August 19, 1960

For final payment of $199.99, dated July 8, 1960, Voucher No. 103, see Report of Disbursements and Repayments for July 1960. (In Contract Administration and Audit Division).

DMEA-4619 (Uranium)
Midland Mining Company
Sendra Group
Carbon County, Montana
Contract Idm-E1097

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
1201 N. Division St.
Spokane 2, Washington

March 1, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 7 1960

| DATE | INIT. | |
|---|---|---|
| 3-7 | gad | 110 |
| " | [illegible] | 110 |
| 3/8 | [illegible] | 800 |
| " | Murphy | 500 |
| | | |
| | | |
| | | |

Memorandum

To: OME Field Team, Region I

From: S. W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Final inspection, Docket No. DMEA-4619 (uranium), Midland Mining Company, Sandra Group, Carbon County, Montana, Contract No. Idm-E1097

This final inspection report summarizes work units verified by on-site inspection and reported in interim inspection reports dated July 29, 1959 by S. W. Zoldok, Mining Engineer, U. S. Bureau of Mines, and October 9, 1959 by R. D. Sample, Geologist, U. S. Geological Survey.

The contract expired on September 1, 1959.

The Government has no equity in equipment or supplies used on the Project.

The project was not successful in disclosing significant uranium mineralization, and the Field Team final report will not recommend a Certification of Discovery.

The Operator has not submitted a final engineering and geological report and $100 will be withheld from the final payment in lieu of such a report.

Work units authorized and completed under terms of the contract are given on the attached sheet.

S. W. Zoldok

S. W. Zoldok

Distribution:
OME (3)
USGS (2)
USBM (AD)
Docket

Stage I

| Work Item | Authorized | Completed |
|---|---|---|
| Bulldozing | 80 hrs. | 80 hrs. |
| Rotary drilling | | |
| 0' to 100' | 2,000 ft. | 1,900 ft. |
| 100' to 200' | 500 ft. | 410 ft. |
| Standby time | 33 hrs. | 33 hrs. |
| Chemical analyses | 25 | 25 |

Stage II

| | | |
|---|---|---|
| Rotary drilling | | |
| 0' to 100' | 1,000 ft. | 104 ft. |
| Crosscutting, drifting, winzing and raising | 400 ft. | 383 ft. |
| Chemical analyses | 23 | 5 |

DMEA FORM 6 REFERENCE SLIP

REV. 12-56 DEFENSE MINERALS EXPLORATION ADMINISTRATION

| TO: | INITIALS | DATE |
|---|---|---|
| 1. 110 | [illegible] | 11/6 |
| 2. ~~500 Mr. Murphy~~ | [illegible] | 11/6 |
| 3. | | |
| 4. | | |
| 5. | | |
| FROM: 225 | RCW | 11/6 |

FOR: Check items for action desired

____ Action ____ Reply for signature of _____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

INT.-DUP. SEC., WASH., D.C.

M25803

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

Budget Bureau No. 42-R1036.5

# UNITED STATES
## DEPARTMENT OF THE INTERIOR
### DEFENSE MINERALS EXPLORATION ADMINISTRATION

NOV 6 1959
O.M.E.

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July & August, 195 9 Docket No. DMEA 4619 Contract No. Idm-E 1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana
Contract Amount, $ 27,008.00 Government Participation: 75 % Amount, $ 20,256.00

| 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 Stage 1 0-100 | | 6,460.00 | 6,460.00 | | 6460.00 | 6460.00 |
| ~~Bulldozing~~ Stage I 100-200 | | 1,988.50 | 1,988.50 | | 1988.50 | 1988.50 |
| ~~Crosscutting~~ Stage II 0-100 | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting etc. Stage II | 2,488.50 | 9,576.00 | 12,064.50 | 2488.50 | 9576.00 | 12,064.50 |
| Bulldozing Stage I | | 1,200.00 | 1,200.00 | | 1200.00 | 1200.00 |
| Moving & Standby | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| ~~Payroll Taxes~~ Stage II | | 25.00 | 25.00 | | 25.00 | 25.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 2,488.50 | 20,071.30 | 22,559.80 | 2488.50 | 20071.30 | 22559.80 |

I certify that the above bill is correct and just and that payment therefor has not been received.
Date September 8, 1959 *Payee Midland Mining Company
Per George E. Gray 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) Withheld 1866.37
200.00
Pay 1666.37

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

$ 1666.37

Signature Dorothy F. Lang
(Authorized Certifying Officer)

Date 11/2/59 Vou. No. 2331
(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. E1097 in accordance with the terms of the contract.

Signature /s/ Stephen W. Foldok Title Mining Engr. Date 10-28-59

APPROVAL BY ~~DMEA~~ OME EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Wing L. Agnew Title Acting Exec. Date 11-2-59

# 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

NOV 6 1959
O.M.E.

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

Month of ~~August~~ July & 195 9 Docket No. DMEA 4619 Contract No. Idm-E 1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana

| 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 etc. Stage II | Ft. | 2488.50 | 79 | 12,064.50 | 383 | | 400 | 31.50 ft. |
| ~~Scraping Stage I~~ | ~~Hr.~~ | | | 1,200.00 | 80 | | 80 | 15.00 hr. |
| ~~Sample~~ Anal. Stage I | ~~Ea.~~ | | | 125.00 | 25 | | 25 | 5.00 ea. |
| ~~Sample~~ Anal. Stage I | Ea. | | | 25.00 | 5 | | 23 | 5.00 ea. |
| ~~Moving~~ & Standby ~~Stage I~~ | ~~Hr.~~ | | | 343.20 | 33 | | 33 | 10.40 hr. |
| Drilling: ~~Non~~ pneumatic | | | | | | | | |
| ~~Stage~~ I 0-100 | Ft. | | | 6,460.00 | 1900 | | 2000 | 3.40 ft. |
| ~~Stage~~ II 0-100 | Ft. | | | 353.60 | 104 | | 1000 | 3.40 ft. |
| ~~Stage~~ I 100-200 | | | | 1,988.50 | 410 | | 500 | 4.85 ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 2488.50 | | 22,559.80 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 2488.50 | | 22,559.80 | | | | |

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. 8, 1959 Operator Midland Mining Company

Per George L. Lucy 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)

REMARKS:

(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

MIDLAND MINING COMPANY
297 Hedden Bldg. Telephone 2-7220
BILLINGS, MONTANA

RECEIVED
BUREAU OF MINES
SEP 1 7 1959
SPOKANE, WASH.

July 1 - August 1 - Sandra Advance of 5 feet for a total of 62 feet since the recess ended prior to June.

1.

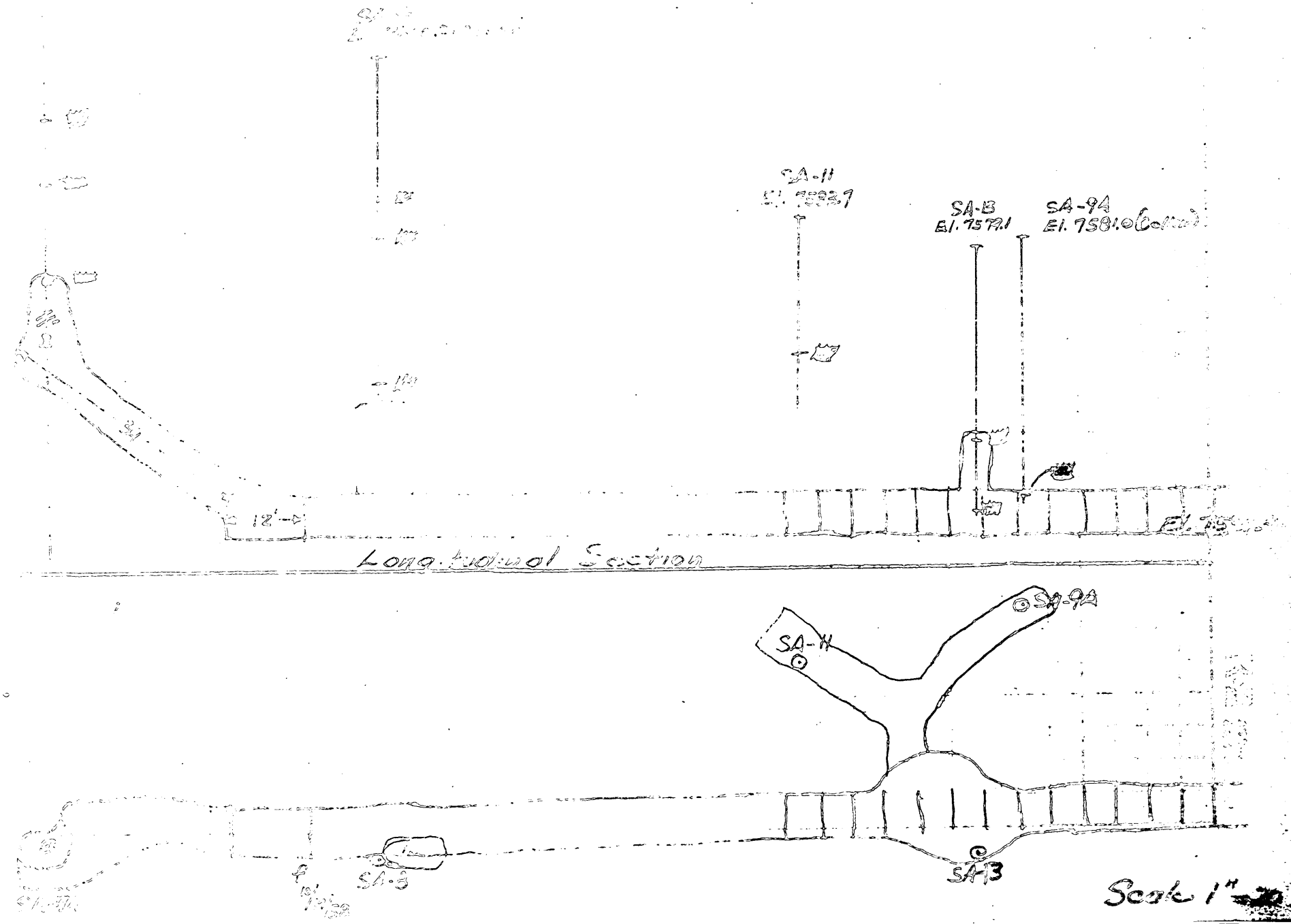
The intersection of the inclined drift to SA-7A, at a depth of about 55 feet below the collar, was in a water course, bearing NW-SE. Driving a certical raise 11 feet confirmed the radioactive anomaly at a depth of about 45 feet below the collar, as reported in the log of the drill hole. The raise was stopped in white limestone after passing through the oxidation zone of the drill hole in the water course. Scattered yellow tuyumanite mineralization was detected on the east wall of the raise. Radiometric count (MR/hr.) at the top of the raise was off the first scale (0.20) and almost midway on the second scale (0.10x10) of the Geiger counter. The full extent of the mineralization beyond the walls of the raise has not been determined, however, it is scattered and meager in the vicinity of the drill hole.

August 1 - September 1 - Sandra Advance of 74 feet; 60 feet of drifting and 14 feet of raising.

A raise along rotary drill hole SA-8 was advanced a total distance of 14 feet above the back of the main north adit. The objective was a radioactive anomaly approximately 18-20 feet above the adit back. The last raise round broke into brownish stained fractured limestone. Minor indications of yellowish tuyumanite mineralization was noted in the walls and back of the last round blasted.

At 168 feet from the portal a crosscut was advanced in the east wall a distance of 12 feet, thence two crosscuts northeasterly and southeasterly were driven to intersect rotary drill holes SA-11 and SA-9A respectively. The northeasterly crosscut was advanced 23 feet without intersecting SA-11 as projected to the drift elevation; the crosscut was advanced about 7 feet beyond the projected location of the hole thence slab rounds in both walls were proposed to locate the hole. When the hole is found raising 20-25 feet should reach the radioactive anomaly reported in the drill log. Consistent tuyumanite mineralization was found in a 8-12 inch contact zone along the west-wall of the cross cut.

The southeasterly crosscut was advanced 25 feet to the intersection of SA-9A thur confirming the radioactive anomaly reported in the drill log. Persistent and extensive tuyumanite mineralization of minable ore grade was opened in the vicinity of the hole. The mineralization is found in a dark reddish to black brecciated zone whose strike and dip has not been opened sufficiently for determination to date.


SA-11
El. 7583.7
SA-B
El. 7572.1
SA-94
El. 7581.0 (Collar)
12'
Longitudinal Section
SA-94
SA-11
SA-3
SA-13
Scale 1"

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

Budget Bureau No. 42-R1036.5

# UNITED STATES
## DEPARTMENT OF THE INTERIOR
### DEFENSE MINERALS EXPLORATION ADMINISTRATION

JUL 20 1959

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1959 Docket No. DMEA 4619 Contract No. Idm-E 1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

Contract Amount, $ 27,008.00 Government Participation: 75% Amount, $ 20,256.00

| 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 Stage I 0-100 | | 6460.00 | 6460.00 | | 6460.00 | 6460.00 |
| ~~Bulldozing~~ Stage I 100-200 | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| ~~Crosscutting~~ Stage II 0-100 | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting etc. Stage II | 1417.50 | 8158.50 | 9576.00 | 1417.50 | 8158.50 | 9576.00 |
| Bulldozing Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| Moving & Standby | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| ~~Bookkeeping~~ Stage II | | 25.00 | 25.00 | | 25.00 | 25.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 1417.50 | 18653.80 | 20071.30 | 1417.50 | 18653.80 | 20071.30 |

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

Date July 6, 1959 *Payee Midland Mining Company

Per C. M. Hampton 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:

$ 1063.12

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 7/9/59 Vou. No. 2208

(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. 61097 in accordance with the terms of the contract.

Signature /s/ Stephen W. Goldock Title Mining Engr. Date July 9, 1959

APPROVAL BY ~~DMEA~~ OMF EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ W. E. Weissenborn Title Exec. Officer Date July 14, 1959

# 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 MT-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JUL 20 1959
O.M.E.

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1959 Docket No. DMEA 4619 Contract No. Idm-E 1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

| 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, etc. Stage II | ft. | 1417.50 | 45 | 9576.00 | 304 | | 400 | 31.50 ft. |
| Bulldozing Stage I | hr. | | | 1200.00 | 80 | | 80 | 15.00 hr. |
| Sample Anal. Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00 ea. |
| Sample Anal. Stage I | ea. | | | 25.00 | 5 | | 23 | 5.00 ea. |
| Moving & Standby Stage I | hr. | | | 343.20 | 33 | | 33 | 10.40 hr. |
| Drilling: Pneumatic | | | | | | | | |
| Stage 10-100 | ft. | | | 6460.00 | 1900 | | 2000 | 3.40 ft. |
| Stage 110-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40 ft. |
| Stage I 100-200 | ft. | | | 1988.50 | 410 | | 500 | 4.85 ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 1417.50 | | 20071.30 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 1417.50 | | 20071.30 | | | | |

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

Date July 6, 1959 Operator Midland Mining Company

Per C. M. Hampton 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)

/s/ Stephen W. Goldok, Mining Engr.
7-9-59

## 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

# MIDLAND MINING COMPANY

207 Hedden Bldg. Telephone 2-7220
BILLINGS, MONTANA

July 6, 1959

Office of Minerals Exploration
U.S. Dept. of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket # DMEA-4619
Progress Report
Period June, 1959

Gentlemen,

During the month of June, the drift at the Sandra claim was advanced forty five feet in the effort to intersect drill hole SA-7a. The work since the last reporting period has been carried on an incline, using a slusher for mucking back to the haulage level. Our intent is to intecect hole SA-7a some that below the anomalous area indicated on the probe record of the hole. As yet we have not found the hole, although we know we have advanced far enough to reach it. We are slabbing to find the hole, a situation we have met before since the hole drift due to the erratic condition of the rocks drilled.

Mineralization has increased somewhat during the last part of this latest advance, although not in sufficient quanity to be commercial. Minor pods and streaks of ore have been found which give further encouragement to the belief that larger ore bodies are in the vicinity.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hampton

C. M. Hampton
President

CMH/am
Encls.

EXTRA COPY
O. M. E.
RECEIVED JUL 20 1959

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
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MME FORM 6
REV. 2-59

REFERENCE SLIP

OFFICE OF MINERALS EXPLORATION

| TO: | DATE | INITIALS |
|---|---|---|
| 1. 110 | 6/16 | FEJ |
| 2. ~~700~~ | 6/17 | [illegible] |
| 3. | | |
| 4. | | |
| 5. | | |
| FROM: 220 | 6/15 | |

FOR: Check items for action desired

____ Action ____ Reply for signature of ____
____ Approval ____ Investigate ____ Surname
____ Comment ____ Recommendations ____ Signature
____ Conference ____ Rewrite ____ File
____ Instructions ____ Your information

REMARKS:

INT.-DUP. SEC., WASH., D.C.

M50943

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. 2302

JUN 15 1959 O.M.E.

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

Voucher prepared at Spokane, Washington 6/11/59
(Give place and date)

THE UNITED STATES, Dr., Payee's Account No. Idm-E1097

To Midland Mining Company DMEA-4619
(Payee)

207 Hedden Building (Address) Billings, (City) Montana (State)

PAID BY
(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. |
|---|---|---|---|---|---|---|---|
| | Sept. & Oct. 1958 | Funds withheld under Voucher No. 2256 dated December 3, 1958 | | | | 200 | 00 |
| | May 1959 | As per attached certified form MF-104 dated June 2, 1959 | | | | 358 | 50 |
| PAYMENT: Complete ☐ Partial ☐ Final ☐ | | Use continuation sheet(s) if necessary | | | | | |

Shipped from to Weight Government B/L No. Total 558 50

(Payee must NOT use this space)

Differences .....

Account verified; correct for 558 50

(Signature or initials) A. L.

Contract No. Date Req. 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

W

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

JUN 15 1959 O.M.E.

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1959 Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana
Contract Amount, $27,008.00 Government Participation: 75 % Amount, $20,256.00

| 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 Stage I 0-100 | | 6460.00 | 6460.00 | | 6460.00 | 6460.00 |
| " Stage I 100-200 | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| " Stage II 0-100 | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting etc. Stage II | 378.00 | 7780.50 | 8158.50 | 478.00 | 7680.50 | 8158.50 |
| Bulldozing Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| Moving & Standby Stage I | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| " " " Stage II | | 25.00 | 25.00 | | 25.00 | 25.00 |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 378.00 | 18,275.00 | 18,653.80 | 478.00 | 18175.80 | 18653.80 |

I certify that the above bill is correct and just and that payment therefor has not been received.
Date June 2, 1959 *Payee Midland Mining Company
Per C. M. Hauptman 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:

$ 358.50

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 6/11/59 Vou. No. 2302

(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. 61097 in accordance with the terms of the contract.

Signature /S/ Stephen W Foldoh Title Mining Engr. Date 6-5-59

APPROVAL BY ~~DMEA~~ ONE EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Wing G. Agnew Title Acting Exec Date 6-11-59

# 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

JUN 15 1959 O.M.E.

Month of May 1959 Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana

| 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 etc. Stage II | ft. | 378.00 | 12 | 8158.50 | 259 | | 400 | 31.50/ft. |
| ~~Bulldozing~~ Stage I | hr. | | | 1200.00 | 80 | | 80 | 15.00/hr. |
| ~~Sample anal.~~ Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| ~~Sample anal.~~ Stage II | ea. | | | 25.00 | 5 | | 23 | 5.00/ea. |
| ~~Moving & standby~~ St. I | hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| Drilling: ~~Core~~ Pneumatic | | | | | | | | |
| ~~Churn~~ Stage I 0-100 | ft. | | | 6460.00 | 1900 | | 2000 | 3.40/ft. |
| ~~Auger~~ Stage II 0-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| ~~Stripping~~ Stage I 100-200 | ft. | | | 1968.50 | 410 | | 500 | 4.85/ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| TOTAL DISTRIBUTED COSTS | | 378.00 | | 18,653.60 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 378.00 | | 18,653.80 | | | | |

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

Date June 2, 1959 Operator Midland Mining Company

Per C. M. Hauptman 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)

6-5-59
/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

# MIDLAND MINING COMPANY

207 Hedden Bldg. Telephone 2-7220

BILLINGS, MONTANA


June 2, 1959

Office of Minerals Exploration
U. S. Dept. of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket # DMEA-4619
Progress Report
Period May, 1959

Gentlemen,

Work was resumed at the Sandra Mine on April 5, 1959. The work, carried on intermittantly due to inclement weather, consisted primarily of rehabilitation of the timber and track within the drift, cleaning up fallen rock at the portal, and rebuilding the track from the portal to the dump. Actual work in the drift to crosscut to SA-7 was begun on May 25. As of June 1st, the drift had been advanced twelve feet in this latest work. No appreciable mineralization was encountered in this last twelve feet. Work is being continued with every effort being made to finish the contract before the September expiration date.

