficiently dry for burning and practically all of this has been cleaned up and burned. A contract was given to Zanetti Brothers for moving the Atlas building to the Silver Mountain site. This building contains a small office, a warehouse, dry, and shop, and with the exception of a small shelter for the equipment during the winter, will be adequate for the job.

At June 1 the shaft had been put down eight (8) feet to solid rock, the tunnel was widened into the hoist room site, and the crosscut off this tunnel was widened for a powder magazine. Approximately one-third of the room has been cut. This room will house the hoist, compressors and substation and a thirty-five (35) foot rope raise will be put up to the surface and our incoming power supply from the Washington Water Power Company will be taken down this raise to the substation. The power company has already placed their line to the top of the raise and we are using this line for the temporary operation of the compressor.

Zanetti has completed moving the building to the site and will start moving the headframe from the Gem State Shaft the early part of June."

Since none of the phases of the project were completed a final statement will be submitted later after completion, covering each part of the project as set up in the contract.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/vfc

COPY

RECEIVED
JUN 20 1955

Hecla Mining Company

Wallace, Idaho
May sixteenth
1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane 4, Washington

Re: Progress Report Hecla-Silver Mountain
Project - April 1955
Docket No. DMEA 3406
Contract No. Idm-E732

Gentlemen:

Progress of work during April was:

1. Dump Area was cleared of timber
2. Old house moved and converted to tool shed
3. Creek was moved west of its former site
4. Road to site was about 1/2 completed by bulldozer
5. Shaft collar site was prepared by bulldozing adjacent hillside
6. Five sets of timber were placed in portal of the tunnel which will be used as entrance to underground hoist room and powder magazine.

Since none of the projects were entirely finished a statement of the account covering the work will be submitted upon completion of projects.

Work is progressing in a satisfactory manner.

Yours very truly,

/s/ Robert E. Sorenson

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

1201 N. Division St.
Spokane 2, Washington
July 12, 1955

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Property, Shoshone County, Idaho, Contract No. Idm-E732

The project site was inspected July 8, 1955, accompanied by Mr. Lee Messerly, superintendent for the company.

Work on the surface plant and shaft preparation are progressing favorably.

The shaft has been advanced 34 feet of which 25 feet or 5 sets have been timbered. The shaft collar is being poured, starting at the bottom of the third timbered set, and will be formed and poured about 10 feet above the top shaft set. Headframe footings will be formed and poured to an elevation above the shaft collar that will allow dumping into trucks.

The hoist and compressor room cut underground is about 75% completed and the rope raise has been holed. A concrete collar will be poured for rope raise.

The combination office, change house and warehouse building is completed except for the inside painting and hanging the doors. The building was moved in three sections from the Atlas property located about 3 miles southwesterly from the Silver Mountain project site. Mr. Messerly stated the building cost $2,000 and it was moved by Zanetti Bros., contractors, for $3,500. There are probably some incidental costs for moving not included in the above.

The original plans on which the contract was written have been altered some, i.e., rather than a hoist and compressor building outside the Operator elected to excavate an underground room. The cost to the contract was based on actual cost less a salvage value. It is believed the cost to the project as written in the contract may be considered a maximum. When the surface plant has been completed the costs will be

audited to determine the allowable cost to the contract. Due to some changes there may have to be some adjustment between separate items but the over-all cost will be within the amount allowed by the contract. The changes have been discussed with the Field Team and no complications regarding proper invoicing as per the contract are anticipated. If the contract will require amending it was decided that one amendment covering any changes in the work items would be drafted at the completion of the surface plant.

The present work schedule indicates the mechanical shaft sinking equipment will be placed in the shaft the latter part of September 1955 and a regular sinking cycle established by October 1955. Hoist, compressor, headframe and incidental installations are expected to be completed in the meantime.

The Operator submits a monthly narrative progress report and may invoice when major items of surface plant are completed or he may elect to submit an invoice on the surface plant after it has all been completed.

Operator is doing a good job in a workmanlike manner. The job is taking the form of a first-class installation without any unnecessary frills or costs.

E. G. Erickson

E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

W DMEA

Hecla Mining Company

Wallace, Idaho

July fifteenth
1 9 5 5

RECEIVED
JUL 26 1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 N. Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver Mountain Project - June 1955
Docket No. DMEA 3406
Contract No. IDM-E732

Gentlemen:

Mr. Neyman, General Manager, reports that the combination office, dry room and storeroom building is completely erected and ready for use and the shaft was sunk another 26 feet to a total depth of 34 feet and timbered with five sets of timber preparatory to placing the concrete collar through the overburden which also will serve as a foundation for the headframe. He reports the rope raise is completed and roof bolted and that the hoist room is about 75% completed and roof bolted. The water lines, fire hydrant line and sewer lines also are completed.

A right-of-way easement for a roadway between the highway and railroad track was obtained and as Mr. Neyman reports this roadway, making a more direct route to the shaft site, will be completed with muck from shaft sinking.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES
vfc

Narrative Rept

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

1201 N. Division St.
Spokane 2, Washington
July 29, 1955

VC 7

RECEIVED
SEP - 1 1955

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was inspected July 21, 1955, accompanied by Mr. Wing G. Agnew, U. S. Bureau of Mines Member of the Field Team, and Mr. Lloyd Pollish, research engineer, Anaconda Company.

The combination office, change house and warehouse building was ready for occupancy.

The underground hoist and compressor room had been excavated and rock-bolted. The floor was being made ready for concrete, and rock bolts for I-beams for a traveling chain hoist had been placed. The rope raise was being made ready for a concrete collar at the surface, and an underground powder magazine was almost completed.

Forms for concrete shaft collar were near completion, and head-frame footings were staked.

Progress has been satisfactory and barring delays the shaft sinking will be in full swing in September 1955.

E. G. Erickson

E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

Hecla Mining Company

Wallace, Idaho

August twelfth
1955

RECEIVED
AUG 26 1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project-July-1955
Docket No. DMEA 3406
Contract No. IDM-E732

Gentlemen:

Mr. Neyman, General Manager, reports that at the end of July the hoistroom and powder magazine were completed and roof bolted, the concrete shaft collar was finished, the dump was leveled, air receiver, air lines and water lines to the shaft were placed and two fire hydrants were installed.

A review of the completed work will be made shortly and statements will be prepared covering items completed and then submitted to you.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:dl

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

RECEIVED
OCT 10 1955

1201 N. Division St.
Spokane 2, Washington
September 16, 1955

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper) Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project was visited August 29, 1955 and September 22, 1955. On August 29 a labor strike halted work on erection of the headframe by Zanetti Bros., contractors. Other work on the project was progressing, as the Hecla company was not involved in the strike.

The Zanetti Bros., by some agreement with the union, were allowed to raise the headframe, which was done September 21, and the Operator will finish placing the headframe. The concrete floor and hoist foundation had been completed in the underground room, and the collar for the rope raise had been placed.

A hoist is being installed at the Star mine in Burke, Idaho, which will replace the hoist that will be used at the Silver Mountain project. The tightening and aligning of the headframe and placing hoist and other equipment is expected to be completed about November 1, 1955.

The changes in the construction of the surface plant were discussed with Mr. R. E. Sorenson, vice-president, and Mr. Lenis, accountant. The Operator will meet with the Field Team later this month, and allowable costs of the surface plant in which the Government will participate will be determined within the maximum allowed by the contract.

Standard of work is good.

Eric G. Erickson
E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

w

Hecla Mining Company

Wallace, Idaho

October twenty-fifth
1955

RECEIVED
OCT 31 1955

~~Granvold~~
Betty

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project-September, 1955
Docket No. DMEA 3406
Contract No. IDM-E732

Gentlemen:

As reported previously, the local strike against the Sixteen Operators delayed the subject project because Zanetti Brothers were withheld from erecting the headframe. Through a temporary contract with the Union, since that time, Zanetti has been allowed to resume work and on September 28th erection of the headfram was resumed.

A concrete ring around the rock raise collar to prevent drainage of surface water into the raise was poured. The hoist room floor and hoist foundations have been poured. Headframe alignment and installation of the Star hoist remain to be completed before sinking is commenced.

The expectation is that the Star hoist will be available about November first and should be completely installed at Silver Mountain by December first. Since alterations of the plans for surface plant have changed estimated costs of several categories set up in the contract, it will be advisable to make the necessary adjustments of these figures after more detailed costs are available. Therefore to this time no statements have been submitted to D.M.E.A., but will be submitted and discussed as soon as possible after the hoist has been installed.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/rmr

Pop

Hecla Mining Company

RECEIVED
DEC - 5 1955

Betty

Wallace, Idaho
November twenty-eighth
1 9 5 5

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver
Mountain Project - October, 1955
Docket No. DMEA-3406
Contract No. IDM-E 732

Gentlemen:

During October, as reported by Mr. Neyman, the headframe was completed and a snowshed placed in front of the shaft over the entrance. The compressors were also set.

A bachelor from Mullan will live on the property in the cabin which was formerly located about where the shaft is to be sunk. This arrangement will place someone on the property as a resident serving as some degree of protection on days when the operation is not active.

Everything is in readiness for the installation of the hoist which should be available sometime in November. After the hoist installation is completed, definite cost figures will be available for the complete preparation period.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/v

Hecla Mining Company

Wallace, Idaho

December twentieth
1 9 5 5

RECEIVED JAN 3 1956

~~Greenfield~~
Betty

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 N. Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver Mountain Project - November, 1955
Docket No. DMEA-3406
Contract No. IDM-E 732

Gentlemen:

During November no changes were effected on the Project itself but the hoist change over in the Star Mine was completed during the Thanksgiving holiday and the Star hoist made available for Silver Mountain. Removal of the hoist from the Star was commenced immediately and installation of the hoist on the Silver Mountain property is now progressing.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES/mg

Rept

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
December 21, 1955

RECEIVED
JAN 23 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim inspection, Docket No. DMEA-3406 (lead-zinc-copper) Hecla Mining Company, Silver Mountain Project, Contract No. Idm-E732

Mr. R. E. Neyman, general manager for Hecla Mining Co., and Mr. L. Messerly, superintendent, were contacted in Wallace, Idaho, on December 15 regarding the progress on the Silver Mountain project. Mr. Neyman stated they had encountered difficulties and delays in making the exchange of hoists at the Star mine in Burke, Idaho. The first load of the disassembled hoist had just arrived at the Silver Mountain project, and the Operator believed they would complete the hoist installation in January 1956. This would indicate shaft sinking would start in February 1956.

Eric G. Erickson
E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

w

Hecla Mining Company

Wallace, Idaho

January twenty-sixth
1956

RECEIVED
FEB - 6 1956

Answered
Betty

Defense Minerals Exploration Administration
U. S. Department of the Interior
1201 North Division Street
Spokane 2, Washington

Re: Progress Report Hecla-Silver Mountain
Project - December, 1955
Docket No. DMEA - 3406
Contract No. IDM-E732

Gentlemen:

Installation of the Star doubledrum hoist progressed satisfactorily and the fan for shaft ventilation was installed in the headframe as reported by Mr. Neyman.

Washington Water Power Company worked on the extension of their highline to the Silver Mountain site and on installing a sub-station. They have since completed that work and power is now available at the site.

