500

RM 60
959

# UNITED STATES
## DEPARTMENT OF THE INTERIOR
### OFFICE OF MINERALS EXPLORATION

Docket No. OME 6243
Contract No. 14-23-090-2150
Contract Amount $45,380.00
Gov't. Participation % 50 $ 22,690.00
Mineral(s) Iron Ore, Columbium, Tantalum, Bauxite

## OPERATOR'S MONTHLY VOUCHER

For Month of December 1962

Operator's Name Alpha Mineral Company
Address 753 W. Creekside, Houston 24, Texas

| COST CATEGORIES | FOR OPERATOR'S USE | | | FOR GOVERNMENT APPROVAL ONLY | | |
|---|---|---|---|---|---|---|
| | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE |
| Fixed Unit Costs and | | | | | | |
| (1) Independent Contracts: | | | | | | |
| Bulldozing | 0 | 65.50 | 65.50 | | 65.50 | 65.50 |
| Drifting | | | | | | |
| Crosscutting | 7819.25 | 18,384.14 | 26,203.39 | | | |
| Drilling | 8137.25 | 18,542.13 | 26,679.38 | 7819.25 | 18,384.13 | 26,203.38 |
| Fixed Unit Costs | 870.00 | 2,186.00 | 3,056.00 | 870.00 | 2,186.00 | 3,056.00 |
| (2) Personal Services: | | | | | | |
| Supervision & Technical | | | | | | |
| Outside Consultants | | | | | | |
| Labor | | | | | | |
| (3) Operating Mat'l. & Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Rail | | | | | | |
| Core boxes | | 95.40 | 95.40 | | 95.40 | 95.40 |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehab. & Repairs: | | | | | | |
| Buildings, Fixtures, etc. | | | | | | |
| Operating Equipment | | | | | | |
| (6) New Buildings, Fixtures, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Analytical Work | | | | | | |
| Payroll Taxes | | | | | | |
| Employee's Liability Ins. | | | | | | |
| | 8,699.25 | 20,731.03 | 29,420.28 | | | |
| 4,344.63 TOTALS | 9007.25 | 20,889.03 | 29,896.28 | 8,689.25 | 20,731.03 | 29,420.28 |

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

Date Jan. 3, 1963 *Payee Alpha Mineral Company

Per L. W. Mentzer Title General Partner

* 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.

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.)

(INSTRUCTIONS ON REVERSE)

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

$ 4,094.63 To Contractor
250.00 To Surplus

Signature BHB
(Authorized Certifying Officer)

Date 1/15/63 Vou. No. 3658

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2150

Signature George C. Selfridge Title George C. Selfridge, Chief Division of Field Operations Date 1/8/63

Approved by OME Executive Officer or Alternate:

Signature George C. Selfridge Title George C. Selfridge, Chief Division of Field Operations Date 1/8/63

## OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

## PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

# JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING
PITTSBURGH 22, PENNSYLVANIA

| STOMER'S ORDER NO. | DATE | REQ. NO. | OUR ORDER NO. | DATE | AT REC. POINT | D.O. NO. |
|---|---|---|---|---|---|---|
| CONTRACT | CODE 52 | | | DATE | AT SHIP POINT | |

SOLD TO: Alpha Mineral Company
753 West Creekside Drive
Houston, Texas

NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97678
INVOICE DATE 12-24-62
DATE SHIPPED
SHIPPED VIA

SHIPPED TO: Benton, Ark.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

| GINAL NTITY DERED | UNIT | PART NUMBER | DESCRIPTION | | | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | To 2175.' Core Drilling at Benton, Arkansas for period ending December 24th as per agreement. | | | | | | | |
| | | Prospect # | | From | To | | Total Feet | | Unit Cost | Total Cost |
| | | 7 EP1-5 | Non-Core | 0. | 646. | | 646. | | $2.75 | $1,776.50 |
| | | | BX Core | 646. | 1200. | | 554. | | 4.75 | 2,631.50 |
| | | 8 B | Non-Core | 0. | 626. | | 626. | | 2.75 | 1,721.50 |
| | | | BX Core | 626. | 975. | | 349. | | 4.75 | 1,657.75 |
| | | | | | | | 2175.0 | | | |
| | | | | | | | core 903' = | 4,289.25 | | 7,787.25 |
| | | | | | | | | | | -318.00 |
| | | Demobilization | | | | | non-core 1,272' = | 3,180.00 | | 7,469.25 |
| | | | | | | | | $7,469.25 | | 350.00 |
| | | | | | | | | | | $8,137.25 |
| | | | | | | | | | | -318.00 |
| | | | | | | | | | | $7,819.25 |
| | | | WORK COMPLETED | | | | | | | |

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

P188A

FORM 61
T. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of December 1962 Docket No. OME-6243

Operator's Name Alpha Mineral Company Contract No. 14-23-090-2150

| 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 | Feet | 903 | 2694.5 | 14,312.83 14,347.81 | 903 | 2,694.5 | 14,312.83 |
| Rotary | | | | 14,341.95 | | | |
| Drilling, Non-core-Diamond | | 1272 | 4945.5 | 14,782.97 | 1,272 | 4,945.5 | 14,341.95 |
| Rotary | | | | | | | |
| Churn | | | | | | | |
| Percussion | | | | | | | |
| Miscellaneous | | | | | | | |
| Mob. & Demob. | | 1 | 2 | 700.00 | 1 | 2 | 700.00 |
| Roads and Trails | hrs. | 0 | 5.2 | 65.50 | — | 5.2 | 65.50 |
| 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) | | | | $ 29,420.28 29,896.28 | | | 29,420.28 |

REMARKS

(Continue on back)

REMARKS

(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. 3, 1963 Operator Alpha Mineral Company

Per L. W. Minton Title General Partner

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 George C. Selfridge

Title George C. Selfridge, Chief Division of Field Operations Government Representative

Date 1/8/63

(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.

Docket Number OME-6243
Contract Number 14-23-090-2150

PART 3 - NARRATIVE REPORT

Hole EP1-5 was cored to a depth of 1200'. Pyroxenite, carbonate veins and altered material were the rock types encountered. Magnetite to a possible concentration of 20% was encountered in some sections. Nothing of value was encountered according to the core examination.

Hole B was drilled and cored to a depth of 975'. No new rock types were encountered but the core was much more highly altered than the core from the adjacent Hole A. Nothing of value was encountered according to the core examination.

These and all other cores are in the possession of the Arkansas Department of Geology and are being examined as time permits. The mineralogic descriptions will be completed, thin sections made, polished sections made and examined, wet analyses made where required, fire assays made on the pyrite concentrations and as many spectrographic analyses made as the Bureau of Mines will accept.

The attached spectrographic analyses are from Hole EP1-2. A chip was taken at each foot of the core and the chips were combined into the following samples:

Sample 1 - Carbonate veins
Sample 2 - Altered pyroxenite
Sample 3 - Pyroxenite
Sample 4 - Ouachitite dike.

Based on the mineralogy texts and Bulletin 585, 1960 Edition, of the Bureau of Mines, we conclude that this is a typical ultra-basic rock analysis and that there are no commercial concentrations of minerals indicated. The amount

of carbonatite material encountered was small, so that any potential rare-earth metal values seem remote.

We would appreciate being advised if there is any other information available for the evaluation of these cores.

Additional information will be forwarded as soon as it is available.

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn, General Partner

G-[illegible]
(March 1947)

Bur. of Mines, Reg. IV
Room 206 Federal Bldg.
Bartlesville, Oklahoma

# UNITED STATES DEPARTMENT OF THE INTERIOR
## BUREAU OF MINES
### Salt Lake City, Utah

No. 1

Report to Mr. Raymond D. Stewart

## Chemical Laboratory Report

Date received 11/27/62

Date reported 12/[illegible]/62

| Serial No. | DESCRIPTION | Lot No. | Spectrographic |
|---|---|---|---|
| 1035 | [illegible]-2 | 1 | * |
| 57 | " | 2 | * |
| 58 | " | 3 | * |
| 59 | " | 4 | * |

*Spectrographic Report attached.

U S GOVERNMENT PRINTING OFFICE : 1960 O—[illegible]

Signed Heber E. Paterson

Bur. of Mines, Reg. IV
Room 206 Federal Bldg.
Bartlesville, Oklahoma

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Salt Lake City, Utah

Submitted by [illegible]

Date Submitted 11/[illegible]/62

Date Reported 12/[illegible]/62

REPORT OF SPECTROGRAPHIC ANALYSIS

| Report No. | Lot No. | Spectro No. | Ag | Al | As | Au | B | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cs | Cu | Fe | Ga | Ge | Hf | Hg | In | Ir |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 1 | [illegible] | - | B | - | - | - | C | - | - | A | - | C | D | E | - | E | A | E | - | - | - | - | - |
| [illegible] | 2 | [illegible] | - | B | - | - | - | D | - | - | [illegible] | - | D | D | D | - | E | A | E | - | - | - | - | - |
| [illegible] | 3 | [illegible] | - | B | - | - | - | D | - | - | A | - | - | D | D | - | E | A | E | - | - | - | - | - |
| [illegible] | 4 | [illegible] | - | B | - | - | - | C | - | - | A | - | - | D | E | F | E | A | E | - | - | - | - | - |

| Report No. | Lot No. | Spectro No. | K | La | Li | Mg | Mn | Mo | Na | Nb | Ni | Os | P | Pb | Pd | Pt | Rb | Re | Rh | Ru | Sb | Sc | Si | Sn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C | C | E | B | C | D | C | D | D | - | - | C | - | - | F | - | - | - | - | E | A | - |
| | | | C | D | E | B | B | D | C | E | D | - | - | D | - | - | F | - | - | - | - | D | A | - |
| | | | C | - | F | B | E | - | C | - | D | - | - | E | - | - | F | - | - | - | - | D | A | - |
| | | | B | - | E | B | C | - | C | - | D | - | - | E | - | - | E | - | - | - | - | D | A | - |

| Report No. | Lot No. | Spectro No. | Sr | Ta | Te | Th | Ti | Tl | U | V | W | Y | Zn | Zr | Nd | Pr | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C | - | - | - | B | - | - | D | - | E | - | E | C | - | E | - | - | - | - | | | |
| | | | D | - | - | - | D | - | - | D | - | E | - | E | D | - | E | - | - | - | - | | | |
| | | | D | - | - | - | D | - | - | D | - | - | - | E | - | - | E | - | - | - | - | | | |
| | | | D | - | - | - | D | - | - | D | - | - | - | E | - | - | E | - | - | - | - | | | |

- Not detected
- A Probably > 10 percent
- B Probably 1 - 10 percent
- C Probably 0.1 - 1 percent
- D Probably 0.01 - 0.1 percent
- E Probably 0.001 - 0.01 percent
- F Probably 0.0001 - 0.001 percent
- I Indeterminate