Kindly remind Mrs. Long that, through a clerical error, we made an underclaim of $100.00 in the voucher dated November 3, 1958. The footage claimed was correct so the only correction necessary is in the cost figures. The error was picked up in the enclosed voucher and unit cost reports. Also, kindly forward the $200 withheld from our previous voucher pending resumption of the work at the Sandra Mine.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
President

CMH/am
Encls.


OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 15 1959

| DATE | INITIALS | CODE |
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DMEA FORM 6

REFERENCE SLIP

REV. 12-56 DEFENSE MINERALS EXPLORATION ADMINISTRATION

| TO: | INITIALS | DATE |
|---|---|---|
| 1. ITC | | |
| 2. 700 Murphy | | |
| 3. | | |
| 4. | | |
| 5. | | |
| FROM: | | |

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

INT.-DUP. SEC., WASH., D.C.

M25803

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 OCT 3 1958 D.M.E.

Period ~~Month~~ of May thru Aug., 1958 Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

Contract Amount, $27,008.00 Government Participation: 75 % Amount, $20,256.00

| 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 Stage I 0-100 | | 6460.00 | 6460.00 | | 6460.00 | 6460.00 |
| ~~Bulldozing~~ " Stage I 100-200 | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| ~~Crosscutting~~ " Stage II 0-100 | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting etc. Stage II | 614.25 | 4709.25 | 5323.50 | 614.25 | 4709.25 | 5323.50 |
| Bulldozing Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| Moving & Standby Stage I | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| ~~Payroll Taxes~~ " Stage II | | 25.00 | 25.00 | | 25.00 | 25.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 614.25 | 15,204.55 | 15,818.80 | 614.25 | 15,204.55 | 15,818.80 |

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

Date Sept. 10, '58 Payee Midland Mining Company

Per C. W. Hampton 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:

$ 460.69

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 10/1/58 Vou. No. 2227

(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 1097 in accordance with the terms of the contract.

Signature /s/ John A. Bowcher Title Mining Engr. Date 9/22/58

APPROVAL BY ~~DMEA~~ OME EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date Sept. 30, 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. 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 1958 6 OMB

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Period May thru Aug. 1958 ~~Month of~~ ..... 195.....

Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

| 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 etc. Stage II | ft. | 614.25 | 19½ | 5323.50 | 169 | | 400 | 31.50/ft. |
| ~~Bulldozing~~ Stage I | hr. | | | 1200.00 | 80 | | 80 | 15.00/hr. |
| ~~Prospecting~~ Sample analysis Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| ~~Panning~~ Sample analysis Stage II | ea. | | | 25.00 | 5 | | 25 | 5.00/ea. |
| ~~Shafts~~ Moving & storage Stage I | hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| ~~Winzes~~ Drilling: ~~Core~~ Pneumatic | | | | | | | | |
| ~~Churn~~ Stage I 0-100 | ft. | | | 6460.00 | 1900 | | 2000 | 3.40/ft. |
| ~~Auger~~ Stage II 0-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| Stage I 100-200 | ft. | | | 1988.50 | 410 | | 500 | 4.85/ft. |
| ~~Stripping~~ | | | | | | | | |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 614.25 | | 15,818.80 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 614.25 | | 15,818.80 | | | | |

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. 10, 1958 Operator Midland Mining Company

Per C. M. Hampton 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)

/s/ John A. Bowsher
Mining Engr., 9/22/58

## 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

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

September 10, 1958

Defense Minerals Exploration Admin.
U. S. Dept. of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket # DMEA-4619
Progress Report
Period August, 1958

Gentlemen,

Work was resumed at the Sandra mine during the last week in August. The main drift is being carried forward from the vicinity of drill hole SA-13 on the same line as before, i.e., toward SA-7A. We have progressed 19½ feet past SA-13, which is 163½ from the portal, for a total drift length of 183 feet.

Almost from the beginning of this latest advance, we have been on a narrow mineralized clay seam. In the last fifteen feet of the drift the seam has been carried first on the right rib, then across the face, and now at the breast, on the left rib. The seam appears to be almost vertical. We considered carrying the drift to the left to follow this seam but in the drill holes being drilled for the next round, more mineralized clay was encountered. We therefore decided we might as well continue to drive straight ahead. Our present plans are to carry the drift straight ahead to the vicinity of SA-7A and then long hole from the drift at a later date. The long holing may be preceded by lateraling from the drift on the good mineral shows passed or to reach the drill holes drilled under Stage I which had mineral shows.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
President

5-27-58

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 JUN 9 1958 D.M.E.A.

Month of April, 1958 Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg, Billings, Montana
Contract Amount, $27,008.00 Government Participation: 75% Amount, $20,256.00

| 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 Stage I 0-100 | | 6460.00 | 6460.00 | | 6460.00 | 6460.00 |
| ~~Bulldozing~~ " Stage I 100-200 | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| ~~Crosscutting~~ " Stage II 0-100 | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting etc. Stage II | 519.75 | 4189.50 | 4709.25 | 519.75 | 4189.50 | 4709.25 |
| Bulldozing Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| Moving & standby Stage I | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| " " " Stage II | | 25.00 | 25.00 | | 25.00 | 25.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 519.75 | 14,684.80 | 15,204.55 | 519.75 | 14684.80 | 15204.55 |

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

Date May 20, 1958 *Payee Midland Mining Company

Per O M Hampton 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:

$ 289.81

Signature Joseph F. Lang
(Authorized Certifying Officer)

Date 6/2/58 Vou. No. 217
(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. G1097 in accordance with the terms of the contract.

Signature /s/ John A. Bowden Title Mining Engr. Date 5/24/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date May 29, 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. 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 JUN 9 1958 D.M.E.A.

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

Month of April 1958 Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana

| 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 etc. Stage II | ft. | 519.75 | 16½ | 4,709.25 | 149½ | | 400 | 31.50/ft. |
| Bulldozing Stage I | hr. | | | 1,200.00 | 80 | | 80 | 15.00/hr. |
| Sample analysis Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| Sample analysis Stage II | ea. | | | 25.00 | 5 | | 23 | 5.00/ea. |
| Moving & standby Stage I | hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| Drilling: Pneumatic | | | | | | | | |
| Stage I 0-100 | ft. | | | 6,460.00 | 1900 | | 2000 | 3.40/ft. |
| Stage II 0-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| Stage I 100-200 | ft. | | | 1,988.50 | 410 | | 500 | 4.85/ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 519.75 | | 15,204.55 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 519.75 | | 15,204.55 | | | | |

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 20, 1958 Operator Midland Mining Company

Per C. M. Hampton 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)

/s/ John A. Boeschen
Mining Engr., 5/24/58

## 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

MAY 29 1958

MIDLAND MINING COMPANY
207 Hedden Bldg. Telephone 2-7220
BILLINGS, MONTANA

May 20, 1958

Defense Minerals Exploration Administration
U. S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket # DMEA-4619
Progress Report,
Period April, 1958

Gentlemen,

During the first week in April, the shaft near drill hole SA-13 was timbered and work was begun on a hoist to raise loaded cars from this sublevel to the level of the portal drift. Only one shift was employed for this work and the spring thaw slowed all activity considerably.

On about the 10th of April, work was begun on further drifting southeast and northwest from this sublevel to prospect along the mineralized structure exposed on both sides of the winze. This structure consisted of a meandering solution channel in the silicified limestone secondarily filled with a heterogeneous jumble of Amsden type sediments, i.e., Indurated red clay and multicolored, fine-grained sandstone. The best mineralization was found near the walls of the channel in a soft, soapy, white to pink clay. During this work, the drift was extended ten and a half feet to the southeast and six feet to the northwest.

On April 21, a late spring snow storm blocked access to the property for the first and only time of the winter. All work therefore ceased for the remainder of the month.

During this month payment was received for a thirty ton ore shipment sent to Riverton in March. The grade was much lower than we had expected, .18% $U_3O_8$, which barely covered the cost of handling and shipping. In the future more careful attention will be paid to separating the ore from the waste as long as the ore zones remain thin.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
President

CMH/am

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

Budget Bureau No. 42-R1036.5

RECEIVED MAY 12 1958

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

Months of February & March, 1958 Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Minerals Uranium
Address 207 Hedden Bldg., Billings, Montana
Contract Amount, $27,008.00 Government Participation: 75 % Amount, $20,256.00

| 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: | | | | | | |
| | | 6460.00 | 6460.00 | | | |
| Drilling 0-100 Stage I | | 6,800.00 | 6,800.00 | | 6460.00 | 6460.00 |
| Bulldozing 100-200 Stage I | | 1988.50 | 1,988.50 | | 1988.50 | 1988.50 |
| Crosscutting 0-100 Stage II | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting, etc. Stage II | 409.50 | 3,780.00 | 4,189.50 | 409.50 | 3780.00 | 4189.50 |
| Bulldozing Stage I | | 1,200.00 | 1,200.00 | | 1200.00 | 1200.00 |
| (2) Labor and Supervision: Moving & Standby Stage I | | 343.20 | 343.20 | | 343.20 | 343.20 |
| 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 Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| Payroll Taxes Stage II | 10.00 | 15.00 | 25.00 | 10.00 | 15.00 | 25.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| | | 14,265.30 | 14,684.80 | | | |
| TOTALS | 419.50 | 14,605.30 | 15,024.80 | 419.50 | 14265.30 | 14684.80 |

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

April 9, 1958 *Payee Midland Mining Company

W. M. Hampton Title President

r is signed or receipted in the name of a company or corporation, the name of the person writing porate name, as well as the capacity in which he signs, must appear. For example: "John hn Smith, Secretary," or "Treasurer," as the case may be.

18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully ntation to any department or agency of the United States as to any matter within its

(Instructions on reverse)

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

$ 314.63

Signature Dorsey F. Lang
(Authorized Certifying Officer)

Date 5/8/58 Vou. No. 2158

(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-1097 in accordance with the terms of the contract.

Signature /s/ John A. Bowcher Title Mining Engr. Date 5/5/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Wiesenthern Title Exec Officer Date May 7, 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. 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 MAY 12 1958

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Feb. & March 1958 Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

| 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 etc. Stage II | ft. | 409.50 | 13 | 4,189.50 | 133 | | 400 | 31.50/ft. |
| Bulldozing Stage I | hr. | | | 1,200.00 | 80 | | 80 | 15.00/hr. |
| Sample analysis Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| Sample analysis Stage II | ea. | 10.00 | 2 | 25.00 | 5 | | 23 | 5.00/ea. |
| Moving & standby Stage I | hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| Drilling: Pneumatic | | | | | | | | |
| Stage I 0-100 | ft. | | | 6,460.00 | 1900 | | 2000 | 3.40/ft. |
| " II 0-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| Stage I 100-200 | ft. | | | 1,988.50 | 410 | | 500 | 4.85/ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 419.50 | | 14,684.80 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 419.50 | | 14,684.80 | | | | |

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: Winze authorized in letter DMEA, Spokane dated February 18, 1958.

Date April 9, 1958 Operator Midland Mining Company

Per D. M. Hamilton 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)

/s/ John A. Lowsher
Mining Engr, 5/5/58

## 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

# MIDLAND MINING COMPANY

207 Hedden Bldg. Telephone 2-7220

BILLINGS, MONTANA


April 15, 1958

Defense Minerals Exploration Admin.
U. S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Progress Report,
period Feb.-Mar., 1958

Gentlemen:

During the period Feb. 1-12, the drift at the Sandra mine was advanced from 125 ft. to 169 ft., a point just east of drill hole No. SA-13. At 155 feet, a fair mineralized show was encountered at the breast and right lower rib in the drift. This show persisted somewhat erratically to 169 feet. At 164 feet, an inch wide seam of high grade tyuyamunite was discovered in the floor of the drift. This streak was traced left and up the ~~right~~ left rib and right across the floor in a southeasterly direction. This streak was followed to the left during the work of breaking into the drill hole SA-13. When the drill hole was found, a short raise was driven to within 26 feet of the surface in order to investigate the zone of high count found during the drilling of this hole. The afore-mentioned radiometric count was found to have been caused by a pocket of high grade ore along the rich streak previously mentioned. This pocket amounted to only a few hundred pounds.

The last half of February was spent installing track in the drift and in building a storage bin near the portal. In none of the work done in February was the government committed to participate.

The first week in March was spent in exploring to the right or east side of the end of the drift. Some of the material appeared good enough to save and after selection, was placed in a storage bin. The decision was then made to sink on the show in the floor of the drift. By the 24th of March, this shaft had been sunk to a depth of 12 feet and the mineralized fissure continued to persist. This fissure was actually a solution channel in the silicified cave-fill, which in turn was filled with collapse debris and gelatinous siliceous mud. This fissure varied from a few inches to four feet in width. The best mineralization was a narrow streakk on each wall of the fissure. Two five foot channel samples were taken horizontally across the north and south walls of the shaft at a depth of eight feet. Assay results of these samples are shown on the enclosed assay reports. The shaft progressed slowly because an effort was made to save the mineralized rock by hand sorting each carload mucked out. The last few days of the month were spent in deepening the shaft to 13 feet and widening same for timber.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
Pres.

CMH/am

YAPUNCICH, SANDERSON & BROWN
LABORATORIES

P. O. Box 593
PHONE 2-6325

13 N. 32ND ST.
BILLINGS, MONTANA

To: MIDLAND MINING COMPANY
207 HEDDEN BUILDING
BILLINGS, MONTANA

Date 4-1-58

Lab. No. 536-U

Invoice No.

Total Charges $ 10.00

# CERTIFIED URANIUM ASSAY REPORT

| SAMPLE | RADIOMETRIC ASSAY Equivalent $U_3O_8$, % by weight | CHEMICAL ASSAY $U_3O_8$, % by weight |
|---|---|---|
| NO. 1 SO. WALL - 8' IN SHAFT | 0.15 | 0.27 |
| NO. 2 NO. WALL - 8' IN SHAFT | 0.01 | 0.04 |

Signed by A. L. Brown
Chemist

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

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

RECEIVED MAR 10 1958 D.M.E.A.

Month of January, 1958 Docket No. DMEA 4619 Contract No. Ida - E1097
Operator's Name Midland Mining Co. Minerals Uranium
Address 207 Redden Bldg., Billings, Montana
Contract Amount, $ 27,008.00 Government Participation: 75 % Amount, $ 20,256.00

| 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 0-100 Stage I | | 6800.00 | 6800.00 | | 6460.00 | 6460.00 |
| Bulldozing 0-200 Stage I | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| Crosscutting 0-100 Stage II | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting State II | 1984.50 | 1795.50 | 3780.00 | 1984.50 | 1795.50 | 3780.00 |
| Bulldozing-Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| (2) Moving & Standby State I | | 343.20 | 343.20 | | 343.20 | 343.20 |
| 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 Stage I | | 125.00 | 125.00 | | 125.00 | 125.00 |
| Payroll Taxes " " Stage II | 15.00 | None | 15.00 | 15.00 | | 15.00 |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 1999.50 | 12605.80 | 14605.30 | 1999.50 | 12265.80 | 14,265.30 |

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

Date Feb. 21, 1958 *Payee Midland Mining Co.

Per C. M. Hampton 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:

$ 1499.63

Signature Dorothy F. Fong
(Authorized Certifying Officer)

Date 3/5/58 Vou. No. 2128

(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 1097 in accordance with the terms of the contract.

Signature 1s/ John A. Boreuler Title Mining Engr. Date 7/28/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature 1s/ A. E. Weissenborn Title Exec. Officer Date March 4, 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. 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 MT-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED MAY 10 1958

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1958 Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Redden Bldg., Billings, Montana

| 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 Stage II | ft. | 1984.50 | 63 | 3780.00 | 120 | | 400 | 31.50/ft. |
| ~~Bulldozing~~ Stage I | hr. | | | 1200.00 | 80 | | 80 | 15.00/hr. |
| ~~Sampling~~ Sample analysis Stage I | ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| ~~Sample~~ analysis Stage II | ea. | 15.00 | 3 | 15.00 | 3 | | 23 | 5.00/ea. |
| ~~Moving~~ & standby Stage I | hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| Drilling: ~~rig~~ Pneumatic Stage I 0-100 | ft. | | | 6460.00 | 1900 | | | |
| ~~Rotary~~ Stage II | | | | ~~6800.00~~ | ~~2000~~ | | 2000 | 3.40/ft. |
| ~~Auger~~ 0-100 | ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| ~~Rotary~~ Stage I 100-200 | ft. | | | 1988.50 | 410 | | 500 | 4.85/ft. |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 1999.50 | | 14,265.30 ~~14,605.30~~ | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| | | | | 14,265.30 | | | | |
| Total Costs | | 1999.50 | | ~~14,605.30~~ | | | | |

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

Date February 21, 1958 Operator Midland Mining Company

Per C. M. Hauptman 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: Only 120 feet of drifting authorized in entry to drill hole SA-13 per DMEA letter, Spokane, dated November 19, 1957.

(For Government use only)

/s/ John A. Bowsher
Mining Engr.
2/28/58

## 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

# MIDLAND MINING COMPANY

207 Hedden Bldg. Telephone 2-7220

BILLINGS, MONTANA


EXTRA COPY
DMEA

RECEIVED MAR 10 1958

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

February 21, 1958

Defense Minerals Exploration Admin.
U. S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Progress Report, period
Jan. 1 - 31, 1958

Gentlemen:

As of Friday night, January 31, the drift on the Sandra claim had been advanced 125 feet from the portal to the vicinity of SA-13. The rock encountered in the drift continued to consist of highly silicified cave debris; that is, silicious lime boulders, banded onyx ( highly silicified silt ), soft unconsolidated red silt and some grey to white plastic clay. The predominant color in all the debris is brick red to ochre brown.

Because of the broken character of the ground, we encountered considerable difficulty, not only in drilling, but in getting the rounds to pull properly. We could only drill four foot holes due to the fact that deeper holes resulted in much lost time from stuck steels. We also found that the so-called Swedish steel, with the integral bit and shank and one carbide insert, was more effective than the regular rose bits which were constantly stuck by key pebbles falling in behind them.

The count, which was first picked up at 57 feet, continued to improve as the drift advanced. Spots of yellow tyuyamunite mineralization were picked up in the waste with increasing frequency. At 113 feet, a narrow streak of fair mineralization in about the center of the breast. To aid in defining the mineralized zones, we attempted a technique used elsewhere in the district; that is, a short-wave ultra-violet lamp with the filter removed. Such a light ordinarily intensifies the yellow of carnotite-type minerals, which is ordinarily indistinguishable underground. We found that the iron-stained rock in this drift gave a pale greenish-yellow fluorescence was not, however, quite as intense as the yellow produced by visibly mineralized rock. On the chance that this might indicate uranium mineralization that was not detectable with a geiger counter, we selected three samples for assay. One sample was of the muck pile at the breast; one sample, for control, was of some brown rock in the bulldozer cut near the portal, which also gave the peculiar green fluorescence, and the third was a channel sample of the obviously mineralized rock in the breast. The assays of these samples, in the order listed above, are as shown on the enclosed certified uranium assay report. As is obvious from the assay results, we concluded that the geiger counter is still the best and most reliable method of ore grading.

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
Pres.

CMH/cm

YAPUNCICH, SANDERSON & BROWN
LABORATORIES

P. O. Box 593
Phone 9-8979

20 North 31st Street
Billings, Montana

To: Mr. Chuck Houptman
Hedden Building
Billings, Montana

Date 1-30-50

Lab. No. 513-U

Invoice No.

Total Charges $

# CERTIFIED URANIUM ASSAY REPORT

| SAMPLE | RADIOMETRIC ASSAY Equivalent $U_3O_8$, % by weight | CHEMICAL ASSAY $U_3O_8$, % by weight |
|---|---|---|
| | | DIXIECO FLUORIMETRIC |
| 1. Box of Rock at 113' in Sandra drift | | 0.004 |
| | | CHEMICAL ASSAY |
| 2. Rock (near portal) | <0.01 | 0.002 |
| 3. Yellow Rock at 113' in Sandra drift | 0.11 | 0.20 |

Signed by R. L. Brown
Chemist

W

Form MT-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 FEB 10 1958 D.M.E.