No other important work remained to be done and it is anticipated that sinking will be started in a few days.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:dl

Rep'ts

Hecla Mining Company

Wallace, Idaho

RECEIVED
FEB - 6 1956

January ninth
1 9 5 6

Mr. L. J. Randall, President
Hecla Mining Company
Wallace, Idaho

Re: Silver Mountain Project
Month of December - 1955

Dear Mr. Randall:

Installation of the Star double drum hoist progressed satisfactorily during December and the fan for shaft ventilation was installed in the headframe.

Washington Water Power Company are now engaged in extending their highline to the Silver Mountain site and installing a sub-station at that point. They have promised that this work will be completed by January 10, following which our electricians will make necessary connections for power transmission to the hoist room, the distributing point.

Aside from very minor detailed work no other changes were effected in December.

Yours very truly,

/s/ R. W. Neyman

R. W. Neyman
General Manager

RWN:dl

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

1201 N. Division St.
Spokane 2, Washington
January 31, 1956

RECEIVED
FEB 13 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA-3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract No. Idm-E732

The project site was visited January 25, accompanied by Mr. Kangus, mine foreman.

The hoist had been installed and cables strung. The shaft ventilation fan had also been installed. The dump irons were being installed at the shaft collar, and the electricians were making the final electrical hookups. The power sub-station at the mine reduces the voltage to 2300 volts which was reported will be carried down the shaft. Sinking is expected to start early in February.

Although the progress has been slow, mainly because of the delay in acquiring the hoist, the standard of work has been good.

E. G. Erickson

E. G. Erickson

orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

Defense Minerals Administration
RECEIVED
MAY 17 1955

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

Month of February, 1955 Docket No. DMEA 3406 Contract No. Idm-E-732
Operator's Name Hecla Mining Company Minerals Lead, zinc, copper
Address Box 320 - Wallace, Idaho
Contract Amount, $ 1,050,370.00 Government Participation: 50 % Amount, $ 520,185.00

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 711 @ $7.00	$4,977.00	$10,731.00	$15,708.00	4977.00	10731.00	15708.00
Bulldozing						
Crosscutting						
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	$4,977.00	$10,731.00	$15,708.00	4977.00	10731.00	15708.00

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

Date 3-9-55 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 2488 50

Signature MGP
(Authorized Certifying Officer)

Date 5-13-55 Vou. No. 1517
(See other side)

Narrative - one
10 ea - map + drill
logs sent to wash. Mch 21-55

(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. E732 in accordance with the terms of the contract.

Signature 151 Eric G. Erickson Title Mining Eng. Date 3-18-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 151 Stephen W. Goldoft Title Mining Eng. Date 5-13-55

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.

GPO 83-38476

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 January, 195 5 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals lead, zinc, copper

Address Box 320 - Wallace, Idaho

Contract Amount, $ 1,058,370.00 Government Participation: 50% Amount, $ 529,185.00

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 823 @ $7.00	$5,761.00	$4,970.00	$10,731.00			
Bulldozing						
Crosscutting						
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	$5,761.00	$4,970.00	$10,731.00	5761.00	4970.00	10731.00

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

Date 2-10-55 *Payee Hecla Mining Company

Per [signature] Title President

*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:

$ 2880 50

Signature [signature]
(Authorized Certifying Officer)

Date 2/18/55 Vou. No. 1442

(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. E 732 in accordance with the terms of the contract.

Signature (S) Eric G. Erickson Title Mining Engr Date 2/15/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature (S) Stephen W. Zoldak Title Mining Engr Date 2/17/55

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

Month of January 1955 Docket No. DMEA 3406 Contract No. IDM-E-732

Operator's Name Hecla Mining Company Minerals lead, zinc, copper

Address Box 320, Wallace, Idaho

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	feet	$5,761.00	823	$10,731.00	1,533	$7.00	3,000	* $7.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 2-10-55 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract

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

Hecla Mining Company

Wallace, Idaho

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 21 1955

February tenth
1 9 5 5

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane, Washington

Re: Progress Report Hecla-Silver
Mountain Project - January 1955
Docket No. DMEA -3406
Contract No. IDM-E-732

Gentlemen:

Progress during January in diamond drill hole No. S. M. -2 was 823 feet placing the hole at 1533 feet at the end of the month.

This hole has been difficult to drill since most of the progress was in thin-bedded Wallace argillite containing many gougy fault structures and abundant shearing. One section from about 630 to 710 feet had to be redrilled because of a very bad area below the bottom of the B-X casing. The continued caving of the walls of the hole required drilling with a circulating load of bentonite below the 700 foot point. The hole was finally discontinued at 1604 feet on February third. The size of the hole where completed was B-X.

No zones of strong sulphide mineralization were found although considerable bleaching was indicated and some pyritic zones and quartz stringers were cut. The complete log of the hole together with sludge assays is in process of preparation and will be submitted with next month's report. Some assaying remains to be completed at this date.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES:abs

Form MF-10-2A
(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 February 1955 Docket No. DMEA 3406 Contract No. IDM-E 732

Operator's Name Hecla Mining Company Minerals Lead, Zinc, Copper

Address Box 320, Wallace, Idaho

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	Feet	$4977.00	711	$15708.00	2244	$7.00	3000*	$7.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 9-1955 Operator Hecla Mining Company

Per [signature] Title President

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)

*Maximum allowed by contract

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.

Payment is being held up pending addition of another claim which is to be included in operator's property rights. Part of diamond drilling claimed on this MF-104 is for drilling a hole collared on Cyringa claim.

Hecla Mining Company

Wallace, Idaho
March ninth
1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 25 1955

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane 4, Washington

Re: Progress Report Hecla-Silver Mountain Project - February 1955
Docket No. DMEA - 3406
Contract No. IDM - E732

Gentlemen:

During February diamond drill hole S. M. No. 2 was drilled an additional 71 feet to completion at 1640 feet. A plan and section of the hole - 200 scale - and a complete log of the hole are enclosed. As shown, progress was largely in Wallace argillite except for the section 1410 - 1512 which is possibly St. Regis argillite. Mineralization in the hole is minor in amount and unimportant. Except for the section 40-45 feet where a sludge sample assayed 0.6 oz. silver, no other samples exceeded 0.1 oz. silver.

This hole was surveyed with a Trotter-Pajari instrument. You will note a rapid flattening of the hole. This is the usual experience in the Coeur d'Alene District where thin-bedded steep-dipping rocks of variable hardness are encountered. Also core recovery was not good, although a special effort was made to recover as much core as possible. Aquagel was used in the drilling water to aid in support of the friable broken walls of the hole. It appears to have been successful in eliminating much of the trouble which was plaguing the driller previous to its use.

Core recovery was poor, the hole flattened too much and the hole did not succeed in getting deep enough below the surface to reach the more favorable bleached St. Regis formation. After discussion with the Spokane office of DMEA, it was decided to eliminate the drilling of the third hole proposed in the contract and to substitute therefore a rather shallow hole under the area in which the shaft sinking is expected to be done in order to obtain some idea concerning the structures which might be encountered in shaft sinking. The hole drilled for this purpose is numbered S. M. No. 3.

A 200 scale plan and section and a detailed log of hole No. S. M. 3 is attached. Some broken sections were indicated but no strong pronounced gauge

zone was found. The indications are that the ground encountered should be reasonably good for shaft sinking with the long axis of the shaft located at right angles to the bedding. The hole was completed to 640 feet on February 4th and diamond drilling has been discontinued.

Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES
EMZ

Enc.

DIAMOND DRILL RECORD

Standpipe 10'
Casing 20' NX

Started 2-8-55
Finished 3-2-55
Hole Size NX
Depth 640'
% Core Rec. 43

Mine SILVER MOUNTAIN
Location 25' N. W. of old Snowstorm Mill Foundations
Logged by A. H. S. Date 2-28-55
Drilled by Joy Manufacturing Company

Hole No. S. M. #3
Level Surface
Grid
Latitude 90, 172 S.
Departure 154, 862 E.
Elevation 3, 533'
Bearing See Surv. Below
Inclination See " Below.

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn

Defense Minerals Administration RECEIVED MAR 25 1955

SILVER MOUNTAIN DIAMOND DRILL HOLE NO. 3

Maximum depth of visible oxidation = about 120 feet.
Bleached zones = less than 50% bleached from 541 - 547 feet.
= 50% bleached from 575 - 591 feet.
= less than 50% bleached from 607 - 627 feet.
There were no visible indications of metallization.
No Core samples were taken.
Sludge samples were taken at 5' intervals and assayed for silver. The assays show trace quantities, or no quantity of silver except as otherwise noted.

Number of shifts setting up = 4 daylight shifts with 6 men working.
Number of shifts spent actively drilling into the hole = 36.6
Average number feet drilled per actively drilling shift = 17.5
Number of shifts spent reaming, inserting casing, mixing bentonite = 2
Number of shifts tearing down = 3 daylight shifts with 6 men working.

SURVEY DATA

Depth	Mag. Bearing	True Bearing	Inclination
000	N 21-30 W	North	- 60°
200	N 18-30 W	N 03-00 E	- 55°
375	N 25-00 W	N 03-30 W	- 54°
550	N 10-30 W	N 11-00 E	- 53°

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location

Logged by Date
Drilled by

Hole No. S. M. # 3
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

U.S. Dept. of the Interior
Bureau of Mines
Mineral Administration
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MAR 25 1955

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
0.0									
10	0.0	0' - 10' Standpipe							
15	0.8	10 - 36 Wallace Formation. Medium-gray siliceous argillite, much of it buff-colored due to weathering. Alternating light, dark, and buff-colored bands. Lt. and buff bands contain variable amounts of calcareous material, with the strongest concentration of carbonate in the buff bands. Banding is due to bedding, and is inclined 20° - 25° to the core axis. From 10-15 consists of broken pieces 4-5" long; 15-21 of pieces 2-3" long; 21-22 of small, rounded pieces ½-2" long. From 22-36 shows good core lengths with some broken areas between.							
21	0.8								
22	0.6								
24	1.5								
29	4.7								
33	4.0								
End Box 1									
% Core Recovery Box 1	56		G 680	30 - 35			0.1		
37	4.0	36 - 57 Mostly medium gray Wallace Formation, broken into 2-4" lengths, with some good core lengths up to 18". Medium gray from 36-45. Lt. gray from 45-48. Dk. gray 48-57. Light, dark, and buff-colored bands incline 25° to core axis.							
41	4.0								
44	2.6								
48	3.1								
52	3.4								
53	0.6								
End Box 2									
% Core Recovery Box 2	52								
59	2.7								
62	2.6	57 - 78 Medium gray Wallace Formation. Some thin, wavy, lt. gray and buff-colored bands. Bedding inclined 10-15° to core axis. Good core lengths.							
66	3.8								
73	7.0								
End Box 3									
% Core Recovery Box 3	80								
83	8.2	78 - 96 Medium gray Wallace Formation with thin, wavy, lt. gray siliceous-calcareous bands.							
90	7.0								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location
Logged by Date
Drilled by