Signed Heber E. Peterson

FORM 60
r. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

JAN 8 1963

Docket No. OME-6243
Contract No. 14-23-090-2150
Contract Amount $45,380
Gov't. Participation 50 $22,690
Mineral(s) Iron Ore, Columbium, Tantalum, Bauxite

# OPERATOR'S MONTHLY VOUCHER

For Month of November, 1962

Operator's Name Alpha Mineral Company
Address 753 W. Creekside, Houston 24, Texas

| COST CATEGORIES | FOR OPERATOR'S USE | | | FOR GOVERNMENT APPROVAL ONLY | | |
|---|---|---|---|---|---|---|
| | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE |
| Fixed Unit Costs and | | | | | | |
| (1) Independent Contracts: | | | | | | |
| Bulldozing | 27.50 | 38.00 | 65.50 | 27.50 | 38.00 | 65.50 |
| Drifting | | | | | | |
| Crosscutting | 4692 | | 19,384.13 | | | |
| Drilling | 4850.00 | 13,692.13 | 18,569.63 | 4,692.00 | 13,692.13 | 18,384.13 |
| Fixed Unit Costs | 492.00 | 1,694.00 | 2,186.00 | 492.00 | 1,694.00 | 2,186.00 |
| (2) Personal Services: | | | | | | |
| Supervision & Technical | | | | | | |
| Outside Consultants | | | | | | |
| Labor | | | | | | |
| (3) Operating Mat'l. & Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Rail | | | | | | |
| Core boxes | | 95.40 | 95.40 | | 95.40 | 95.40 |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehab. & Repairs: | | | | | | |
| Buildings, Fixtures, etc. | | | | | | |
| Operating Equipment | | | | | | |
| (6) New Buildings, Fixtures, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Analytical Work | | | | | | |
| Payroll Taxes | | | | | | |
| Employee's Liability Ins. | | | | | | |
| | 5211.50 | | 20,731.03 | | | |
| TOTALS | 5369.50 | 15,519.53 | 20,889.03 | 5,211.50 | 15,519.53 | 20,731.03 |

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

Date Dec. 19, 1962 *Payee Alpha Mineral Company

Per L. W. Mintum Title General Partner

* 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.

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.)

(INSTRUCTIONS ON REVERSE)

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

$ 2,605.75

Signature BWB
(Authorized Certifying Officer)

Date 1/2/63 Vou. No. 3459

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2150

Signature George C. Selfridge Title George C. Selfridge, Chief ~~Division of Field Operations~~ Date 12/28/62

Approved by OME Executive Officer or Alternate:

Signature George C. Selfridge Title George C. Selfridge, Chief ~~Division of Field Operations~~ Date 12/28/62

## OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

## PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

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Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

# JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

| CUSTOMER'S ORDER NO. | DATE | REQ. NO. | OUR ORDER NO. | DATE | AT REC. POINT | B.O. NO. |
|---|---|---|---|---|---|---|
| | | | | | | |
| CONTRACT | CODE | | | DATE | AT SHIP POINT | |
| | 52 | | | | | |

SOLD TO: Alpha Mineral Company
753 West Creekside Drive
Houston, Texas

[redacted] NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97594

INVOICE DATE 11-24-62

DATE SHIPPED

SHIPPED VIA

SHIPPED TO: Benton, Ark.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

| ORIGINAL QUANTITY ORDERED | UNIT | PART NUMBER | DESCRIPTION | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|
| | | | To 1230.' Core Drilling at Benton, Arkansas for period ending November 24th as per agreement. | | | | | |
| | | | Prospect # / From / To | | Total Feet | | Unit Cost | Total Cost |
| | | 5 (H-1-4) | AXM 930. 970. | | 40. | | $4.25 | $ 170.00 |
| | | 6 (A) | Non-core 0. 632. | | 632. | | 2.75 | 1,738.00 |
| | | | HX 632. 1113. | | 481. | | 4.75 | 2,284.75 |
| | | | AXM 1113. 1190. | | 77. | | 4.25 | 327.25 |
| | | | | | | | | 4,520.00 |
| | | | | | 1230 | | | |
| | | | | | core 598 = | | 2,782.00 | |
| | | | | | non 632 = | | 1,580.00 | |
| | | | | | 1230 | | 4,362.00 | |
| | | | Reaming | | | | | |
| | | 5 | Oct. 27 22 Hrs. @$15.00 per hr. | | | | | 330.00 |
| | | | Casing Lost | | | | | |
| | | 5 | 530'- NX Casing @$2.92 per ft. | | | | | 1,547.60 |
| | | | Dozer Work | | | | | |
| | | | Nov. 8 Ira West | | | | | 12.50 |
| | | | Nov. 23 Ira West | | | | | 15.00 |
| | | | | | | | | $6,425.10 |
| | | | | | Less items not covered | | | 1547.60 |
| | | | | | | | | 4877.50 |

Approved Robert H. Arnold 12/11/62

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

MME FORM 61
SEPT. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

**OPERATOR'S PROGRESS REPORT** For Month of November, 1962 Docket No. OME-6243

Operator's Name Alpha Mineral Company Contract No. 14-23-090- 2150

| 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 | | | | 9662.38 | | | |
| Drilling, Core-Diamond | Feet | 598 | 1791.5 | 9578.56 | 598 | 1,791.5 | 9,662.38 |
| Rotary | | | | | | | |
| Drilling, Non-core-Diamond | | | | 10,653.15 | | | |
| Rotary | Feet | 632 | 3673.5 | 10,894.97 | 632 | 3,673.5 | 10,653.15 |
| Churn | | | | | | | |
| Percussion | | | | | | | |
| Miscellaneous | | | | | | | |
| Mobilization | | 0 | 1 | 350.00 | — | 1 | 350.00 |
| Roads and Trails | hrs. | 2.2 | 5.2 | 65.50 | 2.2 | 5.2 | 65.50 |
| 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)* | | | | 20,731.03<br>20,889.03 | | | 20,731.03 |

REMARKS

*(Continue on back)*

REMARKS

*(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 Dec. 19, 1962 Operator Alpha Mineral Company

Per L. W. Munthur Title General Partner

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 George C. Selfridge

Title George C. Selfridge, Chief Division of Field Operations Government Representative

Date 12/28/62

(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

Docket Number OME-6243
Contract Number 14-23-090-2150

PART 3 - NARRATIVE REPORT

Hole EP1-4 was cored to a depth of 970 feet without encountering unusual concentrations of magnetite.

Hole A was cored to a depth of 1190 feet. A discussion of the lithology of this core is in the attached letter.

Magnetometer surveys on the ground were made to pinpoint the highs caused by Ore Bodies B and D. A discussion of this is also in the attached letter.

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn, General Partner

Dec. 8, 1962

Mr. G. C. Selfridge, Chief
Division of Field Operations
Office of Minerals Exploration
Department of the Interior
Washington, D. C.

Re: OME-6243 (Iron Ore, Columbium, Tantalum, Bauxite)
Alpha Mineral Company
Benton Prospect
Saline County, Arkansas
Contract 2150

Dear Sir:

With reference to your letter of Nov. 29, which I received on December 5 after returning from a field job, Hole A, the hole approved in your letter of October 25, was completed on or about Nov. 21. We then attempted to reenter Hole EP1-3, but were unsuccessful so moved to Hole EP1-5, which is currently nearing completion.

We wanted to check the structural conditions, check the degree of alteration, and search for more feldspar-carbonate material by drilling in this area. As you will recall, Hole EP1-# 2 quit in altered syenite, which was ascertained after the hole was completed. This was topped at 773 feet. We have cored to below 1000' in EP1-5 and have found no altered syenite yet.

The lithology of Hole A is simple. There was slight alteration at the top, pyroxenite to 964.5, pyroxenite with varying magnetite to 1000', and pyroxenite from there to the T. D. at approximately 1200'. A detailled mineralogic log of the interesting section is enclosed. This 35 foot section was split, sampled every foot, crushed and ground, and then combined in five foot groups and separated magnetically. The results are as follows:

Sample 1 965-970, 13.5% Magnetite
Sample 2 970-975, 14.5% "
Sample 3 975-980, 14.5% "
Sample 4 980-985, 19.0% "
Sample 5 985-990, 13.8% "
Sample 6 990-995, 20.3% "
Sample 7 995-1000. 8.4% "

In as much as we could see, the magnetite in Hole A does not adequately explain the anomaly, yet it contained far more magnetite than the other holes. In seeking an explanation of this, we conducted a magnetic survey on the ground. This survey pinned down the top of the high at a point approximately 50 feet west and 150' north of that mapped by the aerial survey. This may be caused in part by the fact that the aerial traverses were 500' apart and there may have been some inaccuracies in mapping the aerial work and subsequently relating this survey to the ground. As a matter of exploration technique, we would not have drilled Hole A at its present location but would have drilled at the projected location of the magnetic high as determined by the ground survey, if we had had this information. In as much as the proposed new location is from 100 to 200' from Hole A, Hole A had interesting showings of magnetite, and the sought for body of magnetite may be on the order of 100' wide, we believe that this anomaly will not be adequately tested unless this site is drilled. We therefore request permission to drill Hole B at the location shown on the enclosed sketch map.

We also made a ground survey of the magnetic high on which Exploration Profile 3 was based, hoping to drill EP3-1 next. A local high some 200 gammas above the surounding country and higher than the Airborne high was found some 600' west of the airborne high as mapped. This is more difficult to understand than the discrepancy over Ore Body B. Under the circumstances, we do not feel we should drill in this vicinity until a complete ground survey has been made. Actually the work was done on the ground and has not yet been surveyed in, other than that is close to the property line as shown on the enclosed map. A study of all the data indicates to us that the lithologic situation in this area will be the same as it is in the vicinity of Ore Body B, and that penetrating it with the drill will depend upon an accurate magnetic survey on the ground. In as much as the magnetic anomaly over Ore Body B is stronger the body or area of mineralization should be larger and easier to find. Therefore we believe Ore Body B should be carefully confirmed or condemned first.

In the event we drill Hole B and it is not in the ore body, we would propose to cease drilling as the best ore body potential would be disproved to the depth we have drilled.

It is anticipated that Hole EP1-5 will be completed on December 11 or 12. We would appreciate it if you could notify me by long distance telephone collect at 713-HO5 8702 as soon as a decision has been made. Lacking approval to drill Hole B we probably will petition to cancel the program, because we have no good technical reason to drill at any other location. We would also appreciate your opinion on this matter.