Month of 11-1-57 to 12-31-57, 195 Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

Contract Amount, $ 27,008.00 Government Participation: 75 % Amount, $ 20,256.00

| 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: ~~Stage II~~ | | | | | | |
| Drilling 0-100 Stage I | | 6800.00 | 6800.00 | | 6460.00 | 6460.00 |
| ~~Bulldozing~~ 100-200 " " | | 1988.50 | 1988.50 | | 1988.50 | 1988.50 |
| ~~Crosscutting~~ 0-100 Stage II | | 353.60 | 353.60 | | 353.60 | 353.60 |
| Drifting 57 ft. " " | 1795.50 | None | 1795.50 | 1795.50 | — | 1795.50 |
| Bulldozing -Stage I | | 1200.00 | 1200.00 | | 1200.00 | 1200.00 |
| Stage I Moving & Standby time | | 343.20 | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Stage I Sampling and Analysis | | 125.00 | 125.00 | | 125.00 | 125.00 |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| | | 10810.30 | 12605.80 | | | |
| TOTALS | 1795.50 | ~~None~~ | 1795.50 | 1795.50 | 10,470.30 | 12265.80 |

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

Date 1-15-58 *Payee Midland Mining Company

Per D M Haughton 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:

$ 13462

Signature Dorothy F. Long (Authorized Certifying Officer)

Date 2/4/58 Vou. No. 2111

(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. 6-1097 in accordance with the terms of the contract.

Signature /s/ John A. Bowsher Title Mining Engr. Date 1/24/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date Jan. 31, 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. 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 11-1-57 to 12-31-57 195____ Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Bldg., Billings, Montana

| 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 Stage II | Ft. | 1795.50 | 57 ft. | 1795.50 | 57 ft. | | 400 | 31.50 /ft. |
| Stage I Bulldozing | hr. | | | 1200.00 | 80 | | 80 | 15.00/hr. |
| Sampling&Analysis | Ea. | | | 125.00 | 25 | | 25 | 5.00/ea. |
| Moving &Standby | Hr. | | | 343.20 | 33 | | 33 | 10.40/hr. |
| Stage I Drilling: Pneumatic | | | | | | | | |
| 0-100 | Ft. | | | 6800.00 | 2000 | | 2000 | 3.40/ft. |
| 100-200 | Ft. | | | 1988.50 | 410 | | 500 | 4.85/ft. |
| Stage II-Drilling 0-100 | Ft. | | | 353.60 | 104 | | 1000 | 3.40/ft. |
| Roads and Trails | | | | | | | | |
| TOTAL DISTRIBUTED COSTS | | 1795.50 | 57 ft. | 12,605.80 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 1795.50 | | 12,605.80 | | | | |

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 1-15-58 Operator Midland Mining Company

Per C. M. Hampton 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)

/s/ John A. Bowden
Mining Engr, 1/24/58

## 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

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

JAN 24 REC'D

January 18, 1958

Defense Minerals Exploration Admin.
U. S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Progress Report, period
Oct. 1 - Dec. 31, 1957

Gentlemen,

During the months of October and November, there was no work done on the Sandra Group claims in which DMEA participated. There was, however, considerable work done toward continuing under the terms of the contract.

Most of October was spent examining drill samples and compiling drill logs for a better evaluation. As a result of this evaluation, a well mineralized trend was delineated on the Sandra claim. The long axis of this trend appears to run about north-south, from drill hole SA-4 to drill hole SA-15. Generally, the depths to this trend are fairly shallow, from 35 to 65 feet. SA-15, however, had a good mineral show at about ninety feet. We decided that our next step should be the underground exploration of this trend, thereby saving for future use the balance of 900 feet of drilling remaining under Stage II.

The entire month of November was spent in preparing the surface site for our underground work on the Sandra claim. The Necessary equipment also had to be procured and arrangements made for miners. Soon after the middle of November, final agreement had been reached with the DMEA field team as to location of the portal. We were authorized to begin the drift slightly south of SA-15 and proceed toward drill hole SA-13, a distance of about 150 feet. Of this distance, DMEA would participate in 120 feet.

The first entry underground was made December 1st. By December 5, fifteen feet had been made from the portal in very bad ground. The rock consisted of badly broken, multi-colored siliceous cave fill material necessitating continuous timbering. The back was hard to hold and considerable bridging was used for the first forty feet. After the usual holiday shutdowns, work was resumed in somewhat better ground on the 26th of December. By New Year's Day, the drift had been advanced 57 feet, and a small amount of mineralization had been encountered at the face.

Only the progress map showing the portal site, direction of advance and footage advanced is submitted with this report. A detailed map of the drift will be submitted with the next report when more significant advancement has been made.

Very truly yours,
MIDLAND MINING COMPANY
C. M. Hauptman

CMH/am

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

Budget Bureau No. 42-R1036.5

# UNITED STATES
## DEPARTMENT OF THE INTERIOR
### DEFENSE MINERALS EXPLORATION ADMINISTRATION

# SUPPLEMENTAL OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of 7-23 to 10-31-57, 195- Docket No. DMEA 4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Building, Billings, Montana

Contract Amount, $27,008.00 Government Participation: 75 % Amount, $20,256.00

| 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 0--100 Stage 1 | | | 6800.00 | | 6460.00 | 6460.00 |
| 100-200 " | | | 1988.50 | | 1988.50 | 1988.50 |
| 0-100 Stage 2 | | | 353.60 | | 353.60 | 353.60 |
| Stage 1 Bulldozing | 1200.00 | -- | 1200.00 | 1200.00 | — | 1200.00 |
| " 1 Moving & Standby time | | | 343.20 | | 343.20 | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Stage 1 Sampling and Analysis | | | 125.00 | | 125.00 | 125.00 |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 1200.00 | -- | 10810.30 | 1200.00 | 9270.30 | 10470.30 |

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

Date Jan. 16, 1958 *Payee Midland Mining Company

Per O. M. Houpt 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:

$ 900.00

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 1/21/58 Vou. No. 2108

(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. E61097 in accordance with the terms of the contract.

Signature /s/ Stephen W. Goldoff Title Mining Engr. Date 1-20-58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ A. E. Weissenborn Title Exec. Officer Date Jan. 20, 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. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED JAN 27 1958 D.M.E.A.

SUPPLEMENTAL
7-23 to 10-31-57

Month of ..... 195..... Docket No. DMEA 46D9 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Building, Billings, Montana

| 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 |
|---|---|---|---|---|---|---|---|---|
| Stage I | | | | | | | | |
| 0-100 Drilling | | | | | | | | |
| Pneumatic | ft. | | | 6,800.00 | 2000 | | 2000 | 3.40 |
| 100-200 " | ft. | | | 1,988.50 | 410 | | 500 | 4.85 |
| Bulldozing | hr. | 1200.00 | 80 | 1,200.00 | 80 | | 80 | 15.00 |
| Sampling&Analysis | ea. | | | 125.00 | 25 | | 25 | 5.00 |
| Moving &Standby | hr. | | | 343.20 | 33 | | 33 | 10.40 |
| Drilling: Core | | | | | | | | |
| Stage II Pneumatic | ft. | | | 353.60 | 104 | | 1000 | 3.40 |
| Auger 0-100 | | | | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| TOTAL DISTRIBUTED COSTS | | 1200.00 | | 10,810.30 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc | | | | | | | | |
| TOTAL COSTS | | 1200.00 | | 10,810.30 | | | | |

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

Date Jan. 16, 1958 Operator Midland Mining Company

Per C. M. Hampton 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)

/s/ Stephen W. Zoldok
Mining Engr., 1-20-58

## INSTRUCTIONS

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

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

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

GPO 872894

Form 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 2 1957 D.M.E.A.

7-23-57 to 10-31-57
XXXXXX Month of ....., 195..... Docket No. DMEA 4619 Contract No. Idm-E1097
Operator's Name Midland Mining Company Mineral Uranium
Address 207 Hedden Building; Billings, Montana
Contract Amount, $ 27,008.00 Government Participation 75 % Amount, $ 20,256.00

| 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 0-100 Stage 1 | 6800.00 | -0- | 6800.00 | 6460.00 | — | 6460.00 |
| XXXXXXX100-200 " | 1988.50 | -0- | 1988.50 | 1988.50 | — | 1988.50 |
| XXXXXXX0-100 Stage-2 | 353.60 | -0- | 353.60 | 353.60 | — | 353.60 |
| age 1XXXXXX Bulldozing | 1200.00 | -0- | 1200.00 | — | | — |
| age 1Moving & Standby time | 343.20 | -0- | 343.20 | 343.20 | — | 343.20 |
| (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., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Stage 1 Sampling and Analysis | 125.00 | -0- | 125.00 | 125.00 | — | 125.00 |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): | | | | | | |
| TOTALS | 10810.30 | -0- | 10810.30 | 9270.30 | — | 9270.30 |

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

Date ..... *Payee Midland Mining Company

Per O. M. Hampton 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:

$ 6952.72

Signature Dorothy F. Long
(Authorized Certifying Officer)

Date 12/5/57 Vou. No. 2081

(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. 61097 in accordance with the terms of the contract.

Signature /s/ John A. Bowsher Title Mining Engr. Date 11/25/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ W. E. Weissenborn Title Exec. Officer Date Dec. 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.

[redacted] (April [redacted])

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED DEC 9 1957

## OPERATOR'S UNIT COST AND PROGRESS REPORT

7-23-57 to 10-31-57

XXXXXXX of ..... 195..... Docket No. DME-4619 Contract No. Idm-E1097

Operator's Name Midland Mining Company Minerals Uranium

Address 207 Hedden Building; Billings, Montana

| 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 |
|---|---|---|---|---|---|---|---|---|
| 0-100 Drilling | | | | | | | | |
| XXXX Pneumatic | 3.40 | 6,800.00 | 2000ft | 6,800.00 | 2000ft | | 2000ft | 3.40 |
| 100-[illegible] | | | | | | | | |
| XXXXXXXXing @ " | 4.85 | 1,988.50 | 410ft | 1,988.50 | 410ft | | 500ft | 4.85 |
| XXXXXBulldozing | 15.00 | 1,200.00 | 80hrs | 1,200.00 | 80hrs | | 80hrs | 15.00 |
| XXXXXMoving&Standby | 10.40 | 343.20 | 33hrs | 343.20 | 33hrs | | 33hrs | 10.40 |
| XXXXXSampling&Anaylsis | 5.00 | 125.00 | 25 | 125.00 | 25 | | 25 | 5.00 |
| Drilling: Core | | | | | | | | |
| 0-100 XXXXPneumatic | 3.40 | 353.60 | 104 ft | 353.60 | 104ft | | 1000 ft | 3.40 |
| Auger | | | | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| Test Pits | | | | | | | | |
| Roads and Trails | | | | | | | | |
| Total Distributed Costs | | 10,810.30 | | 10,810.30 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | 10,810.30 | | 10,810.30 | | | | |

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

Date 11-20-57 Operator Midland Mining Company

Per W. M. Hampton 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)

/s/ John A. Bowcher
Mining Engr., 11/25/57

## INSTRUCTIONS

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GPO 872894

DMEA Field Team, Region I

December 5, 1957

DMEA Certifying Officer, Region I

Contract No. Idm-21097
Monthly operating report for July-October 1957

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

We have deleted $340.00 for 100 feet of drilling at $3.40/ft. claimed for Hole No. 17. According to the Operator's narrative dated September 25, 1957 for the period July 1-31, 1957, Hole No. 17 was scheduled for a 200-ft. hole but was not completed. The contract states, in exhibit A, "The Government will not participate in the cost of an incomplete hole".

We have also deleted the $1200 claimed for bulldozing. The invoice received from the dozer operator did not specify the type dozer used. Upon receipt of this information from the dozer operator this item will be reinstated.

Dorothy F. Long

cc: DMEA (2)
USGS (2)
Contract Admin. & Audit Division
JAB
AD

ORIGINAL FILE COPY
DMEA
RECEIVED
DATE

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

EXTRA COPY
DMEA
RECEIVED NOV 18 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 11/18 | JH | 110 |
| 11 | [illegible] | 700 |
| | | |
| | | |
| | | |

Defense Minerals Exploration Administration
U.W. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Monthly progress report, period
Sept. 1-30, 1957

Gentlemen:

Drilling resumed on September 3rd, after Labor Day. Drilling was continued in SA-3 from 102 ft. At 156 ft. in this hole, the bit hit a cavity, circulation was lost, and the bit broken from the tappet. A fishing tool was brought up to the site on the 4th but the tool was too large and wouldn't go down the hole. The drillers returned to Lovell to get another fishing tool. On the 5th, they made two trips with a new fishing tool to attempt to find the bit, but it had apparently fallen into the cavity and could not be found. A rock bit was then run but it was promptly worn smooth in the very abrasive chert and so the drillers decided to wait until the new bit for the Mole drill arrived. On September 6th, with a new Mole drill bit, SA-3 was worked down to a depth of 184 ft. As the drilling had been very difficult at this point, it was decided to bottom the hole at this depth.

The rig was then moved to SA-2 and by the end of the day on September 6th, this hole had been drilled to 94 ft. On September 7th, SA-2 was bottomed at a total depth of 102 ft and the rig moved to the site of SA-1. At the end of this day, SA-1 had been drilled to 148 ft., at which depth the Mole drill would not cut. Operations were resumed on this hole on September 9th using a rock bit. The rock bit drilled to 176 ft., at which depth the rock became too hard for a rock bit. Therefore, the Mole drill was used to drill the hole on down to a total depth of 206 ft. The rig was then moved to the site of SA-8. On September 10, SA-8 was drilled to a total depth of 104 ft. and the rig moved to the site of SA-7A. On September 10th, drilling was started on SA-7A, at which point the Mole drill broke down and the rest of the day was spent waiting on new parts.

On September 11th, the drillers found that the new Mole drill would not follow the hole made the previous day. Therefore, they moved the rig a couple of feet and started a new hole which was bottomed at a total depth of 106 ft. The rig was then moved to the site of SA-9A and 45 ft. of hole was drilled at this location. On September 12th, SA-9A was drilled to a total depth of 104 ft. The rig was then moved to the site of SA-21, but almost immediately as the drilling started on this hole, the Mole drill again broke down. Drilling was not resumed until Monday, the 16th of September, when new Mole drill parts were obtained. On this day, SA-21 was completed at a total depth of 124 ft., and the rig moved to the site of SA-17. Because such difficulty had been encountered in the drilling of SA-17 earlier, the rig was set up about 5 ft. north of the old hole. However, the same difficulties were encountered in this new hole and in three hours on this date, September 16th, only 42 ft. of hole had been made. On the 17th, 16 ft. had been made in SA-17 in approximately 2 hrs. when again

the badly shattered rock caused the bit to break from the Mole drill. Since more than 25 hrs. had been spent to get this hole drilled and the rough drilling had produced two fishing jobs and had caused two breakdowns in the Mole drill, we decided to make no further attempt to drill deeper on this site.

This completed the drilling under Stage I of our contract. As we intend now not to continue with drilling under Stage II, we are standing by until we receive approval on the portal location from which to begin underground exploration of this prospect. 17

Very truly yours,

MIDLAND MINING COMPANY

C. M. Hauptman

C. M. Hauptman
Pres.

CMH/am
Enc. 10

YAPUNCICH, SANDERSON & BROWN
LABORATORIES

P. O. Box 593
PHONE 2-6325

13 N. 32ND ST.
BILLINGS, MONTANA

To: MIDLAND MINING COMPANY
207 HEDDEN BUILDING
BILLINGS, MONTANA

Date 9-27-57

Lab. No. 451-U

Invoice No.

Total Charges $

# CERTIFIED URANIUM ASSAY REPORT

| | SAMPLE | RADIOMETRIC ASSAY Equivalent $U_3O_8$, % by weight | CHEMICAL ASSAY $U_3O_8$, % by weight | $V_2O_5$ |
|---|---|---|---|---|
| 1. | SA-4 6-8 | <0.01 | 0.006 | |
| 2. | SA-4 8-10 | <0.01 | 0.005 | |
| 3. | SA-5 90-92 | <0.01 | 0.001 | |
| 4. | SA-7A 18-20 | <0.01 | 0.001 | |
| 5. | SA-7A 20-22 | <0.01 | 0.001 | |
| 6. | SA-7A 28-30 | <0.01 | 0.004 | |
| 7. | SA-7A 44-46 | 0.03 | 0.05 | |
| 8. | SA-8 20-22 | 0.01 | 0.02 | |
| 9. | SA-8 22-24 | <0.01 | 0.01 | |
| 10. | SA-8 24-26 | 0.04 | 0.06 | |
| 11. | SA-8 26-28 | 0.02 | 0.02 | |
| 12. | SA-8 48-50 | 0.02 | 0.02 | |
| 13. | SA-9A 38-40 | 0.02 | 0.03 | |
| 14. | SA-9A 40-42 | 0.02 | 0.03 | |
| 15. | SA-9A 92-94 | 0.02 | 0.02 | |
| 16. | SA-9A 94-102 | <0.01 | 0.001 | |
| 17. | SA-10 78-80 | <0.01 | 0.001 | |
| 18. | SA-11 26-28 | 0.02 | 0.05 | |
| 19. | SA-13 26-28 | <0.01 | 0.003 | |
| 20. | SA-13 28-30 | 0.10 | 0.13 | 0.59 |
| 21. | SA-13 30-32 | 0.23 | 0.36 | 1.22 |
| 22. | SA-13 32-34 | <0.01 | 0.006 | |
| 23. | SA-13 40-42 | 0.02 | 0.02 | |
| 24. | SA-15 32-34 | 0.02 | 0.02 | |
| 25. | SA-15 34-36 | <0.01 | 0.001 | |

Signed by R. J. Brown
Chemist

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 102' Elevation at collar: 7639.9' MSL

Hole no.: SA - 2

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 17°30' W 890' from SW corner of claim

Date commenced: 9-6-57 Date completed: 9-7-57

Driller: Moab Drlg. - Bird Drill type: Mole drill and rock bit(air)

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: Kowalczyk Date: 9-7-57

Record completed: 10-8-57 by Hauptman

| Depth (ft.) | Log — MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0 XXXXXX; 5.0 10 15 20 000000) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil, dk brown, sandy & slope wash debris | Mole drill to 30', Rock bit from 30' to T.D. |
| | | | | | | Siltstone, sandy, red & ochre; some quartzitic white sandstone; unaltered ls.; und dk chert (slope wash) | |
| | | | | | | Siltstone, lt. ochre, hd, v. sandy, non-calc. Abund pinkish-tan qtz., micro-sucrose (after ls) Some v.f.g. silty ss. | |
| 10 | | | | | | 50% siltstone, as above 50% silt, soft, pale green and ochre, mottled | |
| | | | | | | 25% indurated ochre silt 75% quartz (tan, microsucrose; clear xls.; dense dk chert & varicolored xln. vug fill) | |
| | | | | | | Siltstone, firm, lt. ochre v. sandy | |
| 20 | | | | | | Tr. dense red band siltstone | |
| | | | | | | Tr. onyx and amorph. chert | |
| | | | | | | Siltstone, ochre, soft | |
| | | | | | | 50% siltstone, as above 50% ls., silic. pink, dense. Abund. calcite xls. | |
| | | | | | | 25% ochre siltstone 75% ls, wh., soft, xln. Abund. calcite xls. | |
| 30 | | | | | | 50% Siltstone, pale green to ochre, calc. 50% ls wh Some pink silic. ls. | |
| | | | | | | 50% ochre silt, as above 50% silic ls., pink, hd, almost chert | |
| | | | | | | Silt, ochre, calc. Abund. calcite xls | |
| 40 | | | | | | Abund. ls, wh, dense, hd. | |
| | | | | | | Abund. black manganese specks | |
| 50 | | | | | | Very calc. | |
| | | | | | | Abund. calcite xls. | |
| | | | | | | Tr. normal tan ls. | |
| 60 | | | | | | Darker ochre | |
| | | | | | | Tr. normal tan ls. | |
| | | | | | | 50% ochre silt 50% silica, after ls, hard, dense, lt. gray, microsucrose | |
| 70 | | | | | | Silt, mod. calc, soft, dk ochre Tr. chert | |
| | | | | | | Abund chert | |
| | | | | | | Silt, finely sandy, lt. maroon sl. calc. Abund chert Tr. ochre silt. | |
| | | | | | | As above w/some soft to hard wh. silt Abund chert | |
| 80 | | | | | | Chert, lt to med. gray and tan, glassy to microsucrose. Tr. silt | |
| | | | | | | 50% chert, as above 50% silt and partially silic. tan ls. flecked w/red and ochre | |
| | | | | | | 25% chert & onyx, 25% ls., as above, 50% silt, wh. to maroon | |
| | | | | | | Limestone, pinkish-tan, xln, abund. streaks and fracts w/greenish to ochre silt. Some dk red silica replacement in ls. | |
| | | | | | | 50% ls, as above 50% fract fill, as above Abund. chert | |
| | | | | | | Silt, ochre and lt. maroon, sl. calc. | |
| 90 | | | | | | Siltstone, bright deep ochre. Tr. red silt, sl. calc. Tr. chert | |
| | | | | | | 50% hd siltstone, as above 50% dk. chert | |
| | | | | | | 25% siltstone, as above 75% chert, dk, xln. to dense | |
| | | | | | | 50% dk chert 50% mottled onyx | |
| 100 | | | | | | Abund. siltstone | |
| | Log TD - 102' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 3

