UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 1309

This is the official contract file containing all official records of the project. Duplicate material has been removed. The records contained in the files are checked and are arranged in this manner:

Left Side

Certificate of Audit (Final).

Interim Audit(s).

✓ Report of Review.

Termination Notice or Agreement.

Recision Notice.

✓ Assignment of Contract.

✓ Contract Amendments (latest on top).

✓ Contract with all exhibits and annexes.

Owner's Consent to Lien.

Subordination Agreement.

✓ Leases and assignments of leases.

✓ Application and attachments.

Schedule of Collections.

✓ Operator's monthly reports and all attachments (latest on top).

Right Side

✓ Project summary.

Work completed analysis.

All other material is filed in chronological order with correspondence including the following reports as checked:

✓ Final Field Team Report. (Tab)

Operator's Final Report.

Interim Reports.

✓ On-site Exam Report(s). (Tab)

Settlement Sheets.

If additional folders are required because of volume of records, show folder numbers and contents below:

Maps in folder number _____

Operator's Monthly Reports in folder number _____

C. W.
Reviewer's Initials

7973

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Plateau Mining Company
A corporation, assignee of
Bowles-Heflin Mining Company, Partnership
U. S. Bank Building
Grand Junction, Colorado

pertaining to Exploration Project Contract No. Idm-E192, Docket No. DMA 1309X, and including Amendment No. 1, covering a project for exploration of Uranium-Vanadium, located in San Juan County, Utah, near Moab, Utah, for the months of November 1951 to October 1952.

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

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

The voucher files include evidence that the Government representative who visited the project, examined the records of the Operator and determined the validity and propriety of the costs claimed.

The major portion ($12,271.[illegible]) of the cost, covered diamond drilling at rates specified in an approved sub-contract.

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

Total cost as billed by Contractor		$14,731.37
Exceptions:		
By DMEA Finance Officer	None	
Herewith	None	None
Total Accepted Cost		$14,731.37

The contract calls for a 90 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Thirteen Thousand Two Hundred Fifty-Eight and 23/100 Dollars

-$13,258.23-

is considered valid and proper.

Dated: December 31, 1953

Donald J. Zenich
Auditor

Government Copy
Uranium

SEP 24 1952

ASSIGNMENT AND RELEASE

The Bowles-Heflin Mining Company, a partnership composed of A. L. Heflin and Melvin C. Bowles, located at Moab, Utah (hereinafter called the "Assignor"), in consideration of one dollar lawful money of the United States and other good and valuable consideration received from the Plateau Mining Company, a corporation duly organized and existing under and by virtue of the laws of the State of Colorado (hereinafter called the "Assignee"), the receipt whereof is hereby acknowledged, does hereby assign, transfer, and convey to the Assignee all its right, title and interest in and to an Exploration Project Contract dated October 23, 1951, No. Idm-E192, Docket No. DMA-1309X, with the United States of America, acting through the Department of the Interior, Defense Minerals Administration (hereinafter called the "Government"), including any and all property purchased for, and the right to use any and all property devoted to, the exploration work under the terms of the contract; PROVIDED, however, that the Government shall pay to the Assignor all moneys which may be or become due and payable to it under said contract before the first day of the second month following the month in which this Assignment is accepted in writing by the Assignee; and upon payment thereof, the Assignor agrees to release and hereby releases the Government from any and all claims past, present, or future arising out of said contract.

This assignment is subject (1) to the written consent of the Government; (2) to written acceptance by the Assignee; and (3) assumption by the Assignee of the terms, provisions, and conditions of said contract binding upon the Assignor.

Dated June 15, 1952.

BOWLES-HEFLIN MINING COMPANY

By A. L. Heflin
(Partner)

By Melvin C. Bowles
(Partner)

The Assignee, this 15th day of June 1952, hereby accepts the above Assignment, and assumes and agrees to be bound by the terms, provisions, and conditions of said contract that are binding on the Assignor.

THE PLATEAU MINING COMPANY

By Frank L. Seymour
Gen. Mgr. & Sec. Treasurer

The Government this 15 day of JUNE 1952, without releasing the Assignor from any of the terms, provisions and conditions of the said contract, hereby consents to the above Assignment.

UNITED STATES OF AMERICA

By O Mitchelson
Acting Administrator, Defense Minerals Exploration Administration (formerly Defense Minerals Administration)

State of Colorado

County of Mesa

On this 15th day of June 1952, before me Marie L. Poulos the undersigned officer personally appeared Frank L. Seymour who acknowledged himself to be the General Manager and Secretary Treasurer of Plateau Mining Company of Grand Junction, Colorado, a corporation, and that he, as such General Manager, and Secretary Treasurer, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as General Manager and Secretary Treasurer.

IN WITNESS WHEREOF, I have hereunto set my hand and seal.

Marie L. Poulos (L.S.)

My Commission Expires

Feb. 5, 1956

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

224 New Customhouse
Denver 2, Colorado

August 5, 1952

Memorandum

To: C.O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Amendment No. 1 to Contract Idm-E192, Docket 1309X, Plateau Mining Company (Uranium)

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E192. Copies of this amendment have been given to the operator, Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three copies of a letter from the applicant requesting this amendment and three copies of a memorandum from W.E. Young, Bureau Engineer, approving this amendment.

W. H. King

W. H. King

Enclosures

RECEIVED
AUG 13 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

AUG 11 1952

8-18-52

Gov't Copy

No. 1

AMENDMENT OF CONTRACT: No. Idm-E192

Contract Docket No. DMA 1309X, dated October 23, 1951, between the United States of America and Plateau Mining Company is hereby amended as follows, effective June 15, 1952:

Referring to Exhibit A attached to Exploration Project Contract Form MF-200 under title "Performance of Work", add the following: Diamond core drilling may be substituted for a portion of the wagon drilling. The increased cost of diamond drilling over wagon drilling will result in a reduction of the footage drilled in order to stay within the funds allocated for the project. Diamond drill cores must be split and one-half retained for the use of the DMEA. Drill cores must be stored properly in acceptable core boxes. Sludge samples must be collected. Complete diamond drill hole logs must be submitted for each hole drilled.

Referring to Exhibit A under title "Operating Equipment", subtitle "To be furnished by Operator", add the following: A 210 c.f.m., Cleveland rock drill and tower unit, mounted on a 6x6 truck may be substituted in lieu of the Tractair 105 c.f.m. compressor-drill unit and the Worthington 105 c.f.m. compressor without change in the allowable monthly depreciation rate.

Referring to the same Exhibit A under caption "Labor and Supervision:", hourly wage rates are increased as follows: Supervisor-Engineer rate increased from $1.50/hour to $1.75/hour; wagon drill operator rate increased from $1.50/hour to $1.75/hour.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 13 of the contract form.

Dated August 5, 1952.

Plateau Mining Company

By Frank J. Seymour
Gen. Mgr.

UNITED STATES OF AMERICA

gws

By [illegible]
Executive Officer - DMEA

Exhibit "C" to Contract No. Nor-1452

Contract Number No. NOr 1202, dated August 23, 1942, between the United States of America and [illegible] for the Navy, as follows, effective June 15, 1942:

Referring to article 1 entitled "Contract Price", add the following: "Except some additions may be authorized for a portion of the water drilling. The increased cost of these additional drilling over water drilling will result in a reduction in the fixed fee. In order to obtain this fixed fee and be paid the one-half retained for the use of the Navy, drill cores must be shown previously in accepted boxes. Single or [illegible] cores will be collected. Corresponding drill hole logs must be established for each hole drilled."

Referring to article 1 under title "Drilling Equipment", add-title "To be furnished by Contractor", add the following: "1 air compressor, diamond rock drill and bore tools, mounted on a [illegible] truck may be substituted in lieu of the Prospector 100 c.f.m. compressor-drill unit and the Jackhammer 100 c.f.m. compressor without change in the allowable monthly depreciation rate."

Referring to the same Exhibit C under section 1, "Rate and Depreciation", monthly rate increased from [illegible] to [illegible]; monthly drill operator rate increased from [illegible] to [illegible].

This agreement shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay on this contract or the amount which the Government may pay under the provisions of Article 13 of the contract form.

Dated August 5, 1942.

Internal Drilling Company

By [illegible]

Contracting Officer - [illegible]

COPY

May 17, 1952

Mr. Stephen R. Wilson
Bureau of Mines
1600 East First South Street
Salt Lake City 1, Utah

Subject: DMA Loan #1309X to Bowles and Heflin Mining Company, Partnership. P.O. Box 185, Moab, Utah.

Dear Mr. Wilson:

Reference is made to subject loan. Bowles and Heflin Mining Company has incorporated under the laws of Colorado and will henceforth be known as Plateau Mining Company, the address of which is U. S. Bank Building, Grand Junction, Colorado.

This new company has undertaken the operation of the identical mining claims operated by Bowles and Heflin and has also taken ownership of all partnership equipment. Because the Plateau Mining Company has no other objectives than did Bowles and Heflin Mining Company we think it fair to ask that you please amend subject Contract #1309X and substitute Plateau Mining Company for Bowles-Heflin Mining Company as "Operator."

Operating equipment under the contract as listed in Exhibit A has been changed as follows. The 105cfm Tractair compressor and the 105cfm Worthington compressor have both been replaced by one heavy duty wagon drill rig with s 210 compressor mounted on an Army 6x6 truck with a 20 Ft. tower. This rig utilizes a Cleveland H23 hammer. The market value of this rig is $10,000. A third suggested amendment to the contract would be that the labor and supervision estimate concerning both the supervisor engineer and the wagon drill operator be increased from $1.50 per hour to $1.75 per hour. At this time it is virtually impossible to employ a competent man at the estimated rate of $1.50 per hour.

According to our records as of December 31, 1951, we had completed 1316 feet of wagon drilling under the contract. Due to severe weather we suspended operations. On April 7, 1952, we resumed drilling and since that date have completed over 1400 feet of wagon drilling on the property. Because we were in the process of incorporating while drilling this 1400 feet we decided against attempting to bring this footage under the terms of the contract and have assumed that cost ourselves. At this time, however, we would like to again commence drilling under the contract with the above suggested amendments.

Inclosed please find a map representing the first 14 holes drilled under the contract. The apparent ore body encountered by this drilling lies in the upper zone. This entire area is said to have three distinct ore zones. If it were possible to drill 120 feet it is thought that all three zones would be pierced and this would eliminate duplicate drilling in the future. It is partially for this reason that we are suggesting that it might be considered to complete the drilling under this contract with a core drill.

Mr. Stephen R. Wilson May 17, 1952

Another important reason for recommending the use of a diamond drill is the fact that the wagon drill has had a difficult time penetrating the many wet clay beds that exist on this property. The operator has been forced tomake several moves before reaching the desired depth on several locations. A core drill could easily penetrate these wet clay beds and reach all three ore zones.

Should you approve such a core drilling program under the remaining portion of this contract we would like to advise that current core drilling costs in this area, according to Minerals Engineering and the Atomic Energy Commission, will be in the neighborhood of $2.50 per foot. To sub-contract this core drilling would be satisfactory as far as we are concerned and we are inquiring as to whether or not such a sub-contract would meet with your approval.

Sincerely,

Melvin C. Bowles
Vice President

COPY

S. R. Wilson

May 26, 1952

W. E. Young

Requested amendments to DMA 1309X, Contract Idm-E192, Bowles-Heflin Mining Co., San Juan County, Utah

Melvin C. Bowles, partner of Bowles-Heflin Mining Co., requests assignment of the remaining funds of the subject loan to Plateau Mining Co., Inc. It is my understanding that the partnership of Bowles-Heflin Mining Co. was dissolved and the Plateau Mining Co., Inc., took over all interests of the above partnership and additional leases in the immediate area. Principal officers and directors of the Plateau Mining Co., in addition to Mr. Bowles, are Vance and Garth Thornberg and affiliates. These people are owners and operators of Excalibur Uranium Corp. and the Seven Mile uranium property out of Moab.

The subject loan was for 25,600 feet of drilling at a cost of $18,944. Under previous operation of Bowles-Heflin Mining Co., 1,316 feet of drilling was completed under the contract at a cost of $1,589.66. The above drilling resulted in the discovery of an ore body which is now in the process of being mined. Additional drilling was completed by the Plateau Mining Co. at their own expense. Now that legal arrangements have been completed for formation of the new company, the request for assignment of the subject contract has been made. The Plateau Mining Co. was informed that supporting evidence should be furnished showing assignment from Mr. Heflin of his interest in property, leases and equipment.

In addition to the above assignment, the following amendments are requested:

1. Authority to do either or both wagon drilling or diamond drilling under the subject contract. Two good reasons for the request are:

a. Melting snows have saturated clay seams in the rock, making wagon drilling impossible in some locations. Drill bits become stuck in the clay seams and wagon drilling costs, in some cases, exceed core drilling costs.

b. Three mineralized horizons exist in the area. Holes in excess of 125 feet will be needed to penetrate all three possibilities. Occasional deep holes with a diamond drill would be a distinct advantage in testing all three horizons. Water for drilling is available 2 miles from the site.

It is recommended the company be granted the right to do 6,940 feet of diamond drilling at a cost of $2.50 per foot, the diamond drilling to be contracted to a competent drilling company and the cost to be subtracted from the allowable total cost of the project for wagon drilling. If less diamond drilling is done, the remaining fund may be used for wagon drilling under the contract.

2. Authority to substitute the heavy-duty Cleveland H23 wagon drill now in use for the 105-cfm. Tractair compressor with drill rig mounted and the 105-cfm. Worthington compressor listed in the contract. Monthly depreciation of "equipment furnished by operator" to remain the same.

3. Authority to increase hourly rate of supervisor and wagon drill operator from $1.50 per hour to $1.75 per hour. Additional costs to be subtracted from the total footage drilled and in no way increase the stipulated cost of the loan above $18,944.

The above-requested amendments are concurred with and are considered reasonable.

W. E. Young

MF-200
(June 1951)

Docket No. DMA 1309X
Commodity Uranium-Vanadium
Idm-E 192

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 23rd day of October, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Bowles-Heflin Mining Company, Partnership
P.O. Box 185, Moab, Utah

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Utah, County of San Juan described as follows: [3] The property is located in T.27S, R.23E, Sections 34 and 35 and T.28S, R.23E, Sections 2, 3 and 4 as per the accompanying claim map, and also described in Annex I attached.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) ~~That he is a lessee in possession and entitled to possession, and the subordination agreement of the lessor is attached.~~

3. *Exploration project.* The Operator, within Thirty (30) days from the date of this contract shall commence work on a project of exploration for [5] Uranium and Vanadium; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] Thirteen (13) months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 90 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 17,079.60, which is 90 percent of the agreed estimated total cost of this project, $ 18,944.00.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Bowles-Heflin Mining Company
(Operator)

By Frank E. Johnson
Acting Director, Production Expansion Division
Defense Minerals Administration

By Melvin C. Bowles
Partner

By R. L. Heflin
Partner

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

Docket No. DMA - 1309X
Bowles-Heflin Mining Company
Exploration Project Contract

EXHIBIT "A"

Performance of work:

This project involves the exploration of a uranium-vanadium deposit located in San Juan County.

In the Moab district the Morrison formation of Jurassic age consists of two members: The basal Salt Wash Sandstone which lies with apparent conformity upon the Summerville formation, and the Bushy Basin shale which lies conformably upon the Salt Wash. The Dakota Sandstone of Cretaceous age rests conformably on the shale. The mine workings and prospects of the Yellow Circle group of mining claims are mainly in the Salt Wash member.

The ore is localized in northeastward trending rolls and in replaced tree trunks in the upper Sandstone lenses of the Salt Wash member of the Morrison formation. During the period 1942-44 recorded shipments of ore show that the Yellow Circle group of claims yielded 2,925.90 tons of ore averaging 1.88% V_2O_5. Production from April 9, 1948 to February 29, 1951 was 2,839 tons of ore averaging .315% U_3O_8 and 1.37% V_2O_5.

This exploration work is to be confined to two areas, in Sections 2, 3, and 4, T.28S, R.23E, and Sections 34 and 35, T.27S, R.23E (as per attached map). These areas are to be explored to a depth of about 40 feet from the surface (by means of drilling with a wagon drill) through the Salt Wash member where the ore horizon is shallow. The drill holes are to follow the rolls and the holes are to be spaced every 50 feet in a northwest direction (across the rolls) and every 200 feet in a northeast direction (along the rolls) in the area indicated on the map (Fig. 2 attached). These areas are covered by the following claims: Vision Nos. 1, 2 and 3; Jane Nos. 2, 3, 4, 5, 6 and 7; and Rex Nos. 10 and 13, the other area is covered by the following claims: Pioneer Nos. 1, 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20. Holes may be drilled elsewhere on Operator's ground subject to the prior approval of the Government Field Team Engineers. A total of 25,600 feet of drill holes are to be drilled having a starting hole diameter of 2-3/4".

Estimated cost of Project:

25,600 feet of drill hole @ $0.74/ft.	$ 18,944.00*
Total cost of project	18,944.00

*Total cost/ft. including supplies, repairs, supervision, engineering, sampling, assaying, drilling, mapping and office expense.

Estimated cost/ft. - basis drilling 90 feet/day

	Cost/ft.
Labor @ $39.60/day	$ 0.44
Supplies, gasoline, oil, grease, drill bits, drill steel and couplings - $12.53/day	.1393
Camp and commissary - 3 men @ $2.00/day each	.0667
Equipment repairs (basis 264 work days/yr. @ $400.00) @ $1.52/day	.0169
Operator's equipment - depreciation allowed - Basis $200.83/month or $6.60/day	.0734
Estimated cost/ft.	0.7363

Fixtures and Improvements:

None

Operating Equipment:

To be purchased: None

To be furnished by Operator:

	Equipment Market Value
1 - Caterpillar tractor w/dozer blade D-4	$ 3,000.00
1 - Tractair compressor, 105 cfm, crawler-mounted, 1951 model. Drill rig mounted on this unit complete with 2 drills, one Cleveland H-10 and one Cleveland H-23	6,200.00
1 - Worthington compressor, 105 cfm, portable 1949 model	2,500.00
1 - Dodge 1947 pick-up truck	350.00
Total value	$12,050.00

Depreciated over 60 months (5 years)

$\frac{12,050.00}{60 \text{ months}}$ = $200.83 monthly depreciation allowed or $6.60/day - depreciation allowed

Labor and Supervision:

1 - Supervisor-Engineer @ $1.50/hour*
1 - Wagon drill operator @ $1.50/hour
1 - Wagon drill helper @ $1.50/hour

*Will direct work, supervise sampling, do the surveying, mapping, locate drill holes, and do all required office work.

NOTE: Hourly rate does not include insurance rate - OAB, comp. unemployment, etc., of 10% of payroll.

Rehabilitation and Repairs:

None

ANNEX I

Description of Lode claims owned by Bowles-Heflin Mining Company

Claim Name	Date Located	Date Recorded	Book & Page
Pioneer No. 1	3 - 2 - 51	3 - 12 - 51	R-2 505
Pioneer No. 2	3 - 3 - 51	3 - 12 - 51	R-2 505
Pioneer No. 3	3 - 7 - 51	3 - 12 - 51	R-2 505
Pioneer No. 4	3 - 10 - 51	3 - 12 - 51	R-2 504
Pioneer No. 5	3 - 10 - 51	3 - 15 - 51	R-2 526
Pioneer No. 6	3 - 10 - 51	3 - 15 - 51	R-2 526
Pioneer No. 7	3 - 11 - 51	3 - 15 - 51	R-2 527
Pioneer No. 8	3 - 11 - 51	3 - 15 - 51	R-2 527
Pioneer No. 9	3 - 12 - 51	3 - 15 - 51	R-2 527
Pioneer No. 10	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No. 11	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No. 12	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No. 13	3 - 13 - 51	3 - 15 - 51	R-2 529
Pioneer No. 14	3 - 13 - 51	3 - 15 - 51	R-2 529
Pioneer No. 15	3 - 13 - 51	3 - 15 - 51	R-2 529
Pioneer No. 16	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No. 17	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No. 18	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No. 19	3 - 14 - 51	3 - 15 - 51	R-2 531
Pioneer No. 20	3 - 14 - 51	3 - 15 - 51	R-2 531
Rex No. 1	7 - 17 - 51	8 - 13 - 51	R-4 65
Rex No. 2	7 - 18 - 51	8 - 13 - 51	R-4 65
Rex No. 3	7 - 18 - 51	8 - 13 - 51	R-4 65
Rex No. 4	7 - 18 - 51	8 - 13 - 51	R-4 64
Rex No. 5	7 - 19 - 51	8 - 13 - 51	R-4 64
Rex No. 6	7 - 19 - 51	8 - 13 - 51	R-4 64
Rex No. 7	7 - 19 - 51	8 - 13 - 51	R-4 63
Rex No. 8	7 - 19 - 51	8 - 13 - 51	R-4 63
Rex No. 9	7 - 20 - 51	8 - 13 - 51	R-4 63
Rex No. 10	7 - 20 - 51	8 - 13 - 51	R-4 62
Rex No. 11	7 - 21 - 51	8 - 13 - 51	R-4 62
Rex No. 12	7 - 21 - 51	8 - 13 - 51	R-4 62
Rex No. 13	7 - 21 - 51	8 - 13 - 51	R-4 61
Jane No. 1	7 - 24 - 51	8 - 13 - 51	R-4 61
Jane No. 2	7 - 24 - 51	8 - 13 - 51	R-4 61
Jane No. 3	7 - 24 - 51	8 - 13 - 51	R-4 60
Jane No. 4	7 - 25 - 51	8 - 13 - 51	R-4 60
Jane No. 5	7 - 25 - 51	8 - 13 - 51	R-4 60
Jane No. 6	7 - 25 - 51	8 - 13 - 51	R-4 59
Jane No. 7	7 - 25 - 51	8 - 13 - 51	R-4 59
Vision No. 1	7 - 5 - 51	7 - 6 - 51	R-3 568
Vision No. 2	7 - 5 - 51	7 - 6 - 51	R-3 568
Vision No. 3	7 - 16 - 51	8 - 13 - 51	R-4 58
Vision No. 4	7 - 17 - 51	8 - 13 - 51	R-4 57
Vision No. 5	7 - 18 - 51	8 - 13 - 51	R-4 57
Vision No. 6	7 - 20 - 51	8 - 13 - 51	R-4 57
Vision No. 7	7 - 21 - 51	8 - 13 - 51	R-4 56
Vision No. 8	7 - 23 - 51	8 - 13 - 51	R-4 56
Vision No. 9	7 - 24 - 51	8 - 13 - 51	R-4 56

Exh. "A"

● SHOWS SEC. CORNERS & NUMBER THE SECTION

—·—·— SHOWS CANE CANYON

〰〰 SHOWS TOP OF HIGH RIM

X SHOWS CLAIMS WE HAVE LEASED (6)

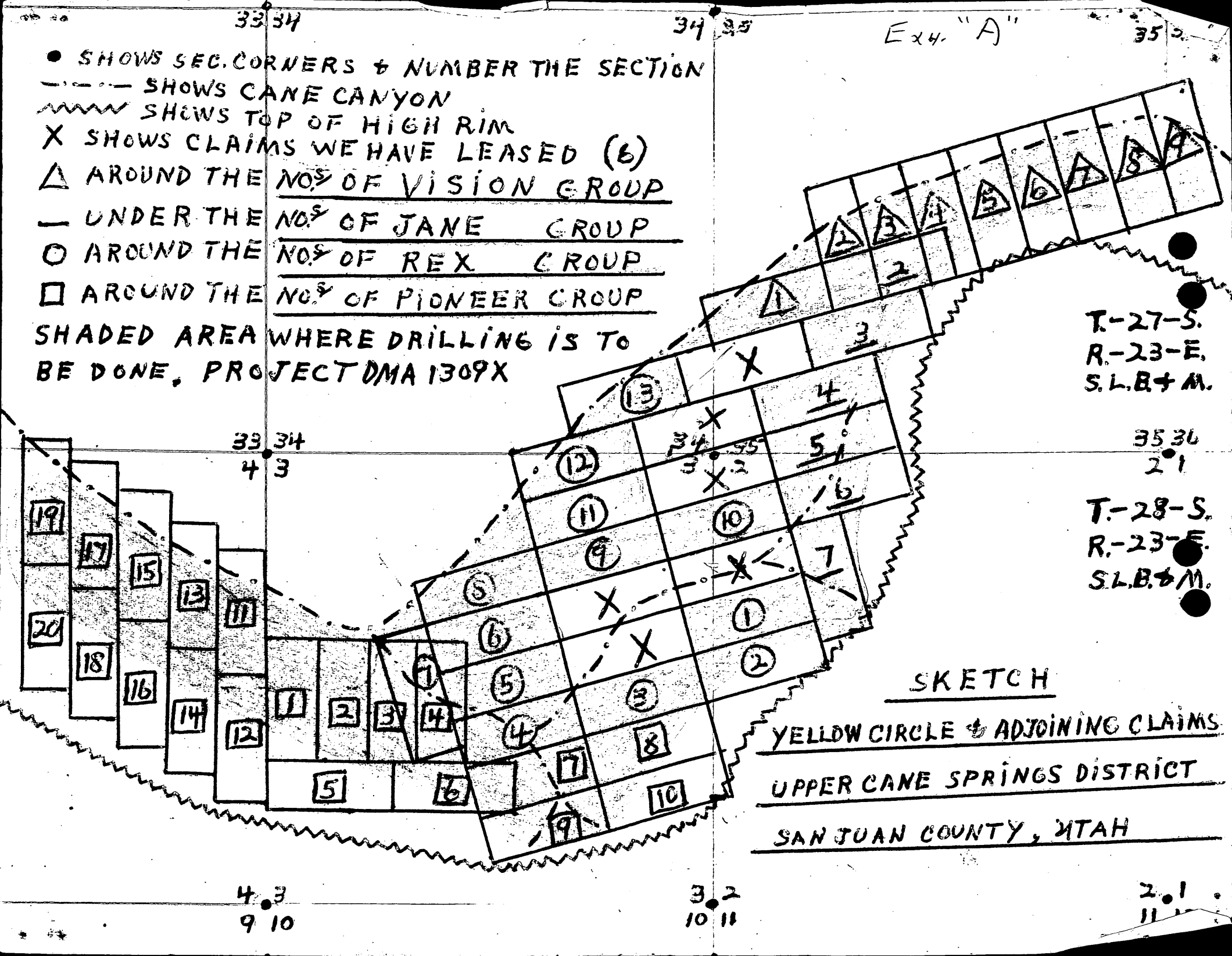
△ AROUND THE NOS OF VISION GROUP

— UNDER THE NOS OF JANE GROUP

○ AROUND THE NOS OF REX GROUP

□ AROUND THE NOS OF PIONEER GROUP

SHADED AREA WHERE DRILLING IS TO BE DONE, PROJECT DMA 1309X



SKETCH

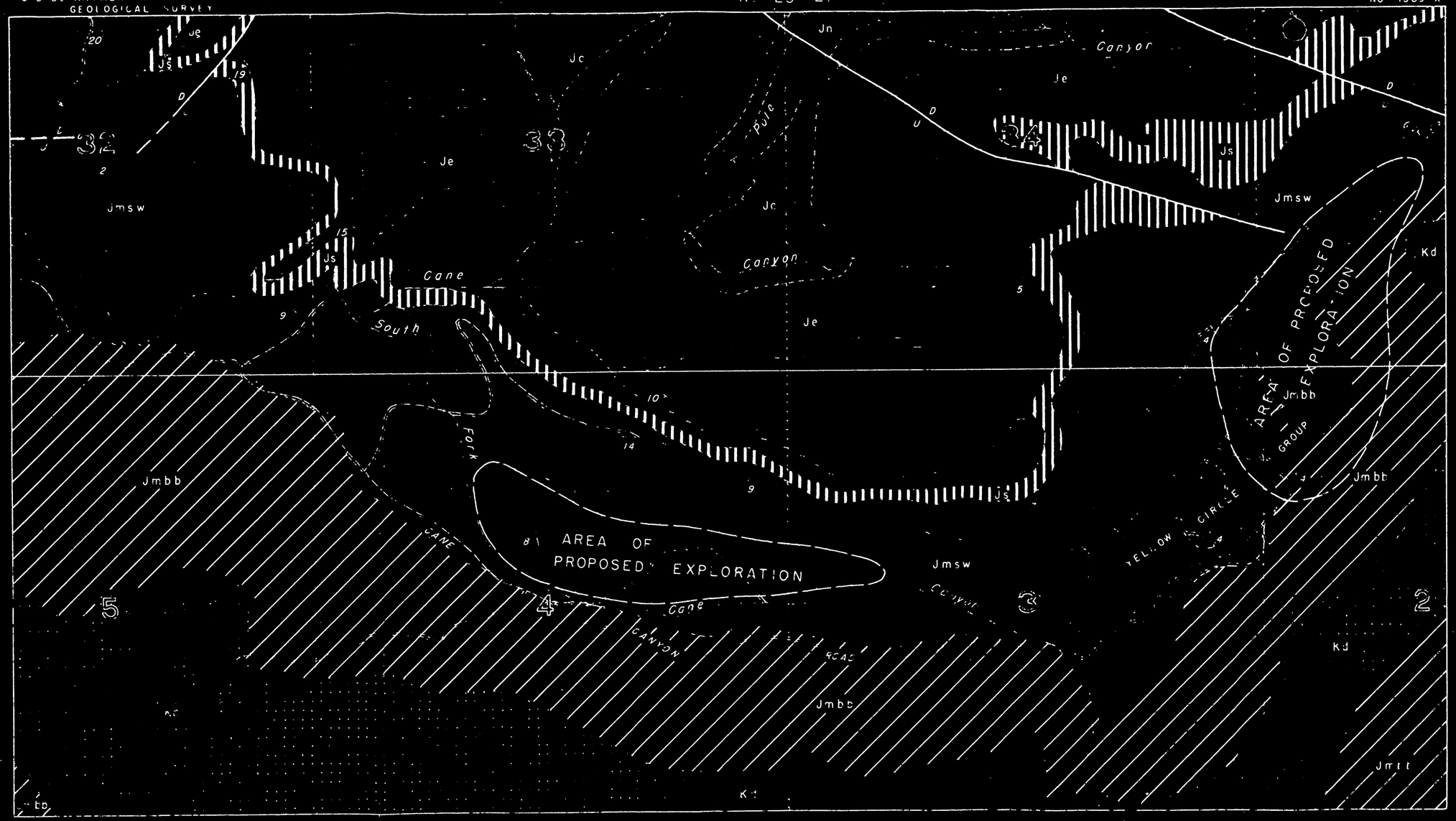
YELLOW CIRCLE & ADJOINING CLAIMS

UPPER CANE SPRINGS DISTRICT

SAN JUAN COUNTY, UTAH

U S DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS ADMINISTRATION
NO 1309-X



EXPLANATION

CRETACEOUS

- Kd — Dakota sandstone

JURASSIC

Morrison formation

- Jmbb — Brushy Basin member
- Jmsw — Salt Wash member

San Rafael group

- Js — Summerville formation
- Je — Entrada sandstone
- Jc — Carmel formation

UNCONFORMITY

- Jn — Navajo sandstone

D/U — Fault, dashed where approx. (D, downthrown side; U, upthrown side)

7. — Dip and strike of bedding

Geology by H. R. Wardwell and E. E. Waulters, Union Mines Development Corp. Sept. 1944

FIG. 2 GEOLOGIC MAP SHOWING AREAS OF PROPOSED EXPLORATION BY THE BOWLES - HEFLIN MINING CO. MOAB DISTRICT, SAN JUAN CO., UTAH

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

DMEA-1309
Idm-E192
Uranium, Vanadium

224 New Customhouse
Denver 2, Colorado

August 5, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Approval of drilling subcontract between Plateau Mining Company and Minerals Engineering Company

Enclosed are three copies of a drilling subcontract between Plateau Mining Company and Minerals Engineering Company.

Also enclosed are three copies of our approval of this subcontract.

DEPARTMENT OF THE INT
Defense Minerals
RECEIVED
AUG 11 1952

W. H. King

W. H. King

Enclosures

RECEIVED
AUG 13 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

5 d 9
9-18-52

BU

GOVERNMENT COPY

APPROVAL OF SUBCONTRACT

To: PLATEAU MINING COMPANY
U. S. BANK BUILDING
GRAND JUNCTION, COLORADO

That certain contract, six copies of which you have submitted with your request for approval, dated June 17, 1952, between you and Minerals Engineering Company for the performance of the following work: To diamond core drill in lieu of a portion of wagon drilling which is all or a specific element of the work described in an Exploration Project Contract dated October 23, 1951, Idm E192, Docket No. DMEA 1309X, is hereby approved by the United States of America, subject to the following terms and conditions:

1. The Government shall not be nor be considered to be a party to said independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of said independent contract.

2. Regardless of the provisions of said independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary.

3. The said independent contract will not have the effect of increasing the estimated total cost of the exploration project contract or the maximum amount which the Government will pay as provided in the exploration project contract.

Dated: June 17, 1952

THE UNITED STATES OF AMERICA

By W. H. King

DIAMOND DRILLING AGREEMENT

THIS AGREEMENT, made and entered into in octuplo as of June 17, 1952, by and between Minerals Engineering Company, a Colorado Corporation, and Plateau Mining Company, a Colorado Corporation, hereinafter called Operator,

WITNESSETH: whereas Minerals is the owner of drilling equipment to carry on what is known as diamond drilling for uranium and vanadium ores, and Operator owns or has legal possession to those certain mining claims in San Juan County, State of Utah, and more particularly described on the attached photostatic copy of a list of these claims, including the date located, date recorded and the book and page number of the County records wherein said claims are recorded. The names of the various groups are Pioneer, Rex, Jane and Vision.

In consideration of the payments to be made by the Operator to Minerals, Minerals agrees:

1. To drill to a maximum depth of 200 feet for each hole at the rate of $2.50 per foot;

2. To drill in excess of 200 feet for each hole at the rate of $3.00 per foot; the maximum drilling depth of each hole in excess of 200 feet dependent upon the local formation;

3. To deliver to Operator core samples with accurate log of each hole;

4. To permit Operator at all times to inspect and copy records and to observe all drilling operations;

5. To sustain each and all costs and expenses in connection with such drilling and to carry on such operations steadily and continuously unless prevented by cause beyond its control;

6. To commence drilling operations on Operator's property on or about July 15, 1952, and to continue such drilling as requested by the Operator for a maximum of 25,000 feet.

7. To use either an AX or BX core recovery, such choice being at the discretion of the Operator and to be determined by whichever core size produces the maximum core recovery from the type of rock encountered with the drilling.

8. To grant the Government, under Defense Minerals Administration Contract Idm-E192, the right to enter and observe and inspect the work under this contract at all reasonable times; it being understood that this is a sub-contract for work under such Defense Minerals Administration contract, but it is also understood that this contract is simply between the parties hereto and Minerals contemplates performance solely by Plateau Mining Company.

For the covenants agreed to be performed by Minerals, Operator guarantees to Minerals a minimum of 3,000 feet of drilling; to specify locations where holes are to be drilled; to provide access roads to such locations, if required by Minerals for the movement of its equipment; to pay to Minerals the amount due it as determined by its drilling records, on or before the 10th of the month following the month during which the work was performed.

MINERALS ENGINEERING COMPANY

By R. B. Sullivan
Vice-President

PLATEAU MINING COMPANY

By Frank L. Seymour
Gen. Mgr.

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

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

FEB 1 0 1953

Re: Plateau Mining Company
Docket No. DMA-1309
Contract No. Idm-E192
(Uranium)

J. C. 2/10/53

Dear Mr. King:

Reference is made to your memorandum to the Administrator dated January 27, 1953, in which you ask whether the mining lease dated July 15, 1951, between the United States Atomic Energy Commission and the Plateau Mining Company constitutes a sufficient clearance of title so that the operator may be reimbursed for work performed on the claims referred to in the exploration project contract.

The above-mentioned lease, made with the assignee of the original operator, is dated July 15, 1951, and bears a corporate acknowledgement dated January 26, 1951, indicating that the Plateau Mining Company was in existence about nine months prior to the execution of the Exploration Project Contract on October 23, 1951. However, in his letter of May 17, 1952, to Mr. Stephen R. Wilson of the Bureau of Mines, Mr. Melvin C. Bowles, Vice-President of the Bowles and Heflin Mining Company, the original operator, casts some doubt upon this when he states that "Bowles and Heflin Mining Company has incorporated under the laws of Colorado and will henceforth be known as Plateau Mining Company . . ."

It therefore seems that the original operator represented, in the exploration project contract, that it owned certain lode claims which it actually did not own, as some of them were already under lease to the Plateau Mining Company, to whom the contract was subsequently assigned. However, assuming that this misrepresentation, if there were one, caused no harm, as the assignee assumed all the obligations of the contract, and assuming that the Plateau Mining Company was incorporated in 1951, and not in 1952, the mining lease from the Atomic Energy Commission can only act as a clearance of title for the claims referred to therein, i.e., the Jane #3, 4, and 5, the Vision #3, 4, and 5,

and the Plateau #1 to 7 inclusive. On the other hand, the exploration project contract covers a larger number of claims, i.e., the Jane #1-7 inclusive, the Vision #1-7 inclusive, the Pioneer #1-20 inclusive, and the Rex #1-13 inclusive.

This office is informed that the Atomic Energy Commission does have authority to lease for mining purposes lands covered by prior oil and gas leases. The corporate acknowledgment on the lease from the Atomic Energy Commission to the Plateau Mining Company indicates that the company was in existence approximately 6 months before the lease was made to it. Consequently, the lease seems to have been properly entered into with the company.

If there are any mining claims referred to in the exploration project contract which are on land covered by prior oil and gas leases and which are not included in the afore-mentioned lease, the operator should be called upon to clear their title and have them included in this lease or in a new lease with the Atomic Energy Commission. When this is done the various MF-104's may be paid.

Sincerely yours,

George C. Selfridge (NB)

Chairman, Operating Committee

APPROVED:

J. E. Hedges (NB)

Member, Bureau of Mines

A. R. Kinkel, Jr. (NB)

Member, Geological Survey

AEKane/mef
2/6/53
ccto: Mails and Files
Admr. R. File
Op. Committee
Mr. Thayer
Mr. Hedges
Mr. Ellis
Mr. Hofflund
Mr. Kane
Chron.
Pending

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 28 1953

224 New Customhouse
Denver 2, Colorado

January 27, 1953

AIRMAIL-SPECIAL

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA 1309, Contract Idm- E192, Plateau Mining Co., (Uranium)

Reference is made to a letter dated January 5, 1953, from the Chairman of the Operating Committee, to which was attached a memorandum dated December 31, 1952 to the Administrator from the Chief Counsel. This memorandum states that the Government would be justified in requiring clearance of title in all cases where the operator can do so under the procedure provided by the Atomic Energy Commission and the Government wants the work to proceed.

We are enclosing the mining lease effective the 15th day of July, 1951, between the U.S. Atomic Energy Commission and the Plateau Mining Company. The operator is seeking reimbursement for work performed under the terms of Contract Idm-E192 on ground which was covered by an oil and gas lease. Does this document constitute a sufficient clearance of title so that we may reimburse the operator for work performed on these claims? We do not have any information in Denver which indicates that Congress has authorized the Atomic Energy Commission to lease lands and we doubt if the General Accounting Office would approve payments based on this document.

Your attention is called to the fact that the lease is effective July 15, 1951. Contract Idm-E192 was originally between the Government and the Bowles Heflin Mining Company. This contract was assigned to the Plateau Mining Company effective June 15, 1952.

If this document should be in order in all other respects, we still question its validity because the effective date is prior to the formation of the Plateau Mining Company. We are withholding payment from several MF-104s pending clearance of title.

Please notify us by teletype if this lease is acceptable and if we may reimburse the operator for these monthly progress reports.

W. H. King

Enclosure

W. H. King

MINING LEASE NO. AT(05-1)-OG- 4

THIS AGREEMENT OF LEASE, effective as of the 15th day of July, 1951, by and between the UNITED STATES ATOMIC ENERGY COMMISSION (hereinafter called the "Commission"), acting as agent of and on behalf of the UNITED STATES OF AMERICA, and The Plateau Mining Company, a corporation, whose address is U. S. Bank Building, Grand Junction, Colorado (hereinafter called the "Lessee");

WITNESSETH THAT:

WHEREAS, the Lessee desires to develop and produce uranium ore on certain lands which would be open to location under the mining laws except for the existence of an oil and gas lease on such property, issued under the provisions of the Act of February 25, 1920, (41 Stat. 437, 30 U.S.C., Sec. 181 et seq.), as amended: and

WHEREAS, the Commission desires to acquire source materials from those certain lands; and

WHEREAS, this agreement is authorized by and has been negotiated under the Atomic Energy Act of 1946, as amended, in the interest of the common defense and security:

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. The Commission, for and in consideration of the performance by the Lessee of the covenants and agreements hereinafter expressed, does hereby lease unto the said Lessee for the purpose of mining uranium bearing ores those certain mineral lands described as follows: Mining claims in the W½, Sec. 35, NE¼ Sec. 34, SE¼ Sec. 27, SW¼ Sec. 26, all in T 27 S, R 23 E, S.L.P.M., Moab Mining District, San Juan County, Utah. Said claims being described in the books and on the pages of the public record in San Juan County, Utah, as follows:

Claim	Book	Page	Recording Date	
Jane No. 3	R-4	60	8-13-51	
Jane No. 4	R-4	60	8-13-51	
Jane No. 5	R-4	60	8-13-51	That part lying in W½, Sec. 35, T 27 S, R 23 E, S.L.M.
Vision No. 3	R-4	58	8-13-51	
Vision No. 4	R-4	57	8-13-51	That part lying in W½, Sec. 35, T 27 S, R 23 E, S.L.M.
Vision No. 5	R-4	57	8-13-51	That part lying in W½, Sec. 35, T 27 S, R 23 E, S.L.M.
Plateau No. 1	11	256	5-30-52	
Plateau No. 2	11	259	5-30-52	
Plateau No. 3	11	260	5-30-52	
Plateau No. 4	11	262	5-30-52	
Plateau No. 5	11	261	5-30-52	
Plateau No. 6	11	263	5-30-52	
Plateau No. 7	11	264	5-30-52	That part lying in W½, Sec. 35, and SW¼, Sec. 26, T 27 S, R 23 E, S.L.M.

The rights hereby granted are limited to mining within the vertical planes of the boundary lines of the above-described premises.

2. The term of this lease shall be for so long as the Lessee shall comply with the lease terms.

3. In consideration of this lease, the Lessee agrees as follows:

(a) To enter upon the premises and commence work on or before April 1, 1953, working the property in a manner consistent with good and economical practice and to conduct all operations with due regard for good land management and avoidance of unnecessary damage or waste.

(b) Throughout the life of the lease to sustain with reasonable diligence, skill and care, a program of development and mining of uranium deposits or a program of prospecting and exploration for such deposits in such manner as to achieve and maintain maximum production of uranium ore from the leased premises, consistent with good mining practice and the size of the deposit.

(c) To comply with all requirements of pertinent State and Federal laws applicable to the conduct of mining operations.

(d) To allow the Commission and its representatives at all reasonable times to enter upon the property and into all parts of the mine for purposes of inspection, drilling, sampling and mapping.

(e) To keep proper records of (1) shifts worked, (2) tonnage and grade of ore developed and mined, and (3) development work and drilling performed and assay data pertaining thereto.

(f) To submit reports to the Commission covering the matters referred to in 3(e) above, when requested to do so.

(g) To permit the Commission to inspect Lessee's mine maps and assay records relating to the leased premises.

(h) To conduct operations hereunder in such manner as not to interfere with the lawful operations of any third party having an interest in the premises.

4. The lease of premises for mining purposes pursuant to this agreement includes (subject to the provisions of paragraph 3(h) above) rights to use the surface of the area described only insofar as such use is reasonably necessary for the conduct of prospecting, development, and mining operations for uranium, including the right of way over the surface for access to the workings. The Lessee shall have the right, to the extent required for operations, to erect buildings and structures and install machinery, and upon termination or expiration of this lease agreement it may remove any such buildings, structures and machinery placed by it on the property; provided, however, that this right of removal shall not extend to the removal of mine timbering. The Lessee hereby waives all rights, title and interest to and in all ore and tailings which have not been removed from the leased premises pursuant to Commission licensing regulations within ninety (90) days after the termination or expiration of this lease and all equipment, appurtenances, fixtures and other personal property not removed from the leased premises within such time.

5. (a) It is understood that the Commission shall not be responsible for any mechanics' or miners' liens or other liens, encumbrances or liabilities incurred by the Lessee in connection with the operation of the leased premises, and the Lessee assumes all responsibility for all claims of whatsoever nature arising from the operation or occupancy of the premises. The Lessee shall forthwith post, and at all times keep posted, in some conspicuous place upon the premises a noticestating that the premises are leased to the Lessee and that the interest of the Commission shall not be subject to any liens, claims or encumbrances arising in connection with the occupancy and operation of the premises, and that the Commission shall not be liable to any person not a party to this lease for any claims arising in connection with this lease of the leased premises.

(b) The Lessee agrees to protect and indemnify the Commission against any claims arising in connection with activities of the Lessee under this lease. The Lessee also agrees to provide (at its own cost and expense) for each workman employed by it in the conduct of its activities under the lease such protection as is required by applicable laws relating to workmen's compensation and employers' liability insurance.

6. This agreement or any interest herein may be assigned or transferred by the Lessee only upon prior written authorization from the Commission.

7. The term of this agreement shall expire, at the option of the Commission, upon failure of the Lessee to comply with any of the obligations in this lease within ninety (90) days after the receipt of a notice from the Commission specifying such failure and requesting compliance. Thereupon, the Commission or its representative may, after demand of possession in writing, enter upon the leased premises and dispossess all persons occupying the same. This lease may be terminated at any time by the Lessee by written notification to the Commission, such termination to be effective upon receipt by the Commission of the notification.

8. The Lessee does not waive any right to which he would otherwise be entitled because of the passage of subsequent legislation by entering into this agreement.

9. The provisions of the Commission's Domestic Uranium Program Circular 6 shall be applicable to ores produced from the leased premises to the same extent as if the Lessee held such land by reason of valid location under Federal and State mining laws.

10. The Lessee warrants that it has not employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Commission the right to terminate this lease, or, in its discretion, charge to the Lessee the amount of such commission, percentage, brokerage, or contingent fee.

11. No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this lease or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease if made with a corporation for its general benefit.

12. It is expressly agreed between the parties that should any legal proceedings be instituted which would interfer with the possession and enjoyment of the premises, the Lessee shall not attempt to hold the Commission liable in damages or otherwise to the Lessee on account of such distrubed and interrupted possession and enjoyment.

13. As used in this lease agreement, the term "Commission" includes the Commission and its authorized representative or representatives.

14. In performance of work under this agreement, the Lessee agrees not to discriminate against any employee or applicant for employment because of race, creed, color or national origin.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written, intending to be legally bound thereby.

Witnesses:

THE UNITED STATES OF AMERICA
by UNITED STATES ATOMIC ENERGY COMMISSION

Harriet J. Ballard	Frank H. McPherson
Hazel M. Henderson	Director of Production
	(Title)
J. T. Tumell	Vance Thornburg
Arthur M. Kirkendall	President

ACKNOWLEDGMENT

I, Frank L. Seymour, certify that I am the Secretary Treasurer of the corporation named as Lessee herein; that Vance Thornburg, who signed this agreement on behalf of the Lessee was then President of said corporation; that said agreement was duly signed by and on behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

IN WITNESS WHEREOF, I have hereto affixed my hand and the seal of said corporation this 26th day of January, 1951.

/s/ Frank L. Seymour

(CORPORATE SEAL)

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. Dma - 1309 X

Date received 5/28/51

Participation

BOWLES-HEFLIN MINING CO.
P. O. BOX 185
MOAB, UTAH

Name and address of applicant

Date May 21, 1951

FILL IN THIS BLOCK

Date of application May 21, 1951

Estimated cost $100,000.00

Mineral or metal Uranium

Percentage of Government participation 90 %

Location of mine All of Sec. 36, T-27-S, R-22-E, All of Sec. 32, T-27-S, R-23-E. Part of Sec's. 33, 34 &35, T-27-S, R-23-E, Part of Sec's. 2, 3 &4, T-28-S, R-23-E.