Hole No. S. M. # 3
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
94	4.0	Waviness of lt. bands due to slight shearing parallel to bedding. A few thin, buff-colored bands. Bedding inclined 25° to core axis. Good core lengths.							
End Box 4									
% Core Recovery									
Box 4	91								
		96 - 123 Medium gray argillite with wavy, lt. gray arenaceous - calcareous bands. A few buff-colored thin bands and stringers. Bedding inclined about 10° to core axis. Some thin, sharply-defined extensions of lt. gray material into dk. gray argillite maybe deformed mud-cracks, but in most cases is deformed bedding. Mostly good core lengths from 6 to 18". Broken pieces 2" dia. from 100-101, 108-110, 111-114 and 119-121.							
101	5.4								
110	5.0								
114	3.1								
121	4.0								
End Box 5									
% Core Recovery									
Box 5	65								
133	3.9								
137	0.0								
140	1.5	123 - 171 Homogeneous medium gray argillite broken into fragments 2-3" long , but with some 4-5" core lengths from about 140 -148. Bedding is not readilly apparent, but appears to make a small angle with the core. Not visibly oxidized. No core recovery from 133-137, 150-156, and 161-165.							
145	5.0								
150	3.6								
156	0.0								
161	1.0								
165	0.0								
171	1.0								
End Box 6									
% Core Recovery									
Box 6	32								
		171 - 200 Medium gray argillite with a lt. gray arenaceous section from 182-187. Rather thick bedded, with bedding inclined 30° to core axis. Contacts of light bands are wavy due to movement at an angle of about 60° to the bedding. 4-8" core lengths from 171-185. Broken into 1-3" fragments from 185-200.							
176	3.0								
182	1.3								
187	4.7								
191	2.5								
197	2.3								
End Box 7									
% Core Recovery									
Box 7	53								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location
Logged by Date
Drilled by

Hole No. S. M. # 3
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Rb	% Zn
203	3.0								
207	1.1								
211	0.6								
215	1.5								
221	2.6								
223	0.0								
231	0.2	200 - 279 Homogeneous medium							
241	0.0	gray argillite. Rather thick							
246	0.7	bedded. Badly broken into 1-2"							
256	0.0	fragments throughout except from							
260	0.5	211-212, and 265-266. Little							
264	1.1	or no core recovery from 221-260,							
268	1.9	poor from 260 - 279.							
273	0.6								
278	0.4								
End Box 8 % Core Recovery									
Box 8	.18								
282	0.3								
285	0.2								
290	0.7								
296	1.1								
302	1.5								
305	0.3	279 - 342 Homogeneous medium							
309	1.2	gray argillite. Bedding rather							
312	0.5	thick, and where apparent it							
315	0.3	makes an angle of about 40° with							
320	2.1	core axis. Badly broken into							
325	0.7	fragments 1"-2" in diameter							
330	0.6	except from 340 - 342.							
335	0.9								
340	1.2								
End Box 9 % Core Recovery									
Box 9	.19								
345	2.6								
350	3.2								
355	0.4	342 - 381 Medium gray argillite							
361	0.9	with some lt. and dk. bands							
366	4.1	making large angles with the							
370	2.8	core axis. Bedding contacts very							

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location
Logged by Date
Drilled by

Hole No. S. M. # 3
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
378	1.1	irregular. Good core recovery							
End Box 10		345-350 and 361-368. Small							
% Core Re-		fragments from 368 - 378.							
covery									
Box 10	40								
384	2.7	381 - 425 Medium gray argillite							
390	1.9	with some lt. bands. Numerous							
395	1.3	lt. gray inclusions in dark gray							
400	2.4	argillite are apparently due to							
405	1.7	solution and redeposition of							
410	1.4	carbonate and silica combined							
417	3.4	with slight deformation at an							
421	1.3	angle to the bedding. Bedding							
425	0.8	is about 45° to core axis.							
End Box 11		Broken into 2" fragments except							
% Core Re-		from 395-400, and 410-415.							
covery									
Box 11	36								
429	1.0	425 - 463 Homogeneous med.							
436	3.5	gray argillite. Slightly light-							
440	1.0	er gray, and calcareous-arenaceous							
445	2.6	from 454 to 463. Slaty cleavage							
451	0.9	not well-developed. Bedding in-							
457	3.8	lined about 80° to core axis.							
461	2.0	Freshly broken into rounded or							
End Box 12		angular fragments 1" - 2" in							
% Core Re-		length from 425-430, and 445 -							
covery		452. Many good core lengths.							
Box 12	41								
		463 - 486 Homogeneous med. gray							
		argillite with some lt. and dark							
467	5.3	banding inclined 80° - 90° to							
471	2.4	core axis. Not thin-bedded ex-							
477	4.9	cept from 482 - 485. Good core							
482	3.4	lengths, not much broken. Some							
End Box 13		indications of slickensides at							
% Core Re-		474' about parallel to core axis.							
covery		The angle the bedding makes with							
Box 13	76	the core axis apparently de-							
		creases gradually from 80° to 55°							
		between 480 and 486 feet.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location

Logged by Date
Drilled by

Hole No.
Level
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		486 - 505 Med. to lt. gray argillite, with alternating light and dark bands. The bedding makes an angle with the core axis which varies from 50° to 80°. Poorly-developed slaty cleavage cuts across the bedding. Some well-developed graded bedding occurs from 503 to 505 feet. A series of alternating bands occur in which the texture grades from comparatively coarse, light-gray, arenaceous argillite in the lower part to fine, dark-gray argillite in the upper part. The fine, dark-gray argillite then ends abruptly against the coarse base of the next overlying light-gray, arenaceous layer. The gradation is due to a gradual decrease in grain size, and increase in clay matter going up the section within the band. It is apparently due to some form of rhythmic or cyclic deposition related to seasonal variations in sedimentation. The feature is interpreted as an indication that the beds are topside-up at this depth. Very good core lengths.							
490	7.1								
500	9.6								
End Box 14									
% Core Recovery									
Box 14	93								
		505 - 547 Med. to dk. gray argillite. Dk. gray from 509-538. Some alternating light and dark bands make angles of 70° - 80° with the core axis. Broken, small, scaly fragments from ¼" to 1" in length from 508-509. Freshly broken fragments 1" to 2" long from 520-526. Light-gray quartzitic argillite from 541-547, showing some evidences of bleaching. Gougy material from 542-544. Broken fragments ½" to 3" in size from 544-547.							
509	5.4								
514	1.6								
520	3.4								
526	1.3								
531	1.7								
538	2.6								
542	1.5								
547	1.2								
End Box 15									
% Core Recovery									
Box 15	40								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine
Location

Logged by Date
Drilled by

Hole No.
Level
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
553	1.5	547 - 586 Med. gray argillite from 547-575. Light gray from 575-586. Partially bleached 547-553, and 575-586. Broken into 1" to 3" fragments throughout, with some 5" to 6" core lengths. Bedding deformed, more or less crenulated, but where preserved appears to make an angle of about 70° with the core axis. Some slickensides parallel to slaty cleavage at 548 and 559 feet.							
559	3.4								
566	2.8								
571	2.3								
575	1.1								
580	1.5								
586	4.0								
End Box 16									
% Core Recovery Box 16	42								
590	1.0								
595	1.3								
600	0.9	586 - 631 Med. gray argillite with some light, arenaceous bands making angles of about 80° with the core axis. More or less broken throughout, with rounded to subangular fragments from 1" to 3" in length. Some core lengths 4" to 6" long. About 50% bleached from 586-591. Slightly bleached 607-612, 617-618, and 625-627.							
605	1.4								
607	1.3								
612	1.8								
617	3.0								
623	1.5								
627	1.5								
631	1.3								
End Box 17									
% Core Recovery Box 17	33								
640	4.8	631 - 640 Med. gray argillite, with alternating light and dark bands which make an angle of about 50°-70° with the core axis. Bedding crenulated and deformed. Core lengths average 5" to 6" long. No indications of bleaching.							
End Box 18									
% Core Recovery Box 18	53								
		END OF HOLE							

TITLE PAGE

DIAMOND DRILL RECORD

Standpipe None
Casing See Below

Started 11-26-54
Finished 2-7-55
Hole Size See Below
Depth 1604
% Core Rec. 30

Mine SILVER MOUNTAIN
Location Surface - 1300 ft. East of Daisy Creek; 800 ft. North of County road.
Logged by A.H.S. Date 1955
Drilled by Joy Manufacturing Company

Hole No. S.M. # 2
Level Surface
Grid - -
Latitude 90,099.5 S.
Departure 156,120.6 E.
Elevation 3,827.2
Bearing See Surv. Below
Inclination " " "

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn

SILVER MOUNTAIN DIAMOND DRILL HOLE NO. 2

Hole Size:
NX from 10 to 713 feet.
BX from 631 to 1604 feet.
(Redrilled BX from 631)

Total casing inserted: 631 feet.
NX casing to 160 feet.
BX casing to 631 feet.

Casing remaining in hole: 331 feet. Damaged.
NX casing 50 feet.
BX casing 281 feet.

Number of shifts setting up = 8 daylight shifts with 6 men working.
Number of shifts spent actively drilling into the hole = 97.2
Average No. feet drilled per actively-drilling shift = 16.5
Number of shifts spent cementing, drilling into cement, reaming, casing, mixing bentonite, hauling supplies= 46.3
Number of shifts tearing down = 3.5
Total number of shifts spent on S.M. # 2 = 155

No core assays were made.
Sludge samples were taken at 5' intervals and assayed for silver. The assays indicate trace quantities, or no quantity of silver except as otherwise noted.

SURVEY DATA

Depth	Mag. Bearing	True Bearing	Inclination
0'	N 03-30 W	N 17-30 E	- 50°
500'	-	-	- 42°
690'	-	-	- 36°
750'	N 03-00 W	N 18-00 E	- 34°
840'	N 06-30 W	N 14-30 E	- 32°

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size See Info. Above
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location Surface - 1300 ft. East of Daisy Creek; 800 ft. North of County road.
Logged by A. H. S. Date 1955
Drilled by Joy Manufacturing Co.