Location in property: N 14°30' W 845' from SW corner of claim

Total depth: 184'  Elevation at collar: 7626.7' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-31-57  Date completed: 9-6-57

Driller: Moab Drlg. - Bird  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 9-6-57

Record completed: 11-2-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | 25% Soil, brown, silty 25% silt, lt. ochre. 50% limestone, tan to wh., xln. to dense | |
| | | | | | | 90% clay, ochre to wh., sandy 10% red silt | |
| | | | | | | Silty clay, as above, calc. | |
| | | | | | | 50% silt, as above 50% chert (after l.s.) lt. gray, microsucrose | |
| 10 | | | | | | 80% silic. l.s. (chert) as above 10% l.s., recrystallized, earthy, wh. Tr. ~~red~~ silt | |
| | | | | | | Hard silica (after l.s.), multicolored, predom. tan, Tr. pink to red hematitic siltstone | |
| | | | | | | Ditto (mottled onyx) | |
| | | | | | | 25% onyx 25% l.s. tan, xln 50% clay, soft, silty, red and ochre | |
| | | | | | | Limestone, tan, microxln. | |
| 20 | | | | | | 50% l.s. 50% clay, silty, mottled pink & gray | |
| | | | | | | Siltstone, soft, clayey, pink (mottled maroon & wh.) | |
| | | | | | | Tr. dk. chert | |
| 30 | | | | | | Same ochre silt Abund. chert | |
| | | | | | | Limestone, tan, microxln, foss. Abund chert | |
| | | | | | | 25% l.s. as above, 25% dk. chert 50% siltstone, hd, red & ochre | |
| | | | | | | Limestone, tan, microxln Abund. chert | |
| 40 | | | | | | 15% l.s. as above 85% silty l.s., silic., lt. pastels | |
| | | | | | | 75% normal tan l.s., 25% silty l.s. as above | |
| | | | | | | Normal tan l.s. w/ abund. fractures filled w/ xln calcite and silty detritus. Abund chert | |
| | | | | | | Very cherty | |
| | | | | | | Limestone, tan, grading from normal to v. silic. | |
| 50 | | | | | | Normal foss. tan l.s. w/ some red silty fracts. | |
| | | | | | | sl. silic. | |
| | | | | | | Normal unaltered tan to pinkish-tan l.s. Abund. dk. chert. | |
| 60 | | | | | | | |
| 70 | | | | | | | |
| 80 | | | | | | | |
| 90 | | | | | | 20% l.s. as above 80% variq. limy silt, hard, pink, pale green and gray. | |
| | | | | | | Variq. dirty lime and limy silt | |
| | | | | | | Dirty limestone (about 50% normal, balance varicolored dark, reddish, speckled w/red, etc.) | |
| | | | | | | 50% l.s. as above 50% silt, calc., pale ochre | |
| 100 | | | | | | Ochre silt, as above, some speckled w/ hematite | |
| | | | | | | All ochre silt | |
| | | | | | | slightly greenish | |
| | | | | | | abund. calcite rhombs | |
| | | | | | | Limestone, lt. tan, earthy | |
| 110 | | | | | | 25% l.s. as above 75% silt, soft, earthy, calc., pale ochre. | |
| | | | | | | Ochre silt as above | |
| | | | | | | Abund. dk. chert | |
| | | | | | | 25% silt as above 75% l.s. dolomitic, dense, dk. gray | |
| | | | | | | 50% dolo. l.s. as above 50% l.s. earthy, pale ochre, dense | |
| | | | | | | Tr. red stain in fracts. | |
| 120 | | | | | | Limestone, tan, earthy, abund. red specks | |
| | | | | | | sl. more xln. | |
| | | | | | | Limestone, tan, xln. | |
| 130 | | | | | | Limestone, lt. gray, dolomitic, dense | |
| | | | | | | less dolomitic | |
| 140 | | | | | | | |
| | | | | | | Tr. pale ochre frac. fill | |
| | | | | | No sample | | |
| 150 | | | | | | Cuttings like fine sand - lime, pastel silts, and chert | |
| | | | | | No sample | | 156' Hit cavity, lost circulation Bit broke off. |
| 160 | | | | | | Fine cuttings Silt, calc., dk red and ochre; recrystallized l.s., and l.s. coarse xln. | |
| | | | | | | Silt, calc., dk red and ochre Few frags. silic. l.s. Last sample | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| | Log TD - 186' | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

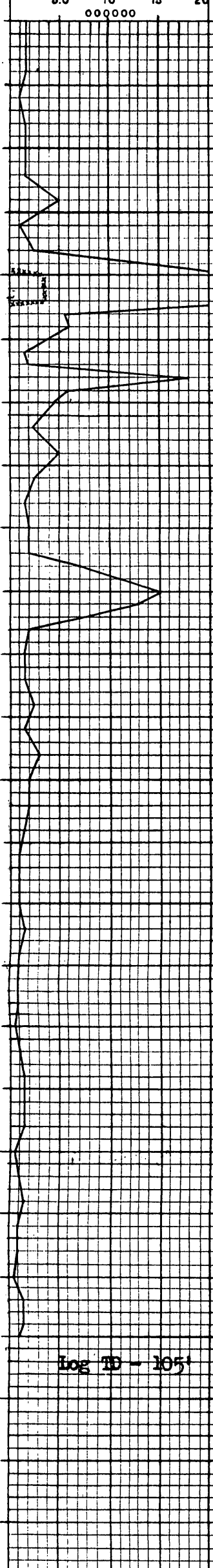
# MIDLAND MINING CO.
Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM
Hole no.: SA - 7A
Location in property: N 09°32' W 787' from SW corner of claim

Total depth: 106'
Elevation at collar: 7618.8' MSL
Hole size: 4 3/4"
Inclination: Vertical
Date commenced: 9-10-57
Date completed: 9-11-57
Driller: Moab Drlg. - Bird
Drill type: Mole drill
Sample interval: 2'
Sample examiner: Hauptman
Logging method: PRI 120
Logged by: CMH & IK
Date: 9-11-57

Record completed: 11-6-57 by Hauptman




| Depth (ft.) | $U_3O_8$ | $V_2O_5$ | Other | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|
| 0 | | | | Chert, brown, tan & wh. | |
| | | | | Predom. lt. colored, replacement of ls. micro-sucrose | |
| | | | | Grading to unaltered ls. | |
| | | | | Limestone, tan, xln with some silic. ls. | |
| 10 | | | | All ls., as above Tr. dk. chert | |
| | | | | 50% ls., as above 50% chert, dk. gray & blk., amorphous Tr. onyx | |
| | | | | Limestone, tan, xln Abund. chert Few platelets amber barite | |
| 20 | .001 | | | Ditto Tr. chert and pale green clay Fossiliferous | |
| | .001 | | | Limestone, as above w/ abund. silt, dk brown and red, indurated | Circ. 5 gal. diesel oil to wash out cuttings |
| | | | | 75% normal tan ls. 25% chert, dk. amorph. | |
| | | | | 10% chert Fossil. | |
| 30 | .004 | | | L.s. mod. recrlized, silty Fossil | |
| | | | | Limestone, tan, xln (Normal) | |
| 40 | | | | Abund. chert | |
| | .05 | | | 25% ls., as above 75% siltstone, hard compkt. cemented w/ silica (onyx), maroon, dk. gray & brown | |
| | | | | Limestone, tan & gray, normal to med. silic. Tr. onyx | |
| 50 | | | | Limestone, tan, xln (normal) | |
| | | | | Some pink silt in fracts. | |
| | | | | Abund. red hematite specks | |
| 60 | | | | 25% ls., as above 75% dk chert & onyx | Washed 5 gal diesel oil around to regain circ. |
| | | | | Silt, dk. ochre, calc. Tr. ls. & chert, as above | |
| | | | | 25% silt, as above 75% normal tan ls. | |
| | | | | Normal tan ls. | |
| | | | | Fossiliferous. | |
| 70 | | | | Tr. hematite stained | |
| | | | | Abund. buff to ochre ls. | |
| | | | | Some ls. very silic. | |
| | | | | Abund. tiny pyrite cubes | |
| 80 | | | | 75% ls., soft, recrlized, tan to buff, 25% clay ~~silt~~, calc., soft, pale green Tr. unaltered tan ls. | |
| | | | | Clay-Silt, pale green, soft, calc. Tr. unaltered ls. and ochre calc. silt | |
| 90 | | | | 50% clay-silt, as above 50% recrlized lime, pale ochre, soft, earthy, densely speckled w/ tiny pyrite xls. | |
| | | | | Normal tan ls., fairly dense | |
| | | | | Much of lime weathered?, soft, ochre | |
| 100 | | | | Normal tan ls., dense | |
| | | | | Abund. hematite specks | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 8

Location in property: N 10°25' W 739' from SW corner of claim

Total depth: 104'  Elevation at collar: 7600.9' MSL

Hole size: 4 3/4"  Inclination: Vertical

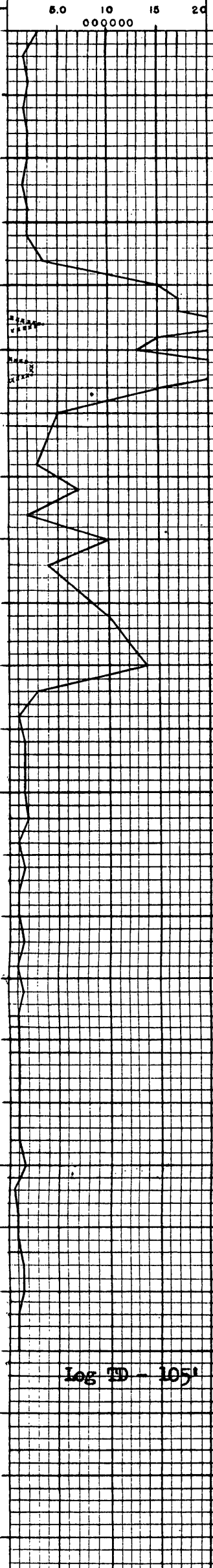
Date commenced: 9-10-57  Date completed: 9-10-57

Driller: Moab Drlg. - Bird  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 9-10-57

Record completed: 11-2-57 by Hauptman




| Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|
| | | | | Soil, dark brown Abund. chert frags | |
| | | | | Onyx (indurated, silicified silt, brown & red) Abund. dk. amorphous chert | |
| | | | | Predom. brown | |
| | | | | Silt, hard, sandy, gray Abund. chert | |
| | | | | Abund gray silica (altered l.s.) | |
| | | | | More reds | |
| | | | | Silt altered to onyx | |
| | | | | 50% onyx 50% murky chert | |
| | | | | Tr. unaltered l.s, tan, xln. | |
| | | | | 10% onyx, 40% unaltered l.s., 50% silica after. l.s. Tr. tyuyamunite | |
| .02 | | | | Limestone, 50% unaltered 50% silic., tan to gray Tr. chert Tr. tyuyamunite | |
| .01 | | | | Silic. l.s., lt. gray Tr. chert | |
| .06 | | | | Tr. tyuyamunite | |
| .02 | | | | Ditto | |
| | | | | Ditto | |
| | | | | Chert, dk tan to blk | |
| | | | | Tr. onyx | |
| | | | | Dense silica mass, mostly chert, predom. brown Tr. tyuyamunite (Sample all fines) | |
| | | | | Tr. tyuyamunite (Cave from above?) | |
| | | | | 75% onyx and chert, as above 25% unaltered tan l.s. Tr. tyuyamunite | |
| | | | | 80% l.s., tan, xln. 20% chert, dk. amorphous | |
| | | | | Limestone, as above Tr. chert | |
| .02 | | | | Abund chert | |
| | | | | Abund. onyx | |
| | | | | | Samples 56 to 74 all fines |
| | | | | Tr. onyx | |
| | | | | Some silty fract. fill | |
| | | | | Abund. red hematite specks and pale green clay fract. fill | |
| | | | | l.s. microxln to dense | |
| | | | | Limestone, dense, lt. gray | |
| | | | | Tr. green clay | |
| | | | | Tr. chert | |

# MIDLAND MINING CO.
Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM
Hole no.: SA - 9A
Location in property: N 08°40' W 635' from SW corner of claim

Total depth: 104'  Elevation at collar: 7581.0' MSL
Hole size: 4 3/4"  Inclination: Vertical
Date commenced: 9-11-57  Date completed: 9-12-57
Driller: Moab Drlg. - Bird  Drill type: Mole drill
Sample interval: 2'  Sample examiner: Hauptman
Logging method: PRI 120  Logged by: Kowalczyk  Date: 9-12-57

Record completed: 11-5-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Onyx, cherty; brown (Slope wash) | |
| | | | | | | All brown, ochre and maroon silicified silt | |
| | | | | | | Predom. dk. brown & ochre | |
| 10 | | | | | | | |
| | | | | | | Somewhat lighter ochre | |
| | | | | | | light, multicolored Tr. unaltered l.s. | |
| 20 | | | | | | (Sample all fines) | Circ. 5 gal. deisel oil to clean hole |
| | | | | | | Chert, dk, amorphous Tr. unaltered l.s. and onyx | |
| | | | | | | 50% chert 50% onyx | |
| 30 | | | | | | Onyx Tr. chert | |
| | | | | | | very cherty | |
| | | | | | | dker brown | |
| 40 | .03 | | | | | Tr. unaltered l.s. | |
| | .03 | | | | | 50% limestone, tan, xln. 40% l.s. mod. silic. micro-sucrose 10% silt, indurated brown & ochre, Tr. tyuimunite | |
| | | | | | | Limestone, tan, xln w/ streaks silic. silt Tr. dk chert | |
| | | | | | | Unaltered limestone, tan, microxln | |
| 50 | | | | | | | |
| 60 | | | | | | Fossiliferous | |
| | | | | | | Abund. chert | |
| 70 | | | | | | Sl. cherty Tr. silt, calc, pale green and pink, frag. till Tr. chert and calcite rhombs | |
| 80 | | | | | | 50% l.s., as above 50% silt, calc., pale orange and ochre | |
| | | | | | | Silt, as above Tr. l.s. | |
| | | | | | | silt, pale, soft & rexlized l.s. | |
| | | | | | | Limestone, rexlized, soft, tan & wh. | |
| | | | | | | 50% rexlized l.s., as above 50% silt, pink, calc, soft | |
| 90 | | | | | | Pink calc. silt, as above | |
| | .02 | | | | | Hematite specks | 99' to 102' — one sample |
| | .001 | | | | | | |
| 100 | | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |

Log TD - 104'

# MIDLAND MINING CO.
Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 206' Elevation at collar: 7652.0' MSL Hole no.: SA - 1

Hole size: 4 3/4" Inclination: Vertical Location in property: N 18°00' W 969' from SW corner of claim

Date commenced: 9-7-57 Date completed: 9-9-57

Driller: Moab Drlg. - Bird Drill type: Mole drill and rock bit (air)

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: Kowalczyk Date: 9-9-57

Record completed: 11-8-57 by Hauptman

| Depth (ft.) | Log — MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0; 5.0 10 15 20) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil, dk. brown, sandy & slope wash debris | |
| | | | | | | Mostly chert | |
| | | | | | | Chert, lt gray to pink, micro-sucrose | |
| | | | | | | 25% chert, as above 75% silt, soft, ochre, sandy | |
| | | | | | | 25% ochre silt 75% silt, brick red, finely micaceous | |
| 10 | | | | | | Silty clay, soft, dk. maroon Abund tiny selenite xls. Tr. dk maroon chert | |
| | | | | | | Tr. ochre or gray streaks | |
| | | | | | | Clay, dk. brick red, Abund included darker hard cherty pebbles, rounded | |
| 20 | | | | | | | |
| | | | | | | More silty | |
| | | | | | | Some bentonite specks | |
| 30 | | | | | | finely sandy w/ abund. wh. bent. streaks | |
| | | | | | | less bent. | |
| 40 | | | | | | Sl. lighter color v. little silt | |
| | | | | | | deep brick red | |
| 50 | | | | | | abund. pale tan bent. | |
| | | | | | | Clay, soft, pale gray-green, bent. abund. fine hematite specks. | |
| | | | | | | 50% clay, as above 50% clay, bright yellow-ochre. | |
| | | | | | | Silt, bright ochre, bent. | |
| 60 | | | | | | 50% ochre silt 50% brick red silt | |
| | | | | | | Silt, dk. brick red | |
| | | | | | | Silt, v. sandy, soft, wh. to ochre | |
| 70 | | | | | | Tr. sandy dark chert nodules | |
| | | | | | | Silt, soft, sandy, lt. orange-brown | |
| | | | | | | sl. darker | |
| | | | | | | Silt, bright red Tr hd cherty nodules | |
| | | | | | | Abund. selenite | |
| 80 | | | | | | deeper red | |
| | | | | | | Tr. ochre bentonite & chert nodules | |
| | | | | | | 50% red silt, as above 50% quartzite, blk, f.g., microxln | |
| 90 | | | | | | 10% chert 90% red silt | |
| | | | | | | 50% red sandstone, v.f.g. 50% red silt | |
| | | | | | | Some ochre bent. silt | |
| 100 | | | | | | 50% red silt 50% multicolored chert | |
| | | | | | | Some tan to wh. silt | |
| | | | | | | 80% silt, tan to wh., bent., firm 10% chert 10% red silt | |
| | | | | | | silt hd. & tight | |
| 110 | | | | | | Some pink hd siltstone | |
| | | | | | | Silt, ochre 10% chert 10% red silt | |
| | | | | | | 50% variegated silt 50% chert, lt. colored; amorphous to micro-sucrose | |
| 120 | | | | | | 25% silt, as above 75% chert | |
| | | | | | | silt sl. limey Tr. tan l.s. | |
| | | | | | | 80% l.s., tan, microxln 20% silt, soft, calc., hematite specks Tr. chert | |
| 130 | | | | | | 75% limestone and limey silt, varicolored 25% dk chert | |
| | | | | | | 90% limestone, rexlized, silty, ochre to wh. 10% chert | |
| | | | | | | More red hematitic silt | |
| 140 | | | | | | 90% chert, variq. brown, tan, & pink, amorphous to microsucrose 10% l.s., tan, micro-xln More silt and tr. onyx | |
| | | | | | | 80% silt, ochre, calc. Tr. red hematitic silt 20% unaltered l.s., tan, microxln. | |
| | | | | | | 80% silt, as above 20% chert, dk Tr. l.s. | |
| 150 | | | | | | Silt, ochre Tr. chert | |
| | | | | | No Sample | | |
| 160 | | | | | | Silt, ochre, calc, as above Tr dk chert | |
| | | | | | | 60% silt 40% chert Tr. onyx | |
| 170 | | | | | | 75% chert 25% silt, as above | |
| | | | | | | 25% chert 75% silt | |
| 180 | | | | | | Predom. silt, as above | |
| | | | | | | Tr. normal tan l.s. | |
| | | | | | | 50% l.s., tan, micro-xln 50% ochre silt, as above Tr. chert | |
| 190 | | | | | | Silt, ochre, calc. w/ sprinkling dk. red silt Tr. l.s. | |
| | | | | | | Brighter ochre | |
| 200 | | | | | | | |

Log TD - 206'

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 17

Location in property: N 9°55' W 405' from SW corner of claim

Total depth: 98'  Elevation at collar: 7536.9' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 7-26-57  Date completed: 7-31-57

Driller: Moab Drlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: CMH & LK  Date: 7-31-57 (to 94')

