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

Budget Bureau No. 42-R1036.5

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

MAR 25 1960
O.M.E.

1439

Month of January, 1960 Docket No. -6020 Contract No. E 2002
Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper
Address P. O. Box 1019, Troy, New York
Contract Amount, $ 12,990.00 Government Participation: 50 % Amount, $ 6,495.00

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) Short Form Contracts: Fixed price						
Drilling		6702.75	6702.75			6,702.75
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core boxes		180.00	180.00			180.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS		6882.75	6882.75	276.10	6606.65	6882.75

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

Date Jan. 29, 1960 Payee Roland F. Beers, Inc.

Per John D. Bates Title Accountant

*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:

$ 138.06

Signature
(Authorized Certifying Officer)

Date Vou. No. 3831

(See other side)

138.05

(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. 2002 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER S. BUREAU OF MINES Date FEB 8 1960

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert T. A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date FEB 8 1960

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.

MME FORM 61
SEPT. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FINAL REPORT

STAGE I

OPERATOR'S PROGRESS REPORT

For Month of January, 1960 Docket No. 6020

Operator's Name Roland F. Beers, Inc. Contract No. 14-23-090- 2002

OPERATION	UNITS	FOR OPERATOR'S USE: UNITS THIS MONTH	UNITS TO DATE	COSTS TO DATE	FOR GOVERNMENT USE: APPROVED UNITS THIS MONTH	APPROVED UNITS TO DATE	APPROVED COSTS TO DATE
Drifting							
Crosscutting							
Raising							
Shafts							
Winzes							
Other Underground							
Drilling, Core-Diamond							
Rotary							
Drilling, Non-core-Diamond	Feet	None	2025	6882.75			
Rotary							
Churn							
Percussion							
Miscellaneous							
Roads and Trails							
Stripping							
Trenching							
Test Pitting							
Other Surface Work							
Initial Rehabilitation and Repairs							
Rehabilitation of Mine Workings							
New Buildings, Fixtures, etc.							
Operating Equipment Purchases							
Analytical Work							
TOTAL TO DATE *(per MME Form 60)*				6882.75			

REMARKS

(Continue on back)

REMARKS
$276.10 was withheld from the October Voucher pending receipt of the Final Engineering and geological Report. This report has now been received, also the Report of Review.
(Continue on back)

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. 29, 1960 Operator Roland F. Beers, Inc.

Per John D. Bates Title Accountant

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U.S. Code, Title 18, Sec. 1001.)

I certify that the information above is complete and accurate to the best of my knowledge and belief.

Signature V. J. Lynch
MINING ENGINEER
Title U. S. BUREAU OF MINES
Government Representative

Date FEB 8 1960

O.M.E. MAR 25 1960

(INSTRUCTIONS ON REVERSE)

REMARKS *(Cont.)*

REMARKS *(Cont.)*

INSTRUCTIONS FOR PREPARING OPERATOR'S PROGRESS REPORT, MME FORM 61

This report is the second of the three parts of the Operator's Monthly Report. Submit the original and four copies.

The cost for each operation should be the total of all claimed costs attributable to that type of work with two exceptions, namely—operating equipment purchased and analytical work which are stated separately. For example, drifting costs should be the total of all costs chargeable to drifting including supervision, technical services, timbering (if any), etc. Similarly, drilling costs should include the cost of cementing, reaming, core boxes, etc. This procedure of distribution holds whether the contract was written on an actual cost or a unit cost basis, or some combination of the two. Distribute the cost of such general items as supervision, equipment rented, etc. according to relative footages or on some other conventional basis. The item "Initial Rehabilitation and Repairs" covers all rehabilitation and/or repairs other than the rehabilitation of mine workings.

The item titled "Drilling, Non-core Percussion" includes all drilling performed with wagon, jack-hammer, stoper and mounted drills. The several items labelled "Other" are provided to take care of particular exploration operations not specified on this form.

INT.DUP.,D.C.59- 61577

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.
March 17, 1960

Memorandum

To: Fiscal Section, Division of Administrative Services
Office of the Secretary
Department of the Interior
Washington 25, D. C.

From: OME Field Team, Region V - Knoxville, Tennessee

Subject: Final Voucher and Report of Review on OME-6020,
Contract No. 2002 (zinc-Lead-Copper) Meyers Pros.
Smyth County, Virginia
Roland F. Beers, Inc. Operator.

Attached are the original and 2 copies of MME Form 61 from the subject Operator claiming the 10% withheld from the October voucher. This amount was withheld pending final report and Report of Review.

Original of the Report of Review is attached.

Robert A. Laurence

VJL/zm
cc
Lynch
Files

EXTRA COPY O. M. E. RECEIVED DEC 3 1959		
DATE	INITIALS	CODE
12-3	gad	220
"	J Fs	110
"	President	500

December 1, 1959

Memorandum

To: E. D. Talbert, Office of Minerals Exploration, Interior Building, Washington 25, D. C.

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly reports and vouchers

We are enclosing two copies each of the following monthly reports and vouchers:

14-23-090-2002 Roland F. Beers, Inc.
Docket No. OME-6020
2nd payment - month of October
Stage I and II vouchers
Amount $1606.95

Helen R. Miller

Attachments
/hbm
Norris files
Day files

Copies to R. A. Laurence
V. J. Lynch

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

VOUCHER AND SCHEDULE OF PAYMENTS No. 9

STAGE I

Month of October, 1959 Docket No. ~~DMEA~~ OME-6020 Contract No. E 2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P. O. Box 1019, Troy, New York

Contract Amount, $ 12,990.00 Government Participation: 50% Amount, $ 6,495.00

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: Fixed price						
Drilling	3310.00	3392.75	6702.75	3310.00	3392.75	6702.75
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core boxes	180.00	-	180.00	180.00	-	180.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3490.00	3392.75	6882.75	3213.90	3392.75	6606.65

NOTE: TEN PERCENT (10%) OF THE TOTAL OCTOBER VOUCHERS (STAGE I AND II) BEING WITHHELD PENDING DECISION OF CONTINUATION OF PROJECT OR TERMINATION

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

Date Nov. 14, 1959 Payee Roland F. Beers, Inc.

Per John D. Bates Title Accountant

*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:

$ 1606.95

Signature Helen R. Meier
(Authorized Certifying Officer)

Date DEC 1 1959 Vou. No. 9

(See other side)

1606.95

(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. 2002 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date NOV 25 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Laurence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date NOV 25 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 MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

DEC 3 1959 D.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT STAGE I

Month of October 1959 Docket No. ~~DMEA~~ ~~XXXXX~~ OME-6020 Contract No. E 2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P. O. Box 1019, Troy, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	3490.00	1000	6882.75	2025	3.399		
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		3490.00	1000	6882.75				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3490.00		6882.75				

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

Date Nov. 14, 1959 Operator Roland F. Beers, Inc.

Per John A. Baker Title Accountant

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)

V. J. Lepuch

MINING ENGINEER
U. S. BUREAU OF MINES

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.

INT.-DUP., D.C.-62307-59

ROLAND F. BEERS, INC.
Troy, New York

STATEMENT SUPPORTING UNITED STATES DEPT. OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1959 - Docket No. OME-6020 - Contract No. 14-23-090-2002

Diamond drilling during October, 1959 -
per attached invoices of Joy Manufacturing Company:

Invoice Number	Drill Hole	Feet Drilled
98055	5	225
98071	6	225
98072	7	275
98112	8	300
Total feet drilled		1,025

Feet drilled distributed as follows -

		Fixed unit cost (per foot)	
Stage I	1,000 ft.	$3.31	$3,310.00
Stage II	25 ft.	3.24	81.00
Total	1,025 ft.		$3,391.00

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

STAGE II

Month of October, 1959 Docket No. ~~DMEA~~ OME-6020 Contract No. E 2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P.O. Box 1019, Troy New York

Contract Amount, $ 12,990.00 Government Participation: 50 % Amount, $ 6,495.00

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: Fixed price	81.00	-	81.00			
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	81.00		81.00			

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

Date Nov. 14, 1959 *Payee Roland F. Beers, Inc.

Per John S. Beers Title Accountant

*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:

$

Signature (Authorized Certifying Officer)

Date Vou. No.

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

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

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

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

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

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 872893

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

STAGE II

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1959 Docket No. ~~DMEA~~ OME-6020 Contract No. E 2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P. O. Box 1019, Troy, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	81.00	25	81.00	25	3.24		
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		81.00	25	81.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		81.00		81.00				

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

Date Nov. 14, 1959 Operator Roland F. Beers, Inc.

Per John A. Baker Title Accountant

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

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

INT.-DUP., D.C.-62307-59

EXTRA COPY
O. M. E.
RECEIVED DEC 3 1959

DATE	INITIALS	CODE

PROGRESS REPORT

October, 1959

Docket No. OME-6020

Contract No. 14-23-090-2002

Myers Prospect, Smyth Co., Va.

Roland F. Beers, Inc. Troy, New York

GENERAL INFORMATION

Stage I drilling has been completed at the Myers Prospect, Smyth County, Virginia. Eight drill holes, aggregating 2,050 linear feet, were put down, following the conditions set forth in Exploration Contract E-2002. Following an agreement reached by representatives of the Government and the Operator, drilling was recessed upon completion of drill hole M-8 (10/29/59). The contractor, Joy Manufacturing Co., removed the drilling equipment from the property on October 29 - 30, 1959.

All of the core is being stored at 114 W. Park Drive, Charlottesville, Va.

* * * *

Drilling and Inspection Program

At the end of the period covered by the September Progress report, drilling was proceeding on drill hole M-5. This hole was completed to the prescribed depth of 225 feet. Following the objectives laid out at the September 19th field conference, hole M-6 was drilled to the east of the old shaft. The precise location of this, and all other drill holes, is shown on the accompanying map. M-6 was drilled to a total vertical depth of 225 feet. Because of abundant cavities, the contractor encountered a great deal of trouble in completing the hole; permission to reduce the hole to EX size below 162 feet was requested and granted. Drill hole M-7 was designed to test the possibility of the mineral-bearing fractures being best developed on a S.45°W. trend from the shaft. The hole was drilled to a vertical depth of 275 feet. A thin, mineralized zone of barite-fluorite-pyrite with trace sphalerite was encountered. Hole M-8, at -60°, was drilled to test the projected mineral-bearing horizon as near the old workings as seemed safe. M-8 was completed at an inclined depth of 300 feet, having penetrated a thick, near-surface, barite-fluorite-pyrite zone.

As had been previously decided at the October 17, 1959 meeting between Helmuth Wedow and Robert Young, drilling was suspended indefinitely upon completion of hole M-8. This current recess is to allow a full evaluation of the drilling data obtained to date.

During the period October 1 - October 29, 1959, 889 linear feet of diamond drilling were put down on the Myers Prospect. This total footage was distributed among four holes; 89 feet going to complete M-5, the remainder being used in M-6, M-7 and M-8.

The physical characteristics of the holes drilled during October follow:

Hole No.	Location	Total Depth	Attitude
M-5	1.5N ≠ 0.5W	225'*	-90°
M-6	1.5S ≠ 0.5E	225'	-90°
M-7	0.0 ≠ 2.5W	275'	-90°
M-8	0.5N ≠ 1.25W	300'	-60° at N.45°E.

Core recovery, although probably several per cent lower than in the first four holes, was satisfactory.

After the site of M-8 was selected, elevations were run on all drill holes. A road-level dolomite outcrop, at the entrance of the Myers field road, was estimated at 2060' ASL; the other elevations are relative to this point. The elevations of the various drill holes are presented below:

Hole No.	Assumed Elevation
M-1	2182.1 ft.
M-2	2203.1 ft.
M-3	2218.6 ft.
M-4	2222.5 ft.
M-5	2219.2 ft.
M-6	2229.4 ft.
M-7	2203.4 ft.
M-8	2220.4 ft.

* 136' - 225' drilled during October.

* * * *

Drilling Results

A preliminary evaluation of the data obtained through 2,050 feet of diamond drilling indicates that the Operator will not recommend additional drilling. Despite the good coverage obtained through drilling the eight holes, only minor amounts of mineralized rock were encountered. Mineralized areas of significance were cut in only two drill holes, M-1 and M-8; sphalerite was positively identified in only one hole, M-7, and there in trace amounts.

Recommendations for the disposition of the program will be formulated at a Government-Operator representative meeting, scheduled for mid-November.

* * * *

DRILL LOG

Hole No.: Myers #5
Location: 1.5N / 0.5W
Elevation: 2219.2'

Depth: 225'
Angle: -60°
Logged by: RSY

Core size:		
	0' - 3'	soil
	3' - 20'	BX
	20' - 225'	AX

Depth		Lithology
0	- 3'0"	soil, no core.
3'0"	- 4'8"	white chert.
4'8"	- 25'8"	medium fine, tan to gray, rudely laminated dolomite; ½" green shale with scattered sand at base of unit.
25'8"	- 28'3"	medium-grained, mottled, brown dolomite.
28'3"	- 31'3"	fine-grained, gray to tan dolomite; ½" white chert at 29'4"; 1" gray chert top 29'7".
31'3"	- 32'5"	medium-grained, mottled, brown dolomite.
32'5"	- 32'11"	chert and dolomite breccia; thin pyrite at top; thin green shale at base.
32'11"	- 35'10"	well laminated, gray-brown dolomite; medium fine-grained; gradational.
35'10"	- 42'11"	medium fine, brown to gray, mottled dolomite; 8" dark gray zone top 40'6".
42'11"	- 43'5"	shaly and limy dolomite with minor pyrite stringers.
43'5"	- 46'7"	fine-grained, mottled, gray dolomite with 3" calcite, limestone and chert at base.
46'7"	- 53'0"	fine-grained, faintly banded, buff dolomite; ½" gray chert with minor pyrite (and sphalerite shines?) at 47'8".
53'0"	- 55'0"	cavity.