Hole No. S. M. #2
Level Surface
Grid --
Latitude 90, 099.5 S.
Departure 156,120.6 E.
Elevation 3827.2
Bearing N 17° 30' E.
Inclination - 50°

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
10-15	1.7								
20	2.0								
25	1.0								
30	1.0	10 - 50 Med gray Wallace Quartzite - buff colored from abundant oxidation. About 35% of the core is dark gray arg. with banding at 45° to core axis.							
35	1.2								
40	3.6								
42.6	2.2		G - 381	40 - 45			0.6		
45	1.9								
50	1.7								
End Box 1									
60	7.0	50 - 90 The same med. gray Wallace quartzite-buff colored from oxidation. About 35% of core is dark gray arg, with banding 45° to core axis. Numerous carb. veinlets oriented approx. parallel with the banding.							
65	0.9								
70	0.9								
77	3.2								
85	5.3								
End Box 2									
93.6	6.2	90 - 120 Dark gray argillite, with arenaceous bands of lighter gray. Bands are inclined 45° to core axis. Many carb. veinlets in the argillite, fewer in the arenaceous bands. Minor faults & slickensides at about 109 ft., with movement of about ¼". Quartz veins about ¼" wide at 117 feet.							
94	0.7								
101	4.5								
111	3.7								
118	4.3								
End Box 3									
125	3.1	120 - 155 Med. gray arenaceous argillite. Numerous thin, ferruginous, calcareous beds and laminae oxidized to an ocherous color, & comprising 30%-40% of the rock in this box. Bedding at 45° to core axis.							
133	3.5								
139	1.9								
145	2.3								
150	4.3								
155	3.0								
End Box 4									

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. #2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Department of the Interior
Bureau of Mines Administration
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Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		155 - 176 Med. gray arenaceous argillite, mostly thin-bedded							
162	6.6	with bands of dark-gray argil-							
165	3.0	lite. Banding 30°-40° to core							
170	2.6	axis. Numerous thin, ferruginous,							
176.8	5.3	calcareous bands oxidized to an							
End Box 5		ocherous red color. Calcite veinlets present but not conspicuous.							
		176 - 200 Med to lt. gray argillaceous quartzite. Thin, wavy, dark-gray argillaceous bands from 176 to 190 ft. Becomes more							
184	4.9	massively bedded from 190 to 199							
186.5	2.0	ft, with decreasing argillite.							
195	7.4	Much oxidized along ferruginous,							
End Box 6		calcareous layers from 176-184'. Bedding planes 30°-40° to core axis. Very good core recovery 187 to 199 ft, but fractured badly 195 - 196 ft.							
		200 - 220 Med. to dark-gray arenaceous, calcareous argillite. Alternating light and dark bands show good examples of graded bedding. Coarser-textured, light-gray, calcareous-arenaceous bands							
201	5.6	grade upward into fine, dark-							
207	6.6	gray, essentially non-calcareous							
215	4.5	argillite. The gradation is due							
220	4.2	to decrease in grainsize and in-							
End Box 7		crease in sericite and clay matter. The fine, dark-gray argillite then ends abruptly against the coarse base of the next overlying, light-gray, calcareous-arenaceous layer. Bedding bands are inclined about 30° - 40° to core axis.							
		220 - 240 Med to lt.-gray argillaceous quartzite; thinly bedded from 229 ft. to 237. Bedding							
225	4.6	bands about 30° to core axis.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. # 2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
235	9.8								
End Box 8		Oxidized in thin, calcareous bands between argillaceous bands. Good core lengths, not much broken.							
		240 - 265 Principally a dark-gray to almost black argillite with thin, calcareous, oxidized bands of an ocherous color. Bedding at about 30° to core axis.							
241	5.8								
245	0.0	No core recovery 241-245. Badly broken 245-250 and 253 to 256.							
250	1.2								
255	4.7	Good, solid core 256 to 265 ft.							
260	5.0	Light-tan slightly calcareous quartzite 239 - 250 with thin, oxidized, highly calcareous bands. Non-Calcareous dark-gray arg 250-265 with thin, light-brown quartzitic bands, and thin, ocherous, calcareous bands.							
End Box 9									
		265 - 295 Med. to dk-gray quartzitic argillite, mostly thin-bedded, with bands of dark-gray arg, and ocherous calc. bands. Bedding 30° to core axis. Numerous inclusions of the lt-gray calcareous-arenaceous material within the dk-gray argillaceous bands are apparently due to slight deformation almost parallel to the bedding, with the calcareous bands yielding plastically, and being drawn out in thin wisps and lenticles into the adjacent argillite bands.							
265	4.8								
275	7.3								
285	5.0								
End Box 10									
		295 - 317 Med. to dk-gray calcareous-arenaceous argillite. Thin bands of lt-gray argillaceous quartzite. Bedding 30-40° to core axis. A 6" bed of soft, whitish, brecciated, calcareous material at about 300 feet.							
295	6.0								
305	7.8								
311	5.7								
316	3.0								
End Box 11									

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. #2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
321	2.2	317 - 346 Med-gray, banded cal-							
328	4.7	careous-arenaceous argillite,							
333	2.9	with bedding about 40-45° to core							
338	3.3	axis. Some bedding slip. A few							
343	3.0	thin, ocherous calcareous bands.							
End Box 12		More or less broken throughout.							
350	2.9								
357	3.4								
365	3.8	346 - 405 Med-gray quartzitic							
375	2.3	argillite. Broken from 346 to							
385	1.8	365. Badly broken 365 - 405.							
395	1.3	Bedding 45° to core axis. Not							
400	1.3	oxidized.							
405	1.1								
End Box 13									
410	0.7								
412	2.3								
415	0.7								
417	0.9	405 - 445 Med. - gray quartzitic							
421	0.7	argillite. Badly broken. Bed-							
424	0.5	ding 45° to core axis. No in-							
427	0.6	dications of oxidation. No calc.							
432	1.4	bands or stringers.							
435	0.6								
440	3.0								
445	1.6								
End Box 14									
		445 - 485 Badly broken through-							
		out. Unbleached Wallace. Med.							
		to dk. gray argillite. Thin -							
		bedded with dark and light bands.							
		Bedding inclined 40-55° to core							
		axis. One short section from							
450	1.0	476 to 478 feet consists of a							
455	1.2	lighter olive to gray-green ma-							
458	1.8	terial with thin dark gray lam-							
465	2.1	ina which may contain some sul-							
470	2.3	phide. This is the first in-							
476	1.5	dication of bleaching. A few							
480	2.2	small grains of sulphide, pro-							
481	0.8	bably pyrite, are visible on a							
485	2.9	slickensided surface at about							
End Box 15		477 feet. The slickensides cut							

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine: SILVER MOUNTAIN
Location
Logged by: Date:
Drilled by

Hole No.: S. M. # 2
Level: Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Bureau of Mines
RECEIVED
MAR 25 1953

Depth Feet	Feet Core	Lithologic Description	Sample No.	Sample Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		across the bedding. Slickensides here are inclined 35° to core axis. Bedding here inclines 55° to core axis, hence the slickensides are more nearly vertical than the bedding in respect to to the core axis.							
		485 - 519 Broken, but with a few core lengths 6-8 inches and one length is 1.9 feet. Variations from lt. to dk. gray. Thin bedded. Bedding 50-55° to core axis. From about 488' - 495', the gray-green to olive rock occurs, with dark-gray laminae. There is some appearance of slight silicification, but no metallization is megascopically apparent. No further slickensides. This rock, when dry, appears talcy on fracture surfaces. Effervesces slightly in acid along these surfaces.							
490	1.4								
495	1.1								
502	0.5								
507.6	5.1								
515	5.5								
517.5	1.2								
End Box 16									
525	1.8								
530	0.9	519 - 588 Badly broken throughout. Dark gray argillite with light bands. Thin-bedded. Bedding inclines about 70° to core axis. Greenish-gray to olive rock from 540 - 550 feet with thin dark-gray laminae. At about 543 to 544 ft, a lens of pyrite occurs in a dark lamina. One pyrite crystal about 5mm. in dia. occurs in a dark lamina, with the foliation of the lamina bending around it.							
533	0.8								
540	0.7								
545	0.6								
551	0.9		G-465	550 - 555			0.1		
557	2.0								
567	1.2								
570	1.7								
574	0.5								
579	0.2								
585	0.6								
586.6	1.2								
End Box 17									
588	1.7								
595	2.5								
600	1.7	588 - 653 Broken dark gray argillite with thin light bands. Bedding inclined 70° to core axis. Bleached greenish-gray to olive							
607.6	1.5								
615	1.0								
622	0.8								

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. # 2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
628	0.0								
633	0.0	zone from 645-647. Recovered							
636	0.0	part is 2' thick, but upper part							
640	0.2	of section appears to have been							
645	0.9	lost. Lower part is gradational							
650	2.0	into unbleached argillite. Thin							
End Box 18		dk-gray streaks in bleached zone.							
653	2.9								
655	0.9								
658	2.5								
665	4.0	653 - 696 Mostly calcareous -							
672	1.2	arenaceous Wallace Fm. Light-gray							
675	0.6	with thin dark-gray bands. Bands							
680	1.0	inclined 50° to core axis. Bro-	G-492	680 - 685			0.1		
685	0.0	ken. Slightly bleached in some							
690	1.3	areas.							
695	1.5								
End Box 19									
700	1.3								
707	1.1								
713	1.6	696 - 713 Calcareous-arenaceous							
End Box 20		Wallace Fm, much broken. Bleached							
& End of		from 700 - 705.							
NX Core.									
BX Core.		Upon shifting to BX size a second							
		hole was drilled beginning at 631.							
		631 - 720 Unbleached dark-gray							
631		Wallace argillite. No core re-							
645	1.5	covery from 631 to about 641.							
647	0.4	Badly broken from 641 to 720.							
652	2.3	From 700 - 720 a lt.-gray cal-							
655	0.9	careous-arenaceous argillite.							
682	0.9	Slightly bleached from 700 to 711.							
690	1.2	Some slickensides parallel to							
700	1.4	bedding at about 703 feet in a							
707	2.7	partially bleached, lt.-gray,							
711	3.6	arenaceous argillite which con-							
717	2.8	tains discontinuous lenses of							
End Box 21		dk-gray argillaceous material.							

DIAMOND DRILL RECORD

Standpipe
Casing
Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. # 2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
725	4.3								
732	2.6	720' - 776' Mostly a light-gray							
739	1.5	calcareous arenaceous argillite.							
745	1.5	Very little dark-gray material.							
753	3.3	Badly broken. About 20% bleached.							
758	1.8	Bedding inclined 70° to core	G - 507	755 - 760			0.1		
765	2.5	axis. Bleaching is in thin bands							
775	2.8	parallel to bedding. Badly							
End Box 22		broken.							
785	3.0								
795	2.2								
803	1.8								
811	2.1								
820	2.0	776' - 865' Wallace Fm. Badly							
828	1.2	broken. More or less homogeneous							
835	0.8	medium to dk-gray argillite thru-							
843	2.8	out. Unbleached.							
850	1.0								
855	0.8								
860	1.1								
865	0.8								
End Box 23									
875	0.0								
880	0.0	865' - 1005' Homogeneous med.							
885	0.7	to dk. gray shaly, calcareous							
893	0.0	argillite. Badly broken, with							
900	0.7	only slight core-recovery. Un-							
906	0.8	bleached from 865 to about 950,							
912	1.0	but becoming gradually bleached							
917	1.1	from 950 to 1005. Fairly well-							
922	1.0	bleached at 1005. The bleached,							
928	1.0	quartzose, calcareous argillite							
935	1.0	contains the scattered, thin dk							
945	1.0	streaks which at times have car-							
953	0.1	ried fine, disseminated sulphides.							
958	0.0	Some bleached rock shows small,							
961	0.3	scattered black specs, and small,							
967	1.2	green, acicular inclusions which							
973	1.3	may be actinolite. At about 960							
980	0.4	feet, a bleached fragment con-							
988	0.0	tains minute inclusions of chal-							
996	0.0	copyrite. At about 962 feet, a							
1005	1.2	single dark, unbleached fragment							
End Box 24									

DIAMOND DRILL RECORD

Standpipe
Casing
Started
Finished
Hole Size
Depth
% Core Rec.