Very truly yours,

Alpha Mineral Company

By_____
L. W. Minturn, General Partner

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

DEC 28 1962

Memorandum

To: Chief, Fiscal Section
Division of Administrative Services
Office of the Secretary

From: Chief, Division of Field Operations, OME

Subject: OME-6243 (Iron Ore, Columbium, Tantalum, Bauxite)
Alpha Mineral Company
Benton Prospect
Saline County, Arkansas
Contract 2150

Enclosed are the original and two copies of MME Form 60 (with supporting documents) and the original and two copies of MME Form 61 covering work performed during November 1962.

A disallowance of $158.00 has been made for 632 feet of non-core drill hole as they were charged at $2.75 a foot instead of $2.50 as stipulated by the contract. The $330.00 reaming charge has been allocated to the core drilling.

It is considered that the work performed complies with the intent of the contract and is acceptable to the Government.

The work performed during the month was on both actual cost and fixed unit cost bases.

Subject to verification of the arithmetical accuracy of the report, it is recommended that the Operator be reimbursed $2,605.75, which is 50 percent of the approved costs for November.

George C. Selfridge

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of the Secretary
Accounting Unit
Washington

January 2, 1963

# ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee: Alpha Mineral Company
753 W. Crockeldo
Houston 24, Texas

| Amount Claimed: | Differences (Explained Below) | Amount Approved |
|---|---|---|
| $ 5,369.50 | $ 158.00 | $ 5,211.50<br>($ 2,605.75 - Gov't. Share) |
| **Bu. Voucher No.** | **Payee's Invoice No.** | **Period** |
| | OME 6243 - Cont 2150 | November 1962 |

EXPLANATION

Amount claimed non-core drilling 632' @ $ 2.75 = $ 1,738.00

Amount stipulated per contract 632' @ $ 2.50 = 1,580.00

Amount Disallowed $ 158.00

Any reclaim for items deducted must be supported by the original of this statement and submitted to the office shown above.

Suspension made by:

(Sgd) OPAL A. SHELTON

Signature

Opal A. Shelton
Chief, Accounting Unit

Title

74165

MME FORM 60
SEPT. 1959

500

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

DEC 1962

Docket No. OME-6243
Contract No. 14-23-090-2150
Contract Amount $45,380.00
Cost Participation % 50 $22,690.00
Mineral(s) iron ore, columbium, tantalum, bauxite

# OPERATOR'S MONTHLY VOUCHER

For Month of October, 1962

Operator's Name Alpha Mineral Company
Address 753 W. Creekside, Houston 24, Texas

| COST CATEGORIES | FOR OPERATOR'S USE | | | FOR GOVERNMENT APPROVAL ONLY | | |
|---|---|---|---|---|---|---|
| | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE |
| Fixed Unit Costs and | | | | | | |
| (1) Independent Contracts: | | | | | | |
| Bulldozing | 12.50 | 25.50 | 38.00 | 12.50 | 25.50 | 38.00 |
| Drifting | | | | | | |
| Crosscutting | | | | | | |
| Drilling | 6,161.63 | 7,530.50 | 13,692.13 | 6,161.63 | 7,530.50 | 13,692.13 |
| Fixed Unit Costs | 768.40 | 925.60 | 1,694.00 | 768.40 | 925.60 | 1,694.00 |
| (2) Personal Services: | | | | | | |
| Supervision & Technical | | | | | | |
| Outside Consultants | | | | | | |
| Labor | | | | | | |
| (3) Operating Mat'l. & Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Rail | | | | | | |
| Core boxes | | 95.40 | 95.40 | | 95.40 | 95.40 |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehab. & Repairs: | | | | | | |
| Buildings, Fixtures, etc. | | | | | | |
| Operating Equipment | | | | | | |
| (6) New Buildings, Fixtures, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Analytical Work | | | | | | |
| Payroll Taxes | | | | | | |
| Employee's Liability Ins. | | | | | | |
| TOTALS | 6,942.53 | 8,577.00 | 15,519.53 | 6,942.53 | 8,577.00 | 15,519.53 |

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

Date Nov. 15, 1962 * Payee Alpha Mineral Company

Per K.W. Minturn Title General Partner

* 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.

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.)

(INSTRUCTIONS ON REVERSE)

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

$ 3,471.27

Signature BHB
(Authorized Certifying Officer)

Date 12/6/62 Vou. No. 2920

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2150

Signature George C. Selfridge Title George C. Selfridge, Chief ~~Division of Field Operations~~ Date 11/27/62

Approved by OME Executive Officer or Alternate:

Signature George C. Selfridge Title George C. Selfridge, Chief Division of Field Operations Date 11/27/62

## OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

## PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

# JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

| CUSTOMER'S ORDER NO. | DATE | REQ. NO. | OUR ORDER NO. | DATE | AT REC. POINT | B.O. NO. |
|---|---|---|---|---|---|---|
| | | | | | | |
| CONTRACT | CODE | | | DATE | AT SHIP POINT | |
| | 52 | | | | | |

SOLD TO: Alpha Mineral Company
753 W. Creekside Drive
Houston, Texas

[redacted]
NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97516
INVOICE DATE 10-25-62 Page 1
DATE SHIPPED
SHIPPED VIA

SHIPPED TO: Benton, Ark.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

| ORIGINAL QUANTITY ORDERED | UNIT | PART NUMBER | DESCRIPTION | | | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | To 1921.' Core Drilling at Benton, Arkansas for period ending October 25th as per agreement. | | | | | | | |
| | | | | | | | Total Feet | | Unit Cost | Total Cost |
| | | Prospect # | | From | To | | | | | |
| | | 3 (EP1-3) | Non-Core | 440. | 600. | | 160. | | $2.50 | $ 400.00 |
| Correction - (11.00) | | | Non-Core | 600. | 622. | | 22. | | (3.00) | 66.00 |
| | | | NXM | 622. | 653. | | 31. | | 5.25 | 162.75 |
| | | 4 (EP1-2) | Non-Core | 0. | 600. | | 600. | | 2.50 | 1,500.00 |
| Correction (-10.00) | | | [redacted] | 600. | 620. | | 20. | | (3.00) | 60.00 |
| | | | B [redacted] | 620. | 692. | | 72. | | 4.75 | 342.00 |
| | | | AXM | 692. | 778. | | 86. | | 4.25 | 365.50 |
| | | 5 (EP1-4) | Non-Core | 0. | 600. | | 600. | | 2.50 | 1,500.00 |
| Correction (-1.75) | | | Non-Core | 600. | 603.5 | | 3.5 | | (3.00) | 10.50 |
| | | | NXM | 603.5 | 644. | | 40.5 | | 5.25 | 212.63 |
| | | | BXM | 644. | 803. | | 159. | | 4.75 | 755.25 |
| | | | AXM | 803. | 930. | | 127. | | 4.25 | 539.75 |
| | | | | | | | 1921 | | | 5,914.38 |
| | | Reaming | | | | | | | | |
| | | 5 | Oct. 20 | 11 Hrs. | | | | | | |
| | | | 22 | 7 " | | | | | | |
| | | | 18 Hrs. @$15.00 per hr. | | | | | | | 270.00 |

Corr 515.25 = 2377.88
mm 1405.5 = 3518.
$5,891.63

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

# JOY MANUFACTURING COMPANY

Inv. 97516
Alpha Mineral Co.

PAGE NO. 2

SOLD TO

| OUR ORDER NO. | AT REC. POINT | AT SHIP POINT | B.O. NO. | INVOICE NO. |
|---|---|---|---|---|
| | | | | |

| ORIGINAL QUANTITY ORDERED | UNIT | PART NUMBER | DESCRIPTION | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|
| | | **Casing Lost** | | | | | | |
| | | 3 | 560.' NX Casing @$2.92 per ft. | Correction - (-2,531.60) | | | | 1,635.20 |
| | | 4 | 415.' BX Casing @$2.16 per ft. | | | | | 896.40 |
| | | **Dozer Work on Road** | | | | | | |
| | | Oct. 10 | J. West | | | | | 12.50 |
| | | | | | | | | $8,728.48 |

OK Bonny Field

8,728.48
2,554.35
$ 6,174.13
12.50
6,161.63

Less total correction

Less dozer

FORM P138A

INVOICE (CONTINUATION)

MME FORM 61
SEPT. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

**OPERATOR'S PROGRESS REPORT** For Month of October, 1962 Docket No. OME-6243

Operator's Name Alpha Mineral Company Contract No. 14-23-090-2150

| 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 | Feet | 515.5 | 1193.5 | 6,396.56 | 515.5 | 1,193.5 | 6,311.18 |
| Rotary | | | | | | | |
| Drilling, Non-core-Diamond | | | | | | | |
| Rotary | Feet | 1405.5 | 3041.5 | 8,734.97 | 1,405.5 | 3,041.5 | 8,820.35 |
| Churn | | | | | | | |
| Percussion | | | | | | | |
| Miscellaneous | | | | | | | |
| Mobilization | | 0 | 1 | 350.00 | — | 1 | 350.00 |
| Roads and Trails | hrs. | 1 | 3 | 38.00 | 1 | 3 | 38.00 |
| 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)* | | | | 15,519.53 | | | 15,519.53 |

REMARKS

*(Continue on back)*

REMARKS

*(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 11/19/62 Operator Alpha Mineral Company

Per L. W. Minturn Title General Partner

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 George C. Selfridge

Title George C. Selfridge, Chief Division of Field Operations Government Representative

Date 11/27/62

(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

Docket Number OME-6243
Contract Number 14-23-090-2150

PART 3 - NARRATIVE REPORT

Hole EP1-3 was drilled to 622 feet, where the igneous rock was encountered. Core was taken to 653. No appreciable magnetite was found and the quantity of pyroxene showed that we had not crossed a country rock contact. The field description of the core is attached.

Hole EP1-2 was drilled to 620', where igneous rock was encountered. It was cored to 778'. A mineralogic description of the core by Mr. Drew Holbrook, Geologist, Arkansas Department of Geology and Conservation, is attached. No magnetite of commercial concentration was encountered. Representative samples have been sent to the Bureau of Mines for spectrographic analysis.

Hole EP1-4 was drilled to the igneous at 603.5' and cored to 930' by the end of the billing period. No commercial concentrations of magnetite were found.

Also attached is a mineralogic description of the core from HM-1, by Mr. Holbrook.