Date of filing MF-100 May 19, 1951

DMA Docket Number, if available Dma - 1309 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining	Seven to eight	0.30% U308	$20,00	$30.00
(2) Milling	ton truck load	1.50% V205		
(3) Shipped or sold	mined & sold.			

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

Bowles-Heflin Mining Co.
(Name of company)

By Melvin C. Bowles
(Signature of authorized official)

May 21, 1951
(Date)

Partner & General Manager
(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Sheet 1. BOWLES-HEFLIN MINING CO. P. O. Box 185 MOAB, UTAH.

1. see form MF-100.

2. see form MF-100.

3. see form MF-100.

4. see form MF-100.

5. see form MF-100.

6. The part of this property which we own has no claims, liens, or encumbrances what so ever against it.

7. Attached here-to is a copy of our leases on Sec.36, T-27-S, R-22-E. and Sec.32, T-27-S, R-23-E. These leases are in good standing.

7a. Though we have another small area under short term lease this exploration program will all be carried outon the area covered by these leases and on claims we own.

8. Attached here-to is a copy of our assets and liabilities statement as of Now.30, 1951. Which was the last time we figured up but anytime after June 15, 1951 I will be able to furnish you with a simular one as of May 31, 1951. They will be nearly the same.

8a. Attached here-to is a copy of our Income and Expenses for the Fiscal Year ending November 30, 1951. Also anytime after June 15, 1951 we can furnish you one for the first six months of this Fiscal Year.

9. We are prepared to invest $10,000.00 in this exploration project and would be willing to escrow that amount to guarantee participation.

10. The Property:
(a) All of Sec.36, T-27-S, R-22-E, and all of Sec.32, T-27-S, R-23-E, and parts of Sec.33, 34 &35 of T-27-S, R-23-E and parts of Sec.2, 3 & 4 of T-28-S, R-23-E. on which we have located claims on outcrops and parts which are public domain and open to location that we expect to be able to locate ore on by test drilling and then locate claims to cover our discovery's.
(b) These areas are the same

11.
11. see form MF-100.

12. see form MF-100.

13. see form MF-100.

14. see form MF-100.

15. We truck all ore we produce with company trucks to Thompson, Utah. where it is sold to U. S. Vanadium Corp. They ship it by rail to Rifle, Colo. where they have a treating plant.

16. see form MF-100.

17. see form MF-100.

18. see form MF-100.

19. none.

20. This exploration program will be conducted to locate deposits of Carnotite Ore containing Uranium and Vanadium minerals.

21. We propose to drill not less than 40,000 feet of Wagon Drill hole where the overburden is shallow enough to permit this type of drilling. Not less than 10,000 feet of core drill hole in areas where the overburden is greater and to drive not less than 3,000 feet of tunnel and-or incline to open any ore bodies located. With the equipment we have and the size crew we have facilities to care for this project will require 18 to 20 months to complete.

22. This area which we are going to explore is covered by the Morrison formation of Jurassic age in which the Carnotite ore is found and is in a region that has many steep walled canyons and plateaus, these rims on which outcrops have been responsible for most of the discoveries in the past have proven this area to be mineralized but now we most look to the areas under the plateaus back from the rim for our ore.

23. (a)

2 miners,	$300. mo. x 2 equals $600. mo. x 20 mo's equals	$12,000.
2 muckers,	$250. mo. x 2 equals $500. mo. x 20 mo's equals	10,000.
1 wagon drill operator,	$300. mo. x 20 mo's equals	6,000.
1 helper on wagon drill,	$250 mo. x 20 mo's equals	5,000.
1 core drill runner at	$350. mo. x 20 mo's equals	7,000.
1 helper on core drill	$250. mo. x 20 mo's equals	5,000.
1 cat.& dozer operator and truck driver	$300. mo. x 20 mo's equals	6,000.
1 cook for crew	$200. mo. x 20 mo's equals	4,000.
	Total cost for labor -----	$55,000.

(b) 1 supervisor of operations, at present that would be Melvin C. Bowles - Partner & General Manager of the Company at $250. mo. x 20 mo's ---------- 5,000.

(c) Cost of necessary repairs. ----------nothing -------

(d) Cost of necessary installations or construction-nothing-

(e) We will have to purchase one core drill at a cost of about $5,000 but the company will purchase this **----------

(f) WE propose to furnish all the equipment for this project encluding a core drill, making a total of about $30,000. worth of equipment. On the basis of 20% a year depreciation

(g) and interest on the investment. $500. mo. x 20 mo. equals 10,000.

(h) Operating expenses including but not limited to such as gas, oil, grease, exposives, steel bits, maintance ects. 25,000.

(i) all other items not provided for above ---------- 5,000.

Total cost of project ------ $100.000.00

24. We are in a position to have this project in full operation in less than one month from the date of approval. We would complete at least one/twentieth of the proposed work each month and spend not over $5,000 each month.

Sheet 3. BOWLES-HEFLIN MINING CO. P. O. BOX 185 MOAB, UTAH

ASSETS & LIABILITIES as of NOVEMBER 30, 1950

Current assets:			
Cash - First National Bank of Eagle County			483.79
Fixed Assets:			
Mining Equipment	17,458.25		
less, Reserve for Depreciation	4,552.07	12,906.18	
Mining Properties		6,598.56	
Total Fixed assets			19,504.74
0			
Other Assets:			
Compresation Insurance Fund Deposit		200.00	
Lease on six claims		1.00	201.00
TOTAL ASSETS			$20,189.53

Current Liabilities:			
Income Tax Withheld	97.30		
Social Security Withheld & Accured	28.71		
		126.01	
Liabilities to Partners:			
Notes Payable - A. L. Heflin		7,857.94	
TOTAL LIABILITIES -----			7,983.95

	M.C.BOWLES	A.L.HEFLIN	
Capitol:			
Balance, Novenber 30, 1949	5,059.75	5,059.75	
Deduct net loss for the fiscal year ending November 30, 1951.	273.48	273.48	
	4,786.27	4,786.27	
TOTAL PARTNERS CAPITOL -------		9,572.54	
Reserve for Depletion (Percentage allowed by Treasury Department)		2,633.04	
TOTAL CAPITOL---------			12,205.58
TOTAL LIABILITIES AND CAPITOL ----			$20,189.53

Sheet 4. BOWLES-HEFLIN MINING CO. P. O. BOX 185, MOAB, UTAH.

Profit or Loss Statement for the Fiscal Year ending Nov.30, 1950.

INCOME:	ORE SALES	$48,143.23	100%
EXPENSES:	Total Operating Expense	40,155.91	83.41 %
	Depreciation & Depletion	5,354.28	11.12 %
	Loss on sale of a compressor	180.00	.37 %
	TOTAL EXPENSES -	45,690.19	94.90 %
	Net Income before Partner's Salary	2,453.04	5.10 %
PARTNER'S SALARY - -	Melvin C Bowles	3,000.00	6.23 %
	NET LOSS FOR THE YEAR	546.96	1.13 %

Copy

There is two leases just the same so have put the nos of both

UTAH STATE URANIUM AND VANADIUM MINERAL LEASE.

Mineral Lease Application No. 2799----------Mineral Lease No. 3477 &3478
Bowles-Heflin Mining Co.----------Grant: School----------

This INDENTURE OF LEASE AND AGREEMENT, enteredinto, in duplicate, this 1st. day of December, A.D. 1950, by and between the State Land Board, acting in behalf of the State of Utah, hereinafter called the Lessor, and Bowles-Heflin Mining Co., hereinafter called the Lessee, under and pursuant to Title 86, Chapter 1, Utah Code Annotated 1943, and Ammendments thereto..

WITNESSETH: That the Lessor, in consideration of the rents and royalties to be paid and the covenants to be observed by the Lessee, as hereinafter set forth, does hereby grant and laese to the Lessee the exclusive * right and priviledge to mine and dispose of all of the uranium and vanadium minerals in the following described tract of land situated in San Juan County, State of Utah, to-wit:

The description of both inserted here as leases are the same;

All of Section thirty-six(36), Township Twenty-seven(27) South, Range Twenty-two(22) East, of the Salt Lake Base and Meridian,

All of Section Thirty-two(32), Township Twenty-seven(27) South, Range Twenty-three(23) East, of the Salt Lake Base and Meridian,

containing a total of 1280 acres, more or less, together with the right to use and occupy, so much of the surface of said land as may be required for all purposes reasonably incident to the mining and removal of the uranium and vanadium minerals, according to the laws of the State of Utah, for a period of ten years and as long thereafter as uranium and vanadium minerals are produced in commercial quantities from the said lands, upon condition that at the end of each twenty year period succeeding the first day of the year in which this lease is issued, such readjustment of terms and conditioneds may be made as the Lesser may determine to be necessary in the interest of the State.

ARTICLE I.

It is extremely understood and agreed that this lease is granted subject in all respects to and under the conditions of the Laws of the State of Utah and the Federal Statutes regarding the operation of metallic mines, Employer's Workman's Compensation, Workman's Insurance, Social Security and Unemployment Insurance.

ARTICLE II.

It is further expressly understood and agreed that this lease covers only the mining and marketing of uranium and vanadium minerals, but that should other minerals be discovered such fact shall be immediatly reported to the Lessor.

ARTICLE III.

The Lessee in consideration of the granting of the rights and priviledges afore said, here-by covenant and agree as follows:

FIRST: To pay to the Lessor as annual rental for each acre covered by this lease the sum of 50¢ per acre annum.

All such annual payments of rental to be made in advance on the 2nd day of January of each year, except the 1950 rental, which is payable on the execution of this lease, such rental to be credited on the royalties to become due hereunder during the year for which said rental is paid.

SECOND: To pay to the lessor a royalty of 12½% of the sale price of the ores at the point of sale, Such sale price shall include transportation allowance to point of sale, and there may be deducted therefrom Assay charges and actual transportation costs. Said royalities less one-twelfth of the paid annual rental sum to be paid monthly on or before the 15th day of the month next succeeding the month in which the ores are sold. Monthly statements as to the amount of production and production sold from the leased ground in the preceding must be in the form of an affidavit and shall accompany the royalty remittance. Failure to pay the rents and royalties or any of them in the manner herein provided shall constitute a default and entitle the leassor to declare a forfieture of this lease and to enter upon and take possession of the premises with or without process of law.

If the ore mined from this property is milled by the lesee, the royalty shall be bases upon the said value of the concentrates or bullion shipped less transportation costs.

THIRD: That at the option of the lessor it may require the payment at the mine of royalties in kind; the amount being 12½% of the material produced.

FOURTH: That upon the shipment of any ore under this lease, the Lessor shall be immediately notified in writting that such shipment is being made, giving the means of transportation and the point of destination.

FIFTH: That at the option of the lessor it may require, before the commencement of mining operations, that the lessee shall submit a detailed plan with maps, showing the proposed method of opening the ground and that such work shall not be undertaken untill the lessor has approve such plan and that failure on the part of the lessee to do so, if required, or to prosecute development on the lines directed, shall constitute a cause for cancellation of this lease.

SIXTH: To commence actual mining operations upon the land included herein on or before December 31, 1951, and thereafter to diligently operate the property according to the plans accepted or under modifications thereof as may be acceptable to the lessor.

SEVENTH: To at all times during the life of this lease perpetuate and protect the main line tunnels in ingress and egress to and from said lands and the air courses necessary for proper ventilation, by means of proper pillars and timbering as may be necessary or directed by the lessor or the State Mine Inspector, wheather upon this leased land or extending through adjacent lands owned or operated by the lessee, and upon abondonment or termination of this lease from any cause, to substantially fence, fill in, or cover or close all surface openings or workings, if directed to do so by said lessor.

EIGHTH: To keep at the mine office clear, accurate and detailed maps on tracing cloth, on a scale not more than 50 ft. to the inch, of the workings in each seperate mine on the leased lands and on the lands adjscent, and to be so arranged ith reference to a public land corner that the maps may be readily, and correctly superimposed, and to furnish to the lessor annually or upon demand, certified copies of such maps and such written statenent of operations as may be called for. All mine surveys shall be made by a licensed engineer and all maps certified to by him.

NINTH: To not assign this lease or any interest therein, nor sublet any portion of the leased premises, or any of the rights and priviledges herein granted, without the written consent of the Lessor being first had and obtained.

ARTICLE IV

The Lessor hereby excepts and reserves from the operation of this lease:

FIRST: The right to permit for joint or several use such easements or rights-of-way, through or in the land hereby leased as may be necessary or appropriate to the working of these or other lands belonging to the Lessor containing mineral deposits or for other use.

SECOND: The right to use, lease, sell or otherwise dispose of the surface of said lands or any part thereof, under existing State Laws or laws hereafter enacted, insofar as said surface is not necessary for the use of the Lessee in the mniing and removal of the uranium and vanadium minerals therein, and to lease other minerals deposits, excepting those enumerated herein which may be contained in said lands.

ARTICLE V

It is further understood and agreed that upon failure or refusal of the Lessee to except the readjustment of terms and conditions demanded by the Lessor at the end of any twenty-year period, such failure or refusal shall work a forfeiture of the lease and the same shall be canceled.

ARTICLE VI.

Upon cancelation of this lease for any cause hereunder the Lessee shall be entitled to remove from the lease holdings only their personal and moveable property and that improvements attached to the land such as buildings, timbering or other construction or construction material in place, shall remain undisturbed upon the ground and the property surrendered in good condition.

ARTICLE VII.

It is mutually understood and agreed that the suspension of mining operations by the Lessee for a longer period than six months without the written consent of the Lessor being first had and obtained shall be a cause for forfeiture, and that upon the violation of this provision or any of the other terms of this lease the Lessor may at its opinion after thirty days notice by registered mail cancel this lease. After the expiration of the said thirty days and the cancelation of the lease no notice of such cancelation need be given the Lessee.

ARTICLE VIII.

It is mutually understood and agreed that the Lessee may terminate this lease at any time upon giving three months notice in writing to the Lessor, and upon payment of all rents and royalties and other sums due and payable to the Lessor, and upon complying with the terms of this lease with respect to the preservation of the workings in such order and condition as to permit of the continued operation of the premises and the preservation of the mine.

ARTICLE IX.

ARTICLE IX.

It is understood and agreed by and between the parties hereto that the Lessor, its officers and agents, shall have the right at all times to go in and upon the leased lands and premises, during the term of said lease to inspect the work done and the progress thereof on said lands and the pro* products obtained therefrom, and to post any notices on the said land that it may deem fit and proper; and also shall permit any autherized representitives of the Lessor to examine all books and records pertaining to operations under this lease, and to make copies and extracts from the same if desired.

ARTICLE X.

It is mutually understood and agreed by the parties hereto that all of the terms, covenants, conditions and obligations in this lease contained, shall be binding upon the heirs, executors, administrators and assigns of the Lessee.

ARTICLE XI.

It is understood and agreed that this lease is issued only under such title as the State of Utah may now hold, and that in the event the State is hereafter divested of such title, the Lessor shall not be liable for any d** damages sustained by the Lessee, nor shall the Lessor be entitled to or claim any refund of rentals or royalties, or other monies theretofore paid to the Lessor.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names the day and year first above written.

STATE OF UTAH, STATE LAND BOARD

Signed Lee E. Young
EXecutive Secretary LESSOR

Bowles- Heflin Mining Co.
By Melvin C. Bowles
Partner LESSEE

Form MF-100
(March 1951)

Bourret

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA 1309X

Date received DMA 0048

69730

BOWLES-HEFLIN MINING COMPANY
P. O. BOX 185
MOAB, UTAH.

Name and address of applicant

Date May 19, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) ~~Necessity Certificate pursuant to the provisions of Sec. 124 (a) (Amend-~~ priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

5 GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - [X] Owner.
   - [X] Lessee.
   - [ ] Contractor.
5. Number of years in production 2 1/2 years
   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Mr Melvin G. Bowles	Operating Partner	$3000.00	$5000.00		Unlimited Partnership		None
Mr A. L. Heflin	General Partner	$ none	$250,000.00		"		"
	Total	$3000.00	x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) Short tons	Carnotite Ore	50 ton.	950 ton.	1800 ton.	150 ton.
2. Quantity of product processed (specify unit of measure and type of process)	none	---	---	---	---
3. Quantity and grade of product sold or shipped (specify units of measure) Short tons	Carnotite Ore	50 ton.	950 ton.	1800 ton.	150 ton.

Average about $30.00 per ton.

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

Sheet 1. BOWLES-HEFLIN MINING CO. P.O. Box 185, Moab, Utah.

GENERAL TECHNICAL DATA

1. Materials produced:
   (a) Carnotite Ores, Containing Uranium and Vanadium.
   (b) No byproducts.

2. Names of Mining Properties:
   (1) The Primero, Protection, White Fawn No.1, U. S. Treasury, The Exchequer and Yellow Circle No.1 claims operated and known as The Yellow Circle Group. Formerly known as the Wright Mine.
   (2) The Pioneer no.1, to No.20, inclusive. Located and known as The Pioneer Group.
   (3) School Section No.36, T-27-S, R-22-E, S.L.M.
   (4) School Section No.32, T-27-S, R-23-E, S.L.M.

2a. Extent of workings and size of property:
   (a) Linear feet of shafts: Fourty-five (45). (estimated)
   (b) Linear feet of drifts and crosscuts: One-thousand (1000) (est.)
   (c) Linear feet of tunnel or adit: Five-hundred (500) (estimated)
   (d) Linear feet of trenching: Five-hundred (500) (estimated)
   (e) The above listed workings are divided between several small mines on this property.
   (f) None of these mine workings are wet. Due to the elevation of the ore-bearing strata in the formation we are never bothered by water in any of these mines.
   (g) This property covers eighteen-hundred (1800) acres, more or less. Nearly all of this area being covered by the ore-bearing formation.

3. Location of this property:
   (a) Twenty (20) miles south-east of Moab Utah. And sixty (60) miles south-east of Thompson, Utah. Our shipping Point.
   (b) In the Cane Springs Mining District.
   (c) Including all of Sec.36, T-27-S, R-22-E, all of Sec. 32, and parts of Sec's.33,34,35. T-27-S, R-23-E, and parts of Sec's. 2,3,4, of T-28-S, R-23-E, S.L.M.
   (d) San Juan County, Utah.

4. Status of operations:
   (a) This property is now in operation on a limited scale by us- The Bowles-Heflin Mining Co.
   (b) We are operating this property as the owners of part of it and leasing the balance.

5. Number of years in production:
   (a) We started the present operation by Bowles-Heflin Mining Co. in the fall of 1948. Two and one-half years ago.
   (b) Parts of this property has been worked by various operators at times when there was a market since as early as 1914.

6. Experience of operators:
   (a) Melvin C. Bowles, Partner & General Manager. American, White, Thirty years old. Worked for various mines and Company's since reaching eighteenth birthday except short time in the Army. Was always interested in Mining and spent a good deal of time studying and in the field prospecting. In 1948 joined in a partnership with Mr. A.L. Heflin and started this operation.

(b) Mr A. L. Heflin- Silent Partner, About sixty years old, Has been in business for himself nearly all his life, Encluding Realestate, Investments, Building ects.

7. History of this property:

(a) A number of the Yellow Circle claims and other mines on this area were located before the first World War. From the time of there discovery until the discovery of the rich cheaply mined ores of the Belgium Congo, many rich shipments were made from this property that contained high values in Radium, Uranium and Vanadium.

During the next peroid, 1921 to 1941, many very rich though small shipments of Carnotite ore was made from these properties, These to domestic manufacturers of Radium and Uranium products and while we no records available as to the amount recieved from these sales, it must have been considerable as it kept those old Uranium miners in their necessary supplies for many years so that when the demand came for Vanadium ore, during World War 11, these properties were in a position to start operation and quickly get into production.

During World War 11, a large tonnage of carnotite was mined from from this property and sold for its Vanadium content. In the spring of 1943 the Government drilled fifty-seven core drill holes on this property locating ore bodies in over half of them. Though nearly all the ore developed as a result of this project has been mined out, the results obtained have an important bearing on the future operations of this property.

This property is located along a small canyon in the foothills on the west side of the La Sal mountains. Nearly all the ore mined to-date has came from ore bodies that outcropped along this canyon but the small amount of drilling that was done on this property as well as drilling by some of the large companies on other near by area's has proven there is ore bodies just as large and as rich in values back from the rims as those that were exposed by the canyons.

One of the largest operations in this part of the country is that of the United States Vanadium Corp. on Polor Mesa which lies in the foothills on the north side of the La Sal mountains a very similar area to the one covered by this property.

In conclusion of this short history, though many pages of detail could be written, it sums up in short to the fact that nearly all the rimrock orebthat was exposed by nature has been worked out, and now we must start looking for our reserves in the area back from the rims. The larger companies have done this with a high degree of success on there properties in adjoining areas by core drilling and wagon drilling. The fact that we could expect a reasonable degree of success by the same methods in this area is proven by the drilling that was done by the Government in 1943 on this property. The Geology and conditions for the formation of ore being good over this entire area. The diffaculty being that the ore bearing formation is covered by later formations in the entire area except where it is exposed by the cutting of the canyons.

8. Names and addresses of the partners: (See form MF100)

9. Capitol Stock Issues. (Does not apply)

10. Production: (See form MF 100)

11. YES, We hope to greatly increase present production, to as much as a thousand tons per month, as fast as we can develop reserves and aquire the necessary equipment and capitol.

12. Ore Reserves:
(a) The carnotite ore bodies are sedimentary in formation and are spread discontinuously over a large area. Some of the ore bodies occur as small, irregular masses and others occur as large tabular bodies.
(b) Production since we started present operation equals 3500 tons. Estimated previous production from this property is 3500 tons. The total of the combined area's worked out would be less than twenty acres or the area of one claim. There is estimated to be a thousand acres that should be as productive as the small area that has been worked out, where the ore bodies were exposed by the canyon, that is covered by later formations and will have to be test drilled to locate the ore bodies, but if even half of this area proved out it would give us a probable tonnage of 175,000 tons of ore, with a present value at to-days prices of $8,750,000.00
(c) See form MF 100 for Tabulated total.

13. Access Roads:
(a) There is first class roads into the area, The farthest part being seven miles from an oiled highway, five mile of this distance being gravel road and the last two miles a first class dirt road..

14. Water Supply:
(a) There is a good spring on this property that furnishes water for the present operation but might be insufficent for future operations if we get as large an operation as we hope to but would have a short haul for what additional water was needed.

15. Power:
(a) We have a small light plant for camp light and all thevequipment is gasoline and diesel operated so that is no problem.

16. Labor:
(a) There is sufficent local labor for enlarging operations, presently we are working four machine men classed as Miners, four helpers classed as Muckers, two truckedrivers, one maintenance man and one supervisor of operations.

17. Equipment and Facilities:
(a) We have a camp built on the property that cosists of a cookshack, three bunkhouses, ablacksmith shop and a general repair shop and warehouse combined, all in good condition.
(b) Major pieces of equipment now on the property and available for this operation include, Three trucks, one pickup, four air compressors, one mucking machine, one wagon drill, mine cars and rail, one cat. and dozer, one gas hoist, one air tugger, five drills and mountings, light plant, shop tools and equipment, cookshack and other camp equipment, Many small items of mining equipment.

18. Misc.:
(a) The only condition that I believe needs be nentioned here is that we started out on a very small scale with one compressor and two men and for the past two years have gradually been enlarging and expanding our operation but it is hard and slow when one starts so small and if we could get some test drilling done we could sure increase our present production much faster.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved) Test drilled ahead of our present faces.	1000	0.30% U308 1.50% V205	$30.00	$30.00	$20.00
Indicated (probable)	175,000	0.30% U308 1.50% V205	$30.00	$30.00	$25.00

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

Bowles-Heflin Mining Co.
(Name of company)

By Melvin C. Bowles
(Signature of authorized official)

May 19, 1951
(Date)

Partner + General Manager
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 28 1951
LANDON F. STROBEL
Executive Secretary

2

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No.
Idm-E 192

Name of Operator Bowles-Heflin Mining Co.
Docket No. DMA 1309-X
Total Contract Amount $ 18,944.00
Government Participation: 90 % Amount, $ 17,049.60
Distribution of Expenditures for Month of December 1951

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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

Bowles-Heflin Mining Co.
(Name of Company)

By Melvin C. Bowles
(Signature of Authorized Official)

Jan. 17, 1952
(Date)

Partner & Gen. Mgr.
(Title)

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

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator						
D-4 Cat. w/dozer	13 days @					
Tractair. w/drill	6.60/day					
105' compressor	"					
pick-up truck.	85.80	52.80	138.60	85.80	52.80	138.60
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

16—64068-3

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	275.00	168.40	443.40	275.00	168.40	443.40
5. Supervision	165.00	96.00	261.00	165.00	96.00	261.00
6. Supplies						
(a) Timber						
(b) Explosives						
(c) Repair Parts	6.00	-- --	6.00	6.00	—	6.00
(d) Other	445.07	199.09	644.16	445.07	199.09	644.16
7. Power						
8. Transportation						
9. Insurance						
(a) Fire						
(b) Public Liability						
(c) Workmen's Compensation	20.54	12.34	32.88	20.54	12.34	32.88
State Unemployment	7.42	4.54	11.96	7.42	4.54	11.96
10. Contract Work						
11. Other (specify) O.A.B.	4.13	2.53	6.66	4.13	2.53	6.66
Camp & Commissary	35.14	9.86	45.00	35.14	9.86	45.00
Total	1044.10	545.56	1,589.66	1044.10	545.56	1589.66
Deletions						
Adjusted totals						
Totals previously reported				545.56		
Totals to date				1589.66		

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by W. E. Young
Amount approved for payment
Remarks

6. Supplies -- others

Gas, Diesel Oil, Grease	91.69
Bits, Steel, Couplings	353.38
Total.	445.07

W. K. K.

93969

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF Dec. 1951

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes Wagon-	440.00	85.80	451.07	67.23	1044.10	feet	786	530	1316	25,600
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	440.00	85.80	451.07	67.23	1044.10	feet	786	530	1316	25,600

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

Sebd DMA 52-22

S. R. Wilson

January 23, 1952

W. E. Young

DMA Docket 1309X, Contract Idm-E192, Bowles-Heflin Mining Co., San Juan County, Utah

This project was inspected on January 10, 1952. The accounts were checked and found to conform to those reported. The costs for the period were $1.33 per foot, or $ .59 above the estimate. Most of this is due to an allowable increase of supplies on hand.

It is recommended that $939.69 be vouchered for payment to the operator. This amount is 90 percent of $1,044.10, the total expended during the month of December 1951.

W. E. Young

W. E. Young

BOWLES-HEFLIN MINING CO.

DMA Docket No. 1309-X Contract No. Idm-E 192

Copy of the applicable part of the Payroll for the Month of Dec., 1951.

Employee's Name	Social Security Number	Assigned Duties	Hourly Rate	Total Earnings	Soc. Sec. Contributions	Unemployment Contributions	Workmen's Compensation
Melvin C. Bowles	515-05-9481	Supervisor-Engineer	1.50	165.00	Partner		7.70
Vernon K. Bowles	514-20-2790	Wagon-Drill Operator	1.50	165.00	2.48	4.46	7.70
Rex McCall	548-14-9310	Wagon-Drill Helper	1.00	110.00	1.65	2.96	5.14
		Total.....	var.	440.00	4.13	7.42	20.54

BOWLES-HEFLIN MINING CO.

Moab, Utah.
Jan.17, 1952

UNITED STATES DEPARTMENT
OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Re: DMA Docket 1309-X
Contract Idm-E192

Gentlemen:

This report has been held up as Mr. Bill Young of the Salt Lake City office advised me to wait until he could send me the new MF-104 forms when he visited here more than a week ago, and they just arrived to-day.

Well it seems we got off to a bad start as we only worked a total of thirteen days in Dec. due to extremely severe weather and on Jan.4, 1952 I was forced to request permission to discontinue operation on this project untill spring.

We drilled an additional eight holes on the Jane No.5 & 6 claims the first of Dec. and then moved to the western area as shown on the map attached to our contract. This area is more open and accessible in the winter. Here we drilled twelve holes before it got to bad to work at all, on the Pioneer No.1 claim.

The accompanyingsketches show the location of both areas and location of the drilled holes. Everything was going fine and I feel confident would have been satisfactory had not the weather turned unusually severe for this area.

Our costs to-date are in excess of the amount the work that has been completed justifies due to the purchases of considerable steel, bits & couplings as well as other supplies that has not been used as yet. But it seems wise to get these and have then on hand. I am sure the costs will average out as these are used after we start up again.

Present plans are to get started again in March sometime, not later than April the first at the very latest. and I feel sure we will be able to show better progress then than we have to-date. The ore encounted to-date has all been low grade but it does show these areas to be mineralized and I feel sure we are going to find some better ore as this drilling is continued.

Will advise you as soon as we start up again.

Sincerly Yours

Melvin C. Bowles
Partner & Gen. Mgr.
Bowles-Heflin Mining Co.
Moab, Utah.

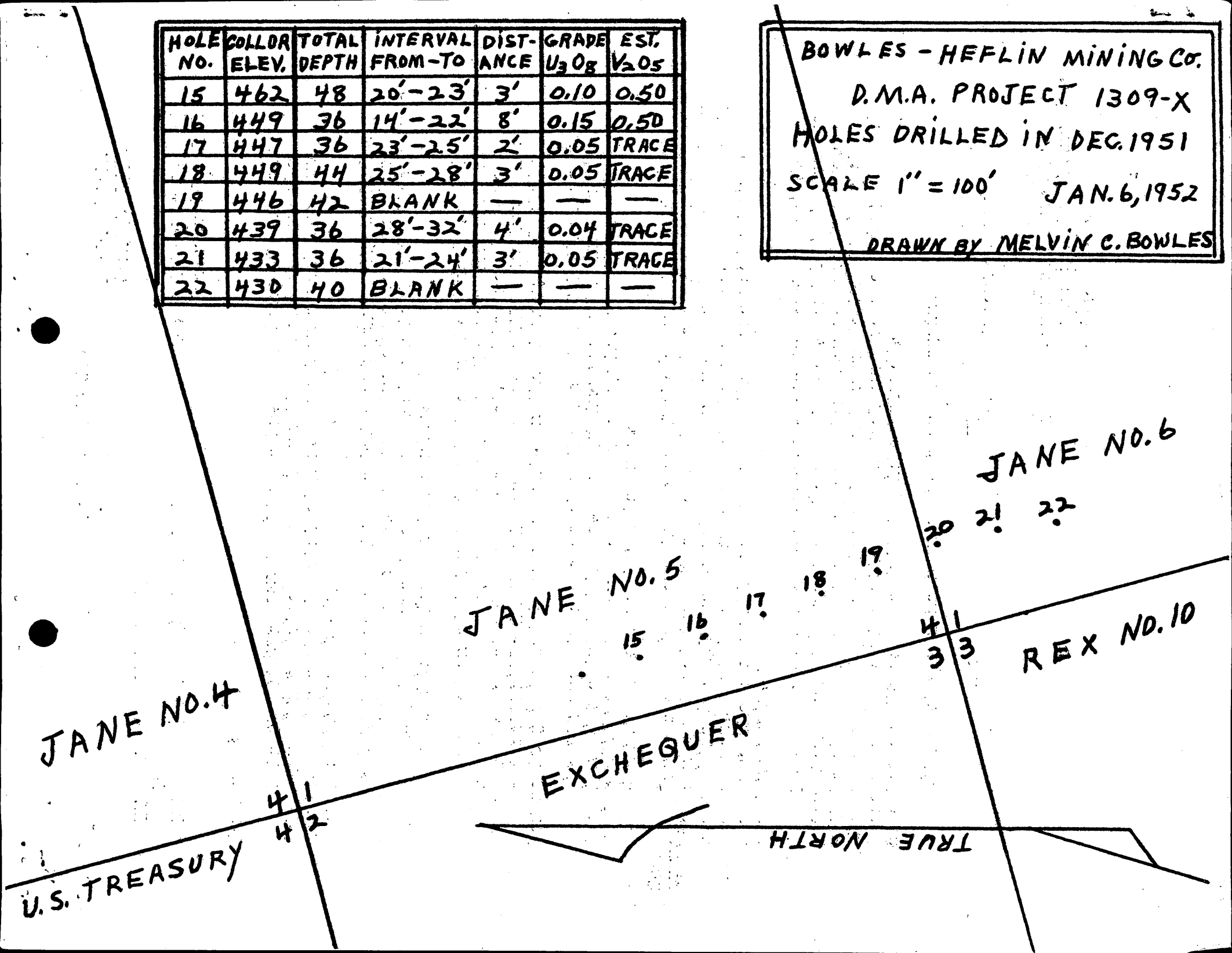
RECEIVED
BUREAU OF MINES

JAN 23 10 07 AM 1952

SALT LAKE CITY, UTAH

HOLE NO.	COLLOR ELEV.	TOTAL DEPTH	INTERVAL FROM-TO	DIST-ANCE	GRADE U_3O_8	EST. V_2O_5
15	462	48	20'-23'	3'	0.10	0.50
16	449	36	14'-22'	8'	0.15	0.50
17	447	36	23'-25'	2'	0.05	TRACE
18	449	44	25'-28'	3'	0.05	TRACE
19	446	42	BLANK	—	—	—
20	439	36	28'-32'	4'	0.04	TRACE
21	433	36	21'-24'	3'	0.05	TRACE
22	430	40	BLANK	—	—	—

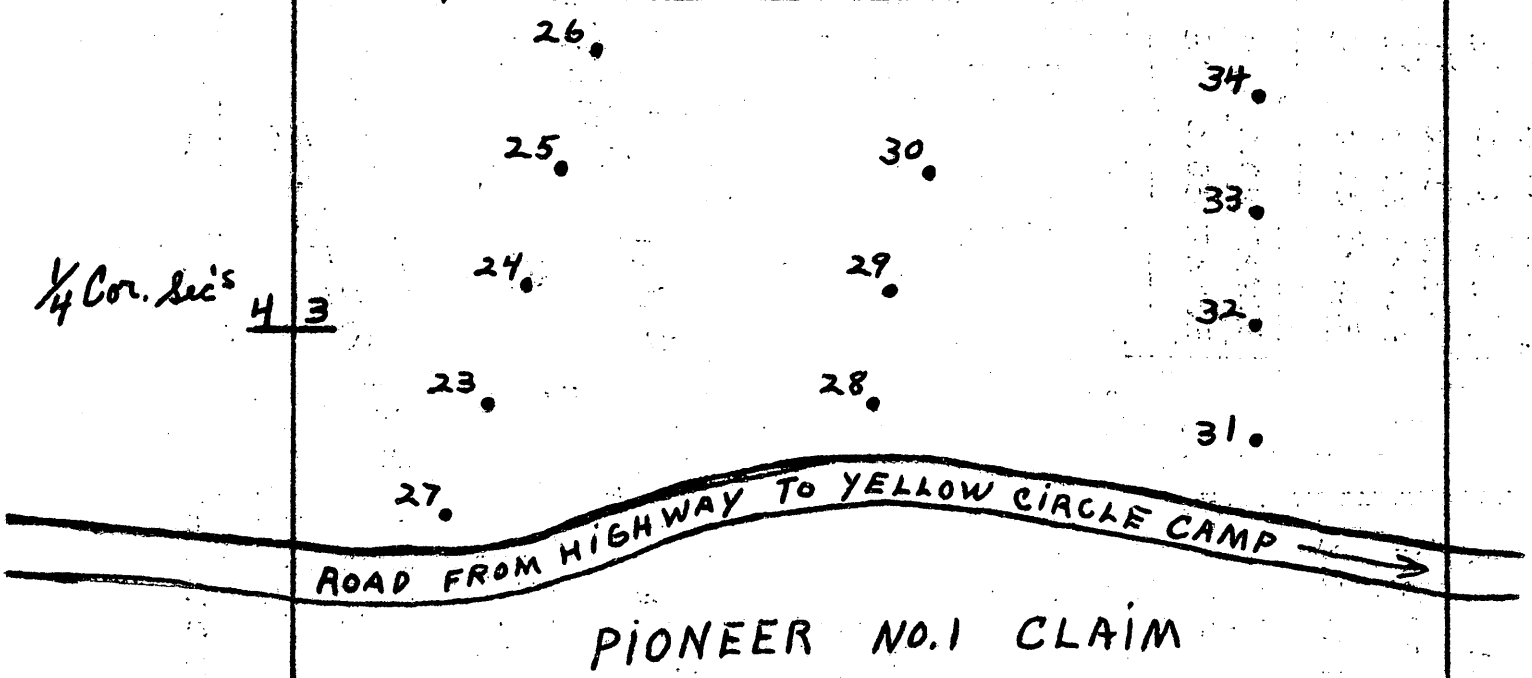
BOWLES - HEFLIN MINING CO.
D.M.A. PROJECT 1309-X
HOLES DRILLED IN DEC. 1951
SCALE 1" = 100' JAN. 6, 1952
DRAWN BY MELVIN C. BOWLES



N.W. Cor. No. 1

N.E. Cor. No. 2

HOLE NO.	COLLOR ELEV.	TOTAL DEPTH	INTERVAL FROM-TO	DIST-ANCE	GRADE U_3O_8	EST. V_2O_5
23	510	36	BLANK	—	—	—
24	512	36	BLANK	—	—	—
25	514	36	18'-24'	6'	0.05	TRACE
26	514	36	BLANK	—	—	—
27	506	36	BLANK	—	—	—
28	524	36	BLANK	—	—	—
29	518	36	BLANK	—	—	—
30	526	48	BLANK	—	—	—
31	536	36	BLANK	—	—	—
32	536	48	BLANK	—	—	—
33	534	44	28'-36'	8'	0.05	TRACE
34	530	40	34'-37'	3'	0.06	TRACE



PIONEER NO. 1 CLAIM

BOWLES-HEFLIN MINING COMPANY
DMA PROJECT 1309-X
HOLES DRILLED IN DEC. 1951
SCALE 1" = 100' JAN. 6, 1952
DRAWN BY MELVIN C. BOWLES

RADIATION SURVEY OF HOLES DRILLED IN DECEMBER 1951
MADE WITH MODEL [illegible]00, SERIAL NO. 529, MINERAL COUNTER + PROBE

RANGE SWITCH 5 — ZERO CONTROL FULL — CALIB. CONTROL FULL — INTER. SWITCH MED. — BASIS USED 05 = .01% X308

DEPTH / HOLE	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	—	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	—	120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	80	—	—	—	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—
19	—	60	—	—	—	—	—	—	—	—	25	—	—	—	—	—	—	—	—	—
20	40	60	—	—	—	—	—	—	—	—	30	—	—	—	—	—	—	—	—	—
21	60	40	—	—	—	—	20	—	—	—	30	—	—	—	—	—	—	—	—	—
22	80	40	—	—	—	—	30	—	—	—	25	—	—	—	—	—	—	—	—	—
23	20	—	20	—	—	—	30	—	—	—	20	—	—	—	—	—	—	—	—	—
24	—	—	30	—	—	—	20	—	—	—	20	—	—	—	—	—	—	—	—	—
25	—	—	20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	30	—	20	—	—	—	—	—	—	—	—	—	—	—	—	25	—
29	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—	—	30	—
30	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—	—	25	—
31	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—	—	20	—
32	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	—	—	—	20	—
33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25	—
34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30	20
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25	40
36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20	40
37	—	X	X	—	—	X	X	—	X	X	X	X	X	X	X	—	X	—	—	20
38	—			—	—			—								—		—	—	—
39	—			—	—			—								—		—	—	—
40	—			—	—			—								—		—	—	—
41	—			—	—			X								—		—	—	X
42	—			—	—											—		—	—	
43	—			—	X											—		—	—	
44	—			—												—		—	—	
45	—			X												—		—	X	
46	—															—		—		
47	—															—		—		
48	X															X		X		
49																				
50																				

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB - 1 1954

January 28, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 1309X (Uranium), Contract No. Idm-E192, Plateau Mining Company, Grand County, Utah.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of October 1952.

Also enclosed are two copies of a memorandum to Mr. T. A. Christensen, dated January 14, 1954, relative to final payment under the terms of the subject contract.

Final payment to the Operator in the amount of $1,463.40 has now been made in conformance with the Report of Review by the Contract Administration and Audit Division dated December 21, 1953.

W. H. King

Enclosures

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

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

U. S. Bureau of Mines
RECEIVED
JAN 21 1953

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

Month of [illegible], 1952 Docket No. DMEA [illegible] Contract No. [illegible] Salt Lake City, Utah
Operator's Name [illegible]
Address [illegible]
Minerals [illegible]
Contract Amount, $ [illegible] Government Participation: [illegible] % Amount, $ [illegible]

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:		10,727.75				
Drilling [illegible]	3,[illegible]		[illegible]			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor		[illegible]	[illegible]			
Supervision [illegible]	70.00	[illegible]	[illegible]			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
[illegible]		[illegible]	[illegible]			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation [illegible]	12.50	238.60	251.10			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment		6.00	6.00			
Sampling and Analysis						
Payroll Taxes		6.66	6.66			
Liability Insurance						
[illegible]		22.00	22.00			
[illegible]		12.00	12.00			
(8) Contingencies (specify):						
[illegible]		16.00	16.00			
[illegible]		127.00	127.00			
TOTALS	1,[illegible]	13,105.[illegible]	[illegible]	1,626,00	13,105.37	14,731.37

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

Date [illegible] *Payee [illegible]

Per [illegible] Title [illegible]

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

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

(Instructions on reverse)

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

$ 1463.46

Signature [illegible]
(Authorized Certifying Officer)

Date 1/20/54 Vou. No. DMA 54-73

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Tdm-E-192 in accordance with the terms of the contract.

Signature W. K. Thurber, Jr. Title Mining Eng. Date Jan. 26, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.B.

Signature W. H. King Title Executive Officer Date JAN 14 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of _____ 195____ Docket No. DMEA _____ Contract No. _____
Operator's Name _____ Minerals _____
Address _____

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

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

Date _____ Operator _____

Per Frank L. Seymour Title _____

REMARKS: _____

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

U. S. GOVERNMENT PRINTING OFFICE 205676

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

224 New Customhouse
Denver 2, Colorado

February 24, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
Feb 2 1953

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1309, Contract Idm-E192, (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah.

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and 104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of September, 1952, pertaining to DMA Docket 1309, Contract Idm-E192, (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah.

W. H. King

W. H. King

Enclosures

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

New Customhouse
Denver 2, Colorado

February 13, 1953

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 1309, Contract Idm-E192, (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah - Operator's Monthly Progress Report for the period of September, 1952

Enclosed are the original and four copies of Form MF-104 and Form MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been accomplished as authorized in the contract and payment is recommended for 90 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations.

Remarks:

Date of Report - October 10, 1952
Date Received in Field Office - January 21, 1952
Date Received in Region Office - January 28, 1952
Date Processed for Payment - February 13, 1953

Held up pending clarification of Federal Oil and Gas Lease conflict.

W. H. King
W. H. King

Enclosures

RDB:oc

cc: Contract
Secretary to the Operating Committee (2)
SRWilson
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

January 26, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Utah. MF-104 forms for September 1952.

Enclosed are the original and four copies of MF-104 forms pertaining to work under the subject contract for September 1952. A memorandum of progress was prepared by H. K. Thurber, Jr., copies of which are attached.

The data were originally received from the operator during November 1952, but because of a conflict with Federal oil and gas leases, the forms were returned with the suggestion that a division be made between exploration on property held under oil and gas leases and that on non-leased ground. However, the operator submitted the present forms with no division; thus part of the expenditures have been made on property held by oil and gas lease. The operator has included a copy of an application for lease with the AEC, but this document is not sufficient to permit payment of expenditures on presently invalid mining claims. The lease application is included with the August 1952 MF-104 forms. The forms are recommended for approval in the amounts shown, subject to clarification of the oil and gas conflict and arithmetical accuracy.

The data attached to the MF-104 forms are deficient in copies of the narrative report, hole logs and maps. The original of the forms includes this information, but the copies do not.

Exploratory work on the property has been completed with an expenditure less than permitted in the contract. The Government may have equity in supplies remaining from the Bowles-Heflin operation, previous to Plateau Mining Co. No operating equipment was purchased and no expenditures were made for fixtures and improvements during the life of the project.

The present MF-104 forms were received from the operator January 21, 1953.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

S. R. Wilson

January 26, 1953

H. K. Thurber, Jr.

Review of MF-104 forms for August, September and October, DMA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Colo.

The subject MF-104 forms and supporting documentation representing all of the diamond drilling completed under Amendment No. 1 of Contract Idm-E192, were reviewed this date. The drilling under the amendment was started on August 1, 1952, and completed October 9, 1952, during which time a total of 4,889.7 linear feet of hole was drilled under the contract terms.

The drill logs presented by the operator and the drilling subcontractor's invoices agree as to the total footage drilled. Observation of the cores further substantiates the footage claimed by the operator.

The work was in conformance with Amendment No. 1 to the contract, with the exception of the requirement regarding the saving of sludge. Recovery of good sludge samples from the drilling apparently was difficult due to broken nature of the ground in the area. This is explained in the original and copies of a letter from the drilling subcontractor to the operator in reply to the operator's complaint regarding loss of sludge. Inasmuch as the operator has probed the holes with a standard make of Geiger counter which showed some uranium mineralization, but no ore, the loss of sludge does not alter the results of the drilling.

The following is a review of specific items for all three months:

Item 1. Drilling

August - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

September - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

October - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

Item 2. Supervision

August - Supervision is allowable by Amendment No. 1 at $1.75 per hour and charged for entire month for preparing drill sites previous to actual drilling and during actual drilling. A certification of the total amount paid the supervisor for each month of the work under the contract is attached to the MF-104 forms.

September - Supervision charged is allowable and necessary to the contract work.

October - The supervision charge for one week is allowable, since the actual drilling was completed October 9, 1952.

Item 4. Depreciation

August - The charge of $50.00 depreciation on the Caterpillar D-4 tractor-dozer is allowable under the schedule outlined in the contract and the use of this machine for a full month was necessary to the conduct of the project.

September - The use of this machine for a full month was necessary to the conduct of the project.

October - A depreciation charge for one week is made for this reporting period. This is allowable, since actual drilling was completed October 9, 1952.

Item 8. Contingencies -

September - The core boxes shown in this category was an expense necessary to the proper conduct of the project and is allowable.

It should be noted that both MF-104 and MF-104A forms carry the wagon drilling done by Bowles-Heflin in the "Totals previously reported," and "Totals to date" columns. The total reimbursement under this former work has been made.

The narrative reports, drill logs and maps accompanying the MF-104 forms are sufficient.

Payment is recommended, subject to clarification of property status in relation to Federal oil and gas leases in the area, and check of arithmetical calculations, for the following:

Month	Total Project Cost	90% Reimbursement
August	$4,736.75	$4,263.07
September	6,778.96	6,101.06
October	1,626.00	1,463.40
Totals	$13,141.71	$11,827.53

The total recommended for reimbursement is $11,827.53.

H. K. Thurber, Jr.
H. K. Thurber, Jr.

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

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

U. S. Bureau of Mines
RECEIVED
JAN 21 1953

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

Month of September, 1952 Docket No. DMEA 1309X Contract No. Salt Lake City, Utah 192
Operator's Name Plateau Mining Company Minerals Uranium and Vanadium
Address U. S. Post Bldg., Grand Junction, Colo.
Contract Amount, $17,079.60 Government Participation: 50 % Amount, $17,079.60

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent ~~Short Form~~ Contracts:						
Drilling	2,523.5 6,321.00	4,406.75	10,727.75			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor		443.40	443.40			
Supervision 4 wks.	280.00	541.00	821.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Other		644.16	644.16			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation Dec 4 wks.	50.00	180.60	230.60			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment		6.00	6.00			
Sampling and Analysis						
Payroll Taxes		6.66	6.66			
Liability Insurance						
Workman's Comp.		32.88	32.88			
State Unemployment		11.96	11.96			
(8) Contingencies (specify):						
Comm & Contingency		45.00	45.00			
Core Boxes	127.96		127.96			
TOTALS	6,778.96	6,326.41	13,105.37	6,778.96	6,326.41	13,105.37

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

Date Oct. 10, 1952 *Payee Plateau Mining Co.