Record completed: 11-7-57 by Hauptman

| Depth (ft.) | Log – MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0; 5.0 10 15 20) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Siltstone, hard, siliceous, sandy, brick red & white | |
| | | | | | | 80% siltstone, as above 20% chert, tan, amorphous | |
| 10 | | | | | | predom. brick red | |
| | | | | | | 50% siltstone 50% chert | |
| | | | | | | Siltstone altered to onyx 20% chert | |
| | | | | | | 50% onyx 50% chert | |
| 20 | | | | | | All onyx Tr. chert | |
| | | | | | | 50% onyx 50% chert | |
| | | | | | | All tan chert Tr. onyx | |
| | | | | | | 80% chert 20% siltstone, hard, sandy, red & ochre | |
| 30 | | | | | | Siltstone becoming onyx | |
| | | | | | | | Washed 5 gal. deisel oil around to regain circ. |
| | | | | | | 50% chert 50% onyx Tr. sandy hd. siltstone | |
| 40 | | | | | | | |
| | | | | | | Chert, tan Tr. onyx | |
| | | | | | | 50% chert 50% onyx Some soft, pink-speckled silt streaks | |
| 50 | | | | | | 50% chert and onyx 50% siliceous siltstone, soft, wh. to pink to dk maroon | |
| | | | | | | 90% chert 10% soft siltstone, as above | |
| | | | | | No sample | | |
| 60 | | | | | | 50% silica (compl. replacement after l.s.) 50% soft limonitic and hematitic siliceous clay and silt | |
| | | | | | | | Samples 58 to 68 all fines |
| | | | | | | 75% replacement silica 25% silt | |
| 70 | | | | | | 90% limestone, tan, dense, sl. silic. 10% silt | |
| | | | | | | Tr. silty frac. fill | |
| 80 | | | | | | 80% limestone 20% frac. fill & chert | |
| | | | | | No sample | | |
| | | | | | | About 50% l.s. 50% soft calc. silt (samples all fines | |
| | | | | | | Limestone, tan, microxln Tr. chert & calc. silt | |
| 90 | | | | | | | Samples 90 to 94 all cement from 5 sacks dumped in hole in an attempt to seal off caving zone. Ineffective. |
| | | | | | | | Last sample 92-94 |
| | Log TD – 94' | | | | | | |
| 100 | | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 21

Location in property: N 09°30' W 575' from SW corner of claim

Total depth: 104'

Elevation at collar: 7564.5' MSL

Hole size: 4 3/4"

Inclination: Vertical

Date commenced: 9-16-57

Date completed: 9-16-57

Driller: Moab Drlg. - Bird

Drill type: Mole drill

Sample interval: 2'

Sample examiner: Hauptman

Logging method: PRI 120

Logged by: Hauptman & Guest

Date: 9-18-57

Record completed: 11-4-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | 50% Dark soil & slopewash 50% siltstone, ochre, sandy, hard | |
| | | | | | | Siltstone, hd, tightly cemented w/silica, sandy ⅓ deep maroon, ⅓ dk ochre, ⅓ white Abund. chert | |
| | | | | | | 25% hd. siltstone, as above 75% dk. chert and ccyx. | |
| 10 | | | | | | (sample all siliceous fines) | |
| | | | | | | 85% Flint-hard siliceous siltstone, lt. pink to wh., 15% dk. amorphous chert | |
| | | | | | | 60% siltstone & 10% chert, as above 30% limestone tan, microsln., sl. siliceous | |
| | | | | | | 25% siltstone, 15% chert, 65% unaltered tan l.s. | |
| 20 | | | | | | 80% silica (after l.s.), tan, micro-sucrose, 15% siliceous siltstone, pastel, 5% dk. chert | |
| | | | | | | Tr. unaltered l.s. | |
| | | | | | | Limestone, tan, dense, grading from silicified and micro-sucrose to unaltered & microsln. Abund. tan chert | |
| | | | | | | moderately to sl. siliceous Fossiliferous | |
| 30 | | | | | | Tr. dk ochre clay, fract. fill, speckled w/ limonite after pyrite | |
| | | | | | | more pink unaltered l.s. | |
| 40 | | | | | | 40% normal l.s. as above 60% recrystallized l.s., soft, sugary, wh. to ochre. Abund. dk chert | |
| | | | | | | Unaltered l.s., tan, pink & gray Tr. recrystallized l.s. Tr. chert | |
| | | | | | | Tr. ochre clay fract. fill | |
| 50 | | | | | | (Last sample) | |
| 60 | | | | | | | |
| 70 | | | | | | | |
| 80 | | | | | | | |
| 90 | | | | | | | |
| 100 | | | | | | | |
| | Log TD - 102' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

RECEIVED OCT 21 1957

August 16, 1957

Defense Minerals Exploration Administration
U.S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Document No. DMEA-4619
Monthly progress report, period June 19 through June 30, 1957

Gentlemen:

During the period of June 19 through June 30, initial drill-site survey work was performed on the Sandra Claim. The twenty holes authorized under Stage 1 of our DMEA contract were located on the ground by plane table survey. The locations were determined by scaling the distances off of Plate 2 of the contract, the geologic and topographic map of the Sandra Claim. Each drill-site location was prominently marked with a lath and stake and a number assigned to same.

After the drill-sites had been located, the west boundary of the Sandra Claim was located and prominently marked by a series of stakes. To further insure that none of the holes was closer to this west boundary line than allowed per contract, all holes within the critical distances of 50 or 100 feet, as the case may be, were checked by level chaining from the west boundary line and a safety tolerance of approximately 1 foot was assured at each site. Thus, the holes No. SA-18, SA-19, and SA-20 were located 51 feet easterly and at right angles to the western boundary of the Sandra Claim and holes No. SA-1, SA-2, SA-6, SA-10, SA-14, SA-15, SA-16, and SA-17 were located 101 feet easterly and at right angles to the western boundary of the Sandra Claim.

During this period, negotiations were under way to attempt to get a drilling contractor to perform the work on the Sandra Claim. Only two drilling companies were available in the area, namely Navajo Drilling Co. of Norfolk, Nebraska and Moab Drilling Co. of Moab, Utah. Since Moab Drilling would not have a rig available for a week or two, the greatest effort was being made toward negotiating a contract with Navajo Drilling Co.

Very truly yours,

Midland Mining Co.

C. M. Hauptman

C. M. Hauptman
President

Map removed. no drilling
see map July period
FMM

CMH/am

W

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

September 25, 1957

Defense Minerals Exploration Administration
U.S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Monthly progress report, period July 1-31, 1957

Gentlemen:

During the first week in July, bulldozer work to level the sites for drilling was conducted. We also negotiated a contract with Navajo Drilling Co. to perform the drilling called for under our DMEA contract. Navajo agreed to do this drilling at the rate listed in our contract, but because of the hazardous nature of the drilling, insisted on a "mercy" clause which would release them from the contract should the work be too damaging to their equipment or be unprofitable for them.

On Monday, July 8th, Navajo moved their Portadrill rig onto the Sandra claim and set up on hole No. SA-19. They began drilling about four o'clock in the afternoon and planned to work around the clock in twelve hour shifts. By 10 a.m. on July 9th, Navajo had made only 26 ft. on SA-19 and in the process, had used three new bits at $50.00 each. Their last bit had only cut about 6 inches of hole. Navajo had moved their rig to SA-18 and after about 8 hrs., had only 11 ft. of hole. Again they used three new bits and encountered great difficulty in keeping the hole clean. The last bit made less than 1 inch of hole and was pulled worn absolutely smooth. Navajo drillers then shut the rig down and said that they would have to wait for further orders from their supervisor. On Wednesday, July 10, I discussed the drilling situation with Mr. Wayne Cox, the supervisor for Navajo Drilling Co., and he informed me that his present equipment simply would not handle our drilling job. He and I felt that the only solution to the drilling of this chert on the Sandra claim would be a Mole drill manufactured by Gardner-Denver Co. for Mayhew Mfg. Co. This tool had been used with success by Lisbon Uranium Co. on their property about a mile south of the Sandra claim. Mr. Cox was uncertain whether or not his company would be interested in purchasing this expensive tool, but informed me that he would discuss it with his supervisors. On Monday, July 15, Mr. Cox notified me that his company was not interested in investing in a Mole drill and that he would therefore be forced to cancel his contract with us.

Meanwhile I had been contacted by Mr. William Lewis of Moab Drilling Co. in regard to our drilling on Pryor Mountain. Mr. Lewis informed me that he could have a rig available if we could use his services. Since Moab Drilling Co. had the greatest experience in Pryor Mountain drilling, I felt that they certainly would be the most logical to do our drilling on the Sandra. Mr. Lewis arrived in Billings to discuss our drilling problems on the 18th of July and at that time we contracted to use Moab Drilling equipment. Moab would not, however, take the job on a footage basis, but rather would do it only at the rate of $18.00 per hour for the use of their rig and we would have to furnish all bits and other necessities, such as compressors, cement, air lines, a helper, etc.

Midland Mining Co. also contracted at this time to purchase a Mole drill and accessories from Mayhew Mfg. Co.

On Tuesday, July 23, Moab Drilling moved their Mayhew rig to the Sandra and rigged up on SA-18. They began to drill with a Mole drill, but after making 6 ft. of hole, found that our 210 compressor was inadequate for operating the Mole drill and keeping the hole clean. We brought in a rented 125 compressor and compounded it with our own compressor to boost the air supply. The first breakdown of many in the experimental Mole drill occurred on Wednesday, July 24, when a tapit broke in the bit. The part was replaced by Mayhew Mfg. Co., however, and SA-18 was completed on July 25 at a total depth of 102 ft.

On Friday, July 26, the rig was moved to SA-17 and drilling began about 9:30. This hole was drilled to 22 ft. when a sheared thread in the Mole drill stopped operations. New parts had to be ordered for the Mole drill and we decided while waiting for these parts to bring in a rented 600 cu. ft. compressor as our air supply to this point had been barely adequate and the drillers were having considerable difficulty keeping the hole clean. The large compressor was moved up to the Sandra on July 27. On Monday, July 29, Moab made up the Mole drill with new parts and continued drilling on SA-17. Since this hole was close to the edge of the cliff, they encountered badly shattered and crevassed rock and the drilling was extremely rough and slow. In 6 hrs., they made 62 ft. in this hole scheduled for 200 ft. At a depth of 82 ft., the bit hung up solidly and the drill pipe twisted off, leaving the Mole drill, one drill collar, and one stand of drill pipe in the hole. Fishing tools were brought up on Tuesday, July 30, and the fish was recovered after about 2 hrs. The drilling was continued about noon, but after 5½ hrs., the drill had only made 8 ft. in badly broken and shattered rock, which made it almost impossible to keep the hole clean. We mixed four sacks of quick-set cement and dumped it in the hole, hoping that this would cement off the caving zones. On Wednesday, July 31, we drilled out this cement plug and found that it had very little effect in stopping the caving. The drilling continued to be as rough as before and at a depth of 98 ft., the pipe again twisted off just above the drill collar. The fish was recovered about noon. Since we had already put more than 21 hrs. of rig time on this hole, we decided to temporarily abandon it and move the drill to SA-13.

Both holes SA-17 and SA-18 were probed to their total depth, but no significant radioactivity was detected. The drill record for SA-18 is included with this report along with a progress map indicating the drill hole sites and the contract work completed.

Very truly yours,

Midland Mining Company

C. M. Hauptman

C. M. Hauptman
President

RECEIVED
OCT 4 1957
U. S. G. S.
SPOKANE, WASH

CMH/am
Enc.

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 102' Elevation at collar: 7528.6' MSL

Hole no.: SA - 18

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 15°45' W 345' from SW cornerof claim.

Date commenced: 7-23-57 Date completed: 7-25-57

Driller: Moab Drlg. - Hays Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: CMH & LK Date: 7-25-57

Record completed: 9-5-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Limestone, tan, microxln, sl. cherty | |
| | | | | | | ditto, with abund. ochreaceous and hematitic silt | |
| | | | | | | Silt, sandy, firm, multicolored, predominantly maroon | |
| | | | | | | Chert, dk. gray to white sl. silty | |
| 10 | | | | | | Silt, indurated, siliceous, sandy; Chert, pink & white. Trace qtz. fract fill | |
| | | | | | | | Many fractures and caverns from surface to 22'. |
| 20 | | | | | | Tr. red & ochre silt fract. fill | |
| | | | | | | Some gray chert | |
| | | | | | | No-recovery | |
| | | | | | | Silt and chert as above with abund. s.s., red. fine-grained, quartzitic | |
| 30 | | | | | | Ditto less s.s. | |
| | | | | | | Some nodular vug quartz | |
| 40 | | | | | | Ditto with abund. silt, soft to firm, sandy, ashy | |
| | | | | | | Chert Tr. silt as above | |
| 50 | | | | | | Chert, as above and Sandstone, silty, very fine grained, hard, maroon | |
| | | | | | | Predom. chert as above 15% silt, wh. to ochre, sandy, silicic. Tr. tan limestone | |
| 60 | | | | | | Silt, lt. ochre, calcareous (80%) & Ls., tan, microxln | |
| | | | | | | | Circulated 5 gals. diesel oil to clean hole. |
| | | | | | | Some white silt | |
| 70 | | | | | | sl. cherty | |
| | | | | | | Silt, variegated wh., maroon, gray, some sandy, calc. to non-calc. Tr. chert | |
| | | | | | | Limestone, tan, dense to micro sucrose, 10% silt, sandy and chert | |
| | | | | | | Chert, lt. tan Tr. ls. | |
| 80 | | | | | | Limestone, tan, dense, cherty, slightly argillaceous | |
| | | | | | | Chert, lt. tan to gray Tr. unaltered to siliceous limestone | |
| | | | | | | Tr. glassy quartz | |
| | | | | | | Limestone, tan, dense, hard | |
| 90 | | | | | | | |
| | Log TD - 94' | | | | | Moderately cherty | |
| | | | | | | Chert, dk red and brown Tr. ls. | |
| 100 | | | | | | 50% chert as above and 50% Limestone as above | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |

MIDLAND MINING COMPANY
207 Hedden Bldg.
Billings, Montana

EXTRA COPY
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| DATE | INITIALS | CODE |
|---|---|---|
| 10/15 | [illegible] | 110 |
| | [illegible] | 700 |
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| | | |
| | | |

Defense Minerals Exploration Administration
U.S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4619
Monthly progress report, ~~period August~~
1-31, 1957

Gentlemen:

Hole SA-13 was drilled to a total depth of 112 ft. without any particular difficulty on August 1st. On August 2nd, the drill was moved to SA-11, one of the proposed 200 ft. holes. Drilling progressed on this hole without difficulty to about 80 ft., where a moderate flow of water was encountered. Drilling was rough with practically no returns below this depth and a rock bit was interchanged a number of times for a Mole drill in a very cavernous zone from 100-138 ft. On the 3rd of August, still on SA-13, the drill collar twisted off at 174 ft. On August 6th, the repaired drill collar was brought up to the mountain and after cleaning the hole and recovering fish, operations were again shut down due to damage to the drill. Repair parts for the Mole drill were not received until August 9th, but still no further drilling could be done because some parts had been damaged in shipment. The necessary parts for the drill were finally brought up on the 10th of August and drilling was resumed. Due to a badly caving hole, it was necessary to interchange rock bit and Mole drill to finally work the hole down to 180 ft., at which depth SA-11 was completed on the 10th. On this date, the rig was moved to SA-10 and this hole was drilled and completed on this date without any difficulty to a total depth of 105 ft. SA-14 was drilled to a depth of 72 ft. on the 12th. This, after many mechanical and natural rock difficulties. Circulation was lost in this hole at 55 ft. and again a rock bit had to be interchanged with the Mole drill. On August 13th, SA-14 was drilled to a depth of 100 ft. at which depth the Mole drill broke in half, leaving an unrecoverable fish in the bottom of the hole. Again more parts had to be ordered from Mayhew for the Mole drill. On August 16th, the rig was moved and new parts for the new Mole drill, assembled. Drilling was begun on SA-15 and again circulation was lost at 55 ft. SA-15 was completed on this date, however, at a total depth of 105 ft. and the rig moved to SA-16. On August 17, while drilling at 61 ft. on the hole No. SA-16, the tappet in the Mole drill again broke and operations ceased for that day. Drilling resumed on August 19 on SA-16. The bit and broken tappet could not be fished from the hole. Therefore, the rig was moved a few feet and the new hole drilled to a total depth of 104 ft.

On August 20th, the rig was moved from SA-16 to SA-19. SA-19 was bottomed at a total depth of 104 ft. this date and the rig was moved to the site of SA-20. On August 21st, drilling was begun on SA-20. Circulation in this hole was lost at 60 ft. and some rough drilling was encountered to 110 ft., at which depth, the drill pipe was twisted off, leaving the Mole drill, the drill collar, and one stand of pipe in the hole. The fish was recovered, however, and drilling continued to 184 ft., at which time the entire Mole drill was lost in the bottom of the hole. Two hours was spent fishing for the tool, but the fish could never be felt. Drilling conditions indicated that the Mole drill simply fell over in

a cavern and probably rolled an unknown distance from the drill hole. When this hole was probed, the probe went 250 ft., the full length of the probe cable, indicating a cavern or perhaps fissure to at least this depth.

A new Mole drill arrived on August 26th and the rig was moved to SA-12, which was drilled with no particular difficulty, to a depth of 102 ft. total. The rig was then moved to the site of SA-4. On Saturday, August 27, SA-4 was drilled and completed at a total depth of 102 ft. by noon. On Monday, August 29th, the rig was moved to SA-6. Difficulty in keeping the hole clean necessitated a number of trips to clean the Mole drill to keep it in working order, so only 86 ft. of hole was made this date. On August 30th, SA-6 was completed at a depth of 102 ft. by noon and the rig moved to the site of SA-5. SA-5 was drilled and completed at a total depth of 102 ft. on this date. On August 31st, the rig was moved to the site of SA-3 and 102 ft. were drilled in this hole slated to go 200 ft.

In spite of the difficulties with the Mole drill, it was found that this tool is the only thing capable of penetrating the dense chert encountered on this prospect. Mayhew still considers this an experimental tool and we have been assured by this company that Midland Mining Co.will not have to assume the cost of more than the original tool.

Each of the holes was probed immediately after the drilling thereof. The results of this radioactive survey and all of the other pertinent information on each hole, may be found on the enclosed drill record of each hole. Significant radioactivity was found in SA-4, SA--11, SA-13, and SA-15. The best hole was SA-13, with 10 ft. of indicated ore-grade material. Assays of the samples of these intervals was only fair; however, the samples may not be absolutely representative, as no method was available for trapping the extremely fine cuttings. Also, since the radioactive intervals in the various holes do not appear to correlate, final evaluation of the apparent ore zones will have to wait until completion of this first stage of the drilling program.

Copies of the drill record for each hole completed during this period are enclosed along with a progress map covering the proposed drill program under our contract.

Again no voucher is submitted for expenses under our drilling program inasmuch as no bill was received from Moab Drilling Co. to this date. Also a change in our contract relating to vouchering is being requested.

Very truly yours,

Midland Mining Co.