ALPHA MINERAL COMPANY

By_____
L. W. Minturn, General Partner

ALPHA MINERAL COMPANY
753 W. Creekside Drive
Houston 24, Texas

Mineralogic Log of Hole HM-1

| DEPTH | DESCRIPTION |
|---|---|
| 578.0-580.0 | Pyroxenite. Black coarse grained rock containing mostly pyroxene and some magnetite. |
| 580.0-581.0 | Ouachitite Dike. |
| 581.0-596.5 | Pyroxenite |
| 596.5-597.3 | Feldspar carbonate vein. Medium grained light colored rock containing mostly calcite. |
| 597.3-599.5 | Pyroxenite. Cut by numerous white calcite seams. |
| 599.5-600.0 | Feldspar carbonate vein. Barren. |
| 600.0-603.6 | Pyroxenite |
| 603.6-603.9 | Feldspar carbonate vein. Barren. |
| 603.9-630.9 | Pyroxenite. |
| 630.3-631.3 | Carbonate vein. Coarse grained. Mostly dolomite with some pyrite and few sphalerite grains. |
| 631.3-635.0 | Pyroxenite. |
| 635.0-635.3 | Calcite vein. Some pyrite. |
| 635.3-651.7 | Pyroxenite. Contains narrow bleached patches. |
| 651.7-662.8 | Phonolite dike. Fine grained hard rock. Abundant fine grained pyrite. |
| 662.8-664.0 | Carbonate vein. Coarse grained rock with much pyrite, possibly some rutile. |
| 664.0-681.7 | Pyroxenite. Much of this core is composed almost entirely of very coarse grained pyroxene. |
| 681.7-682.4 | Dike. Very fine grained very dark dike rock. |
| 682.4-704.8 | Pyroxenite. 1" calcite vein at 693.0. 3" dolomite vein at 698.9. Thin Section A-5 at 695.0. |
| 704.8-708.3 | Carbonate vein/altered pyroxenite. Cut along contact. Some pyrite. |
| 708.3-709.5 | Dike. Dark grey very fine grained. |
| 709.5-716.0 | Pyroxenite. |
| 716.0-721.5 | Calcite vein. Mostly pure coarsely crystalline calcite with minor pyrite and sphalerite along vein boundaries. |
| 721.5-726.8 | Pyroxenite. |
| 726.8-728.3 | Calcite vein. Few scattered grains of sphalerite. |
| 728.3-746.5 | Pyroxenite. |
| 746.5-756.0 | Pyroxenite (?). Fresher with more biotite than above rock. Thin section A-4 at 753.0. |
| 756.0-759.0 | Pyroxenite. |
| 759.0-765.0 | Pyroxenite. Same as 746.5-756.0. |
| 765.0-779.2 | Pyroxenite. |
| 779.2-781.2 | Calcite pyrite vein. |
| 781.2-829.8 | Pyroxenite. Narrow zone at 819.2 high in magnetite. |

| DEPTH | DESCRIPTION |
|---|---|
| 829.8-831.5 | Carbonate-pyrite vein. Flesh colored biotite along contact. |
| 831.5-834.3 | Pyroxenite. |
| 834.2-837.5 | Calcite-pyrite vein. Some biotite as above. |
| 837.5-843.5 | Pyroxenite. |
| 843.5-846.0 | Calcite-pyrite vein. Trace of Sphalerite. |
| 846.0-849.6 | Pyroxenite. Thin Section A-6 at 847. |
| 849.6-850.0 | Calcite-pyrite vein. Trace of sphalerite and titanium minerals. |
| 850.1-854.0 | Pyroxenite. |
| 854.0-855.0 | Calcite-pyrite vein. |
| 855.0-865.1 | Pyroxenite. |
| 865.1-866.7 | Phonolite porphry dike. |
| 866.7-867.7 | Altered pyroxenite. Dark green rock slightly softer than the unaltered rock. |
| 867.7-953.0 | Pyroxenite. 1"-2" calcite veins at 871.3 and 875.0. |
| 953.0-954.3 | Phonolite dike. Dark grey fine grained rock. |
| 954.3-1013.6 | Pyroxenite. Brecciated zone with calcite 992.0-994.0. |
| 1013.6-1019.0 | Magnetite rich rock. Essentially magnetite and pyroxene. |
| 1019.0-1023.0 | Pyroxenite. Contains moderate amount of magnetite. |
| 1023.0-1025.0 | Magnetite rich nock. |
| 1025.0-1026.0 | Pyroxenite. |
| 1026.0-1027.0 | Altered (bleached) pyroxenite. |
| 1027.0-1028.0 | Calcite vein. Contains some ilmenite and pyrite. |
| 1028.0-1060.0 | Pyroxenite. Thin Section A-7 at 1042.2. |
| 1060.0-1061.4 | Magnetite rich rock. Thin Section A-8 at 1061.0. |
| 1061.4-1149.2 | Pyroxenite. 1" calcite vein at 1062.7 contains sparse sphalerite. At 1112.4, 2" calcite-pyrite vein with trace of sphalerite. |
| 1149.2-1154.2 | Calcite vein. Some pyrite and a white fibrous mineral. |
| 1154.2-1163.4 | Pyroxenite. Brecciated, bleached along fractures. |
| 1163.4-1194.2 | Pyroxenite. 3" calcite-pyrite at 1184.8. Total Depth. |

Drew Holbrook
Geologist, Arkansas State Department
of Geology and Conservation.

ALPHA MINERAL COMPANY
753 W. Creekside
Houston 24, Texas

Mineralogic Log of Hole EPI-2

| DEPTH | DESCRIPTION |
|---|---|
| 620.5-621.7 | Pyroxenite (dark greenish black coarse-grained rock containing mostly pyroxene with some magnetite and biotite. Cut by numerous thin stringers of calcite. |
| 621.7-621.8 | Altered pyroxenite - Soft grey - green rock mostly serpentine and biotite with some pyroxene, magnetite and pyrite. |
| 629.0-629.1 | Feldspar-carbonate vein - medium grained hard light colored rock containing fine grained pyrite, calcite and feldspar. |
| 621.8-629.0 | Pyroxenite. |
| 629.1-667.0 | Pyroxenite. Contains biotite rich zone 633.4-633.7, half inch feldspar carbonate vein 640.0. Thin section A-1 cut at 656.0. |
| 667.0-667.5 | Altered pyroxenite. Olive green soft rock containing mostly serpentine (?) and clay minerals with some magnetite and biotite. Some magnetite has been partially altered to hematite. |
| 667.5-668.08 | Feldspar-carbonate vein. Hard white coarsely crystalline rock mostly delomite with much fine-grained pyrite and trace of molybdenite. |
| 668.0-668.4 | Altered pyroxenite. |
| 668.4-673.3 | Pyroxenite. Slighly altered along seams. |
| 673.3-675.8 | Altered proxenite. |
| 675.8-679.0 | Feldspar carbonate vein. |
| 679.0-683.2 | Pyroxenite. Altered along seams. |
| 683.2-686.5 | Feldspar carbonate vein. Mostly coarse grained dolomite, some fine grained pyrite, trace of molybdenite. Thin Section A-3 at 685. |
| 686.5-692.5 | Altered Ouachitite dike. Grey coarse grained rock abundant biotite. |
| 692.5-695.3 | Pyroxenite. Altered along cracks and cut by carbonate seams. |
| 695.3-700.0 | (No description received) |
| 700.0-701.3 | Altered pyroxenite. |
| 701.3-705.0 | Feldspar carbonate vein. Fine grained, carries some pyrite. |

| DEPTH | DESCRIPTION |
|---|---|
| 705.0-705.3 | Altered pyroxenite. |
| 705.3-708.1 | Pyroxenite. Altered along cracks. |
| 708.1-709.2 | Feldspar carbonate vein. Possibly molybdenite at 709.2. |
| 709.2-710.0 | Altered pyroxenite. |
| 710.6-711.2 | Feldspar carbonate vein. |
| 711.2-713.5 | Altered pyroxenite. |
| 713.5-719.0 | Monchiquite dike. Hard dark porphyritic rock with amphibole or olivine phenocrysts. |
| 719.0-721.5 | Altered monchiquite dike. |
| 721.5-721.8 | Monchiquite dike. |
| 721.8-722.3 | Feldspar carbonate vein. Coarse grained with traces of fine grained opague minerals that might be titanium or molybdenum minerals. |
| 722.3-725.0 | Feldspar carbonate vein. Cut along contact. Contains altered nepheline syenite wall rock. Nepheline syenite is friable light green granular rock. |
| 725.0-725.3 | Feldspar carbonate vein. Contains pyrite with some molybdenum and titanium minerals. |
| 725.3-728.0 | Phonolite. Hard finegrained greenish rock with much fine grained pyrite. |
| 728.0-731.4 | Altered phonolite. |
| 731.4-741.5 | Altered phonolite. Soft green friable fine grained rock. Cut by a few veins of feldspar carbonate containing sparse molybdenite and possibly rutile. Entire interval sacked due to friable condition of core. |
| 741.5-747.8 | Altered phonolite. Interval 744.5-747.8 hard and vuggy with abundant pyrite and some rutile. |
| 747.8-749.3 | Feldspar carbonate vein. Hard medium grained rock with much fluorite. |
| 749.3-757.6 | Feldspar carbonate vein. Vuggy medium grained rock with much pyrite and rutile. |
| 757.5-764.8 | Altered nepheline syenite. Coarse grained altered friable green igeneous rock. |
| 764.8-770.0 | Pyroxenite. Slightly altered along seams and cracks. |
| 770.0-773.0 | Feldspar carbonate vein. Contains much pyrite and some molybdenite. Thin section A-2 at 772.7. |
| 773.0-778.0 | Altered nepheline syenite. |

Drew Holbrook
Geologist, Arkansas Department
of Geology and Conservation

COPY

ARKANSAS GEOLOGICAL
& CONSERVATION COMMISSION

Norman F. Williams
Director & State Geologist

State Capitol - Little Rock, Arkansas

November 9, 1962

Mr. R. B. Stroud
Room 206 Federal Building
Bartlesville, Oklahoma

Dear Ray:

I am shipping separately four samples from Alpha Mineral Company's hole Number EP1-2 near Benton, Saline County, Arkansas.

The four samples are composites of similar rock types and are in an attachment to this letter. I have also enclosed a copy of my log of the hole.

Regarding elements that may be present, we identified molybdenite and rutile (or brookite) in the feldspar-carbonate veins (represented by composite sample #1). In addition, spot checks on core samples run by Alpha minerals have indicated the presence of chromite. I would also recommend that the samples be checked for columbium because of the nature of the rock types involved.

If you need any further details on these samples, please let us know.

Sincerely,

/s/ DH

Drew Holbrook,
Geologist

DH/eas
Enc: 2
cc: Louis Minturn

## SAMPLE DATA HOLE EPI-2

Sample #1 — A composite of all the feldspar-carbonate veins encountered in the drill cores. The veins varied in width from 0.5 to 10 feet. The depth intervals maybe seen in the accompanying log of the drill hole. The carbonates are mostly dolomite, and the feldspar is unknown at this time.