55'0"	- 57'4"	fine-grained, gray limestone with ¼" chert at top.
57'4"	- 62'0"	fine-grained, light gray dolomite; chert balls in lower 3".
62'0"	- 68'2"	fine-grained, gray limestone.
68'2"	- 70'0"	cavity.
70'0"	- 75'3"	fine-grained, gray limestone; scattered pyrite grains.
75'3"	- 77'0"	fine-grained, gray dolomite.
77'0"	- 90'4"	fine-grained, gray limestone; minor dolomitic areas; massive for most part; ½" gray shale at base.
90'4"	- 94'4"	medium fine, gray dolomite with sand grains throughout, but concentrated near base.
94'4"	- 96'0"	medium-grained, gray dolomite.
96'0"	- 107'8"	fine-grained, light gray dolomite with grain size gradually increasing with depth; lower 12" medium-grained, mottled, broken dolomite.
107'8"	- 110'6"	fine-grained, gray limestone, lower contact gradational.
110'6"	- 111'2"	coarse- to medium-grained, brown to gray dolomite.
111'2"	- 118'1"	fine-grained, gray limestone.
118'1"	- 130'2"	medium-grained, mottled, brown dolomite.
130'2"	- 132'3"	fine-grained, poorly laminated, gray dolomite.
132'3"	- 135'2"	coarse-grained, light gray, recrystalline dolomite; chert ball at 132'6".
135'2"	- 138'9"	medium fine- to medium-grained, rudely laminated gray dolomite; gradational with unit below.
138'9"	- 139'10"	coarse, recrystalline, brown to tan dolomite; gradational with unit below.

139'10" - 152'10"	fine-grained, gray limestone; 4" gray chert top 140'7"; 1" gray chert top 140'9"; 1" gray chert top 147'1"; 2" gray chert top 148'4"; scattered, thin, intraformational conglomerates; 2" gray dolomite top at 148'10".
152'10" - 156'0"	medium fine, massive gray-brown dolomite; chert ball at 155'2".
156'0" - 159'6"	medium- to coarse-grained, recrystalline type, light brown dolomite; residual laminae in upper part of unit; 3/4" white chert at base.
159'6" - 161'8"	medium fine, gray-brown dolomite; mottled in part; 3" gray and white chert top 161'3".
161'8" - 164'11"	mottled, brown dolomite; medium fine-grained in lower 6"; 3/4" chert at base; white chert ball 5" up.
164'11" - 211'3"	fine-grained, gray limestone; scattered intraformational conglomerates; 5" shale zone top 169'7" with sand in shale zone and 2" in underlying limestone; sand grains in 3" intraformational conglomerate top 180'9"; 6" zone of intraformational conglomerate with sand top 182'1"; 4" sand-bearing zone top 198'10"; limestone becomes well laminated (shaly?) in interval 200'-202' with scattered sands best developed for 7" top 200'9" and ½" at 202'0"; sparse sand 210'0"-210'2"; ¼" gray chert at base.
211'3" - 212'11"	fine-grained, buff, massive dolomite.
212'11" - 215'6"	coarse-grained, recrystalline type, tan dolomite with a 6" black, shaly zone top 214'7".
215'6" - 225'0"	principally fine-grained, buff dolomite; well laminated for 8" zone top 216'11" with thin sand at base; unit grades into brown dolomite at 222'; sand occurs in brown section for 9" top 222'9"; return to buff dolomite at 224'.

* * * * TDA - 225' * * * *

DRILL LOG

Hole No.: Myers #6
Location: 1.5S / 0.5E
Elevation: 2229.4'

Depth: 225'
Angle: -90°
Logged by: RSY

Core size:		
	0' - 35'	soil
	35' - 40'	BX
	40' - 162'	AX
	162' - 225'	EX

Depth		Lithology
0	- 35'0"	soil, no core.
35'0"	- 50'5"	fine-grained, gray limestone; massive; thin intraformational conglomerates; small gray chert ball 45'9".
50'5"	- 51'10"	medium fine, gray dolomite.
51'10"	- 55'0"	fine-grained, gray limestone.
55'0"	- 57'0"	cavity.
57'0"	- 60'0"	fine-grained, gray limestone.
60'0"	- 80'0"	cavity.
80'0"	- 95'6"	fine-grained, gray limestone with a few inches of cave breccia in top 1'; 30" zone of fracturing and solution top 84'; 3" shale and chert zone top 93'6".
95'6"	- 101'7"	medium-grained, mottled, brown dolomite.
101'7"	- 105'6"	fine-grained, gray limestone.
105'6"	- 107'1"	medium-grained, gray dolomite.
107'1"	- 110'8"	fine-grained, gray limestone; 1" gray chert 108'11".
110'8"	- 116'0"	medium fine, gray dolomite grading to coarse, brown recrystalline in lower 9".
116'0"	- 120'5"	fine-grained, gray limestone; thin, scattered intraformational conglomerates.

120'5" - 122'6"	mixed medium fine, gray dolomite and medium coarse brown dolomite; grain size largest in middle of unit.
122'6" - 129'0"	fine-grained, gray limestone; 1" cherty zone at top; thin intraformational conglomerates; 2" gray chert at base.
129'0" - 136'11"	medium fine, gray dolomite; 1½" gray chert top 130'1"; 1½" gray chert 130'10"; 6" gray and white chert top 136'5".
136'11" - 137'11"	transitional bed; medium coarse recrystalline dolomite to fine-grained, gray limestone.
137'11" - 143'6"	fine-grained, gray limestone; gray chert ball 139'0"; 2" chert-shale zone top 140'0"; sparse sand grains below chert; thin intraformational conglomerates.
143'6" - 162'0"	cavity.
162'0" - 170'5"	fine-grained, gray limestone; massive; 1" white chert at base.
170'5" - 176'0"	principally recrystalline type, brown to gray dolomite; some residual areas of fine-grained, gray dolomite.
176'0" - 177'8"	principally white and gray chert with 5" brown dolomite in center.
177'8" - 178'11"	medium-grained, gray recrystalline type dolomite; scattered sand grains in lower 6"; minor fracturing.
178'11" - 181'1"	fine-grained, gray dolomite grading to recrystalline type dolomite 10" down.
181'1" - ≮186'0"	white and gray chert with minor residual dolomite; dolomite carries thin sand.
≮186'0" - 187'10"	gray, recrystalline dolomite with scattered chert balls; sparse sand in lower 4".
187'10" - 190'0"	white chert.

190'0" - 209'1"	principally medium fine, gray to brown dolomite; 2" white chert top 193'6"; ¼" gray chert at 196'5"; 6" zone scattered sand grains top 198'0"; chert ball at 199'2"; 1" sand zone at 201'10"; 4" chert top 206'11"; 1" chert top 207'11"; minor sand grains at 208'10".
209'1" - 222'6"	recrystalline dolomite - white chert zone (proportions essentially equal apparently, core loss high).
222'6" - 225'0"	medium coarse, tan, recrystalline dolomite.

* * * * TDA - 225' * * * *

DRILL LOG

Hole No.: Myers #7
Location: 0.0 ≠ 2.5W
Elevation: 2203.4'

Depth: 275'
Angle: -90°
Logged by: RSY

Core size:		
	0' - 12'	soil
	12' - 20'	BX
	20' - 275'	AX

Depth		Lithology
0	- 12'0"	soil, no core.
12'0"	- 54'10"	fine-grained, buff, massive dolomite; chert ball at 14'10", 15'2"; 2" white chert top 15'7"; chert ball 16'0"; 1" zone of scattered sand top 16'6"; ¼" gray chert 18'3"; thin gray shale 18'8"; 3/4" white chert 21'2"; ¼" gray shale 22'7"; thin chert band 28'2"; gray chert ball 28'6"; 3/4" gray shale 30'2"; 1" shaly zone top 31'2"; 1½" chert ball top 34'3"; 1" cherty zone at 39'4"; 6" zone gray and white chert at 43'5"; 2" sparse scattered sands top about 45'6"; several thin zones of increased grain size toward base; 12" zone of early fracturing top 48'; lower 6" of fractured zone carries scattered sand; 2" gray chert top 49'2".
54'10"	- 55'1"	green shale with chert fragments; breccia ?
55'1"	- 69'2"	principally medium fine, gray-brown dolomite with some lamination and some mottling; 1" gray chert 58'1"; 2" cherty zone top 60'3"; 1½" zone of chert with basal shale and sand grains top 61'4"; ½" green shale 64'4".
69'2"	- 69'8"	green shale with subordinate chert and pyrite.
69'8"	- 74'4"	principally medium coarse, mottled, brown dolomite; some fine-grained zones; 2" shaly zone top 72'7"; thin (2") dolomite breccia at base.

74'4" - 80'1"	medium fine, tan to gray, massive dolomite; 3/4" green shale at 75'8".
80'1" - 81'7"	shale-breccia-chert zone (green shale, gray chert).
81'7" - 82'2"	fine-grained, gray dolomite.
82'2" - 86'1"	medium-grained, brown, mottled dolomite; 10" fractured zone top 84'9".
86'1" - 87'2"	zone of alternating gray and white chert and brown dolomite; chert in center is 5".
87'2" - 92'8"	medium fine, gray, faintly laminated dolomite; ¼" gray shale 3" down; 12" zone of minor fracturing with calcite and pyrite top 88'.
92'8" - 108'8"	principally medium-grained, brown and gray, mottled dolomite; some areas definitely recrystalline; 1" white chert at 100'; 3" gray and white chert top 100'9"; 3" barite top 103'; 7" recrystalline dolomite with 2" residual limestone top 103'3" and thin shale at base; ¼" sand zone 2" above base.
108'8" - 111'6"	coarse-grained, tan, recrystalline dolomite with 4" residual limestone at top.
111'6" - 113'9"	medium fine, brown dolomite; ½" white chert at 112'4"; 2" brown chert at base.
113'9" - 114'11"	medium coarse, brown dolomite with 2" gray chert at base.
114'11" - 116'2"	fine-grained, gray limestone; 1½" gray chert top 115'10".
116'2" - 136'3"	brown, gray and mottled, medium fine dolomite; upper 4" well laminated, remainder mottled; 1" gray chert 119'10"; 2" shaly zone top 125'9"; 2" gray chert top 130'2"; 1/8" fluorite-filled fracture at 135'6"; minor pyrite in lower 6".

136'3" - 139'6"	fine-grained, gray limestone; 1" gray shale at top; 1" shaly zone 137'9"; ½" green shale at base; minor intraformational conglomerates.
139'6" - 144'8"	medium fine, gray dolomite; abundant early fractures; 2" cherty zone top 143'1"; 2" white chert top 144'.
144'8" - 160'0"	fine-grained, gray limestone; chert ball at 146'1", 149'1"; thin, scattered intraformational conglomerates.
160'0" - 161'3"	medium fine, oxidized, tan dolomite; ¼" shale at base.
161'3" - 167'6"	fine-grained, gray limestone; 1" zone of barite-fluorite-pyrite next to ½" gray shale at 163'0"; minor clear and purple fluorite as crystals and veins in interval 163'6"-164'6"; 1" shale top 166'8".
167'6" - 168'11"	medium-grained, gray-brown dolomite; fractured to low-grade breccia in lower 10", breccia transects low contact and extends into underlying limestone; fractures are healed by vein dolomite and pyrite with trace zinc as fine sphalerite crystals in vein dolomite; mineralized area oxidized.
168'11" - 174'7"	fine-grained, gray limestone; fractured in uppermost 8"; fractures carry pyrite; 9" zone of finely interlaminated limestone and shale, both carrying scattered sands top 172'10".
174'7" - 188'5"	medium fine, gray, massive dolomite; mottled in some areas; unit grades to brown below 184'; 6" low-grade breccia top 185'; lower 12" coarse-grained recrystalline dolomite.
188'5" - 191'4"	fine-grained, gray limestone; both contacts gradational.
191'4" - 192'0"	medium-grained, brown dolomite with scattered sand at top.