Per Frank L. Seymour Title Gen. Mgr. & Sec. Treas.

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

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

(Instructions on reverse)

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

$6101.06

Signature [illegible]
(Authorized Certifying Officer)

Date 2/20/53 Vou. No. DMA 5398

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idg-E-192 in accordance with the terms of the contract.

Signature N. K. Thurber, Jr. Title Mining Eng. Date Jan. 26, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date FEB 13 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 195 2 Docket No. DMEA 1309K Contract No. DMI-E-102
Operator's Name Plateau Mining Co. Minerals Uranium and
Address U. S. Bank Bldg., Grand Junction, Colo. Vanadium

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Feet	6,770.96	2,523.5	11,515.71	4,286.2	2.69		
Churn								
Auger (incl. all wagon drlg.)				1,589.66				
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		6,770.96		13,105.37				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6,770.96		13,105.37				

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 October 10, 1952 Operator Plateau Mining Co.

Per Frank L. Seymour Title Gen. Mgr. & Sec.-Treas.

REMARKS: All wagon drilling was completed by Dowlos-Hollin Mining Company prior to assignment of contract to Plateau Mining Co.

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

U. S. GOVERNMENT PRINTING OFFICE 205676

3/10/53 jri

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

224 New Customhouse
Denver 2, Colorado

February 24, 1953.

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 2 1953

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1309X, Contract Idm E-192, (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah.

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and 104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of August, 1952, pertaining to DMA Docket 1309X, Contract Idm-E192, (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah.

W. H. King
W. H. King

Enclosures

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

New Customhouse
Denver 2, Colorado

February 13, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 9 1953

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 1309X, Contract Idm-E192 (Uranium and Vanadium) Plateau Mining Co., San Juan County, Utah - Operator's Monthly Progress Report for the period of August, 1952

Enclosed are the original and four copies of Form MF-104 and Form MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been accomplished as authorized in the contract and payment is recommended for 90 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations.

Remarks:

Date of Report - September 10, 1952
Date Received in Field Office - January 21, 1953
Date Received in Region Office - January 28, 1953
Date Processed for Payment - February 13, 1953

Held up pending clarification of Federal Oil and Gas Lease conflict.

W. H. King

W. H. King

Enclosures

RDB:oc
cc: Contract
Secretary to the Operating Committee (2)
SRWilson
Chron.

January 26, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Utah. MF-104 forms for August 1952.

Enclosed are the original and four copies of MF-104 forms pertaining to work under the subject contract for August 1952. A memorandum of progress was prepared by H. K. Thurber, Jr., copies of which are attached.

The data were originally received from the operator during November 1952, but because of a conflict with Federal oil and gas leases, the forms were returned with the suggestion that a division be made between exploration on property held under oil and gas leases and that on non-leased ground. However, the operator submitted the present forms with no division; thus part of the expenditures have been made on property held by oil and gas lease. The operator has included a copy of an application for lease with the AEC, but this document is not sufficient to permit payment of expenditures on presently invalid mining claims. The lease application is included with the August 1952 MF-104 forms. The forms are recommended for approval in the amounts shown, subject to clarification of the oil and gas conflict and arithmetical accuracy.

The data attached to the MF-104 forms are deficient in copies of the narrative report, hole logs and maps. The original of the forms includes this information, but the copies do not.

Exploratory work on the property has been completed with an expenditure less than permitted in the contract. The Government may have equity in supplies remaining from the Bowles-Heflin operation, previous to Plateau Mining Co. No operating equipment was purchased and no expenditures were made for fixtures and improvements during the life of the project.

The present MF-104 forms were received from the operator January 21, 1953.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

S. R. Wilson

January 26, 1953

H. K. Thurber, Jr.

Review of MF-104 forms for August, September and October, DMA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Colo.

The subject MF-104 forms and supporting documentation representing all of the diamond drilling completed under Amendment No. 1 of Contract Idm-E192, were reviewed this date. The drilling under the amendment was started on August 1, 1952, and completed October 9, 1952, during which time a total of 4,889.7 linear feet of hole was drilled under the contract terms.

The drill logs presented by the operator and the drilling subcontractor's invoices agree as to the total footage drilled. Observation of the cores further substantiates the footage claimed by the operator.

The work was in conformance with Amendment No. 1 to the contract, with the exception of the requirement regarding the saving of sludge. Recovery of good sludge samples from the drilling apparently was difficult due to broken nature of the ground in the area. This is explained in the original and copies of a letter from the drilling subcontractor to the operator in reply to the operator's complaint regarding loss of sludge. Inasmuch as the operator has probed the holes with a standard make of Geiger counter which showed some uranium mineralization, but no ore, the loss of sludge does not alter the results of the drilling.

The following is a review of specific items for all three months:

Item 1. Drilling

August - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

September - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

October - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

Item 2. Supervision

August - Supervision is allowable by Amendment No. 1 at $1.75 per hour and charged for entire month for preparing drill sites previous to actual drilling and during actual drilling. A certification of the total amount paid the supervisor for each month of the work under the contract is attached to the MP-104 forms.

September - Supervision charged is allowable and necessary to the contract work.

October - The supervision charge for one week is allowable, since the actual drilling was completed October 9, 1952.

Item 4. Depreciation

August - The charge of $50.00 depreciation on the Caterpillar D-4 tractor-dozer is allowable under the schedule outlined in the contract and the use of this machine for a full month was necessary to the conduct of the project.

September - The use of this machine for a full month was necessary to the conduct of the project.

October - A depreciation charge for one week is made for this reporting period. This is allowable, since actual drilling was completed October 9, 1952.

Item 8. Contingencies -

September - The core bomb shown in this category was an expense necessary to the proper conduct of the project and is allowable.

It should be noted that both MP-104 and MP-104A forms carry the wagon drilling done by Bowles-Heflin in the "Totals previously reported," and "Totals to date" columns. The total reimbursement under this former work has been made.

The narrative reports, drill logs and maps accompanying the MP-104 forms are sufficient.

Payment is recommended, subject to clarification of property status in relation to Federal oil and gas leases in the area, and check of arithmetical calculations, for the following:

Month	Total Project Cost	90% Reimbursement
August	$4,736.75	$4,263.07
September	6,778.96	6,101.06
October	1,626.00	1,463.40
Totals	$13,141.71	$11,827.53

The total recommended for reimbursement is $11,827.53.

H. K. Thurber Jr.
H. K. Thurber, Jr.
SKW

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

U. S. Bureau of Mines
RECEIVED
JAN 21 1953
Salt Lake City, Utah

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of [illegible], 1952 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $ Government Participation: % Amount, $ 17,079.40

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent ~~Short Form~~ Contracts:						
Drilling [illegible]	[illegible]	—	[illegible]			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor		[illegible]	[illegible]			
Supervision [illegible]	[illegible]	[illegible]	[illegible]			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
[illegible]		[illegible]	[illegible]			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation [illegible]	[illegible]	[illegible]	[illegible]			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment		[illegible]	[illegible]			
Sampling and Analysis						
Payroll Taxes		[illegible]	[illegible]			
Liability Insurance						
[illegible]		[illegible]	[illegible]			
[illegible]		[illegible]	[illegible]			
(8) Contingencies (specify):						
[illegible]		[illegible]	[illegible]			
TOTALS	[illegible]	[illegible]	[illegible]	4,736.75	1,589.66	6,326.41

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

Date [illegible] *Payee [illegible]

Per [illegible] Title [illegible]

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

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

(Instructions on reverse)

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

$ 4263.08

Signature [illegible]
(Authorized Certifying Officer)

Date 2/20/53 Vou. No. DMA 53-98

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Edm-E-197 in accordance with the terms of the contract.

Signature N. K. Thurber, Jr. Title Mining Eng. Date Jan. 26, 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date FEB 13 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1952 Docket No. DMEA 1309X Contract No. DMI-E-192
Operator's Name Plateau Mining Company Mineral Vanadium and
Address S. Bank Bldg., Grand Junction, Colo. Vanadium

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Feet	4,736.75	1,762.7	4,736.75	1,762.7	2.69		
Churn								
Wagon	(incl. all wagon drlg.)			1,589.66				
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		4,736.75		6,326.41				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		4,736.75		6,326.41				

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

Date Sept. 10, 1952 Operator Plateau Mining Co.

Per Frank L. Seymour Title Gen. Mgr. & Sec.-Treas.

REMARKS All wagon drilling completed by Foulos-Moflin prior to assignment of contract to Plateau Mining Company.

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

U. S. GOVERNMENT PRINTING OFFICE 205676

Standard Form No. 1034a—Rev.
Form approved by
Comptroller General, U. S.
May 26, 1938
(Amended August 15, 1941)

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

D. O. Vou. No. _____
Bu. Vou. No. DMA-122

GENERAL ACCOUNTING OFFICE PREAUDIT
Certified for payment in the sum of $_____
Comptroller General of the United States
By _____

U. S. Dept. of Interior, Defense Minerals Administration, 224 New Customhouse
(Department, bureau, or establishment)

Voucher prepared at Denver, Colorado 12/28/51
(Give place and date)

THE UNITED STATES, Dr.,

To Bowles-Heflin Mining Company
P. O. Box 185 (Payee)
Address Moab, Utah
Payee's Account No. I-DMA-E-192

PAID BY
(For use of Paying Office)

No. and Date of Order	Date of Delivery or Service	Articles or Services (Enter description, item number of contract or general supply schedule, and other information deemed necessary) Terms _____% Discount Cash _____ days	Quantity	UNIT PRICE Cost	UNIT PRICE Per	AMOUNT Dollars	AMOUNT Cts.
		Brought forward from continuation sheet(s)					
	November 1951	Certified "Operator's Monthly Progress Report" for the Mineral Exploration Program attached:				491.	00

Shipped from _____ to _____ Weight _____ Government B/L No. _____ Total 491.00

(Payee must NOT use this space)
Differences _____
Account verified; correct for 491.00
(Signature or initials) _____

Contract No. I-DMA-E-192 Date 10/23/51 Req. No. _____ Date _____ Invoice Rec'd _____

W.H.K. **MEMORANDUM**

Approved for payment by:
J. H. East, Jr.

Naomi E. Stokes
Authorized Certifying Officer

ACCOUNTING CLASSIFICATION (for completion by Administrative Office)

Appropriation, limitation, or project symbol	Appropriation title	Limit'n or Proj't Amount	Appropriation Amount
14X4401	Revolving Fund, Defense Production Act, Interior		491.00

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

Paid by { Check No. _____ dated _____, 19____, for $_____ } on Treasurer of the United States in favor of payee named above.
{ Cash, $_____, on _____, 19____, Payee _____ }
(Sign original only)

* 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.
† If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the blank space below "Approved for $_____", and over his official title.

Per _____
Title _____

16—22900a-1

METHOD OF OR ABSENCE OF ADVERTISING

(Section 3709 of the Revised Statutes)

1. After advertising in newspapers.

2. (*a*) After advertising by circular letters sent to _____ dealers.

(*b*) And by notices posted in public places.

(If notices were not posted in addition to advertising by circular letters sent to dealers, explanation of such omission must be made. The notation on the certificate on the face of the voucher must be "2(*a*)(*b*)" or "2(*a*)", depending on whether or not notices were posted.)

3. Without advertising, under an exigency of the service which existed prior to the order and would not admit of the delay incident to advertising.

4. Without advertising in accordance with _____

5. Without advertising, it being impracticable to secure competition because of _____

_____

_____

_____

_____

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

NOTE.—The above form "Method of or Absence of Advertising" is to be used when purchases are made or services secured under proper authority without written agreement in any form. In case of a written agreement (formal contract, proposal, and acceptance, or less formal agreement) Standard Form No. 1036—Revised should be used for abstracting the method of or absence of advertising and award of contract. (See General Regulations No. 51, Supplement No. 6, General Accounting Office, Aug. 20, 1930.)

U.S. GOVERNMENT PRINTING OFFICE: 1946 O-88934

16—22900-1

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts will be made from time to time.

CERTIFICATION

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

BOWLES-HEFLIN MINING COMPANY
(Name of Company)

By Melvin C. Bowles
(Signature of Authorized Official)

Dec. 6, 1951
(Date)

Partner & Gen. Mgr.
(Title)

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

16—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator Bowles-Heflin Mining Co.
Project No. DMA 1309-X
Total contract amount $18,944.00
Government participation percent 90%

Distribution of Expenditures for Month of NOV. 1951

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	264.40	--- --	264.40	264.40		264.40
Equipment purchase [1]						
Equipment rental [2]	52.80	--- --	52.80	52.80		52.80
Buildings						
Explosives						
Repair parts						
Other supplies, steel, bits,	118.20	--- --	118.20	118.20		118.20
Power, gas, diesel, oil,	80.89	--- --	80.89	80.89		80.89
Transportation						
Withholding taxes O.A.B.	2.53	------	2.53	2.53		2.53
Compensation insurance, State	12.34	--- --	12.34	12.34		12.34
Other insurance unemployment	4.54	--- --	4.54	4.54		4.54
Contract work						
Other (specify) camp & commissary	9.86	--- --	9.86	9.86		9.86
Total	545.56	--- --	545.56	545.56		545.56
Totals previously reported	--- --		--- --			
Totals to date	545.56		545.56	545.56		545.56

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by W. C. Young
Amount approved for payment
Remarks

W. H. K.

491.06

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF NOV. 1951

Name of operator Bowles-Heflin Mining Co.
Project No. DMA 1309-X
Total contract amount $ 18,944.00
Government participation percent 90%

TYPE	NUMBER	MAN-SHIFTS	RATE	TOTAL
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners, Wagon	1	8	$1.50 hr.	96.00
Drill helpers, Wagon	1	8	1.35 & 1.00	72.40
Teamsters	Note; the change in helpers pay is due to working one man			
Manager	three days that is getting 1.35 and then changing to an older			
Superintendent	man capable of doing the job, that we pay 1.00 hr.			
Engineers - supervisor	1	8	$1.50 hr.	96.00
Geologists				
Bookkeeper				
Foreman				
Clerks				
Stenographers				
Other				
TOTAL	3	24	varies	264.40

NOTE.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

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Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF NOV. 1951

Name of operator Bowles-Heflin Mining Co.
Project No. DMA 1309-X
Total contract amount $18,944.00
Government participation, percent 90%

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes, Wagon	264.40	52.80	199.09	29.27	545.56	feet	530	---	530	25,600
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	264.40	52.80	199.09	29.27	545.56	feet	530	---	530	25,600

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.

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Remarks

S. R. Wilson

December 5, 1951

W. E. Young

DMA 1309X, Contract Idm-E192, Bowles-Heflin Mining Co., San Juan County, Utah

This project was inspected on December 4, 1951. Drilling started on November 19, 1951, and has been in progress since that time. On December 1, 14 holes had been drilled, which averaged slightly over 40 feet per hole. Ore was encountered in 5 of the 14 holes. The ore varied in thickness from 2 feet to 8 feet. The holes have been drilled along a northwest line and are spaced 50 feet apart. The mineralization is erratic, and more closely spaced drilling will be necessary before mining. //Ore

The operator states that drilling costs will be very close to those estimated in the contract, except that equipment repairs will likely exceed the estimated figure before the project is completed.

MF-104 forms for November have not been prepared. The operator states that he will be busy for three or four days collecting engineering data and preparing a map before he will have time to complete them.

W. E. Young

W. E. Young

S. R. Wilson

December 12, 1951

W. E. Young

DMA 1309X, Contract Idm-E192, Bowles-Heflin Mining Co., San Juan Co., Utah

The MF-104 forms for this project for the month of November 1951 have been checked and found to be correct. This month's footage costs for drilling have been in excess of the contract estimate. The operator expects to be able to lower this when the project gets under way. The costs for the eight-day period were $1.03 per foot, or $.29 above the estimate. It is recommended that $491.00 be vouchered for payment to the operator. This amount is 90 percent of $545.56, the total expended during November 1951.

W. E. Young

W. E. Young

NARRATIVE REPORT

UNITED STATES DEPARTMENT
OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEC. 6, 1951

Re: DMA Project 1309-X
Contract Idm-E192

Gentlemen:

We started actual drilling on this project Nov. 19, 1951. We got in eight working days in Nov. and completed fourteen holes, with a total of 530 feet of drill hole. With very good results, as we have located one ore body that shows promise of being of good size and grade. It will require additional holes, which will be drilled later, on company account, to block out and determine the size, shape and grade of this ore body before starting actual mining of it.

We failed to average the schedule we set, and our costs are in excess of what we estimated for the entire project, part of which is accountable to the purchase of more supplies than was actually used during these few days. The balance and the failure to accomplish as much work as we show in our estimated schedule was due to getting the operation smoothed out and doing quite a bit of experimenting on the start. We have everything going fine now and feel confident that everything will average out better this month.

Actual practice is showing that the smaller the bit we can use and still have clearance for the cuttings to come past the steel couplings the better the cuttings blow from the hole. We would like to request permission to use from a quarter to a half an inch smaller bit than we stated we planned to use. This would be advantageous both as to speed and cost.

Also we are encountering some difficulty in collecting satisfactory dust samples, due to considerable snow on the ground, the moisture content of the rock being excessingly high and the ore encountered to-date being of a low vanadium content and therefore of very slight difference in color than the overlying and underlying rock. In most instances we have been unable to tell when we encountered the ore or when we drilled through it. After drilling a few feet, we take up our dust sample and on testing it we discover it contains ore but with no way of telling how much barren rock it has been contaminated with, therefore not being able to tell the grade of the ore, or determine the actual thickness of the ore body.

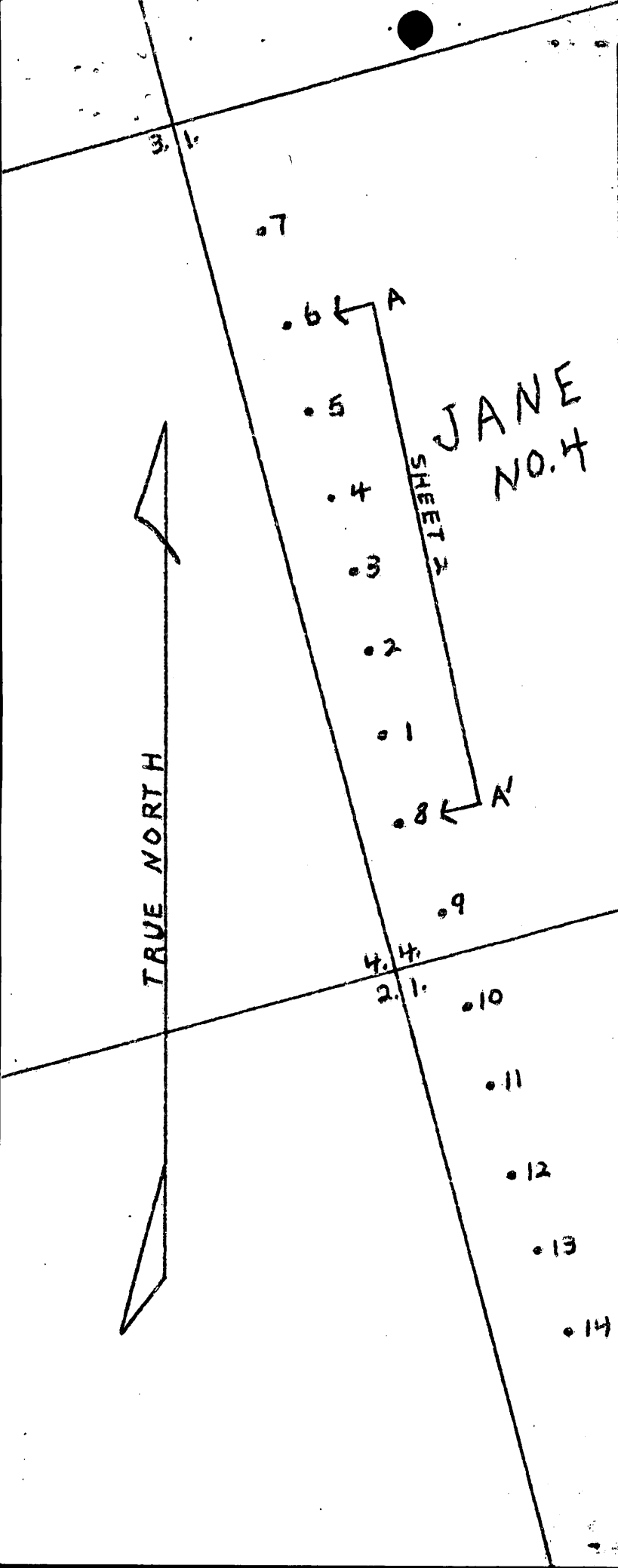
We have a Model 600 Gieger-Muller Radition Counter built by Minerals Engineering Co. which has the tube probe on a fifty foot extention cord that can be lowered into these holes, and is proving more satifactory by far than the dust sample method. So if it is agreeable we will continue to use this method in most instances except when we can definitely tell by the color when entering and leaving an ore body.

Everything else is shaping up and working out fine.

Sincerely Yours

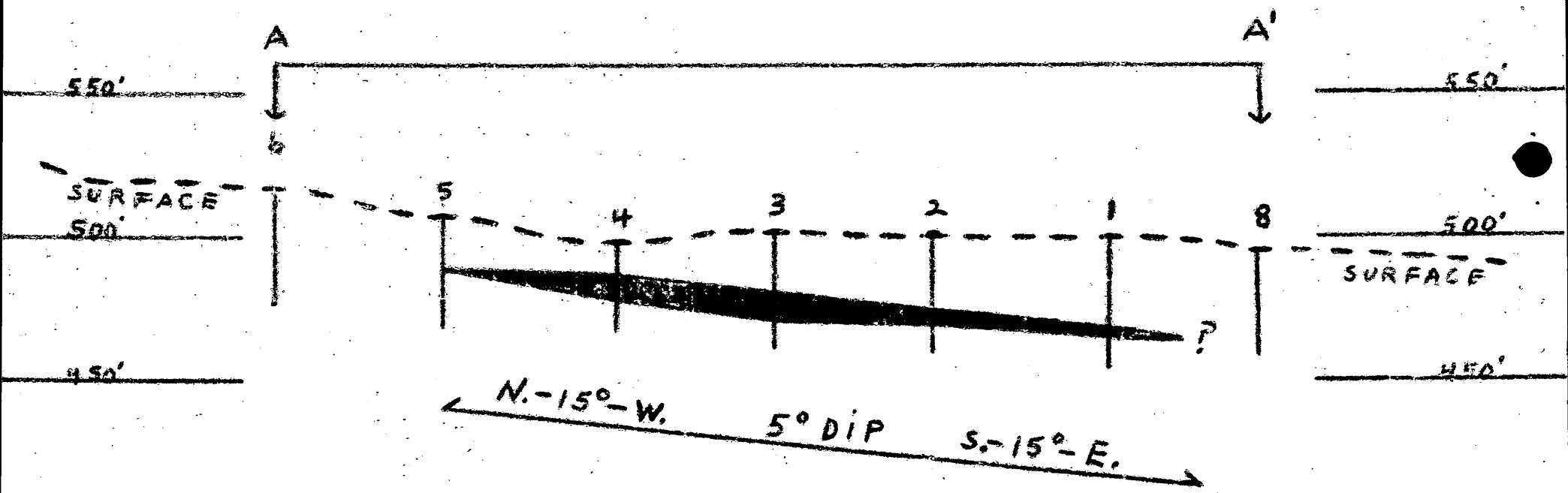
Melvin C. Bowles

Partner & Gen. Mgr.
Bowles-Meflin Mining Co.



HOLE NO.	COLLOR ELEV.	DEPTH	INTERVAL FROM-TO	DIST-ANCE	GRADE X_3O_8	EST. V_2O_5
1	500'	45'	33'-36'	3'	0.10	0.50
2	501.5	42'	27'-32'	5'	0.12	0.50
3	502	39'	20'-29'	9'	0.15	0.50
4	498.5	30'	12'-20'	8'	0.15	0.50
5	507.5	36'	18'-18.3'	.3'	0.05	—
6	514	36'	BLANK	—	—	—
7	520	36'	BLANK	—	—	—
8	496	36'	BLANK	—	—	—
9	494	36'	25'-27'	2'	0.05	—
10	480	36'	BLANK	—	—	—
11	476.5	36'	BLANK	—	—	—
12	471.5	40'	BLANK	—	—	—
13	471.5	40'	19'-21'	2'	0.05	—
14	466	36'	BLANK	—	—	—

BOWLES-HEFLIN MINING COMPANY
DMA PROJECT 1309-X
HOLES DRILLED DURING NOV. 1951
SCALE 1" = 100' DATE DEC. 6, 1951
BY MELVIN C. BOWLES



VERTICAL + HORIZONTAL SCALE 1" = 50'

BOWLES-HEFLIN MINING Co.
DMA PROJECT 1309-X
CROSS-SECTION ON JANE NO. 4
SCALE 1" = 50' DEC. 6, 1951
BY MELVIN C. BOWLES

RADIATION SURVEY LOG OF HOLES DRILLED IN NOV. 1951
BOWLES-HEFLIN MINING CO. DMA PROJECT 1309-X
MADE WITH MODEL 600, SER. 529, MINERAL COUNTER - SETTING

DEPTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	USED
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	↓
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	RANGE
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	SWITCH
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(5)
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	INTER.
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	SWITCH
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(MED)
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	CALIB.
12	—	—	—	40	—	—	—	—	—	—	—	—	—	—	CONTROL
13	—	—	—	70	—	—	—	—	—	—	—	—	—	—	(FULL)
14	—	—	—	70	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	70	—	—	—	—	—	—	—	—	—	—	BASIS
16	—	—	—	60	—	—	—	—	—	—	—	—	—	—	FULL
17	—	—	—	80	—	—	—	—	—	—	—	—	—	—	SCALE
18	—	—	—	90	25	—	—	—	—	—	—	—	—	—	or
19	—	—	—	100	—	—	—	—	—	—	—	—	20	—	100
20	—	—	40	70	—	—	—	—	—	—	—	—	40	—	=
21	—	—	70	—	—	—	—	—	—	—	—	—	20	—	0.20%
22	—	—	100	—	—	—	—	—	—	—	—	—	—	—	
23	—	—	100	—	—	—	—	—	—	—	—	—	—	—	
24	—	—	90	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	80	—	—	—	—	—	15	—	—	—	—	—	
26	—	—	50	—	—	—	—	—	50	—	—	—	—	—	
27	—	20	80	—	—	—	—	—	15	—	—	—	—	—	
28	—	80	100	—	—	—	—	—	—	—	—	—	—	—	
29	—	80	40	—	—	—	—	—	—	—	—	—	—	—	
30	—	100	—	—	—	—	—	—	—	—	—	—	—	—	
31	—	60	—	—	—	—	—	—	—	—	—	—	—	—	
32	—	20	—		—	—	—	—	—	—	—	—	—	—	
33	30	—	—		—	—	—	—	—	—	—	—	—	—	
34	70	—	—		—	—	—	—	—	—	—	—	—	—	
35	70	—	—		—	—	—	—	—	—	—	—	—	—	
36	30	—	—		—	—	—	—	—	—	—	—	—	—	
37	—	—	—								—	—			
38	—	—	—								—	—			
39	—	—	—								—	—			
40	—	—									—	—			

BY MEANING C. BOWLES
SHEET 3 OF 3

REPORT ON PROGRESS OF DIAMOND DRILLING

YELLOW CIRCLE PROPERTY, SAN JUAN COUNTY, UTAH

CONTRACT 1309X

The diamond drilling under Contract 1309X was started in August, 1952, on the June group of claims. Minerals Engineering Company of Grand Junction contracted the work. Sixteen holes were drilled on June 4, 5 and 6, averaging approximately 110 feet in depth. These holes and their location relative to the claim lines are shown on Drawings Nos. 1 and 3 attached hereto.

The logs of the cores, Supplement 1 to this report, indicate that these holes penetrated sand and shale lenses typical of the Salt Wash member of the Jurassic Morrison formation, including some lenses of coarse iron grained, stained sandstone, thought by those working in the area to be indicative of favorable conditions for Carnotite deposition. No ore was found, however. Results of samples taken from cores from these lenses show uranium and vanadium mineralization, but no ore. Observation of the cores shows the most "favorable" sandstone to be in the southernmost hole of the group, Hole 28. The character of the sandstone closely resembles the low grade ore and waste being mined in the No. 1 Incline on the Carol D. claim immediately joining June 6 on the west. The relation of the elevations of the ore being mined and the "favorable" lens encountered in Hole 28 lead to the conjecture that the cores may indicate an extension of the ore horizon on to the June group in this area.

After completion of the sixteen holes on the Jane group, the two drill rigs were moved to Vision No. 4 claim, where eleven holes were drilled averaging 130 feet in depth. Hole 23 showed "favorable" sandstone at 65 to 70 feet. Sample #3 indicates uranium mineralization in the available core, but no ore. Other holes were drilled in an irregular pattern to delimit this lens. The sandstone was found to be limited in extent, and the cores showed no ore.

The drills were moved to the east end of the Vision group, where eleven holes were drilled, averaging 164 feet deep. The cores from this area showed no ore, but some course grained highly iron stained sandstone, with considerable trash carbon was encountered. Samples No. 1 and No. 2 from Hole 35 showed some uranium mineralization.

Unfortunately, little continuity of beds could be established because of displacement of the beds by minor faulting apparently attendant to a fault lying between Holes 46 and 47. It will be noted from the hole logs that Hole 46 shows typical Jurassic Morrison salt wash sandstones and shales, while Hole 47 was drilled entires in Cretaceous Mancos shale, the bottom of which lies stratigraphically approximately 400 feet above the top of the salt wash member of the Morrison formation. Cain Spring Canyon probably represents the trace of the major fault in the area.

The core recovery from all the holes was only fair, the over-all average 61%. A perusal of the core logs shows that the core recovery on the Jane group was consistently better than the core recovery on the Vision group. This was due, in part, to the fractured nature of the ground on the latter group.

The drills were removed from the property October 8, 1952, after the minimum contract footage had been drilled. A summary of the project shows the following:

Number of holes drilled:	38
Average depth of holes:	128 feet
Average over-all core recovery:	51%

Although the drilling showed no ore, the southernmost holes on the June group did indicate the possible extension of the Carol B. on to the June group.

D. D. HOLE NO. 26A ON MAP-MINERALS #30 JAMES GROUP

COLLAR ELEVATION: 6571.3 DEPTH: 110.0'

CORE RECOVERY FROM HOLE: 51% SIZE OF BITS: ALL AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	12.0	Coarse grained sandstone, Fe stains.
12.0	20.0	No core recovered. No sludge taken.
20.0	21.0	Very fine grained quartzitic grey sandstone.
21.0	23.0	Coarse to medium white sandstone, Fe stained.
23.0	30.0	No core.
30.0	31.5	Very fine grained sandstone.
31.5	35.0	Variegated red and grey shale.
35.0	37.0	Fine grained, grey to buff sandstone, Fe stain in fractures.
37.0	40.0	Grey-green clay and clayey sandstone or mudstone.
40.0	42.0	Medium grained brown sandstone.
42.0	50.0	No core.
50.0	80.0	Coarse to medium white sandstone, Fe stains in zones, Purple clay band 0.3' at 61.5'.
80.0	89.0	Grey-Green clay.
89.0	90.0	Medium grained brown sandstone.
90.0	91.0	Red and dark grey sandy shale.
91.0	92.5	Fine grained buff sandstone.
92.5	97.0	Variegated red and grey shale.
97.0	100.0	No core.
100.0	101.5	White, coarse grained sandstone, with 0.3' clay bed at 100.9'.
101.5	104.0	Variegated red and greyish, graying to sandstone.
104.0	110.0	Variegated red and grey shale and shaley sandstone.

A. D. HOLE NO. 16 ON MAP-MINERALS #15 JANE GROUP

COLLAR ELEVATION: 6501.3 DEPTH: 50.0 feet

CORE RECOVERY FROM HOLE: 77% SIZE OF BITS: 10.0' to 15.0': BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	15.0	Medium grained, white sandstone, Fe stained, some blebs of green clay at 12.0' to 14.1'.
15.0	35.0	Coarse to medium grained sandstone, white with Fe stains. Clay blebs at 24.0' in very coarse grained sandstone. Fe stains at 47.0'.
35.0	38.0	Variegated red and grey sandy shale and fine grained sandstone.
38.0	41.0	Variegated purple to grey clay, with 0.3' fine grained sandstone, at 55.0'.
41.0	50.0	Coarse grained sandstone, brown to red and green particles in bands.

D. D. HOLE NO. 17 ON MAP-MINERALS #16 JAME GROUP

COLLAR ELEVATION: 6499.6 DEPTH: 110.0 feet

CORE RECOVERY FROM HOLE: 67% SIZE OF BITS: 10.0' to 20.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	50.0	Coarse to medium grained sandstone, white with Fe stain, sparse clay blebs, Fe stain banding for 0.8 at 41.5' and for 1.2' at 47.0'.
50.0	55.0	Variegated red and grey shale and clay, grading to grey green at base.
55.0	56.5	Fine grained quartzitic sandstone, buff to light grey.
56.5	57.5	Grey clay.
57.5	63.0	Medium grain, Fe stained whitesandstone.
63.0	70.0	Variegated red shale, clay and fine grained sandstone.
70.0	75.0	Medium grained buff sandstone, with clay seams at 71.0', and 74.5'.
75.0	80.0	No core.
80.0	88.0	Medium to fine grained sandstone, Fe stained.
88.0	91.0	Red shale.
91.0	98.0	Medium grained white sandstone, Fe stained in bands.
98.0	101.0	Variegated red and grey shaley clay and fine grained sandstone.
101.0	107.0	Fine grained sandstone, some purple bands.
107.0	110.0	Red and grey shale.

D. D. HOLE NO. 18 on MAP-MINERALS #17 JANE GROUP

COLLAR ELEVATIONS: 6488.9 DEPTH: 99.0 feet

CORE RECOVERY FROM HOLE: 71% SIZE OF BITS: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
10.0	14.0	No core.
14.0	16.0	Grey clay.
16.0	39.0	Coarse to medium grained white sandstone, Fe stained in places, friable. Bands of Fe stain in zones. Clay blebs sparsely scattered.
39.0	56.0	Grey clay and clayey sand.
56.0	78.0	Medium to fine grained sandstone, white with little Fe stain. Many very thin clay seams.
78.0	99.0	Variegated red and grey shale and fine grained sandstone 0.3' bed of grey mudstone at top.

D. D. HOLT NO. 18 on MAP-MINERALS #17 JAMES GROUP

COLLAR ELEVATIONS: 6488.9 DEPTH: 99.0 feet

CORE RECOVERY FROM HOLE: 71% SIZE OF BITS: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
10.0	14.0	No core.
14.0	16.0	Grey clay.
16.0	39.0	Coarse to medium grained white sandstone, Fe stained in places, friabb . Bands of Fe stain in zones. Clay blebs sparsely scattered.
39.0	56.0	Grey clay and clayey sand.
56.0	78.0	Medium to fine grained sandstone, white with little Fe stain. Many very thin clay seams.
78.0	99.0	Variegated red and grey shale and fine grained sandstone 0.3' bed of grey mudstone at top.

a. D. HOLE NO. 19 ON MAP-MINERALS #18 JANE GROUP

COLLAR ELEVATION: 6483.6 DEPTH: 111.0

CORE RECOVERY FROM HOLE: 73% SIZE OF BITS: 11.0' to 15.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	11.0	No core.
11.0	48.0	Coarse grained white sandstone. Zones of clay seams, Fe stained.
48.0	51.0	No core.
51.0	55.0	Red shale and fine grained sandstone, grading into grey clay.
55.0	56.0	Grey-green fine grained sandstone, quartzitic.
56.0	66.0	Variegated red and grey shale and fine grey sandstone.
66.0	79.0	Fine to medium sandstone, white, friable, clay seams, frequent, clay blebs at 76.5±.
79.0	80.0	Red shale.
80.0	84.0	Medium grained white sandstone, clay seams.
84.0	91.0	Red shale and shaley sand, variegated.
91.0	109.0	Light grey sandstone, very thin, irregular seams of clay. Some carbonaceous material.
109.0	111.0	Interbedded red shale and fine grained sandstone.

D. D. HOLE NO. 20 ON MAP-MINERALS #25 JANE GROUP

COLLAR ELEVATION: 6458.2 DEPTH: 135.0 feet

CORE RECOVERY FROM HOLE: 73% SIZE OF BITS: 10.0' to 20.0':BX
Remainder:AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	41.0	Medium to coarse grained sandstone, white with zones of light Fe stain, sparse clay blebs.
41.0	42.0	Light grey clay seam
42.0	49.0	Medium to coarse grained sandstone, white. Some Fe stain.
49.0	50.0	Variegated red to grey clay.
50.0	98.0	Friable coarse grained white sandstone with many clay blebs, and clay seams, grading to medium grained massive white sandstone.
90.0	99.5	Variegated sandy shale.
99.5	116.5	Massive medium grained sandstone, isolated clay seams, Fe stained at base.
116.5	119.0	Grey-green shaley sand, grading to variegated shale.
119.0	125.0	Medium grained white sandstone, with clay seams near top.
125.0	127.5	Grey shale becoming red clay near 127.5'.
125.5	129.0	Grey sandstone with very thin layers (unconformable) of carbonaceous material.
129.0	130.5	Variegated grey to red shale and sandstone.
130.5	135.0	Coarse grained, Fe stained sandstone, with clay blebs.

D. D. HOLE NO. 21 ON MAP-MINERALS #21 JANE GROUP

COLLAR ELEVATION: 6455.2 DEPTH: 120.0 feet

CORE RECOVERY FROM HOLE: 82% SIZE OF BIT: 10.0' to 20.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	53.0	Medium grainedwhite sandstone, Fe stained. White matrix, Fe stained in zones. Sparse clay blebs.
53.0	60.0	White sandy clay.
60.0	115.0	Fine to medium grained sandstone, white to buff and purple. Carbonaceous bands at 81.0'. Thin red shale 92.0' and 95.0'.
115.0	116.0	Variegated red shale.
116.0	118.0	Medium grained sandstone, Fe stained.
118.0	120.0	Variegated red to grey shale and sandy shale. 1.0' mudstone at 119.0'.

D. D. HOLE NO. 22 ON MAP-MINERALS #20 JANE GROUP

COLLAR ELEVATION: 6449.8 DEPTH: 93.0 feet

CORE RECOVERY FROM HOLE: 82% SIZE OF BIT: 5.0' to 10.0':BX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	5.0	No core.
5.0	41.0	Medium to coarse grained white sandstone, Fe stained in zones. Carbonaceous banding at 12.0'.
41.0	42.5	Clayey sand, very friable.
42.5	51.5	Medium grain white sandstone with few layers of clayey sandstone.
51.5	53.5	Variegated shaley sandstone and red shale.
53.5	55.0	Medium to coarse grained white sandstone, medium Fe stain.
55.0	66.0	Variegated red and grey shale and fine grey sandstone.
66.0	81.0	Fine white sandstone, frequent clay seams.
81.0	93.0	Interbedded red shale and fine grained sandstone.

D. D. HOLE NO. 23 ON MAP-MINERALS #24 JANE GROUP

COLLAR ELEVATION: 6448.4 DEPTH: 92.7 feet

CORE RECOVERY FROM HOLE: 70% SIZE OF BIT: 5.0' to 10.0':BX
Remainder: AX

DEPTH, FEET		
FROM	TO	DESCRIPTION
0.0	5.0	No core.
5.0	40.0	Medium to coarse grained sandstone, containing some clay blebs and fe stain, becoming fine grained and grading to purple at bottom.
40.0	42.0	Variegated shale, red and grey.
42.0	50.0	No core.
50.0	90.0	Medium to coarse grained white sandstone with 0.8' bedof purple shale at 75.0'.
90.0	91.0	Variegated red and purple shale.
91.0	92.7	Medium grained white sandstone, consistent Fe stain.

D. D. HOLE NO. 23A ON MAP-MINERALS #23 JANE GROUP

COLLAR ELEVATION: 6569.8 DEPTH: 150.0 feet

CORE RECOVERY FROM HOLE: 85% SIZE OF BITS: 0.0' to 20.0':NX
20.0' to 46.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	Soil, no core.
10.0	14.0	Variegated coarse grained sandstone, some grits, Fe stained.
14.0	20.0	Green-grey clay.
20.0	21.0	Grey-brown very fine grained quartzitic sandstone.
21.0	30.0	Grey-green to grey clay.
30.0	34.0	Brown fine grained sandstone, brown clay at 32.0' to 32.4'.
34.0	40.0	Variegated red and grey shale.
40.0	46.0	Coarse to medium grained sandstone, white, Fe stain.
46.0	48.0	Green clay.
48.0	80.0	Coarse to medium sandstone, white, Fe stained grits and clay inclusions at 76.0'.
80.0	81.0	Red shale
81.0	83.0	White sandstone with clay inclusion.
83.0	90.0	Variegated shales, red and grey, and shaley sandstone.
90.0	106.0	White to brown sandstone with thick bed red shale at 95.0' and 97.0'.
106.0	110.0	Red shale, variegated, some sandy layers.
110.0	114.0	Interbedded red and grey shale and clay with some clayey sandstone.
114.0	134.0	Medium to coarse grained sandstone, some infrequent clay inclusions and Fe stains.
134.0	150.0	Variegated red and green shale with some grey shaley sandstone beds.

D. D. HOLE NO. 24 on MAP-MINERALS #19 JANE GROUP

COLLAR ELEVATION: 6450.0 DEPTH: 111.0'

CORE RECOVERY FROM HOLE: 65% SIZE OF BIT: 5.0' to 10.0':BX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	5.0	No core.
5.0	28.0	Medium to coarse grained sandstone, white, with Fe stain. Clay seam, 0.5' at 19.0'.
28.0	31.0	Light grey clay.
31.0	55.0	Medium grained white sandstone, moderate Fe stain at 40.0'.
55.0	70.0	Variegated shale and fine grained sandstone, Red, purple, grey and dark grey.
70.0	73.0	Medium to coarse grained sandstone with Fe stain.
73.0	76.0	Grey-green clay.
76.0	85.0	Medium to fine grained sandstone with few thin beds of light grey clay.
85.0	92.0	Red shale and shaley sand, variegated.
92.0	108.0	Grey sandstone, thin seams of clay.
108.0	111.0	Red shale interbedded with fine grained sandstone.

D. D. HOLE NO. 25 ON MAP-MINERALS # 27 JANE GROUP

COLLAR ELEVATION: 6446.0 DEPTH: 107.0 feet

CORE RECOVERY FROM HOLE: 75% SIZE OF BIT: 10.0' to 90.0':BX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	10.0	No core.
10.0	53.0	Medium to coarse grained white sandstone, some clay blebs.
53.0	56.0	Yellow, Fe stained clay.
56.0	60.0	Medium grained brown sandstone.
60.0	68.0	Variegated red and grey shale with interbedded shale sandstone.
68.0	73.0	Fine grained light grey sandstone, some clay seams.
73.0	75.0	Variegated shale and sandstone.
75.0	81.0	Medium grained buff sandstone.
81.0	90.0	Variegated shale, green and purple, some shaley sandstone.
90.0	92.0	Fine grained sandstone.
92.0	107.0	Variegated shale and fine grained sandstone.

D. D. HOLE NO. 25A [redacted]HAP-MINERALS 29 JANE [redacted]OUP

COLLAR ELEVATION: 6,573.8 DEPTH: 140.0'

CORE RECOVERY FROM HOLE: 57% SIZE OF BITS: 0.0' to 21.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	No core.
10.0	20.0	Very coarse sandstone and grits, considerable Fe stain.
20.0	21.0	Grey clay.
21.0	22.0	Fine grained sandstone or mudstone, grey and brown.
22.0	25.0	Coarse grained sandstone.
25.0	30.0	No core.
30.0	31.0	Grey mudstone and interbedded clay.
31.0	36.0	Buff sandstone.
36.0	40.0	No core.
40.0	44.0	Buff sandstone, fine grained, with clay inclusions.
44.0	45.0	Brown to red sandy shale.
45.0	50.0	No core.
50.0	77.0	Coarse to medium grained white sandstone with Fe stains. Some clay inclusion and clay bands.
77.0	85.0	No core.
85.0	87.0	Grey fine grained sandstone.
87.0	95.0	Sandy shale and red and grey mudstone at 90.0'.
95.0	100.0	Variegated shale, red & grey, with some sandstone, greyblebs
100.0	107.0	Coarse grained sandstone, white Fe stain.
107.0	109.0	Red shale and grey clay.
109.0	111.0	Fine grained sandstone, grey, grades to grey shale and to red shale.
111.0	115.0	No core.
115.0	116.0	Grey-green clay and red shale.
116.0	124.0	Coarse to medium grained sandstone with clay inclusions and thin clay beds.
124.0	140.0	Red and grey variegated sandy shale and fine grained sandstone.

D. D. HOLE NO. 26 on NAP-MINERALS #22 JANE GROUP

COLLAR ELEVATION: 6481.8 DEPTH: 125 feet

CORE RECOVERY FROM HOLE: 95% SIZE OF BIT: 14.0' to 20.0': NX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	14.0	no core.
14.0	15.0	Apparent core of float.
15.0	44.0	Core of apparent Brushy Basin.
44.0	48.0	Light grey sandy clay.
48.0	85.0	Medium to coarse grained white sandstone, Fe stained, mostly friable.
85.0	86.0	Clay bed, grey-green.
86.0	102.0	Coarse grained white sandstone, Fe stained and brown clay blebs.
102.0	108.0	Light grey and dark grey clays and sandy clay. Moderately calcareous at bottom.
108.0	116.0	Medium grained sandstone, little Fe stain.
116.0	125.0	Variegated shale, sandy shale and clays, red and grey.

D. D. HOLE NO. 27 ON MAP-MINERALS #26 JANE GROUP

COLLAR ELEVATION: 6481.7 DEPTH: 120.0 feet

CORE RECOVERY FROM HOLE: 25% SIZE OF BIT: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	50.0	Plug bit in Brushy Basin.
50.0	54.0	Variegated shale and clay, some mudstone.
54.0	93.0	Medium to coarse grained buff to brown sandstone. Band of grits 0.5' ~~xx~~ at 90.0'.
93.0	95.0	Light grey clay.
95.0	107.0	Coarse grained white sandstone, Fe stained, blebs and seams of clay.
107.0	109.0	Grey-green clay.
109.0	114.0	Medium grained to fine grained white sandstone.
114.0	120.0	Variegated shale and shaley sandstone, red and grey.

D. D. HOLE NO. 28 ON MAP-MINERALS #31 JANE GROUP

COLLAR ELEVATION: 6481.7 DEPTH: 90 feet

CORE RECOVERY FROM HOLE: 50% SIZE OF BIT: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	50.0	No core.
50.0	61.0	Rubble of Brushy Basin
61.0	65.0	Medium to coarse grained sandstone containing bands of grits at 95.0' to 98.0'. Copper stain at 98.0'.
65.0	66.5	Clayey, green to white.
66.5	68.0	Medium grained sandstone, white, Fe stain.
68.0	69.0	Poorly cemented grits, carbonaceous material.
79.0	90.0	Variegated shale and shaley sandstone, red and grey.