C. M. Hauptman

C. M. Hauptman
Pres.

CMH/am
Enc. 13

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 4

Location in property: N 955' W 855' from SW corner of claim

Total depth: 102'  Elevation at collar: 7626.2' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-27-57  Date completed: 8-27-57

Driller: Moab Drlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-27-57

Record completed: 10-3-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil, dk. brown, silty | |
| | | | | | | Siltstone, dk. brown & maroon, sandy, firm | |
| | | | | | | Siltstone, as above but hd. & brittle Abund. tan & pink chert | |
| | | .006 | | | | Chert, calc, replacement after lime, dk. to med. gray, hd, micro-sucrosic w/ 10% siliceous silt, dk. brown & dk. red, hd, dense. | |
| | | .005 | | | | | |
| 10 | | | | | | Limestone, tan, microsln, unaltered | |
| | | | | | | Tr. chert | |
| 20 | | | | | | Fossiliferous | |
| 30 | | | | | | Tr. lt. gray to blk. chert | |
| | | | | | | Abund. lt. gray & tan chert | |
| 40 | | | | | | | |
| 50 | | | | | | | |
| 60 | | | | | | 50% chert | |
| 70 | | | | | | Abund. blk. chert | |
| | | | | | | Tr. chert | |
| | | | | | | Tr. silty recrized lime, varig. pale gray, maroon, pink & ochre | |
| 80 | | | | | | 50% l.s., as above 50% recrized fract. fill, as above | |
| | | | | | | Limestone, tan, dense | |
| | | | | | | 10% l.s. as above 90% siltstone, calc, firm to hd., ochre w/ some reddish specks. | |
| 90 | | | | | | Tr. clay, gray-blue, firm, non-calc. | |
| | | | | | | Tr. chert & calcite rhombs | |
| 100 | | | | | | Chert, limy (onyx) banded dk. gray & maroon | |
| | | | | | | Cherty lime (or limy chert), dk. gray, micro-sucrosic. | |
| | Log TD - 104' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 102' Elevation at collar: 7614.7' MML

Hole no.: SA - 5

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 1405' W 792' from SW corner of claim

Date commenced: 8-30-57 Date completed: 8-30-57

Driller: Moab Drlg. - Bird Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: Kowalczyk Date: 8-30-57

Record completed: 10-2-57 by Hauptman

| Depth (ft.) | Log — MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0; 5.0 10 15 20) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Silt, brick red to lt. gray, sandy, soft. non-calc. | |
| | | | | | | reddish-pink, more sandy, hd. | |
| | | | | | | 75% hd silt, as above 25% chert, lt. tan, microsucrosic, very hd. & brittle | |
| | | | | | | 10% siltstone, as above, 90% chert, as above | |
| 10 | | | | | | 50% siltstone, as above 50% claystone, wh., hard, sl. silty, siliceous Tr. chert | |
| | | | | | | Some darker brown & red silicified silt stone (onyx) | |
| | | | | | | All siltstone, silicified, brick red to dk. brownish red, hd., brittle. | |
| 20 | | | | | | Onyx, mottled lt. maroon & gray, very hd. | |
| | | | | | | 10% onyx, as above 90% chert, sedimentary, lt. tan, to wh., amorph. to microsln. | |
| | | | | | | Chert, as above | |
| 30 | | | | | | Tr. clay, soft, soapy, wh., non-calc. | |
| | | | | | | Silicified l.s, tan, microsucrosic, glassy | |
| | | | | | | w/abund. dk brown to blk. chert | |
| | | | | | | Chert, dk. Tr. w/pinkish cast non-calc. | |
| 40 | | | | | | Quartz, tan (after limestone) Tr. tyuyamunite | |
| | | | | | | Limestone, tan, microsln 10% tan qtz, as above Tr. tyuyam. | |
| | | | | | | Limestone, as above no Umineral. | |
| | | | | | | fossiliferous | |
| 50 | | | | | | Tr. non-calc clay fissure fill | Sample all fines |
| | | | | | | | " " " |
| 60 | | | | | | Abund chert | |
| | | | | | | Chert, amorph. to microsucrosic, tan to dk. brown Tr. l.s. | |
| 70 | | | | | | Limestone, tan, microsln. | |
| | | | | | | Some pastel dense l.s. & calcite rhombs | |
| | | | | | | Tr. clay, soft, green, non-calc. | |
| 80 | | | | | | tiny hematite specks in l.s. | |
| | | | | | | Silt, calc., dk. ochre to pink Tr. tyuyam | |
| | | | | | | tr. onyx & calcite xls. " " | |
| 90 | | .001 | | | | Silt, calc., pale ochre, abund. calcite rhombs. Tr. pale green calc. clay | |
| | | | | | | 90% silt, as above 30% green clay, as above | |
| | | | | | | clay very pale | |
| | | | | | | Silt calc, pale ochre, Tr. green clay | |
| 100 | | | | | | Silt, as above | |
| | | | | | | Tr. tan, xln l.s. | |
| | Log TD - 106' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 6

Location in property: N 16°30' W 774' from SW corner of claim

Total depth: 102'  Elevation at collar: 7610.5' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-29-57  Date completed: 8-30-57

Driller: Moab Drlg. - Bird  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-30-57

Record completed: 10-2-57 by Hauptman

| Depth (ft.) | Log — MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0; 5.0 10 15 20) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Limestone, tan, microxln Some brown soil | Slope wash |
| | | | | | | Limestone pebbles, red silty clay & chert | |
| | | | | | | Silt, brick red, sandy chert nodules | |
| | | | | | | Silt, bright red, v. sl. sandy | |
| 10 | | | | | | Tr. ochre silt | |
| | | | | | | 50% clay, silty, soft, ochre 50% clay, white, soft sdpy, non-calc. | |
| | | | | | | 75% ochre silty clay 25% soft wh. clay | |
| | | | | | | 1/3 ochre clay, 1/3 wh. clay, 1/3 silt, maroon, sandy | |
| 20 | | | | | | 1/2 ochre clay, 1/2 maroon silt | |
| | | | | | | Silt, bright brick red, sl. sandy, non-calc. | |
| | | | | | | lighter and pinkish | |
| | | | | | | shoc. brown Tr. chert | |
| 30 | | | | | | Abund. chert and 2ndary quartz | |
| | | | | | | Scattered clear amber barite xls. | |
| | | | | | | Siltstone, dk. maroon, hard, brittle very sandy and cherty. | |
| | | | | | | Silt, pink and wh., firm to hd., sl. sandy | |
| 40 | | | | | | Abund. chert | |
| 50 | | | | | | Siltstone, lt. gray to dk. maroon, sandy, hd, brittle sl. cherty | |
| | | | | | | Siltstone, lt. brick red, sl. sandy Tr. chert | |
| | | | | | | Tr. dk. gray chert | |
| | | | | | | Ditto Some white Abund. chert | |
| | | | | | | Chert, wh. to dk. gray, clear to micro-sucrosic | |
| 60 | | | | | | Siltstone, wh., pastel pink & gray, hd. to firm, sl. sandy Abund med. gray chert | Cuttings from 58 to 80 fine dust only |
| | | | | | | Ditto (practically chert) | |
| 70 | | | | | | | Washed 5 gal. deisel oil around to maintain circulation and clean hole. |
| | | | | | | more reds Tr. limestone | |
| 80 | | | | | | 50% siliceous siltstone, as above 50% tan ls. | |
| | | | | | | Limestone, tan, microxln Few streaks silty fissure fill. Abund. calcite rhombs | |
| 90 | | | | | | Abund ostracods | |
| | | | | | | Tr. silt, red | |
| | | | | | | Abund red silt, (fissure fill) Tr. clay, green, bentonitic, sl. calc | |
| | | | | | | 50% ls. 50% siltstone, siliceous, firm to hard, pastel pink, ochre, gray, and wh. Tr. green clay | Sample all fines |
| | | | | | | 90% siltstone, as above 10% ls. as above | " " |
| 100 | | | | | | 90% silt, ochre, soft, specked w/ hematite; 10% clay, soft, pale green, calc. | |
| | | | | | | 20% ochre silt, 80% green clay Abund calcite xls. and rhombs. | |
| | Log TD - 104' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 10

Location in property: N 15°45' W 692' from SW corner of claim

Total depth: 105'  Elevation at collar: 7586.5' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-10-57  Date completed: 8-10-57

Driller: Moab Drlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-10-57

Record completed: 10-2-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Clay, deep red & ochre, sandy | |
| | | | | | | Tr. sandstone, wh., v.f.g. | |
| | | | | | | Silt, bright ochre, sandy, firm | |
| | | | | | | lighter ochre | |
| | | | | | | Tr. lt. gray chert | |
| 10 | | | | | | Siltstone, sandy, mottled and speckled maroon and lt. gray. | |
| | | | | | | predom. deep maroon | |
| | | | | | | v. sl. sandy | |
| 20 | | | | | | | |
| | | | | | | brick red | |
| | | | | | | sandy | |
| 30 | | | | | | Sandstone, silty, pale maroon, quartzitic | |
| | | | | | | 50% s.s. as above 50% siltstone, maroon, sandy | |
| | | | | | | Siltstone, maroon, sandy Tr. chert, dk. | |
| 40 | | | | | | 10% Siltstone, as above 40% siltstone, speckled gray-wh and maroon, sandy, hd 50% chert, dk. gray | |
| | | | | | | 50% chert, 50% hd. siltstone, as above. | |
| | | | | | | 20% chert 80% siltstone | |
| | | | | | | 75% chert 25% siltstone | |
| 50 | | | | | | Chert, dk gray, amorph. | |
| | | | | | | Tr. speckled ochre silt | |
| | | | | | | 75% chert 25% siltstone, ochre, firm to hd. | |
| | | | | | | 25% chert 75% siltstone, as above | |
| 60 | | | | | | 25% chert, 25% siltstone 50% lime, siliceous, tan, micro-sucrosic | |
| | | | | | | 10% chert 90% l.s. tan, grading from unaltered to siliceous | |
| | | | | | | Limestone, as above | |
| | | | | | | Tr. amorph. chert | |
| | | | | | | Limestone, tan, microxln, unaltered | |
| 70 | | | | | | Chert, dk reddish-brown, microsucrosic | |
| | | | | | | onyx Tr. tyuyamunite | |
| | | | | | | predom. gray chert Tr. unaltered dm ls | |
| 80 | | .001 | | | | Limestone, tan to pinkish tan, some hematite specks, dense, hard. Abund chert Tr. dk. red silty fract. fill | |
| | | | | | | Abund l.s. dk. gray, microsucrosic | |
| | | | | | | 80% l.s. as above 20% clay, pale pastel green, firm, sl. calc. Abund. calcite rhombs | |
| | | | | | | Limestone, tan, dense, hard, micro-sucrosic | |
| 90 | | | | | | Limestone, pink to tan to dk. gray, more coarsely xln than above. | |
| | | | | | | Some lt. ochre calc. silt & chert | |
| | | | | | | Siltstone, pale ochre, speckled w/ few spots of red, firm, calc. | |
| | | | | | | Abund. calcite rhombs. | |
| 100 | | | | | | 10% clay, pale green gray, mod. calc. | |
| | Log TD - 105' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 180' Elevation at collar: 7583.7' MSL

Hole no.: SA - 11

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 8°50' W 672' from SW corner of claim

Date commenced: 8-2-57 Date completed: 8-10-57

Driller: Moab Drlg. - Hays Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: CMH & LK Date: 8-3&10-57

Record completed: 9-27-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | 80% Silt, indurated, siliceous, variegated reds & grays and 20% chert, dk. gray. | |
| | | | | | | Silt predom. dk. brownish-red and sandy | |
| | | | | | | All silt, as above Tr. chert | |
| 10 | | | | | | 25% chert | |
| | | | | | | 50% silt, 50% chert Tr. siliceous lime | |
| | | | | | | 25% silt, 25% chert, as above 50% Limestone tan, microxln. | |
| 20 | | | | | | 80% chert, 15% hd. variq. siltstone | |
| | | | | | | All chert | |
| | | | | | | 50% chert 50% hard siltstone, variq. reds. | |
| | | | | | | Siltstone, variegated, indurated to soft. Tr. tan limestone Tr. tyum. in softer silt. | |
| | .05 | | | | | Limestone, tan, microxln. Tr. tyum. | |
| 30 | | | | | | Limestone, as above No U mineralization | |
| | | | | | | Do. Sl. cherty | |
| 40 | | | | | | | |
| | | | | | | Tr. limonite staining in fracts. | |
| | | | | | | 25% reworked l.s. and calc., limonitic clay | |
| 50 | | | | | | All limestone (typ. Mod.) | |
| | | | | | | Tr. blk. chert | |
| 60 | | | | | | Limestone, tan, dense, hard, mod. dolomitic | |
| | | | | | | Tr. pink limestone | |
| | | | | | | Tan Mod. ls. w/ some fract. fill (silty calc. clay, clear calcite xls, lt. gray to wh. chert) | |
| 70 | | | | | | Limestone, pink, micro sucrosic | |
| | | | | | | Some reworked lime | |
| | | | | | | Silt, variegated, calc. speckled w/hematite and limonite | |
| | | | | | | Silt, soft, ochre, calc. | |
| 80 | | | | | | Lime, reworked, spongy, vugular, limonite stained | |
| | | | | | | Some ochre calc. clay | Abundant water kicked out in returns during drilling from 82' to 84' |
| | | | | | | No returns | |
| 90 | | | | | | Ochre clay and dense recrized l.s. | |
| | | | | | | Lime, recrized, hemotitic, silty | |
| 100 | | | | | | Unaltered Mod. l.s. (tan, hd, microxln) Tr. xln calcite vug fill | |
| | | | | | | (No returns below 102') | Abund. cavities encountered during drilling from 100' to 138' |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | Hole caved at 150 during drilling |
| 160 | | | | | | | |
| 170 | | | | | | | Hole caved at 174' during drilling |
| 180 | | | | | | | |
| | | | | | | | Radiometric log below 180' probably in a fissure or cavern |
| 190 | | | | | | | |
| 200 | Log T.D. - 200' | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 12

Location in property: N 5°05' W 622' from SW corner of claim

Total depth: 102'  Elevation at collar: 7582.5' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-26-57  Date completed: 8-26-57

Driller: Moab Dlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-26-57

Record completed: 10-1-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil, dk brown, sandy w/ pebbles of lt chert & limestone | |
| | | | | | | Lt. to dk. chert pebbles (slope wash debris) | |
| | | | | | | Limestone, tan to pink-tan, microxln, fossiliferous Tr. chert. | |
| 10 | | | | | | Tr. silt, ochre & brick red, non-calc. | |
| | | | | | | 50% chert, dk gray to blk | |
| | | | | | | 75% chert, as above | |
| | | | | | | 25% chert Tr. ochre silt. | |
| 20 | | | | | | 25% L.s., as above. 50% siliceous lime 25% chert | |
| | | | | | | Limestone, tan, pink, microxln sl. cherty. | |
| 30 | | | | | | 50% cherty lime and amorphous chert | |
| | | | | | | L.s., tan to pink, microxln | |
| | | | | | | Tr. chert | |
| | | | | | | 10% chert Tr. silt, soft, ochre | |
| 40 | | | | | | | |
| 50 | | | | | | Tr. chert | |
| | | | | | | Some hematite staining | |
| 60 | | | | | | | |
| | | | | | | 50% l.s., as above 25% clay, greenish-ochre, silty, hd, calc., hematite speckled, 25% calcite rhombs, pink to wh. w/ tr. chert | |
| 70 | | | | | | Claystone, calc, hd, pale greenish ochre, scattered hematite specks. Abund. xln calcite. Tr. pale green hematitic clay. | |
| | | | | | | Claystone, pale gray-green, mod. calc., hard | |
| | | | | | | Siltstone, pale green, heavily speckled & mottled w/ limonite stain, calc, firm Abund calcite rhombs | |
| | | | | | | Some sugary recrystallized lime | |
| 80 | | | | | | Tr. dk chert & dk red siliceous siltstone | |
| | | | | | | 50% siltstone as above 50% rosettes and rhombs of clear to pink calcite | |
| | | | | | | Siltstone, pale green to ochre, hd. Tr. calcite | |
| | | | | | | Tr dk. cherty l.s. and normal l.s. | |
| 90 | | | | | | Limestone, recrystallized, wh. soft, earthy. Abund. calcite xls. | |
| | | | | | | harder Some unaltered l.s. | |
| | | | | | | Sl. cherty | |
| 100 | | | | | | 10% l.s., as above 90% lime, silicified, microsucrosic | |
| | | | | | | All as 90% above | |
| | Log TD - 101' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 13

Location in property: N 11°50' W 648' from SW corner of claim

Total depth: 112'  Elevation at collar: 7579.1' MSL

Hole size: 4 3/4"  Inclination: Vertical

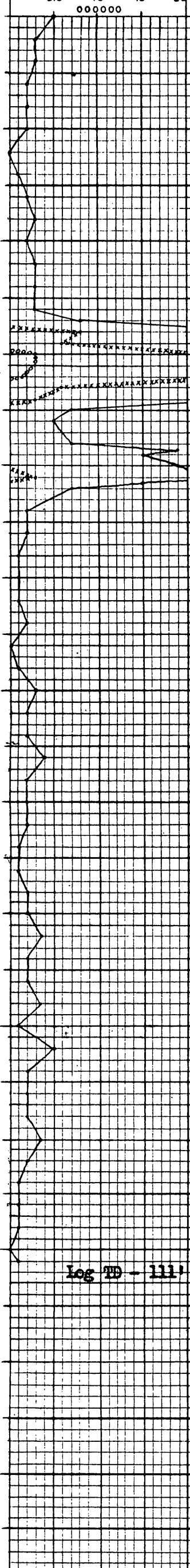
Date commenced: 8-1-57  Date completed: 8-1-57

Driller: Moab Drlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: CMH & IK  Date: 8-2-57

Record completed: 9-27-57 by Hauptman




| Depth (ft.) | $U_3O_8$ | $V_2O_5$ | Other | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|
| | | | | Silt, limonitic and yellow-brown to hematitic and brownish-red. Some dk. gray chert | |
| | | | | 50% brown silt and 50% chert as above | |
| | | | | Tr. ls., gray-white, dense | |
| | | | | 80% siltstone, reddish-pink, argill., non-calc., and 20% silt, yellow, as above | |
| | | | | Siltstone, red, non-calc. 10% chert, dk. gray | |
| | | | | Tr. wh. silt | |
| | | | | Siltstone, mottled red & gray, hard, silicified, microsucrosic w/ tr. dense gray chert | |
| | | | | 50% lt. siltstone as above & 50% dk. gray chert | |
| | .003 | | | Chert, quartitic, dk. brown, quartz xls in vugs, dense | |
| | .13 | .59 | | Siltstone, lt. gray, gritty, silic. 15% chert, dk. gray | |
| | .36 | 1.22 | | Tr. tyuyumunite | |
| | .006 | | | All siltstone, as above | |
| | | | | Do. No tyum. | |
| | | | | Do. & 25% chert, gray, smoky | |
| | | | | Do. 50% chert | |
| | .02 | | | 50% chert, as above 50% ls, tan, microxln. & limestone, silic., microsucrosic | |
| | | | | Tr. variegated siltstone | |
| | | | | Limestone, tan, microxln. | |
| | | | | Tr. chert | |
| | | | | Abund. foss. | |
| | | | | Limestone, white, earthy | |
| | | | | Do & Ls., tan, microxln | |
| | | | | 20% tan ls. 80% chert, dk. gray | |
| | | | | Limestone, tan, microxln Tr. pastel pink & orange silt | |
| | | | | Limestone, as above | |
| | | | | Do. partially dolomitized | |
| | | | | Limestone, dolomitic, tan, microsucrosic 75% ls. tan, dolomitic, 15% limestone, dk. gray xln, & 10% shale, pale green, silty, | |
| | | | | Limestone, tan, microxln, foss. | |
| | | | | Do some partialy recrized, wh. to ochre soft, earthy | |
| | | | | Limestone, tan, soft, earthy. limonite stained | Cuttings wet |
| | | | | Some xln limestone & calcite xls. | Hole wet (no standing water) from 80' to T.D. after standing 12 hours |
| | | | | Some unaltered ls. | |
| | | | | All unaltered tan ls. many calcite xls. | |
| | | | | Earthy limestone, soft, limonitic | |
| | | | | Limestone, tan, microxln, hard sl. dolomitic | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 14

Location in property: N 14°05' W 593' from SW corner of claim

Total depth: 100'  Elevation at collar: 7565.1' MSL

Hole size: 4 3/4"  Inclination: Vertical

Date commenced: 8-12-57  Date completed: 8-13-57

Driller: Moab Drlg. - Hays  Drill type: Mole drill

Sample interval: 2'  Sample examiner: Hauptman

Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-15-57

Record completed: 9-25-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil, dk. brown, sandy | |
| | | | | | | Sandstone, tan to pink, very fine grain, quartzitic, limonite stained w/abund. brn. clay. | |
| | | | | | | Brown sandy clay, w/traces ss. as above, milky chert, hard maroon clay, and tan limestone | |
| | | | | | | Quartz, secondary, quartzitic, finely xln, vugular, & brown ochreaceous clay | |
| 10 | | | | | | 50% ochre sandy clay w/frag. filling vugular quartz and 50% hard maroon clay Non-calc. | |
| | | | | | | Hard silty clays, predom. maroon. Abund. gray milky chert. | |
| | | | | | | 50% chert | |
| 20 | | | | | | Silt, as above, maroon grading to lt. gray w/fine maroon specks Tr. ochre clay | |
| | | | | | | 50% maroon silt, 50% ochre silt | |
| | | | | | | Chert, gray and highly indurated (cherty) maroon siltstone | |
| | | | | | | Siltstone, cherty, as above | |
| 30 | | | | | | Chert, gray to pink, microcrystalline | |
| | | | | | | Tr. tan limestone | |
| 40 | | | | | | Limestone, tan, microxln, foss | |
| | | | | | | Chert, wh. gray, and pink, dense Tr. ls. | |
| | | | | | | Chert, gray | |
| 50 | | | | | | Limestone, siliceous | |
| | | | | | | Limestone, tan, microxln (unaltered Mod.) | |
| | | | | | | (No returns below 56') | |
| 60 | | | | | | | |
| 70 | | | | | | | Hole caving and difficult to keep clean. |
| 80 | | | | | | | |
| 90 | | | | | | | |
| 100 | Log TD - 99' | | | | | | Lower half of mole drill left in hole @ 100' |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 105' Elevation at collar: 7553.1' MSL