Sample #2 — A composite of all altered pyroxenite encountered in the drill hole. Minerals probably mostly pyroxene, serpentine chlorite, clay minerals, biotite and pyrite. (see log for depth intervals)

Sample #3 — A composite sample of the pyroxenite from 620.5' - 673.5'. The rock is comparatively fresh and consists mostly of pyroxene (?) with varying amounts of magnetite and biotite.

Sample #4 — A composite sample of altered ouachitite dike from 686.5' to 692.5, probably consists mostly of serpentine, chlorite, pyroxene, and coarse biotite.

FORM R-505-31

Lease 15

# LOG SHEET

Property MOSES KIDD

Date Started Sept. 24, 1962 Date Completed Sept. 27, 1962 Approx. Elev. Collar 378.20 Hole No. EP1-3

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample NX core - 2.1/8 in.

Total Depth of Hole 653.6/10 Cored from 622 to 653.6 Logged and Sampled by Benny Kidd

| FROM | TO | DESCRIPTION AND REMARKS |
|---|---|---|
| 0 | 5 | Top soil & varicorored clays |
| 5 | 60 | Brown, sandy to silty clays |
| 60 | 215 | Brn.,sdy., to silty clays with thin lignite and siderite lenses. |
| 215 | 220 | Bluish gray, silty clay |
| 220 | 230 | Gray, silty clay |
| 230 | 280 | Choc.brn., silty, mic. clay with small lignite and siderite lenses. |
| 280 | 300 | Bluish gray, silty, plastic clay |
| 300 | 305 | " " , silty to sdy., micaceous clay |
| 305 | 310 | " " , " , micaceous clay |
| 310 | 325 | Gray, silty, mic. clay with 2"-4"in.lig.lenses |
| 325 | 330 | Gray, silty, kaolinic clay |
| 330 | 335 | Gray, silty clay.--No Bauxite-- |
| MIDWAY | | |
| 335 | 424 | Blue, plastic clay |
| 424 | 424.5 | Tan ls. lense |
| 424.5 | 430 | Blue, silty clay |
| 430 | 450 | Blue to black clay & shale |
| 450 | 498 | Shale, with hard,thin, consolidated,calc.lenses |
| 498 | 510 | Bluish, sdy.shale with thin brn.,non-calc. " . |
| 510 | 535 | Gray, silty, to fine sandy clay |
| 535 | 560 | Gray, silty clay & shale. |
| 560 | 592 | Bluish gray, silty shale with 1 to 2 in.,calc.Len |
| 592 | 595 | Gray, hard, calcareous shale |
| 595 | 602 | Lt. gray, kaolinic clay (?) |
| 602 | 610 | gray & greenish, limy shale. Marl |
| 610 | 618 | Blue & brn. sh., with some gray clay |
| 618 | 620 | Gray clay with some igneous fragments |
| 620 | 622 | Igneous - Started coring at 622 feet |
| | | CORE LOG |
| 622 | 623.5 | Greenish, slightly magnetic, slightly calc.ig. |
| 623.5 | 623.7 | Band of hematite |
| 623.7 | 634 | Green, med. grained, slightly magnetic,mic. ig. |
| 634 | 635.5 | White, slightly calcareous phonolite dike. May contain $CaF_2$. |
| 635.5 | 653.6 | Greenish, very hard, slightly magnetic,pyroxene. |

ADDITIONAL REMARKS

Drilled overburden with 4.3/4 inch roller bit and set 590 feet of N casing. Casing stuck before getting on bottom. Casing could not be driven or pulled.

Cut 31.6 feet of NX core with plus 95 percent recovery.

Unable to pull casing. Retrieved top 30 feet.

FORM R-009-01

# LOG SHEET

Property MOSES KIDD

Date Started Oct. 11, 62 Date Completed approx. Oct. 30, 62 Elev. Collar 394.85 Hole No. EP1-4

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample DX 2.1/8, BX & AX

Total Depth of Hole Cored from 603.5 to Logged and Sampled by Benny Kidd

| FROM | TO | DESCRIPTION AND REMARKS |
|---|---|---|
| 0.0 | 15.0 | Red & gray, fine sandy clay |
| 15.0 | 90.0 | Brown, sandy clay |
| 90.0 | 260.0 | Chocolate brown, silty, lignitic clay |
| 260.0 | 265.0 | Choc. brn., silty clay with minor qtz. sand & lig. |
| 265.0 | 275.0 | " " " " " " lignite |
| 275.0 | 295.0 | Gray, silty clay. (no siderite) |
| 295.0 | 298.0 | Choc. brn. silty clay |
| 298.0 | 305.0 | Gray, silty clay. Cleaned hole @ 303.0 |
| 305.0 | 314.0 | pale blue, firm, plastic clay |
| 314.0 | 316.0 | Choc. brn., silty, lignitic clay |
| 316.0 | 318.0 | Lignite |
| 318.0 | 335.0 | Lt. gray, silty clay |
| 335.0 | 338.0 | lt. gray, silty clay with detrital syenite |
| 338.0 | 342.0 | lt. gray to white, hard, kaolinic clay (Bx zone) |
| 342.0 | 355.0 | lt. gray, kaolinic clay with some detrital syn. |
| 355.0 | 356.0 | Red clay |
| 356.0 | 360.0 | Red & gray, mottled clay |
| MIDWAY | | |
| 360.0 | 452.0 | Blue, plastic clay |
| 452.0 | 495.0 | Blue clay with sh. & minor ~~xxx~~ calc. lenses |
| 495.0 | 580.0 | Blue shale with hard calcareous lenses |
| 580.0 | 598.0 | " & gray clay with sh. & hard calc. lenses |
| 598.0 | 599.0 | Red, iron stained sand. |
| 599.0 | 603.5 | Lt gray clay & saprolite. Contact zone. |
| CORE | LOG | |
| 603.5 | 607.0 | Basal conglomerate with pyroxenite pebbles |
| 607.0 | 607.3 | Brown shale. ??? |
| 607.3 | 616.0 | Pale blue to green, friable, altered igneous |
| 616.0 | 616.7 | White, hard, pyt. phonolite (Dolomite ??)? |
| 616.7 | 617.8 | Greenish, hard phonolite |
| 617.8 | 622.7 | Pyroxenite. Gn., hard, calc., magnetic, minor biot. |
| 622.7 | 630.0 | " . Green, firm to friable, micaceous. |
| 630.0 | 636.7 | " . ", hard, calc., magnetic. |
| 636.7 | 642.5 | " . lt. green, firm, fine grained. |
| 642.5 | 644.0 | Phonolite. gray to grn., hard, fine grained, mag. |
| 644.0 | 652.0 | Pyroxentie. Grn., hard, magnetic. Mica replaced by calcite. |
| 652.0 | 653.0 | Pyroxenite. Grn., friable, altered, micaceous. |
| 653.0 | 690.8 | " . Green, hard, unaltered, " . |
| 690.8 | 697.2 | " . ", friable, altered, non-mag., non-calc. but with calcite stringers. |
| 697.2 | 699.7 | Pyroxenite. Grn., calcareous, slightly mag., very hard, with approx. 20% biotite. |
| 699.7 | 706.3 | Pyroxenite. Grn., hard, med. grained, calc., Mag. |

ADDITIONAL REMARKS

Continued on next sheet.

Grn - - - - - Green
Calc - - - - - Calcareous
Mag - - - - - Magnetic

FORM R-605-31 --CONTINUED-- LOG SHEET Property MOSES KIDD

Date Started Oct. 11, 62 Date Completed Oct. 30, 1962 Elev. Collar 394.85 Hole No. EP1-4

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample NX, BX, & AX cores

Total Depth of Hole 970.2' Cored from 603.5 to 970.2 Logged and Sampled by Benny Kidd

DESCRIPTION AND REMARKS

Page 2, a continuation.

| CORE FROM | LOG TO | Description |
|---|---|---|
| 708.3 | 711.7 | Pyroxenite. Grn., soft to friable, slightly calc. |
| 711.7 | 712.8 | White & azure blue, hard, lazurite-phonolite. |
| 712.8 | 721.0 | Pyroxenite. Grn., friable, med. grained, altered. |
| 721.0 | 733.3 | " . " , hard, calc., mag., minor biot. |
| 733.3 | 735.3 | " . pale grn., firm, slightly altered, non-magnetic, micaceous. |
| 735.3 | 743.0 | Pyroxenite. Grn., hard, med. grned, calc., mag. |
| 743.0 | 751.0 | " . Pale green, friable. |
| 751.0 | 763.3 | " . Grn. to gray, soft, highly altered, non-calc., non-magnetic, micaceous |
| 763.3 | 763.8 | Phonolite dike. White, hard, non-calcareous. |
| 763.8 | 768.5 | Altered pyroxenite. Lt. gray, fine to med. grained, friable, non-calc., non-magnetic. |
| 768.5 | 770.2 | Pyroxenite. Gray (altered green parts) hard, mic., non-calc., non-magnetic. |
| 770.2 | 803.0 | Pyroxenite. Grn., hard, calc., magnetic. |
| 803.0 | | ---- Started cutting AX core ---- |
| | 887.0 | " . Green, hard, calc., magnetic. |
| 887.0 | 895.3 | " . " , altered, friable to soft. |
| 895.3 | 941.0 | " . " , hard, calc., magnetic. |
| 941.0 | 943.0 | Altered pyrox., lt. grn., friable, mic., non-calc. |
| 943.0 | 946.0 | Phonolite. White, hard, non-calc., pyt.-phono. |
| 946.0 | 946.7 | Pyroxenite. grn., soft, altered, micaceous. |
| 946.7 | 949.8 | " . " , altered hard to friable, approx. 25 % biotite. |
| 949.8 | 956.0 | Pyroxenite. Green, hard, slightly calcareous, magnetic. |
| 956.0 | 970.2 | Syenite. Gray, medium grained, with altered nepheline. Upper portion firm with small fractures, grading downward to hard more massive, nepheline syenite. |

Note: In order to continue this hole it would have been necessary to ream and set more casing. In fact the reaming was started and some tools broke off in the hole. To continue would have been very costly and time consuming. Also, the probability of finding a magnetite dike within the massive syenite body is not common.

ADDITIONAL REMARKS

The "pyroxenite - syenite" contact would be an interesting zone to prospect for metasomatic deposits. If the zone is continuous it may also provide the answer for the sharp magnetic anomalies !

The next hole has been located in the field 300 feet S 7° W of EP1-4.

C O P Y

Route 7, Box 237
Hot Springs, Arkansas

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

Alpha Minerals

This letter constitutes my final account to "Alpha Minerals" and covers the period October 16, through October 30, 1962. I did not go into the field October 31.