Mine: SILVER MOUNTAIN
Location
Logged by _____ Date
Drilled by

Hole No.: S. M. # 2
Level: Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		contains a well-defined lamina of chalcopyrite about 0.5 mm thick.							
1010	0.1								
1015	0.4								
1020	0.0								
1025	0.2								
1032	0.9								
1039	0.6	1005' - 1150' Homogeneous appear-							
1045	0.7	ing, shaly Wallace Fm. Med to							
1053	0.4	dk. gray, but partially bleached.	G-566	1050-1055			0.1		
1060	0.4	Badly broken. Very poor core							
1065	0.0	recovery except for a section							
1071	0.0	from 1090 to 1100. Some highly	G-571	1075-1080			0.1		
1076	0.0	contorted foliation from 1095 -							
1083	0.1	1100. Some very soft, lt. brown							
1090	0.8	gouge material from 1020 - 1025;							
1100	4.7	1039 - 1045; and 1110 - 1116.							
1105	0.5	A quartz-carbonate vein about							
1110	0.5	3" thick at about 1024 - 1025							
1116	1.0	containing scattered sulphide.							
1122	0.6	Well-bleached rock from 1010 to							
1128	0.5	about 1076. Unbleached from							
1135	1.3	1076-1150. Small euhedral cry-							
1140	0.0	stals of pyrite at about 1010							
1145	0.3	feet.							
1150	0.0								
End Box 25									
1155	0.7								
1162	0.7								
1170	0.7								
1177	0.0								
1185	0.0		G-594	1190-1195			0.1		
1193	0.3	1150' - 1273' Homogeneous appear-							
1199	0.4	ing, lt.-gray Wallace Fm. Well							
1205	0.0	bleached except the first 15							
1210	0.0	feet. A crinkly appearance at							
1218	1.3	1250 - 1260.	G-599	1215-1220			0.1		
1225	0.9								
1235	0.7								
1240	0.9								
1245	0.9								
1252	1.0								
1260	2.0								
1268	3.3								

Fm 108 3m 2-52
End Box 26

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. # 2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
1276	3.6								
1284	2.4								
1290	1.1								
1297	1.4								
1305	1.0	1273' - 1373' Homogeneous appear-							
1308	1.1	ing, lt-gray Wallace Fm. Bleached							
1315	0.6	1273-1330. Partially bleached							
1323	1.2	1330-1373. Badly broken through-							
1330	1.1	out. Crinkly appearance at 1323.							
1335	0.4	Discontinuous ¼" quartz-carbon-	G - 623	1335-1340			0.1		
1340	0.3	ate vein at 1307. Soft, clay							
1348	1.9	fault-gouge from 1290-1295.							
1355	2.3								
1359	0.4								
1365	0.6								
End Box 27									
1373	1.2	1373' - 1465' Lt-gray, partly-							
1381	0.9	bleached Wallace Fm. 1373-1410.							
1390	1.8	Unbleached, purplish St. Regis							
1398	2.6	from 1410-1465. Discontinuous							
1405	0.6	¼" quartz-carbonate vein at 1397.	G - 637	1405-1410			0.1		
1410	0.7	Fairly well-developed veins 3/8"							
1416	1.8	wide at 1457, 1458, and 1465.	G - 639	1415-1420			0.1		
1422	1.8	The contact between Wallace and	G - 640	1420-1425			0.1		
1430	2.1	St. Regis is very transitional	G - 641	1425-1430			0.1		
1438	1.7	and arbitrary. Core badly bro-							
1444	0.6	ken, except for a few 5" or 6"							
1450	0.5	lengths at 1457-1465. Abundant,							
1457	1.1	fine-grained disseminated pyrite							
1465	1.9	from 1457-1465 concentrated along							
End Box 28		fractures and shear-planes.							
1473	1.8	1465' - 1512' Dk-gray to purp-							
1478	2.4	lish probable St. Regis. Unblea-	G - 652	1480-1485			0.1		
1485	1.7	ched. Loose, finely-broken ma-							
1490	1.6	terial from 1478-1482 which is							
1497	1.0	the only bleached zone. Much							
1505	2.4	broken or brecciated throughout.	G - 657	1505-1510			0.2		
1510	4.1	No visible indication of metal-							
End Box 29		lization.							
		1512' - 1581' Medium-gray Wal-							
		lace Formation. Thin-bedded and							
		fissile. Bedding is inclined							

DIAMOND DRILL RECORD

Standpipe
Casing

Started
Finished
Hole Size
Depth
% Core Rec.

Mine SILVER MOUNTAIN
Location
Logged by Date
Drilled by

Hole No. S. M. # 2
Level Surface
Grid
Latitude
Departure
Elevation
Bearing
Inclination

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		75° to core axis. Alternating light and dark bands pinch and swell noticeably. Light colored							
1513	0.4	bands are arenaceous, slightly							
1518	0.3	calcareous, and considerably							
1525	0.4	harder than the darker-gray arg-							
1533	0.7	illaceous bands. Fissility is							
1540	1.6	due to much shearing parallel to							
1548	6.2	bedding. The pinching and swel-							
1552	0.3	ling of lighter-colored bands	G - 667	1555-1560		.	0.1		
1558	0.3	may be due to shearing and also	G - 668	1560-1565		.	0.1		
1564	3.0	to deposition or redistribution							
1569	1.9	of silica and calcite thru meta-							
1577	1.9	morphic differentiation of a							
End Box 30		low grade. Some areas are only slightly or partially bleached. A few thin, 1/8" quartz veins cutting across bedding. Some good-sized core lengths.							
		1581' - 1604' Dark to medium-gray Wallace Formation. Slightly bleached in some areas. Thin - bedded and fissile. Alternating, thin, light and dark bands. A broad, more or less homogeneous, dark, argillite band from 1582 - 1585. Dark bands tend to be broader than light bands, with the light bands pinching and swel-							
1585	4.5	ling due to redistribution of	G - 673	1585-1590		.	0.1		
1589	3.8	silica and carbonate through low							
1598	6.2	grade metamorphic differentiation.	G - 675	1595-1600		.	0.1		
1604	3.4	Good core recovery, but core breaks							
End Box 31		easilly parallel to the bedding due to fissility produced by shearing. Thin quartz veins 1/16 -1/8" thick cut across bedding and are pre-shearing in age. A ½" thick quartz inclusion occurs at 1589. Bedding 70° to core axis. No metallization mega- scopically apparent.	G - 676	1600-1604		4.0	0.1		
		END OF HOLE.							