D. D. HOLE NO. 29 ON MAP-MINERALS #32 VISION GROUP

COLLAR ELEVATION: 6553.6 DEPTH: 123.0'

CORE RECOVERY FROM HOLE: 40% SIZE OF BITS: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	40.0	Plug bit.
40.0	52.0	Fine grained sandstone to sandy shale, white to buff color.
52.0	60.5	Grey clay with yellow Fe in fractures.
60.5	65.0	Fine grained sandstone, white.
65.0	70.0	Brown to dark brown friable sandstone. Sample No.3.
70.0	80.0	Fine grained brownish quartzitic, grading to mudstone.
80.0	89.5	Medium grained white sandstone with vugs and fissures. Fe stained in zones.
89.5	92.0	Very fine grained sandstone, buff to brown.
92.0	98.0	Medium to coarse grained sandstone with clay blebs and clay seams.
98.0	103.0	Variegated shale and clay, red and green.
103.0	104.0	Fine grained sandstone, buff, reddish and green.
104.0	108.0	Medium grainedsandstone, white, with Fe stain.
108.0	116.0	Fine grained, friable brown sandstone with trash carbon.
116.0	123.0	Shaley sandstone, variegated, with clay seams.

D. D. HOLE NO. 29A ON MAP-MINERALS #29A VISION GROUP

COLLAR ELEVATION: 6542.2 DEPTH: 125.0 Feet

CORE RECOVERY FROM HOLE: 51% SIZE OF BITS: 0.0' to 10.0'NX
10.0' to 30.0'BX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
00.0	10.0	White sandstone, little Fe stain.
10.0	19.5	White sandstone, little Fe stain.
19.5	21.0	Hard, brittle quartzitic sandstone. Grey, pink, with inclusions of dark grey shale.
21.0	25.0	Red and grey shale and clay, 6" bed shaley sand at 23.0'.
25.0	28.0	Brown shale with Fe yellow stain.
28.0	30.0	Red shale, variegated, grading to red sandstone at 30.0'.
30.0	37.0	Same.
37.0	43.0	Coarse grained sandstone, white, some Fe stain.
43.0	55.0	Interbedded clay and shale, brown and grey. Bands of gypsum at 53.5'.
55.0	63.6	Brown to grey mudstone with a thin band of coarse brown sandstone at approxmiately 60.0'.
63.6	68.0	Fine grained brown sandstone and mudstone. Considerable Fe stain near fractures.
68.0	106.5	Coarse to medium grained sandstone, white with Fe stain, grading from predominant at top to little at base. Clay blebs sparsley scattered.
106.5	110.0	Light grey clay, Fe stained in zones.
110.0	118.0	Variegated shale and clay, predominately red. Some thin sandstone bands.
118.0	125.0	Fine grained sandstone, light grey, with zones of shaley sandstone, purple.

D. D. HOLE NO. 29B ON MAP-MINERALS #29B

VISION GROUP

COLLAR ELEVATION: 6549.1

DEPTH: 126.0 feet

CORE RECOVERY FROM HOLE: 66%

SIZE OF BITS: 0.0' to 10.0':NX
10.0' to 20.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	5.0	Little core, grits banded with coarse grained sandstone.
5.0	10.0	Finegrainedto medium grained sandstone, white.
10.0	20.0	Coarse to medium grained sandstone, white. Conglomerate fine at 12.0'.
20.0	25.0	Coarse grained sandstone, Fe stained, with clay bedding at 25.0'.
25.0	30.0	Grey mudstone.
30.0	36.0	Variegated red and grey shaley sand.
36.0	41.0	Coarse to medium sandstone, white with Fe stain. Some trash carbon in zones.
41.0	42.0	Small pebble conglomerate.
42.0	63.0	Shales, sandy shales and clays predominating. Brown to black. Gypsum in seams to 1/2" at 57.0'. Sand beds at 58.0' and 61.0'.
63.0	65.0	Brown, coarse grained sandstone, with Fe stain in fractures and trash carbon.
65.0	67.5	Brown clay to buff. Sand layer at 66.0'.
67.5	112.0	Medium to coarse grained white sandstone, with consisten Fe stain. Clay blebs frequent and clay seams at 9910' and 110.0'.
112.0	122.0	Grey clay, variegated red and grey shale and shaley sandstone. Some fine grained sandstone beds.
122.0	126.0	Fine grained white sandstone. Some Fe stain.

D. D. HOLE NO. 29D ON MAP-MINERALS 29D VISION GROUP

COLLAR ELEVATION: 6538.6 Depth: 125.0 feet

CORE RECOVERY FROM HOLE: 40% SIZE OF BITS: ALL BX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	20.0	Plug bit.
20.0	29.0	Grey clay
29.0	35.0	Coarse grained sandstone, white, Fe stain.
35.0	58.0	Series of brown shale and medium grained sandstone and shaley sandstone. Some trash carbon at 46.0'.
58.0	95.0	Medium to coarse grained sandstone, white with Fe stain. Some vugs and fractures, with calcite crystals. Trash carbon at 71.0'.
95.0	99.0	Grey clay and shale with some particles of fine grained sandstone.
99.0	101.0	Red variegated shale and clay.
101.0	125.0	White, medium grained sandstone, with clay blebs at 105.0'. Friable at bottom.

D. D. HOLE NO. 29F ON MAP-MINERALS #29F VISION GROUP

COLLAR ELEVATION: 6530.9 DEPTH: 102.0 feet

CORE RECOVERY FROM HOLE: 54% SIZE OF BITS: BX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	33.5	Grey sandy clay, grading to borwn at 32.0'.
33.5	35.0	Brown sandstone, fine grained, manganese in fractures.
35.0	38.0	Brown sandy clay, grading to fine grained sandstone, brown, at 37.0'.
38.0	41.0	Light grey sandy clay and mudstone, some Fe stain in partings.
41.0	43.5	Fine grained brown sandstone and sandy clay.
43.5	49.5	Red sandy shale and clay.
49.5	52.0	Pink fine grained sandstone, quartzitic.
52.0	54.0	Sandy clay, light grey.
54.0	90.0	Medium to coarse sandstone, white with Fe stain.
90.0	98.0	Variegated clay, red to grey-green.
98.0	100.0	Sandstone, grey, quartzitic.
100.0	102.0	Red shale and clay.

D. D. HOLE NO. 30 ON MAP-MINERALS #29E

VISION GROUP

COLLAR ELEVATION: 6548.4

DEPTH: 134.0 feet

CORE RECOVERY FROM HOLE: 41%

SIZE OF BITS: 0.0' to 20.0' BX

Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	Plug bit.
10.0	20.0	Coarse sand, considerable staining, some grits at 12.0'.
20.0	32.0	Coarse sandstone, white grains, Fe staining, 0.6' of grits at 31.0'.
32.0	50.0	Little core, some red shale rubble at unknown depth.
50.0	51.0	Yellow clay, sandy, grading into fine grained sandstone.
51.0	52.0	Red sandstone and sandy shale.
52.0	61.0	Brown sandstone, medium grained.
61.0	64.0	Red sandy shale.
64.0	68.0	Medium to fine grained sandstone, white, with little Fe stain.
68.0	70.0	Variegated red and grey-green shales and clay.
70.0	92.5	White sandstone with few clay seams. Carbon streaks at 81.5'.
92.5	93.2	Highly Fe stained sandstone, coarse grained and friable.
93.2	105.0	Coarse to medium grained white sandstone, massive.
105.0	106.0	Variegated purple to grey shale and sandy shale.
106.0	107.5	Medium grained sandstone, black particles.
107.5	134.0	Variegated shale.

D. D. HOLE NO. 30A ON MAP-MINERALS #30A VISION GROUP

COLLAR ELEVATION: 6555.0 DEPTH: 113.0

CORE RECOVERY FROM HOLE: 40% SIZE OF BITS: 0.0' to 10.0'. BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	Coarse to medium grained sandstone, Fe stain, and calcite in fractures.
10.0	21.0	Light grey-green clay with Fe stain.
21.0	29.5	Fine grained sandstone, buff, grading to medium grained sandstone.
29.0	30.0	Mudstone, very fine grained, tan color.
30.0	31.0	Grey clay, sandy in zones.
31.0	55.0	Medium to coarse white sandstone, with varying Fe stain, clay blebs at 46.0' and red clay bed at 47.0'.
55.0	56.0	Clay and brown mudstone.
56.0	65.0	Variegated purple and grey sandy shale and fine grained sandstone.
65.0	67.0	Brown sandstone with carbon streaks.
67.0	72.0	Variegated shale and clay.
72.0	75.0	Fine to medium grained sandstone.
75.0	102.0	Coarse to medium grained sandstone with little Fe stain.
102.0	102.8	Very coarse grained, Fe stained sandstone.
102.8	104.5	Medium grained sandstone, white.
104.5	113.0	Variegated shale and mudstone.

D. D. HOLE NO. 30B on MAP-MINERALS #30B

VISION GROUP

COLD R ELEVATION: 6533.7

DEPTH: 100 feet

CORE RECOVERY FROM HOLE: 38%

SIZE OF BITS: ALL AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	20.0	Plug bit.
20.0	20.6	Coarse grained sandstone, white and grey grains.
20.6	36.5	Variegated red, grey, green and purple shale and clay.
36.5	40.5	Medium grained sandstone, Fe stain in fractures.
40.5	47.5	Little core. Variegated shale.
47.5	81.0	Medium to coarse grained sandstone, white, little staining, with clay seam at 59.6.
81.0	100.0	Shale and shaley sand, red to grey.

D. D. HOLE NO. 30C ON MAP-MINERALS #30C VISION GROUP

COLLAR ELEVATION: 6540.7 DEPTH: 111.0 feet

CORE RECOVERY FROM HOLE: 50% SIZE OF BITS: 0.0' to 10.0': NX
10.0' to 110.0':AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	7.0	Surface soil and sandstone rubble.
7.0	10.0	Broken material, coarse grained buff sandstone, with Fe stain in fractures.
10.0	12.0	Variegated red and grey clay.
12.0	29.0	Fine to medium grain white sandstone with brown Fe stain. Grades to grits at 28.0'.
29.0	30.0	Fine grain pink sandstone.
30.0	40.0	Variegated red and grey shale, with mudstone at 39.0'.
40.0	45.0	Medium grain massive sandstone, white with some Fe stain.
45.0	46.5	Red sandy shale.
46.5	51.5	Grey to pink fine grained sandstone with calcite in fractures.
51.5	52.5	Light grey clay, Fe streaks.
52.5	62.5	Coarse grained to medium grained sandstone, with 0.5' grits at 55.0'.
62.5	65.0	Sandy clay, light grey.
65.0	90.0	Medium to coarse grained sandstone. Some Fe staining. Clay Blebs at 70.0'.
90.0	95.0	Fine grained sandstone, grading to grey sandy shale at 95.0'.
95.0	111.0	Variegated sandy shale, red and grey, with medium sand x 1.0' thick at 104.0'.

D. D. HOLE NO. 31 ON MAP-MINERALS #36A VISION GROUP

COLLAR ELEVATION: 6543.1 DEPTH: 127.0'

CORE RECOVERY FROM HOLE: 71% SIZE OF BITS: 0.0' to 10.0':BX
10.0' to 90.0':AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	10.0	Medium to coarse grained sandstone, massive, light Fe stain.
10.0	34.5	Same as above, becoming coarse at base.
34.5	40.0	Grainy green clay, with scattered sand particles, grading to red at 40.0'.
40.0	50.0	Variegated clay and shale, red and grey, 1.0' of grey sandstone at 42.0'.
50.0	58.0	Medium grained massive white sandstone, with red zones near the bottom.
58.0	60.0	Red clay and shale.
60.0	70.0	White, medium grained sandstone, little fe staining.
70.0	90.0	Variegated red and grey sandstone and sandy shale.
90.0	127.0	Variegated red to green shale.

D. D. HOLE NO. 32 ON MAP-MINERALS #38 VISION GROUP

COLLAR ELEVATION: 6546.9 DEPTH: 130 feet

CORE RECOVERY FROM HOLE: 43% SIZE OF BITS: 0.0' to 10.0': NX
10.0' to 30.0': BX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	10.0	Undefinitive sandstone and clay rubble, sandstone core, medium grain.
10.0	20.0	Little core, medium grained sandstone, some clay blebs.
20.0	27.0	Variegated clay, red and grey green.
27.0	31.0	Medium sandstone, white, some Fe stain.
31.0	40.0	Little core, brown siltstone and dark grey shale.
40.0	60.5	Medium to coarse grained sandstone, with strong Fe stain at 45.8'.
60.5	93.0	Massive fine grained to medium grained sandstone with thin seams to Fe stain.
93.0	100.0	Little core, grey green clay and brown silt stone.
100.0	130.0	Variegated shale and sandy shale.

D. D. HOLE NO. 33 ON MAP-MINERALS #33 VISION GROUP

COLLAR ELEVATION: 6571.3 DEPTH: 85.0 feet

CORE RECOVERY FROM HOLE: 38% SIZE OF BITS: 0.0' to 10.0': NX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	10.0	Medium to coarse grained white sandstone, Fe stains in zones, Dark sandstone at base.
10.0	26.0	Medium grained white sandstone with Fe stain.
26.0	26.5	Grits in clay matrix.
26.5	30.0	Fine grained white sandstone, with Fe stains in fractures.
30.0	50.0	Light grey clay and shale with .7' bed sandstone at 40.0'.
50.0	55.0	Fine grained sandstone with clay seams.
55.0	56.5	Grey shale.
56.5	58.5	Grey, sandy shale and fine grained sandstone, calcite in fractures.
58.5	60.0	Grey clay and shale.
60.0	70.0	Little core, some fine grained grey sandstone and grey shale.
70.0	74.5	Medium grained white sandstone, Fe stained.
74.5	75.5	Grey-green clay with Fe stain in fractures.
75.5	76.5	Fine grained, yellowish-green sandstone, grading to red at contact with red shale.
76.5	85.0	Variegated red to green shale.

D. D. HOLE NO. 34 ON MAP-MINERALS #34 VISION GROUP

COLLAR ELEVATION: 6551.2 DEPTH: 70.0feet

CORE RECOVERY FROM HOLE: 38% SIZE OF BITS: 0.0' to 10.0':NX
10.0' to 30.0':BX
Remainder: AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	10.0	Bro ken red clayey material, probably topsoil.
10.0	15.0	No core. Quartzitic sand rubble.
15.0	20.0	(0.5' core) Very fi ne grained sandstone and reddish shale rubble.
20.0	25.0	Red shale.
25.0	30.0	Fine grained white sandstone, grading to light grey shale.
30.0	34.0	Light grey shale with some Fe stain.
34.0	35.5	Dark grey sandy shale.
35.5	39.5	Medium grained grey sandstone with zones of Fe stain and dark grey shale inclusionsnear the base.
39.5	40.5	Grey silt stone.
40.5	55.0	Grey clay and shale with a few beds of sandy shale.
55.0	64.0	Grey sandy shale with few sonesof Fe stain.
64.0	70.0	Fine grained grey sandstone.

D.D. HOLE NO. 35 ON MAP-MINERALS #35 VISION GROUP

COLLAR ELEVATION: 6530.2 DEPTH: 220.0 feet

CORE RECOVERY FROM HOLE: 68% SIZE OF BITS: 0.0' to 10.0':NX
10.0' to 30.0':BX
Remainder: AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	White fine grained sandstone, quartzitic.
10.0	17.5	White fine grained sandstone, with thin carbonaceous bands at bottom. SAMPLE #1.
17.5	20.0	Yellow clay, with bebbles, bed of hard sandstone grits at bottom.
20.0	23.3	Poorly cemented grits, probably clay matrix.
23.0	30.0	Grey to red sandy shale.
30.0	36.5	Variegated red and grey shale.
36.5	38.0	Grey, fine grained sandstone.
38.0	38.8	Variegated red and white shale. Some sand shale.
48.8	50.0	Grey sandy shale.
50.0	80.0	Variegated sandy shale, red and grey. Some green clayey layers. Some sandstone beds with inclusions of shale.
80.0	102.0	Coarse to medium grained grey sandstone with some Fe stain.
102.0	103.5	Grey clay.
103.5	106.0	Light grey, medium grained friable sandstone, Fe stains in thin zones.
106.0	109.0	Grey clay with thin sandstone beds.
109.0	126.0	Brown to red, fine grained sandy shale, with calcite stringers.
126.0	131.0	White to brown, medium grained sandstone, some Fe stain.
131.0	139.0	Light grey to dark grey shale.
139.0	140.0	Brown, fine grained sandstone, with yellow Fe stain.

140.0	141.0	White to grey, medium grained sandstone.
141.0	144.5	Brown sandy shale, with considerable trash carbon and Fe staining. SAMPLE No. 2.
144.5	166.0	Coarse grained, friable white sandstone, Fe stained, calcite in fractures.
166.0	168.5	Interbedded grey sandstone and green clay.
168.5	171.0	Fine to medium grained sandstone, little Fe stain, thin bed of grits at base.
171.0	172.0	Interbedded sandstone and clay.
172.0	205.0	Coarse grained white sandstone with some Fe staining.
205.0	220.0	Red sandy shale and clay.

D. D. HOLE NO. 36 ON MAP- MINERALS NO. 37 VISION GROUP

COLLAR ELEVATION: 6525.5 DEPTH: 125'

CORE RECOVERY FROM HOLE: 60% SIZE BITS: ALL AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	10.0	Topsoil.
10.0	14.0	White fine grained sandstone.
14.0	21.0	Grey to red sandy shale.
21.0	35.0	Variegated red and grey shale.
35.0	48.0	Variegated red and white shale.
48.0	72.0	Variegated red and grey sandy shale.
72.0	78.0	Fine grained grey sandstone.
78.0	85.0	Light grey coarse grained friable sandstone.
85.0	90.0	White medium grained sandstone, some Fe stain.
90.0	97.0	Coarse grained, friable brown sandstone, Fe stained.
97.0	108.0	Grey to brown shale.
108.0	125.0	Red shale and clay.

D. D. HOLE NO. 41 ON MAP-MINERALS #41 VISION GROUP

COLLAR ELEVATIO : 6534.7 DEPTH: 189.0'

CORE RECOVERY FROM HOLE: 30% SIZE OF BITS: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	104.0	Plug bit, no core.
104.0	105.5	Red shale.
105.5	189.0	Variegated shale and sandy shale with thin sandstone ribs. Apparently Brushy Basin.

D. D. HOLE NO. 45 ON MAP-MINERALS #40 VISION GROUP

COLLAR ELEVATION: 6531.9 DEPTH: 190 feet

CORE RECOVERY FROM HOLE: 48.8% SIZE OF BITS: ALL AX

DEPTH, FEET FROM	TO	DESCRIPTION
0.0	80.0	Plug bit.
80.0	134.0	Variegated shale and sandy shale, red to grey. Brushy Basin.
134.0	151.0	White to grey sandstone with clay inclusions. Some Fe stain in zone.
151.0	153.0	Light grey clay and sandy shale.
153.0	166.0	Coarse grained white sandstone with some Fe stain.
166.0	170.0	Fine grained grey sandstone.
170.0	174.0	Light grey sandy clay.
174.0	177.5	Light grey, shaley sandstone.
171.5	180.0	Variegated sandy shale, red and grey.
180.0	190.0	Medium grained white to grey sandstone.

D. D. HOLE NO. 46 OU MP-MINERALS #46 VISION GROUP

COLLAR ELEVATION: 6474.8 DEPTH: 124.0 feet

CORE RECOVERY FROM HOLE: 34% SIZE OF BITS: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	40.0	Plug bit, no core.
40.0	40.5	Red shale (bottom of Brushy Basin, member of Morrison).
40.5	59.0	White, friable sandstone, some brown Fe stain.
59.0	61.5	Grey, sandy shale, with nodules of dark, hard shale. Poor core recovery.
61.5	63.5	White, friable sandstone, sparsely Fe stained.
63.5	87.5	Grey to pink shale with sandy shale bands.
87.5	90.0	Grey, fine grained sandstone.
90.0	94.0	Red shale with some sandy shale.
94.0	95.0	Grey, hard quartzitic sandstone.
95.0	104.0	Red sandy shale, quite friable.
104.0	106.0	Grey, hard sandstone, with some carbon particles, purple stains.
106.0	114.0	Light grey hard quartzitic sandstone.
114.0	122.0	Medium grained, grey to white sandstone, with some red Fe stain, friable.
122.0	124.0	Red and green variegated shale and clay.

D. D. HOLE NO. 47 ON MAP-MINERALS #39 VISION GROUP

COLLAR ELEVATION: 6451.5 DEPTH: 204.5 feet

CORE RECOVERY FROM HOLE: 90% SIZE OF BITS: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	30.0	Plug bit, no core.
30.0	204.5	Grey Mancos shale, uniform, with very thin pyrite stringers in widely separated fractures.

D. D. HOLE NO. 39 on MAP-MINERALS #47 VISION GROUP

COLLAR ELEVATION: 6555.4 DEPTH: 134.0 feet

CORE RECOVERY FROM HOLE: 72% SIZE OF BITS: BX

DEPTH FROM	FEET TO	DESCRIPTION
0.0	30.0	Plug bit.
30.0	32.0	Light grey coarse grained sandstone, with Fe stain.
32.0	35.0	Grey-green sandy clay.
35.0	36.5	Brown, fine grained sandstone, calcite stringers.
36.5	40.0	Variegated purple and green sandy shale.
40.0	44.0	Fine grained grey to green variegated.
44.0	48.0	Coarse grained sandstone and grits, Fe stains.
48.0	50.0	Red clay and clayey sand.
50.0	55.0	Grey clayey sand, red bed, 52.0' to 53.0'.
55.0	60.0	Grey fine grained sandstone, grading to clay at 60.0'.
60.0	62.0	Medium grained sandstone, brown and grey clay inclusion at bottom of bed.
62.0	64.5	Red and green variegated clay.
64.5	65.5	Fine grained sandstone, brown and grey.
65.5.	69.0	Variegated clay, red and grey.
69.0	73.0	Light grey, Fe stainedquartzitic sandstone, fine grained.
73.0	74.5	Light grey clay and clayey sand.
74.5	120.0	Medium to coarse grained sandstone, white, Fe stained, some friable grits at bottom.
120.0	134.0	Variegated interbedded fine grained sandstone and shale, red and grey.

D. D. HOLE NO. 42 ON MAP-MINERALS #42 VISION GROUP

COLLAR ELEVATION: 6541.5 DEPTH: 214.5 FEET

CORE RECOVERY FROM HOLE: 35% SIZE OF BITS: ALL AX

DEPT, FEET FROM	TO	DESCRIPTION
0.0	114.0	Plug bit, no core.
114.0	143.0	Coarse, white sandstone with Fe stain. Carbonaceaus material in thin bands.
143.0	144.5	Light grey sandy clay.
144.5	153.5	Medium grained white sandstone, little Fe stain.
153.5	154.5	Shaley sandstone, some inclusionsof dark grey shale.
154.5	170.0	Red shale.
170.0	192.0	Coarse grained, white sandstone, Fe stained.
192.0	199.0	Fine grained white sandstone, little Fe stain.
199.0	214.5	Coarse grained white sandstone, Fe stain.

D. D. HOLE NO. 43 ON MAP-MINERALS #43 VISION GROUP

COLLAR ELEVATION: 6544.3 DEPTH: 255.0 feet

CORE RECOVERY FROM HOLE: 35% SIZE OF BITS: ALL AX

DEPTH, FEET		DESCRIPTION
FROM	TO	
0.0	128.0	No core, apparently drilled with plug bit.
128.0	129.5	Red shale (bottom of Brushy Basin).
129.5	140.0	Grey sandstone, withbands of red shale, Some bands of hard, fine grained sandstone.
140.0	146.5	Grey to pink shale.
146.5	177.0	Grey sandstone with interbedded shaley sandstone. Some Fe stain.
177.0	178.0	Soft grey clay with Fe stain and carbon inclusions.
178.0	186.5	Red shale with bands of sandy shale.
186.5	224.5	Large grain, poorly cemented friable sandstone with brown Fe stain.
224.5	227.0	Grey-green sandy shale with stringersof calcite.
227.0	246.5	Coarse grained,friable, white sandstone with Fe stain.
246.5	255.0	Grey-green fine grained shaley sandstone, grading to red at bottom.

February 26, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA 1309X, Contract Idm-E192, Plateau Mining Co., Grand County, Utah

Attached are five copies of a letter received from Frank L. Seymour, officer of the Plateau Mining Co., in which he states that no unused materials, supplies, or equipment remained on the property at the completion of the contract work. The Government, therefore, has no equity in any items purchased under the contract terms.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

18 February, 1953

Defense Minerals Administration
Bureau of Mines
1600 East First Street South
Salt Lake City, Utah

Attention: Mr. Stephen Wilson

Re: Docket No. DMA-1309X

Gentlemen:

Please permit this letter to serve as a full and final accounting of the operations of Plateau Mining Company under Subject Contract.

We trust that the final report submitted along with our vouchers for the months of August, September and October, will satisfy the requirement of a final report as required under Clause 17 of Subject Contract.

We would like to further affirm that there are no unused materials, supplies or equipment at the completion of the contract. The total amount of money expended by the contractor was $14731.37 as indicated on form MI-104A for October, 1952. We are forwarding this final report and affirmation of no unused materials in five copies for your files.

We want to thank all of you in the Defense Minerals Administration for your cooperation with this matter.

Yours truly,

F. L. S.

Frank L. Seymour

FLS:nm

6/9/53. db.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 East First South St.
Salt Lake City 1, Utah

COPY

May 19, 1953

Mr. John Tunnell
Plateau Mining Company
U.S. Bank Building
Grand Junction, Colorado

Dear Mr. Tunnell:

Reference is made to the Exploration Project Contract between the Government and Bowles-Heflin Mining Company, under Contract Idm-E192. The contract was assigned to Plateau Mining Company by "Assignment and Release" dated June 15, 1952.

Article 14 of the above contract states, "Upon completion of the project or termination of the contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability."

Under date of March 21, 1953, a report was submitted by Frank Seymour to W.H. King, 224 New Customhouse, Denver, Colorado. The report was intended to be the final report from the operator, but lacks the proper geologic and engineering data as requested under Article 14 of the contract.

Please prepare additional information describing the work accomplished and illustrating the description with proper maps.

Final audit of the accounts cannot be scheduled, or final MF-104 forms processed for payment, until a satisfactory engineering and geologic final report is received from the operator.

Sincerely,

Stephen R. Wilson, Chief
Minerals Development Branch
Mining Division, Region IV

cc: W. H. King
file

224 New Customhouse
Denver 2, Colorado

May 14, 1953

Memorandum

To: S.R. Wilson

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1309X (Uranium), Contract Idm-E192
Plateau Mining Co., San Juan County, Utah

Enclosed is a copy of the operator's final narrative report which was submitted for work under the subject contract. The report was received in this office March 26, 1953, and we are sorry that we inadvertently neglected to send you a copy.

The operator does not describe the work performed or furnish maps to depict the accomplishments. The narrative report, maps and drill logs attached to the MF-104 report for October 1952 do supply some information, however we are in doubt as to whether or not the work performed by Bowles-Heflin, before the contract was assigned to Plateau, is included.

Under item (3) of the "Assignment and Release" between Bowles-Heflin and the Plateau Mining Company, the assignee assumes all terms, provisions and conditions of the DMEA contract, therefore they are obligated to furnish an adequate engineering and geologic report on all work performed under the contract.

Please advise the operator that the final audit cannot be scheduled, or their final Form MF-104 report processed for reimbursement to them, until an adequate engineering and geologic report is received.

When the enclosed report has served your needs please return it to this office

JWT:jp

W.H. King

cc Contract
Chron
AHKoschmann
JWTownsend

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

April 24, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Utah. Your memorandum of March 20, 1953.

The subject MF-104 forms and attached data have been reviewed as requested in your memorandum of above date.

Under denoted paragraph 1 in your memorandum, the apparent overcharge of $36.75 does not appear on the October MF-104 forms. An error occurs on the penciled sheet attached to the invoice as follows:

Hole	0-200'	Over 200'
42	200'	14.5'
43	200'	55.0'
47	134'	
	534'	69.5'
	At $2.50 per foot	At $3.00 per foot
	$1335	$208.50

The sum of $208.50 was shown as $245.25 on the penciled sheet. The October MF-104 forms show a charge of $1,543.50 ($1,335 + $208.50) for 603.5 feet (534 + 69.5) of drilling, which apparently is correct. The error was noticed by the operator and is not reflected in the MF-104 forms.

The above-mentioned invoice was certified and returned to this office by letter dated April 23, 1953. Copies of this letter are attached. The penciled sheet was corrected to correspond with the tabulation above.

Paragraph 2 in your memorandum points out a total difference of 234 feet in footage drilled as shown by the subcontractor's invoices and that shown on the MF-104 forms. The 20-foot discrepancy on the August invoice is the result of an incorrectly located drill hole, as stated in Frank Seymour's attached letter. Reference to the October MF-104 forms and narrative discloses that hole 29C, 34' (Minerals Engineering Number) was a mislocated hole and hole 48, 180' (Minerals Engineering Number) was drilled on a claim not included under the contract. The two holes total 214 feet and account for the discrepancy. The footage is not reported on the October MF-104 forms, but is charged to company work.

The original data as returned to this office, with certified invoice, are enclosed.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

COPY

FRANK L. SEYMOUR
Attorney at Law
317 Main
Grand Junction, Colo.

April 23, 1953

United States Department of the Interior
Bureau of Mines
1600 East First South Street
Salt Lake City 1, Utah

Attn: Stephen R. Wilson, Chief
Minerals Development Branch
Mining Division, Region IV

Dear Mr. Wilson:

Thank you for your letter of March 24, 1953. I am no longer associated with Plateau Mining Company, nor do I represent them; but I am glad to return an answer to the above-mentioned letter.

I enclose the certified invoice from Minerals Engineering Company. I have also made the change on the penciled sheet attached to the invoice.

Regarding your last paragraph of the letter of March 24th, the difference of 20 feet is the result of an incorrectly located drill hole which we are not charging to the DMEA.

I trust this information will satisfy the requirements of your office.

Sincerely,

/s/ Frank L. Seymour

fls/lc

Enc.

COPY

224 New Customhouse
Denver 2, Colorado

March 20, 1953

Memorandum

To: S.R. Wilson

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 1309X (Uranium), Contract Idm-E192, Plateau Mining Co., San Juan County, Utah - MF-104 Forms for Oct. 1952

Enclosed is the subject report complete as submitted to this office except for the original and one copy of your memorandum of transmittal dated January 26, 1953.

Mr. Finch of the Contract Administration and Audit Division, while in the process of preparing a final Report of Review of the operator's reports pertaining to the project operation, has uncovered the following discrepancies and errors which must be corrected before the review can be completed:

1. The invoice for drilling attached to the October 1952 MF-104 submitted by the operator is not a certified copy and contains an apparent overcharge of $36.75 on the extension of the charge for 69.5 feet of hole drilled in excess of 200 feet in depth. It will be necessary for the operator to provide an accurate certified copy of the drilling company's invoice.

2. The October 1952 MF-104A indicates total footage for core drilling of 4889.7 feet, whereas the total footage billed by the subcontractor shows a total of 5123.7 feet, or a difference of 234 feet. This difference appears as follows:

August Invoice	1782.7 feet	
MF-104A	1762.7 feet	
		20 feet
October Invoice	817.5 feet	
MF-104A	603.5 feet	
Difference		214 feet
Total Difference		234 feet

The above discrepancy must be corrected. Please forward the report to the operator for the necessary corrections and, after correction, return to this office as soon as possible.

W.H. King

JWT:jp
cc Contract
Chron
DFinch

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

January 26, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-1309X, Contract Idm-E192, Plateau Mining Co., San Juan County, Utah. MF-104 forms for October 1952.

Enclosed are the original and four copies of MF-104 forms pertaining to work under the subject contract for October 1952. A memorandum of progress was prepared by H. K. Thurber, Jr., copies of which are attached.

The data were originally received from the operator during November 1952, but because of a conflict with Federal oil and gas leases, the forms were returned with the suggestion that a division be made between exploration on property held under oil and gas leases and that on non-leased ground. However, the operator submitted the present forms with no division; thus part of the expenditures have been made on property held by oil and gas lease. The operator has included a copy of an application for lease with the AEC, but this document is not sufficient to permit payment of expenditures on presently invalid mining claims. The lease application is included with the August 1952 MF-104 form. The forms are recommended for approval in the amounts shown, subject to clarification of the oil and gas conflict and arithmetical accuracy.

The data attached to the MF-104 forms are deficient in copies of the narrative report, hole logs and maps. The original of the forms includes this information, but the copies do not.

Exploratory work on the property has been completed with an expenditure less than permitted in the contract. The Government may have equity in supplies remaining from the Bowles-Heflin operation, previous to Plateau Mining Co. No operating equipment was purchased and no expenditures were made for fixtures and improvements during the life of the project.

The present MF-104 forms were received from the operator January 21, 1953.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

G. R. Wilson

January 26, 1953

R. R. Thurber, Jr.

Review of MF-104 forms for August, September and October, DMT-1309X, Contract Idx-E192, Plateau Mining Co., San Juan County, Colo.

The subject MF-104 forms and supporting documentation representing all of the diamond drilling completed under Amendment No. 1 of Contract Idx-E192, were reviewed this date. The drilling under the amendment was started on August 1, 1952, and completed October 9, 1952, during which time a total of 4,089.7 linear feet of hole was drilled under the contract terms.

The drill logs presented by the operator and the drilling subcontractor's invoices agree as to the total footage drilled. Observation of the cores further substantiates the footage claimed by the operator.

The work was in conformance with Amendment No. 1 to the contract, with the exception of the requirement regarding the saving of sludge. Recovery of good sludge samples from the drilling apparently was difficult due to broken nature of the ground in the area. This is explained in the original and copies of a letter from the drilling subcontractor to the operator in reply to the operator's complaint regarding loss of sludge. Inasmuch as the operator has probed the holes with a standard make of Geiger counter which showed some uranium mineralization, but no ore, the loss of sludge does not alter the results of the drilling.

The following is a review of specific items for all three months:

Item 1. Drilling

August - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

September - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

October - Allowed by Amendment No. 1, in conformance with contract, except as noted in a foregoing paragraph and substantiated by drill logs and driller's invoice.

Item 2. Supervision

August - Supervision is allowable by Amendment No. 1 at $1.75 per hour and charged for entire month for preparing drill sites previous to actual drilling and during actual drilling. A certification of the total amount paid the supervisor for each month of the work under the contract is attached to the MF-104 forms.

September - Supervision charged is allowable and necessary to the contract work.

October - The supervision charge for one week is allowable, since the actual drilling was completed October 9, 1952.

Item 4. Depreciation

August - The charge of $50.00 depreciation on the Caterpillar D-4 tractor-dozer is allowable under the schedule outlined in the contract and the use of this machine for a full month was necessary to the conduct of the project.

September - The use of this machine for a full month was necessary to the conduct of the project.

October - A depreciation charge for one week is made for this reporting period. This is allowable, since actual drilling was completed October 9, 1952.

Item 8. Contingencies -

September - The core boxes shown in this category was an expense necessary to the proper conduct of the project and is allowable.

It should be noted that both MF-104 and MF-104A forms carry the wagon drilling done by Bowles-Heflin in the "Totals previously reported," and "Totals to date" columns. The total reimbursement under this former work has been made.

The narrative reports, drill logs and maps accompanying the MF-104 forms are sufficient.

Payment is recommended, subject to clarification of property status in relation to Federal oil and gas leases in the area, and check of arithmetical calculations, for the following:

Month	Total Project Cost	90% Reimbursement
August	$4,736.75	$4,263.07
September	6,778.96	6,101.06
October	1,626.00	1,463.40
Totals	$13,141.71	$11,827.53

The total recommended for reimbursement is $11,827.53.

H K Thurber Jr. SRW

H. K. Thurber, Jr.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 2 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of _____ 195____ Docket No. DMEA _____ Contract No. _____
Operator's Name _____ Minerals _____
Address _____

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1,626.00		14,731.37				

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 _____ Operator _____

Per Frank L Seymour Title _____

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

REMARKS: _____

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

U. S. GOVERNMENT PRINTING OFFICE 205676

COPY

REPORT ON PROGRESS OF DIAMOND DRILLING

YELLOW CIRCLE PROPERTY, SAN JUAN COUNTY, UTAH

CONTRACT 1309X

The diamond drilling under Contract 1309X was started in August, 1952, on the Jane group of claims. Minerals Engineering Company of Grand Junction contracted the work. Sixteen holes were drilled on Jane 4, 5 and 6, averaging approximately 110 feet in depth. These holes and their location relative to the claim lines are shown on Drawings Nos. 1 and 3 attached hereto.

The logs of the cores, Supplement 1 to this report, indicate that these holes penetrated sand and shale lenses typical of the Salt Wash member of the Jurassic Morrison formation, including some lenses of coarse iron grained, stained sandstone, thought by those working in the area to be indicative of favorable conditions for Carnotite deposition. No ore was found, however. Results of samples taken from cores from these lenses show uranium and vanadium mineralization, but no ore. Observation of the cores shows the most "favorable" sandstone to be in the southernmost hole of the group, Hole 28. The character of the sandstone closely resembles the low grade ore and waste being mined in the No. 1 Incline on the Carol B. claim immediately joining Jane 6 on the west. The relation of the elevations of the ore being mined and the "favorable" lens encountered in Hole 28 lead to the conjecture that the cores may indicate an extension of the ore horizon on to the Jane group in this area.

REPORT ON PROGRESS OF DIAMOND DRILLING

[illegible] PROPERTY, SAN JUAN COUNTY, UTAH

CONTRACT [illegible]

The diamond drilling under Contract [illegible] was started on August, 1952, on the Lone Star claim. Directly underneath the tempo of usual production conveyed the rock. Sixteen holes were drilled on Zone A, 3 and 6, averaging approximately 100 feet in depth. These holes and their location relative to the shaft house are shown on Drawings No. 1 and 3 attached hereto.

The logs of the cores, Supplement I to this report, indicate that there holes penetrated hard and white Jersey typical of the Salt Lake member of the Jurassic Morrison formation, including some layers of coarse iron pyrites, altered sandstone, though by more working in the area to be indicative of favorable conditions for Uranium deposition. In one way though, however. Results of assays taken from cores from these holes show erratic and extremely unpredictable, but no ore. Observation of the cores show the most "favorable" sandstone to be in the mineralized hole of the group, Hole 2B. The observation of the sandstone closely resembles the low grade ore and waste being mined in the Ia. I Heights on the Group 6. Hole immediately joining Zone 6 on the east. The relation of the clayey sand of the ore being mined and the "favorable" zone encountered in Hole 2B lead to the conjecture that the cores may indicate an extension of the ore horizon on to the Lone Star in this area.

After completion of the sixteen holes on the Jane group, the two drill rigs were moved to Vision No. 4 claim, where eleven holes were drilled averaging 120 feet in depth. Hole 29 showed "favorable" sandstone at 65 to 70 feet. Sample #3 indicates uranium mineralization in the available core, but no ore. Other holes were drilled in an irregular pattern to delimit this lens. The sandstone was found to be limited in extent, and the cores showed no ore.

The drills were moved to the east end of the Vision group, where eleven holes were drilled, averaging 154 feet deep. The cores from this area showed no ore, but some coarse grained highly iron stained sandstone, with considerable trash carbon was encountered. Samples No. 1 and No. 2 from Hole 35 showed some uranium mineralization.

Unfortunately, little continuity of beds could be established because of displacement of the beds by minor faulting apparently attendant to a fault lying between Holes 46 and 47. It will be noted from the hole logs that Hole 46 shows typical Jurassic Morrison Salt Wash sandstones and shales, while Hole 47 was drilled entires in Cretaceous Mancos shale, the bottom of which ties stratigraphically approximately 400 feet above the top of the Salt Wash member of the Morrison formation. Cain Spring Canyon probably represents the trace of the major fault in the area.

The core recovery from all the holes was only fair, the over-all average 51%. A perusal of the core logs shows that the core recovery on the Jane group was consistently better than the core recovery on the Vision group. This was due, in part, to the fractured nature of the ground on the latter group.

The drills were removed from the property October 8, 1952, after the minimum contract footage had been drilled. A summary of the project shows the following:

Number of holes drilled:	38
Average depth of holes:	128 feet
Average over-all core recovery:	51%

Although the drilling showed no ore, the southernmost holes on the Jane group did indicate the possible extension of the Carol B. on to the Jane group.

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Mineral Administration
Washington 25, D. C.

224 New Customhouse
Denver 2, Colorado

March 20, 1952

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Executive Officer, Region IV

Subject: Monthly Progress Reports, Form MF-104

Enclosed is one copy of the Monthly Progress Report, Form MF-104 and one copy of the narrative report for DMA Docket 1309X , Contract No. Idm-E192 for the months of November 1951 and December 1951.

W. H. King.
W. H. King, for
J. H. East, Jr.

Enclosures:

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.
MAR 24 8 34 AM '52

W. C. [illegible]

[illegible]

RECEIVED
OCT 16 1951
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

RECEIVED
OCT 12 1951
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 1309x

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Exploration

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Routing Slip

To:	Production Expansion Div	Date	9-20-51
To:	~~Director, Supply Division~~ Production Expansion Division	Date	SEP 24 1951
To:		Date	
To:	F. L. Knouse	Date	10/5/51
To:	Legal	Date	10/12/51
To:	Mr. Knouse	Date	10/15/51
To:	Legal	Date	10/16/51
To:	PED	Date	10/19/51
To:	Legal	Date	10/24/51
To:	P.E.D.	Date	10/24/51
To:	R & R	Date	12/5/51
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OCT 12 1951

GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

Project Summary Report

By: F. L. Knouse February 8, 1954

1. Docket No. DMEA-1309 (Uranium)
Contract No. Idm-E192
Property - Yellow Circle claims, San Juan County, Utah

Operator - Plateau Mining Company, Assignee of Bowles-Heflin Mining Co.
U. S. Bank Building
Grand Junction, Colorado

Operator's Property Rights -

Sole owner - Bowles-Heflin Mining Company, Moab, Utah
(Original Operator)
Exploration contract assigned, transferred, and conveyed to Plateau Mining Company "including any and all property purchased for, and the right to use any and all property devoted to, the exploration work under the terms of the contract;" by Assignment and Release dated June 15, 1952.

2. Contract dated October 23, 1951
Assignment and Release dated June 15, 1952.

Work authorized -

25,600 feet of wagon drilling at $0.74 per ft., at a total estimated cost of $18,944.00, which amount included supplies, repairs, supervision, engineering, sampling, assaying, drilling, mapping and office expense.

Amendments -

No. 1, dated August 5, 1952, effective June 15, 1952. Plateau Mining Company, after assuming obligations of the exploration contract, requested that diamond drilling be substituted for the wagon drilling. Amendment No. 1 permitted this and revised certain wage rates. No increase in the total project cost was allowed by the amendment, but the total footage to be drilled was reduced to offset the increased cost per foot of diamond drilling.

Work completed -

Work under the contract was begun on November 19, 1951, by the Bowles-Heflin Mining Co., and was recessed January 4, 1952, due to severe winter conditions. During this period,

1,316 feet of wagon drill holes were drilled on the Jane Nos. 4, 5 and 6 claims and on the Pioneer No. 1 claim. This constituted all of the work done by the Bowles-Heflin Mining Co. under the contract.

Upon the assignment of the contract to the Plateau Mining Company, work was resumed by that company on August 1, 1952, pursuant to the provisions of Amendment No. 1. The drilling was contracted by the Minerals Engineering Co. of Grand Junction, Colorado. A total of 4,889.7 linear feet of BX- and AX-size diamond drill hole was drilled on the Jane and Vision groups before project work was stopped October 9, 1952.

The average over-all depth of the holes drilled was 128.7 feet, and the over-all core recovery for the project was 58 percent. The relatively low average core recovery resulted from the badly fractured nature of the ground on the east end of the Vision group where numerous faults have displaced the beds varying amounts. The sandstone beds drilled on the Jane group were found to be undisturbed.

In addition to the drilling under the contract, work accomplished consisted of road building, drill site preparation, engineering and map preparation.

3. Audit - Report of Review, dated December 21, 1953.

Total Cost as billed by Contractor and Total Accepted Cost (No exceptions)	$14,731.37
90% Government participation	$13,258.23

4. Certification - None

5. Comments -

The project was established to explore the ore horizons in the Salt Wash member of the Upper Jurassic Morrison Formation.

No ore was discovered by the project work on the claims drilled under the contract. Some weak uranium mineralization was encountered in the wagon drilling on the Jane No. 4, but later underground work which exposed the mineralized zone in drift faces showed that radiometric indications were unreasonably high. Probing of the diamond drill holes on the Jane and Vision groups of claims by an AEC logging unit revealed an estimated 0.039 percent U_3O_8 as the maximum grade of mineralization encountered in any hole that could be probed.

5. Comments (continued) -

The exploration work did not result in a discovery of uranium ore, therefore a certification of discovery or development was not recommended by the Field Team.

The results of the drilling under the contract and later underground work done by the Operator indicate that additional exploration either by the Operator or the Government is not warranted.

Recorded production by Metals Reserve Company for the period June 1942 to March 1944 is 2,925 tons containing an average of 1.88 percent V_2O_5. The A.E.C. reports a production of 2,839 tons for the period April 9, 1948, to February 28, 1951, containing an average 0.315 percent U_3O_8 and 1.37 percent V_2O_5.

The work was done in a satisfactory manner.

- - -

Final payment to the Operator was processed by Region IV on January 14, 1954, in conformance with the final Report of Review by the Contract Administration and Audit Division dated December 21, 1953. No equipment was purchased for the project, and no supplies or material remain in which the Government has an equity.

F. L. Knouse

F. L. Knouse

Copies to:

Docket (original)
Administrator's Reading File
Operating Committee
Division contract file
Mr. Knouse

☒ Audited

☐ Certified No

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of 12/6/54
Incl. Voucher for October 1952

☒ Actual Cost

☐ Agreed Unit Costs

Name Plateau Mining Company
(Former) Bowles-Heflin Mining Co.

State Utah

Commodity Uranium and Vanadium

DMA Docket No. 1309X

Idm-E No. 192.

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling - Wagon 1/	1316'	1589.66	1316'	1589.66	1589.66
(Specify) Diamond Core	6458'	17354.34	4889.7'	13141.71	13141.71
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals →		$18,944.00		14,731.37	14,731.37

Distributed above:

	Wagon Drill	Diamond Drill
Wages	$704.40	$12,361.84
Equipment rental	138.60	1740.44
Supplies	630.16	2915.92
Misc.	96.50	336.14
	$1589.66	$17354.34

Prepared by [signature]

1/ contract originally written estimates 25,000' of drill hole at cost of $18,944.00 or $0.74/ft
amended to permit diamond drilling [signature]

71626

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: February 24, 1954

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Final Field Team Report, DMEA Docket 1309X (Uranium), Contract Idm-E192, Plateau Mining Company (formerly Bowles-Heflin), contractor, Grand Junction, Colorado; Yellow Circle claims, Secs. 2, 3, and 4, T. 28 S., R. 23 E., and Secs. 34 and 35, T. 27 S., R. 23 E., San Juan County, Utah

The Field Team Report on the results of exploration with DMEA assistance at the property identified above has been reviewed.

Comment

Exploration by 1,360 feet of wagon drilling and 4,890 feet of diamond drilling on the Pioneer, Jane, and Vision group of the Yellow Circle claims failed to find any uranium-bearing ore although the group had a production record of several thousand tons of ore. The exploration was aimed at finding new mineralized areas or extensions of known mineralized areas in the Morrison formation. Preliminary measurements of radioactivity in some drill holes on the Jane No. 5 claim suggested the presence of ore on the claim in the range from 0.10 to 0.15 percent U_3O_8. Subsequent drifting and sinking in the vicinity of these holes showed no ore. Because of the unfavorable results obtained in the exploration under this contract, the Field Team concluded that no commercial ore was discovered and that no further exploration should be carried out with DMEA at the present time.

Conclusion

I concur with the conclusion of the Field Team as set forth in the report.

Arthur P. Butler Jr

Copies to: E. Wm. Ellis (2)

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

224 New Customhouse
Denver 2, Colorado

February 17, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 1309 (Uranium), Contract Idm-E192, Plateau Mining Company, Yellow Circle Claims, San Juan County, Utah

Receipt is acknowledged of your letter dated February 10, 1954 containing your comments relative to the requirement that the Operators holding old contract forms supply five copies of the final report in lieu of the four copies stipulated in the contract form.

