NOTE: Use a separate form for each request.

DESCRIPTION OF RECORD(S) OR INFORMATION REQUESTED

3855

REMARKS

MAY 31 8 35 AM '72 NATIONAL GSA

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REMARKS

DATE	SERVICE	TIME REQUIRED	SEARCHER'S INITIALS
5/31/72	1		CB

FOR USE OF REQUESTER

NAME OF REQUESTER: Thos Burke

TELEPHONE NO.: 183-5371

DATE:

NAME AND ADDRESS OF AGENCY: Interior

(Include building, room no. and Zip Code) 4460

(In Washington, D.C. area also include STOP number)

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REVISED FEBRUARY 1971
GENERAL SERVICES ADMINISTRATION
FPMR (41CFR) 101 - 11.4
5011 - 104

REFERENCE REQUEST — FEDERAL RECORDS CENTERS

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DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

William G. Reynolds
Stonegate Road
Anchorage, Kentucky

pertaining to Exploration Project Contract No. Idm-5914, DMEA No. 3855, including Amendment Nos. 1 and 2, for the months of April, 1956, to July, 1956, inclusive, covering a project for the exploration of thorium, uranium and rare earths on property, known as the Hemp Lease, Hicks Dome Area, located in Hardin County, Illinois.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence; 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 reason:

all of the costs incurred were under a contract provision for payment by the Government on the basis of fixed unit costs of work actually performed.

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

Total cost as billed by Contractor		$4,610.00
Exceptions:		
Prior to this review	$ -0-	
Herewith (underclaimed for rare earth determinations)	(55.00)	(55.00)
Total Accepted Cost		$4,665.00

The contract calls for a 75 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Three thousand four hundred ninety-eight and 75/100 Dollars

$3,498.75

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

E. D. Talbert

E. D. Talbert, Auditor

February 25, 1957

FEB 26 1957

Mr. Robert L. Laurence
Executive Officer
DSFA Field Team, Region V
Room 14, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DSA-3255
William C. Reynolds
Camp Lease, Wicks Dam Area
Hardin County, Illinois
Contract No. Ida-914

Dear Mr. Laurence:

Enclosed are the original and two copies of a Report of Review in lieu of a final audit of the referenced project, prepared in accordance with your February 21, 1957, memorandum advice that such is now in order.

If you concur with the facts stated in this Report of Review, the original and one copy should be forwarded to the Certifying Officer and one copy should be retained in your files. If, for any reason, the report does not have your concurrence please return all copies to this Division with your comments.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
February 26, 1957

Copy to: Docket
Admr. Reading File
Helen Miller
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C.
ROOM POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 25 1957

DATE	INITIALS	CODE
2/25	C	220
		800

February 21, 1957

Memorandum

To: Jay L. Chambers, Chief, Contract Admin & Audit Div.

From: Executive Officer, DMEA - Region V - Knoxville, Tenn.

Subject: Completion of DMEA-3855, Idm-E914(Thorium, etc.)
Wm. G. Reynolds, Anchorage, Ky.
Hicks Dome, Hardin County, Illinois

Work on this project has been completed, the Operator's final report received, and the final voucher approved. Work quantities are verified in the Field Team final report submitted from this office February 13, 1957.

The suggestion in an earlier memorandum that additional assays might be needed turned out to be erroneous. Therefore, a Report of Review on this contract is now in order.

Robert A. Laurence

Robert A. Laurence

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON XXXXXX~~
Knoxville 2, Tennessee

C
O
P
Y

February 6, 1957

Memorandum

To: Jay L. Chambers, Chief Contract Admin. & Audit Div.

From: Executive Officer, DMEA- Region V

Subject: Reports of Review.

Reference is made to your letter of January 28.

Idm-E687, DMEA-3256, Glenn C. Rathburn

Construction of the powder magazine and cap magazine were reported in the interim report for September 24, 1954. Verification of the 28-feet of drifting claimed by the Operator is reported in my memorandum to you dated January 25, 1957. The Operator's final report and final MF-104 were forwarded on January 28.