Hole no.: SA - 15

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 12°55' W 519' from SW corner of claim

Date commenced: 8-16-57 Date completed: 8-16-57

Driller: Moab Drlg. - Hays Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: Kowalczyk Date: 8-16-57

Record completed: 10-3-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Soil and slope wash pebbles | |
| | | | | | | Silt, ochre and maroon, soft to firm, sl. sandy w/ abund gray chert Tr. ls, tan | |
| | | | | | | ~ | |
| | | | | | | 50% siltstone, as above 50% ls, tan, xln. | |
| 10 | | | | | | Siltstone, gray and maroon, firm, sandy | |
| | | | | | | more maroon | |
| | | | | | | few dk. hd. quartzitic sand streaks | |
| | | | | | | Siltstone, gray to ochre, speckled, v. hd. 20% chert, gray, amorphous | |
| 20 | | | | | | Siltstone, varicolored tan, ochre, gray white & pink, cherty, v. hd. siliceous | |
| | | | | | | 50% siltstone, as above 50% dk. chert | |
| | | | | | | Siltstone, as above | |
| 30 | | | | | | 50% dk. chert 50% onyx (hd, siliceous siltstone mottled gray & maroon Tr. tyuyamunite (to 36') | |
| | .02 | | | | | | |
| | .001 | | | | | | Circulated 5 gal. deisel oil to clean hole. |
| 40 | | | | | | 40% onyx, as above 60% ls, tan, xln. | |
| | | | | | | Limestone, tan, microxln Tr. dk. chert | |
| | | | | | | Tr. chert | |
| 50 | | | | | | 50% ls, as above 50% silt, soft, sandy, pastel pink, wh. & ochre, calc. | |
| | | | | | | No rec. | Lost circulation @ 52' Only fine dust for samples below this point. |
| | | | | | | Fine dust limy, silty | |
| 60 | | | | | | Limestone, tan, xln Streaks pastel silt (Dust) | |
| | | | | | | (62-72, one sample) | |
| 70 | | | | | | (72-82, one sample) | |
| 80 | | | | | | Limy dust Predom. lt. ochre silt (82-86, one sample) | |
| | | | | | | (86-92, one sample) | |
| 90 | | | | | | (92-98, one sample) | |
| 100 | | | | | | (98-102, one sample) darker ochre | |
| | Log TD - 104' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.
Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM
Hole no.: SA - 16
Location in property: N 12°10' W 466' from SW corner of claim

Total depth: 104'  Elevation at collar: 7543.4' MSL
Hole size: 4 3/4"  Inclination: Vertical
Date commenced: 8-19-57  Date completed: 8-19-57
Driller: Moab Drlg. - Hays  Drill type: Mole drill
Sample interval: 2'  Sample examiner: Hauptman
Logging method: PRI 120  Logged by: Kowalczyk  Date: 8-19-57

Record completed: 10-2-57 by Hauptman

| Depth (ft.) | Log – MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | .05 .10 .15 .20; 0 .5 1.0 1.5 2.0; 5.0 10 15 20 | | | | | Silt, brick red, sandy, non-calc. | |
| | Fallout | | | | | Tr. dk. chert | |
| | | | | | | Chert, dk brown & red, some mottled onyx, limonite stained | |
| | | | | | | (predom. silicified siltstone) | |
| | | | | | | tan, ochre and onyx. No red | |
| 10 | | | | | | more red onyx | |
| | | | | | | more deep maroon & brown | |
| | | | | | | | |
| 20 | | | | | | Limestone, wh. to pinkish wh., reslized, firm | |
| | | | | | | Limestone, tan to dk. gray, microsln to microsucrosic, partially silicified. | |
| | | | | | | pink & tan, non-silic. | |
| | | | | | | Fossiliferous | |
| 30 | | | | | | Tr. hematitic stained silt | |
| | | | | | | Tr. chert | |
| | | | | | | 60% l.s. as above, 20% l.s. wh., earthy, reslized | |
| 40 | | | | | | Limestone, tan, microsln, hd. sl. cherty | |
| | | | | | | Limestone, dk brown, iron-stained, partly silicified | |
| 50 | | | | | | (Almost chert) | |
| | | | | | | 50% as above, 50% unaltered tan l.s. | |
| | | | | | | Limestone, tan, microsln | |
| 60 | | | | | | | Sample all fines |
| 70 | | | | | | 50% unaltered l.s. as above 50% reslized lime, wh., earthy, hard Tr. iron stained | |
| | | | | | | Unaltered tan l.s. Tr. wh. reslized lime | |
| | | | | | | | Sample all fines |
| | | | | | No rec. | | |
| 80 | | | | | | Tr. dk. chert (Last sample) | |
| 90 | | | | | | | |
| 100 | | | | | | | |
| | Log TD - 104' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Total depth: 104' Elevation at collar: 7526.7' MSL

Hole no.: SA - 19

Hole size: 4 3/4" Inclination: Vertical

Location in property: N 14°05' W 299' from SW corner of claim

Date commenced: 8-20-57 Date completed: 8-20-57

Driller: Moab Drlg. - Hays Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: CMH & LK Date: 8-20&21-57

Record completed: 8-30-57 by Hauptman

| Depth (ft.) | Log — MR/hr. (.05 .10 .15 .20; 0 .5 1.0 1.5 2.0 xxxxxx; 5.0 10 15 20 000000) | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology: Grapic | Lithology: Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Chert, replacement after limestone, reddish brown, lt. brown & tan, lt. gray & white, some sl. banded, microsucrosic. Tr. dolo. ls. | |
| | | | | | | Pinker, due to included hematite | |
| 10 | | | | | | Predom. multicolored silic. limestone w/ abund pink & yellow sandy clay, mod. calc. | |
| | | | | | | Limestone, lt. gray, microxln w/clear calcite rhombs Tr. dk. gray dense chert and pink and yellow argillaceous clay. | |
| 20 | | | | | | Siltstone, multicolored, finely sandy, non-calc., abund. hematitic cuttings pink | |
| | | | | | | Silt, lt. cream, non-calc., hard., some hematite streaks | |
| | | | | | | Do. Abund dense dk. chert | |
| 30 | | | | | | Chert, varicolored, translucent, cryptoxln to amorphous | |
| | | | | | | Do. Tr. ls., creamy wh. to lt. gray | |
| 40 | | | | | | 10% chert as above 90% siltstone, lt. tan, sandy to earthy. non-calc. | |
| | | | | | | Limestone, brown to tan, fossiliferous, micro xln. | |
| | | | | | | Do. 25% Clay, ochre yellow, soft, silty, sl. calc. | |
| | | | | | | Chert, lt. tan (limestone replacement) | |
| 50 | | | | | | Limestone, tan, sl. silic. | |
| | | | | | | Tr. dk. chert | |
| | | | | | | Sl. vugular | |
| | | | | | | | Circulation lost at 52'. No returns of air or cuttings below this depth to T.D. |
| 60 | | | | | | | |
| 70 | | | | | | | |
| 80 | | | | | | | |
| 90 | | | | | | | |
| 100 | | | | | | | |
| | Log TD - 104' | | | | | | |
| 110 | | | | | | | |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | |
| 160 | | | | | | | |
| 170 | | | | | | | |
| 180 | | | | | | | |
| 190 | | | | | | | |
| 200 | | | | | | | |

# MIDLAND MINING CO.

Billings, Montana

# DRILL HOLE RECORD

Property: SANDRA CLAIM

Hole no.: SA - 20

Location in property: N 11°50' W 243' from SW corner of claim

Total depth: 184' Elevation at collar: 7528.7'MSL

Hole size: 4 3/4" Inclination: Vertical

Date commenced: 8-20-57 Date completed: 8-21-57

Driller: Moab Drlg. - Hays Drill type: Mole drill

Sample interval: 2' Sample examiner: Hauptman

Logging method: PRI 120 Logged by: CMH & LK Date: 8-21-57

Record completed: 9-26-57 by Hauptman

| Depth (ft.) | Log — MR/hr. | Chemical Assays $U_3O_8$ | $V_2O_5$ | Other | Lithology Grapic | Descriptive | Remarks |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Chert, wh. & tan predom., some pink, translucent & amorphous to opaque & microsucrosic. Tr. siltstone, pinkish-red, very hard, siliceous, hematitic | |
| | | | | | | Abund. silt, soft, pink & wh., siliceous | |
| | | | | | | Silt, hard, mottled pink, purple, & white | |
| | | | | | | Silt, mottled pink, purple & wh., hard, siliceous 10% chert | |
| 10 | | | | | | Chert, lt. tan and gray, some pinkish, microsuc. to amorphous 10% indurated silt as above | |
| | | | | | | Few specks tyuyamunite | |
| | | | | | | 20% chert, as above 80% Limestone, tan, hard, dense to microxln. | |
| 20 | | | | | | Limestone, as above Tr. clear calcite xls. | |
| | | | | | | Do. | |
| | | | | | | Silt, pink, orange and white, hard, indurated, silic. | |
| | | | | | | Limestone, tan, hard, dense to microxln | |
| 30 | | | | | | 25% l.s., as above 75% Silt, hard to firm, mottled ochre, pink & gray, limonitic, non-calc. | |
| | | | | | | Siltstone, as above | |
| | | | | | | Limestone, as above | |
| | | | | | | 20% siltstone, as above | |
| | | | | | | 20% l.s. 80% Silt, soft to firm, earthy, ochre | |
| 40 | | | | | | Siltstone, ochre, pink and mottled, firm to hard and brittle. | |
| | | | | | | Limestone, tan, xln, abund. lt. gray amorphous chert | |
| | | | | | | 90% siltstone as 40-42 above Tr. l.s. Abund. clear calcite rhombs & clusters | |
| | | | | | | Limestone, tan to pinkish, xln. Tr. silt | |
| | | | | | | Silt, pinkish-tan, finely speckled w/ red, hard, sl. calc. Tr. varig. chert & l.s., as above. | |
| 50 | | | | | | (No recovery) | |
| | | | | | | Limestone, pink to tan, xln and silt, as above cherty | Returns 52-56 fine dust. |
| | | | | | | Tr. chert and clay fract. fill | |
| 60 | | | | | | | |
| | | | | | | (No recovery) | |
| 70 | | | | | | | |
| | | | | | | Limestone, tan and soft balls of clay and silt | Returns 74-82 a light blow of fine dust. One sample |
| 80 | | | | | | | 82-86 practically no returns. One dust sample |
| | | | | | | Limestone, tan, microxln. | 86-90 One sample fine dust. |
| 90 | | | | | | (No returns) | |
| | | | | | | Limestone, as above | 96-102 One dust sample |
| 100 | | | | | | Clay, ochre, silty Tr. l.s. | 102-106 One dust sample |
| | | | | | | 50% silty clay and 50% l.s., as above | 106-110 One dust sample |
| 110 | | | | | | | Last sample |
| 120 | | | | | | | |
| 130 | | | | | | | |
| 140 | | | | | | | |
| 150 | | | | | | | Drill hung up on ledge at 150' constantly. Probe also difficult to get past 150'. From 150' to 240' probe in friction (fissure or cavern Depth and radioactivity measurements below 18 questionable. |
| 160 | 200 0 .03 | | | | | | |
| 170 | 210 | | | | | | |
| 180 | 220 | | | | | | Entire Mole drill lost in cavern at 184'. Fis tools didn't feel it. |
| 190 | 230 | | | | | | |
| 200 | 240 | | | | | | |

EXTRA COPY
D M E A
RECEIVED OCT 14 1957

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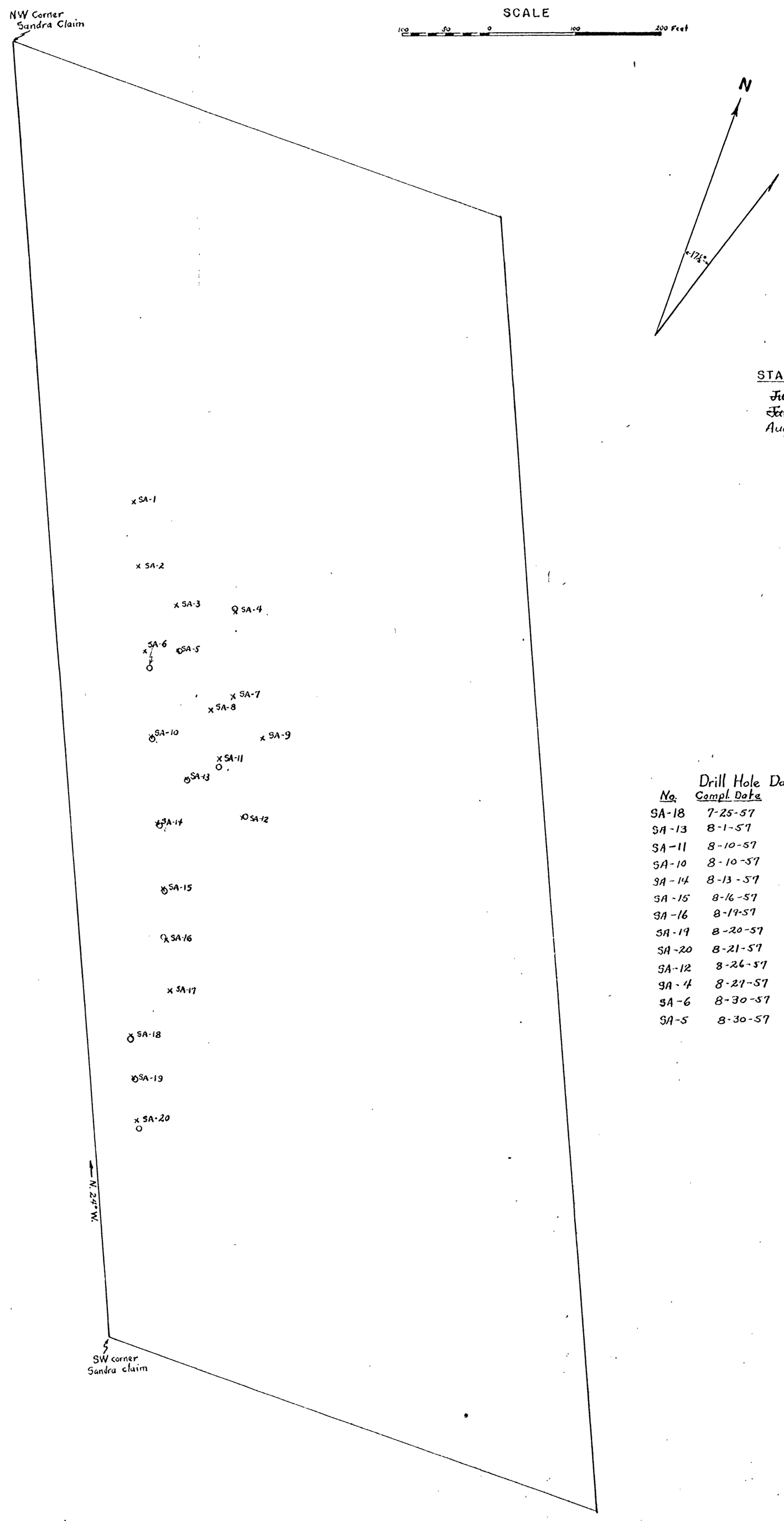
# PROGRESS MAP
## DMEA DOCKET NO. 4619

**MIDLAND MINING CO.** **BILLINGS, MONTANA**




STATUS AS OF:
~~June 30, 1957~~
~~July 31, 1957~~
August 31, 1957

Drill Hole Data

| No. | Compl. Date | Total Depth |
|---|---|---|
| SA-18 | 7-25-57 | 102' |
| SA-13 | 8-1-57 | 112' |
| SA-11 | 8-10-57 | 180' |
| SA-10 | 8-10-57 | 105' |
| SA-14 | 8-13-57 | 100' |
| SA-15 | 8-16-57 | 105' |
| SA-16 | 8-19-57 | 104' |
| SA-19 | 8-20-57 | 104' |
| SA-20 | 8-21-57 | 184' |
| SA-12 | 8-26-57 | 102' |
| SA-4 | 8-27-57 | 102' |
| SA-6 | 8-30-57 | 102' |
| SA-5 | 8-30-57 | 102' |

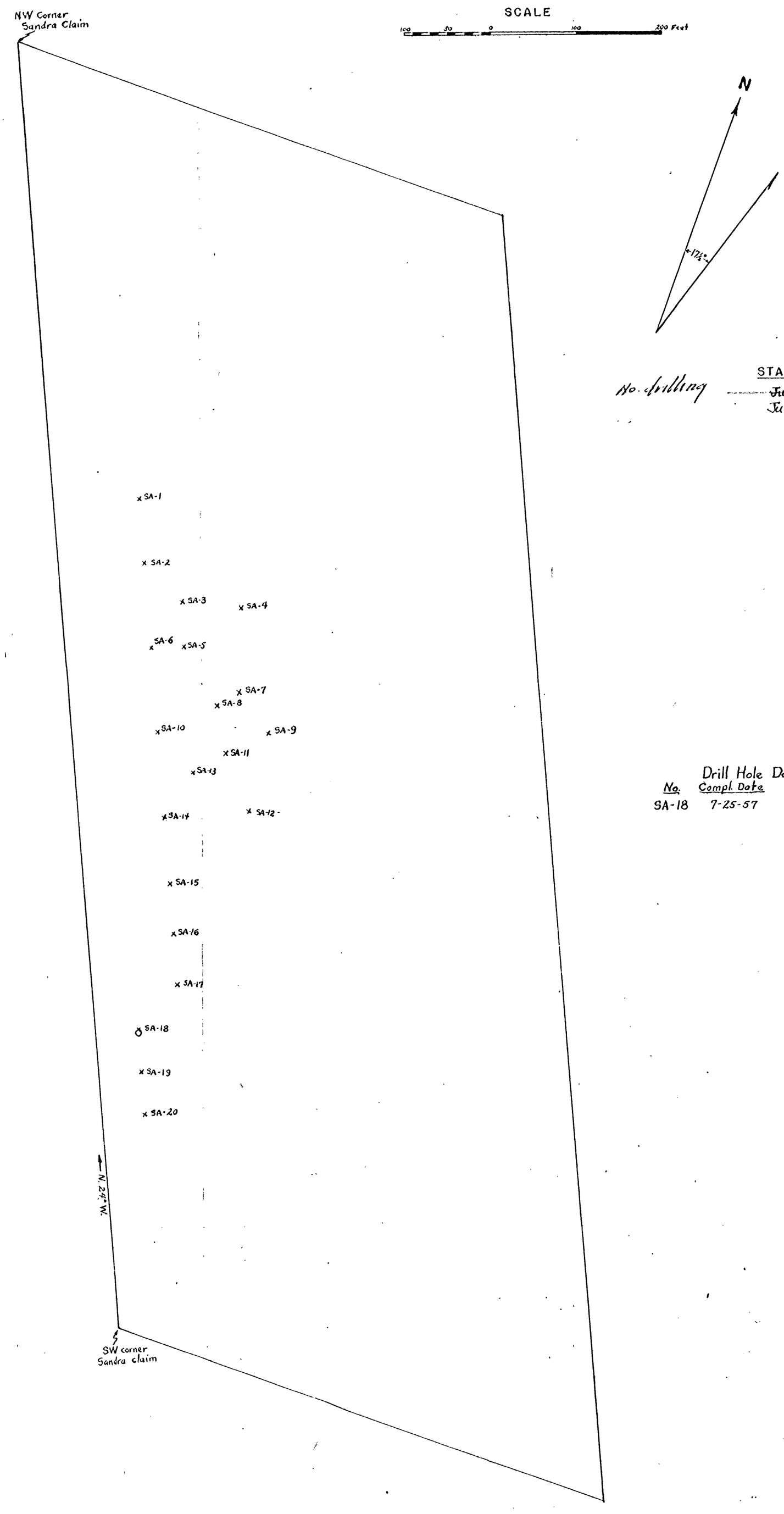
LEGEND:

x Drill site - plane table survey

o Completed drill hole

# PROGRESS MAP
## DMEA DOCKET NO. 4619

**MIDLAND MINING CO.** **BILLINGS, MONTANA**




STATUS AS OF:
~~June 30, 1957~~
July 31, 1957

No drilling

Drill Hole Data

| No. | Compl. Date | Total Depth |
|---|---|---|
| SA-18 | 7-25-57 | 102' |

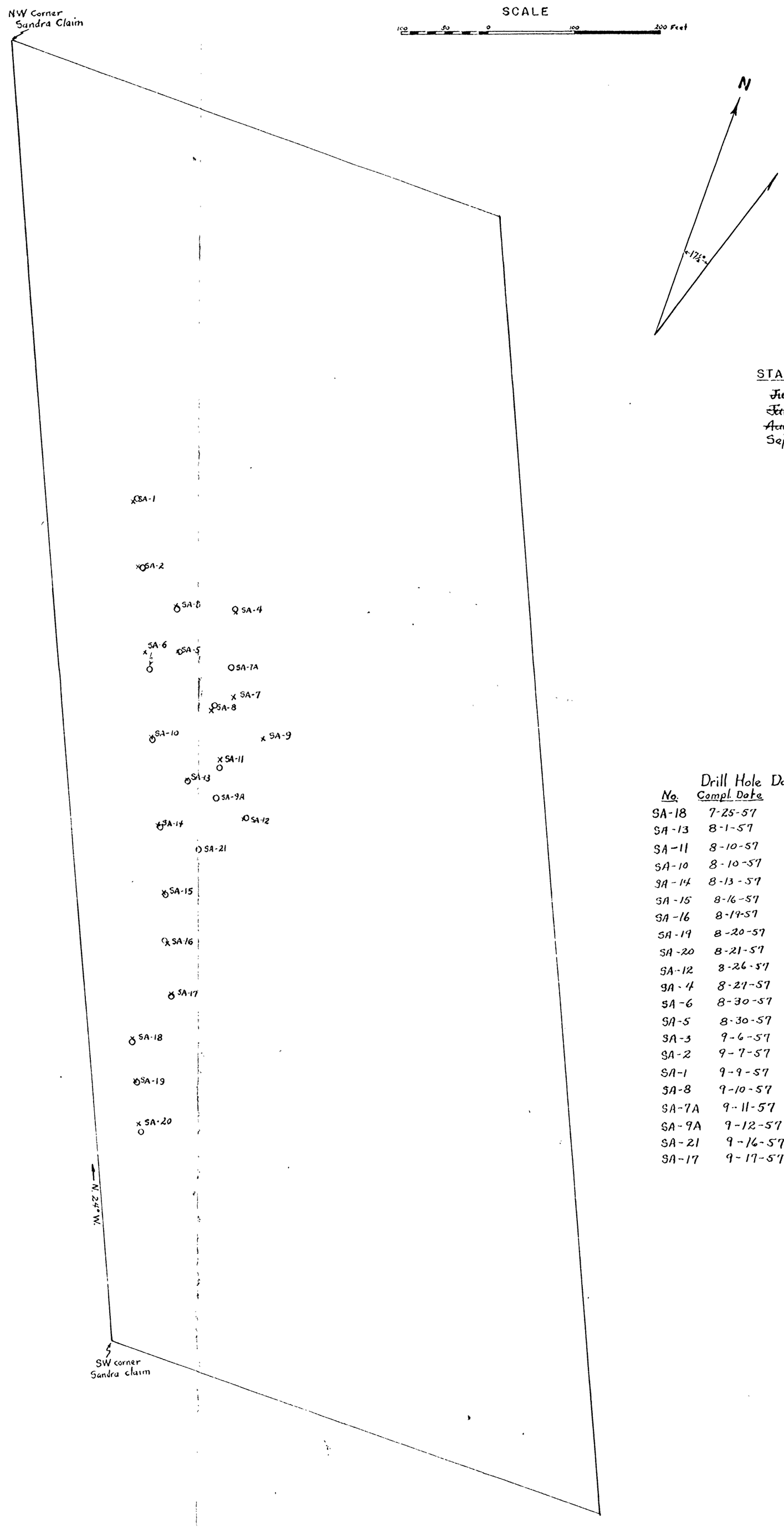
LEGEND:

x Drill site - plane table survey

o Completed drill hole

# PROGRESS MAP
## DMEA DOCKET NO. 4619

**MIDLAND MINING CO.** **BILLINGS, MONTANA**




STATUS AS OF:
~~June 30, 1957~~
~~July 31, 1957~~
~~August 31, 1957~~
Sept. 30, 1957

Drill Hole Data

| No. | Compl. Date | Total Depth |
|---|---|---|
| SA-18 | 7-25-57 | 102' |
| SA-13 | 8-1-57 | 112' |
| SA-11 | 8-10-57 | 180' |
| SA-10 | 8-10-57 | 105' |
| SA-14 | 8-13-57 | 100' |
| SA-15 | 8-16-57 | 105' |
| SA-16 | 8-19-57 | 104' |
| SA-19 | 8-20-57 | 104' |
| SA-20 | 8-21-57 | 184' |
| SA-12 | 8-26-57 | 102' |
| SA-4 | 8-27-57 | 102' |
| SA-6 | 8-30-57 | 102' |
| SA-5 | 8-30-57 | 102' |
| SA-3 | 9-6-57 | 184' |
| SA-2 | 9-7-57 | 102' |
| SA-1 | 9-9-57 | 206' |
| SA-8 | 9-10-57 | 104' |
| SA-7A | 9-11-57 | 106' |
| SA-9A | 9-12-57 | 104' |
| SA-21 | 9-16-57 | 104' |
| SA-17 | 9-17-57 | 98' |

LEGEND:

x Drill site - plane table survey

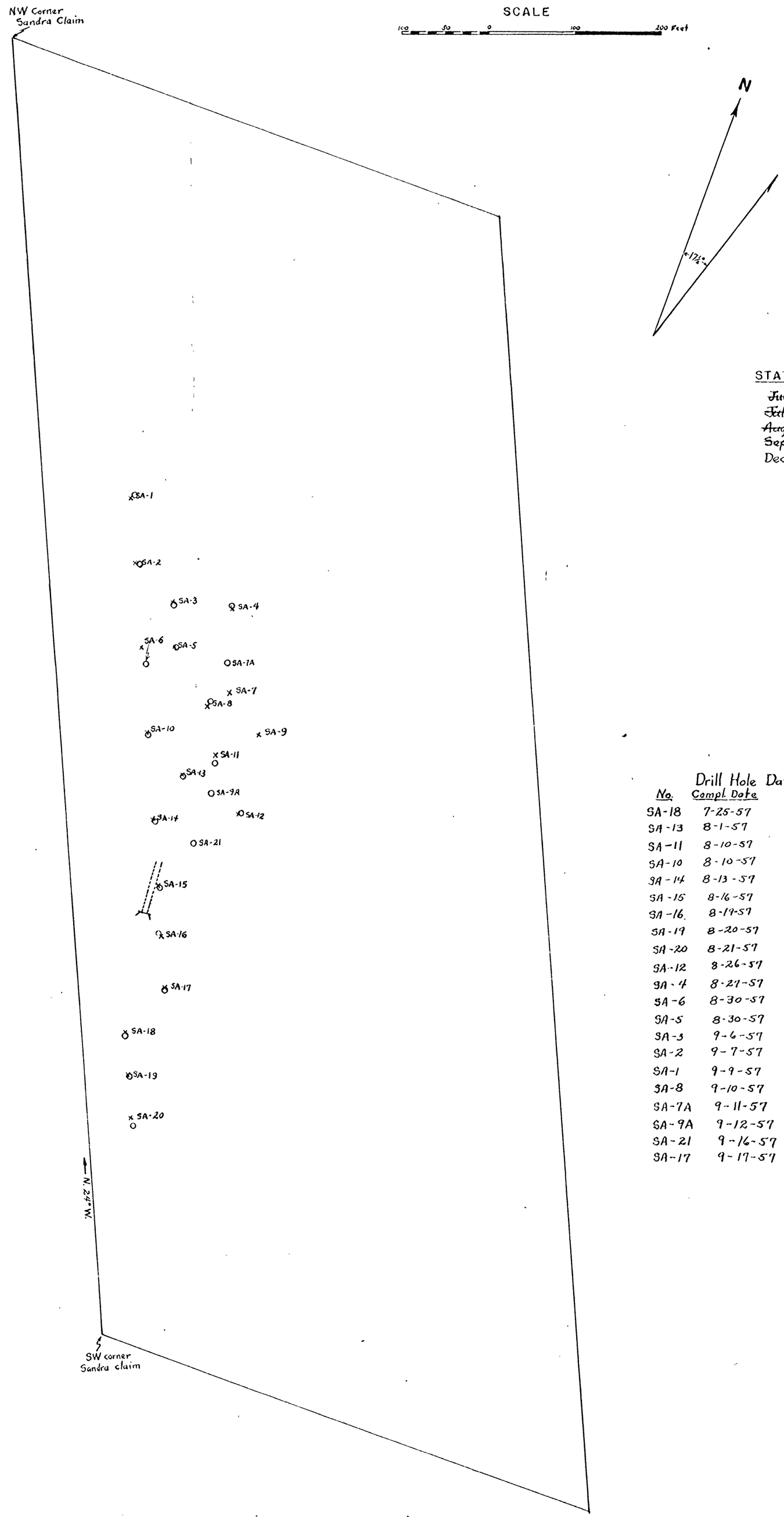
o Completed drill hole

# PROGRESS MAP

JAN 8 REC'D

## DMEA DOCKET NO. 4619

**MIDLAND MINING CO.** **BILLINGS, MONTANA**




STATUS AS OF:
~~June 30, 1957~~
~~July 31, 1957~~
~~August 31, 1957~~
~~Sept. 30, 1957~~
Dec 31, 1957

Drill Hole Data

| No. | Compl. Date | Total Depth |
|---|---|---|
| SA-18 | 7-25-57 | 102' |
| SA-13 | 8-1-57 | 112' |
| SA-11 | 8-10-57 | 180' |
| SA-10 | 8-10-57 | 105' |
| SA-14 | 8-13-57 | 100' |
| SA-15 | 8-16-57 | 105' |
| SA-16 | 8-19-57 | 104' |
| SA-19 | 8-20-57 | 104' |
| SA-20 | 8-21-57 | 184' |
| SA-12 | 8-26-57 | 102' |
| SA-4 | 8-27-57 | 102' |
| SA-6 | 8-30-57 | 102' |
| SA-5 | 8-30-57 | 102' |
| SA-3 | 9-6-57 | 184' |
| SA-2 | 9-7-57 | 102' |
| SA-1 | 9-9-57 | 206' |
| SA-8 | 9-10-57 | 104' |
| SA-7A | 9-11-57 | 106' |
| SA-9A | 9-12-57 | 104' |
| SA-21 | 9-16-57 | 104' |
| SA-17 | 9-17-57 | 98' |

LEGEND:

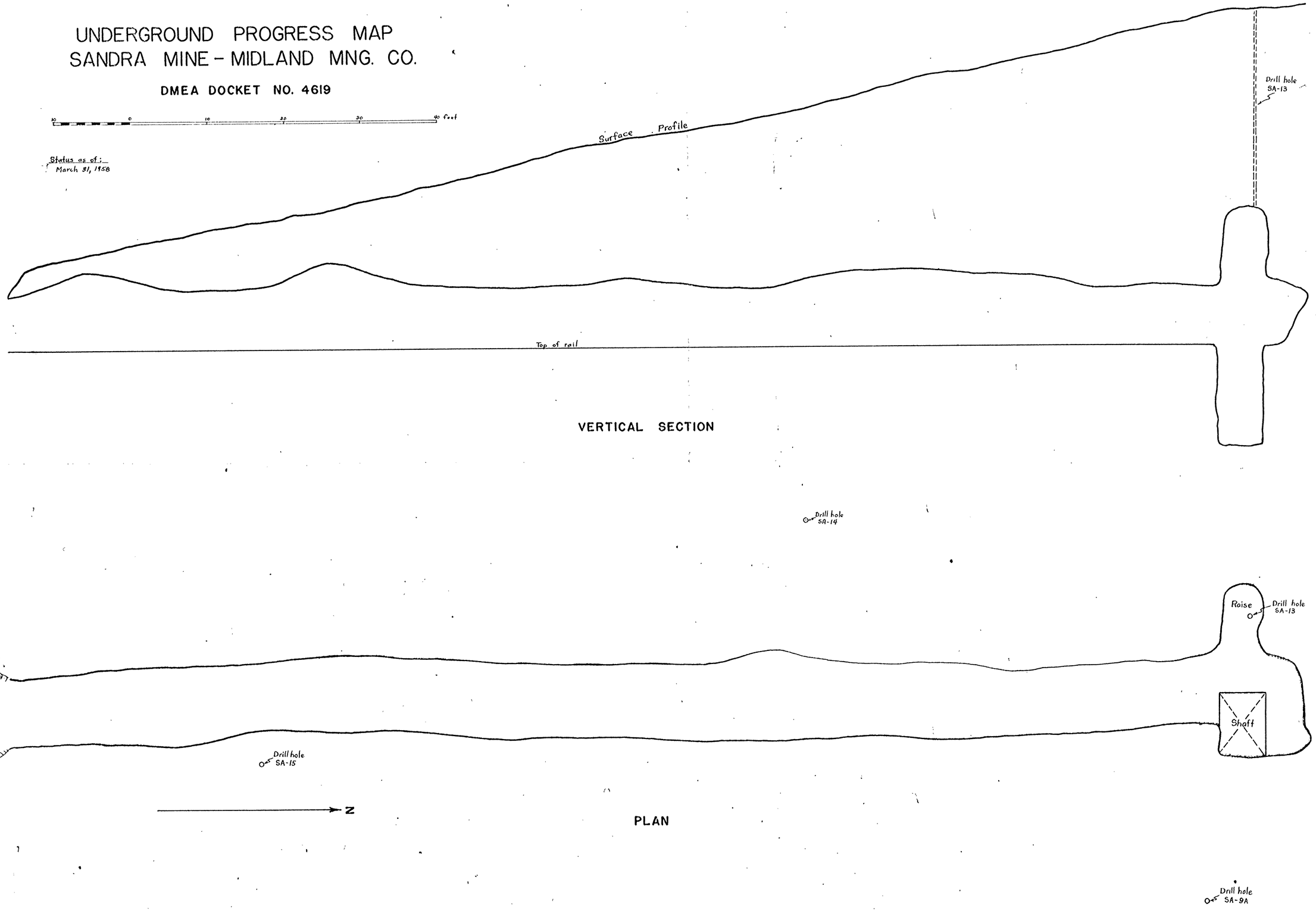
- x Drill site - plane table survey
- o Completed drill hole
- Portal
- Drift

# UNDERGROUND PROGRESS MAP
# SANDRA MINE - MIDLAND MNG. CO.

**DMEA DOCKET NO. 4619**

10 0 10 20 30 40 feet

Status as of:
March 31, 1958

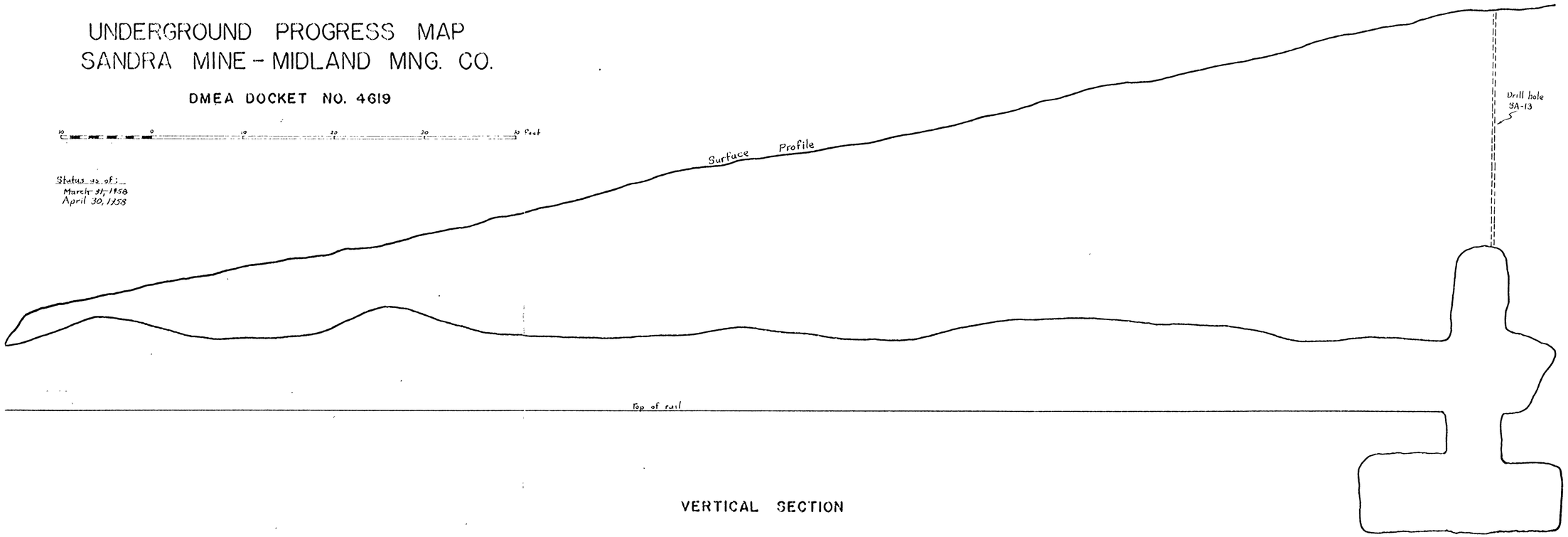



C.M.H.

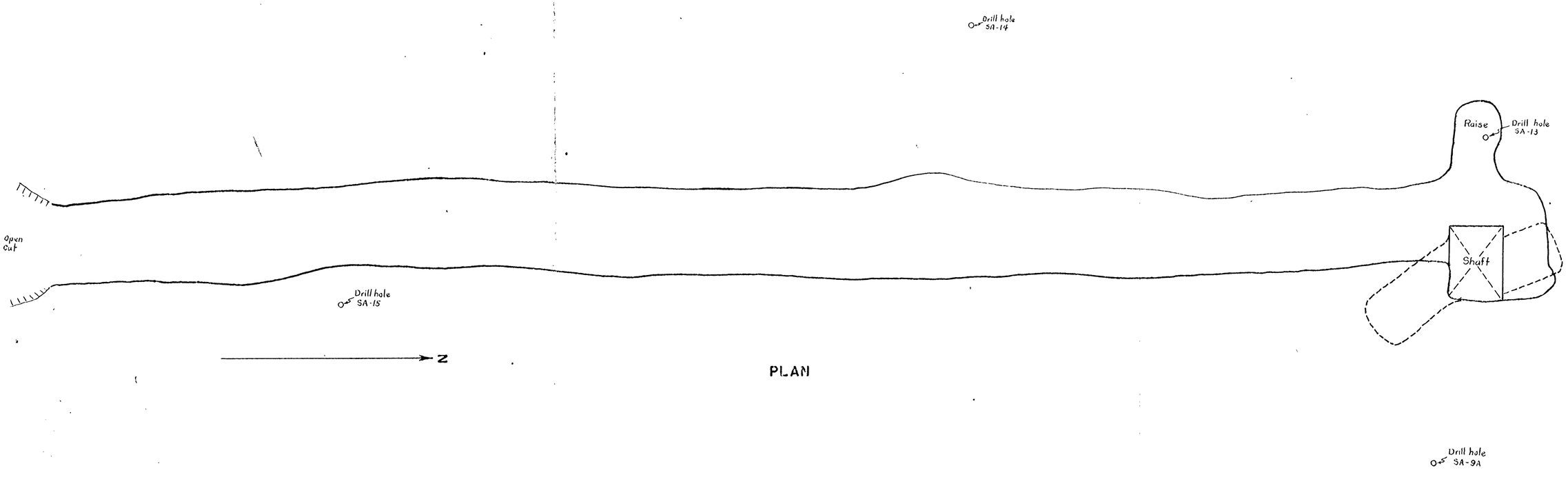
MAY 22 REC'D

# UNDERGROUND PROGRESS MAP
# SANDRA MINE - MIDLAND MNG. CO.

**DMEA DOCKET NO. 4619**




VERTICAL SECTION




PLAN

C.M.H.