Fm 108 3m 2-52

Fm 116 500 11-54

HECLA MINING COMPANY

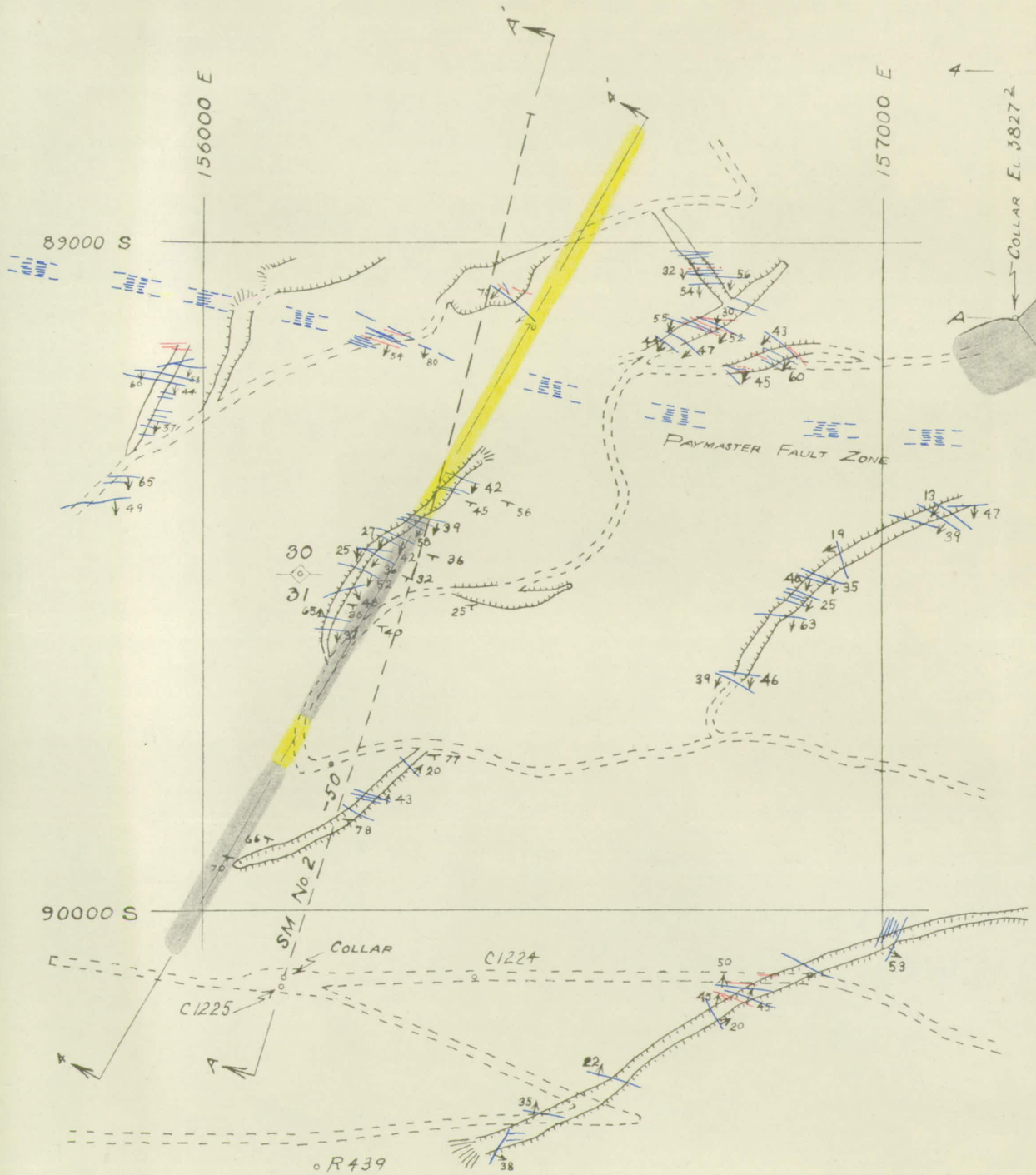
BURKE, IDAHO

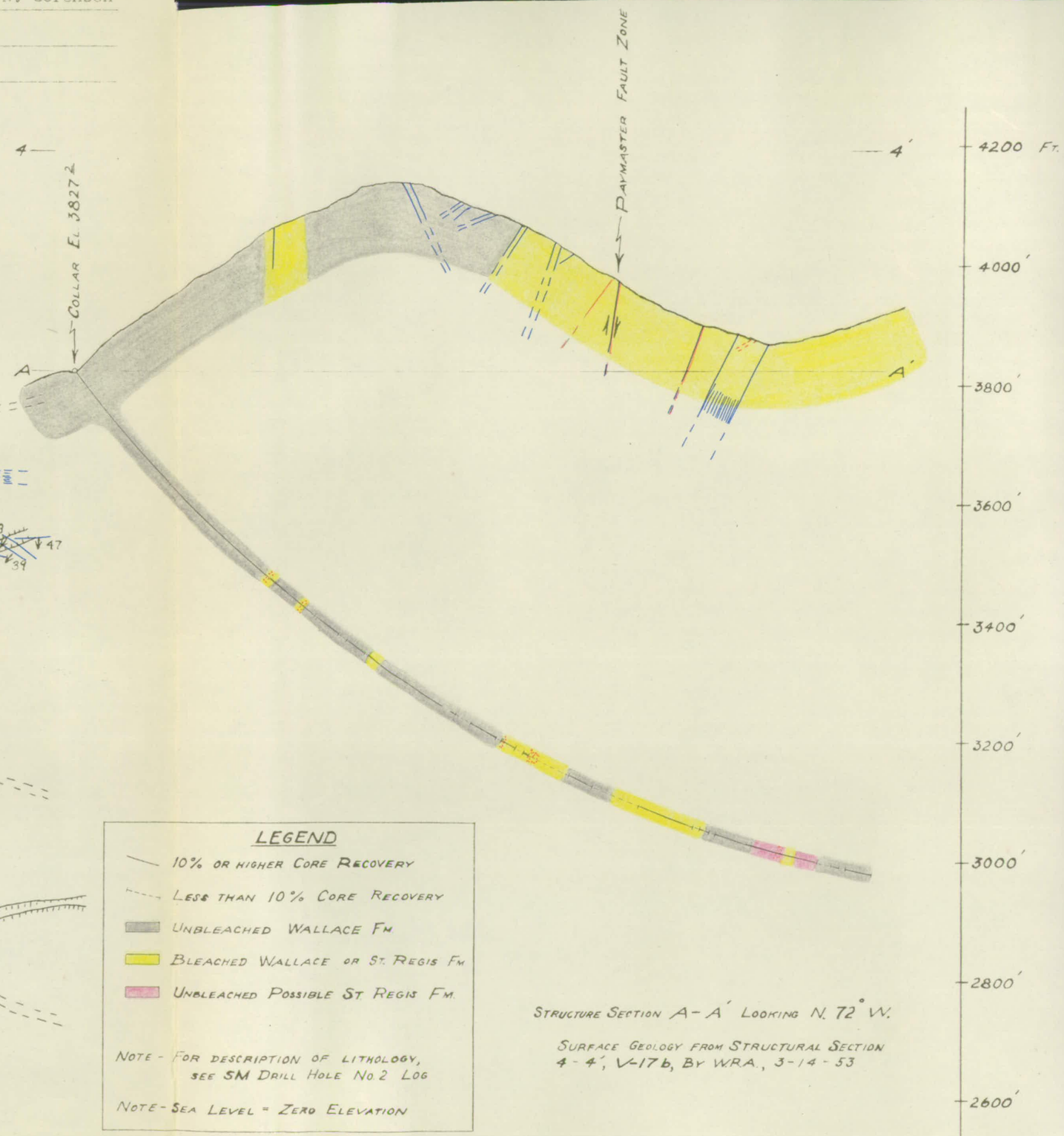
ENGINEERING OFFICE

Subject: SILVER MOUNTAIN DIAMOND DRILL HOLE #2 — Computed by: A. H. Sorensen

Silver Mountain Surface East of Daisy Creek — Checked by:

Scale: 1" = 200' — Date: Feb. 15, 1955 — Approved:





LEGEND

- 10% OR HIGHER CORE RECOVERY
- LESS THAN 10% CORE RECOVERY
- UNBLEACHED WALLACE FM.
- BLEACHED WALLACE OR ST. REGIS FM.
- UNBLEACHED POSSIBLE ST. REGIS FM.

NOTE - FOR DESCRIPTION OF LITHOLOGY, SEE SM DRILL HOLE NO. 2 LOG

NOTE - SEA LEVEL = ZERO ELEVATION

STRUCTURE SECTION A-A' LOOKING N. 72° W.

SURFACE GEOLOGY FROM STRUCTURAL SECTION 4-4', V-17b, BY W.R.A., 3-14-53

Fm 116 500 11-54

HECLA MINING COMPANY

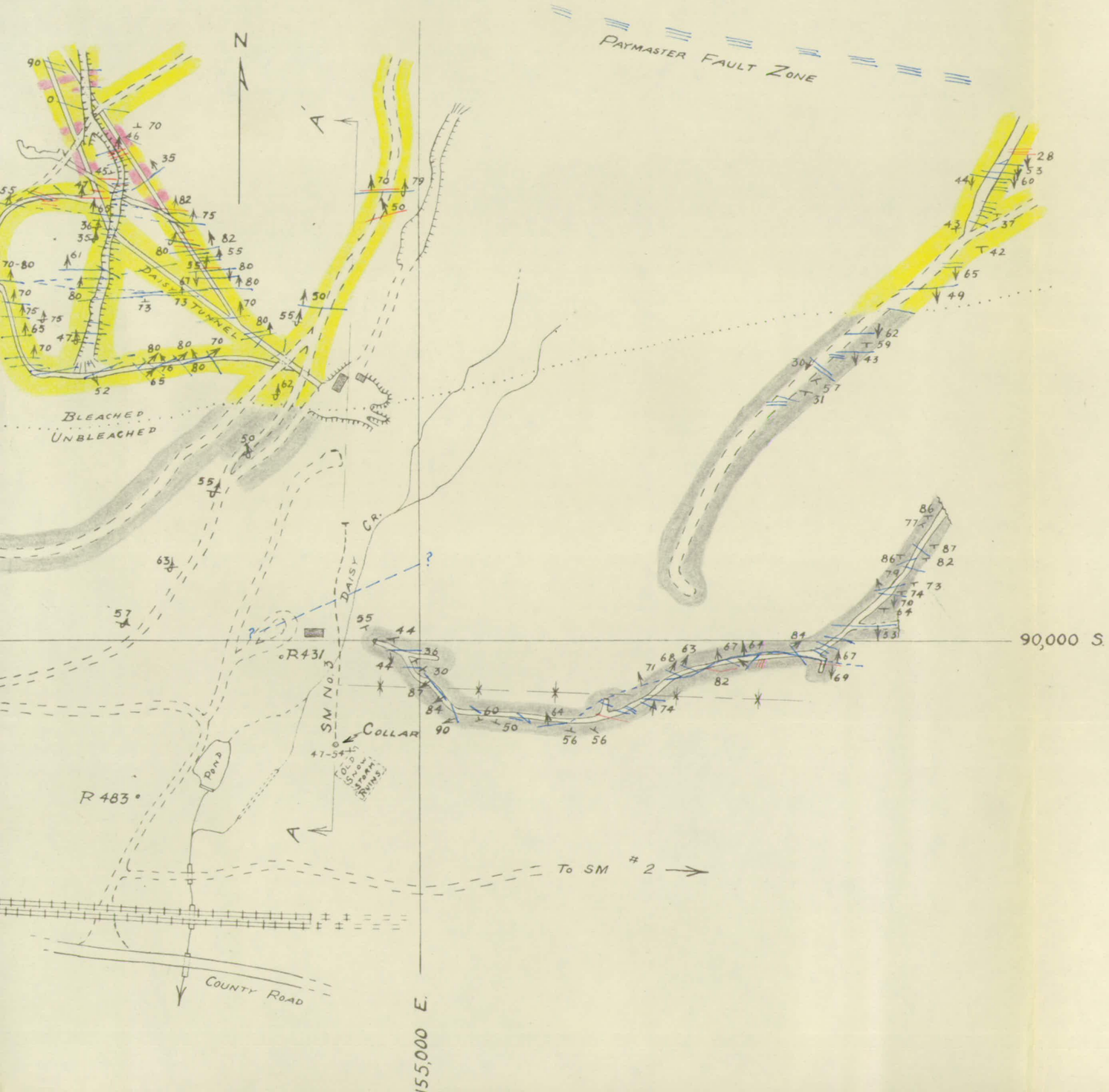
BURKE, IDAHO

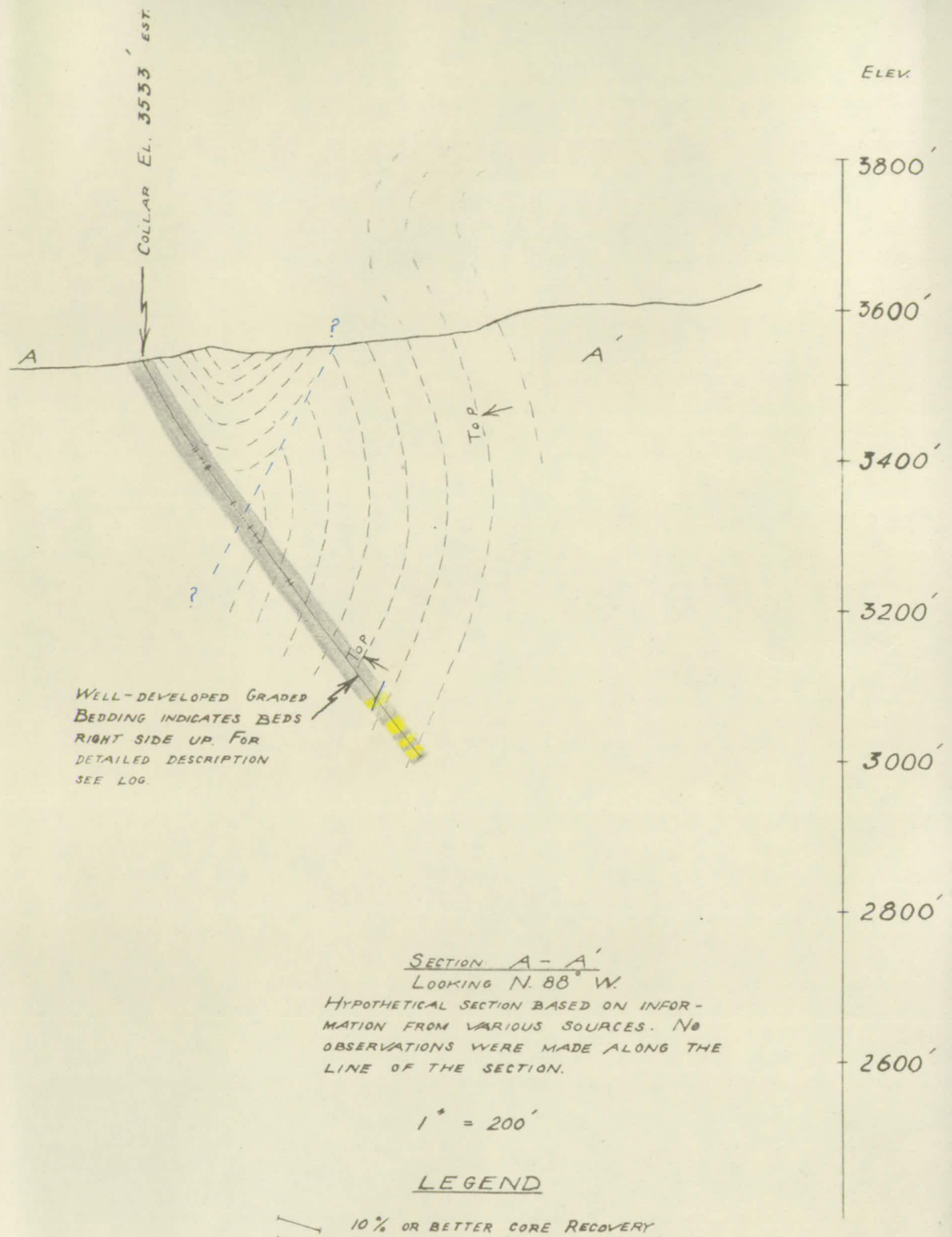
ENGINEERING OFFICE

Subject: SILVER MOUNTAIN D.D.H. # 3 — Computed by: A.H.S.