We will endeavor in the future to obtain the required number of reports from all Operators holding the old form contract.

W H King
W. H. King

FILE COPY
SURNAME:

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

FEB 10 1954

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-1309 (Uranium)
Plateau Mining Company
Yellow Circle Claims
San Juan County, Utah
Contract No. Idm-E192

Dear Mr. King:

This is in response to your memorandum of January 29, 1954, concerning our letter of January 25 relating to the number of copies of the Operator's final geologic and engineering report required in Washington.

To the best of our recollection this is only the second instance in which Washington has not received two copies of the operator's final report. Our letter was written because of this and the fact that we took it for granted that the matter had been directly straightened out with all of the field teams in accordance with discussions held in Washington, changing the requirement from four copies to five copies of the monthly and final reports in the new contract forms and the issuance of Memorandum No. 20, thus providing an extra copy for the field; and indirectly by the suggestion in DMEA Circular No. 19 that the operators under the old contract forms be requested to furnish monthly reports in quintuplicate, and our letter to you of June 11, 1952, regarding copies of the monthly reports.

To avoid duplication of final operators' reports under the old contract forms, we suggest that each operator be contacted prior to the termination of the exploration work to see if he will not kindly furnish the Government with a fifth copy of his final report.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

Approved:

J. H. Hedges
Member, Bureau of Mines

D. M. Larrabee
Member, Geological Survey

GCSelfridge/esf - 2/9/54
cc to: Docket
Admr. R. File
Op. Committee
Messrs. H.D.Keiser, Rm. 3641
A.P.Butler, Rm. 3212
Ellis
Selfridge
Chron.

R.C.S. 8-10-54

SURNAME
DOCKET
F. L. Knouse
Ellis
Chamberlin

FEB - 9 1954

Mr. Garth W. Thornburg, President
Plateau Mining Company
U. S. Bank Building
Grand Junction, Colorado

Re: Docket No. DMEA-[illegible] (Random)
Contract No. [illegible]
Yellow Circle claims
San Juan County, Utah

Dear Mr. Thornburg:

This is with reference to the subject Exploration Contract, between your company and the Government, which contract, by assignment and release dated June 15, 1952, your company assumed from the Benfico-Harlin Mining Co., Moab, Utah.

The final audit of the contract expenditures and the final reports of the Operator and of the Field Team have been received and accepted by this Administration. Of the total amount of $[illegible].00 approved under the contract, the sum of $[illegible],732.37 was expended, 90 per cent of which, or $[illegible].23, represented the Government's share. There were no unused materials, supplies or equipment to be disposed of for the joint account of the Operator and the Government. The exploration work was completed in a satisfactory manner.

Because the results of the exploration were unfavorable, it is not our intention to make a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to Article II of the Contract which requires the Operator to "keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract."

Your interest in the Exploration Program of the Defense Minerals Exploration Administration and your willingness to participate therein are appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

FLKnouse/foc 2-8-54
cc to: Adm. Reading File
Operating Comm.
Docket
Messrs. HDKeiser, Rm. 3641
APButler, Rm. 3212 - GSA
Ellis
Knouse
DMEA Field Team, Region IV

HHH
2-9-54

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

224 New Customhouse
Denver 2, Colorado

January 29, 1954

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1309 (Uranium), Contract Idm-E192, Plateau Mining Company, San Juan County, Utah

Reference is made to your letter of January 25, 1954, wherein you advise that two copies of the operator's final report are required by the Washington office and request that we furnish an additional copy of the report as soon as possible.

Article 14 of Exploration Project Contract Form MF-200 (June 1951) stipulates that the operator will only furnish four copies of a final geologic and engineering report. We have operated under the understanding that on all the old form contracts the Washington office would duplicate all data to provide the required number of copies for your files.

W. H. King

W. H. King

FILE COPY
SURNAME:

200

Selfridge
Hedges
Larrabee

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

JAN 25 1954

Mr. W. H. King
Executive Officer
Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 1309 (Uranium)
Plateau Mining Company
San Juan County, Utah
Contract No. Idm-2192

Dear Mr. King:

This will acknowledge your memorandum dated January 14, 1954, in which you transmitted, among other documents, the original copy of the operator's final report on the above-mentioned subject.

Please be advised that two copies of the operator's final report are required on an exploration project contract. Therefore, we shall appreciate it if you will furnish an additional copy of this report as soon as possible.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

D. M. Larrabee (JHB)
Member, Geological Survey

REAdams/meb
1-22-54
cc to: Adm.Reading File
Mails & Files Br.
Oper.Comm. File

R.C.B. 1-26-54

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 22 1954

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

224 New Customhouse
Denver 2, Colorado

January 14, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket DMEA 1309 (Uranium), Contract Idm-E192, Plateau Mining Company, San Juan County, Utah

Enclosed are the following final reports pertaining to work completed under the subject contract:

1. Original copy of the operator's final report. - to code 700 Ray R & Adam

2. Original and three copies of the final geologic report by the U.S. Geological Survey.

3. Original and three copies of the final engineering report by the Bureau of Mines.

Final payment to the operator was processed by this office January 14, 1954, in conformance with the final report of review by the Contract Administration and Audit Division dated December 21, 1953, which was released to this office January 12, 1954. Final payment had been deferred pending receipt of the operator's final engineering and geologic report and release of the report of review by the Contract Administration and Audit Division.

The exploration work consisted of 1316 feet of wagon drilling and 4889.7 feet of core drilling at a total accepted cost of $14,731.37 in which the Government participated to the extent of 90% or the amount of $13,258.23. The exploration work did not result in a discovery of uranium ore, therefore a certification of discovery or development is not recommended.

W. H. King

W. H. King

A. H. Koschmann

A. H. Koschmann

Enclosures

PLATEAU MINING COMPANY

U. S. Bank Building Phone 261
GRAND JUNCTION, COLORADO

Mining Division
Date Rec'd.
DEC 16 1953
BUREAU OF MINES
Denver, Colorado

December 14, 1953

Mr. William H. King, Executive Officer
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Plateau Mining Company Final Engineering Report
DMA Docket 1309X
Contract Idm-E-192

Dear Mr. King:

Transmitted herewith are four copies of final engineering report on the work completed under DMA Contract Idm-E-192. This report is in compliance with Article 14 of the contract and your letter of February 16, 1953, and subsequent correspondence.

I hope this report is in sufficient detail and covers the various phases of the work adequately. The details of costs and drilling results have been abstracted from the office copies of the MF-104 forms already presented to the DMEA.

We appreciate your cooperation in the matter of the final report and in other problems which have arisen during the term of the project.

Sincerely,

Garth W. Thornburg

Garth W. Thornburg
President

GWT/mw

FINAL REPORT

PLATEAU MINING COMPANY

YELLOW CIRCLE AREA, SAN JUAN COUNTY, UTAH

Contract Idm-E192

DMA Docket No. 1309X

The following final report on the drilling project conducted on the Pioneer, Jane and Vision groups of claims in the Yellow Circle Area, San Juan County, Utah, under Contract Idm-E192, is written in compliance with the requirements of Article 14 of the contract. The report summarizes the expenditures of the Bowles-Heflin Mining Company and Plateau Mining Company, the drilling done by both and the results obtained. A large amount of detailed data has been presented with the MF-104 monthly report forms and some of the records of the early operation are not in our files, thus only totals of costs, etc., will be presented.

The drilling in both phases of the work under the contract was intended to find extensions of known mineralized areas or the discovery of new ore bodies in the three ore horizons of the Salt Wash member of the Jurassic Morrison formation from which production had come within the areas of the claims. The early underground work on the claims was done on the rim exposures from which good grade carnotite ore was produced during the search for radium and vanadium prior to the recent revival of interest in uranium. It was believed that a trend of mineralization had been established from observation of the old workings and from experience gained in mining. It was upon this assumed trend that the program of drilling was based.

The areas explored under the contract lie in Sec. 35 and Sec. 36 of T27S, R23E, and Sec. 2 and Sec. 3 of T28S, R23E, Salt Lake Meridian on Cain Springs Creek and South Fork of Cain Springs Creek, San Juan County, Utah.

HISTORY OF THE PROJECT

The contract with the Government was negotiated by the Bowles-Heflin Mining Company during the summer of 1951 and wagon drilling was begun by that company on the Jane group of claims in the middle of November, 1951, and continued until January 4, 1952, when Melvin Bowles, the manager of the operation, was forced to discontinue drilling because of bad weather. During the period, 1316 feet of wagon drill hole were drilled on the Jane and Pioneer groups of claims.

The Plateau Mining Company took over the operation of the Yellow Circle mine in the late spring of 1952 and, under an assignment and release dated June 15, 1952, assumed the responsibility of the DMA contract for work on the claims. An amendment to the contract was secured by the company, which allowed diamond drilling to be done in place of the wagon drilling originally specified. The drilling under the amendment (Amendment No. 1 dated June 15, 1952) was intended to explore all three known ore horizons of the Jurassic Morrison formation rather than the one which was penetrated by the wagon drill holes.

The diamond drilling under the amendment was contracted by Minerals Engineering Company of Grand Junction, Colorado, and work was begun on August 1, 1953, on Jane No. 4 claim, and continued on this group of claims until 16 holes had been drilled. These are Holes No. 16, 17, 18, 19, 20,

21, 22, 23, 23A, 24, 25, 25A, 26, 26A, 27 and 28. The location of these holes is shown on Drawing No. 3 attached.

The drills of the contractor were moved to the west end of the Vision group of claims where Holes Nos. 29, 29A, 29B, 29D, 29F, 30, 30A, 30B, 30C, 32 and 39 were drilled. When these holes were completed, the drill were moved to the east end of the Vision group where Holes Nos. 31, 33, 34, 35, 40, 41, 42, 43, 45, 46 and 47 were drilled. The drilling on these holes was completed on October 8, 1952, and the contractor removed his equipment from the property immediately thereafter.

A review of the monthly narrative reports shows that 1762.7 feet of hole were drilled in August, 1952; 2523.5 feet were drilled in September; and 603.5 feet were drilled in October; a total of 4889.7 feet drilled under Amendment No. 1 to the contract.

During the progress of the drilling, it was discovered that some of the holes were drilled on claims that were covered by prior Federal oil and gas leases (Leases SL-068552 and U-03789). The claims affected were Jane No. 3, No. 4 and part of Jane No. 5, as well as Vision No. 3 and part of Vision No. 4 on the first numbered lease, and Pioneer No. 1 on the second. Under DMA regulations, the company could not be reimbursed for holes drilled on these claims. The holes involved were Holes Nos. 16, 17, 18, 19, 23A, 25A, 26A, 29, 29A, 29B, 29D, 29F, 30, 30B, 30C, 32 and 39, drilled under Amendment No. 1,and wagon drill holes Nos. 23 through 34.

The company obtained a lease from the Atomic Energy Commission on the claims covered wholly or in part by the oil and gas leases, which perfected the title relative to the DMA contract, and reimbursement for the 90% of the expenditures during August and September was made by the Government.

PROJECT EXPENDITURES

Copies of the report forms submitted to the Government for reimbursement by Bowles-Heflin Mining Company show that $545.56 was expended during November, 1951, and $1044.10 was expended during December, 1951, on wagon drilling on the Jane and Pioneer groups of claims. The total expenditures for the phase of the contract work was $1589.66, for which 1316 feet of wagon drill hole was completed at a unit cost of $1.21 per foot. Bowles-Helfin were reimbursed for 90% of the total expenditure before the assignment of the contract to Plateau Mining Company.

The total expenditure of Plateau Mining Company under the contract totalled $13,141.71, for which 4889.7 feet of diamond drill hole was completed at a unit cost of $2.69 per foot. A summary of the project expenditures by Plateau, divided into categories, follows:--

Diamond drilling subcontract with Minerals Engineering Company of Grand Junction, Colorado	$12,271.25
Labor and supervision, 9 weeks	630.00
Depreciation on D-4 bulldozer, 9 weeks	112.50
Core boxes	127.96
Expenditures, Plateau Mining Company	$13,141.71
Expenditures, Bowles-Heflin Mining Company	1,589.66
Total expenditures under Contract Idm-E192	$14,731.37

The MF-104 forms for the period during which Plateau Mining Company operated under the contract show monthly expenditures as follows:

August	$4,736.75
September	6,668.96
October	1,626.00
Total expenditures, Plateau Mng.Co.	$13,141.71

To date, the company has been reimbursed for 90% of the expenditures for the months of August and September, or a total of $10,367.14.

The only material purchased for contract work and in which the Government would have an interest was steel and bits used by Bowles-Heflin Mining Company in wagon drilling during the first phase of the project and core boxes used in the second phase. The first named material was completely used in wagon drilling on the claims during the recess before Plateau Mining Company assumed responsibility for the project and so none remained at the close of the project work. All the drilling of Plateau was done on a subcontract basis and other expenditures were composed of labor, supervision and depreciation. The core boxes purchased by Plateau have no resale value.

RESULTS OF PROJECT WORK

Records of the previous operation in the files of Plateau Mining Company show that 14 wagon drill holes were drilled by Bowles-Heflin Mining company during November, 1951, and 12 wagon drill holes were completed during December, 1951. The former group of holes average approximately 37.5 feet deep and were drilled in the top beds of the Salt Wash member of the Morrison formation on the Jane No. 4 and No. 5 claims. These holes are shown on an attached map.

Shortly after these holes were drilled, Bowles-Heflin employees probed the holes with a Babble counter and found radiation which they believed to be "ore." However, when and incline was sunk to the mineralization, it was found to be less than 0.05% U_3O_8 by chemical assay.

The diamond drilling under the amendment to the contract was started on August 1, 1952, on the Jane group of claims. Minerals Engineering

Company of Grand Junction contracted the work. Sixteen holes were drilled on Jane Nos. 4, 5 and 6, averaging approximately 110 feet in depth. These holes and their location relative to the claim lines are shown on Drawings Nos. 1 and 3 attached hereto.

The logs of the cores indicate that these holes penetrated sand and mudstone lenses typical of the Salt Wash member of the Jurassic Morrison formation, including some lenses of coarse-grained iron-stained sandstone, thought by those working in the area to be indicative of favorable conditions for carnotite deposition. No ore was found, however. Results of samples taken from cores from these lenses show some uranium and vanadium mineralization, but no ore. Observation of the cores shows the most "favorable" sandstone to be in the southernmost hole of the group, Hole 28. The character of the sandstone closely resembles the low grade ore and waste mined in the No. 1 Incline on the Carol B. claim immediately joining Jane No. 6 on the west. The relation of the elevations of the ore mined and the "favorable" lens encountered in Hole 28 lead to the conjecture that the cores may indicate an extension of the ore "roll" on to the Jane group in this area.

After completion of the sixteen holes on the Jane group, the two drill rigs were moved to Vision No. 4 claim, where eleven holes were drilled, averaging 120 feet in depth. Hole 29 shows "favorable" sandstone at 65 to 70 feet. A sample indicated a little uranium mineralization in the available core, but no ore. Other holes were drilled in an irregular pattern to delimit this lens. The sandstone was found to be limited in extent, and the cores showed no ore.

The drill were moved to the east end of the Vision group, where

eleven holes were drilled, averaging 164 feet deep. The cores from this area showed no ore, but some coarse-grained, highly iron-stained sandstone, with considerable trash carbon was encountered. Samples from Hole No. 35 showed some uranium mineralization.

Unfortunately, little continuity of beds could be established because of displacement of the beds by minor faulting apparently attendant to a fault lying between Holes Nos. 46 and 47. It will be noted from the hole logs that Hole No. 46 shows typical Jurassic Morrison Salt Wash sandstones and mudstone, while Hole No. 47 was drilled entirely in Cretaceous Mancos shale, the bottom of which lies stratigraphically approximately 400 feet above the top of the Salt Wash member of the Morrison formation. Cain Spring Canyon probably represents the trace of the major fault in the area.

The core recovery from all the holes was only fair, the over-all average 51%. A perusal of the core logs shows that the core recovery on the Jane group was consistently better than the core recovery on the Vision group. This was due, in part, to the fractured nature of the ground on the latter group.

The drills were removed from the property October 8, 1952, after the minimum contract footage had been drilled. A summary of the diamond drilling by Plateau shows the following:

Number of holes drilled	38
Average depth of holes	128 feet
Total footage drilled	4889.7 feet
Average over-all core recovery	51%

Although the drilling showed no ore, the southernmost holes on the Jane group did indicate the possible extension of the Carol B. orebody on to the Jane group.

The logs of the holes were included with the appropriate MF-104 forms and hence are not reproduced here.

The results of the project were disappointing to the company, in that no ore was found. However, the results, when correlated with later A.E.C. drilling, shows the limits of the area favorable for ore deposition and rules out certain areas as possible drilling ground. The Plateau Mining Company does not intend to do any more drilling in the area of the DMA project work.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DENVER
JAN 22 1954

August 4, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 1309X, Plateau (formerly Bowles-Heflin) Mining Company, Yellow Circle claims, San Juan County, Utah

Enclosed are 11 copies of a final geologic report by J. William Hasler of the U. S. Geological Survey covering the above docket.

It has been recommended that no further exploratory work be done with DMEA aid at the present time.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
1-27-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 22 1954

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
July 29, 1953

Memorandum

To: A. H. Koschmann
Field Team, Region IV

From: C. G. Tillman for R. J. Roberts
Utah-Nevada District Office

Subject: DMEA Docket 1309X, Plateau (formerly Bowles-Heflin) Mining Company, Yellow Circle claims, San Juan County, Utah

Enclosed are eleven copies of a final geologic report on the Plateau (formerly Bowles-Heflin) Mining Company exploration program, DMEA Docket 1309X, by J. William Hasler, geologist, U. S. Geological Survey.

The Bowles-Heflin Mining Company was granted a DMEA loan to aid in exploration for uranium ore on the Yellow Circle group of claims, San Juan County, Utah. This Company's rights were later assigned to the Plateau Mining Company.

Uranium minerals in this area occur in the Salt Wash member of the Morrison formation of Jurassic age. Sandstone lenses in the upper part of the Salt Wash member in some places contain ore bodies that consist of northeast-striking rolls. Discovery of such ore bodies was the object of the company exploration program.

A total of 1,310 feet of wagon drilling and 4,889.7 feet of diamond drilling discovered no uranium mineralization of commercial grade or tonnage. It is recommended that no further exploratory work be done with DMEA aid at the present time.

Ralph J. Roberts

By: C. G. Tillman
C. G. Tillman

Reviewed by
DMEA OPERATING COMMITTEE
1-27-54
(date)

RECEIVED
AUG 1953
U.S. Geological Survey
Mineral Deposits Branch
Denver

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
FILE COPY
OCT 22 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA Docket 1309X, Plateau (formerly Bowles-Heflin) Mining Company

Yellow Circle Claims, San Juan County, Utah

By

J. William Hasler
U. S. Geological Survey

July 29, 1953

Reviewed by
DMEA OPERATING COMMITTEE
1-27-54
(date)

PLATEAU MINING COMPANY

SAN JUAN CO., UTAH

CONTENTS

	Page
Introduction	1
Location and Accessibility	1
History and Ownership	1
Geology	2
Ore Deposits	3
Exploratory Work	4
Results of Exploratory Work	5
Summary, Conclusions, and Recommendations	6

ILLUSTRATIONS

Fig. A-1 - Index Map of Utah
A-2 - Geologic Map showing areas of proposed exploration by the Bowles-Heflin mining company, Moab District, San Juan County, Utah
Fig. 1 - Plateau Mining Company, Yellow Circle Mine, San Juan County, Utah—Diamond drill hole map.
Fig. 2 - Plateau Mining Company, Diamond Drill Hole Map, Jane Group, San Juan County, Utah
Fig. 3 - Plateau Mining Company, Diamond Drill Hole Map, Vision Group, San Juan County, Utah

FINAL GEOLOGIC REPORT

PLATEAU MINING COMPANY

SAN JUAN CO., UTAH
DMEA 1309X

INTRODUCTION

The Bowles-Heflin Mining Company, San Juan County, Utah requested an exploration loan for a drilling program to locate new bodies of carnotite ore on the Yellow Circle group of claims, San Juan County, Utah.

In response to a request from the Field Team, Region IV, dated June 18, 1951, P. E. Hotz, R. D. Trace, and B. J. Sharp of the U. S. Geological Survey visited the property on June 29 and 30 to determine the merit of the proposed exploration program. Geologic maps of the area prepared by Union Mines Development Corporation were obtained from the files of the Grand Junction office of the U. S. Geological Survey.

Location and accessibility

The Yellow Circle group of claims is owned by the Bowles-Heflin Mining Company. The claims of this company include all of sec. 26, T. 27 S., R. 22 E.; all of sec. 32, T. 27 S., R. 23 E.; parts of secs. 33, 34, and 35, T. 27 S., R. 23 E.; parts of secs. 2, 3, and 4, T. 28 S., R. 23 E. (Fig. A1).

The Bowles-Heflin Mining Company took over the old Yellow Circle camp in Upper Cane Canyon in San Juan County, Utah. The camp can be reached by a surfaced and graded road extending east from U. S. Highway 160 20 miles southeast of Moab, Utah (fig. A-1). The road is easily maintained winter and summer.

History and ownership

The earliest recorded production of vanadium ore in the area was in 1911 when the Utah Rare Metals Company shipped 30 tons of ore to domestic

buyers and 21 tons of concentrate averaging 7.3 percent V_2O_5 to England. During 1926, H. W. Balsley mined carnotite ore at the Yellow Circle mine in Upper Cane Canyon. In 1927 the U. S. Vanadium Company of New Jersey operated briefly in the district; their properties were acquired by the Vanadium Alloys Corporation in 1929. The properties were inactive during 1932 and 1933. In 1934 the Yellow Circle Mining Company produced carnotite from about 30 small mines under contract agreements. The greatest boom for the area began late in 1939 and lasted until 1944 under the stimulus of subsidy prices. The greatest production was from June, 1942 to March, 1944 under contract with Metals Reserve Company. Recorded shipments to the Metals Reserve Company show that the Yellow Circle group yielded 2,925 tons of ore averaging 1.88 percent V_2O_5. Production data obtained by the Atomic Energy Commission representing the period from April 9, 1948 to February 28, 1951 showed that 2,839 tons of ore were shipped averaging 0.315 percent U_3O_8 and 1.37 percent V_2O_5.

On June 15, 1952, the Bowles-Heflin Mining Company assigned its rights to the Plateau Mining Company, and throughout this report the company will be referred to as the Plateau Mining Company.

GEOLOGY

The area is underlain by sedimentary rocks of Jurassic and Cretaceous age. The uranium deposits were formed in sandstone beds in the lower part of the Morrison formation. Fig. A-2.

In the Moab district the Morrison formation of Jurassic age consists of two members; the basal Salt Wash sandstone which lies with apparent conformity upon the Jurassic Summerville formation, and the Brushy Basin shale which lies conformably upon the Salt Wash. The Dakota sandstone of Cretaceous age rests conformably on the shale.

The mine workings and prospects are mainly in the Salt Wash member. This member consists largely of medium grained buff to brown to grayish-white sandstone lenses interbedded with an approximately equal thickness of reddish-brown to grayish-green shale.

These beds dip gently to the southwest and have been involved in little structural deformation (fig. A-2). A few small faults have been mapped in the area, but they have had no apparent effect on the ore deposition.

Ore deposits

The ore is localized in northeastward trending rolls and in replaced tree trunks in the sandstone lenses of the Salt Wash member of the Morrison formation.

The chief ore minerals of the productive mines are carnotite, vanoxite, and roscoelite. These minerals fill cavities in the sandstone, and have locally replaced carbonaceous material and tree trunks.

The principal ore horizon in the district is in the upper part of the Salt Wash member of the Morrison formation. Ore occurs in two sandstone lenses that are separated by as much as 25 feet of shale in the southern part of the area, but which merge northward as the shale thins and disappears. The lower sandstone is 40 to 45 feet thick and underlain by at least 10 to 15 feet of shale. The upper sandstone lense ranges from 5 to 30 feet in thickness and is overlain by shales of the Brushy Basin member of the Morrison.

Vanadium-bearing sandstone occurs in thin, discontinuous, blanket-like layers that thicken locally and in a few places form fairly well-defined rolls; all of the rolls trend northeast. There are five such layers in the lower sandstone and two in the upper sandstone.

Exploratory work

In the area northeast of the mines in the old Yellow Circle group there was a good possibility of discovering high-grade log replacements. Past history of this area has shown that the deposits are larger and of higher grade than elsewhere in the district.

The applicant proposed to explore the Salt Wash member of the Morrison formation in this area by means of 40,000 feet of wagon drilling and 10,000 feet of core drilling. Wagon drilling was to be used in those areas where the ore horizon was within 40 feet of the surface and core drilling was to be used where the ore horizon was deeper. Exploration was to be restricted to two areas, one in secs. 2, 3, and 4, T. 28 S., R. 23 E., and the other in secs. 34 and 35, T. 27 S., R. 23 E.

The examining geologists were in agreement with the company that exploratory work was warranted, but suggested that the program be modified. The alternate exploratory program, which was thought to have had a better than 50:50 chance of discovering new uranium ore bodies, is described in the following quotation from the DMEA contract executed October 23, 1951.

> This exploration work is to be confined to two areas in sections 2, 3 and 4, T. 28 S., R. 23 E., and sections 34 and 35, T. 27 S., R. 23 E. These areas are to be exposed to a depth of about 40 feet from the surface (by means of drilling with a wagon drill) through the Salt Wash member where the ore horizon is shallow. The drill holes are to follow the rolls and the holes are to be spaced every 50 feet in a northwest direction (across the rolls) and every 200 feet in a northeast direction (along the rolls) in the area indicated on the map accompanying the contract. These areas are covered by the following claims: Vision Nos. 1, 2, and 3; Jane Nos. 2, 3, 4, 5, 6, and 7; and Rex Nos. 10 and 13, the other area is covered by the following claims; Pioneer Nos. 1, 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 (Figs. 1, 2 and 3). Holes may be drilled elsewhere on Operator's ground subject to the prior approval of the government Field Team engineers. A total of 25,600 feet of drill holes are to be drilled having a starting hole diameter of 2 3/4 inches.

The estimated cost of the project was $18,944.00.

Contract Amendment No. 1, dated June 15, 1952, added the following: "Diamond core drilling may be substituted for a portion of the wagon drilling. The increased cost of diamond drilling over wagon drilling will result in the reduction of the footage drilled in order to stay within the funds allocated for the project."

Results of Exploratory Work

A total of 1,310 feet of wagon drilling was drilled on the DMEA project. Wagon drilling on the Jane No. 4 claim showed that holes 1, 2, 3, and 4 found uranium averaging 0.15 percent U_3O_8 with the radiometric probe, however, drifting and sinking on the ore did not find any uranium of commercial grade. Wagon drill holes No. 15 and 16 on the Jane No. 5 claim were probed and showed assays of 0.10 and 0.15 percent respectively, but did not prove to be of commercial grade upon further exploration of the mineralized zones. No ore was found on the Pioneer claims as a result of wagon drilling. Diamond drilling under Amendment No. 1 totaled 4,889.7 feet and included drilling the Salt Wash member of the Morrison formation on the Jane claims Nos. 3, 4, 5, 6, and 7; the West Vision claims Nos. 3 and 4; the Slaughter claims Nos. 8 and 9; and the East Vision claims Nos. 5, 6, 7, 8, 9, and 10 (see diamond drill hole maps, figs. 1, 2, and 3).

No uranium mineralization of commercial grade was found in any of the diamond drill holes.

It was requested by the U. S. Geological Survey and the U. S. Bureau of Mines that the drill holes be logged radiometrically by a representative of the Unit Technical Services Branch, Grand Junction Exploration Branch, A. E.C. The logging was accomplished on June 4, 1953 with Mr. H. K. Thurber, mining engineer, U. S. Bureau of Mines, present as the DMEA representative. Thirteen holes totalling 1,438 feet of drilling were logged. A total of 6,199.7 feet of

diamond and wagon drilling was completed with DMEA aid. The remaining holes were too badly caved to permit logging, but the information obtained from the 13 holes roughly corroborates the data supplied by the operator at the end of exploratory work.

No mineralization of commercial grade or size was found as a result of the DMEA exploration program and it is therefore recommended that no further exploratory work be done with DMEA aid at the present time.

Summary, Conclusions, and Recommendations

The Bowles-Heflin Mining Company obtained a DMEA loan October 23, 1951 to aid in the exploration for uranium ore on the Yellow Circle group of claims near Moab, San Juan County, Utah. This company assigned its rights to the Plateau Mining Company on June 15, 1952 and the latter company completed the DMEA project.

Production of vanadium and uranium ore has been more or less continuous since 1911.

The claim area is underlain by nearly flat-lying sedimentary rocks of Jurassic and Cretaceous age. The Morrison formation of Jurassic age is the principal ore-bearing formation of the district with most production coming from the lower, or Salt Wash, member. This member consists of buff sandstone interbedded with gray-green shale. The ore is localized in northeastward trending rolls and in replaced tree trunks in the sandstone lenses of the Salt Wash member. Carnotite is the principal uranium ore mineral.

An alternate exploration program was adopted which, according to the contract, authorized a maximum of 25,600 feet of wagon drilling on claims in the Vision, Jane, Rex, and Pioneer groups. Substitution of diamond drilling for a portion of the wagon drilling was authorized by Amendment No. 1.

A total of 1,310 feet of wagon drilling and 4,889.7 feet of diamond drilling was completed. Radioactive beds were encountered in four wagon drill holes on the Jane No. 4 claim and in two wagon drill holes on the Jane No. 5 claim. These radioactive areas did not prove to be of ore-grade when exposed by mining operations. No uranium mineralization of commercial grade was found in any of the diamond drill holes.

Radiometric logging of thirteen drill holes by the A. E. C. roughly corroborates the data supplied by the operator concerning the results of the exploratory drilling. The remaining drill holes were too badly caved to permit logging.

No uranium mineralization of commercial grade or tonnage was found as a result of the DMEA exploration program and it is recommended that no further exploratory work be done with DMEA aid at the present time.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Date Rec'd
DEC 2 - 1953
RECEIVED
JAN 22 1954
BUREAU OF MINES
Denver, Colorado

November 30, 1953

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMA-1309X, Contract Idm-E192 (Uranium), Plateau Mining Co., San Juan County, Utah

Enclosed are 11 copies of a final engineering report prepared by H. K. Thurber covering operations of Bowles-Heflin Mining Co. and Plateau Mining Co. under the subject docket.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

REPT.

Reviewed by
DMEA OPERATING COMMITTEE

1-27-54
(date)

PLATEAU MINING CO.
(BOWIES-HEFLIN MINING CO.)
SAN JUAN COUNTY, UTAH
DMA-1309X
Contract Idm-E192
Uranium

Final Engineering Report

By H. K. Thurber, Jr.
Mining engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
1-27-54
(date)

PLATEAU MINING CO.
(BOWIES-HEFLIN MINING CO.)
SAN JUAN COUNTY, UTAH

CONTENTS

	Page
Final Engineering Report	
Summary, conclusions and recommendations	2
Description of work completed	3
Geology	5
Expenditures	7
Efficiency of operation	8
Equipment purchased for project	8

ILLUSTRATIONS

Fig. 1 Diamond drill hole map, Plateau Mining Co., Yellow Circle mine, San Juan County, Utah
Fig. 2 Diamond drill hole map, Jane group
Fig. 3 Diamond drill hole map, Vision group

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Exploratory wagon drilling by the Bowles-Heflin Mining Co., Moab, Utah, under Contract Idm-E192, docket No. DMA 1309X (Uranium), on the Yellow Circle group of claims in San Juan County, Utah, was begun November 19, 1951. The work was recessed January 4, 1952, due to severe winter conditions. During this period, 1,316 feet of wagon drilling was done on the Jane Nos. 4, 5 and 6 claims and on the Pioneer No. 1 claim.

Under an assignment and release dated June 15, 1952, the Plateau Mining Co., U. S. Bank Building, Grand Junction, Colorado, assumed the obligations of the DMA contract and later requested that diamond drilling be allowed under an amendment to the contract. Amendment No. 1 to the contract, effective June 15, 1952, allowed this, and revised certain wage rates. No increase in the total project cost was allowed by the amendment, but the total footage to be drilled was reduced to offset the increased cost per foot of diamond drilling.

Work under the assignment and Amendment No. 1 was resumed August 1, 1952, by Plateau Mining Co. on the Jane group of claims. The drilling was contracted by the Minerals Engineering Co. of Grand Junction, Colorado. A total of 4,889.7 linear feet of BX- and AX-size diamond drill hole was drilled on the Jane and Vision groups before project work was stopped October 9, 1952.

No ore was discovered by the project work on the claims drilled under the contract. Some weak uranium mineralization was encountered in the wagon drilling on the Jane No. 4, but later underground work which exposed the mineralized zone in drift faces showed that radiometric indications were unreasonably high. Probing of the diamond drill holes on the Jane and Vision groups of claims by an AEC logging unit revealed an estimated 0.039 percent U_3O_8 as the maximum grade of mineralization encountered in any hole that could be probed.

The results of the drilling under the contract indicate that additional exploration either by the operator or the Government is not warranted. Production of uranium is not feasible from the drilled areas of the property. It is recommended that no discovery under DMEA regulations be certified on the property.

DESCRIPTION OF WORK COMPLETED

The Bowles-Heflin Mining Co. began wagon drilling under Contract Idm-E192, docket No. DMA-1309X (Uranium), on November 19, 1951, and continued until January 4, 1952, when severe winter weather caused cessation of the exploratory work. During the period, drill sites were prepared and 1,316 feet of wagon drill holes were drilled. This constituted all of the work done by the Bowles-Heflin Mining Co. under the contract. A total of 25,600 feet of wagon drilling was allowed by the contract.

An assignment and release dated June 15, 1953, was approved by the Government, transferring the responsibility and obligation under Contract Idm-E192 to the Plateau Mining Co. The company was granted Amendment No. 1 to the contract effective June 15, 1953, which allowed diamond core drilling to be substituted for the wagon drilling originally specified in the contract, and other changes in equipment and wage rates. Minerals Engineering Corp. of Grand Junction, Colorado, was engaged as independent contractor to do the drilling.

Drilling of BX- and AX-size holes was begun August 1, 1952, and was stopped October 9, 1952. During this period, 4,889.7 linear feet of holes was drilled on the Jane and Vision groups of claims. The location of the holes relative to claim boundaries and land division corners is shown on figure 1, "Diamond drill hole map, Plateau Mining Co., Yellow Circle mine, San Juan County, Utah," attached. The map shows that 16 holes were drilled on Jane Nos. 4, 5 and 6, and 22 holes were drilled on Vision Nos. 4, 7, 8, 9 and 10. Detailed locations of the drill holes on the two groups of claims are shown on figure 2, "Diamond drill hole map, Plateau Mining Co., Yellow Circle mine, Jane group," and figure 3, "Diamond drill hole map, Plateau Mining Co., Yellow Circle mine, Vision group." The maps were traced from company maps submitted with the MF-104 forms presented for payment.

The overall average depth of the holes drilled was 128.7 feet, and the overall core recovery for the project was 58 percent. The relatively low average core recovery resulted from the badly fractured nature of the ground on the east end of the Vision group where numerous faults have displaced the beds varying amounts. The sandstone beds drilled on the Jane group were found to be undisturbed.

In addition to the drilling under the contract, work accomplished consisted of road building, drill site preparation, engineering and map preparation.

GEOLOGY

The work under the contract was intended to explore the ore horizons in the Salt Wash member of the Upper Jurassic Morrison formation. The Salt Wash member consists of medium-to-coarse-grained, tan-to-gray sandstone lenses interbedded with red-to-greenish-gray mudstones. The uranium mineralization has been found in three general horizons in the Salt Wash member in irregular, lenticular bodies or "rolls." The rolls were noted to occur on different levels within the horizon. The "rolls" previously mined consisted of from a few tons of carnotite ore to several hundred tons. The ore bodies are generally noted to occur in groups, and the project was planned to locate new groups of rolls.

The wagon drilling originally proposed by Bowles-Heflin Mining Co. was intended to penetrate only the upper ore horizon on the Jane

and Vision groups and the middle ore horizon on the Pioneer group of claims. The diamond drilling done by the Plateau Mining Co. was intended to penetrate all three ore horizons. It is believed that this was accomplished.

The criteria for favorable areas in the Salt Wash member of the Morrison formation are the thickness and character of the sandstone lenses and the alteration of the red clay underlying and overlying the sandstone lenses. In only one area of the drilling were favorable conditions encountered. This was on the Jane No. 6 claim in Holes 26, 27 and 28, where a relatively thick, iron-stained sandstone was encountered. No radioactivity was noted in the core, however.

The hole logging unit sent to the area by the AEC at the request of the DMEA recorded slight mineralization in only two of the holes that remained open at the time of the probing. These were Hole 26A on Jane No. 4 claim and Hole No. 30 on the Vision No. 4 claim. The estimated grade of mineralization over 1.4 feet in Hole 26A is 0.039 percent U_3O_8, and over 1.0 feet in Hole 30, 0.017 percent U_3O_8. The thickness of the sandstone lens thought to be mineralized and the thickness of the green clay were not indicative of a favorable area.

Two face samples were taken in an incline driven to a supposedly mineralized hole on the Jane No. 4 claim drilled by wagon drill during the operation of Bowles-Heflin Mining Co. These samples assayed 0.031 percent U_3O_8 and 0.036 percent U_3O_8. The original

estimate of the operators at the time the holes were drilled was 0.12 to 0.15 percent U_3O_8, based upon probing the holes with a standard-make Geiger counter. The error in the operator's estimate may have arisen either from an incorrect calibration of the counter or from a concentration of radon gas in the holes which were probed.

No ore reserves were discovered by the drilling under the contract.

EXPENDITURES

The expenditures allowed under the contract total $18,944.00, and the Government's share of the cost (90 percent of the total) is $17,049.60. The expenditures of the Bowles-Heflin Mining Co. during their operation under the contract totaled $1,589.66, of which the company was reimbursed $1,430.69. The total expenditures by the Plateau Mining Co. operating under Amendment No. 1 to the contract were $13,141.71, for which the company has asked 90 percent reimbursement, or $11,827.53. The total expenditures by both Bowles-Heflin Mining Co. and Plateau Mining Co. under the contract have been $14,731.37, which leaves $4,212.63 unexpended. The Government's share of this unexpended amount is $3,791.38.

The question of the conflict of the claims with Federal oil and gas leases was settled by the operator obtaining an AEC lease on the areas in question.

No production came from the claims described in the contract during exploratory work under the contract.

EFFICIENCY OF OPERATION

The drilling done by Bowles-Heflin Mining Co. was accomplished in an efficient manner, but due to bad weather during the two months of operation, resulting in poor road conditions and wet drill sites, the unit cost was high. The overall cost per foot for wagon drilling during the period was $1.21. This would have been reduced materially had the operation resumed under better weather conditions.

The operations of Plateau Mining Co. and the independent contractor, Minerals Engineering Co., were slowed by use of a bulldozer too small to adequately prepare drill sites and access roads. This resulted in some delay to the drilling contractor. The cores resulting from the drilling were properly stored and marked. The overall cost per foot of the drilling under Amendment No. 1 to the contract was $2.69.

EQUIPMENT PURCHASED FOR PROJECT

No equipment was purchased for the project, and it has been administratively determined that no supplies or material remain in which the Government has equity. (Memorandum from Executive Officer, Field Team, Region IV, to Donald F. Finch, DMEA Auditor, Region IV, dated March 19, 1953).

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

224 New Customhouse
Denver 2, Colorado

November 25, 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1309 (Uranium), Contract Idm-E192, Plateau Mining Co., San Juan County, Utah

Reference is made to your letter of October 26, 1953, wherein you request advice as to when you may expect to receive the final reports of the Field Team and the operator pertaining to work under Contract Idm-E192. You also request Field Team recommendations concerning the issuance of a certificate of discovery.

In conjunction therewith, enclosed are the original and three copies of a memorandum from the Chief, Minerals Development Branch, Mining Division, Region IV, dated November 23, 1953, which indicates that no certification of discovery will be recommended and advises that the final engineering report will be submitted to this office before November 30, 1953.

W H King
W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Bureau of Mines
RECEIVED
NOV 23 1953

Mining Division
Date Rec'd
NOV 25 1953
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

November 23, 1953

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMA 1309X (Uranium), Contract Idm-E192, Plateau Mining Co., San Juan County, Utah

Reference is made to your memorandum of October 30, 1953, concerning a certification of discovery on the subject property.

H. K. Thurber, Jr., of this office met Charles Mash, an AEC representative, and operator of a gamma-ray logging unit, at the Yellow Circle property on June 4, 1953. The holes found to be open were logged with the logging unit on that date. The results of this work were interpreted by the Technical Services Branch, AEC, and copies of the recording tape, along with notes on the results, were transmitted to the Geological Survey office in Salt Lake City, via R. P. Fischer's office on June 19, 1953.

Mineralization was encountered in only two of the holes, Hole 26A and Hole 30, which contained 1.4 feet of 0.039 percent U_3O_8 and 1.0 feet of 0.017 percent U_3O_8 respectively. No ore was found in any hole.

The mineralization encountered in the early work of the project, and thought to be ore from radiometric observation by the operator, proved to be below the minimum acceptable grade when encountered by underground mining. Face samples taken by the inspecting engineer contained 0.031 percent U_3O_8 and 0.037 percent U_3O_8 and very minor amounts of V_2O_5.

As a result of these findings, no certification of discovery will be recommended.

The operator is understood to be preparing a final report. A final engineering report is being prepared by this office and will be submitted before November 30, 1953.

Stephen R. Wilson

Stephen R. Wilson

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Ellis

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

Mr. Frank L. Seymour
General Mgr. & Sec. Treas.
The Plateau Mining Company
P. O. Box 185
Moab, Utah

NOV 3 1953

Re: Docket No. DMA-1309X (Uranium)
Contract No. Idm-E192
San Juan County, Utah

Dear Mr. Seymour:

Reference is made to your above-named Exploration Project Contract for uranium. You are probably aware that in some similar cases it has been found that some part or all of the land which is the subject of the exploration project contract consists of claims located on land which was subject to prior Federal oil and gas leases. The validity of such claims is doubtful, and in some cases the Atomic Energy Commission has issued a lease to the land for whatever benefit that may afford in curing the invalidity as far as uranium is concerned.

By the recent act of Congress approved August 12, 1953 (Public Law 250, 83d Cong.), mining claims located between July 31, 1939, and January 1, 1953, on United States Lands which were then subject to oil and gas leases, may be validated by the owners of such claims, if, not later than December 10, 1953, they

> ".... post on such claim in the manner required for posting notice of location of mining claims and file for record in the office where the notice or certificate of location of such claim is of record an amended notice of location of such claim, stating that such notice is filed pursuant to the provisions of this Act and for the purpose of obtaining the benefits thereof."

If any of the land which is the subject of your Exploration Project Contract includes a located claim or claims, the validity of which might be questioned on account of a previous oil and gas lease, the statute cited is called to your attention so that you may validate your rights as above indicated, if you consider this to be in your interest. This Agency deems such validation to be desirable even though the land in question may be covered by a lease from the Atomic Energy Commission.

Sincerely yours,

C. D. Mattendorf
Administrator

cc: Docket
DMEA Field Team, Reg.IV
Division contract file, Code 700

50811

FILE COPY
SURNAME:

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

OCT 26 1953

Mr. W. L. King
Executive Officer
DMA Field Team, Region IV
221 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-1309
Contract No. Idm-192 (Uranium)
Plateau Mining Co.
San Juan County, Utah

Dear Mr. King:

In order for us to keep our records current, kindly advise when we may expect to receive the final reports of the Field Team and the Operator for the captioned project. In this connection please also furnish your recommendations concerning the issuance of a certificate of discovery.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

CONCUR:

J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

FLKnouse/db
10-21-53
cc to: Adm. Reading File
Operating Committee
Docket
Messrs: N.D.Keiser, Rm.3621
A.P.Butler, Jr., Rm.3212, GSA
Ellis
Knouse

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

224 New Customhouse
Denver 2, Colorado

May 28, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUN 2 1953

To: Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Form MF-104A and Narrative Reports covering the last period of work under DMEA Contracts

In compliance with the request contained in Minutes, Operating Committee, No. 192, dated March 20, 1953, and supplementing the data forwarded by our memorandum of May 11, 1953, we are enclosing one copy each of Form MF-104A, engineers' and operators' narrative reports for the following contracts:

1. Docket No. DMEA-1098 (Lead-Zinc), Contract Idm-E13½, Combined Metals Reduction Company, Salt Lake County, Utah - Report for the month of October 1952.

2. Docket No. DMEA-1309X (Uranium), Contract Idm-E192, Plateau Mining Co., San Juan County, Utah - Report for the month of October 1952.

In addition to the Form MF-104A and engineer's and operator's reports we are attaching one copy each of the following correspondence which will explain the delay in settling the account:

(a) Memorandum dated March 20, 1953, to S.R. Wilson from W.H. King.

(b) Memorandum dated April 24, 1953, to W.H. King from S.R. Wilson, with attachment, in reply to the memorandum under (a) above.

(c) Memorandum dated May 14, 1953, to S.R. Wilson from W.H. King.

(d) Letter dated May 19, 1953, to Mr. John Tunnel from S.R. Wilson forwarding instructions contained in the memorandum under (c) above.

3. Docket No. DMEA-1613X (Lead-Zinc), Contract Idm-E193, Clark and Mathis, Luna County, New Mexico - Report for the month of November 1952.

4. Docket No. DMEA-1685X (Uranium), Contract Idm-E225, J.R. Simplot Co., Wayne and Garfield Counties, Utah - Report for the month of July 1952.

Remarks - Final audit and settlement of the account has been delayed because of the non-availability of the project accounts for auditing. We have been advised that the accounting records will be available for audit within the next month.

5. Docket No. DMEA-1631X (Uranium), Contract Idm-E236, Excalibur Uranium Corp., Emery County, Utah - Report for the month of March 1953.

6. Docket No. DMA-967X (Cobalt-Uranium), Contract Idm-E289, Black Hawk Consolidated Mines Co., Grant County, New Mexico - Report for the period of October and November 1952.

7. Docket No. DMEA-2271 (Uranium), Contract Idm-E387, Glenny-Cutler Mining Co., Piute County, Utah - Report for the month of March 1953.

The balance of the two copies of report data for your records will be forwarded as liquidations and final settlement of the accounts are accomplished.

Reports are not included where there is a possibility that the final settlement will be accomplished in a matter of a week or two.

for John F. Shaw
W.H. King

Enclosures

1309
FILE COPY
SURNAME:

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

JAN 5 1953

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-1309X (Uranium)
Plateau Mining Company
Contract No. Idm-E192

Dear Mr. King:

This is with reference to your memorandum of December 12, 1952 to Mr. S. R. Wilson, and previous correspondence we have had with you relating to exploration projects on land on which there is a conflict between located mining claims and oil and gas leases.

For your information there is enclosed copy of a memorandum dated December 31, 1952 from the Chief Counsel to the Administrator, which we believe will be helpful to you in such cases.

With respect to the Plateau Mining Company, reimbursement for the work performed on ground which is in controversy as to its validity should not be made until the Operator clears his title with the Atomic Energy Commission.

Sincerely yours,

Frank E. Johnson

Chairman, Operating Committee

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

Enclosure

FEJohnson/bih 1/5/53
cc to: Docket
Admr. Reading File
Region IV
Operating Committee
Messrs. J.H.Hedges R-4604
A.R.Kinkel,Jr. GSA R-4234
Hofflund
Chambers
Ellis
FEJohnson

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

December 31, 1952

Memorandum

To: The Administrator 4624

From: Chief Counsel

Subject: Defects in Operator's title to land (Plateau Mining Company, formerly Bowles-Heflin Mining Company, Docket No. DMEA-1309X, Contract Idm-E192 (Uranium and Vanadium)

Reference is made to letter dated December 5, Acting Chairman, Operating Committee, to Mr. W. H. King on the above subject, and to a memorandum dated December 12, Executive Officer, DMEA Field Team, Region IV, to S. R. Wilson, a copy of which was referred to this office by routing slip, all relating to defects in Operator's titles to overriding oil and gas leases.