192'0" - 198'2"	fine-grained, gray limestone; minor pyrite as disseminated grains and in stylolites; 1" chert breccia at base.
198'2" - 206'2"	medium-grained, gray and brown, mostly mottled dolomite; 2" zone of sparsely scattered sand at base; 2" chert top 202'6".
206'2" - 210'7"	fine-grained, gray limestone.
210'7" - 213'1"	medium fine, gray, rudely laminated dolomite; lightly fractured.
213'1" - 214'7"	coarse-grained, recrystalline type, tan dolomite; 6" chert breccia at top cemented by dark gray and white recrystalline.
214'7" - 219'8"	gray, medium fine, mottled dolomite.
219'8" - 220'3"	gray and white chert.
220'3" - 229'8"	fine-grained, gray limestone; 2" gray chert top 220'9"; 2" gray chert top 221'2"; 3" cherty zone 228'1"; scattered thin intraformational conglomerates; lower contact gradational.
229'8" - 230'2"	gray-brown, medium-grained dolomite.
230'2" - 235'1"	fine-grained, gray limestone; scattered intraformational conglomerates; 2" gray chert at base (with trace sphalerite in fracture ?).
235'1" - 237'4"	medium fine, gray dolomite; lightly fractured; chert balls in lower 6".
237'4" - 238'9"	mottled coarse, brown and fine, gray dolomite; 1" shaly zone at top.
238'9" - 244'3"	medium fine, gray dolomite; lightly fractured (low-grade breccia) carrying vein dolomite with minor pyrite.
244'3" - 245'2"	coarse, tan, recrystalline dolomite; very sparse sand grains at base.
245'2" - 246'10"	medium fine, gray dolomite; 1" gray chert at base.

246'10" - 247'2"	light gray limestone.
247'2" - 248'0"	medium fine, gray dolomite; mottled; ½" gray chert 1½" above base; scattered sand in lower 1".
248'0" - 249'0"	fine-grained, gray limestone.
249'0" - 250'6"	sedimentary breccia zone; upper (3") separated from lower (12") by normal gray limestone; breccia mostly shale with limestone, chert and dolomite fragments; sand grains in lower 3".
250'6" - 275'0"	fine-grained, gray limestone; sand grains scattered through upper 15", but concentrated in uppermost 2"; 3" cherty zone top 254'10"; sand grains in limestone for 1" below cherty zone; 1" green shale top 257'3"; cavity 263'-264'; unit prominently massive below 267'.

* * * * TDA - 275' * * * *

DRILL LOG

Hole No.: Myers #8
Location: 0.5N / 1.25W
Elevation: 2220.4'

Depth: 300'
Angle: -60°
Logged by: RSY

Core size:		
	0' - 4'	soil
	4' - 10'	BX
	10' - 300'	AX

Depth		Lithology
0	- 4'0"	soil, no core.
4'0"	- 34'6"	fine-grained, gray and tan dolomite; poorly laminated; 2" calcite top at 6'0"; ¼" gray shale at 11'1"; 2" gray chert with thin basal shale top 11'5" with 1" dolomite breccia below shale; 2" core loss 10'-14'; thin gray chert along stylolite at 16'0"; occasional calcite eye or veinlet throughout section; ½" gray chert top at 17'9" (with sphalerite shines at top of chert ?); 1½" gray chert and shale top 18'6"; ½" gray shale 21'4"; 8" zone of early fracturing top 20'3"; unit oxidized 24¼'-27'; 4" mottled zone top 25'6"; 6" medium coarse mottled zone top 27'0"; ¼" white chert 28'5"; ¼" green shale 29'5"; trace pyrite 32'8".
34'6"	- 35'0"	medium coarse, gray dolomite and green shale with 2" shale at base; minor pyrite.
35'0"	- 36'1"	fine-grained, gray limestone; shaly in top 6"; abundant chert balls; 2" banded gray chert at base.
36'1"	- 36'7"	laminated tan dolomite; broken and chert cemented in lower 3".
36'7"	- 40'0"	medium coarse, recrystalline type brown dolomite; chert in lower 6"; 1" banded chert at base.
40'0"	- 40'3"	fine-grained, gray dolomite with scattered sand grains.

40'3"	- 42'6"	white and gray chert with 1" coarse brown dolomite at top.
42'6"	- 46'11"	fine-grained, buff dolomite; occasional cavity lined with dolomite crystals.
46'11"	- 55'0"	medium coarse, brown and tan mottled dolomite; minor chalky white chert; chert balls in lower 6".
55'0"	- 55'6"	chalky white chert with 1" gray chert in center.
55'6"	- 57'10"	medium-grained, mottled gray and tan dolomite.
57'10"	- 62'0"	medium fine, rudely laminated gray dolomite; 3/4" calcite vein 60'10".
62'0"	- 63'2"	medium coarse, tan, recrystalline dolomite.
63'2"	- 66'5"	fine-grained, tan dolomite with scattered sand grains in top 6".
66'5"	- 68'0"	medium coarse, tan and brown dolomite.
68'0"	- 69'7"	medium-grained, tan dolomite.
69'7"	- 71'0"	coarse-grained, recrystalline type dolomite with abundant chalky white chert; ½" gray chert 70'6".
71'0"	- 71'4"	gray chert.
71'4"	- 72'0"	medium coarse, recrystalline type dolomite; gradational with unit below.
72'0"	- 81'0"	medium fine, laminated gray dolomite; unit marks top of barite section:

1" barite-fluorite top 72'4"

2" pyrite-barite-fluorite zone 72'7"

1" barite-fluorite-pyrite vein top 73'4"

3" light fluorite in fractures top 73'9"

3" massive barite with light fluorite and pyrite top 74'1"

1" barite-fluorite zone top 74'9"

3" fluorite-barite-pyrite zone top 75'2"

2" fluorite-barite-pyrite zone top 75'6"

¼" fluorite vein 76'9"

½" fluorite-barite-pyrite vein 77'3"

¼" fluorite vein 78'4"

¼" fluorite-pyrite vein 78'6"

½" fluorite vein 79'4"

½" barite 79'6"

6" barite top 80'0"

81'0" - 84'9" medium fine, brown dolomite; grades into unit below through interlamination; carries barite-fluorite as below:

1" barite at 81'7"

½" fluorite at 83'0"

¼" fluorite-pyrite at 83'4"

¼" fluorite-pyrite at 84'5"

3/4" fluorite-pyrite-barite top 83'6"

1" barite-pyrite top 83'8½"

½" fluorite vein 83'11"

3/4" barite top 84'5½"

84'9" - 99'6" medium fine, gray dolomite; rudely laminated or mottled; mineralized as follows:

8" zone dolomite breccia with barite top 84'9"

12" zone barite-fluorite top 85'10"

1" barite-fluorite 87'1"

3" barite-fluorite-pyrite top 87'6"

¼" fluorite 88'0"

½" barite-fluorite 88'7"

1" barite-fluorite 88'9½"

3" barite-fluorite zone top 89'11"

3" barite-fluorite-pyrite zone top 90'3"

8" barite-fluorite-pyrite zone top 93'11"

1" barite 94'11"

6" barite-fluorite-pyrite zone top 95'2"

15" barite-fluorite-pyrite with 8" massive barite at top, beginning at 96'9"

fluorite in thin fractures and small crystals throughout unit.

99'6" - 99'11"	fine-grained, gray limestone; pyrite with possible fine-grained sphalerite at top and base; unit is 5% fluorite.
99'11" - 100'7"	mottled gray dolomite; minor fluorite in fractures.
100'7" - 101'1"	shale-dolomite-chert breccia; very minor pyrite.
101'1" - 102'4"	medium fine, gray dolomite; oxidized in lower 6".
102'4" - 106'10"	cavity.
106'10" - 108'4"	fine-grained, gray limestone; partings common; trace pyrite.
108'4" - 109'2"	shale-dolomite-limestone breccia.
109'2" - 110'0"	gray limestone; coarse-grained in top 8".

110'0" - 110'3"	shale-limestone-dolomite-chert breccia.
110'3" - 111'2"	fine-grained, gray limestone; trace pyrite.
111'2" - 111'10"	gray shale, chert, limestone.
111'10" - 112'11"	fine-grained, gray limestone; dolomitic toward base.
112'11" - 113'2"	black shale.
113'2" - 114'8"	medium fine, gray dolomite; thin shaly layers near top.
114'8" - 115'8"	dolomite breccia; fine-grained, gray dolomite blocks in a matrix of medium coarse recrystalline type dolomite; thin shales top and base.
115'8" - 117'3"	light brown, recrystalline type, coarse dolomite.
117'3" - 120'6"	fine-grained, gray limestone with occasional dolomitized area.
120'6" - 121'6"	cavity.
121'6" - 122'9"	fine-grained, gray limestone; gradational with unit below.
122'9" - 123'4"	coarse, recrystalline dolomite with 1" shale at base.
123'4" - 141'2"	principally medium fine, tan to gray dolomite; highly oxidized except 130½'-133' where fresh gray; sand grains scattered in interval 124'10"-125'11" with 1" concentration at base; 2" gray shale at base of sand section; purple fluorite in 6" section top 133'10"; 12" dolomite breccia top 135'10"; unit coarse-grained in basal 12".
141'2" - 143'9"	fine-grained, gray limestone; scattered sand grains in lower 4".
143'9" - 144'1"	medium fine, gray dolomite with scattered sand grains.
144'1" - 151'10"	fine-grained, gray limestone; heavy gray chert in top 10"; 4" gray chert top 150'0"; 1" chert top 151'1"; 4" gray chert at base.

151'10" - 161'8"	medium-grained, brown dolomite; laminated in top 2", remainder mottled.
161'8" - 165'3"	fine-grained, gray limestone.
165'3" - 167'9"	medium fine, gray dolomite; recrystalline at top, fine-grained and laminated toward base.
167'9" - 168'2"	gray chert; minor breccia.
168'2" - 173'7"	medium fine, gray dolomite; generally mottled.
173'7" - 186'11"	fine-grained, gray limestone; 1" gray chert 174'4"; 1" gray chert 175'0"; intraformational conglomerates for 2½' top at 177'6"; 2" gray chert top 180'7"; chert ball 181'8".
186'11" - 196'0"	gray and tan, mottled dolomite; 1" gray chert 194'0".
196'0" - 196'4"	gray chert.
196'4" - 197'0"	gray, recrystalline dolomite and white, vein dolomite.
197'0" - 197'10"	tan dolomite and dolomite breccia with vein dolomite.
197'10" - 201'7"	principally dolomite and chert breccia cemented by vein dolomite; 2" gray chert at base.
201'7" - 202'3"	medium fine gray limestone.
202'3" - 203'4"	gray, recrystalline dolomite with abundant gray chert.
203'4" - 206'2"	coarse, recrystalline, light gray dolomite; irregular pyrite stringers, especially in upper 1'.
206'2" - 213'0"	fine-grained, gray limestone; 1" gray chert 208'6", scattered sand grains for 2" below chert; 1" shale with sand 210'3"; ½" chert with sand at 211'4".
213'0" - 217'0"	cavity.

217'0" - 235'5"	fine-grained, massive, gray limestone; scattered thin intraformational conglomerates; 6" sand zone top 225'10"; 21" zone of shaly limestone with scattered sands top 227'3"; 2" heavy sand top 6" above base.
235'5" - 236'0"	gray dolomite.
236'0" - 236'5"	gray chert.
236'5" - 239'5"	mottled, gray dolomite.
239'5" - 244'0"	fine-grained, gray limestone; massive to 243'; carries heavy partings below 243'.
244'0" - 258'10"	fine-grained, massive, tan dolomite; lightly banded from place to place; scattered sand in upper 2"; scattered sand for 1" at 247'; scattered sand for 6" top at 250'11"; 4" chert top 251'3"; 2" scattered sand at 254'; scattered sand for 10" above base.
258'10" - 260'8"	white chert; thin pyrite at top.
260'8" - 262'4"	gray dolomite with minor chert stringers; coarse-grained in lower 4".
262'4" - 263'10"	gray, white and chalky-white chert.
263'10" - 269'3"	recrystalline, tan dolomite with abundant chalky-white chert; gradational with unit below.
269'3" - 274'0"	medium-grained, tan dolomite; scattered sand 270'-270½'; minor scattered white chert.
274'0" - 278'0"	cavity.
278'0" - 284'8"	fine-grained, gray to tan dolomite; scattered sand zones from 282' to base.
284'8" - 293'6"	medium coarse, light gray dolomite.
293'6" - 296'10"	fine-grained, laminated, buff dolomite with abundant sand zones to within 5" of base.
296'10" - 300'0"	medium-grained, buff dolomite.