Before my departure I returned to the Arkansas Geological & Conservation Commission their survey equipment. I gave Phil Sterling, state geologist, a key to my storage building on state highway 5 between Benton and Hot Springs where the cores from hole numbers EP1-1,3 & 4 are stored. I advised him that he could look at, or move, them at his or your convenience. There is no rush on getting them out of the building and, of course, no charge for storage. I also advised Phil that I would go into the field with Robert Arnt during the week ending November 9, to acquaint Arnt with survey control points already plotted, and/or established on the current plane-table sheet. This will require about one day for which there will be no charge submitted.

| | |
|---|---|
| Professional services ---------- | $465.00 |
| Rent, field transportation ---------- | 75.00 |
| Accumulative long dist. calls to date ------ | 12.00 |
| Scotch Brand filament tape for core boxes -- | 2.00 |
| Stamps for posting core specimens ---------- | 6.36 |
| | $560.36 |

When I talked to you October 29, and advised that I would call from the Houston Airport I was scheduled to stop there in route to Corpus Christi. It turned out that I went through Dallas instead; therefore, no call.

It has been my pleasure working for you and I am sincerely sorry that our association was not more permanent. Saludos,

Respectfully yours,

/s/ Benny

Benny Kidd

C O P Y

October 18, 1962

Route 7, Box 237
Hot Springs, Ark

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

I have listed below field expenses for the first half of October. I have not included any labor in this account because the "red tape" and trouble involved with finding out various social security numbers, etc., of misc. labors would amount to more than the expenditures. The amount I pay the two drill helpers is more in the form of a "tip" than salary. I have been giving them small chores like keeping the cardboard core-boxes covered when it is wet, helping me shoot in a drill hole, Laying core out on drill rods when a pull is made and I am not present, etc., A couple of highschool boys helped me and I doubt if they even have social security numbers. At any rate the amount paid out is not much.

| | |
|---|---|
| Professional Services ---------- | $500.00 |
| Rent, Field transportation ---------- | 65.00 |
| Rent. Benton Motel for Core Storage--- | 12.00 |
| Ink filled marker pencils ---------- | 1.60 |
| Postage, mailing samples ---------- | 2.00 |
| | $580.60 |

When I first talked to you about this project you advised that it would last until October 15, and if something should happen that it might be possible to "stretch" it to November 1. On the basis of that I made some pretty definite arrangements to begin November 1, and it will be hard for me to "stretch" that past November 4.

We have drilled over 4,000.00 feet now and barring any further breakdowns I believe the 6,000.00 foot contract may be completed during the first week in November.

Sincerely yours,

/s/ Benny Kidd

Benny Kidd

MMEI FORM-60
SEPT. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

Docket No.
Contract No. 14-23-090-
Contract Amount $
Gov't. Participation % $
Mineral(s)

NOV 6 1962 O.M.E.

## OPERATOR'S MONTHLY VOUCHER

For Month of September, 1962

Operator's Name Alpha Mineral Company
Address 753 W. Creekside, Houston 24, Texas

| COST CATEGORIES | FOR OPERATOR'S USE | | | FOR GOVERNMENT APPROVAL ONLY | | |
|---|---|---|---|---|---|---|
| | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE |
| Fixed Unit Costs and | | | | | | |
| (1) Independent Contracts: | | | | | | |
| Bulldozing | 12.50 | 13.00 | 25.50 | 12.50 | 13.00 | 25.50 |
| Drifting | | | | | | |
| Crosscutting | | | | | | |
| Drilling | 5404.25 | 2139.25 | 7543.50 | 5,391.25 | 2,139.25 | 7,530.50 |
| Fixed unit costs | 666.00 | 259.60 | 925.60 | 666.00 | 259.60 | 925.60 |
| | | | | | | |
| (2) Personal Services: | | | | | | |
| Supervision & Technical | | | | | | |
| Outside Consultants | | | | | | |
| Labor | | | | | | |
| (3) Operating Mat'l. & Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Rail | | | | | | |
| Core boxes | | 95.40 | 95.40 | | 95.40 | 95.40 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehab. & Repairs: | | | | | | |
| Buildings, Fixtures, etc. | | | | | | |
| Operating Equipment | | | | | | |
| (6) New Buildings, Fixtures, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Analytical Work | | | | | | |
| Payroll Taxes | | | | | | |
| Employee's Liability Ins. | | | | | | |
| | | | | | | |
| | | | | | | |
| | 69.75 | | 99.00 | | | |
| TOTALS | 6082.75 | 2507.25 | 8590.00 | 6,069.75 | 2,507.25 | 8,577.00 |

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

Date Oct. 17, 1962 *Payee Alpha Mineral Company

Per L.W. Minton Title General Partner

* 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.

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.)

(INSTRUCTIONS ON REVERSE)

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

$ 3,034.88

Signature BHB
(Authorized Certifying Officer)

Date 10/31/62 Vou. No. 2287

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2150

Signature George C. Selfridge Title George C. Selfridge, Chief ~~Division of Field Operations~~ Date Oct. 24, 1962

Approved by OME Executive Officer or Alternate:

Signature George C. Selfridge Title George C. Selfridge, Chief Division of Field Operations Date Oct 24, 1962

## OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

## PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

# JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

| CUST'S ORDER NO. | DATE | REQ. NO. | OUR ORDER NO. | DATE | AT REC. POINT | D.O. NO. |
|---|---|---|---|---|---|---|
| | | | | | | |
| CONTRACT | CODE | | | DATE | AT SHIP POINT | |
| | 52 | | | | | |

SOLD TO: Alpha Mineral Company
753 W. Greenbriar Drive
Houston, Texas

NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97481
INVOICE DATE 9-25-62
DATE SHIPPED
SHIPPED VIA

SHIPPED TO: Benton, Ark.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

| ORIGINAL QUANTITY ORDERED | UNIT | PART NUMBER | DESCRIPTION | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|
| | | | To 1665.' Core Drilling at Benton, Arkansas for period ending September 25th as per agreement. | | | | | |
| | | | | | Total Feet | | Unit Cost | Total Cost |
| | | Prospect # | From / To | | | | | |
| | | 1 | BXM 649. / 902. | HM-1 | 253. | | $4.75 | $1,201.75 |
| | | | AXM 902. / 1194. | | 292. | | 4.25 | 1,241.00 |
| | | 2 | Non-Core 0. / 600. | EM-1 | 600. | | 2.50 | 1,500.00 |
| | | | Non-Core 626. / 626. | | | | 3.00? | 65 76.00 |
| | | | NXM 626. / 680. | | 54. | | 5.25 | 283.50 |
| | | 3 | Non-Core 0. / 440. | EM-3 | 440. | | 2.50 | 1,100.00 |
| | | | | | 599 core | | | 5,404.25 |
| | | Casing Lost | | | 1066 | | | 5,391.25 |
| | | | | | 1665 | | | |
| | | 1 | 426.'- BX Casing @$2.16 per ft. | | | | | 920.16 |
| | | 2 | 21.'- 5" Pipe @$2.75 per ft. | | | | | 57.75 |
| | | Road Work | | | | | | |
| | | Dozer Work - Newcom and West | | | 5403.75 / 666.00 / 6069.75 | | | 12.50 |
| | | | | | | | | $6,394.66 |

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

MME FORM 61
SEPT. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

**OPERATOR'S PROGRESS REPORT** For Month of September, 1962 Docket No. OME-6243

Operator's Name Alpha Mineral Company Contract No. 14-23-090- 2150

| 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 | Feet | 599 | 678 | 3457.75 10 | 599 | 678 | 3,457.10 |
| Rotary | | | | | | | |
| Drilling, Non-core-Diamond | | | | | | | |
| Rotary | Feet | 1066 | 1636 | 4756.75 44.40 | 1066 | 1636 | 4,744.40 |
| Churn | | | | | | | |
| Percussion | | | | | | | |
| Miscellaneous | | | | | | | |
| Mobilization | | 0 | 1 | 350.00 | — | — | 350.00 |
| Roads and Trails | | | | | | | |
| Stripping | hrs. | 1 | 2 | 25.50 | 1 | 2 | 25.50 |
| 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)* | | | | 8590.00 77.00 | | | 8,577.00 |

REMARKS

*(Continue on back)*

REMARKS

*(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 Oct. 17, 1962 Operator Alpha Mineral Co.

Per L. W. Mintum Title General Partner

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 George C. Selfridge

Title George C. Selfridge, Chief Division of Field Operations

Date Oct. 24, 1962

(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.

Docket Number OME-6243
Contract Number 14-23-090-2150

PART 3 - NARRATIVE REPORT

Heavy Minerals Test 1 was completed at 1194 feet. The igneous section was a slightly altered pyroxenite cut by occasional thin, light-colored and fine-grained dikes or sills. The average of 33 samples gave a specific gravity of 3.1, although the relative weights of the samples was not known. A crude magnetic separation, ground to probably -200 mesh, gave an average magnetite content of 5.7% for 23 samples. Probably this specific gravity is high enough to cause the gravity anomaly, but the magnetite content is definitely not enough to cause the magnetic anomalies.

Hole EP1-1 was drilled next. No bauxite was encountered at the bauxite horizon and the igneous rock was encountered at 625 feet. Several new minerals (possibly magnesite or wollastonite) were encountered, although most of the rock to the total depth of 680 feet was pyroxenite, with varying degrees of alteration.

Hole EP1-3 was drilled to 440 feet at the end of the billing period.

The cores are being examined mineralogically by the geologists of the Arkansas Department of Geology, but no results are available yet.

ALPHA MINERAL COMPANY

By L. W. Minturn
L. W. Minturn, General Partner

FORM R-505-31

# LOG SHEET

Property Moses Kidd LSE 15

Date Started Sept. 18, 62 Date Completed Sept. 20, 62 Elev. Collar App. 385 Hole No. EP1-1

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample NX core, 2 1/8 in.