25' N.W. OF THE OLD SNOWSTORM MILL FOUNDATIONS — Checked by:

Scale: 1" = 200' — Date: 3-4-55 — Approved:





SECTION A-A'

LOOKING N. 88° W.

HYPOTHETICAL SECTION BASED ON INFORMATION FROM VARIOUS SOURCES. NO OBSERVATIONS WERE MADE ALONG THE LINE OF THE SECTION.

1" = 200'

LEGEND

- 10% OR BETTER CORE RECOVERY
- LESS THAN 10% CORE RECOVERY
- BLEACHED WALLACE OR ST. REGIS FM.
- UNBLEACHED ST. REGIS FM.
- UNBLEACHED WALLACE FM.

SEA-LEVEL = ZERO ELEV.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
1201 N. Division St.
Spokane 2, Washington
January 13, 1955

MEMORANDUM

To: DMEA Field Team, Region II

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Interim report, Docket No. DMEA 3406 (lead-zinc-copper), Hecla Mining Company, Silver Mountain Project, Shoshone County, Idaho, Contract Idm-E732

The project site was visited alone on December 8, 1954. Hole No. 2, which is being drilled under the contract, had just been started. Hole No. 1 was started prior to the date of the contract and the cost is company account. Hole No. 2 is located by south coordinate 90,099.5 and north coordinate 156,120.6. The hole bears N. 17° 30' E. and is being drilled minus 50° dip from horizontal. Drilling is being performed by Joy Manufacturing Co.

Mr. R. E. Sorenson was contacted January 12 regarding the contract. I was informed that they were having trouble with the No. 2 hole. About 630 feet of the hole was drilled NX size and cased with BX casing and drilled to the present depth of 900 feet. An attempt will be made to complete the hole a minimum size of AX but it may be desirable because of the undue high cost to drop to EX size for the latter part of the 1500-foot hole.

Wallace argillite is the formation penetrated to date and no significant mineralization has been disclosed.

E. G. Erickson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
EGE/he

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 Decem 7 195 4 Docket No. DMEA 3406 Contract No. TDM-E 732
Operator's Name HECLA MINING COMPANY Minerals Lead, Zinc, Copper
Address Box 320 - Wallace, Idaho
Contract Amount, $ 1,058,370.00 Government Participation: 50 % Amount, $ 529,185.00

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 710 @ $7.00	4,970.00	--	4,970.00			Gruwold Betty
Bulldozing						
Crosscutting						
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	4,970.00	--	4,970.00	4,970.00	-0-	4,970.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 1-7-55 *Payee HECLA MINING COMPANY
Per [signature] Title President

*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:

$ 2485.00

Signature MJP
(Authorized Certifying Officer)

Date 1-19-55 Vou. No. 1405

(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. 6732 in accordance with the terms of the contract.

Signature /s/ Eric G Erickson Title Mining Engr Date 1-14-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Stephen W Zoldok Title Mining Engr Date 1-14-55

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.

GPO 872893

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 December 1954 Docket No. DMEA 3406 Contract No. [illegible]-S 732
Operator's Name HECLA MINING COMPANY Minerals Lead, Zinc, Copper
Address Box 320, Wallace, Idaho

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	feet	$4,970.00	710	$4,970.00	710	$7.00	[illegible]	$7.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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 1-7-55 Operator HECLA MINING COMPANY

Per [signature] Title President

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)

*Maximum allowed by contract

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

Hecla Mining Company

Wallace, Idaho

Department of the Interior
Defense Minerals Administration
RECEIVED
JAN 24 1955

January seventh
1 9 5 5

Defense Minerals Exploration Administration
U. S. Department of the Interior
South 157 Howard Street
Spokane, Washington

Re: Progress Report Hecla-Silver
Mountain Project - Docket No. DMEA 3406
Contract No. IDM-E-732

Gentlemen:

Work under the above contract in December was confined to diamond drilling SM-2 hole located at coordinates 90,099.5 south and 156,120.6 east at elevation 3827.15. The hole bears N. 17° 30' E. and is being drilled -50 degrees from the horizontal. In December the hole was advanced 710 feet.

The hole has been drilled N-X size largely in unbleached Wallace argillite. Small amounts of pyrite were seen in slightly bleached areas but no other mineralization of consequence has been found. A complete log of the hole will be submitted upon completion of the hole.

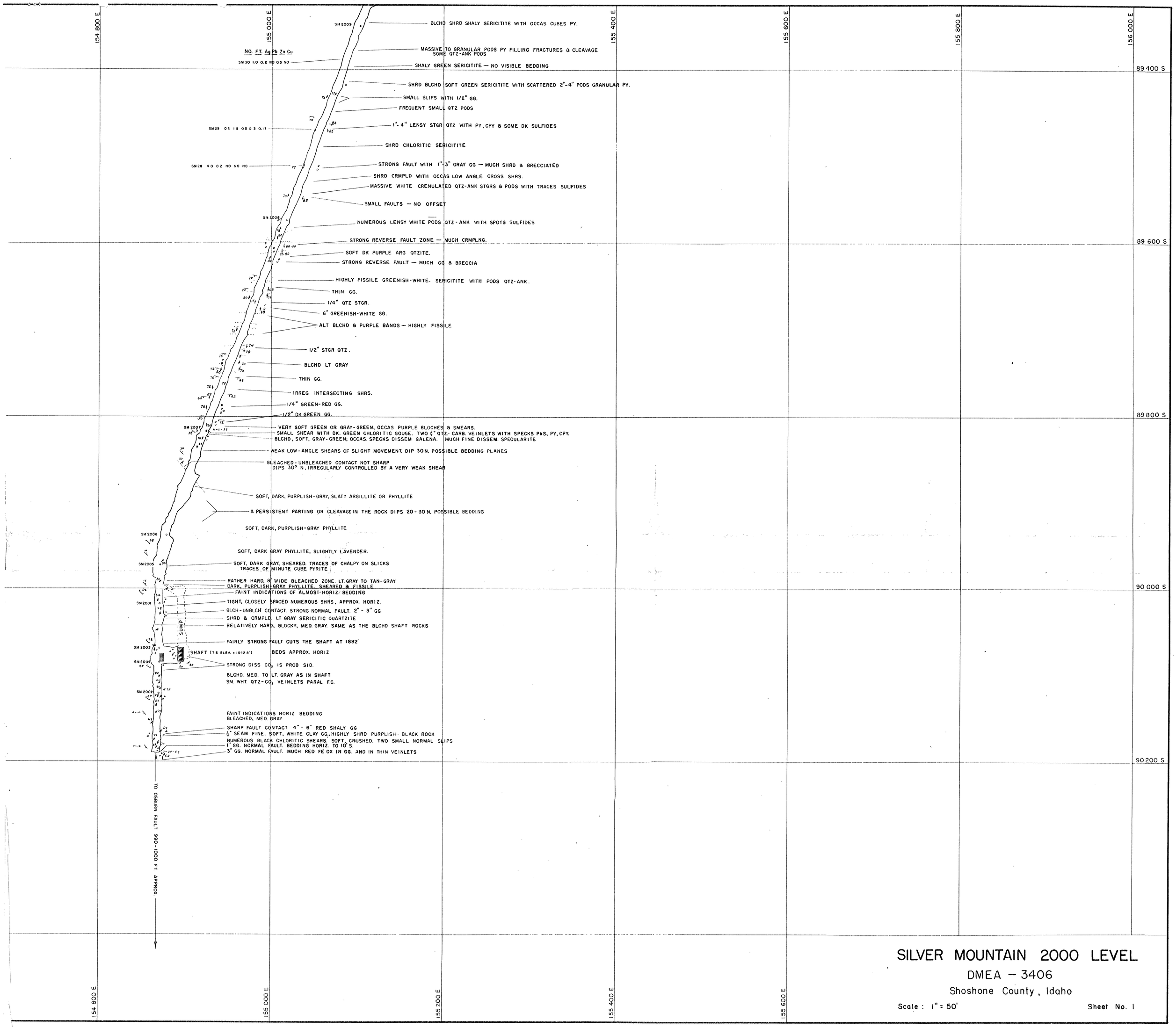
Yours very truly,

Robert E. Sorenson

Robert E. Sorenson

RES
abs

Enc.



SILVER MOUNTAIN 2000 LEVEL

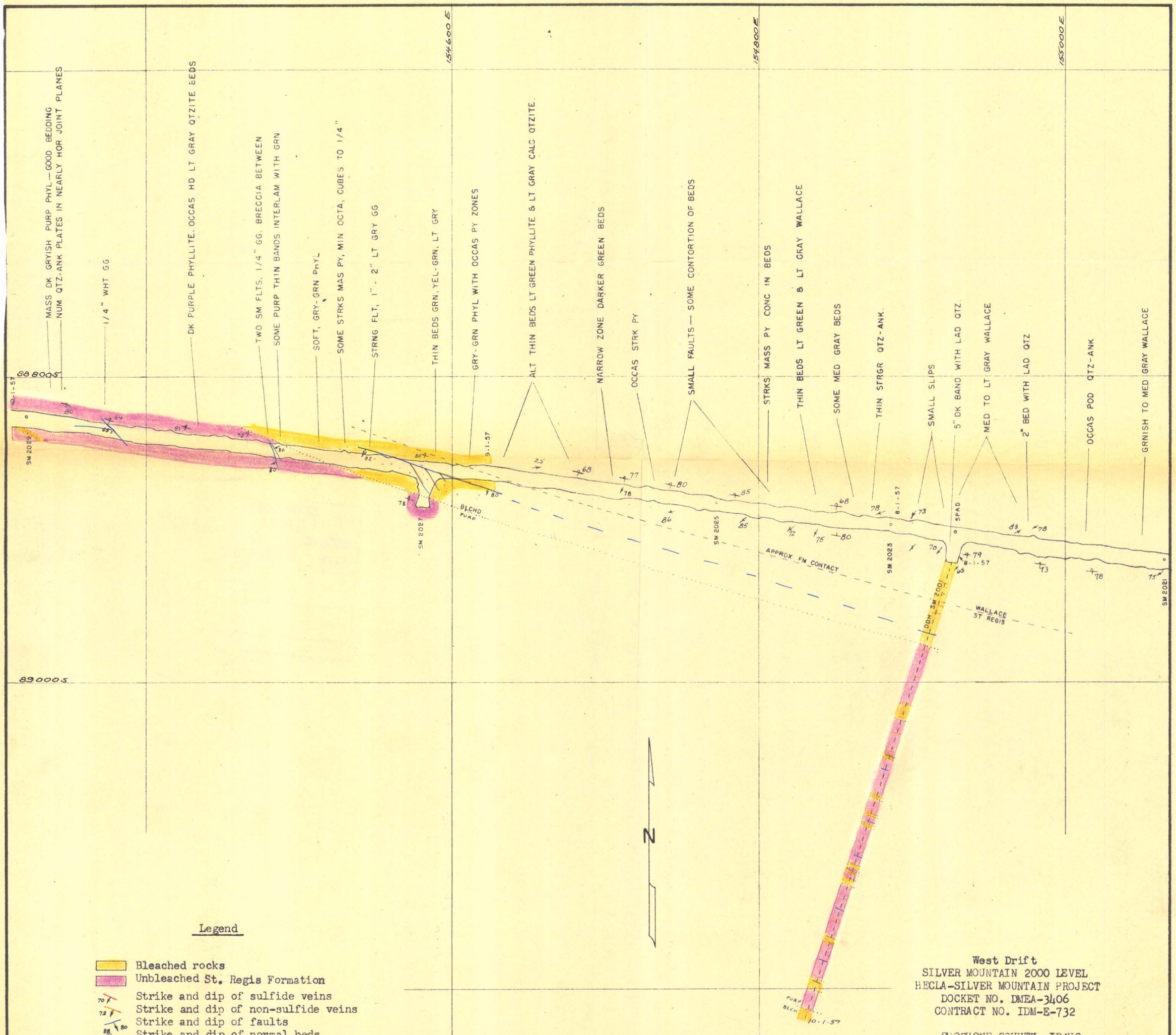
DMEA — 3406

Shoshone County, Idaho

Scale: 1" = 50'