* * * * TDA - 300' * * * *

ROLAND F. BEERS - OME-6020
OPERATOR"S PROGRESS REPORT

OCTOBER 1959

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

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 3 1959

DATE	INITIALS	CODE
11-3	gad	vro
"	HEJ	110
"	Crisfield	800
	✓	~~500~~

OFFICE OF MINERALS EXPLORATION

PROGRESS REPORT

[illegible]-5020, Idn-22002(Zinc-lead-copper)

[illegible] Roland F. Beers, Inc., Troy, New York

[illegible] Mars Prosperity, Smyth County, Virginia

Summary of drilling completed

	Since last inspection	Totals
Number of holes.....	[illegible]	[illegible]
Footage.....	1,200	1,700

Mineralized holes showing:

a) Commercial-grade mineralization..... [illegible]
b) Non-commercial mineralization..... [illegible]
c) No mineralization..... [illegible]

The locations of the seven holes completed since the last progress report are shown on the accompanying [illegible] Mars area. The data on the seven holes are [illegible] below:

Hole No.	Depth	Remarks
[illegible]	[illegible]	0-[illegible] overburden; [illegible]-300 Nittany dolomite. Sedimentary cherty breccia marker (see field geol. report) [illegible]. Section below S-3 marker contains approximately 34% limestone. Mineralization: No copper-lead-zinc minerals noted--other minerals [illegible] as follows: traces of [illegible] [illegible]-2, [illegible], [illegible]; strong "shines" of barite and [illegible] [illegible], [illegible], [illegible], 180-181, [illegible]; traces of [illegible] 172-1[illegible]; strong shines of pyrite [illegible]-1[illegible], [illegible], [illegible], 2[illegible]-2[illegible].
[illegible]	[illegible]	0-[illegible] overburden; 10-2[illegible] Nittany dolomite. S-[illegible] marker approximately [illegible] limestone. Mineralization: No copper-lead-zinc minerals noted. For any [illegible] traces of pyrite [illegible] 36, 10, [illegible], [illegible] [illegible] traces of barite [illegible] approx. [illegible].

Hole no.	Depth	Remarks
#3	225	0-10 overburden; 10-225 Nittany dolomite. S-B. marker @ 36. Section below S-B marker contains approximately 39% limestone. Mineralization: No copper-lead-zinc minerals noted; no barite or fluorite; traces of pyrite @ 66½ and 185-186½.
#4	250	0-6 overburden; 6-250 Nittany dolomite. S-B marker @ 48. Section below S-B marker contains approximately 15% limestone. Mineralization: No copper-lead-zinc minerals or barite or fluorite; traces of pyrite @ 50-57, 131½-135.
#5	225	These last three holes have not yet been logged in detail. Both nos. 5 and 6 collared a few feet below the S-B marker. Because of caving conditions Hole #6 was completed with EX from 162-225 feet and an amendment permitting reduction to EX-size core has been requested. Hole #7 showed a few minute traces of sphalerite associated with fluorite at a depth of about 150 feet.
#6	225	
#7	275	

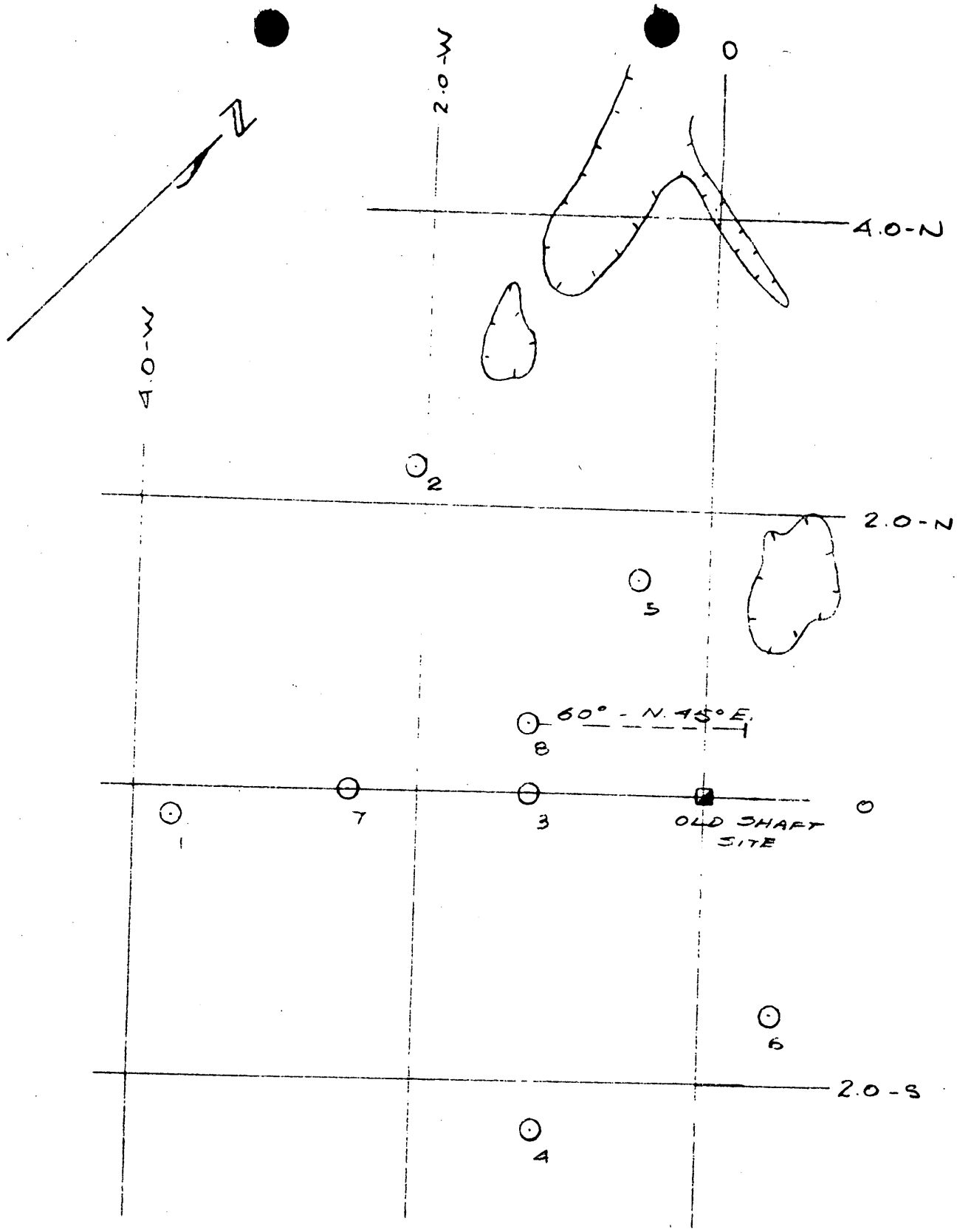
Drilling in progress

Hole # 8 is an angle hole (holes 1-7 were vertical) designed to penetrate the mineralized breccia zone in the vicinity of the old filled shaft. Core from this hole was observed to a depth of 24 feet. The anticipated bottom is about 300-325 feet. The inclination and bearing are -60° and N45°E., respectively. On the completion of Hole 8, the project will be recessed temporarily while the data from the first stage of drilling are reviewed and the Operator makes a decision either to request termination or to continue drilling.

Inspected: October 17, 1959

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey (OME)

z



⊙ VERTICAL DIAMOND-DRILL HOLES

⊙—| INCLINED DIAMOND-DRILL HOLE

MYERS PROSPECT
SMYTH COUNTY
VIRGINIA

ONE-6020, Idm-E 2002
(ZINC-LEAD-COPPER)

SCALE 1" = 100'

October 26, 1959

Memorandum

To: E. D. Talbert, Office of Minerals Exploration, Interior Building, Washington 25, D. C.

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

We are enclosing two copies of the following monthly report and voucher:

14-23-090-2002 Roland F. Beers, Inc.
Docket No. OME-6020
1st payment - month of September
Starting Date: 9/2/59
Amount $1696.37

Helen R. Miller

Attachments
/hbm
Copies to R. A. Laurence
V. J. Lynch
Norris files
Day files

Official File Copy

~~EXTRA COPY~~

O. M. E.
RECEIVED OCT 28 1959

DATE	INITIALS	CODE
10-28	gad	110
"	FEJ	110
"	[illegible]	500

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

OCT 28 1959
O.M.E.

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER AND SCHEDULE OF PAYMENTS N-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

STAGE I

Month of September, 1959 Docket No. ~~EMEX~~ OME-6020 Contract No. E-2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P. O. Box 1019, Troy, N. Y.

Contract Amount, $ 12,990.00 Government Participation: 50 % Amount, $ 6,495.00

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: Fixed price						
Drilling	3392.75	-	3,392.75	10/29/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3392.75	-	3,392.75	3392.75	—	3392.75

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

Date Oct. 19, 1959 *Payee Roland F. Beers, Inc.

Per John D. Bates Title Accountant

*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:

$ 1696.37

Signature Peter R. Mellin
(Authorized Certifying Officer)

Date OCT 26 1959 Vou. No.
(See other side)

1696.37

(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 2002 in accordance with the terms of the contract.

Signature V. J. Lynch Title U. S. BUREAU OF MINES Date OCT 22 1959

Approval by DMEA Executive Officer or Alternate:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date OCT 22 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 MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STAGE I

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 195 9 Docket No. XXXX OME-6020 Contract No. E-2002

Operator's Name Roland F. Beers, Inc. Minerals Zinc-Lead-Copper

Address P. O. Box 1019, Troy, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes	Feet	3392.75	1025	3,392.75	1025	3.31		
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		3392.75	1025	3,392.75				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
		3392.75		3,392.75				
TOTAL COSTS								

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

Date Oct. 19, 1959 Operator Roland F. Beers, Inc.

Per John A. Baker Title Accountant

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)

OCT 28 1959 O.M.E.

GEOLOGIST, U. S. G. S.

OCT 22 1959

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.

INT.-DUP., D.C.-62307-59

ROLAND F. BEERS, INC.
Troy, New York

Statement supporting United States Department of the Interior
Office of Minerals Exploration
Operator's Monthly Report & Voucher
Month of September, 1959 - Docket No. OME-6020, Contract No. 14-23-090-2002

STAGE I

Diamond drilling during September, 1959 -
per attached invoices of Joy Manufacturing Company:

Invoice Number	Drill Hole	Feet drilled	Fixed Unit cost (per foot)	Total Cost
98010	1	300	$3.31	$ 993.00
98009	2	250	3.31	827.50
98023	3	225	3.31	744.75
98056	4	250	3.31	827.50
		1,025		$3,392.75

PROGRESS REPORT

September, 1959

Docket No. OME-6020

Contract No. 14-23-090-2002

Myers Prospect, Smyth Co., Va.

Roland F. Beers, Inc. Troy, New York

GENERAL INFORMATION

In conformance with the provisions of Exploration Contract E-2002, and amendment No. 1 of July 17, 1959, field work began on the Myers Prospect, Smyth County, Virginia on September 2, 1959. On that date, Helmuth Wedow, OME Field Team, and Robert S. Young, Roland F. Beers, Inc., selected four drill sites.

The drilling crew from the Joy Manufacturing Company arrived at the property on the afternoon of Thursday, September 3, 1959. Equipment consisted of one Joy 12-B drill rigged for standard drilling equipment. Because of the long holiday weekend, bedrock drilling did not begin until Tuesday, September 8th.

At the end of the second shift of drilling on September 30th, 1,161 feet of drilling had been completed. The core is being stored at 114 West Park Drive, Charlottesville, Virginia.

* * * *

Drilling and Inspection Program

As a result of conferences held at Marion, Virginia, H. Wedow, OME, and R. Young, Beers, Inc., with the able assistance of R. W. Johnson, USGS, selected the field sites for the first four drill holes. Site selection of these holes was based on a compromise of the drilling plans worked out independently by the Government and the Operator. The drill holes were laid out to test, in part, two geological hypotheses. Holes M-1 and M-3 were designed to test the possibility that the mineral-controlling fractures were best developed along the S.45°W. trend of the plunging anticline. Holes M-1, M-2 and M-4 were located to determine whether the ore minerals were preferentially located in two intersecting fracture systems, oriented approximately N-S and E-W. As a result of a field conference held on Saturday, September 19, 1959, drill holes M-5 and M-6 were laid out on the trend of former workings to check on the possibility of a structural terrace development along the N.45°W. trend. The committed drilling (approximately 2,000 ft.) will be used to evaluate the prospect in the light of the three geological hypotheses.

From September 8th to October 1st, 1,161 feet of drilling, distributed among five holes, were completed. Four holes were completed; the fifth was in progress. The physical characteristics of each hole are tabulated below.

Hole No.	Location	Total Depth	Attitude
M-1	0.28S / 4.90W	300'	-90°
M-2	2.25N / 2.10W	250'	-90°
M-3	0.0 / 1.25W	225'	-90°
M-4	2.35S / 1.65W	250'	-90°
M-5	1.50N / 0.50W	136'*	-90°

The percentage of core recovery has not been calculated; it is estimated to be at least 90 per cent.

A property map showing the exact location of each drill hole forms part of this report. This map also shows the approximate surface trace of one key bed, a sedimentary breccia-shale-chert unit (Unit #52, measured section). For the lower part of the section, it appears that certain quartz sand-bearing limestones will prove to be good structure markers.

* To be completed at 225'

* * * *

Drilling Results

Sphalerite has not been encountered in the drilling to date. The only sulfide present in the core is pyrite, which is prominent in certain parts of the limestone section. Minor amounts of barite and fluorite have been identified in the core; they are most prominent in hole M-1. The well developed limestone breccia, which carries the barite, fluorite and sphalerite, has not been intersected by the drilling.

* * * *

A section of the Ordovician Beekmantown Fm., measured along County Road #645, Myers Prospect, Smyth County, Virginia.