Total Depth of Hole 680 feet CORED Sampled from 626.5 to 680 Logged and Sampled by Bonny Kidd

| FROM | TO | DESCRIPTION AND REMARKS |
|---|---|---|
| 0 | 3 | Red, silty clay. Some lim. nodules on surface |
| 3 | 12 | Red & gray, banded silty clay |
| 12 | 50 | Black, lignitic, silty clay |
| 50 | 70 | Brown & gray, silty, lignitic clay |
| 70 | 85 | Chocolate brown, silty clay |
| 85 | 91 | Tan, plastic, silty clay |
| 91 | 92 | Siderite |
| 92 | 101 | Choc. brn., silty, mic. clay with siderite lenses |
| 101 | 102 | Siderite |
| 102 | 127 | Choc. brn., Mic. clay with thin siderite lenses |
| 127 | 148 | Brn., sdy., mic. clay with siderite lenses |
| 148 | 185 | Choc. brn., mic. clay with fewer siderite lenses |
| 185 | 200 | Brown, sandy, lignitic clay |
| 200 | 265 | Gray, sdy., clay. (Poor returns) Re:sand ?? |
| 265 | 320 | Gray, clayey sand. Few thin ss lenses |
| 320 | 325 | Lt. gray, silty clay, some detrital sym. |
| 325 | 345 | Lt. gray, "plastic" kaolinic clay with detri. sym |
| 345 | 350 | Brown to varicolored, mottled clay |
| Missing | | |
| 350 | 482 | Blue, plastic, micaceous clay |
| 482 | 500 | Gray, silty clay with thin limy lenses |
| 500 | 504 | Bluish, shale with thin (1 to 2 in.) hard lenses |
| 504 | 550 | Blue, non-calcareous, shale & clay |
| 550 | 570 | Blue shale with some brown sh. lenses |
| 570 | 600 | Blue sh. with 1 to 3 in. lt. gray, limy lenses |
| 600 | 605 | Lt. gray, clay. Appears to be kaolinic ? |
| 605 | 623 | Blue shale. Non - calcareous |
| 623 | 625 | Blue shale, some ig. frag. May be saprolite |
| 625 | 626.5 | Igneous. Started coring |
| 626.5 | 642 | Lt. gray, hard, fine grained, phonolite. Core contains considerable pyrite & vertical solution channels of iron oxides, or siderite. Core is slightly magnetic. |
| 642 | 669 | Greenish, medium graindd, slightly calcareous, slighty magnetic pyroxene |
| 669 | 680 | Gray, hard, fine grained phonolite. |

ADDITIONAL REMARKS

Cut 53.5 feet of NX core. Core recovery plus 95 percent.

Used 4 1/8 inch roller bit through overburden. Set N casing to 626.5 feet. All casing retrieved

Route 7, Box 237
Hot Springs, Ark
October 9, 1962

Mr. L. W. Minturn
753 West Creekside Dr.
Houston 24, Texas

Dear Mr. Minturn:

This letter constitutes an invoice of field expenses for the last half of September. Please note that receipt number 1 for 12.50 was charged during the first half of September; therefore the only ones due now are Numbers 2 & 3. Even though Bryce Minner signed the receipt, the work was done by both he and Perry Hunt. Perry did some work later and I am going to use Bryce next time and so forth.

| | |
|---|---|
| Professional Services ---------- | $500.00 |
| Rent, field transportation ---------- | 65.00 |
| Misc. labor ( See receipts ) -------- | 19.50 |
| | $584.50 |

Sometime between now and the 15th. I should hire a helper and survey profiles 2 & 3. This will take about 30 hours. I have not surveyed those profiles yet because there was some earlier suggestion about not doing anything on IPC until EP1 is about completed.

If we use a relative figure of 100 feet for the elevation of hole number EP1-1: Hole number EP1-2 will be 104.35 and EP1-3 will be 93.20. These are Plane-Table figures but they should be pretty close. When I get a chance to do the other profiles I will run elevations from here and will also include the Heavy Minerals Test holes. Saludos,

Sincerely yours,

Benny Kidd

September 24, 1962

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

The outline of field expenses below covers the first half of September. There has been $12.50 paid out for field assistance that I do not have receipts for as yet. The money was paid to the drill helpers for misc. duties such as stacking core boxes at the Benton Motel storage, cutting survey lines, catching cuttings, etc. I will get signed receipts and send them with the account for the month ending September 30.

| | |
|---|---|
| Professional services ---------- | $500.00 |
| Rent, field transportation ---------- | 60.00 |
| Materials for making core boxes -------- | 12.60 |
| Ink filled markers ---------- | 1.83 |
| Misc. labor (see above) ---------- | 12.50 |
| Postage from August first ---------- | 1.50 |
| | $588.43 |

For your information "Heavy Minerals Test # 1" was bottomed at 1,194.2 feet. That was the bottom of the last 20 foot core run, and each trip in caused the A casing to settle further. Also, the last few feet of core was unchanged so I considered it wise to stay out rather than try to cut the additional 5.8 feet to make the hole an even 1200.

The final analysis shows a loss of 426 feet of B casing in "Heavy Minerals Test # 1". However, I am happy to report that after about 36 hours of hammering & blasting in E.P.1.-1 all the N casing was recovered. The final depth in E.P.1.-1 was 680 feet including the 53.5 feet cored. All core was taken with an NX bit.

Sincerely yours,

Benny Kidd

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

SEP 2 1 [illegible]

Memorandum

To: Chief, Fiscal Section
Division of Administrative Services
Office of the Secretary

From: Acting Chief, Division of Field Operations, OME

Subject: OME-6243 (Iron Ore, Columbium, Tantalum Bauxite)
Alpha Mineral Company
Benton Prospect
Saline County, Arkansas
Contract 2150

Enclosed are the original (with supporting documents) and two copies of MME Form 60 and the original and two copies of MME Form 61 covering work performed during August 1962.

It is considered that the work performed complies with the intent of the contract and is acceptable to the Government.

The work performed during the month was on both actual cost and fixed unit cost bases.

Subject to verification of arithmetical accuracy of the report, it is recommended that the operator be reimbursed $1,253.62, which is 50 percent of the monthly total shown on MME Form 60.

W. R. Griswold

Enclosures

MME FORM 60
SEPT. 1959

SEP 26 1962
O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Received
~~Murphy~~

Docket No. OME-6243
Contract No. 14-23-090-2150
Contract Amount $ 45,380
Gov't. Participation % 50 $22,690
Mineral(s) Iron Ore, Columbium, Tantalum, bauxite

# OPERATOR'S MONTHLY VOUCHER For Month of August, 1962

Operator's Name Alpha Mineral Company
Address 753 W. Creekside Dr., Houston 24, Texas

| COST CATEGORIES | FOR OPERATOR'S USE | | | FOR GOVERNMENT APPROVAL ONLY | | |
|---|---|---|---|---|---|---|
| | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE | MONTHLY TOTAL | PREVIOUSLY REPORTED | TOTALS TO DATE |
| Fixed Unit Costs and | | | | | | |
| (1) Independent Contracts: | | | | | | |
| Bulldozing | 13.00 | - | 13.00 | 13.00 | - | 13.00 |
| Drifting | | | | | | |
| Crosscutting | | | | | | |
| Drilling | 2139.25 | - | 2139.25 | 2,139.25 | - | 2,139.25 |
| Fixed unit costs | 259.60 | - | 259.60 | 259.60 | - | 259.60 |
| (2) Personal Services: | | | | | | |
| Supervision & Technical | | | | | | |
| Outside Consultants | | | | | | |
| Labor | | | | | | |
| (3) Operating Mat'l. & Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Rail | | | | | | |
| Core boxes | 95.40 | - | 95.40 | 95.40 | - | 95.40 |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehab. & Repairs: | | | | | | |
| Buildings, Fixtures, etc. | | | | | | |
| Operating Equipment | | | | | | |
| (6) New Buildings, Fixtures, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Analytical Work | | | | | | |
| Payroll Taxes | | | | | | |
| Employee's Liability Ins. | | | | | | |
| TOTALS | 2507.25 | | 2507.25 | 2,507.25 | - | 2,507.25 |

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

Date Sept. 18, 1962 Payee Alpha Mineral Company

Per L. W. Muntum Title General Partner

* 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.

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.)

(INSTRUCTIONS ON REVERSE)

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

$ 1,253.62

Signature BWB
(Authorized Certifying Officer)

Date 9/26/62 Vou. No. 1615

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2150

Signature W. R. Grimsell Title Acting Chief, Division of Field Operations Date Sept. 21, 1962

Approved by OME Executive Officer or Alternate:

Signature W. R. Grimsell Title Acting Chief, Division of Field Operations Date Sept. 21, 1962

## OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

## PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

# JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

| CUSTOMER'S ORDER NO. | DATE | REQ. NO. | OUR ORDER NO. | DATE | AT REC. POINT | D.O. NO. |
|---|---|---|---|---|---|---|
| | | | | | | |
| CONTRACT | CODE 52 | | | DATE | AT SHIP POINT | |

SOLD TO: Alpha Mineral Company
753 W. Creekside Drive
Houston, Texas

NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97412

INVOICE DATE 8-25-62

SHIPPED TO: Benton, Ark.

DATE SHIPPED

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

| ORIGINAL QUANTITY ORDERED | UNIT | PART NUMBER | DESCRIPTION | CODE | UNIT PRICE | QUANTITY BACK ORDERED | QUANTITY SHIPPED | AMOUNT |
|---|---|---|---|---|---|---|---|---|
| | | | To 649.' Core Drilling at Benton, Arkansas for period ending August 25th as per agreement. | | | | | |
| | | Prospect # | From / To | | Total Feet | | Unit Cost | Total Cost |
| | | 1 | Non-Core 0. / 450. | | 450. | | $2.50 | $1,125.00 |
| | | | NXM Core 450. / 458. | | 8. | | 4.75 | 38.00 |
| | | | Non-Core 458. / 578. | | 120. | | 2.50 | 300.00 |
| | | | BXM Core 578. / 600. | | 22. | | 4.25 | 93.50 |
| | | | BXM Core 600. / 649. | | 49. | | 4.75 | 232.75 |
| | | | | | | | | 1,789.25 |
| | | | Mobilization - Drill and Equipment | | | | | 350.00 |
| | | | Dozer Work on Road - 1 hour | | | | | 14.00 |
| | | | | | | | (12cc) | |
| | | | | | | | (2,157.15) | $2,153.25 |

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

OK Benny Fritz

RM PIDDA

# OWENS-ILLINOIS GLASS COMPANY, INC.

FOREST PRODUCTS DIVISION

P. O. BOX [redacted] 1 MEMPHIS, TENN.

3202 - Mallory Station - 2021 Latham Street

| Invoice Number | Our Customer Number |
|---|---|
| [redacted]-1264 | 999999 |

Ship To (Same as "Sold To" unless typed here)

Alpha Mineral Company
753 Greekside Drive
Houston, Texas

ARK Geological & Conservation
State Police Ground Comm. Lab.
Little Rock, Arkansas

TERMS: 1% 10 DAYS NET 30 — No Discount Allowed On Freight, Dies, or Misc. Items

| Invoice Date | Your Order No. | Our Order No. | Date of Order | Ship Via | F.O.B. | Customer No. |
|---|---|---|---|---|---|---|
| 8-28-62 | | M8172-A,B&C | | East Texas | Del. | 588 |

| C/P | QUANTITY ORDERED | BOX NO. OR SIZE | STYLE | TEST | NO. BUNDLES | AMT. PER BUNDLE | QUANTITY SHIPPED | QUANTITY BILLED | PRICE PER M | AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 30 x 10-1/2 x 2-1/2 | Tel. Cover | 200 | 10 | 20 | 200 | 200 Sets | 954.00 | 190.80 |
| | | 30 x 10-1/2 x 2-1/2 | Tel. Body | 200 | 10 | 20 | 200 | | | |
| | | 30 x 7-3/8 | Scd. Pad | 200 | 8 | 100 | 800 | | | |

| CARRIER NUMBER | BILL OF LADING NO. | WEIGHT | FREIGHT RATE | TOTAL FREIGHT (TAX INC | |
|---|---|---|---|---|---|
| | 1028 | Ship. 351 Min. | 1.30 | $4.50 | Cash Discount Allowed if Paid Within 10 Days of Invoice Date. $ 1.86 |

We hereby certify that these goods were produced in compliance with all applicable requirements of Section 6, 7, and 12 of the Fair Labor Standards Act as amended, and of the regulations and orders of the United States Department of Labor issued under Section 14 thereof.