By the letter of December 5, Acting Chairman of the Operating Committee to Mr. King, it was made plain that: "... operators whose claims are subject to overlying oil and gas leases can readily get their interest cleared by application to the United States Atomic Energy Commission at Grand Junction, Colorado." In Mr. King's memorandum to Mr. Wilson of December 12, he comments: "The letter from the Operating Committee only refers to the Press Release by the Atomic Energy Commission and does not appear to constitute a definite ruling by DMEA on the matter. Therefore, until a definite ruling is received from DMEA we believe that we should certify for reimbursement only such costs as are incident to work performed on ground on which the validity of title is not questionable."

The arrangement whereby the Atomic Energy Commission undertakes to clear the titles of owners of located claims which are defective by reason of overriding oil and gas leases, is essentially for the benefit of the owners of such claims. If the defect is discovered before the exploration contract is entered into, the Government should require the

operator to clear his title as a condition to entering into the contract. If the defect is discovered after the contract is entered into, and the operator fails to clear his title, he is in default under the terms of the contract. In this case the operator should be required to clear his title as a condition to receiving any further contribution from the Government. If the operator fails or refuses to clear his title, and the Government is satisfied to abandon the exploration project, the contract may simply be terminated by notice to the operator. If the Government is not satisfied to abandon the exploration project, it should notify the operator that if he fails and neglects to clear his title, the Government will not only refuse to make any further contribution to the work but will demand repayment of any contribution theretofore made.

The contention might be made that inasmuch as the land in question is public land, administered by the Government, the Government cannot be hurt by any defect in the operator's title if the work has been completed or if the operator is willing to carry on the work in spite of defects. Probably as a practical matter, in most cases, this contention would be correct; but if there should be a certification of discovery or development it is hard to foresee what adverse effect the defect in title might have on the Government's right to a royalty on production. The rights in the land might come into the hands of some stranger to the exploration contract, which would defeat the Government's royalty interest. At any rate, it is believed that the Government would be justified in requiring the clearance of title in all cases where the operator can do so under the procedure provided by the Atomic Energy Commission, and the Government wants the work to proceed.

Of course, if the defect in title relates only to some part of the entire land which is considered to be unimportant to the exploration project, that land can be eliminated from the project by agreement with the operator.

If the project land is private rather than public, defects in the title raise different problems which are not under consideration here.

J. L. Hofflund
General Counsel

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

December 31, 1952

Memorandum

To: The Administrator

From: Chief Counsel

Subject: Defects in Operator's title to land (Plateau Mining Company, formerly Bowles-Heflin Mining Company, Docket No. DMEA-1309X, Contract Idm-K192 (Uranium and Vanadium)

Reference is made to letter dated December 5, Acting Chairman, Operating Committee, to Mr. W. H. King on the above subject, and to a memorandum dated December 12, Executive Officer, DMEA Field Team, Region IV, to S. R. Wilson, a copy of which was referred to this office by routing slip, all relating to defects in Operator's titles to overriding oil and gas leases.

By the letter of December 5, Acting Chairman of the Operating Committee to Mr. King, it was made plain that: "... operators whose claims are subject to overlying oil and gas leases can readily get their interest cleared by application to the United States Atomic Energy Commission at Grand Junction, Colorado." In Mr. King's memorandum to Mr. Wilson of December 12, he comments: "The letter from the Operating Committee only refers to the Press Release by the Atomic Energy Commission and does not appear to constitute a definite ruling by DMEA on the matter. Therefore, until a definite ruling is received from DMEA we believe that we should certify for reimbursement only such costs as are incident to work performed on ground on which the validity of title is not questionable."

The arrangement whereby the Atomic Energy Commission undertakes to clear the titles of owners of located claims which are defective by reason of overriding oil and gas leases, is essentially for the benefit of the owners of such claims. If the defect is discovered before the exploration contract is entered into, the Government should require the

operator to clear his title as a condition to enter into the contract. If the defect is discovered after the contract is entered into, and the operator fails to clear his title, he is in default under the terms of the contract. In this case the operator should be required to clear his title as a condition to receiving any further contribution from the Government. If the operator fails or refuses to clear his title, and the Government is satisfied to abandon the exploration project, the contract may simply be terminated by notice to the operator. If the Government is not satisfied to abandon the exploration project, it should notify the operator that if he fails and neglects to clear his title, the Government will not only refuse to make any further contribution to the work but will demand repayment of any contribution theretofore made.

The contention might be made that inasmuch as the land in question is public land, administered by the Government, the Government cannot be hurt by any defect in the operator's title if the work has been completed or if the operator is willing to carry on the work in spite of defects. Probably as a practical matter, in most cases, this contention would be correct; but if there should be a certification of discovery or development it is hard to foresee what adverse effect the defect in title might have on the Government's right to a royalty on production. The rights in the land might come into the hands of some stranger to the exploration contract, which would defeat the Government's royalty interest. At any rate, it is believed that the Government would be justified in requiring the clearance of title in all cases where the operator can do so under the procedure provided by the Atomic Energy Commission, and the Government wants the work to proceed.

Of course, if the defect in title relates only to some part of the entire land which is considered to be unimportant to the exploration project, that land can be eliminated from the project by agreement with the operator.

If the project land is private rather than public, defects in the title raise different problems which are not under consideration here.

J. L. Hofflund

J. L. Hofflund
General Counsel

JLHofflund/em/gla
Copy to: Mails and Files
H.C.Rubin J.L.Chambers
J.L.Hofflund E.W.Ellis
Chron A.E.Kane

140

FILE COPY
SURNAME:

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

December 24, 1952

- destroy -
- to be superseded by new memo per E.A. 12-31-52

Memorandum

To: The Administrator

From: Chief Counsel

Subject: Defects in Operator's title to land (Plateau Mining Company, formerly Bowles-Heflin Mining Company, Docket No. DMEA-1309X, Contract Idm-E192 (Uranium and Vanadium)

Reference is made to letter dated December 5, Acting Chairman, Operating Committee, to Mr. W. H. King on the above subject, and to a memorandum dated December 12, Executive Officer, DMEA Field Team, Region IV, to S. R. Wilson, a copy of which was referred to this office by routing slip, all relating to defects in Operator's titles to overriding oil and gas leases.

By the letter of December 5, Acting Chairman of the Operating Committee to Mr. King, it was made plain that: "... operators whose claims are subject to overlying oil and gas leases can readily get their interest cleared by application to the United States Atomic Energy Commission at Grand Junction, Colorado." In Mr. King's memorandum to Mr. Wilson of December 12, he comments: "The letter from the Operating Committee only refers to the Press Release by the Atomic Energy Commission and does not appear to constitute a definite ruling by DMEA on the matter. Therefore, until a definite ruling is received from DMEA we believe that we should certify for reimbursement only such costs as are incident to work performed on ground on which the validity of title is not questionable."

The arrangement whereby the Atomic Energy Commission undertakes to clear the titles of owners of located claims which are defective by reason of overriding oil and gas leases, is essentially for the benefit of the owners of such claims. If the owners of such claims do not wish to clear their titles in this manner, the problem still remains as

to the effect of such a defect upon an exploration project contract. Mr. King's suggestion (in his memorandum to Wilson) that: "... we believe that we should certify for reimbursement only such costs as are incident to work performed on ground on which the validity of title is not questionable" would not be correct in all cases. The defect in the operator's title may be ignored if it is not detrimental to the Government.

The effect to be given to such defects in the operator's title with respect to public lands, necessarily varies with different states of fact in each case. I will state what I consider to be the proper rules with respect to the following differing states of fact:

1. An exploration project on a group of claims all of which are considered to be important to the project.

(a) The exploration work fully completed (regardless of whether or not a certification is to be made) before the defect in the title is discovered: The Government has not been harmed by the operator's defect in the title, and it is proper to make full contribution to the cost of the project under the terms of the exploration contract. The purpose of the contract was to procure the performance of the exploration, and this purpose has been accomplished. If there was a discovery, the Government is benefited so much the more. The operator is the only one that has been harmed, as he has no interest in the discovery.

(b) The exploration work only partially completed when the defect in title was discovered: Presumably, the operator will not wish to complete because he will have no interest in any possible discovery. However, through the operator's misrepresentation as to his title, the Government has been induced to put money into a project from which it can derive no benefit except by completion of the work. The operator should be required to complete the work as a condition precedent to any contribution or further contribution to work already performed, and as an inducement to the Government to refrain from demanding repayment to

the Government of all contributions made by the Government up to that point. Of course, if only a small amount of work has been done, the operator may prefer to repay the Government and drop the project.

2. A group of claims the title to one or more of which turns out to be defective but which are not considered to be necessary to the exploration project: If no work has been done on the claims to which the title is defective, they may simply be removed from the project. If work has been done and completed on those claims, no harm has been done to the Government, and the Government may properly contribute to the costs as provided in the contract. If work has been partially completed on those claims, and it is considered by the Government that it would be beneficial to the whole project to complete it, the Government should require the operator to complete the unfinished work as a condition to receiving any further contributions to the costs of the uncompleted project.

As to the particular case in hand, I cannot tell just what part of the project land is affected by the defect in title, nor what relation it may have to the project as a whole. The foregoing may afford some help in weighing the considerations involved and in coming to a conclusion as to what to do in the particular case.

Stated in broad terms, it is hard to see any harm to the Government in a defect in the operator's title to project land which is owned by the Government, as long as the operator is willing and able to go ahead with the exploration work regardless of the defect. Of course, where the defect in title extends to all of the land covered by the project, the only inducement the operator may have to proceeding with the project is to secure the Government's contribution to costs already incurred and/or to persuade the Government not to demand repayment of money already contributed. In some cases, this may work a considerable hardship on the operator, but this flows from the operator's mistake and misrepresentation and not from anything that the Government has done.

The problem is entirely different when the project land is not public land administered by the Government, and none of the foregoing applies to defects in titles to private land in which the Government has no interest.

JLHofflund/em
Copy to: Mails and Files
J.L.Chambers
E.W.Ellis
A.E.Kane
H.C.Rubin
J.LHofflund
chron.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

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

New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

December 12, 1952

Memorandum

To: S. R. Wilson

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 1309X, (Uranium and Vanadium) Contract Idm-X192, Plateau Mining Company

Enclosed is a copy of a letter, dated December 5, 1952, from the Acting Chairman, Operating Committee, and a copy of Press Release No. 459 by the Atomic Energy Commission, to which the letter from the Operating Committee makes reference.

The above matter has some bearing on the MF-104 Reports, submitted by Plateau Mining Company, which you are withholding from processing for reimbursement to the Operator for work performed on ground the title to which has been invalidated by prior oil and gas leases.

The letter from the Operating Committee only refers to the Press Release by the Atomic Energy Commission and does not appear to constitute a definite ruling by DMEA on the matter. Therefore, until a definite ruling is received from DMEA we believe that we should certify for reimbursement only such costs as are incident to work performed on ground on which the validity of title is not questionable.

With reference to the Plateau Mining Company reports, reimbursement for the balance of their original claim, which was for work performed on ground which is in controversy as to validity of title, should be held in abeyance pending an administrative decision.

If it is impossible for you to arrive at a division of the costs, to enable you to recommend the deduction of a specific amount, then the reports should be returned to the operator with the request for him to revise them so that they will reflect only the cost which are allowable.

W. H. King
W. H. King

Enclosure

JWT:oc
cc: COMittendorf
Contract
Chron

AHKoschmann (2)

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-1309
Plateau Mining Company
Contract No. Idm-E192

Dear Mr. King:

~~With~~ In reference to the captioned contract, our Chief Counsel has prepared a memorandum relating to mining claims subject to overlying oil and gas leases. A copy of this memorandum, dated December 24, 1952, is enclosed for your information.

When a conflict exists between location rights and oil and gas leases, the matter should be cleared and satisfactory evidence thereof submitted before a contract is executed. In all cases where any of the mining claims are subject to an overlying oil and gas lease, if such claims are considered important to the project, the Operator should be requested to obtain a lease from the Atomic Energy Commission covering those claims. Reimbursement for the Government's share of the cost for work performed on questionable claims should not be made until satisfactory evidence is submitted to show that a lease has been obtained.

If the exploration contract has been executed and work performed before it is discovered that a conflict in property rights exists, further payments ~~of costs~~ should be ~~held up~~ withheld until an appropriate lease from the Atomic Energy Commission is obtained by the Operator.

DMEA-4

Monthly Report of DMEA Field Team

Region_____

Month_____

Exploration Applications

On hand first of month	_____
Received from applicants	_____
Received from Washington office	_____
Transmitted to Washington office	_____
On hand at end of month	_____

Exploration Contracts

		Total Amount	
	No.	Government	Private
In force first of month			
Projects inspected			
Signed during month			
Terminated			
In force at end of month			

Man Days

	Mines		Survey	
	Prof.	Nonprof.	Prof.	Nonprof.
Applications				
Administration of contracts				
Other				
Totals				

Total Professional _____

Total Nonprofessional _____

Attach list of cases on hand at end of month, indicating status of each. Any other remarks considered appropriate may be made on an attached sheet.

Submit four copies to the Operating Committee by the 5th of the month.

Interior—Duplicating Section, Washington, D. C. 10425

We trust that with the foregoing instructions and enclosed memorandum, you will be in a position to resolve the problems arising from defects in Operator's title to land in the subject instance, as well as in other similar cases that may develop.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

Enclosure (1)

FEJohnson/bih

cc to: Docket
Admr. Reading File
Region IV
Operating Committee

Messrs. Hedges R- 4604
Kinkel GSA R-4234
Hofflund
Ellis
FEJohnson

DMEA-4

Monthly Report of DMEA Field Team

Region_____

Month_____

Exploration Applications

On hand first of month	_____
Received from applicants	_____
Received from Washington office	_____
Transmitted to Washington office	_____
On hand at end of month	_____

Exploration Contracts

		Total Amount	
	No.	Government	Private
In force first of month			
Projects inspected			
Signed during month			
Terminated			
In force at end of month			

Man Days

	Mines		Survey	
	Prof.	Nonprof.	Prof.	Nonprof.
Applications				
Administration of contracts				
Other				
Totals				

Total Professional _____

Total Nonprofessional _____

Attach list of cases on hand at end of month, indicating status of each. Any other remarks considered appropriate may be made on an attached sheet.

Submit four copies to the Operating Committee by the 5th of the month.

Interior—Duplicating Section, Washington, D. C. 10425

FILE COPY
SURNAME:

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

DEFENSE MINERALS EXPLORATION ADM.
Frank E. Johnson
5369 4624

1AX3923.970 DMEA Working Fund - Interior
December 5, 1952

W. H. KING, Executive Officer, Region IV
Denver, Colorado

REURTT DECEMBER 5, PLATEAU MINING COMPANY DMEA 1309X , CONTRACT E-192. REIMBURSEMENT FOR WORK PERFORMED MAY BE MADE SUBJECT TO SUBSEQUENT CLEARANCE WITH ATOMIC ENERGY COMMISSION, GRAND JUNCTION. EXPLANATORY LETTER FOLLOWS.

FRANK E. JOHNSON

Acting Administrator

FEJohnson/bih

cc to: Docket
Admr's. Reading File
Mr. Ellis
Mr. Johnson

SENT
DEC 5 1952

Clerical Service Section

SPECIAL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 5 1952

Mr. C. O. Mittendorf
December, 5, 1952
10:35 A.M.

DN 235 BUREAU MINES 12-52XXX 12-5-52 8-33 AM

SPECIAL SPECIAL SPECIAL

C O MITTENDORF

REGARDING REIMBURSEMENT TO PLATEAU MINING COMPANY DOCKET 1309X, CONTRACT IDM-E192. NO REPLY HAS BEEN RECEIVED TO OUR TELETYPE OF NOVEMBER 17,1952 REGARDING OUR MEMORANDUM OF NOVEMBER 6,1952. THE REQUESTED INFORMATION IS URGENTLY NEEDED FOR CONSULTATION WITH REPRESENTATIVE OF OPEAXXX OPERATOR DECEMBER 8,1952.

W H KING

Denver, Colo.

DEC 5 10 47 AM '36
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

140

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

DEC 5 1952

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Defects in Operator's title to land (Plateau Mining Company, formerly Bowles-Heflin Mining Company, Docket No. DMEA-1309X, Contract Idm-E192 (Uranium and Vanadium))

Dear Mr. King:

Reference is made to your memorandum to the Administrator dated November 6, to which is attached a memorandum dated November 4 from the Chief, Utah-Wyoming Branch, Mining Division, Bureau of Mines, to you. These memoranda raise the problem of what effect is to be given to the discovery of defects in the Operator's title after the contract has been entered into and some or all of the work performed. The particular case is the one cited above, in which the project land is a large group of mining claims on public lands. The defect in the Operator's title is that some part of the project land is covered by oil and gas leases from the Government to parties other than the Operator. To the extent that any of the claims are included in oil and gas leases, the claims are invalid.

Reply to your memorandum has been delayed because we knew that the Atomic Energy Commission and the Department of the Interior were together trying to solve the problem. This has now been achieved as evidenced by the release of the Atomic Energy Commission dated December 1, 1952, entitled "Conflict between Uranium Mining Locations and Oil and Gas Leases Settled." Copies of this release are in the mail for you under separate cover.

As indicated in the release, operators whose claims are subject to overlying oil and gas leases can readily get their interest cleared by application to the United States Atomic Energy Commission office at Grand Junction, Colorado.

If the land on which the exploration is being carried out is private land, defects in the operator's title to the property raise quite different considerations. A circular on this subject will be issued in the near future.

Sincerely yours,

George C. Selfridge (JHB)
ACTING Chairman, Operating Committee

Approved:

J. H. Hedges (JHB)
Member, Bureau of Mines

A. A. Stokes, Jr. (JHB)
Member, Geological Survey

J.H.
12-5-52

JLHofflund/em 12/3/52
Copy to: Mails and Files
Adm. R. File
C. O. Mittendorf
Op. Comm.
J. H. Hedges
T. P. Thayer
E. W. Ellis
A. E. Kane
H. C. Rubin
J. L. Hofflund
chron
pending

Mr. C. O. Mittendorf
Nov. 17, 1952
2:30 P.M.

321

SPECIAL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 17 1952

DN 235 BUREAU MINES 11-17-52 12-27 PM

C O MITTENDORF

PLEASE EXPEDITE A REPLY TO OUR AIRMAIL MEMORANDUM DATED NOVE MBER YXX6,1952 REGARDING REIMBURSMXXXX REIMBURSEMENT TO PLATEAU MINING COMPANY, DOCKET 1309X, CONTRACT E192.

W H KING

Denver, Colo.

NOV 17 3 42 PM '56
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D.C.

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 11-18-52

REFERRED TO:

1. ~~[illegible]~~
2. ~~Mr. Knouse~~ Mr Kane
3. Legal Div. Rm. 4627
4.

DMA-1309X
Idm-E192

FOR:

..... Action	..... Recommendation
..... Approval	..... Record
..... Comment	of .....
..... Conference	..... Referring
..... Consideration	to .....
..... Filing	..... Reply for signa-
..... Instructions	ture of .....
..... Investigation	..... Rewriting
..... Initials	..... Signature
..... Mailing	..... Suggestions
..... Previous correspondence	..... Your information

REMARKS: Mr./ Ellis reviewed this matter on November 12 (while you were out of the city) and referred it to Legal Division to prepare a reply.

Mrs. Ault

Check (X) before the items needing attention.

Adams (AA)
Initials of sender.

GPO 16—63815-1

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 11-12-52

REFERRED TO:

DMA-1309X
Idm-E192

1. ~~Mr. Ellis~~
2. Legal Division
3.
4.

FOR:

X	Action		Recommendation
	Approval		Record
	Comment		of
	Conference		Referring
	Consideration		to
	Filing		Reply for signa-
	Instructions		ture of
	Investigation		Rewriting
	Initials		Signature
	Mailing		Suggestions
	Previous correspondence		Your information

RECEIVED
NOV 13
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

REMARKS: I believe the Atomic Energy Commission is making a thorough study of the question in general. Don't know what they have come up with. I believe also that the Operator in this case should be paid and let the future take care of itself. It will probably be straightened out in time by the A.E.C.

Check (X) before the items needing attention.

Initials of sender.

GPO 16—63815-1

11/12/52 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 10 1952

224 New Customhouse
Denver 2, Colorado

Air Mail

November 6, 1952

Memorandum

To: C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: DMA Docket 1309X, (Uranium and Vanadium) Contract Idm-E192, Plateau Mining Company (Formerly Bowles-Heflin Mining Company) San Juan County, Utah

It has been brought to our attention that a portion of the wagon drilling accomplished during the months of November and December, 1951, for which reimbursement has been made, was done on mining claims which are invalid by reason of a prior Gas and Oil lease. Apparently the operator was unaware of the invalid title of the claims on which they proposed the exploration work.

Possibly we will be faced with similar conditions on other projects. Therefore, we seek a legal ruling and advice as to the procedure we are to follow when reimbursements have been made to operators holding DMEA Contracts where it subsequently develops that the operator did not have valid control of the ground on which work was accomplished.

In this particular instance reimbursement has not been made for work accomplished during the months of August, September and October, 1952, therefore, to permit reimbursement to the operator for work performed on claims which are valid we have requested the Operator to submit revised MF-104 Reports on which he will have deleted the costs of drilling on claims the titles of which are not valid by reason of the prior Oil and Gas lease.

For further information in the matter we are enclosing in duplicate the following data:

1. Copy of letter dated October 8, 1952, from the Bureau of Land Management, Colorado-Utah Region (IV) Salt Lake Salt Lake City, Utah, to Stephen R. Wilson, Chief, Utah-Wyoming Branch, Bureau of Mines, Salt Lake City, Utah.

RECEIVED
NOV 13
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

2. Copy of letter, dated November 4, 1952, to W. H. King, Acting Chief, Mining Division, From Chief, Utah-Wyoming Branch, Mining Division, with map attached which shows the claims in question.

We will appreciate prompt consideration of the matter and advise as to the procedure we are to follow in both past and future reimbursements to the operator under similar conditions as outlined.

John F. Shaw

John F. Shaw for
W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 East First South Street
Salt Lake City 1, Utah
November 4, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 10 1952

C O P Y

Air Mail

Memorandum

To: W. H. King, Acting Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA-1309X, Contract Idm-E192, Plateau Mining Co., Grand County, Utah

The Plateau Mining Co. has completed a minimum footage of diamond drilling under the subject contract. The work was accomplished during August, September and October 1952. No payment has been made to the contractor for the diamond drilling because of conflict with prior Federal oil and gas leases which cover portions of the claims involved. It was believed advisable to have the operator prepare an accurate map showing the locations of the claims and diamond drill holes in reference to the legal land subdivision. This has been done, and the operator will submit MF-104 forms for August, September and October, dividing expenditures made on property included in Federal oil and gas leases from expenditures free of lease encumbrance.

It is desirable to obtain a fuling concerning DMEA obligation to reimburse the contractor for work accomplished on mining claims invalidated by previous Federal oil and gas lease. The contractor acted in good faith in performing the work, believing his claims to be valid.

Contract work under the regime of Bowles-Heflin Mining Co. consisted of wagon drilling. This work was done in November and December 1951, and the Government's share has been paid. Part of the drilling was accomplished on W. ½, Sec. 35, T. 27S., R.23 E., on the Jane No. 4 and No. 5 claims. The attached letter from the Bureau of Land Management lists the areas held under Federal oil and gas lease. We do not have a copy of the November 1951 MF-104 forms, and thus cannot determine the total amount returned to Bowles-Heflin for contract work completed on ground held under oil and gas lease.

UNITED STATES
DEPARTMENT OF THE INTERIOR

1530 East First South Street
Salt Lake City 1, Utah
November 4, 1952

NOV 10 1952

C O P Y

Air Mail

Memorandum

To: W. H. King, Acting Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA-1309X, Contract Idm-E192, Plateau Mining Co., Grand County, Utah

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It is desirable to obtain a ruling concerning DMEA obligation to reimburse the contractor for work accomplished on mining claims invalidated by previous Federal oil and gas lease. The contractor acted in good faith in performing the work, believing his claims to be valid.

Contract work under the regime of Bowles-Heflin Mining Co. consisted of wagon drilling. This work was done in November and December 1951, and the Government's share has been paid. Part of the drilling was accomplished on W. ½, Sec. 35, T. 27S., R.23 E., on the Jane No. 4 and No. 5 claims. The attached letter from the Bureau of Land Management lists the areas held under Federal oil and gas lease. We do not have a copy of the November 1951 MF-104 forms, and thus cannot determine the total amount returned to Bowles-Heflin for contract work completed on ground held under oil and gas lease.

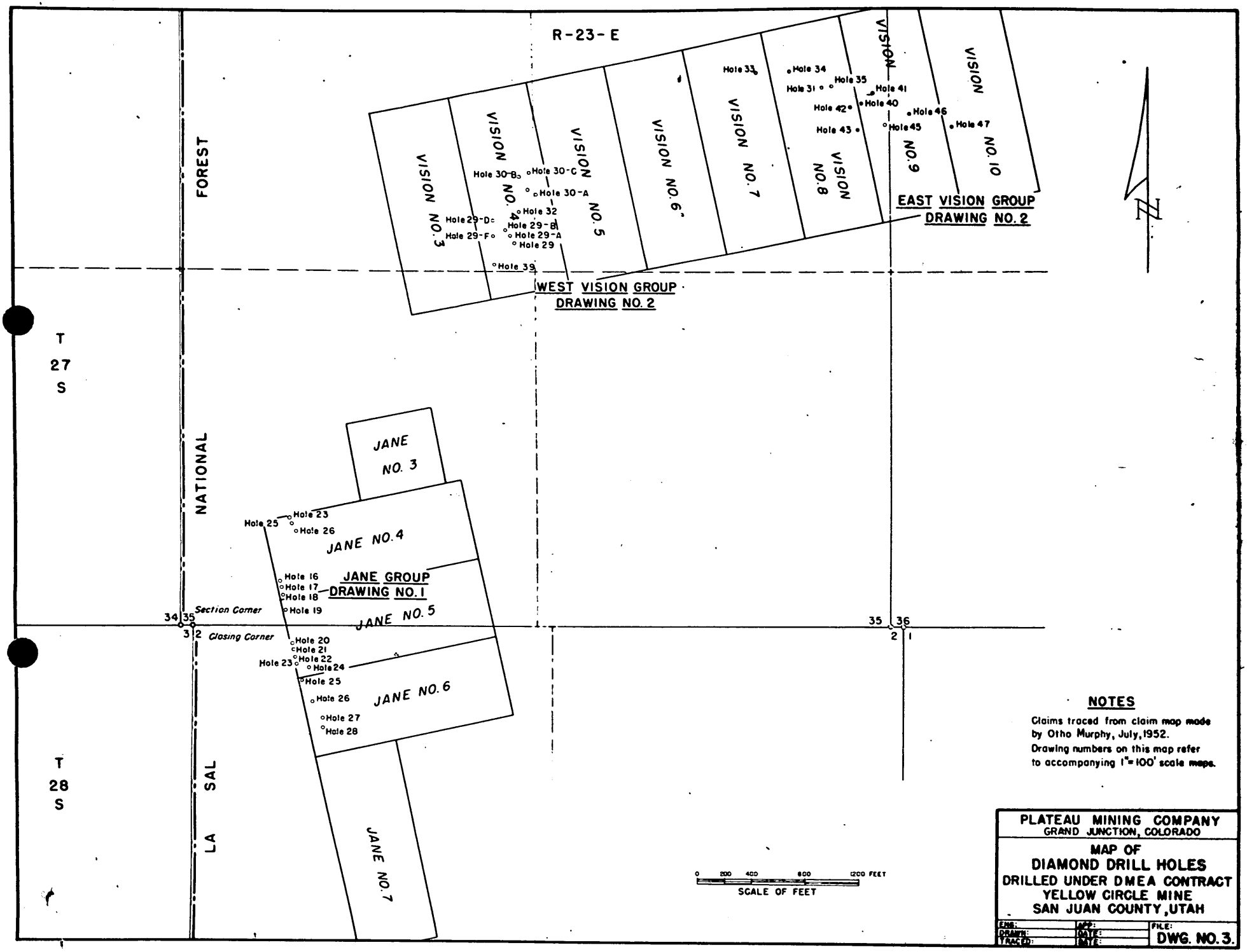
The attached claim map prepared by the contractor shows the location of the Jane Nos. 3, 4, 5 and 6 claims and the Vision No. 3 through Vision No. 10. Exhibit A of the contract lists the Vision Nos. 1, 2 and 3 and the Jane Nos. 3, 3, 4, 5, 6 and 7. Annex 1 to the contract also lists Vision claims Nos. 4, 5, 6, 7, 8 and 9. Presumably, this listing permits drilling, subject to prior approval of the DMEA representative, on the above claims. One diamond drill hole was completed on Vision No. 10 claim which is not listed in the contract. This claim and part of Vision No. 9 lie in the N. W. $\frac{1}{4}$ of Sec. 36, T. 27S., R. 23 E., and are free of any land withdrawals.

The manager of Plateau Mining Co., Mr. Frank Seymour, called at this office November 4, 1952. Logs of holes in his possession indicate that a total of 1,727 feet of diamond drilling was completed on the Jane claims, 755 feet of this total on ground withdrawn by Federal oil and gas lease. Approximately 2,630 feet of drilling was accomplished on the Vision claims. A total of 1,099 feet was drilled on ground held under oil and gas lease.

Drilling on the Slaughter group of claims is not considered under the present work completed. This group parallels the Vision group on the south side.

We have assembled information to conform with requests in your memorandum of October 1, 1952, but have not submitted the information because of expected clarification of the Federal oil and gas conflict with the accomplished work.

/s/ Stephen R. Wilson


R-23-E
FOREST
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T 27 S
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VISION NO. 3
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VISION NO. 7
VISION NO. 8
VISION NO. 9
VISION NO. 10
Hole 33
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Hole 46
Hole 45
Hole 43
Hole 47
Hole 30-B
Hole 30-C
Hole 30-A
Hole 32
Hole 29-D
Hole 29-B
Hole 29-F
Hole 29-A
Hole 29
Hole 39
EAST VISION GROUP
DRAWING NO. 2
WEST VISION GROUP
DRAWING NO. 2
N
JANE NO. 3
JANE NO. 4
JANE NO. 5
JANE NO. 6
JANE NO. 7
Hole 23
Hole 25
Hole 26
Hole 16
Hole 17
Hole 18
Hole 19
JANE GROUP
DRAWING NO. 1
Section Corner
Closing Corner
34 35
3 2
35 36
2 1
Hole 20
Hole 21
Hole 22
Hole 23
Hole 24
Hole 25
Hole 26
Hole 27
Hole 28
0 200 400 800 1200 FEET
SCALE OF FEET
NOTES
Claims traced from claim map made by Otho Murphy, July, 1952.
Drawing numbers on this map refer to accompanying 1"=100' scale maps.
PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO
MAP OF
DIAMOND DRILL HOLES
DRILLED UNDER DMEA CONTRACT
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH
ENG:
DRAWN:
TRACED:
APP:
DATE:
DATE:
FILE:
DWG. NO. 3.

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Land Management
COLORADO-UTAH REGION (IV)
Post Office Box No. 659
Salt Lake City 10, Utah

October 8, 1952

Mr. Stephen R. Wilson
Chief, Utah-Wyoming Branch
Bureau of Mines
1600 East First South Street
Salt Lake City 1, Utah

Dear Mr. Wilson:

By letter of October 3, you inquired whether there were any existing Federal oil and gas leases or other land withdrawals situated over lands described as follows:

Secs. 34 and 35, T. 27 S., R. 23 E., S.L.M.
Secs. 2, 3 and 4, T. 28 S., R. 23 E., S.L.M.,

this information being necessary to determine the validity of lode mining claims in an area included in a Defense Minerals Exploration project contract.

The following status is that reflected on the official records of the Salt Lake Land Office:

Oil and gas lease Salt Lake 068552 filed January 15, 1948, lease issued on February 1, 1950, embracing all of Section 34, W½ Section 35, T. 27 S., R. 23 E., S.L.M.

Oil and gas lease Utah 03782 filed February 26, 1951, lease issued March 1, 1951, embracing SW¼, SW¼NW¼ Section 3, T. 28 S., R. 23 E., S.L.M.

Oil and gas lease Salt Lake 070246 filed November 26, 1948, lease application closed on our records on August 12, 1949, embracing SE¼, S½NE¼, Section 35, T. 27 S., R. 23 E.; Lots 1, 2, 3 and 4, S½N½, and N½S½, Section 2; Lots 1 and 2, SE¼NE¼ Sect. 3, T. 28 S., R. 23 E., S.L.M.

Oil and gas lease Utah 03108 filed January 15, 1951, closed on our records January 25, 1952, embracing E½ Section 35, T. 27 S., R. 23 E.; all of Sec. 2; E½, E½NW¼ and NW¼NW¼ Sect. 3, T. 28 S., R. 23 E., S.L.M.

In connection with the two preceding oil and gas leases listed as being closed on our records, this means that the applications were filed and leases were withdrawn or not issued and the cases were therefore closed on the dates shown.

The records of the Salt Lake land office indicate that there are some patented mining claims in Sec. 34, T. 27 S., R. 23 E.

In connection with the above listed oil and gas leases you will observe that the filing date of the respective leases has been given, as well as the date the lease issued. According to Departmental decisions and interpretations, when an oil and gas lease application is filed, the lands at that time are segregated as if the lease issued as of that date.

Please feel free to call upon us for any further information you might desire.

Sincerely yours,

For the Regional Administrator:

/S/ H. J. Vander Veer
Regional Chief, Division of Minerals

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

224 New Customhouse
Denver 2, Colorado

September 18, 1952

REGISTERED

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, Field Team, Region IV

Subject: Assignment and Release, Docket DMA 1309X, Contract Idm-E192, Plateau Mining Company (Uranium), formerly Bowles-Heflin Mining Company

Enclosed are the original and two copies of the Assignment and Release from the Bowles-Heflin Mining Company to the Plateau Mining Company. All copies have been signed by Frank L. Seymour, General Manager and Secretary Treasurer. The signature of Frank L. Seymour as General Manager and Secretary Treasurer has been properly acknowledged.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 22 1952

FILE COPY
SURNAME:

140

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

AEKane
Hofflund
Ellis
Mittendorf

AUG 12 1952

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Subject: Bowles-Heflin Mining Company,
Docket No. DMA-1309 X
(Uranium-Vanadium)

Dear Mr. King:

I am returning the original and two copies, which you forwarded to Mr. C. O. Mittendorf with your memorandum of July 30, of the Assignment and Release from the Bowles-Heflin Mining Company to the Plateau Mining Company. I am of the opinion that the acceptance of the assignment has been improperly executed by the Plateau Mining Company, despite the corporation acknowledgment, because it has been signed by Frank L. Seymour as General Manager and not as an officer of the corporation. If Mr. Seymour is also an officer of the corporation, request him to merely add his title after his signature. If Mr. Seymour is not an officer of the corporation, please add an additional signature line, have the consent signed by the duly authorized officer and add a new acknowledgment.

P.N. 8-12-52

Sincerely yours,

(signed) FRANK E. JOHNSON (HB)
Chairman, Operating Committee

Enclosures

Approved:

C. N. Johnson (HB)
Member, Bureau of Mines

D. M. Lemmon (HB)
Member, Geological Survey

AEKane/em/ema/8-8-52
cc: Mails & Files
Adm. Reading File
Operating Comm.
J. H. Hedges
L. P. Thayer
E. W. Ellis
J. L. Hofflund
A. E. Kane
Chron.
Pending

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

224 New Customhouse
Denver 2, Colorado

July 30, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Contract Idm-E192, Docket DMA 1309X, Assignment and Release from Bowles-Heflin Mining Company to Plateau Mining Company

Enclosed are the original and two copies of the Assignment and Release from Bowles-Heflin Mining Company to Plateau Mining Company which have been properly executed and notarized.

W. H. King

W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
AUG 4 1952

RECEIVED
AUG 6 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

FILE COPY
110
SURNAME:

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

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: DMA Docket No. 1309X
Bowles Heflin Mining Company
Exploration Contract No. Idm-E192

Dear Mr. King:

Referring to the last paragraph of your letter of June 10, 1952, please be advised that you do not have authority to approve assignments of contracts. Your delegated authority does not cover assignments.

This authority was not included in your delegation as we believed there would be only a few occasions in which an assignment would be required, and because of the complex nature of assignments we thought it best to have all assignments approved by this office.

Sincerely yours,

cc 7/10/52

(signed) FRANK E. JOHNSON
(JHB)

Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J. H. Hedges
(JHB)
Member, Bureau of Mines

T. P. Thayer
(JHB)
Member, Geological Survey

FEJOHNSON/bih 7/8/52
cc to: Docket
Admr's Reading File
Operating Committee
Region IV
Messrs. Thayer Room-5216 GSA Bldg.
Hedges Room-4604
Ellis
FEJohnson

FILE COPY
SURNAME:

AEKane
Hofflund
JLKane

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

JUL 8 - 1952

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
Bureau of Mines
224 New Customhouse Bldg.
Denver 2, Colorado

Subject: The Bowles-Heflin Mining Company -- Docket No. DMA-1309X (Idm-E192)

Dear Mr. King:

There is attached hereto for signature of the Bowles-Heflin Mining Company, an Assignment of its interest in the afore-mentioned contract to the Plateau Mining Company. Provision is made for the acceptance of this Assignment at the foot thereof by the Plateau Mining Company, and the signature of the officer signing for it should be duly acknowledged on the form provided therefor. The Acting Administrator has signed the Government's Consent to the Assignment, but the date thereof should be inserted which should not be prior to the date of the acceptance by the Plateau Mining Company. However, delivery of this assignment is subject to the production by the Plateau Mining Company of satisfactory evidence of its sufficient interest in the property described in Article 2 of the contract to enable it to carry on the exploration work.

Very truly yours,

7/8/52

(signed) FRANK E. JOHNSON
(HB)

Chairman, Operating Committee

Copy to: Mails & Files
Adm. Reading File
A. E. Kane
J. L. Hofflund
Operating Committee (2)
E. W. Ellis
Chron.
Pending
J. H. Hedges
T. P. Thayer
Mr. Chambers

Enclosures

Approved:

J. H. Hedges (HB)

For Bureau of Mines

for D. M. Lemmon (HB)

For Geological Survey

P.S. attached to Original ltr. asking distribution be made same as on contracts. HB 7/7/52

AEKane/bjl/ema (written 6/27/52

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D. C.

June 10, 1952

Ans. 6/26/52
a Elane / Ofje

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Bowles Heflin Mining Company, Contract Idm-E192, DMA Docket 1309X

The Bowles Heflin Mining Company, a partnership, has incorporated under the laws of Colorado, and will be known as Plateau Mining Company. The partnership has asked us to substitute Plateau Mining Company for Bowles-Heflin Mining Company on contract Idm-E192.

We have requested the operator to send us for our approval the form of assignment which will be made transferring the contract to the corporation.

The amount of Government participation is $17,079.60. Does the Executive Officer, Region IV have the authority to approve the transfer of the contract to the corporation.

W. H. King

W. H. King

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
(RECEIVED)
JUN 13 1952

700
FILE COPY
SURNAME:

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

F. Knouse
Komf

AIR MAIL

DEC 29 1951

DM

Bowles-Heflin Mining Company
P. O. Box 185
Moab, Utah

Re: Docket No. [illegible]-1309
Bowles-Heflin Mining Company
Exploration Project Contract

Dear Sirs:

We wish to draw your attention to a mathematical error made in drafting your contract. In Article 13, "Payment to Operator", this article states "Payment shall be made in the amount of 90 percent of the approved costs incurred; provided that, the aggregate total of all sums paid by the Government under this agreement shall not exceed $17,079.60, which is 90 percent of the agreed estimated total cost of this project $18,944.00." Ninety percent of $18,944.00 is $17,049.60, therefore, the figure of $17,079.60 is an error and the aggregate total of all sums to be paid by the Government under this contract will be $17,049.60.

Please attach this letter to your contract to serve as a correction.

Sincerely yours,

C. O. Mittendorf (for) S.N. 12-29

Acting Administrator
Defense Minerals Exploration Administration

FKnouse/jem
12-28-51
cc to: Adm. Reading file
Mails & Files Br.
Docket
Messrs. Mittendorf
Kemp, [illegible]
Keiser, M.D. Rm.3204
Knouse
Region IV Finance Office
Field Team, Region IV (2)

700

FILE COPY
SURNAME:

F L Knouse
19 cont

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

not stripped in R. & R.

December 28, 1951

DEC 28

MEMORANDUM

To: Finance Section

From: Acting Administrator, Defense Minerals Exploration Administration

Subject: Docket No. DMA-1309X
Bowles-Heflin Mining Company

Please forward to Regional IV Finance Office the attached copy of letter sent the Bowles-Heflin Mining Company.

FKnouse/jem

C. O. Mittendorf (for)

cc to: Adm. Reading File
Mails & Files Br.
Docket
Mr. Mittendorf
Mr. Knouse

BL

OFFICE OF THE ADMINISTRATOR

Mr. Krause

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 26 1951

December 21, 1951

Memorandum

To: C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Error in Contract Idm-E192, DMA Docket 1309X, Bowles Heflin Mining Company

Article 13, "Payment to Operator," in the above contract contains an arithmetical error. This article states: "That the aggregate total of all sums paid by the Government under this agreement shall not exceed $17,079.60, which is 90 percent of the agreed estimated total cost of this project, $18,944." Ninety percent of $18,944 is $17,049.60. The amount given in the contract exceeds this amount by $30.00.

Kindly prepare an amendment to correct this error as this office does not have the authority to do so.

J. H. East, Jr.

OFFICE OF THE ADMINISTRATOR

Mr. Krause

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 26 1951
Defense Minerals Administration,
Production Expansion Division

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

224 New Customhouse
Denver 2, Colorado

November 19, 1951

REGISTERED MAIL

Memorandum

To: C. O. Mittendorf, Director, Production Expansion Division

From: Executive Officer, DMA Field Team, Region IV

Subject: Contract Idm-E192, DMA Docket 1309X, Bowles_Heflin Mining Company, San Juan County, Utah

Enclosed are the original and three signed copies of the above contract.

One copy of the contract has been given to the operator and we have retained a copy for DMA files.

J. H. East, Jr.

J. H. East, Jr.

Enclosures

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
Nov 26 1 51 PM '51

FILE COPY
SURNAME:

410

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

FLKnouse
Gotour
FEJohnson

R.E.C.

Mr. J. H. East, Jr.
Executive Officer
Region IV
224 New Customhouse Building
Denver 2, Colorado

OCT 31 1951

Re: Docket No. DMA - 1309X
Bowles-Heflin Mining Company
Exploration Project Contract Idm-E192

Dear Mr. East:

We are enclosing the original and five copies of the above-referenced contract, signed by this office for the Government, together with the attached Exhibit "A" (2 pages), and Annex I (1 page), and two maps.

If the terms and conditions of this contract meet with the approval of the Operator, all six copies should be signed by a duly-authorized official of the company, one copy should be given to the Operator, one copy retained by your office and the original and three copies returned to this office.

If any part of this contract does not meet with the approval of the Operator, the original and all copies of the contract are to be returned to this office together with the proposed changes for consideration.

Sincerely yours,

(signed) FRANK E. JOHNSON (fw) BY 10/31

Acting Director
Production Expansion Division

Enclosures

APPROVED:

Chairman, Coordinating Committee

Member, Geological Survey

Member, Bureau of Mines

FLKnouse/meb
10/23/51
cc to: Admr's Reading Files
Reports and Records
Messrs.Mittendorf/Olund
Mr. Bourret Mr. Moon
Mr. Knouse Docket

FILE COPY
SURNAME:
140
DMA-1309x
Guthrie

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

not stripped in RRR.

October 24, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Bowles-Heflin Mining Company, Partnership - exploration project contract DMA Docket No. 1309X

The proposed exploration contract in this case, resubmitted to us on October 24, 1951, now meets the objections raised in our memo of October 19 and is approved as to legal form and sufficiency for signature on behalf of the Government, subject to:

1. Proper signature on behalf of the applicant.

2. Proper dating prior to delivery.

Your file is returned herewith.

J. L. Hofflund

J. L. Hofflund
General Counsel

Attachment

RRGuthrie/ema

Copy to: Reports & Records
J. L. Hofflund
R. R. Guthrie
Chron.

FILE COPY
SURNAME:
140

Guthrie

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

October 19, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Bowles-Heflin Mining Company, Partnership - exploration project contract DMA Docket No. 1309X

We are returning, unapproved, the proposed exploration contract in this case, submitted to us on October 17, because we are unable to reconcile the total cost of the project with the information as to costs shown in the exhibits.

Apparently the only types of costs to be incurred in this case which fall within the categories requiring tabulation in the exhibits, are the depreciation allowance for operating equipment to be furnished by the operator and the cost of labor and supervision. The total of the former cost, using the monthly figure developed in the exhibit and the over-all length of the project taken from paragraph 3, would be approximately $2,600. The total labor and supervision cost, considering the total monthly estimate of $800 as taken from the exhibit and the over-all length of the project from paragraph 3, would be approximately 10,400. These two items amount to $13,000 in round figures. The total estimated cost of the project, however, is $18,944, roughly $6,000 more than the total of the costs detailed in the exhibit. This difference seems large for the additional items of cost which do not require tabulation in the exhibit.

It seems to this office that the estimated costs should be set forth in the exhibit in such a manner that the total equals the amount inserted in Article 13.

In any rewrite of the exhibit, the word "rental" in the last line of the section headed "operating equipment" should be changed to "depreciation".

Your file is returned herewith.

J. L. Hofflund

not stripped in R.R.

A.E.

J. L. Hofflund
General Counsel

Copy to: Repts. & Records
R. R. Guthrie
J. L. Hofflund
Chron.

Attachment

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 1 5 1951
Defense Minerals Administration,
Production Expansion Division.

October 10, 1951

Memorandum

To: C. O. Mittendorf

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1309-X, Bowles-Heflin Mining Co., San Juan County, Utah

Enclosed are the original and three copies of a memorandum containing engineering information on the above docket.

J. H. East, Jr.

Enclosure

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
OCT 15 9 32 AM '51

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON 25

OCT 15 9 32 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Date Rec'd.
OCT 3 1951
BUREAU OF MINES
Denver, Colorado

October 1, 1951

Memorandum

To: Paul T. Allsman, Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA Docket 1309-X, Bowles-Heflin Mining Co., San Juan County, Utah

The contained information is submitted for use in preparation of an Exploration Project Contract covering the subject docket. My memorandum dated September 10, 1951 and yours of September 13, 1951 refer to the subject.

The Survey's report recommended 25,600 feet of wagon drilling at a cost of $.60 per foot, a total of $15,360. It is believed that this estimated cost per foot is too low. H. K. Thurber, Jr. inspected the property and discussed the drilling with Melvin Bowles, one of the partners in the company.

The work will be performed as outlined in the Survey report. Existing facilities and buildings are adequate to conduct the work. Equipment on the property, owned by the applicant, is sufficient for the drilling.

The following are estimates of the costs of the proposed exploration:

Labor

3 men at $1.50 per hour, 8 hours per day (one a working supervisor)	$36.00	
OAB and insurance, per day	3.60	
	$39.60	$39.60

Supplies

Gas, oil and grease, per day	$10.00

Bits - 150 feet of advance per bit, 90 feet per day.