Lithology	Thickness
76. gray-green shale (strike N.45°W.; dip 29°SW.)	0' 2"
75. medium-bedded, buff, fine-grained, homogeneous dolomite; irregular and discontinuous (0-2") white chert 10" down; 1" irregular shale parting 29" down; lower contact of unit gradational.	4' 0"
74. gray, fine-grained, medium-bedded dolomite; laminated near base and carries minor sedimentary breccia from place to place; some mottling near top; chert balls and lenses in middle of unit.	2' 8"
73. gray-green shale.	0' 1"
72. tan, fine-grained dolomite.	1' 3"
71. medium-bedded, finely crystalline, faintly laminated, gray dolomite; sparse chert balls in lower 1/3 of unit.	1' 9"
70. well laminated, gray dolomite; numerous balls and lenses of white chert, elongate parallel bedding; chert concentrated along contact.	1' 10"
69. thick-bedded tan and gray dolomite; well laminated in lower ½ of unit, mottled in upper ½; chert balls occur in lower 6"; top contact well defined by highly sinuous stylolite seam with ¼" carbonaceous layer; relief on stylolite up to 6".	2' 10"
68. medium-bedded, blocky weathering, faintly laminated, buff dolomite; chert pods in upper 6" and concentrated on top contact (strike: N. 40° W.; dip 23° SW).	4' 4"
67. predominantly white-pink mottled chert with some residual tan dolomite.	0' 10"
66. cobbly weathering, fine-grained, buff dolomite.	2' 4"
65. white to pink mottled chert.	0' 4"

64.	gray-green shaly parting	0' ½"-2"
63.	thin- to medium-bedded, faintly laminated, buff and gray dolomite; top 24" more massive and less laminated than remainder; blocky ("cuneiform") jointly conspicuous.	3' 5"
62.	medium-bedded, homogeneous, medium-crystalline, buff dolomite; occasional small barite mass.	2' 10"
61.	medium-bedded, thinly laminated, gray and buff dolomite.	3' 0"
60.	gray-green, dolomitic shale.	0' 1"-1½"
59.	medium-bedded, finely-crystalline, buff dolomite; occasional chert "eye" or small barite mass.	6' 1"
58.	gray-green shale and interbedded, medium-crystalline, tan dolomite.	0' 3"
57.	medium-bedded, faintly laminated, buff dolomite.	1' 11"
56.	gray-green shale.	0' 1"
55.	medium-bedded, finely-crystalline, faintly laminated, buff dolomite; sparse small barite masses.	4' 5"
54.	green weathering shaly dolomite and dolomitic shale (strike: N. 44° W.; dip: 30° SW).	0' 7"
53.	medium-bedded, medium-crystalline, tan dolomite; minor fracturing with attendant solution effects best developed in lower 1/3 of unit; barite masses throughout unit but most common in lower 1/3; 2"-4" bedded, white chert 38" down; ½" shaly parting 58" down.	9' 5"
52.	dark gray to green sedimentary breccia with irregular shaly zone at top (shaly zone may not persist); ½" to 1½" white, bedded chert at base.	≤ 1' 0"
51.	fine-grained, silty, laminated tan dolomite; sparse barite masses at base.	1' 0"
50.	medium-coarse, thick-bedded, splotchy gray-brown dolomite; fractured and carries vein dolomite and minor barite; stylolotic.	4' 6"

49. chert-dolomite-shale zone; fractured (low-grade breccia):
    5" chert and sugary dlm
    6" laminated gray dlm
    1"-3" sugary dlm with barite
    1" green shale
    1"-4" gray chert
    ½"-1" green shale — 1' 4"

48. medium-bedded; fine-grained, tan dolomite with white, gray, and pink chert balls and plates; 0-3" chert nodules at base with ½" green shale; minor barite masses (strike: N. 46° W.; dip: 23° SW). — 2' 1"

47. fine- to medium-grained, medium bedded, faintly laminated, buff to gray dolomite; occasional chert ball and minor barite masses; grain size increases with depth and becomes mottled; probable 2" chert in middle of unit; 2" green shale 36" up from base; 2"-3" green shale 53" up from base; white chert balls in dolomite for 18" zone beginning 53" up from base. — 18' 10"

46. very fine-grained, brown dolomite with minor barite. — 1' 3"

45. medium- to thin-bedded medium coarse, gray-brown, mottled dolomite; thin cherty layers 42" and 49" down; ½" shaly parting at basal contact; very minor barite. — 5' 4"

44. fine-grained (vaughanitic) gray limestone with 0-2" gray chert at top and scattered chert balls within unit. — 1' 0"

43. bedded gray chert with ½" green shale at base. — 0' 2"

42. fine-grained gray limestone; medium bedded; laminations best developed in middle of unit. — 5' 4"

41. thick-bedded, medium-grained, gray limestone; faintly laminated and occasionally mottled; ½" shale 57" down; sparsely distributed barite masses, some with FeS_2 rims; some beds in unit may be high magnesian limestones. — 9' 4"

40. thin- to medium-bedded, buff, homogeneous dolomite. — 6' 1"

39. laminated gray chert with ½" gray-green shale. — 0' 4"

38.	fine-grained, gray limestone with thin clay partings and laminae; partings weather in relief; "birdseye" limestone in top 36"; unit includes thin intraformational conglomerates.	7' 3"
37.	thin-bedded, medium-grained; tan dolomite; sparse barite balls.	1' 8"
36.	fine-grained, light to medium gray, thick-bedded limestone; contains shaly partings which weather in relief; sparse chert balls along bedding; carries gastropods about 24" down from top; thin limestone conglomerate at base.	6' 9"
35.	thin-bedded, gray limestone; shaly partings common, especially near top and base.	0' 9"
34.	thick-bedded, medium gray limestone; carries moderate fauna, including <u>Lecanospira</u> cf. <u>L. compacta</u> and breviconic cephalopods; unit contains minor chert and some shaly partings.	7' 11"
33.	thin-bedded, tan dolomite.	1' 6"
32.	thin-bedded, probably magnesian, gray limestone with shaly partings.	0' 9"
31.	thick-bedded, impure, gray limestone; faintly banded in part; contains occasional thin-bedded zone with shaly partings; minor amounts of barite in fractures and replacement pods; traces of fluorite; unit constitutes top of potential ore zone (strike: N. 40° W.; dip: 28° SW).	7' 1"
30.	shaly magnesian limestone; very thin bedded.	0' 4"
29.	covered area (old trench) along roadside section; probably mostly limestone.	±28' 0"
28.	light gray, recrystalline dolomite; mottled with white areas; gradational with unit below.	0' 9"
27.	thin-bedded, gray limestone; shaly partings common.	3' 11"
26.	shaly, gray-brown dolomite.	0' 5"
25.	thin- to medium-bedded; shaly partings common; zone of chert lenses 24" down.	7' 2"

24.	thick-bedded, medium-grained, buff to brown dolomite; lower contact gradational.	7' 4"
23.	thin- to medium-bedded, fine-grained, gray limestone with shaly partings.	3' 8"
22.	dolomite; top 8" medium coarse, brown, crystalline; remainder laminated, tan dolomite, fine-grained.	2' 0"
21.	fine-grained, gray, magnesian limestone carrying heavy white chert as lenses and irregular masses in lower one-half; lower contact dolomitized;	1' 6"
20.	medium- to thick-bedded, gray-brown dolomite; medium coarse; occasional chert ball along lower contact.	6' 4"
19.	very coarse-grained, gray limestone with heavy white chert from place to place, chert concentration in lower one-half of unit.	1' 2"
18.	fine-grained, gray limestone with center 3" tightly laminated; occasional chert ball along upper contact.	1' 3"
17.	medium-grained, medium-bedded, tan dolomite; lower 8" coarse recrystalline, grading laterally to gray, fine-grained limestone; limestone partly dolomitic.	2' 9"
16.	laminated, fine-grained, gray limestone with shaly partings; some coarse dolomite grains.	2' 0"
15.	massive, fine-grained, gray limestone; dolomitized along fractures; limestone grades laterally to tan, coarse recrystalline dolomite; stylolitic action prominent throughout.	1' 9"
14.	medium-grained, gray dolomite.	0' 9"
13.	fine-grained, light to medium gray limestone with partings common. (max.)	1' 0"
12.	gray-green shale and associated sporadically distributed chert lenses (max.)	0' 4"
11.	medium-bedded, gray and tan, fine to medium-coarse dolomite; occasional cherty zone, especially in upper and lower units.	7' 1"

10. bedded, white chert. (max.)	0' 2"
9. fine-grained, buff dolomite.	1' 4"
8. white to gray chert; ranges from bedded to individual nodules (max.)	0' 4"
7. light gray limestone with heavy chert; unit nearly all chert in places; 1" solid chert at base.	1' 1"
6. tan dolomite.	0' 5"
5. light gray limestone which is gradational laterally with medium-grained, tan, recrystalline dolomite.	1' 2"
4. tan, medium-grained dolomite, with chert balls, grading laterally to fine-grained, gray limestone. (max.)	0' 13"
3. medium-bedded, fine-grained, gray limestone with shale partings on bedding; thin intraformational conglomerates in lower 24"; 2"-3" basal conglomerate of shale in limestone (strike: N. 29° W.; dip: 26° S.W.).	5' 0"
2. calcareous, green-gray shale.	0' 8"
1. fine-grained, gray limestone, upper 2"-3" carries sand grains.	

DRILL LOG

Hole No.: Myers #1
Location: 30' S. 65° E. of 0 + 4 S.
Elevation:

Depth: 300'
Angle: -90°

Logged by: RSY

Core size: 0' - 6' soil
6' - 10' BX
10' - 300' AX std.

Depth			Lithology
0	-	6'0"	soil; no core.
6'0"	-	12'10"	fine-grained, buff dolomite; faintly laminated in part; stylolites common; lightly fractured; 1/4" shale parting with sand grains immediately above and below at 9'6"; 1/2" green shale at base.
12'10"	-	17'6"	tan dolomite, slightly more coarse grained than above; lightly mottled; stylolitic action common in top 15".
17'6"	-	21'2"	very fine-grained, nearly white (buff) dolomite; zone broken, core recovery about 12".
21'2"	-	25'9"	medium-fine, tan dolomite; FeS_2 along stylolite seams and in fractures 22'-23' est. 3-5% by volume; shaly partings (stylolitic ?) 44" and 48" down; lower 6" mottled.
25'9"	-	28'7"	tan, fine-grained dolomite; faintly laminated with gray bands; 2" intra-formational conglomerate with sand grains top 11" down; lower contact stylolitic; minor FeS_2 in fractures and along stylolites in and below conglomerate-sand zone.
28'7"	-	36'10"	fine-grained, gray and tan, laminated dolomite; soft-sediment structures common (faults and flowage folds); 4" intraformational conglomerate with sand top 31'7"; chert nodule at 33'0".

36'10"	-	39'1"	tan, fine-grained dolomite, faintly mottled in lower 6".
39'1"	-	39'3"	white chert with basal green-gray shale.
39'3"	-	54'11"	tan, fine-grained dolomite; faintly laminated; stylolitic near top; lightly fractured; 2" white-gray chert and thin shale top at 41'8"; 1" collapse breccia 47'0"; 2" shaly zone top 43'7"; chert ball at 52'0"; 1" gray-green shale 52'11"; laminations best 49'-52'; dolomite coarsest between chert at 52'0" and shale at 52'11".
54'11"	-	55'3"	shaly breccia zone.
55'3"	-	55'9"	buff, fine-grained dolomite.
55'9"	-	55'11"	white and gray chert.
55'11"	-	57'9"	faintly laminated, tan dolomite.
57'9"	-	57'10"	gray-green shale.
57'10"	-	61'9"	tan dolomite, much as unit above except that mottling is more prominent than lamination.
61'9"	-	62'0"	white and gray chert and dolomite.
62'0"	-	65'0"	tan, fine-grained, faintly laminated and mottled dolomite.
65'0"	-	65'1"	gray-green shale.
65'1"	-	66'5"	tan, fine-grained, faintly laminated dolomite.
66'5"	-	66'6"	gray shale.
66'6"	-	68'4"	laminated tan and gray dolomite.
68'4"	-	68'9"	chert-dolomite zone; 1" white and gray chert at top; 2-1/2" tan dolomite in center; 1-1/2" white and gray chert at base.

68'9"	-	70'5"	faintly laminated, tan dolomite; chert balls 5" and 9" down.
70'5"	-	70'6"	white chert.
70'6"	-	78'4"	fine-grained, gray-mottled tan dolomite; faintly laminated in places; chert ball 14" down; laminae well defined and prominent beginning with 76'.
78'4"	-	78'9"	white and gray chert.
78'9"	-	81'9"	tan, fine-grained dolomite; broken zone; small cavities with barite crystals; chert balls at 80'4" and 81'0".
81'9"	-	81'11"	shale and dolomite.
81'11"	-	82'9"	mottled gray-green and tan dolomite.
82'9"	-	84'3"	mottled tan and brown dolomite.
84'3"	-	92'10"	laminated tan and gray dolomite; mottling prominent in center of section; barite in 1/4" fracture at 89'5".
92'10"	-	93'3"	green shale and shaly dolomite.
93'3"	-	96'1"	faintly laminated and gray mottled tan dolomite; stylolites common; small barite masses in lower 18".
96'1"	-	96'2"	gray and white chert.
96'2"	-	99'4"	faintly laminated tan dolomite; 1/2" chert 98'2"; 1/2" chert 2" above base; base marked by 1/2" green shale.
99'4"	-	99'11"	mottled gray and brown dolomite.
99'11"	-	108'0"	faintly laminated tan dolomite; 1/4" shale 26" down; mottled in lower 12"; chert ball at 107'3".
108'0"	-	108'5"	gray-green shale.