Sheet No. 1

EE-1

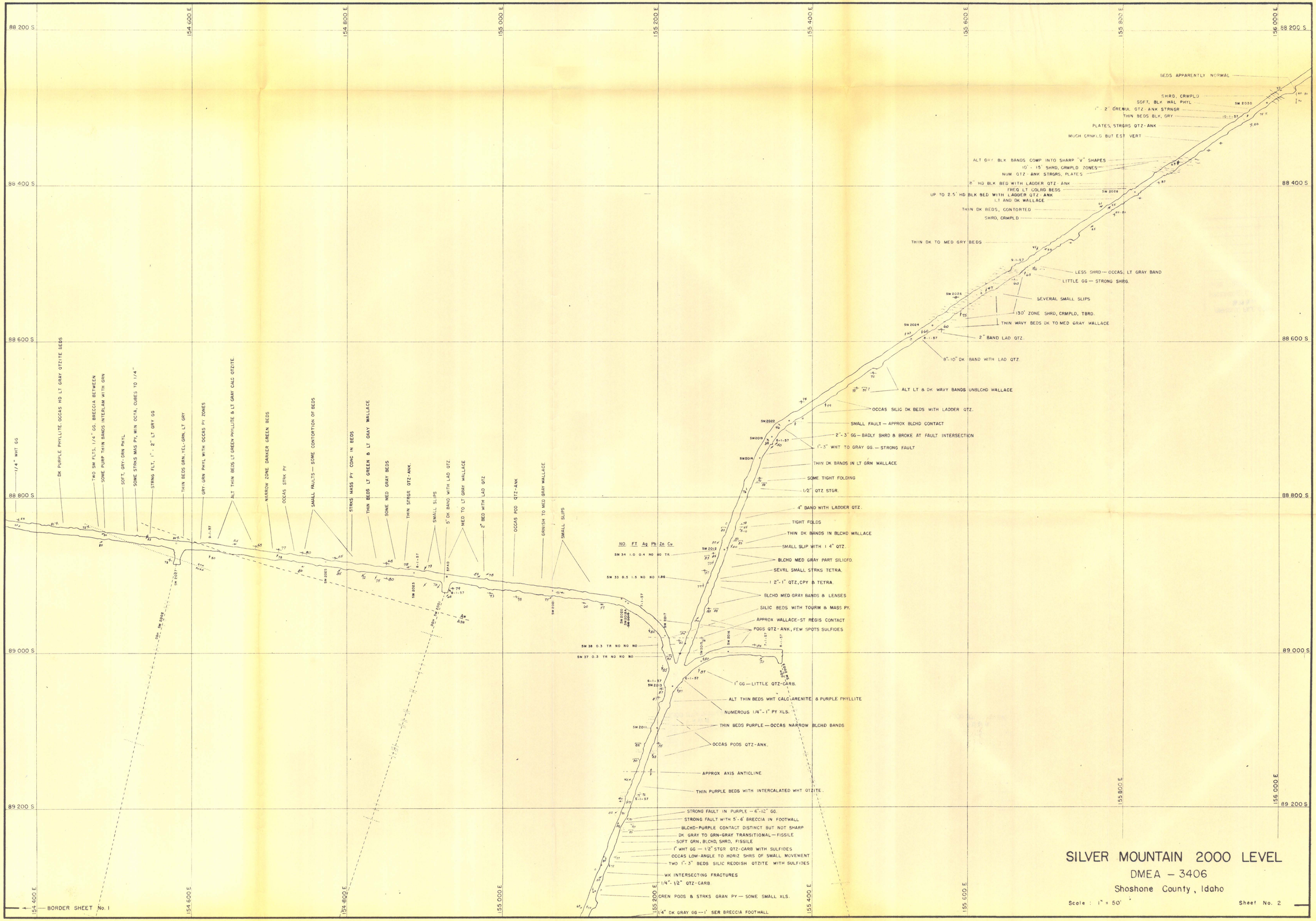


Legend

- Bleached rocks
- Unbleached St. Regis Formation
- Strike and dip of sulfide veins
- Strike and dip of non-sulfide veins
- Strike and dip of faults
- Strike and dip of normal beds
- Strike and dip of overturned beds
- Strike and dip of cleavage

West Drift
SILVER MOUNTAIN 2000 LEVEL
HECLA-SILVER MOUNTAIN PROJECT
DOCKET NO. DMEA-3406
CONTRACT NO. IDM-E-732

SHOSHONE COUNTY, IDAHO
Scale 1" = 50' October 1, 1957
Geology by A.H.S.


SILVER MOUNTAIN 2000 LEVEL
DMEA – 3406
Shoshone County, Idaho
Scale : 1" = 50'
Sheet No. 2
BORDER SHEET No. 1
88 200 S
88 400 S
88 600 S
88 800 S
89 000 S
89 200 S
154 400 E
154 600 E
154 800 E
155 000 E
155 200 E
155 400 E
155 600 E
155 800 E
156 000 E
1/4" WHT GG
DK PURPLE PHYLLITE. OCCAS HD LT GRAY QTZITE BEDS
TWO SM FLTS. 1/4" GG. BRECCIA BETWEEN
SOME PURP THIN BANDS INTERLAM WITH GRN
SOFT, GRY-GRN PHYL.
SOME STRKS MAS PY, MIN OCTA, CUBES TO 1/4"
STRNG FLT, 1" - 2" LT GRY GG
THIN BEDS GRN, YEL-GRN, LT GRY
GRY-GRN PHYL WITH OCCAS PY ZONES
ALT THIN BEDS LT GREEN PHYLLITE & LT GRAY CALC QTZITE.
NARROW ZONE DARKER GREEN BEDS
OCCAS STRK PY
SMALL FAULTS — SOME CONTORTION OF BEDS
STRKS MASS PY CONC IN BEDS
THIN BEDS LT GREEN & LT GRAY WALLACE
SOME MED GRAY BEDS
THIN STRGR QTZ-ANK.
SMALL SLIPS
5" DK BAND WITH LAD QTZ
MED TO LT GRAY WALLACE
2" BED WITH LAD QTZ
OCCAS POD QTZ-ANK
GRNISH TO MED GRAY WALLACE
SMALL SLIPS
NO FT Ag Pb Zn Cu
SM 34 1.0 0.4 NO NO TR
SM 33 0.5 1.5 NO NO 1.86
SM 38 0.3 TR NO NO NO
SM 37 0.3 TR NO NO NO
BEDS APPARENTLY NORMAL
SHRD, CRMPLD
SOFT, BLK WAL PHYL
1" - 2" GRENUL QTZ-ANK STRNGR
THIN BEDS BLK, GRY
PLATES, STRGRS QTZ-ANK
MUCH CRNKLD BUT EST VERT
ALT GRY BLK BANDS COMP INTO SHARP "V" SHAPES
10' - 15' SHRD, CRMPLD ZONES
NUM QTZ-ANK STRGRS, PLATES
8" HD BLK BED WITH LADDER QTZ-ANK
FREQ LT COLRD BEDS
UP TO 2.5' HD BLK BED WITH LADDER QTZ-ANK
LT AND DK WALLACE
THIN DK BEDS, CONTORTED
SHRD, CRMPLD
THIN DK TO MED GRY BEDS
LESS SHRD — OCCAS. LT GRAY BAND
LITTLE GG — STRONG SHRG.
SEVERAL SMALL SLIPS
130' ZONE SHRD, CRMPLD, TBRD.
THIN WAVY BEDS DK TO MED GRAY WALLACE
2" BAND LAD QTZ.
8"-10" DK BAND WITH LAD QTZ.
ALT LT & DK WAVY BANDS UNBLCHD WALLACE
OCCAS SILIC DK BEDS WITH LADDER QTZ.
SMALL FAULT — APPROX BLCHD CONTACT
2'-3' GG — BADLY SHRD & BROKE AT FAULT INTERSECTION
1"-3" WHT TO GRAY GG. — STRONG FAULT
THIN DK BANDS IN LT GRN WALLACE
SOME TIGHT FOLDING
1/2" QTZ STGR.
4" BAND WITH LADDER QTZ.
TIGHT FOLDS
THIN DK BANDS IN BLCHD WALLACE
SMALL SLIP WITH 1 4" QTZ.
BLCHD MED GRAY PART SILICFD.
SEVRL SMALL STRKS TETRA.
1 2"-1" QTZ, CPY & TETRA.
BLCHD MED GRAY BANDS & LENSES
SILIC BEDS WITH TOURM & MASS PY.
APPROX WALLACE-ST REGIS CONTACT
PODS QTZ-ANK, FEW SPOTS SULFIDES
1" GG — LITTLE QTZ-CARB.
ALT THIN BEDS WHT CALC ARENITE & PURPLE PHYLLITE
NUMEROUS 1/4"-1" PY XLS.
THIN BEDS PURPLE — OCCAS NARROW BLCHD BANDS
OCCAS PODS QTZ-ANK.
APPROX AXIS ANTICLINE
THIN PURPLE BEDS WITH INTERCALATED WHT QTZITE.
STRONG FAULT IN PURPLE — 6"-12" GG.
STRONG FAULT WITH 5'-6' BRECCIA IN FOOTWALL
BLCHD-PURPLE CONTACT DISTINCT BUT NOT SHARP
DK GRAY TO GRN-GRAY TRANSITIONAL — FISSILE
SOFT GRN, BLCHD, SHRD, FISSILE
1" WHT GG — 1/2" STGR QTZ-CARB WITH SULFIDES
OCCAS LOW-ANGLE TO HORIZ SHRS OF SMALL MOVEMENT
TWO 1"-3" BEDS SILIC REDDISH QTZITE WITH SULFIDES
WK INTERSECTING FRACTURES
1/4"-1/2" QTZ-CARB.
GREN PODS & STRKS GRAN PY — SOME SMALL XLS.
4" DK GRAY GG — 1' SER BRECCIA FOOTWALL