Idm-E975, DMEA-4145, Ed Huskins

Total amount of excavation, as verified by our field examiners, was 100 cubic yards for the road and 475 cubic yards in portal site preparation. The excess over the contract amounts was at the Operator's own expense.

Idm-E914, DMEA-3855, Wm. G. Reynolds, will be discussed in a separate memorandum.

/s/ Robert A. Laurence

Robert A. Laurence

JAN 28 1957

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room 14, Post Office Building
Knoxville 2, Tennessee

Dear Mr. Laurence:

Enclosed are the original and two copies of Reports of Review, in lieu of final audits, covering the following completed or terminated exploration project contracts:

Contract No.	Docket No.	Operator
Idm-E1014	DMEA-4237	Huskins & Gage
" E1016	" 4248	Grover Grindstaff
" 1029	" 4399	Mack Gouge, et al
" 1040	" 4463	Jeter Boone

Your memorandum of January 22, 1957, which stated that Reports of Review are now in order for these four contracts and three others, did not specifically confirm the number of units of work acceptably performed (as required by the last sentence of the first paragraph of my January 9, 1957, memorandum). However, copies of Field Team reports received in this office have provided specific verification of the units of work performed under these four contracts.

If you concur with the facts stated therein, the original and one copy of each report should be forwarded to the Certifying Officer and one copy of each should be retained in your files. If, for any reason, a report does not have your concurrence please return all copies to this Division.

This Division cannot issue Reports of Review at the present time for the other three contracts for the reasons stated below:

Idm-E687, DMEA-3256, Glenn C. Rathburn — No confirmation of drift footage or magazine construction is given in Field Team reports; also, (as you confirmed in your telephone conversation with me on January 25, 1957) the final MF-104 and Operator's final report have not been received by us.

Idm-E914, DMEA-3855, William G. Reynolds — No verification of units of work completed, other than cubic yards of excavation, is given in Field Team reports received to date; also, Field Team memorandum of September 17, 1956, to Operating Committee indicates possibility of further assaying and a supplemental MF-104.

Idm-E975, DMEA-4145, Ed Huskins — No confirmation of cubic yards of excavation for either road construction or portal site preparation is contained in Field Team reports.

Your further advice on these three contracts will expedite the preparation of Reports of Review.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

Enclosure

HDTalbert/wb
January 25, 1957

Copy to: Docket
Admr. Reading File
Helen Miller
Mr. Houk
Mr. Chambers
Mr. Talbert

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Room 13, Post Office Bldg.
Knoxville 2, Tenn.

January 22, 1957

Memorandum

To: Jay W. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Completed and Terminated Contracts

Reference is made to your memorandum of January 9, 1957:

Work on the following contracts has been completed or terminated, and final reports have been received from the Operators. Final vouchers have been approved for payment, and reports of review are now in order.

DMEA-3256,	Idm-E687	Glenn Rathburn, assignee
DMEA-3855,	Idm-E914	Wm. G. Reynolds
DMEA-4145,	Idm-E975	Ed Huskins
DMEA-4237,	Idm-E1014	Ed Huskins and Fred Gage
DMEA-4249,	Idm-E1016	Grover Grimdstaff
DMEA-4399,	Idm-E1029	Mack Gouge, et al.
DMEA-4463,	Idm-E1040	Jeter Boone

All the above are "short-form" contracts, and the units of work claimed have been acceptably performed.

/s/ Robert A. Laurence

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS X-

OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED SEP 19 1956

Month of July, 1956 Docket No. DMEA 3555 Contract No. 1dm-0214
Operator's Name William G. Reynolds Minerals
Address Stonegate Road, Anchorage, Kentucky
Contract Amount, $ 5,620.00 Government Participation: 75 % Amount, $

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing 7,070 x .20	1,414.00	926.00	2,340.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services Surveying	125.00	125.00	250.00			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	100.00	-0-	100.00			
Payroll Taxes						
Liability Insurance						
Core Drilling 405 ft. @ 4.00/ft	1620.00	-0-	1,620.00			
(8) Contingencies (specify):						
TOTALS	3559.00	1051.00	4,610.00	3559.00	1,051.00	4,610.00

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

Date ..... *Payee W. G. Reynolds

Per ..... Title .....