108'5"	-	109'1"	medium-coarse, brown dolomite with finely disseminated FeS_2, especially in upper 3" (est. 5%).
109'1"	-	116'7"	fine-grained, tan dolomite, faintly laminated in places; solution effects prominent in center of section; 1/4" shales at 110'7" and 110'9"; 4" zone of barite and purple fluorite top 111'4"; 6" barite-fluorite zone top 112'10"; barite and fluorite on fracture at 116'0"; fluorite "shines" on fracture at 114'6"; trace FeS_2 in unit.
116'7"	-	118'5"	green shale-dolomite breccia-shaly dolomite-chert; minor disseminated FeS_2; chert in middle and base.
118'5"	-	119'0"	laminated gray and tan dolomite.
119'0"	-	123'2"	medium-coarse, brown dolomite, coarsest at top; 1" chert top at 122'7".
123'2"	-	125'4"	principally chalky white chert.
125'4"	-	129'4"	fine-grained, buff dolomite.
129'4"	-	137'0"	medium-coarse, brown, mottled dolomite.
137'0"	-	138'8"	medium fine-grained, laminated, tan dolomite; chert balls 6" and 15" down.
138'8"	-	139'0"	gray-green shaly zone.
139'0"	-	144'11"	medium-grained, gray and tan dolomite; laminated near top, but mottled throughout; 1/4" barite in fracture at 141'1".
144'11"	-	145'0"	green shale.
145'0"	-	147'6"	coarse-grained, brown dolomite; gradational with unit below.
147'6"	-	149'9"	medium fine-grained, gray to tan dolomite; fractured and mineralized with FeS_2 147'2"-149'3" (est. 10%).

149'9"	-	150'7"	gray and white chert; est. 15% FeS_2 in top 2".
150'7"	-	154'2"	gray-brown dolomite; generally well laminated except lower 10" where mottled; grain size coarser at top and base; FeS_2 along thin bedding fracture 30" down.
154'2"	-	154'4"	gray chert.
154'4"	-	157'6"	medium fine, rudely laminated, gray dolomite; 2" shaly zone 27" down; unit gradational with that below.
157'6"	-	160'9"	principally brown dolomite, some gray layers near top; rudely laminated; healed fracturing prominent; minor FeS_2 in fractures below 159'.
160'9"	-	161'1"	shaly green dolomite or dolomitic shale.
161'1"	-	165'8"	mottled and rudely laminated gray dolomite; sparse FeS_2 on fractures and along solution seams in lower 2'; 2" dolomite breccia in stylolite zone 1' from base.
165'8"	-	171'3"	medium fine, brown dolomite, lightly mottled or laminated with gray; healed fracturing prominent (low-grade breccia); minor FeS_2 in fractures, especially in interval 166'-168'; 1" chert with thin FeS_2 basal layer top 170'10"; 1" green shale 165'5"; chert ball at 166'2".
171'3"	-	171'6"	2" white chert with 1" green shale at base; 1/4" band FeS_2 at top of shale.
171'6"	-	173'6"	light gray, fine-grained limestone; clay partings prominent in lower 15"; 1" shaly zone 172'4"; first fluorite immediately below shaly zone; lower 14" carries minor (minus 5%) white and purple fluorite and pyrite; thin limestone breccia 173'0".
173'6"	-	173'11"	interbedded green shale, medium coarse, brown dolomite and shaly dolomite.

173'11" -	180'3"	brown dolomite with gray mottled areas; fractures prominent, healed with fluorite, barite and pyrite; prominent mineralized zones are: 1" at top of unit, 8" top at 174'9", 20" top at 176'0", chert ball at 179'9"; fractures and solution effects prominent in lower 18" but mineralization very low.
180'3" -	181'0"	white barite with minor white fluorite and pyrite.
181'0" -	181'9"	interbedded light gray limestone (middle), shaly limestone (top) and shale with pyrite (base); central limestone has 2" section of barite with white and purple fluorite.
181'9" -	183'2"	gray limestone with clay partings.
183'2" -	184'3"	gray limestone, mottled gray and brown limestone and gray shale; 5-10% pyrite in lower one-half of unit; 1/2" shale at base.
184'3" -	185'8"	tan dolomite; 4" calcite and barite with minor fluorite and pyrite at base; trace fluorite on fractures.
185'8" -	194'2"	light gray limestone; clay partings common; 2" shaly zone top at 187'9"; lower contact gradational through dolomitization.
194'2" -	196'4"	tan, laminated dolomite; medium coarse in top 4"; 1/2" shaly parting at base.
196'4" -	201'4"	gray limestone; well laminated with partings in top 12"; crinkly partings in interval 197'4"-198'6"; 1/2" intraformational conglomerate at base; remainder relatively pure, massive limestone with some stylolites.
201'4" -	202'6"	interbedded gray limestone and gray-green shale; sand grains 4"-5" down; 1/2" white chert 5" down; 3" green shale with sand grains in top 1" at base of unit.

202'6"	-	215'7"	tan dolomite; faintly laminated in places; some gray mottling.
215'7"	-	216'9"	medium coarse, mottled gray and brown dolomite.
216'9"	-	219'7"	light gray limestone with some shaly partings; thin intraformational conglomerate near base; lower contact gradational through dolomitization.
219'7"	-	221'1"	medium coarse, tan dolomite; top 9" of unit mottled, lower part well laminated; lower 3" carries sand grains; chert ball 220'8".
221'1"	-	227'8"	light gray limestone with clay partings common; pyrite specks and blebs in lower 30"; small chert lenses 227'1".
227'8"	-	227'10"	gray chert.
227'10"	-	236'6"	medium coarse, brown dolomite; finer grained near base; some areas mottled with white vein dolomite; 18" oxidized zone starting 4" down.
236'6"	-	237'4"	light gray, recrystalline dolomite with minor shaly partings.
237'4"	-	237'7"	light gray limestone with clay partings.
237'7"	-	239'6"	mottled brown limy dolomite with green shale partings.
239'6"	-	241'5"	laminated tan dolomite.
241'5"	-	244'0"	coarse grained, brown dolomite; thin white cherts in lower 10"; 1/4" oolitic chert 243'8"; barite (?) in thin fractures.
244'0"	-	247'9"	mottled and rudely laminated, gray and tan dolomite.
247'9"	-	248'3"	gray and white chert.
248'3"	-	249'2"	dolomite as above, gradational with unit below.

249'2"	-	250'5"	coarse-grained (recrystalline), light brown dolomite.
250'5"	-	251'1"	laminated gray dolomite.
251'1"	-	251'2"	gray chert.
251'2"	-	251'10"	medium coarse, gray and brown dolomite; becomes mixed limestone and dolomite in lower 2".
251'10"	-	264'10"	gray limestone; shaly partings common; thin intraformational conglomerates common; unit oxidized in lower 18"; 3/4" gray chert at 257'.
264'10"	-	266'6"	contorted limy dolomite carrying thin shales in lower 6".
266'6"	-	267'9"	light gray limestone carrying 10-15% pyrite.
267'9"	-	268'1"	medium coarse, brown dolomite.
268'1"	-	272'0"	medium fine, tan, laminated dolomite; fractured and oxidized in lower 1'; chert ball 2" up from base.
272'0"	-	273'1"	medium coarse, mottled, brown and white dolomite.
273'1"	-	273'3"	gray and brown chert.
273'3"	-	273'10"	tan, laminated dolomite with 1" gray chert 1" up.
273'10"	-	282'4"	fine-grained, light gray limestone; clay partings and intraformational conglomerates common; 1/2" chert top at 275'4"; 1" chert top at 275'7"; 1" chert top at 280'3" (note 1' core loss 274'-275').
282'4"	-	282'9"	limy, gray shale (dip 15°-18° true).
282'9"	-	283'1"	limestone conglomerate with sand grains.
283'1"	-	294'2"	light gray limestone; clay partings common in upper 2'; 289'2" marks the top of two 3" cherts separated by 1" limestone; 3" limestone with sand grains subjacent to lower chert.

294'2"	-	294'4"	finely interbedded gray shale and limestone.
294'4"	-	294'8"	gray limestone.
294'8"	-	296'6"	broken zone (low-grade breccia) of limestone, vein dolomite, recrystalline dolomite, shaly partings and minor pyrite.
296'6"	-	297'0"	oxidized cave debris (spongy calcite).
297'0"	-	298'0"	cavern.
298'0"	-	300'0"	oxidized light gray limestone (and spongy calcite) with 1/2" limonite on the cavern floor at 298'.

* * * * TDA - 300' * * * *

DRILL LOG

Hole No.: Myers #2
Location: 2.25N / 2.10W
Elevation:

Depth: 250'
Angle: -90°
Logged by: RSY

Core size:		
	0' - 10'	soil
	10' - 15'	BX std.
	15' - 250'	AX std.

Depth		Lithology
0	- 10'0"	soil; no core.
10'0"	- 20'0"	mostly tan, fine-grained dolomite; unit laminated near top and bottom, mottled 13'-17'; fractures prominent 18½'-20', some calcite-healed but mostly with carbonaceous material; 1" white chert at about 11'.
20'0"	- 20'4"	gray-green shale and dolomitic shale.
20'4"	- 34'6"	principally buff to tan, fine-grained dolomite; unit is nearly massive in top ½, faintly laminated in lower ½; 1' fractured zone with carbonaceous material top at 22'; 2' fractured zone top at 30'; minor calcite eyes in unit; 1" white chert 25'9"; ½" white chert at 34'0".
34'6"	- 34'11"	gray-green shale; pyritic in lower 2½".
34'11"	- 45'2"	medium fine- to medium coarse-grained, tan to brown dolomite; coarsest at top (recrystalline for upper 6"); 3" shaly, fractured zone top at 36'1"; entire unit fractured, many cracks healed with chert; some low-grade breccia areas; ¼" shale at 38'3"; solution effects common; lower 4" of unit brecciated.
45'2"	- 45'11"	sedimentary breccia, gray-green shale and chert.
45'11"	- ≤50'0"	mostly coarse-grained, sugary, buff dolomite; 2" gray chert at about 46'6" (18" core recovery in the interval 47'6"-51'0").

±50'0"	- 52'8"	fine-grained, tan, faintly laminated dolomite, gradational above and below.
52'8"	- 62'3"	coarse-grained, sugary, brown and tan mottled dolomite; chert balls at 60'; 2" brown-white chert 31" up from base; 5" chert (4" chalky, 1" clear) top 25" up from base; dolomite finer-grained below lower chert.
62'3"	- 65'0"	fine-grained, gray limestone; shaly partings common; dolomitized toward base.
65'0"	- 65'6"	medium fine, brown dolomite.
65'6"	- 66'11"	laminated, fine-grained, gray limestone; green shaly partings; lower contact gradational.
66'11"	- 71'2"	medium fine, gray and tan dolomite; faintly mottled; fractures in middle of unit; sparse sand grains in lower 1" of unit.
71'2"	- 71'5"	gray-green shaly, white chert and thin dolomite.
71'5"	- 74'0"	medium coarse, recrystalline, brown, mottled dolomite; lower contact gradational.
74'0"	- 76'7"	tan dolomite; faintly laminated.
76'7"	- 77'8"	fine-grained, gray limestone; gray chert balls in top 2"; ¼" gray shale at base.
77'8"	- 77'11"	banded gray chert, shaly at base.
77'11"	- 80'0"	fine-grained, gray limestone; shaly partings.
80'0"	- 92'6"	medium fine, well laminated, gray and tan dolomite; ½" shaly parting 83'7"; unit mottled from place to place; calcite eyes in lower ½ of unit; 1" gray-green shale 88'8"; mottling becomes prominent below 90'.
92'6"	- 92'8"	gray and white chert.

92'8" - 98'6"	fine-grained, buff dolomite; massive; minor pyrite along stylolites; very faintly laminated.
98'6" - 98'8"	limy, gray-brown shale.
98'8" - 106'1"	gray limestone; shaly partings common; 4" intraformational conglomerate top 100'10"; fractures carry calcite; very minor pyrite about 105'.
106'1" - 108'4"	medium fine, brown dolomite; fractured in top 6"; 2" white chert 3" up; lower 3" contorted.
108'4" - 123'4"	fine-grained, gray limestone; minor shaly partings; 2" brown chert top 14" down; fractures carry calcite; ¼" oxidized, gray shale parting 114'6"; limestone medium fine-grained from place to place.
123'4" - 124'10"	medium fine, slightly oxidized, brown dolomite; faintly laminated; stylolitic; thin shaly parting at base; chert ball at top contact.
124'10" - 134'4"	fine-grained, gray limestone; some shaly partings; oxidized in top ½ of unit; ½" shale parting 126'11"; limestone slightly coarser-grained below 128'6"; 2" shaly zone top 57" down.
134'4" - 135'1"	medium coarse, brown and gray dolomite; 4" fractured zone with calcite near base.
135'1" - 135'5"	limy, gray-green shale.
135'5" - 138'6"	gray limestone; shaly partings common in upper ½; shaly parting at base.
138'6" - 151'0"	faintly laminated, somewhat mottled, tan dolomite; numerous sandy zones, best developed in the interval 140'2"-142'2"; grain size increases with depth; lower contact gradational.
151'0" - 152'6"	medium coarse, gray and brown dolomite.