NO CLAIM ALLOWED UNLESS REPORTED ON RECEIPT OF GOODS

C Designates Complete Shipment
P Designates Partial Shipment

DUPLICATE INVOICE

OK Barry Hall

MME FORM 61
SEPT. 1959

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## OFFICE OF MINERALS EXPLORATION

**OPERATOR'S PROGRESS REPORT** For Month of August, 1962 Docket No. OME-5243

Operator's Name Alpha Mineral Company Contract No. 14-23-090- 2150

| 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 | Foot | 79 | 79 | 491.50 | | 79 | 491.50 |
| Rotary | | | | | | | |
| Drilling, Non-core-Diamond | | | | | | | |
| Rotary | Foot | 570 | 570 | 1,652.75 | | 570 | 1652.75 |
| Churn | | | | | | | |
| Percussion | | | | | | | |
| Miscellaneous | | | | | | | |
| Mobilization | | | | 350.00 | | | 350.00 |
| Roads and Trails | Hours | 1 | 1 | 13.00 | | 1 | 13.00 |
| 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)* | | | | 2,507.25 | | | 2,507.25 |

REMARKS

*(Continue on back)*

REMARKS

*(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 Sept. 18, 1962 Operator Alpha Mineral Company

Per L. W. Mintum Title General Partner

L. W. Mintum

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 W R Grimwood

Title Acting Chief, Division of Field Operations

Government Representative

Date September 21, 1962

(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.

Docket Number ONE-6243
Contract Number 14-23-090-2150

PART 3 - NARRATIVE REPORT

Drilling on Heavy Minerals Test 1 started on August 5, 1962. By the invoice date, 649 feet of hole had been drilled and cored satisfactorily. A report of the mechanical difficulties encountered and a log of the hole are attached.

The bauxite horizon was drilled through two times because of junking the first hole. The cuttings were watched carefully, but no evidence of bauxite was found.

Three and eight-tenths feet of Midway lime shells were cored and recovered, but no mineralization was present.

The base of the Midway was logged at 575 feet, where a weathered pyroxenite was encountered. This material was cored with 100% recovery to 649 feet. The core is currently being examined by geologists of the Arkansas Geological Survey.

Obviously the core contains no commercial magnetite, but magnetite was not expected in this hole. The specific gravities vary from 2.7 to 3.2. Whether or not this range is high enough to cause the gravity anomaly is not known. We expect to core the country rock in one of the Exploratory Profiles, and the specific gravity will be compared to that of the ultra-basic intrusion.

The contractor now has adequate equipment and three crews are promised, so we expect progress to improve most substantially.

ALPHA MINERAL CO.

By L. W. Minturn
L. W. Minturn, General Partner

September 4, 1962

Mr. L. W. Minturn
753 West Creekside Drive
Houston 24, Texas

Dear Mr. Minturn:

Enclosed are two drill logs. One is of the overburded of "Heavy Minerals Test # 1, and the other is a tentative report, or very general description, of the rock types cored in the " RE-DRILL".

Actual drilling started August 6, and you are aware of the slow progress made during the early stages. This was in part due to the driller unfamiliarity with drilling soft materials as well as faulty pumping equipment. As the hole became deeper the pump was not able to bring all of the cuttings out unless several hours were spent during each shift washing. The final result was losing the hole at 624 feet. The hole was abandoned for the follow-in reasons:

August 14, the day shift was told to start coring at 624 feet. The evening shift spent 8 hours washing and drilling the tools to the bottom. At shift end the tools were pulled to hte bottom of the casing at 150 feet and remained overnight.

August 15, a larger pump arrived along with a string of N rods. The N rods were added but the pump would not work because of a hole in one cylinder and a bad piston in another. Consequently, the smaller pump was again employed and the hole was cleaned with a drag bit. In attempting to get back on bottom with the NX barrel it hung up at 567 feet and broke off the bit an reaming shell.

August 16, a pilot an rock bit was used to straighten out the hole. The hole was re-entered with an NX core barrel but an N rod coupling broke off and left the barrel at 564 feet.

August 17, in an attempt to drill around the lost tools and continue the hole, 30 feet of N rods plus a rock bit were also broken off.

August 18. After several hours fishing to no avail the hole was abandoned.

The drill was moved approximately 8 feet southward and a new hole started August 20. Casing was set to 150 feet ( N ). The hole began to tighten up at 290 feet. At 575 feet I decided to start coring. The hole was to tight to enter with a core barrel so the hole was reamed and B casing set at 575 feet. The first B core was pulled on the evening shift August 24.

Since coring operations begun August 24, there have been only minor difficulties. At this point the only major concern is at 370 feet where the B casing has parted. About every third or forth run the barrel hangs slighty.

The tool pusher has decided, and has notified Joy, that it will be necessary to set N casing down to coring depth in future holes. Also, I have asked him to request another crew and run three shifts because we are so far behind schedule. It is my opinion that they now have enough reliable equipment and trained personnel on the job to continue without duplicating their former mistakes.

Respectfully yours,

Benny Kidd, geologist

September 1, 1962

LSE. 12

FORM R-505-31

# OVERBURDEN LOG SHEET

Property Tatum Est.

Date Started Aug. 6, 62 Date Completed Aug. 18, 62 Elev. Collar Appr. 360' Hole No. H.M. #1.

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample NX core (2.125 in)

Total Depth of Hole 624 Sampled from 450 to 458.2 Logged and Sampled by Benny Kidd

DESCRIPTION AND REMARKS

| CORE | FROM | TO | LITHOLOGY |
|---|---|---|---|
| | 0 | 35 | Brn, fine grained loosely consolid. sand |
| | 35 | 40 | " & black, lignitic sand |
| | 40 | 55 | " & " " mic. sand |
| | 55 | 55.5 | Siderite or lim. lenses. No big cuttings. |
| | 55.5 | 70.3 | Brn, fine grained, loosely consolid. mica sand. |
| | 70.3 | 70.8 | Siderite or limonite lense. |
| | 70.8 | 118.0 | Brn. fine grained, clayey, mic. sand. |
| | 118.0 | 123.0 | Siderite lenses |
| | 123.0 | 125.0 | Black, lignitic, clayey sand. |
| | 125.0 | 127.0 | White sand. |
| | 127.0 | 130.0 | Sand & clay. |
| | 130.0 | 239.0 | Choc. brn., silty, micaeous clay. |
| | 239.0 | 258.0 | Gray, silty, micaeous clay. |
| | 258.0 | 261.0 | Choc. brn., silty, micaeous clay. |
| | 261.0 | 280.0 | Gray, silty, mic. clay with shaley lim. lenses. |
| | 280.0 | 285.0 | Gray, kaolinic clay. |
| | 285.0 | 290.0 | Lt. gray, kaolin. |
| | 290.0 | 300.0 | Lt. gray kaolin with detrital syenite (NO bx.) -- Midway contact -- |
| | 300.0 | 365.0 | Blue, plastic, micaeous clay. |
| | 365.0 | 415.0 | " " , mic. clay with few non-calcareous shale lenses. |
| | 415.0 | 433.0 | Bluish, firm clay with non-calc. shaley lenses. |
| | 433.0 | 438.0 | " " non-calc. sh. with small hard lenses. (sludge return very poor due to faulty pump) |
| | 438.0 | 449.0 | Gray, calc. clayey sand with 1 to 3 inch hard consolidated lenses. |
| 450.0 | 449.0 | 452.8 | Lt. gray, fossiliferous limestone. (Cored) |
| 458.2 | 452.8 | 458.2 | Bluish, fine grained, calc., clayey sand (cored) |
| | 458.2 | 480.0 | " " " " " |
| | 480.0 | 510.0 | " , silty shale. |
| | 510.0 | 575.0 | " , firm, non-calc. shale with few 1 to 3 inch calcareous lenses. |
| | 575.0 | 624.0 | Note: From this point on faulty pump rendered sludge samples unreliable. Coring was attempted at 624 feet. After several attempts to get the barrel on bottom, plus losing one rock bit & reamer, and one 10 ft. NX core barrel an 30 ft. of rods the hole was abandoned ! |

ADDITIONAL REMARKS

Approx. elev. taken from U.S.G.S ( BENTON QUADRANGLE ) 7½ minute series. (1944)

This hole is being (RE-DRILLED) and the new hole was cored from 578 feet. A supplement to this log covers the remainder of the hole

FORM R-808-31

# TENTATIVE LOG SHEET

LSE. 12.

Property Tatum Estate

Date Started Aug. 20, 62 Date Completed ..... Elev. Collar Appro. 368' Hole No. H.M. # 1.

Drilled by Joy Manufacturing Co. Rig No. Size 22 Type and Size of Sample BX core (1 5/8 in)

Total Depth of Hole ..... Sampled from ..... to ..... Logged and Sampled by Benny Kidd

| | | DESCRIPTION AND REMARKS |
|---|---|---|
| | | Note: This is a very general description of the type igneous being cored. A more detailed description will be prepared upon completion of the hole. |
| 575.0 | 578.0 | Drag bit cuttings appeared to be either igneous or metamorphosed shale, therefore, coring commenced at 578 ft. This places the top of the igneous at approximately minus 215 ft. (below MSL) |
| 575.0 | | Intrusive igneous rock, greenish, medium to fine grained. Some pyrite, little biotite, calcareous ground mass. Generally aphanitic. |
| | | Field identification: Color, specific gravity, gangue minerals, etc., indicates pyroxene. In upper sections it is cut by a gray, hard, fine grained pyrite-phonolite. Considerable calcite stringers and some massive 1 to 3 ft. sections of calcite & pyrite. |
| | | Below 700 ft. the basic rock is the same ( pyroxene ? ) except there is an increase in biotite and pyrite - calcite phonolite. |
| | | Below 800 ft. the core is more magnetic. Sufficient magnetite is present to support the weight of a small Alnico Magnet. Calcite, and hard, fine grained, green to blue pyrite-calcite phonolite is more common. |

ADDITIONAL REMARKS