$\frac{90}{150}$ x $2.50 (cost of special bit)---------- $ 1.50

Steel and couplings - 500 pounds of steel consumed per 264-day year at $1089 per ton

$\frac{\$1089}{4}$ = $272 $\frac{\$272}{264}$ = ---------- 1.03

$ 12.53 $ 12.53

Camp and Commissary

3 men at $2.00 per day---------- $ 6.00 $ 6.00

Repair of Equipment

$400 per year - per day = $\frac{\$400}{264}$ = ---------- $ 1.52 $ 1.52

Depreciation

Item	Fair Value
D-4 Caterpillar with blade (1944 model)-	$3,000
Tractair compressor, 105 cfm., crawler mounted, 1951 model. Drill rig mounted on this unit. Complete with 2 drills, one Cleveland H-10 and one Cleveland H-23 ----------	6,200
Worthington compressor, 105 cfm., portable, 1949 model----------	2,500
Truck, pickup, 1947 Dodge----------	350
	$12,050

$\frac{\$12,050}{1,825}$ = per day cost = ---------- $ 6.60 $ 6.60

Total estimated cost per day---------- $ 66.25

Cost of drilling per foot based on an estimate of 90 feet per day---------- $ 0.74

Cost of drilling 25,600 feet of holes at an estimated cost of $0.74 per foot———————————— $ 18,944

The total estimated cost of the project is slightly higher than the estimate of $15,360 included in the Survey report.

Wagon drilling on the property at present is done with a special type impregnated bit made by the Western Mine Supply Co. at Monticello, Utah. The operator reports considerable success with the bit.

Wagon drill hole samples will be collected by using a metal-enclosed container at the collar of the hole. The container was designed by the operator. The Worthington compressor is required for drilling, in addition to the compressor mounted with the drilling equipment.

Stephen R Wilson

Stephen R. Wilson

pta

330
FILE COPY
SURNAME:

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

Gordon
Bowles
Hatch
Houser

SEP 24 1951

Memorandum

To: Director, Production Expansion Division

From: Director, Supply Division

Subject: Bowles-Heflin Mining Company
San Juan County, Utah
Uranium - DMA docket - 1309x

Under date of May 21, 1951, Melvin C. Bowles, operating partner of the Bowles-Heflin Mining Company, P. O. Box 185, Moab, Utah, submitted the subject application for an exploration project, DMA docket 1309x, in the sum of $100,000, subsequently reduced by agreement between applicant and field team to the sum of $15,360.00, for a government participation of $13,824.00 (90%). Applicant is prepared to invest $1,536.

The following factors have been carefully considered and weighed in reviewing this application.

1. Refer MO-5 as amended, Sec. 6

(a) Additional domestic sources of uranium ores are desired.
(b) Geological conditions are regarded as favorable and project is recommended by the field team following examination of the property. Reviewers for A.E.C., U.S.G.S. and D.M.A., concur in this opinion.

(c,d,e,f) Manpower, equipment and supplies are available. Adequate roads lead to the property and sufficient water is available from nearby springs. Power is supplied by portable units.
(g) Applicant is capable of directing the project.

2. The ground to be covered in the agreement consists of the following claims, located in T 27S, R 23E, Sections 34 and 35 and T 28S, R 23E, Sections 2,3,and 4, as per accompanying map:

Claim Name	Date Located	Date Recorded	Book &	Page
Pioneer No. 1	3 - 2 - 51	3 - 12 - 51	R-2	505
Pioneer No. 2	3 - 3 - 51	3 - 12 - 51	R-2	505
Pioneer No. 3	3 - 7 - 51	3 - 12- 51	R-2	505
Pioneer No. 4	3 - 10 - 51	3 - 12 - 51	R-2	504
Pioneer No. 5	3 - 10 - 51	3 - 15 - 51	R-2	526
Pioneer No. 6	3 - 10 - 51	3 - 15 - 51	R-2	526
Pioneer No. 7	3 - 11 - 51	3 - 15 - 51	R-2	527
Pioneer No. 8	3 - 11 - 51	3 - 15 - 51	R-2	527
Pioneer No. 9	3 - 12 - 51	3 - 15 - 51	R-2	527
Pioneer No. 10	3 - 12 - 51	3 - 15 - 51	R-2	528
Pioneer No. 11	3 - 12 - 51	3 - 15 - 51	R-2	528
Pioneer No. 12	3 - 12 - 51	3 - 15 - 51	R-2	528
Pioneer No. 13	3 - 13 - 51	3 - 15 - 51	R-2	529
Pioneer No. 14	3 - 13 - 51	3 - 15 - 51	R-2	529
Pioneer No. 15	3 - 13 - 51	3 - 15 - 51	R-2	529
Pioneer No. 16	3 - 13 - 51	3 - 15 - 51	R-2	530
Pioneer No. 17	3 - 13 - 51	3 - 15 - 51	R-2	530
Pioneer No. 18	3 - 13 - 51	3 - 15 - 51	R-2	530
Pioneer No. 19	3 - 14 - 51	3 - 15 - 51	R-2	531
Pioneer No. 20	3 - 14 - 51	3 - 15 - 51	R-2	531
Rex No. 1	7 - 17 - 51	8 - 13 - 51	R-4	65
Rex No. 2	7 - 18 - 51	8 - 13 - 51	R-4	65
Rex No. 3	7 - 18 - 51	8 - 13 - 51	R-4	65
Rex No. 4	7 - 18 - 51	8 - 13 - 51	R-4	64
Rex No. 5	7 - 19 - 51	8 - 13 - 51	R-4	64
Rex No. 6	7 - 19 - 51	8 - 13 - 51	R-4	64
Rex No. 7	7 - 19 - 51	8 - 13 - 51	R-4	63
Rex No. 8	7 - 19 - 51	8 - 13 - 51	R-4	63
Rex No. 9	7 - 20 - 51	8 - 13 - 51	R-4	63
Rex No. 10	7 - 20 - 51	8 - 13 - 51	R-4	62
Rex No. 11	7 - 21 - 51	8 - 13 - 51	R-4	62
Rex No. 12	7 - 21 - 51	8 - 13 - 51	R-4	62
Rex No. 13	7 - 21 - 51	8 - 13 - 51	R-4	61
Jane No. 1	7 - 24 - 51	8 - 13 - 51	R-4	61
Jane No. 2	7 - 24 - 51	8 - 13 - 51	R-4	61
Jane No. 3	7 - 24 - 51	8 - 13 - 51	R-4	60
Jane No. 4	7 - 25 - 51	8 - 13 - 51	R-4	60
Jane No. 5	7 - 25 - 51	8 - 13 - 51	R-4	60
Jane No. 6	7 - 25 - 51	8 - 13 - 51	R-4	59
Jane No. 7	7 - 25 - 51	8 - 13 - 51	R-4	59
Vision No. 1	7 - 5 - 51	7 - 6 - 51	R-3	568
Vision No. 2	7 - 5 - 51	7 - 6 - 51	R-3	568
Vision No. 3	7 - 16 - 51	8 - 13 - 51	R-4	58
Vision No. 4	7 - 17 - 51	8 - 13 - 51	R-4	57
Vision No. 5	7 - 18 - 51	8 - 13 - 51	R-4	57
Vision No. 6	7 - 20 - 51	8 - 13 - 51	R-4	57
Vision No. 7	7 - 21 - 51	8 - 13 - 51	R-4	56
Vision No. 8	7 - 23 - 51	8 - 13 - 51	R-4	56
Vision No. 9	7 - 24 - 51	8 - 13 - 51	R-4	56

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON

work will start immediately and the project will be completed within months following approval of the contract. Time schedule contemplates completing one-twelfth of the program, or approximately 70 wagon drill holes totalling 2130 feet of holes, per month, thus completing the project in one year.

Gordon Bourret.

4. The project consists of drilling an estimated 840 wagon drill holes of 2 3/4" starting diameter to maximum depths of approximately 40 feet with total drilling footage of 25,600 feet. These holes are to be drilled in a pattern with approximately 50 feet between holes in a northwesterly direction (across the rolls) and 200 feet between them in a northeasterly direction (along the rolls), in two areas as recommended by the field team. One area is covered by the following claims: Vision Nos. 1,2, and 3, Jane Nos. 2, 3, 4, 5, 6, and 7, and Rex Nos. 10 and 13; the other area is covered by the following claims: Pioneer Nos. 1, 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20. Holes may be drilled elsewhere on applicant's ground subject to prior approval by field team.

5. Estimated costs for the project are as follows:

25,600 feet of wagon-drill hole at 60 cents per foot	$15,360.00*
Total Cost of project	$15,360.00

*Overallcost including supervision, sampling, assaying etc.

Therefore, it is recommended that the P.E.D. negotiate a formal contract (MF-200) with the Bowles-Heflin Mining Company which will permit them to undertake the following, specific exploration along the lines described above:

(a) Drill approximately 840 wagon-drill holes for a total of 25,600 feet of hole.
(b) Sample and assay cuttings from drill holes.

Tom Lyon
Tom Lyon, Director
Supply Division

not stripped in RAR.

EGordon/mh 9-18-51
cc: Adm. Read. File
Lyon
Field Team, IV
Keiser-Hosted, USGS
Bourret
DMA docket files

EXHIBIT A

Project: Drill approximately 840 wagon drill holes aggregating 25,600 feet of hole to explore favorable sandstone lenses for uranium mineralization, in areas recommended by the government.

It is estimated that approximately 2,130 feet of drill hole will be drilled during each of the twelve months following approval of the project, thus completing it in 12 months time.

Estimated Cost For The Project Are As Follows:

Drill 25,600 feet of wagon-drill holeat 60 cents per foot.	$15,360.00*
Total Cost of project	$15,360.00

*Overall cost, including labor, supervision, equipment and its operation, sampling, assaying, etc.

Additional Fixtures and Improvements - not applicable

Operating Equipment to be Supplied by Applicant:

1. Caterpillar Tractor with dozer
2. Tractor - Self-propelled 105 ft. compressor
3. Le Roi - Cleveland wagon drill
4. Worthington 105 ft. compressor if needed
5. Dodge ½ ton pick-up.

Labor and Supervision :

1 wagon driller	$300 per month
1 Wagon driller helper	250 per month
1 Supervisor, part time	250 per month

Rehabilitation and Repairs - not applicable

MELVIN C. BOWLES
Operating Office
Yellow Circle Mines
Moab, Utah

A. L. HEFLIN
Home Office
1600 Galena St.
Denver 8, Colo.
Phone Aurora 370

Bowles-Heflin Mining Co.

Moab, Utah
Denver 8, Colorado

Sept. 11, 1951

United States Department
of the Interior
Defense Minerals Administration
Washington 25, D. C.

Re: Uranium - DMA 1309X

SEP 13 10 57 AM '51
DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.

Gentlemen:

In reply to your letter of August 29, 1951, I will attempt to supply you with the additional information you requested.

First - During the examination of this property, Study of the geological maps of this area, and our past and present operations by Mr Byron Sharp & Mr Preston Hotz of the DMA field team. They recommended that we modify this application to test drilling those area's immeadiately back of the canyon rims where the overburden is shallow enough to permit testing by wagon drilling as in these area's we would be more likely to discover the most ore for the cost of the exploration project.

Second - In planning this modified program we figured we should drill a minumin of 840 wagon-drill holes aggregating at least 25,600 feet to determine just what area's were mineralized. Then wherever ore was encountered it would justify drilling additional holes later by the Company to determine the size and extent of the ore bodies. At a minumin cost of .60¢ per foot the total of $15,360 was arrived at for government participation. This would be the overall cost of the project encluding access roads, preparing drill sites, drilling, supervision, assaying, mapping ects. In the event the cost exceeds the $15,360 estimate we would be willing to stand the additional cost.

Third - Enclosed is a list of the claims owned by us on which the exploration is to be done. These are all new locations as we have re-located, re-staked and renamed most of these claims since we filed this application, But even though these are recent locations they do cover the old claims dating back as far as 1914.

Fourth - Enclosed is a sketch map of the claims showing the area's to be test drilled by this project.

Fifth - Under this modified project only the following equipment would be needed, it being owned by the Company and on the property.
1. Caterpillar Tractor with dozer - for access roads and drill sites.
2. Tractair - Self-propelled 105' compressor for running wagon-drill.
3. Le Roi-Cleveland wagon drill for above.
4. Worthington 105' compressor on rubber when additional air is needed on the deeper holes.
5. Dodge ½ ton pick-up for hauling supplies and equipment and transportation.

MELVIN C. BOWLES
Operating Office
Yellow Circle Mines
Moab, Utah

A. L. HEFLIN
Home Office
1600 Galena St.
Denver 8, Colo.
Phone Aurora 370

Bowles-Heflin Mining Co.

Moab, Utah

Denver 8, Colorado

Sixth - It is proposed to start these holes with a two and three/fourth inch bit and it will remain nearly the same all the way down as we use a hard bit that will finish the hole without being changed.

Seventh - We are in a position of being able to start on this project immediately upon its approval as we have our present mining operation here now and the additional equipment and men available from worked out area's to carry out this project.

Eighth - We believe it would be desireable to plan on completing a minumin of one/twelveth of this project each month so as to complete not later than one year from the date of signing this contract.

I believe this covers your request and hope it is sufficient in detail to allow you to complete favorable consideration of our application. I assure you we are willing to cooperate in any way we can and if you find it necessary any reasonable change in this proposed project will meet with our approval.

In the future if you desire to contact me I would advise you to send me a telegram as it will be delivered by mail every day and we do not have a telephone up here at the mine where we live and have our headquarters.

Hoping to hear from you soon I remain.

Sincerly Yours

Melvin C. Bowles

Partner and Manager of
Bowles-Heflin Mining Co.

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.
SEP 13 10 57 AM '51

List of Mining Claims which we have and propose to explore for ore bodies by this drilling project, DMA 1309X, if approved. (see sketch)

Claim Name	Date Located	Date Recorded	Book & Page
Pioneer No. 1	3 - 2 - 51	3 - 12 - 51	R-2 505
Pioneer No. 2	3 - 3 - 51	3 - 12 - 51	R-2 505
Pioneer No. 3	3 - 7 - 51	3 - 12 - 51	R-2 505
Pioneer No. 4	3 - 10 - 51	3 - 12 - 51	R-2 504
Pioneer No. 5	3 - 10 - 51	3 - 15 - 51	R-2 526
Pioneer No. 6	3 - 10 - 51	3 - 15 - 51	R-2 526
Pioneer No. 7	3 - 11 - 51	3 - 15 - 51	R-2 527
Pioneer No. 8	3 - 11 - 51	3 - 15 - 51	R-2 527
Pioneer No. 9	3 - 12 - 51	3 - 15 - 51	R-2 527
Pioneer No.10	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No.11	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No.12	3 - 12 - 51	3 - 15 - 51	R-2 528
Pioneer No.13	3 -13 - 51	3 - 15 - 51	R-2 529
Pioneer No.14	3 - 13 - 51	3 - 15 - 51	R-2 529
Pioneer No.15	3-- 13 - 51	3 - 15 - 51	R-2 529
Pioneer No.16	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No.17	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No.18	3 - 13 - 51	3 - 15 - 51	R-2 530
Pioneer No.19	3 - 14 - 51	3 - 15 - 51	R-2 531
Pioneer No.20	3 - 14 - 51	3 - 15 - 51	R-2 531
Rex No. 1	7 - 17 - 51	8 - 13 - 51	R-4 65
Rex No. 2	7 - 18 - 51	8 - 13 - 51	R-4 65
Rex No. 3	7 - 18 - 51	8 - 13 - 51	R-4 65
Rex No. 4	7 - 18 - 51	8 - 13 - 51	R-4 64
Rex No. 5	7 - 19 - 51	8 - 13 - 51	R-4 64
Rex No. 6	7 - 19 - 51	8 - 13 - 51	R-4 64
Rex No. 7	7 - 19 - 51	8 - 13 - 51	R-4 63
Rex No. 8	7 - 19 - 51	8 - 13 - 51	R-4 63
Rex No. 9	7 - 20 - 51	8 - 13 - 51	R-4 63
Rex No.10	7 - 20 - 51	8 - 13 - 51	R-4 62
Rex No.11	7 - 21 - 51	8 - 13 - 51	R-4 62
Rex No.12	7 - 21 - 51	8 - 13 - 51	R-4 62
Rex No.13	7 - 21 - 51	8 - 13 - 51	R-4 61
Jane No. 1	7 - 24 - 51	8 - 13 - 51	R-4 61
Jane No. 2	7 - 24 - 51	8 - 13 - 51	R-4 61
Jane No. 3	7 - 24 - 51	8 - 13 - 51	R-4 60
Jane No. 4	7 - 25 - 51	8 - 13 - 51	R-4 60
Jane No. 5	7 - 25 - 51	8 - 13 - 51	R-4 60
Jane No. 6	7 - 25 - 51	8 - 13 - 51	R-4 59
Jane No. 7	7 - 25 - 51	8 - 13 - 51	R-4 59
Vision No. 1	7 - 5 - 51	7 - 6 - 51	R-3 568
Vision No. 2	7 - 5 - 51	7 - 6 - 51	R-3 568
Vision No. 3	7 - 16 - 51	8 - 13 - 51	R-4 58
Vision No. 4	7 - 17 - 51	8 - 13 - 51	R-4 57
Vision No. 5	7 - 18 - 51	8 - 13 - 51	R-4 57
Vision No. 6	7 - 20 - 51	8 - 13 - 51	R-4 57
Vision No. 7	7 - 21 - 51	8 - 13 - 51	R-4 56
Vision No. 8	7 - 23 - 51	8 - 13 - 51	R-4 56
Vision No. 9	7 - 24 - 51	8 - 13 - 51	R-4 56

Excerpt from: Fis[illegible]r, RP, Duncan, DC, Stokes, WL, [illegible]d Rominger, JF, Federal exploratio[illegible] for vanadium in southeastern Ut[illegible]n and southwestern Colo., June 44, Ms report

Yellow Circle group.--The Yellow Circle group, owned by H. W. Balsley and C. W. Wright of Moab, Utah, is in San Juan County, Utah. The group was drilled by the Bureau of Mines in May and June 1943. Although limited personnel made it impossible for the Geological Survey to participate actively in the project during drilling, general suggestions were made on the basis of earlier reconnaissance work in the area. In May 1944 the Geological Survey studied the deposits in the Yellow Circle claims (sec. 3, T. 26 S., R. 23 E.) for purposes of reserve calculations. The White Fawn claims (sec. 34, T. 27 S., R. 23 E.), although part of the group, were not examined, for all six holes on them were barren.

The deposits are at the top of the lower unit of the Morrison formation. Ore occurs in two sandstone lenses that are separated by as much as 25 feet of shale in the southern part of the area, but the sandstone lenses merge northward, where the shale thins and disappears (pl. 37) _/. The lower sandstone is 40 to 45 feet thick

---

_/ Plate 37.--White Fawn and Yellow Circle claims, Yellow Circle group, San Juan County, Utah.

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and underlain by at least 10 to 15 feet of shale. The upper ore-bearing lens ranges from 5 to 30 feet in thickness and is overlain by shales of the upper unit of the Morrison.

Vanadium-bearing sandstone occurs in thin, discontinuous, blanketlike layers that thicken locally and in a few places form fairly well-defined rolls; all of the rolls trend northeast. There are five such layers in the lower sandstone and two in the upper sandstone (pl. 37). The mineralized area in the lower sandstone, which contains most of the ore, trends northeast, parallel to the roll axes.

Drill data are shown on plate 37, and indicated reserves by grade and thickness classes are shown in table 3, page 100. In addition to the reserves shown, 1,066 tons of ore that averaged 1.94 percent V_2O_5 were indicated by the drilling and were mined from June 1943 to May 1944. Inferred reserves of 1,000 tons of ore averaging 1.50 percent V_2O_5 perhaps lie in the lower sandstone within the vanadium-bearing area shown on the map, and at the northeastern extension of this area.

330

FILE COPY
SURNAME:

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

A.E.C.

Gordon

AUG 29 1951

Mr. Melvin C. Bowles
Bowles-Heflin Mining Company
P. O. Box 145
Moab, Utah

Re: Yellow Circle Group
San Juan County, Utah
Uranium - DMA 1309X

Dear Mr. Bowles:

Having been unsuccessful in contacting you by telephone we are writing to request more data to enable us to give final consideration to your application of May 21, 1951, DMA 1309X for an exploration project.

The DMA field team reports that you agree to a modified program consisting of 840 wagon-drill holes aggregating 25,600 ft. at a cost of 60¢ a foot, total cost to be $15,360. for a government participation of $13,824. (90%). We assume this overall cost covers supervision, assaying, etc.

To enable us to draw up a contract we require a fuller description of the claims owned by you on which the exploration is to be done. Kindly advise us the date, book and page of recording of location notices, whether the claims are patented, and if so the survey patent number. We also request in sextuplicate a map or sketch showing relation of your claims to the location of the areas to be explored. As you know exploration may be carried out only on ground owned or otherwise under your control. Also kindly give us a list of the heavy equipment to be used on the job, also the starting diameter of the proposed wagon-drill holes.

Prompt receipt of the above requested information plus the estimate of time required for starting and completing the project subsequent to signing the contract will enable us to complete our review of your application.

Yours very truly,

8/29 cc

Ernest R. Gordon

Weston Bourret, Chief
Minor and Rare Metals Branch

EGordon/ch 8-28-51
cc: Adm. Reading File
Reports and Records
Lyon
Bourret
Keiser
Hosted
Field Team - IV
DMA docket file

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REGION IV

OFFICE OF
REGIONAL DIRECTOR

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

Air Mail

August 14, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: Field Team, Region IV, Defense Minerals Administration

Subject: Docket DMA-1309X, Bowles-Heflin Mining Company, Moab District, Utah

Enclosed are the original and two copies of the report on the above docket.

We concur with the findings of the field men.

J. H. East, Jr.

A. H. Koschmann

Enclosures

Air Mail

August 14, 1952

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: Field Team, Region IV, Defense Minerals Administration

Subject: Report DMA-2[illegible], Beaver-Raflin Mining Company, Moab District, Utah

Enclosed are the original and two copies of the report on the above domain.

In concur with the findings of the field team.

F. K. Hart, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 13, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 13097, Bowles-Heflin Mining Company, Moab District, Utah

Enclosed are eight copies of the geologic report by Preston E. Hotz and Byron J. Sharp covering the above docket.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 17 1951

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City, Utah
10 August 1951

Memorandum

To: Regional Director, Field Team IV

From: Acting District Supervisor, Utah-Nevada district

Subject: Docket DMA-1309X, Bowles-Heflin Mining Company, Moab District, Utah

Enclosed are eight copies of a report on the Bowles-Heflin property, Moab District, Utah, by Preston E. Hetz and Byron J. Sharp. The report contains sections on geology, ore deposits, ore reserves, and conclusions and recommendations.

Maps and geological data were furnished the Survey by the Utah Mines Development Corporation. This information aided the examining geologists in the study of the property.

I concur in the conclusions and recommendations of Mr. Hetz and Mr. Sharp.

/s/ Ralph J. Roberts

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Docket DMA-1309X, Bowles-Heflin Mining Company

San Juan County, Utah

P. E. Hotz and B. J. Sharp, Geologists
U. S. Geological Survey

August 10, 1951

REPT.

CONTENTS

	Page
Introduction	1
Location and accessibility	1
History and ownership	1
Geology	2
Ore deposits	3
Proposed exploration	4
Conclusions and recommendations	4

ILLUSTRATIONS

Figure 1. Index map showing location of Bowles-Heflin Mining Company.

Figure 2. Geologic map showing areas of proposed exploration by the Bowles-Heflin Mining Company.

Docket DMA-1309X, Bowles-Heflin Mining Company

San Juan County, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Bowles-Heflin Mining Company has applied for an exploration loan to be used in a drilling program to locate new bodies of carnotite ore on the Yellow Circle group of claims. The cost of the proposed work was estimated to be $100,000.

In accordance with a request from the Field Team, Region IV, a field examination of the property was made to determine if the exploration project has merit.

The ore is localized in northeastward trending rolls and in replaced tree trunks in the upper sandstone lenses of the Salt Wash member of the Morrison formation. During the period of 1942 to 1944, recorded shipments of ore show that the Yellow Circle group of claims yielded 2,925.90 tons of ore averaging 1.88 percent V_2O_5. Production from April 9, 1948 to February 28, 1951 was 2,839 tons of ore averaging .315 percent U_3O_8 and 1.37 percent V_2O_5.

The applicant proposes to explore the favorable sandstone lenses in the Salt Wash member on his property by means of wagon drilling (40,000 feet) and core drilling (10,000 feet). The exploration program is to be limited to wagon drilling in two areas in secs. 2, 3, and 4, T. 28 S., R. 23 E., and secs. 34 and 35, T. 27 S., R. 23 E. These areas can be adequately covered by approximately 840 drill holes aggregating 25,600 feet at a cost of $.60 a foot. The total cost of the program would be about $15,360.

It is recommended that the Defense Minerals Administration advance $13,824 as its share of the money needed to do the proposed exploratory work.

Docket DMA-1309X, Bowles-Heflin Mining Company

San Juan County, Utah

INTRODUCTION

Docket DMA-1309X, Bowles-Heflin Mining Company, San Juan County, Utah, has requested an exploration loan for a drilling program to locate new bodies of carnotite ore on the Yellow Circle group of claims.

In response to a request from the field team, Region IV, dated June 18, 1951, P. E. Hotz, R. D. Trace, and B. J. Sharp of the U. S. Geological Survey visited the property on June 29 and 30 to determine the merit of the proposed exploration program. Geologic maps of the area prepared by Union Mines Development Corporation were obtained from the files of the Grand Junction office of the Geological Survey.

Location and accessibility

The Yellow Circle group of claims is owned by the Bowles and Heflin Mining Company. The claims of this Company include all of sec. 26, T. 27 S., R. 22 E.; all of sec. 32, T. 27 S., R. 23 E.; part of secs. 33, 34, and 35, T. 27 S., R. 23 E.; part of secs. 2, 3, and 4, T. 28 S., R. 23 E. (see fig. 1).

The Bowles-Heflin Mining Company has taken over the old Yellow Circle camp in Upper Cane Canyon in San Juan County, Utah. It can be reached by a surfaced and graded road extending 20 miles southeast of Moab, Utah. (See fig. 1) The road is easily maintained winter and summer.

History and ownership

The earliest recorded production of vanadium ore in the area was in 1911 when the Utah Rare Metals Company shipped 30 tons of ore to domestic buyers and 21 tons of concentrate averaging 7.3 percent V_2O_5 to England. During 1926,

H. W. Badsley mined carnotite ore at the Yellow Circle mine in Upper Cane Canyon. In 1927 the U. S. Vanadium Company of New Jersey operated briefly in the district; their properties were acquired by the Vanadium Alloys Corporation in 1929. The properties were inactive during 1932 and 1933. In 1934 the Yellow Circle Mining Company produced carnotite ore from about 30 small mines under contract agreements. The greatest boom for the area began in 1939 and lasted until 1944 under the stimulus of subsidy prices. The greatest production was from June, 1942 to March, 1944 under contract with Metals Reserve Company. Recorded shipments to the Metals Reserve Company show that the Yellow Circle group yielded 2,925.90 tons of ore averaging 1.88 percent V_2O_5. Production data obtained by the Atomic Energy Commission representing the period from April 9, 1948 to February 28, 1951 showed that 2,839 tons of ore were shipped averaging .315 percent U_3O_8 and 1.37 percent V_2O_5.

GEOLOGY

The area is underlain by sedimentary rocks of Jurassic and Cretaceous age. The uranium deposits were formed in sandstone beds in the lower part of the Morrison formation.

In the Moab district the Morrison formation of Jurassic age consists of two members: the basal Salt Wash sandstone which lies with apparent conformity upon the Summerville formation, and the Brushy Basin shale which lies conformably upon the Salt Wash. The Dakota sandstone of Cretaceous age rests conformably on the shale.

The mine workings and prospects are mainly in the Salt Wash member. This member consists largely of medium grained, buff to brown to grayish-white

sandstone lenses interbedded with approximately an equal thickness of reddish-brown to grayish-green shale.

These beds dip gently to the southwest and have been involved in little structural deformation. (See fig. 2) A few small faults have been mapped in The area, but they have had no apparent effect on the ore deposition.

Ore deposits

The ore is localized in northeastward trending rolls and in replaced tree trunks in the sandstone lenses of the Salt Wash member of the Morrison formation.

The chief ore minerals of the productive mines are carnotite, vanoxite, and roscoelite. These minerals fill cavities in the sandstone, and have locally replaced carbonaceous material and tree trunks.

The principal ore horizon in the district is in the upper part of the Salt Wash member of the Morrison formation. Ore occurs in two sandstone lenses that are separated by as much as 25 feet of shale in the southern part of the area, but the sandstone lenses merge northward as the shale thins and disappears. The lower sandstone is 40 to 45 feet thick and underlain by at least 10 to 15 feet of shale. The upper ore-bearing lens ranges from 5 to 30 feet in thickness and is overlain by shales of the Brushy Basin member of the Morrison.

Vanadium-bearing sandstone occurs in thin, discontinuous, blanket-like layers that thicken locally and in a few places form fairly well-defined rolls; all of the rolls trend northeast. There are five such layers in the lower sandstone and two in the upper sandstone.

Recently, the Company discovered and shipped one high-grade tree trunk having a gross value of $40,000.

PROPOSED EXPLORATION

The applicant proposed to explore the Salt Wash member by means of wagon drilling where the ore horizon is shallow and by core drilling where the ore horizon is deeper than 40 feet. He proposed to cover most of his property with 40,000 feet of wagon drilling and 10,000 feet of core drilling.

In the area northeast of the mines in the old Yellow Circle Group there is a good possibility of discovering high-grade log replacements. Past history of this area has shown that the deposits are larger and of higher grade than elsewhere in the district.

The examining geologists are in agreement with the company that exploratory work is warranted, but suggest that the program be modified. In the discussions with the applicant, Mr. Bowles, the field examiners proposed an alternative exploratory program which probably has better than a 50:50 chance of discovering new deposits containing uranium ore that can be mined economically. Mr. Bowles is in complete agreement with the alternative program and has agreed to abandon his original exploratory program which is to be limited to wagon drilling in two areas in secs. 2, 3, and 4, T. 28 S., R. 23 E., and secs. 34 and 35, T. 27 S., R. 23 E. The areas proposed (shown on fig. 2) are the most suited for exploration by wagon drills, as maximum depth to ore is about 40 feet. These areas should be explored to a depth of 40 feet by drill holes spaced every 50 feet in a northwest direction (across the rolls) and every 200 feet in a northeast direction (along the rolls).

CONCLUSIONS AND RECOMMENDATIONS

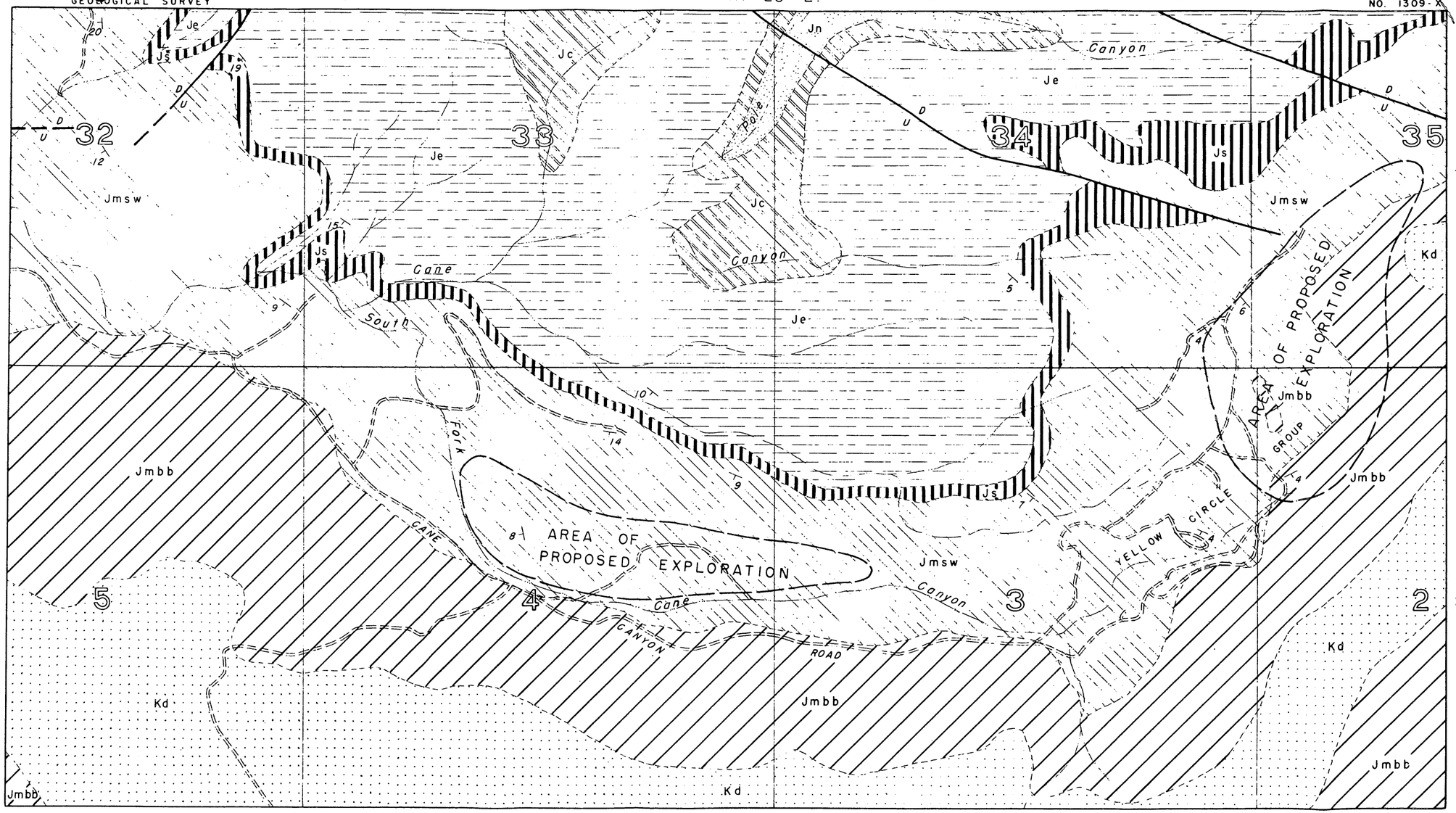
It is concluded that the geologic conditions are favorable for the discovery of additional bodies of uranium ore throughout most of the Bowles-Heflin property. It is also concluded, however, that the best possibilities

for finding important new deposits are in two areas on the South Fork of Cane Canyon in the vicinity of the Yellow Circle Group because: (1) the deposits of the Yellow Circle Group have had the best production record in the past; (2) deposits in the vicinity of the Yellow Circle Group are likely to be more abundant and of larger size and higher grade than elsewhere in the district and; (3) the deposits are at a shallow depth and can be easily explored with a wagon drill.

The geologists who made the examination discussed the exploration program with the applicant, Mr. Bowles, who is in complete agreement with the modified proposal recommended herein. The recommended exploration should result in the discovery of new uranium-bearing deposits in the area indicated. It is therefore recommended that the Defense Minerals Administration approve the modified program outlined herein and enter into an exploration program with the Bowles-Heflin Mining Company for a total cost of $15,360 of which the government's share would be $13,824.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS ADMINISTRATION
NO. 1309-X



EXPLANATION

CRETACEOUS

- Kd — Dakota sandstone

JURASSIC

Morrison formation

- Jmbb — Brushy Basin member
- Jmsw — Salt Wash member

San Rafael group

- Js — Summerville formation
- Je — Entrada sandstone
- Jc — Carmel formation

UNCONFORMITY

- Jn — Navajo sandstone

D/U — Fault, dashed where approx. (D, downthrown side; U, upthrown side)

Dip and strike of bedding

Geology by H. R. Wardwell and E. E. Waulters, Union Mines Development Corp. Sept. 1944

FIG. 2 GEOLOGIC MAP SHOWING AREAS OF PROPOSED EXPLORATION BY THE BOWLES-HEFLIN MINING CO.
MOAB DISTRICT, SAN JUAN CO., UTAH

0 1000 2000 FEET
Scale

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

FILE COPY
SURNAME:
Bourret
Roe
Moon

JUN 15 1951

Mr. Melvin C. Bowles
Bowles-Heflin Mining Co.
P. O. Box 185
Moab, Utah

Dear Mr. Bowles:

Your application, Docket DMA-1309 for exploration project in the amount of $100,000.00 has been received by the Minor and Rare Metals Branch of the Supply Division.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application therefore is being referred to the office of the Executive Officer of DMA field team IV, Mr. J. H. East Jr., 224 New Customhouse Building, Denver 2, Colorado, with the request that the needed information be supplied to us.

Yours very truly,

Tom Lyon, Director
Supply Division

WBourret/mh
cc: Adm. Reading File
Strobel
Lyon
Field Team IV
Bourret
Files

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

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JUN 18 1951
BUREAU OF MINES
DENVER, COLORADO

JUN 15 1951

Mr. J. H. East, Jr.
U.S. Bureau of Mines
224 New Customs House Bldg.
Denver, Colorado

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. DMA - 1309x

Commodity Uranium

Applicant Bowles-Heflin Mining Co.

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

Olaf Ross
For Geological Survey

[illegible]

Review of [illegible] Exploration Assistance

Contract No. [illegible]

Contracted by [illegible]

Total Amount [illegible]

Cost Participation [illegible]

1. Name and address of applicant [illegible]

P.O. Box [illegible]

2. Identification of Property [illegible]

[illegible]

3. Minerals of interest [illegible] Is it listed in Section 3 of 10-[illegible]

If not, application will be rejected.

4. Geologic probability of discovery — based on data in application (questions #10, 11, 13, 16 and 24).

Given on survey [illegible] etc., do you find characteristics

a) Good [illegible]

b) Poor [illegible]

c) None [illegible]

d) Doubt exists — needs field examination [illegible]

e) Is there an alternative and favorable project? [illegible] (If yes, criteria for choice:)

5. Is the applicant a legal [illegible] to the property or party [illegible] (question 5, 6, 7)

6. The applicant is [illegible], is a [illegible] of the [illegible] [illegible]

Has the [illegible] been [illegible] to run be [illegible] a [illegible] product [illegible]

(Continue on back side of [illegible])

7. Are subordination agreements necessary? _____

a) NF-201? _____

b) NF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower _____

b) Equipment and supplies _____
(question 14 plus general knowledge of availability)

c) Accessibility (question 12) _____

d) Water (question 13) _____

e) Power (question 13) _____

Is a field check needed on any of these points? _____

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4) _____

_____

Is a field check needed on this point? _____

10. Exhibit A. (questions 21 and 22)

a) Is the project adequately described? _____

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? _____

_____

c) Is the proposed work "exploration" under the definition of Section 8, MD-5? _____

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project? _____

d) Are the cost estimates detailed? _____

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? _____

f) Should more information be requested from applicant? _____

g) Is a field examination necessary to complete Exhibit A? _____

11. Exhibit B (question 23-d)

a) Is it applicable? _____

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? _____

12. Exhibit C (question 23-e, f and g)

a) Is it applicable? _____

b) Sufficient data? _____ If so, attach a draft.

c) Are rents and charges reasonable? _____

d) Is a field check needed? _____

13. Exhibit D (question 23-a,b)

a) Are there sufficient data? _____

b) Is the schedule adequate for the work proposed? _____

c) Is the schedule excessive for the work proposed? _____

d) Are the proposed wages and salaries reasonable? _____

e) Is a field check needed? _____

14. Exhibit E (question 23-c)

a) Is it applicable? _____

b) Sufficient data? _____

c) Reasonable? _____

d) Field check needed? _____

15. In your judgment, can the proposed work be done in the proposed time? _____

(All exploration must be completed within two years.)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing questions? _____

[illegible] summary [illegible]. If geologic probabilities are good, the other phases of the project should be checked and exhibits prepared.

RBM

Reviewed by: _____

Date _____

FILE COPY
SURNAME:

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

June 5, 1951

Mr. Melvin C. Bowles
Partner
Bowles-Heflin Mining Co.
P. O. Box 185
Moab, Utah

Subject: DMA-1309X
Re: Exploration Loan
The Primero, Protection,
White Fawn No. 1, U. S.
Treasury, The Exchequer,
& Yellow Circle No. 1.
The Pioneer Group.

My dear Mr. Bowles:

Receipt is acknowledged of your application and attachments of May 21, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1309X and was referred to Mr. Weston G. Bourret, Acting Chief, Minor and Rare Metals Branch on May 29, 1951.

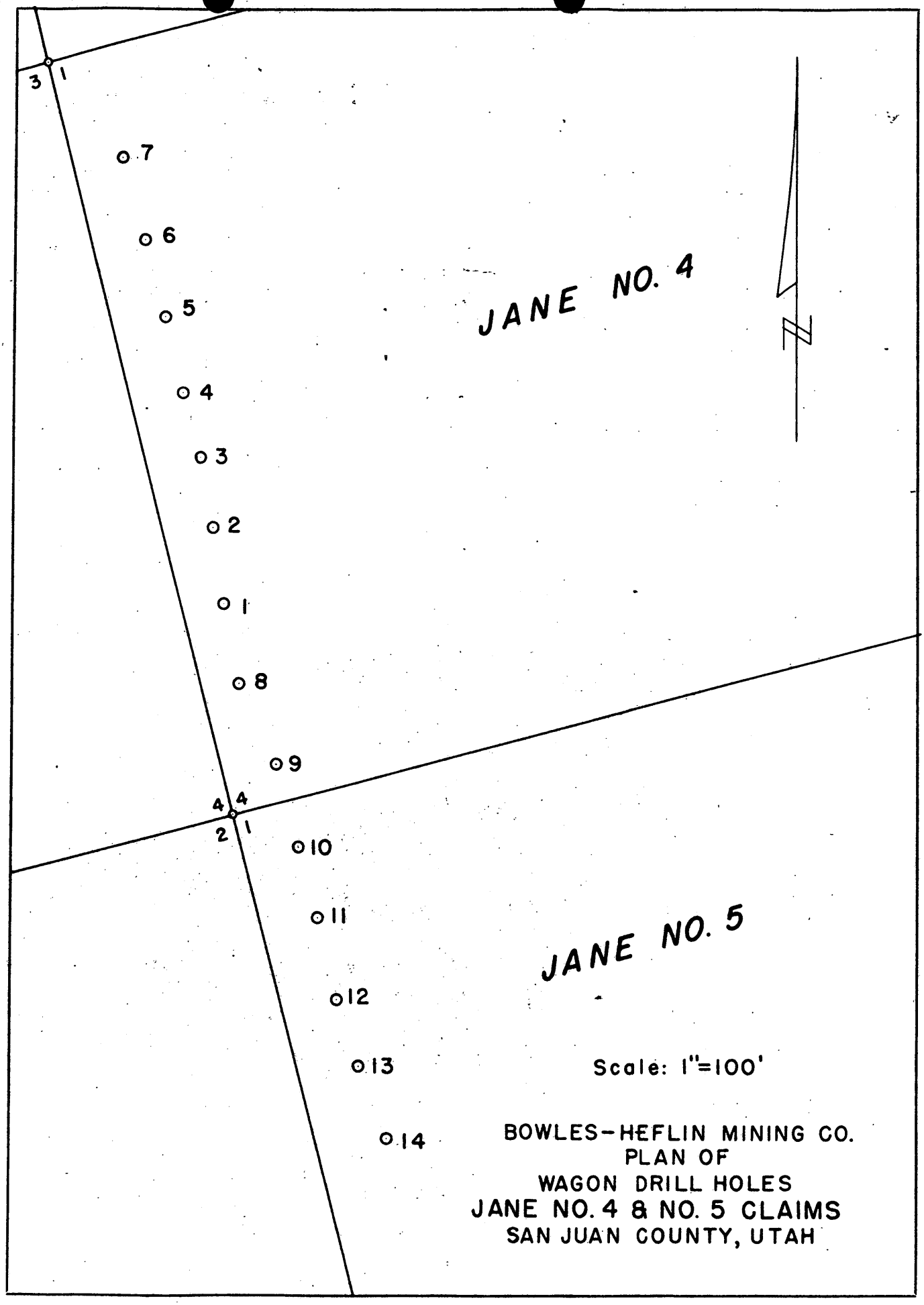
In any future correspondence relating to your application, kindly refer to DMA-1309X.