152'6" - 155'0"	medium coarse, brown dolomite; minor fracturing.
155'0" - 159'2"	coarse-grained, brown and white mottled, recrystalline dolomite; minor fracturing; ½" green shaly zone 8" down; pyrite seam 22" down; unit finer-grained and oxidized in lower 12".
159'2" - 166'3"	gray limestone; medium fine; ½" chert 9" down; minor shaly partings; ¼" white chert 165'7"; 1" white chert top 165'10".
166'3" - 166'5"	white and gray chert.
166'5" - 175'0"	medium coarse, oxidized, gray and tan dolomite; calcite eyes; unit faintly laminated, but mottling predominates; trace barite; 6" gray dolomite (brecciated) at base of unit.
175'0" - 175'2"	sedimentary breccia; remainder shale and limestone.
175'4" - 176'0"	fine-grained, gray limestone; lower 4" dolomitic.
176'0" - 178'2"	medium coarse, brown and gray dolomite; lightly fractured 1' from base; 2" gray shaly zone top 8" down.
178'2" - 180'0"	fine-grained, laminated gray mottled tan dolomite; stylolitic action prominent; pyrite generally along stylolites.
180'0" - 180'3"	gray shale, white chert, and brown dolomite.
180'3" - 183'1"	medium coarse, mottled, brown dolomite; recrystalline in part.
183'1" - 187'8"	medium fine, gray mottled, tan dolomite; faintly laminated in part; 1" gray and white chert 185'7"; unit becomes coarse-grained, brown dolomite in lower 7".
187'8" - 187'10"	white chert.

187'10" - 196'2"	fine-grained, gray limestone; oxidized near top; 1" white chert 6" down; thin intraformational conglomerates; ½" gray chert 194'9".
196'2" - 196'7"	fine-grained, brown dolomite.
196'7" - 201'8"	gray limestone as above; ¼" oxidized shale 27" down.
201'8" - 210'4"	medium-grained, mottled gray-brown dolomite; ¼" white chert at top; faintly laminated; 1' recrystalline-type top 203'9"; unit oxidized in upper ½; minor dolomite eyes, some dolomite and calcite, some with pyrite.
210'4" - 210'7"	2" white chert with 1" green shaly-lime at base.
210'7" - 211'7"	fine-grained, gray limestone; 4" intraformational conglomerate at top.
211'7" - 212'1"	white chert zone; some residual gray limestone.
212'1" - 213'6"	fine-grained, gray limestone; ¼" green shale 8" down.
213'6" - 214'3"	laminated, gray dolomite; ½" gray chert 2" up; both contacts gradational.
214'3" - 219'3"	gray limestone; minor thin intra-formational conglomerates; shaly partings common; 1" white chert 217'11".
219'3" - 219'9"	6" mostly limy gray-green shale; minor white chert and sand grains.
219'9" - 250'0"	fine-grained, gray limestone; upper 3" intraformational conglomerate; shaly partings common in upper 2'; unit oxidized in middle; 6" intra-formational conglomerate top 222'9"; 3" zone with sand grains top 227'1"; 1" oxidized gray shale top 229'4"; 3" intraformational conglomerate with sand grains in matrix top 230'11"; 2" white chert top 237'2"; unit becomes more massive with depth; scattered sand grains in lower 1'.

********* TDA - 250' *********

DRILL LOG

Hole No.: Myers #3
Location: 0.0 ✓ 1.25W
Elevation:

Depth: 225'
Angle: -90°
Logged by: RSY

Core size:

0' - 10'	soil
10' - 20'	BX
20' - 225'	AX

Depth		Lithology
0'	- 10'0"	soil; no core.
10'0"	- 10'6"	white chert.
10'6"	- 27'3"	tan dolomite, somewhat oxidized near top; faintly to well laminated; carries white chert balls; scattered sand grains about 18'3"; some calcite eyes; ½" green shale parting about 11'6"; ¼" shale parting at 21'6"; laminations best developed 16'-18'; 4" green shale and gray chert top at 26'9".
28'3"	- 30'0"	medium crystalline, brown dolomite; fractured, with vein calcite; some iron oxide (after pyrite).
30'0"	- 35'11"	gray dolomite; fracture system of two ages present, latest carry pyrite and calcite; stylolites common; minor chert in lower 8".
35'11"	- 38'6"	green shale, dolomite, gray limestone, and chert.
38'6"	- 41'0"	cavity.
41'0"	- 43'0"	medium coarse, mottled, tan dolomite.
43'0"	- 43'6"	white chert.
43'6"	- 49'6"	series of closely spaced caverns; 6" of buff dolomite and 1" white chert recovered.
49'6"	- 56'3"	medium coarse, tan dolomite with white chert mottling in places; chert balls from place to place.

56'3"	- 56'8"	white and gray chert.
		(15" core recovery 53'-56')
		(15" core recovery 56'-60')
56'8"	- 61'3"	rudely laminated gray and tan dolomite; occasional chert layer.
61'3"	- 61'9"	coarse-grained dolomite and gray-green shale; 2" of dolomite at top.
61'9"	- 66'5"	mottled gray and brown dolomite with 1" green shale zone and minor pyrite at base.
66'5"	- 67'10"	medium coarse, recrystalline-type brown dolomite.
67'10"	- 70'1"	medium fine, gray dolomite; 2" chert ball 68'4"; 2" white chert top 68'8".
70'1"	- 70'11"	white and gray chert; 1" of dolomite near base; thin gray shale at base of unit.
70'11"	- 71'11"	medium coarse, recrystalline-type brown dolomite, laminated; gradational with unit below.
71'11"	- 80'1"	medium-grained, well laminated, gray and brown dolomite with occasional chert ball; mottling prominent below 77'.
80'1"	- 80'11"	mottled white and brown dolomite, medium coarse; ½" gray shale at base.
80'11"	- 85'0"	mottled gray and brown, medium-grained dolomite; light fracturing filled with calcite.
85'0"	- 92'2"	medium- to fine-grained, tan dolomite; thin gray shale 7" down; unit faintly laminated.
92'2"	- 92'5"	gray and white chert and thin gray shale.
92'5"	- 96'1"	fine- to medium-grained, gray limestone; shaly partings common; 1" shaly zone 94'2".
96'1"	- 101'10"	gray dolomite, medium-grained; sparse chert balls; unit grades to predominantly brown at about 98'; lower 3" of unit is coarse-grained dolomite with basal 1" green shale.

101'10" - 115'0"	fine-grained, gray limestone; fine shaly partings prominent; gray chert ball 2' down; scattered thin intraformational conglomerates.
115'0" - 116'6"	fine-grained, gray dolomite; unit oxidized to brown in top 8"; ½" green shale parting at base.
116'6" - 134'6"	fine-grained, gray limestone; 4" zone of dolomitized limestone top 124'11".
134'6" - 135'0"	gray limestone and white chert with sand grains; thin shales.
135'0" - 144'9"	poorly laminated, medium-grained dolomite, gray where fresh, brown where oxidized; gradational with unit below.
144'9" - 148'2"	fine- to medium-grained, brown dolomite; occasional calcite eye.
148'2" - 149'5"	mottled brown and white, medium coarse dolomite.
149'5" - 151'6"	gray limestone; thin shaly partings common; gradational with unit below.
151'6" - 152'3"	medium coarse, brown dolomite.
152'3" - 158'1"	light gray, fine-grained limestone.
158'1" - 171'1"	gray, medium-grained dolomite, brown where oxidized near top; fracture near top carries chalky white chert, top 161'2"; minor fractures and vugs with calcite; unit laminated lower 18".
171'1" - 173'5"	coarse-grained, mottled, brown and white dolomite; gradational with unit below; 5" zone brown and white chert top 9" down; chert in part oölitic.
173'5" - 177'11"	gray and brown, medium-grained dolomite, laminated.
177'11" - 178'4"	gray and white chert with minor coarse-grained dolomite.
178'4" - 179'6"	laminated brown dolomite; 1" gray chert top 9" down.

179'6" - 187'9"	light gray limestone; scattered minor blebs of pyrite; thin intraformational conglomerates; some shaly partings; 4" gray shale zone with 1" gray chert at top 185'0"; 1" white chert top 186'; 1" shaly limestone top 186'6"; pyrite common between two shaly zones occurring as disseminated grains.
187'9" - 188'6"	gray and white chert.
188'6" - 189'0"	light gray, fine-grained limestone.
189'0" - 197'6"	medium-grained, gray dolomite; 1" gray chert top 22" down; gray chert balls prominent in interval 22"-30" down; 2½" bedded gray chert top 5" from base.
197'6" - 198'6"	medium coarse, brown dolomite.
198'6" - 198'9"	gray and white chert.
198'9" - 199'3"	fine-grained, gray dolomite.
199'3" - 199'10"	light gray limestone; gradational with unit below; 2" gray chert top 3" down.
199'10" - 200'10"	medium-grained, gray dolomite; 1" gray chert at base.
200'10" - 223'2"	fine-grained, gray limestone; shaly partings prominent from place to place; thin intraformational conglomerates; 2" zone of limy, gray shale top 206'1"; scattered sand grains in limestone for 2" below shale; 1" brown chert top 213'6"; sand grains in limestone for 1" below chert; 2" of shaly limestone, sand grains in top 1", at 215'6"; 2" with sand grains top at 217'1".
223'2" - 225'0"	rudely laminated, gray and brown dolomite.

******** TDA - 225' ********

DRILL LOG

Hole No.: Myers #4
Location: 2.35S / 1.65W
Elevation:

Depth: 250'
Angle: -90°
Logged by: RSY

Core size:		
	0' - 6'	soil
	6' - 10'	BX
	10' -250'	AX std.

Depth		Lithology
0'	- 6'0"	soil; no core.
6'0"	- 21'3"	tan dolomite, faintly laminated; 2" white chert top at 7'2"; white chert ball from place to place; 2" white and brown chert top 18'7"; scattered sand grains in dolomite for 2" above chert; 2" brown chert top 21'1".
21'3"	- 48'1"	mottled gray dolomite, medium-grained; unit moderately well laminated for 18" beginning at 23'9"; ½" shaly zone top at 25'7"; scattered sand grains immediately above shaly zone; laminations good in interval 29'-32'; 1" green shale top 31'11"; ½" chert top at 36'9"; 5" gray and white chert and thin green shales top at 38'0"; chert balls 45'4".
48'1"	- 49'1"	green shale, dolomite and gray and white chert; may be sedimentary breccia in part.
49'1"	- 50'0"	medium coarse, recrystalline-type brown dolomite.
50'0"	- 57'3"	medium-fine, gray dolomite; minor fractures with pyrite and pyrite along stylolite seams; 2" zone with chert stringers top 51'6"; ¼" shaly zone at 52'.
57'3"	- 57'11"	dolomitic green shale.
57'11"	- 59'0"	fine-grained, gray limestone; ¼" gray chert 1" up from base.

59'0"	- 59'4"	principally gray-green shale; some gray chert.
59'4"	- 59'10"	laminated, gray limestone; thin gray shale at base, intruded upward along fractures.
59'10"	- 63'8"	medium-grained, mottled brown dolomite; 1-1½" gray and white chert top at 62'10".
63'8"	- 64'6"	gray chert with 1½" included green shale near base.
64'6"	- 69'0"	gray to tan, medium-fine dolomite.
69'0"	- 92'5"	medium coarse, brown and gray dolomite; grain size decreases somewhat with depth; chert balls at 77'; chert ball at 79'8"; 1" gray chert at 80'; 4" zone with chert balls top 81'3"; 5" zone green and gray shale top at 82'10"; dolomite coarser grained for 18" below shaly zone; ¼" green shale at base.
92'5"	- 95'6"	medium coarse, recrystalline-type brown dolomite; gradational with unit below.
95'6"	- 99'3"	medium fine, gray-brown dolomite; ½" shaly zone at 96'2"; chert ball at 96'3"; 2" zone with chert balls top 97'1"; 1" chert top 97'8".
99'3"	- 100'8"	zone of mixed coarse-grained, mottled dolomite and laminated brown dolomite with abundant gray chert balls and 3" massive chert at base.
100'8"	- 101'6"	medium coarse, poorly laminated, brown dolomite; gradational with unit below.
101'6"	- 104'1"	well laminated, medium fine, gray and tan dolomite.
104'1"	- 104'4"	gray and white chert.
104'4"	- 105'5"	fine-grained, poorly laminated, limy dolomite and magnesian limestone.
105'5"	- 105'9"	white and gray chert.
105'9"	- 106'10"	laminated, brown dolomite with 1" magnesian limestone at base.

106'10" - 107'10"	zone of medium coarse, mottled, brown dolomite, chert and gray-brown dolomite; gradational with unit below.
107'10" - 131'7"	mottled, medium fine, gray and brown dolomite; transverse fracture with ½" calcite at 114'6"; 1" shaly zone top 114'9"; 8" zone recrystalline dolomite with minor pyrite top 114'10"; 2" breccia top 118'9"; 2½" white chert top 124'; ¼" green shale at 125'5"; ½" shaly zone at 126'9".
131'7" - 135'1"	gray-brown dolomite in a low grade breccia; breccia cemented by vein calcite, vein dolomite and minor pyrite; 3" massive chert at base.
135'1" - 136'6"	faintly laminated, tan dolomite.
136'6" - 137'4"	chert, gray dolomite and green shale.
137'4" - 137'10"	gray-brown dolomite.
137'10" - 140'5"	breccia of tan dolomite blocks in shaly, recrystalline dolomite; 2" gray chert at top; thin shale at base.
140'5" - 144'2"	gray limestone; 1" gray-green shale 2" down; 6" zone of limestone, green shale and sand top 141'9"; 2" green shale at base of unit.
144'2" - 167'6_	fine-grained, gray-brown dolomite; solution effects prominent for 2½' top 145'9"; unit oxidized for 6" top 150'6"; unit fractured and carrying calcite for 18" top 151'3"; unit highly oxidized 154'-160'; good breccia 154'6"-157'; ½" shale 161'; 1" white chert 163'6"; 4" shaly zone top 164'2"; recrystalline lower 18".
	(14" core recovery 165'6"-168'0")
167'6" - 169'6"	chalky-white chert with gray chert eyes; thin (1") shale at base.
169'6" - 171'6"	cavity.
171'6" - 179'3"	heterogeneous dolomite-chert unit; dolomites range from light brown recrystalline to dark mottled; white chalky chert scattered throughout unit, but best developed for 6" top 173'4".

179'3" - 180'3"	principally white, chalky chert; some residual dolomite and shale.
180'3" - 180'9"	medium coarse, brown dolomite; gradational with unit above.
180'9" - 181'1"	green-gray shale with dolomite; shale has flowed and injects dolomite below.
181'1" - 183'2"	medium fine, brown dolomite; faintly laminated; brecciated in upper 6".
183'2" - 184'6"	chert; top 8" is chert breccia of translucent gray-brown fragments in a white matrix, remainder white and gray chert.
184'6" - 185'3"	medium coarse, recrystalline-type, brown dolomite; minor white chert near top.
185'3" - 191'1"	medium-grained, gray-brown dolomite; oxidized to brown in upper 2' and lower 1'.
191'1" - 192'0"	coarse, brown, recrystalline-type dolomite with 2" white chert at top and 1" gray chert in center.
192'0" - 197'0"	fine-grained, gray limestone; shaly partings common; 2" gray chert top 192'2"; lower contact gradational.
197'0" - 199'2"	medium-grained, brown dolomite; residual shaly partings visible; 2" gray chert at base.
199'2" - 204'6"	fine-grained, gray limestone; 1½" gray chert top at 199'7"; 1" shaly zone top at 200'0"; thin intraformational conglomerates below 201'6"; 1½" gray chert at base; 1" shaly zone at 203'8".
204'6" - 215'9"	principally medium fine, gray-brown dolomite; moderately well banded; chert ball at 207'; unit oxidized for 1' centering at 209'6"; 1½" gray chert top at 213'0"; dolomite noticeably coarser grained near cherts, especially for 8" above base.
215'9" - 216'9"	gray chert.

216'9" - 218'9"	principally medium-grained, gray-brown dolomite; ½" gray chert 6" down; 6" recrystalline-type at base of unit.
218'9" - 220'10"	fine-grained, gray limestone; thin intraformational conglomerate at 219'6".
220'10" - 221'4"	medium-grained, brown dolomite; both contacts gradational.
221'4" - 245'6"	fine-grained, gray limestone; 4" zone of limestone, thin shale, intraformational conglomerate with sand grains top at 222'10"; 6" brown (oxidized) shale zone top at 225'3", contacts of shale zone show solution effects; 1" shale at 231'5"; 1" sand zone at 233'0".
245'6" - 249'0"	principally medium coarse, brown dolomite; unit oxidized throughout; 2" zone carrying sand grains top 6" down; 2" shaly zone top 8" down; scattered sand grains for 6" top at 246'11"; 5" white and brown chert top 247'4"; few scattered sand grains 248'3"-248'6".
249'0" - 250'0"	white and brown chert.

******** TDA - 250' ********

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

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 1 1959

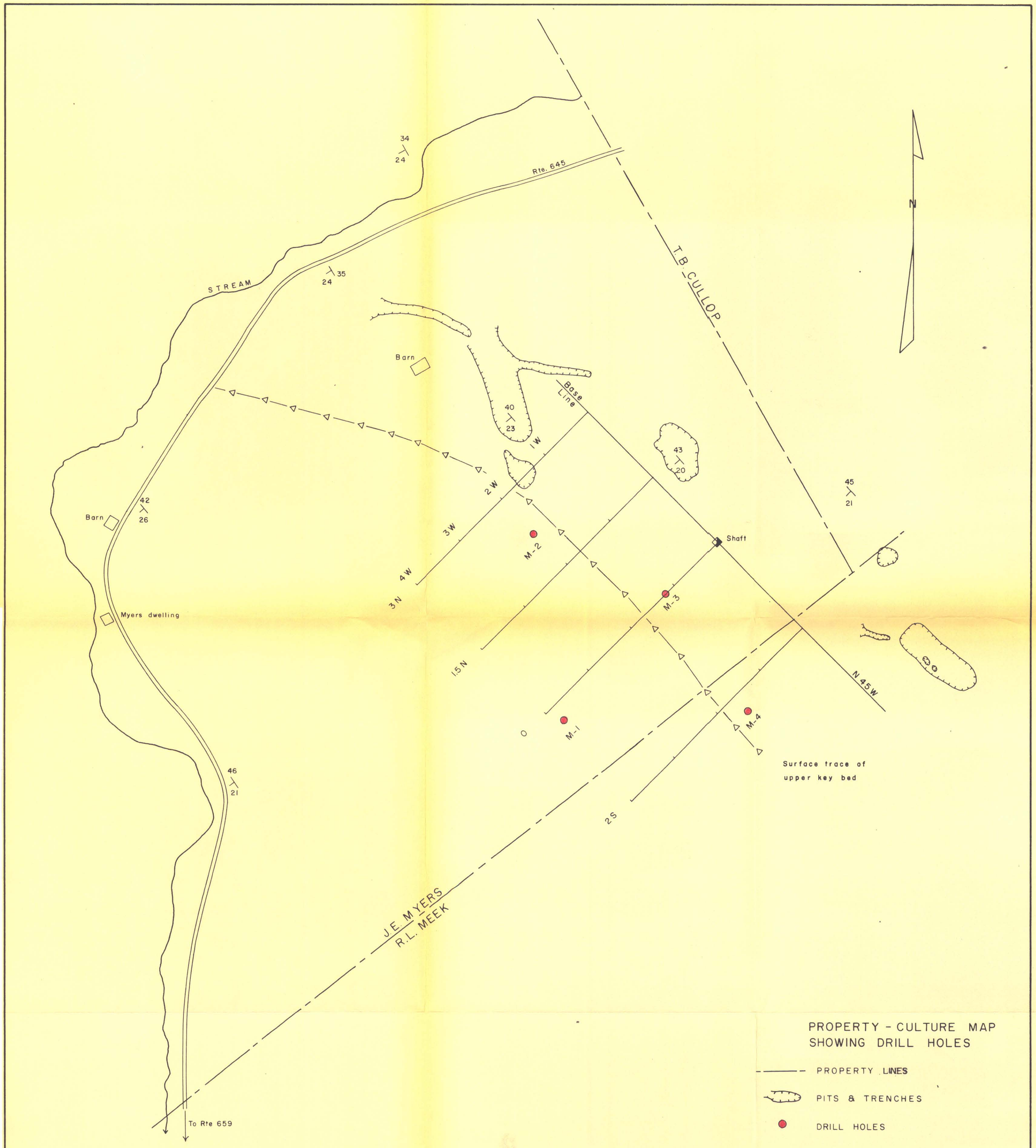
DATE	INITIALS	CODE
10/1	RCW	225
"	329	110
10/1	[illegible]	800
10/2	~~[illegible]~~	500

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 14 1959

DATE	INITIALS	CODE
9-14	gad	VVO
		VO
9/14	[illegible]	800
9/15	[illegible]	[illegible]

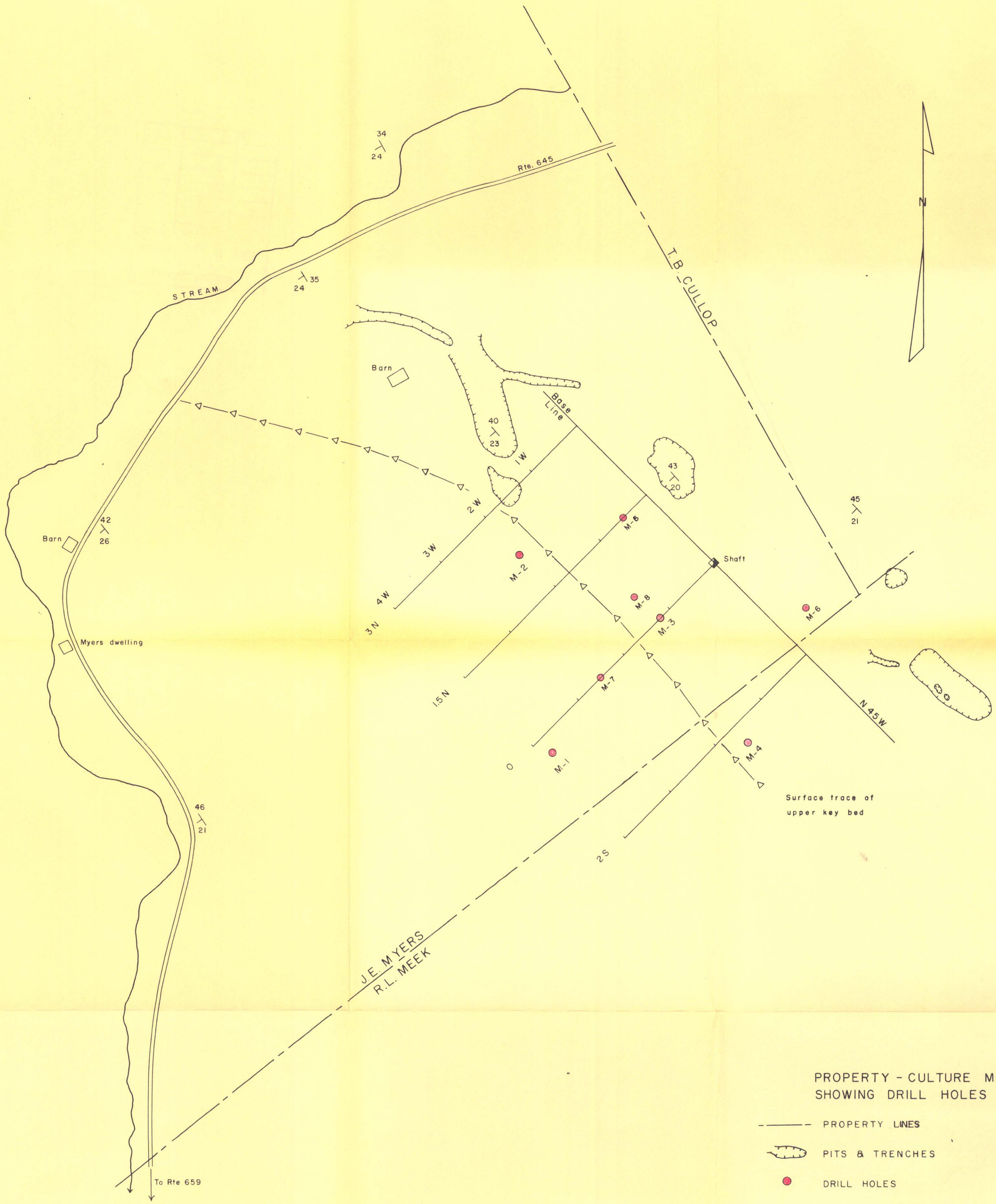
[illegible] REPORT

[illegible]-6020, [illegible]-E20[illegible], [illegible]-[illegible]-Ph[illegible]



Sept. 1959

Drawn by :		ROLAND F. BEERS, INC. TROY, N.Y.
Traced by : R.P.		MYERS PROSPECT
Approved by :		Co. : SMYTH — Scale : 1in.= 100 ft.



PROPERTY - CULTURE MAP
SHOWING DRILL HOLES

PROPERTY LINES

PITS & TRENCHES

DRILL HOLES

Oct. 1959

Drawn by :		ROLAND F. BEERS, INC. TROY, N.Y.
Traced by : R.P.		MYERS PROSPECT
Approved by :		Co. : SMYTH — Scale : 1in.=100 ft.