Sincerely yours,

LANDON F. STROBEL jp

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
√Files
Bourret
Lyon


3
1
7
6
5
4
3
2
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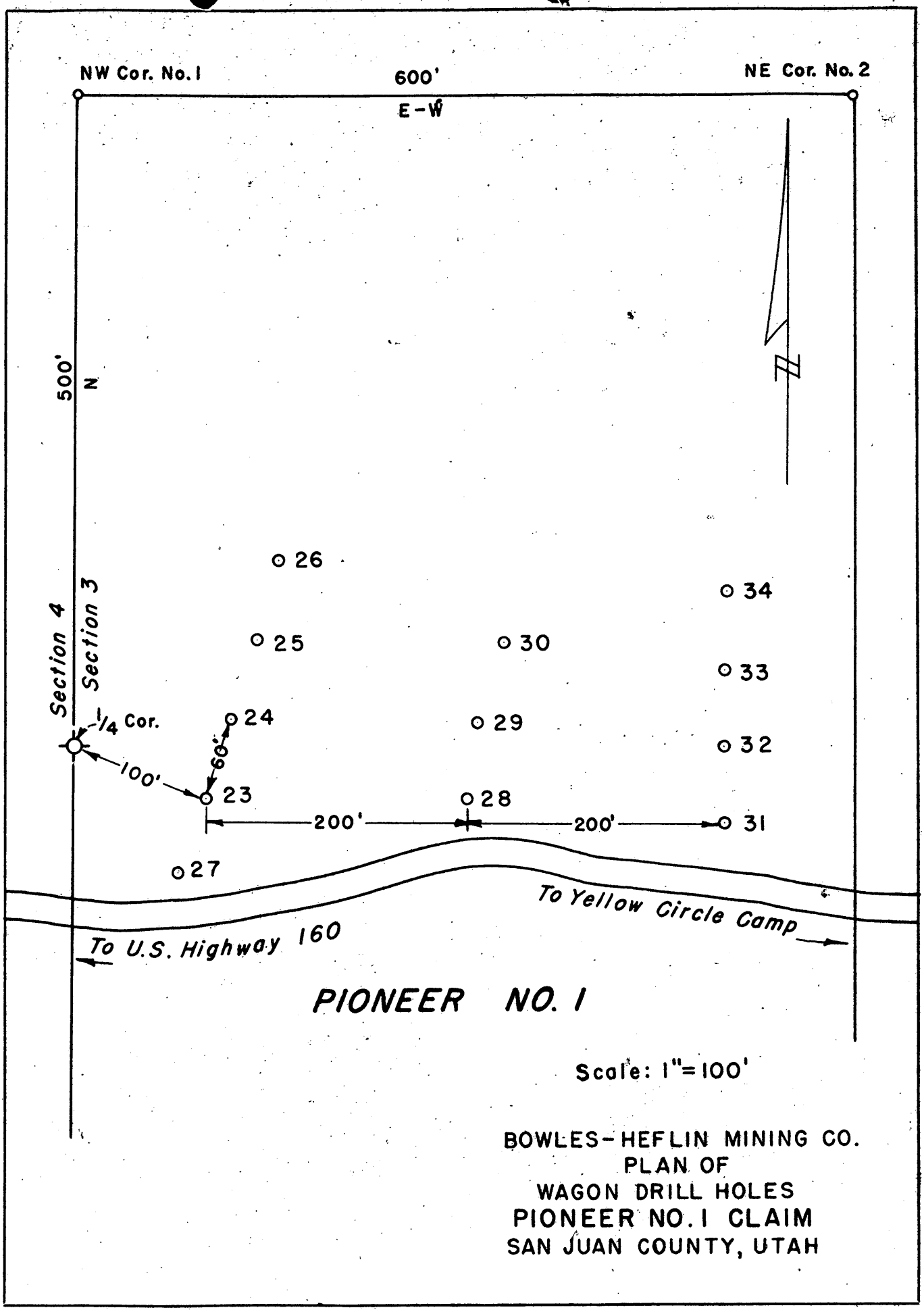
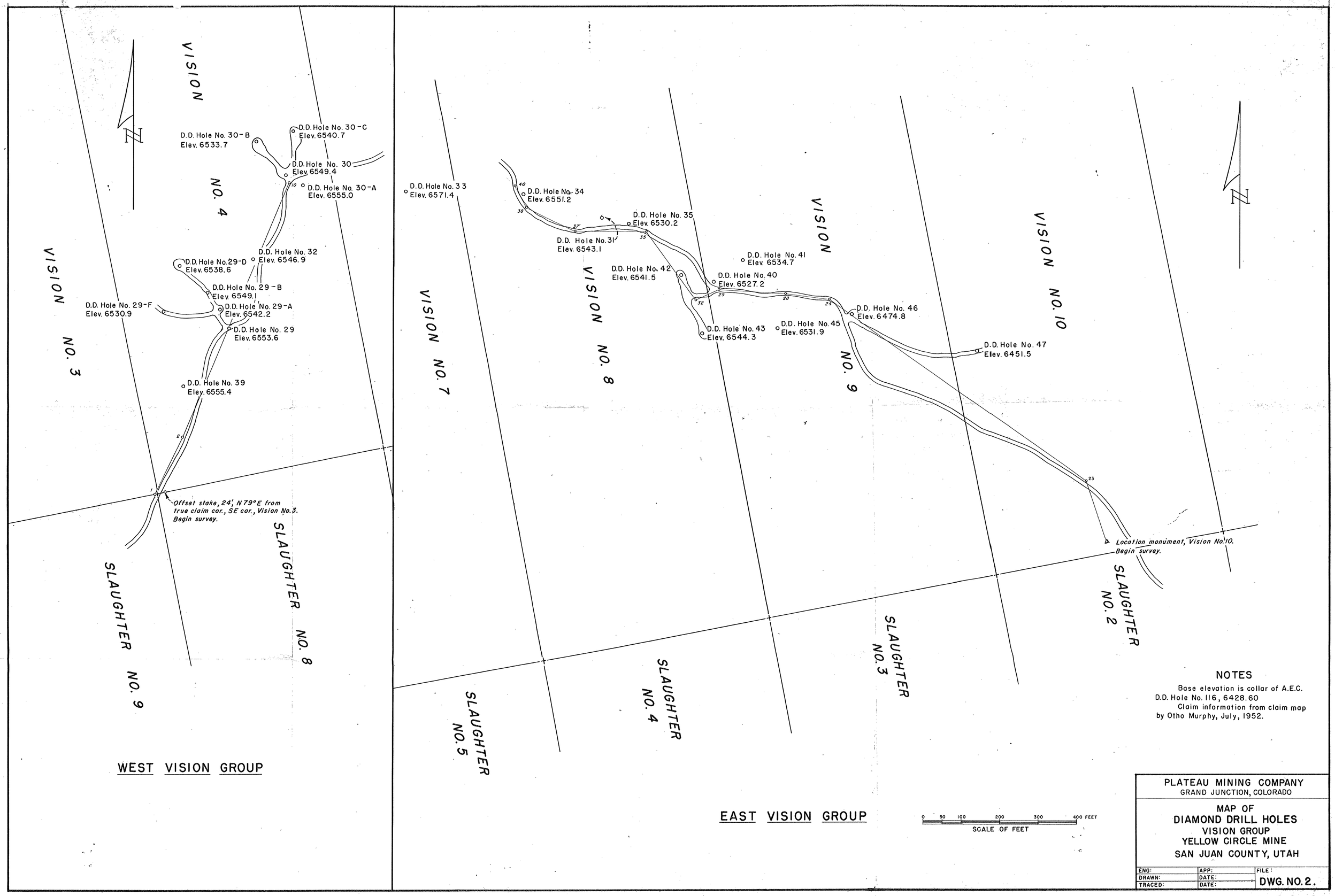
8
9
4
4
2
1
10
11
12
13
14
JANE NO. 4
JANE NO. 5
N
Scale: 1"=100'
BOWLES-HEFLIN MINING CO.
PLAN OF
WAGON DRILL HOLES
JANE NO. 4 & NO. 5 CLAIMS
SAN JUAN COUNTY, UTAH



BOWLES-HEFLIN MINING CO.
PLAN OF
WAGON DRILL HOLES
PIONEER NO. 1 CLAIM
SAN JUAN COUNTY, UTAH


VISION NO. 4
VISION NO. 3
VISION NO. 7
VISION NO. 8
VISION NO. 9
VISION NO. 10
D.D. Hole No. 30-B
Elev. 6533.7
D.D. Hole No. 30-C
Elev. 6540.7
D.D. Hole No. 30
Elev. 6549.4
D.D. Hole No. 30-A
Elev. 6555.0
D.D. Hole No. 32
Elev. 6546.9
D.D. Hole No. 29-D
Elev. 6538.6
D.D. Hole No. 29-B
Elev. 6549.1
D.D. Hole No. 29-A
Elev. 6542.2
D.D. Hole No. 29-F
Elev. 6530.9
D.D. Hole No. 29
Elev. 6553.6
D.D. Hole No. 39
Elev. 6555.4
Offset stake, 24', N 79° E from true claim cor., SE cor., Vision No. 3. Begin survey.
SLAUGHTER NO. 8
SLAUGHTER NO. 9
WEST VISION GROUP
D.D. Hole No. 33
Elev. 6571.4
D.D. Hole No. 34
Elev. 6551.2
D.D. Hole No. 35
Elev. 6530.2
D.D. Hole No. 31
Elev. 6543.1
D.D. Hole No. 41
Elev. 6534.7
D.D. Hole No. 42
Elev. 6541.5
D.D. Hole No. 40
Elev. 6527.2
D.D. Hole No. 46
Elev. 6474.8
D.D. Hole No. 43
Elev. 6544.3
D.D. Hole No. 45
Elev. 6531.9
D.D. Hole No. 47
Elev. 6451.5
Location monument, Vision No. 10. Begin survey.
SLAUGHTER NO. 2
SLAUGHTER NO. 3
SLAUGHTER NO. 4
SLAUGHTER NO. 5
EAST VISION GROUP
0 50 100 200 300 400 FEET
SCALE OF FEET
NOTES
Base elevation is collar of A.E.C. D.D. Hole No. 116, 6428.60
Claim information from claim map by Otho Murphy, July, 1952.
PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO
MAP OF
DIAMOND DRILL HOLES
VISION GROUP
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH
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FILE:
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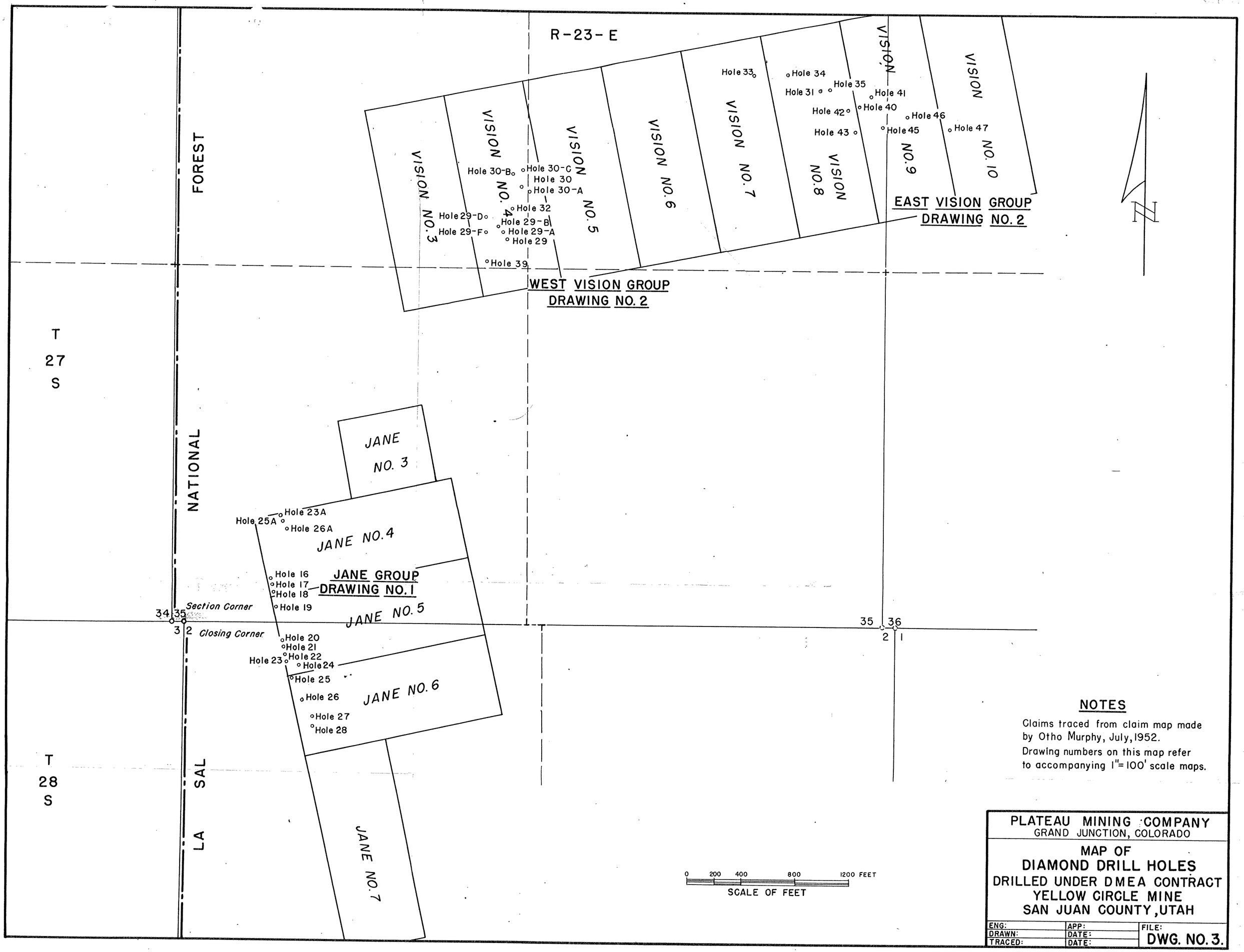
DATE:
DWG. NO. 2.
TRACED:
DATE:



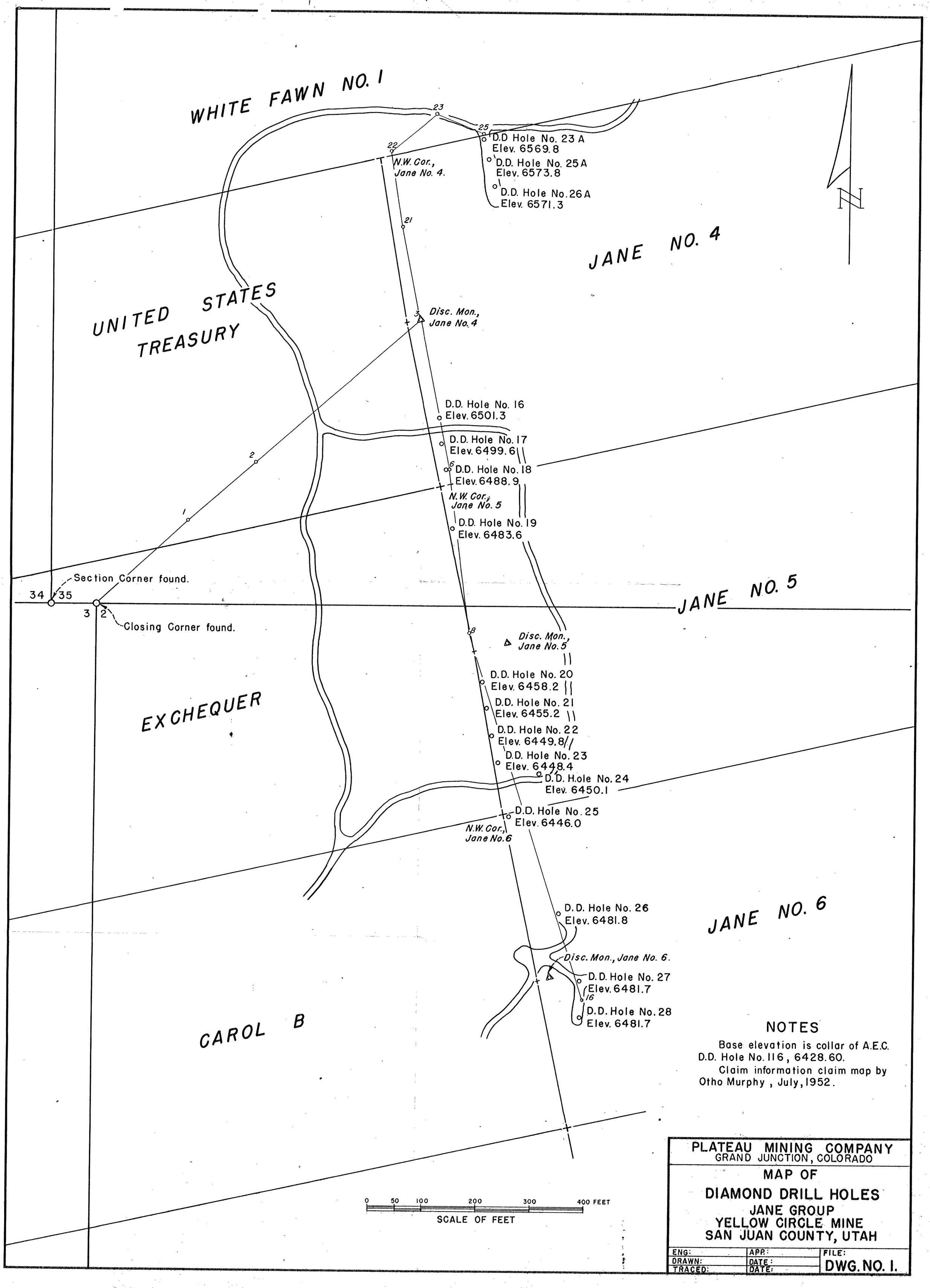
NOTES

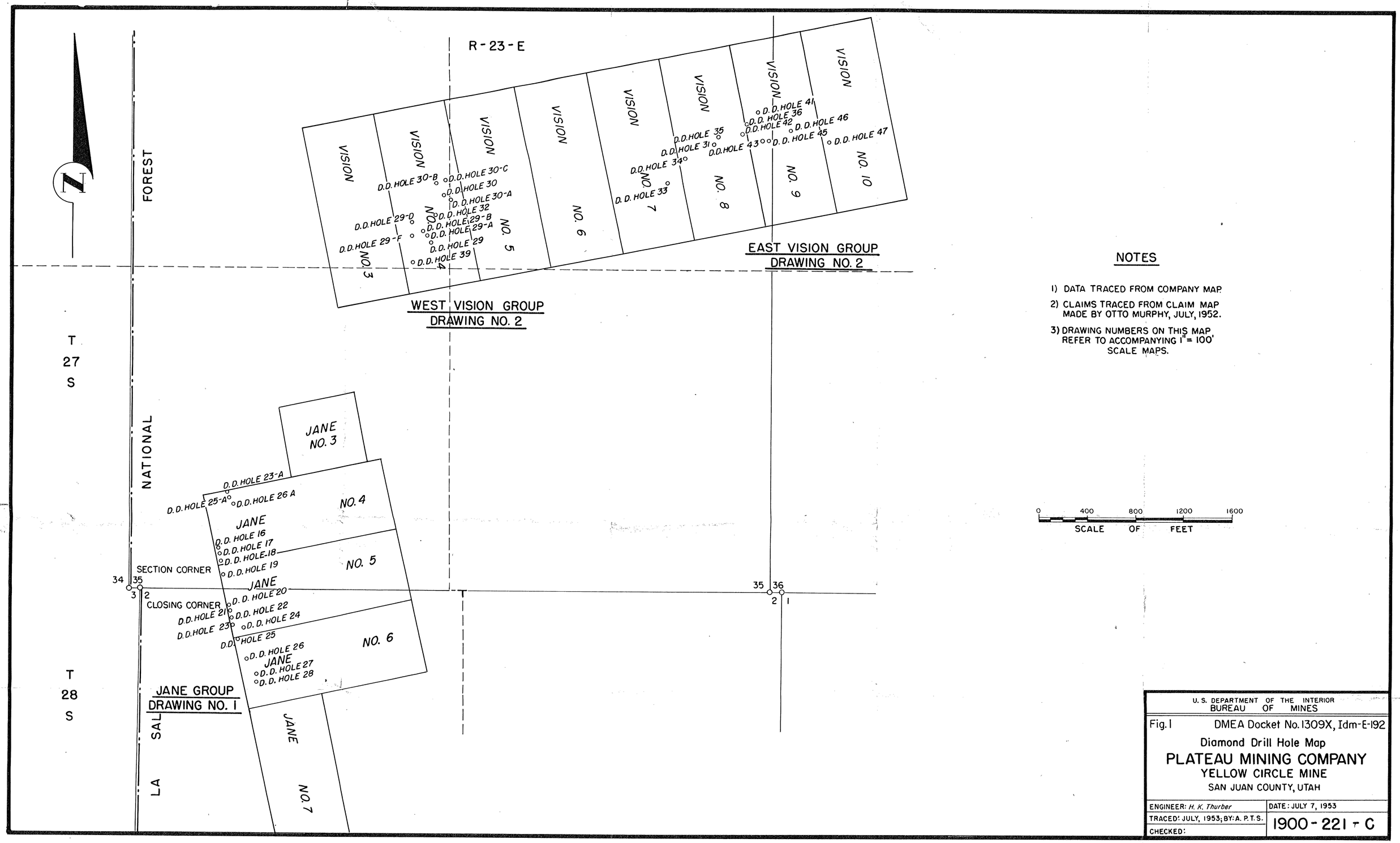
Claims traced from claim map made by Otho Murphy, July, 1952.
Drawing numbers on this map refer to accompanying 1" = 100' scale maps.

PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO

MAP OF
DIAMOND DRILL HOLES
DRILLED UNDER DMEA CONTRACT
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH

ENG:	APP:	FILE:
DRAWN:	DATE:	DWG. NO. 3.
TRACED:	DATE:	


WHITE FAWN NO. 1
23
25
22
D.D Hole No. 23 A
Elev. 6569.8
N.W. Cor.,
Jane No. 4.
D.D. Hole No. 25 A
Elev. 6573.8
D.D. Hole No. 26 A
Elev. 6571.3
21
JANE NO. 4
UNITED STATES
TREASURY
3
Disc. Mon.,
Jane No. 4
D.D. Hole No. 16
Elev. 6501.3
D.D. Hole No. 17
Elev. 6499.6
2
6
D.D. Hole No. 18
Elev. 6488.9
N.W. Cor.,
Jane No. 5
1
D.D. Hole No. 19
Elev. 6483.6
Section Corner found.
34
35
3
2
Closing Corner found.
JANE NO. 5
8
Disc. Mon.,
Jane No. 5
D.D. Hole No. 20
Elev. 6458.2
D.D. Hole No. 21
Elev. 6455.2
EXCHEQUER
D.D. Hole No. 22
Elev. 6449.8
D.D. Hole No. 23
Elev. 6448.4
D.D. Hole No. 24
Elev. 6450.1
D.D. Hole No. 25
Elev. 6446.0
N.W. Cor.,
Jane No. 6
D.D. Hole No. 26
Elev. 6481.8
JANE NO. 6
Disc. Mon., Jane No. 6.
D.D. Hole No. 27
Elev. 6481.7
16
D.D. Hole No. 28
Elev. 6481.7
CAROL B
0 50 100 200 300 400 FEET
SCALE OF FEET
NOTES
Base elevation is collar of A.E.C.
D.D. Hole No. 116, 6428.60.
Claim information claim map by
Otho Murphy, July, 1952.
PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO
MAP OF
DIAMOND DRILL HOLES
JANE GROUP
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH
ENG:
APP.:
FILE:
DRAWN:
DATE:
TRACED:
DATE:
DWG. NO. 1.



NOTES

1) DATA TRACED FROM COMPANY MAP.
2) CLAIMS TRACED FROM CLAIM MAP MADE BY OTTO MURPHY, JULY, 1952.
3) DRAWING NUMBERS ON THIS MAP REFER TO ACCOMPANYING 1" = 100' SCALE MAPS.

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 1309X, Idm-E-192

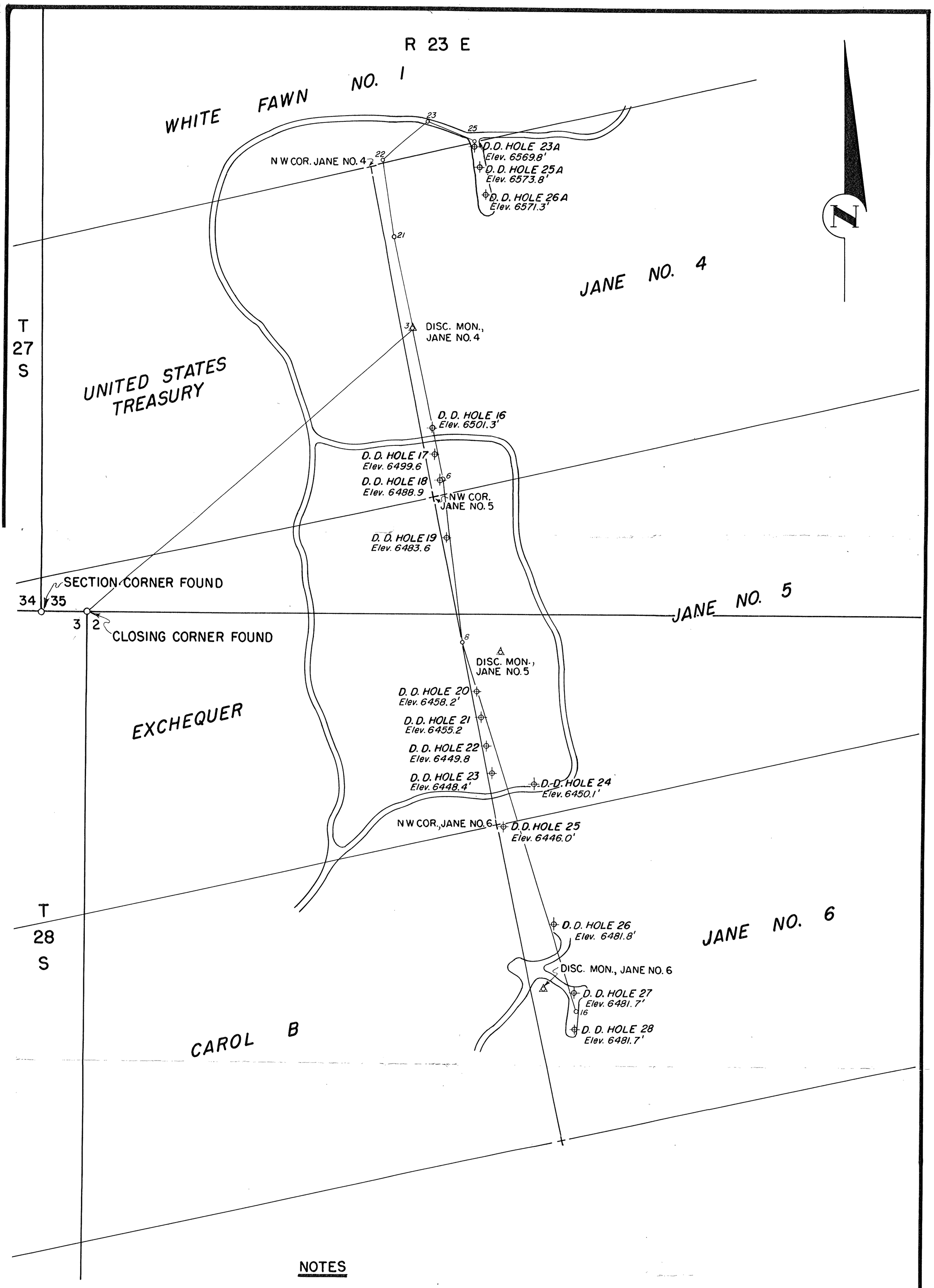
Diamond Drill Hole Map

PLATEAU MINING COMPANY

YELLOW CIRCLE MINE

SAN JUAN COUNTY, UTAH

ENGINEER: *H. K. Thurber*	DATE: JULY 7, 1953
TRACED: JULY, 1953; BY: A. P. T. S.	1900-221-C
CHECKED:	



NOTES

1) DATA TRACED FROM COMPANY MAP

2) BASE ELEVATION IS COLLAR OF A.E.C. D. D. HOLE NO. 116, 6428.60'

3) CLAIM INFORMATION FROM CLAIM BY OTHO MURPHY, JULY, 1952.

0 50 100 200 300 400

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 2 DMEA Docket No. 1309X, Idm-E-192

Diamond Drill Hole Map

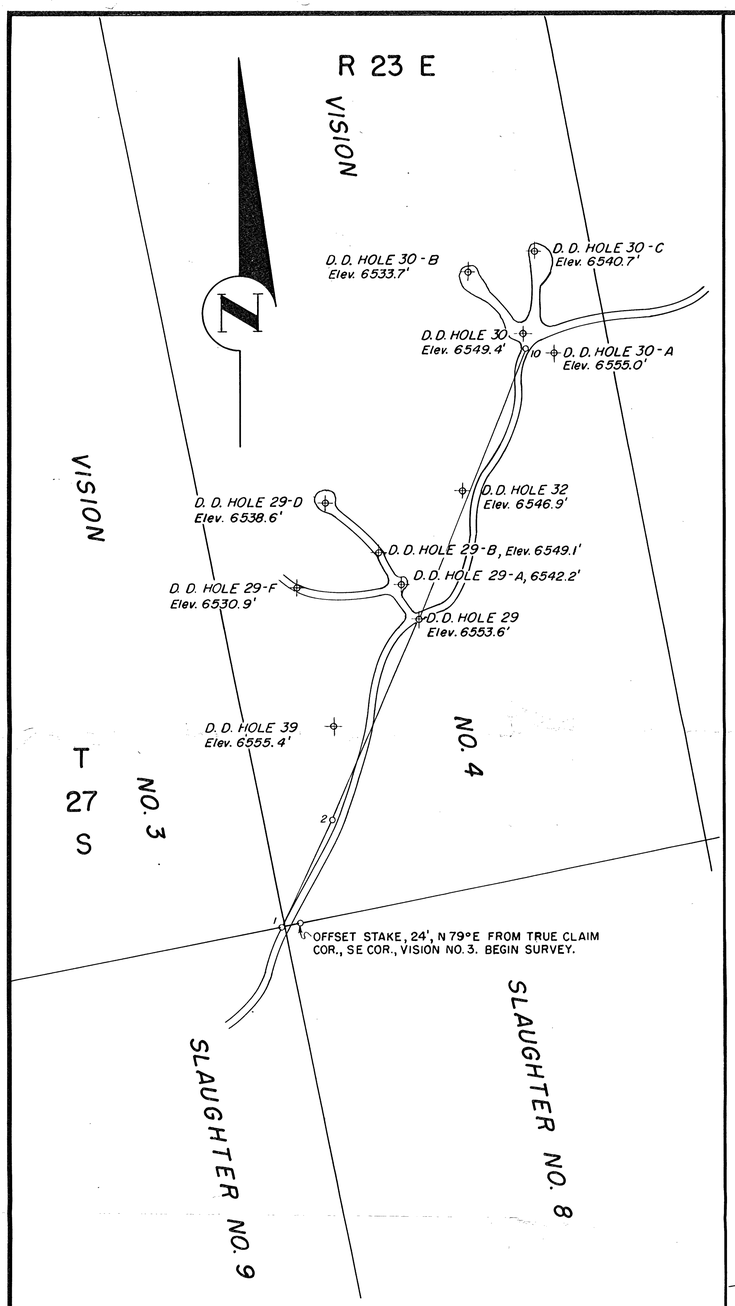
PLATEAU MINING COMPANY

YELLOW CIRCLE MINE

JANE GROUP

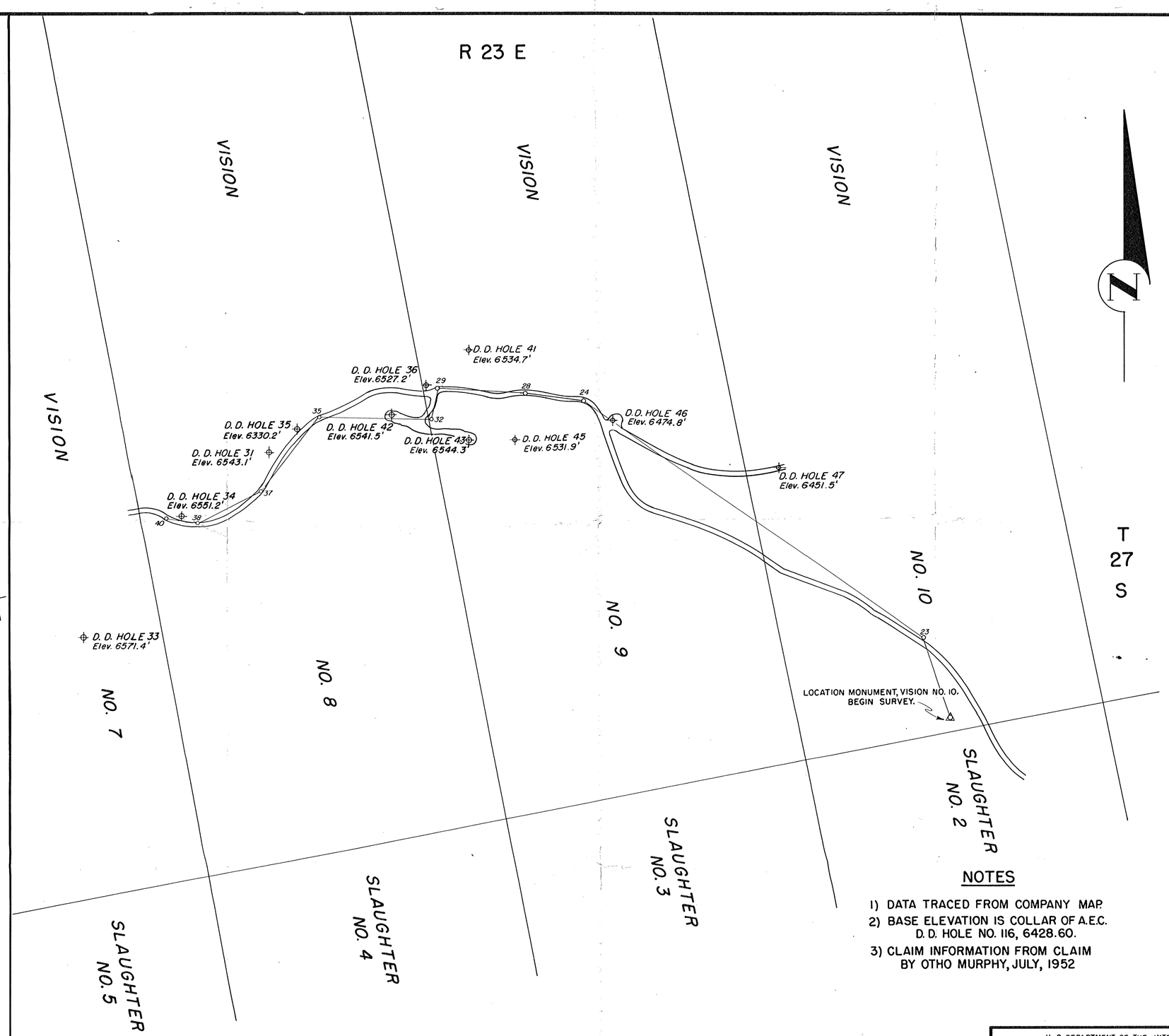
SAN JUAN COUNTY, UTAH

ENGINEER: *H. K. Thurber*	DATE: JULY 6, 1953
TRACED: JULY, 1953; BY: A. P. T. S.	1900 - 222 - C
CHECKED:	



WEST VISION GROUP

0 50 100 200 300 400
SCALE OF FEET



EAST VISION GROUP

0 50 100 200 300 400
SCALE OF FEET

NOTES

1) DATA TRACED FROM COMPANY MAP.
2) BASE ELEVATION IS COLLAR OF A.E.C. D. D. HOLE NO. 116, 6428.60.
3) CLAIM INFORMATION FROM CLAIM BY OTHO MURPHY, JULY, 1952

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

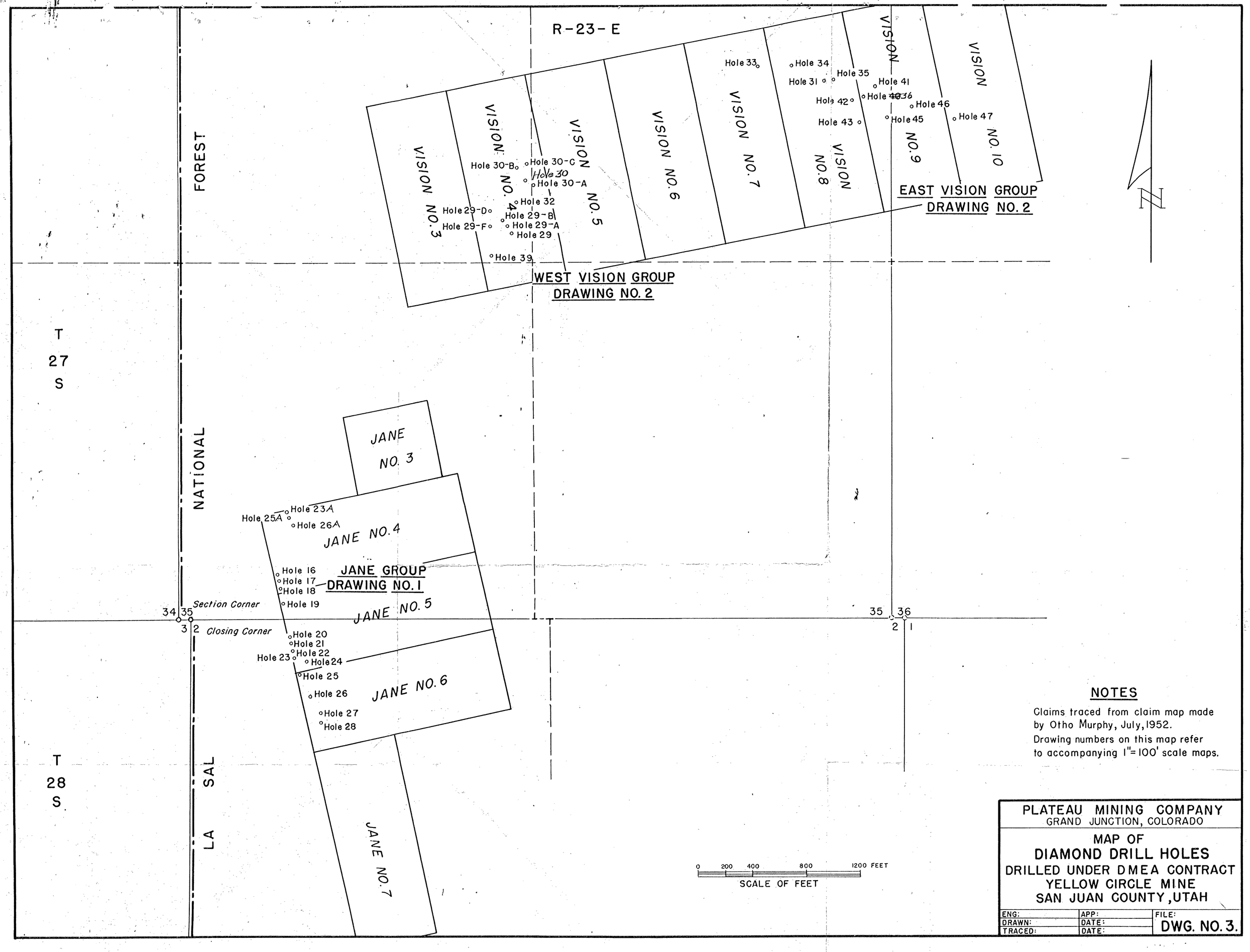
Fig. 3 DMEA Docket No. 1309X, Idm-E 192

Diamond Drill Hole Map

PLATEAU MINING COMPANY

YELLOW CIRCLE MINE
VISION GROUP
SAN JUAN COUNTY, UTAH

ENGINEER: *H. K. THURBER*	DATE: JULY 3, 1953
TRACED: JULY, 1953; BY: A. P. T. S.	1900 - 223 - B
CHECKED:	



NOTES

Claims traced from claim map made by Otho Murphy, July, 1952.
Drawing numbers on this map refer to accompanying 1"= 100' scale maps.

PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO

MAP OF
DIAMOND DRILL HOLES
DRILLED UNDER DMEA CONTRACT
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH

ENG:	APP:	FILE:
DRAWN:	DATE:	DWG. NO. 3.
TRACED:	DATE:	

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

224 New Customhouse
Denver 2, Colorado

January 14, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 1309X (Uranium), Contract No. Idm-E192, Plateau Mining Company, Grand County, Utah. FINAL PAYMENT

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report and Engineer's Report for the above period, which constitutes the Operator's final accounting report under the terms of the contract.

Work has been accomplished as authorized in the contract and the Operator has complied with all requirements,

Final payment has been deferred pending receipt of the Operator's final Engineering and Geologic Report and release of the Report of Review by the Contract Administration and Audit Division.

Final payment is now recommended as follows, which is in conformance with the Report of Review by the Contract Administration and Audit Division, dated December 21, 1953, which was released to this office January 12, 1954.

Basis for Final Payment

Total accepted costs	$14,731.37
Government participation at 90%	13,258.23
Total prior payments	11,794.83
Balance due the Operator	$ 1,463.40

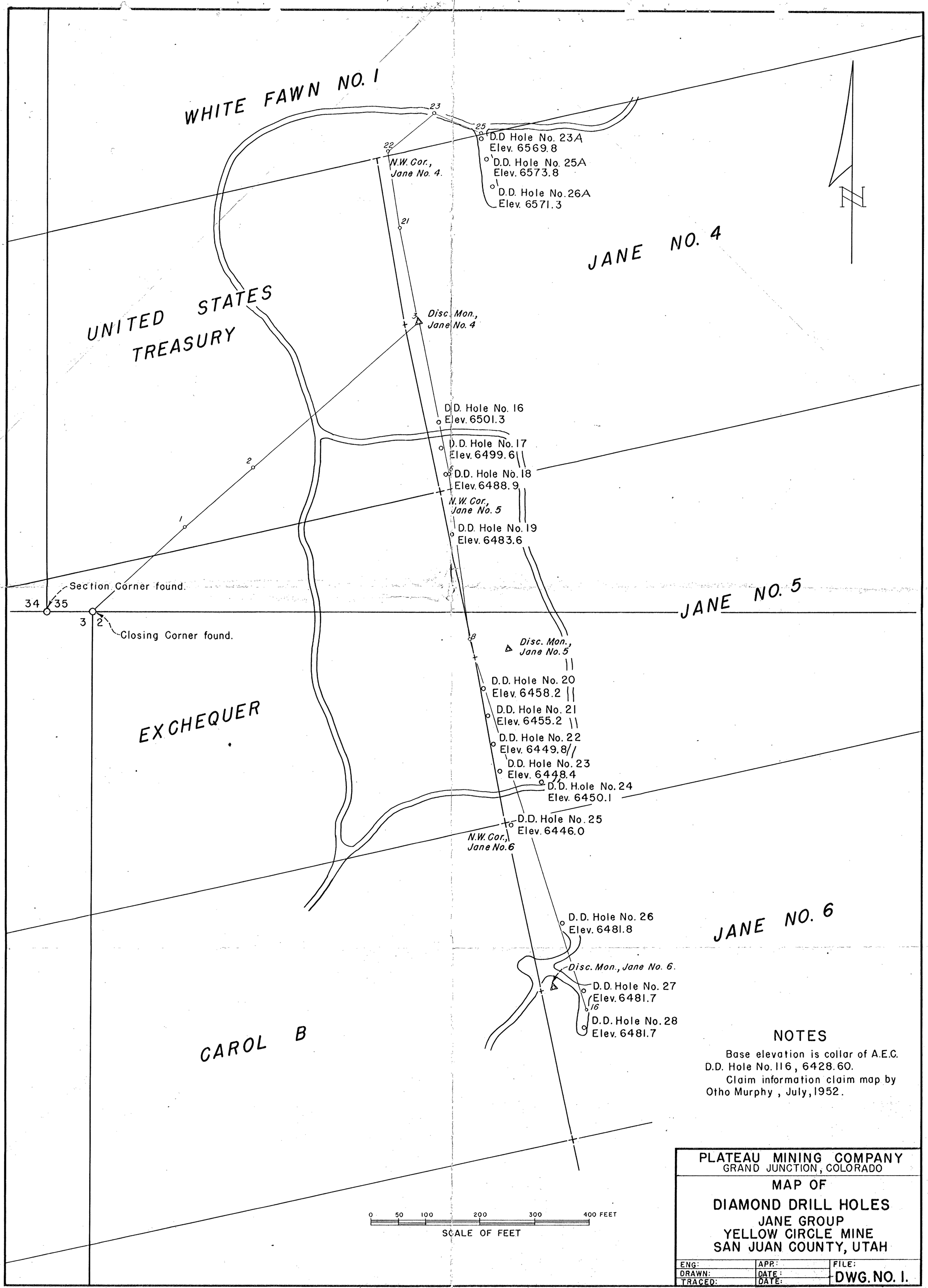
Reconciliation with Operator's Form MF-104
Report for the Month of October 1952

Gross amount claimed by the Operator	$ 1,626.00
Government participation at 90%	1,463.40
Amount due the Operator	1,463.40

W H King
W. H. King

Enclosures

JWT:cwm
cc: Contract; Secretary to the Oper. Comm. (2); SRWilson; Chron.; JWTownsend.



NOTES

Base elevation is collar of A.E.C. D.D. Hole No. 116, 6428.60.

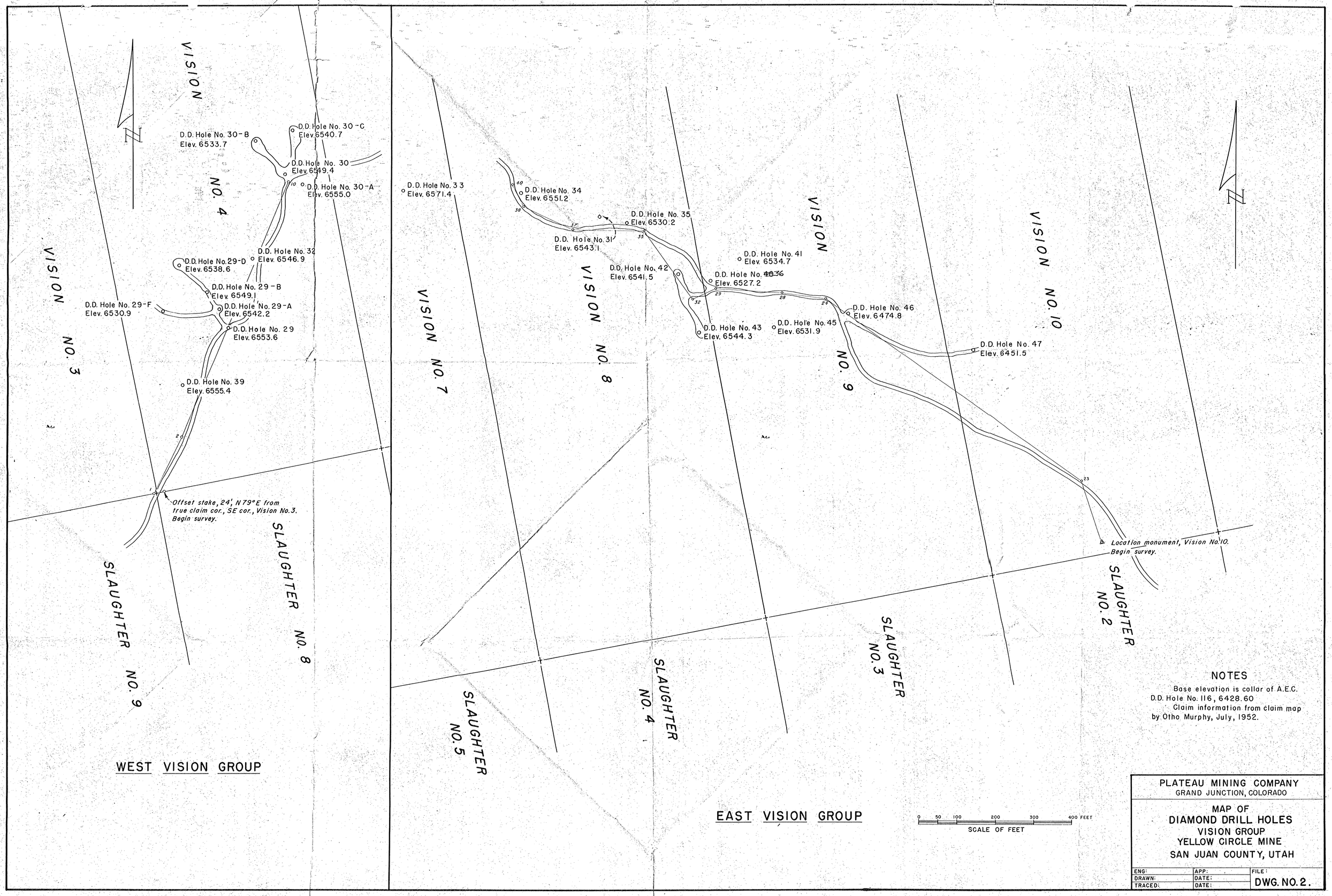
Claim information claim map by Otho Murphy, July, 1952.

PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO

MAP OF

DIAMOND DRILL HOLES
JANE GROUP
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH

ENG:	APP:	FILE:
DRAWN:	DATE:	DWG. NO. 1.
TRACED:	DATE:	


VISION NO. 4
VISION NO. 3
VISION NO. 7
VISION NO. 8
VISION NO. 9
VISION NO. 10
D.D. Hole No. 30-B
Elev. 6533.7
D.D. Hole No. 30-C
Elev. 6540.7
D.D. Hole No. 30
Elev. 6549.4
D.D. Hole No. 30-A
Elev. 6555.0
D.D. Hole No. 32
Elev. 6546.9
D.D. Hole No. 29-D
Elev. 6538.6
D.D. Hole No. 29-B
Elev. 6549.1
D.D. Hole No. 29-F
Elev. 6530.9
D.D. Hole No. 29-A
Elev. 6542.2
D.D. Hole No. 29
Elev. 6553.6
D.D. Hole No. 39
Elev. 6555.4
Offset stake, 24', N 79° E from true claim cor., SE cor., Vision No. 3. Begin survey.
SLAUGHTER NO. 8
SLAUGHTER NO. 9
WEST VISION GROUP
D.D. Hole No. 33
Elev. 6571.4
D.D. Hole No. 34
Elev. 6551.2
D.D. Hole No. 35
Elev. 6530.2
D.D. Hole No. 31
Elev. 6543.1
D.D. Hole No. 41
Elev. 6534.7
D.D. Hole No. 42
Elev. 6541.5
D.D. Hole No. 36
Elev. 6527.2
D.D. Hole No. 43
Elev. 6544.3
D.D. Hole No. 45
Elev. 6531.9
D.D. Hole No. 46
Elev. 6474.8
D.D. Hole No. 47
Elev. 6451.5
Location monument, Vision No. 10. Begin survey.
SLAUGHTER NO. 5
SLAUGHTER NO. 4
SLAUGHTER NO. 3
SLAUGHTER NO. 2
EAST VISION GROUP
0 50 100 200 300 400 FEET
SCALE OF FEET
NOTES
Base elevation is collar of A.E.C. D.D. Hole No. 116, 6428.60
Claim information from claim map by Otho Murphy, July, 1952.
PLATEAU MINING COMPANY
GRAND JUNCTION, COLORADO
MAP OF
DIAMOND DRILL HOLES
VISION GROUP
YELLOW CIRCLE MINE
SAN JUAN COUNTY, UTAH
ENG:
DRAWN:
TRACED:
APP:
DATE:
DATE:
FILE:
DWG. NO. 2.