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing 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:

$2,669.25

Signature Helen R. Meier
(Authorized Certifying Officer)

Date SEP 14 1956 Vou. No. 39

(See other side)

889.75

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 914 in accordance with the terms of the contract.

Signature R. L. Burmeister Title Mining Engr. Date 8/28/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date SEP 10 1956

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 19 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1956 Docket No. DMEA 3555 Contract No. [illegible]
Operator's Name William G. Reynolds Minerals
Address Stonegate Road, Anchorage, Kentucky

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
Sample Analysis								
Drifting								
Crosscutting Tonton	1	$ 190.00	19	$ 190.00	19	$10.00	70	$10.00
Raising Trenches	1	50.00	0	50.00	0	5.00	10	5.00
Shafts Cuts	1	60.00	3	60.00	3	20.00	3	20.00
Winzes Pare Berthe	1	110.00	11	110.00	11	10.00	30	10.00
Drilling: Core	1 ft.	1620.00	405	1620.00	405	$ 4.00	405	$ 4.00
Churn								
Auger								
Stripping								
Trenching Bulldozing	1 cu.	$ 1414.00	7,070	$2820.00	14,700	$ .20	14,700	$ .20
Test Pits								
Roads and Trails								
Surveying & Mapping	1 sq.	125.00		250.00				
Total Distributed Costs		$3,559.00		$6,610.00				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 W. G. Reynolds

Per _____ 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)

W. J. Burmeister

INSTRUCTIONS

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

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

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

GPO 83-38475

August 20, 1956

RECEIVED
SEP 19 1956

U. S. Department of Interior
Bureau of Mines
College Park, Maryland

Attention: Mr. H. L. Burmeister

Subject: Status Report - Docket DMEA #3855
Contract Idm-E914
W. G. Reynolds
Hick's Dome
Hardin County, Illinois

Gentlemen:

Attached is Status Report to date, regarding subject DMEA Project. Attached you will find the following:

1) Operator's Monthly Report and Voucher.

2) Operator's Unit Cost and Progress Report.

3) Final invoices - O. B. Wardlaw and Sons , covering all bulldozing work.

4) Measurement for cubic yards of earth bulldozed in Trench #1 and Trench #2 with recapitulation showing number of yards yet to be reported.

5) Final invoice from Joy Manufacturing Company covering core drilling. The invoice covers 406 feet, but we are requesting 405 feet in the Operator's Monthly Report and Voucher, which is the amount approved by the contract. The other one foot will be paid personally by Mr. W. G. Reynolds.

6) Sketches showing core drilling details for drill hole number one and drill hole number two. Please note that hole #1 extended a distance of 16 feet beyond the vertical and hole #2 extended 50 feet beyond the vertical. We are, therefore, satisfied that both holes were drilled a sufficient linear distance to intersect any potential extension of the radioactive vein.

7) Summary of Hick's Dome sample analyses.

Each Parker invoice has been individually checked and the amount to be borne under the DMEA Contract is listed in the right-hand column. Mr. W. G. Reynolds will bear the cost for Zirconia and Lithium analyses.

8) C. O. Parker invoices.

These have been checked out and are in accordance with the contract. Please note that although the contract calls for spectrographic analysis for rare earths at $15.00 each, C. O. Parker only charged us $10.00 each for these rare earth analyses. We are, therefore, submitting the rare earth cost at this $10.00 amount.

9) Topographic map of the area excavated and core drilled, showing location of bulldozing, location of radioactive vein in main cut and location of the two drill holes in the main cut and also contours of the area explored.

With respect to the evaluation of the cores from the two drill holes, the writer met with Mr. R. D. Trace on July 22nd at Hick's Dome and thoroughly reviewed all cores from both core holes. Mr. Trace and the writer concurred that exceptionally good core recovery was obtained in view of the charty formation. Up to 95% core recovery was obtained. These cores were thoroughly checked by the writer with a Precision Scintillator, Model 111B. Certain cores showed a radioactivity of 30 microroentgens per hour which compared to a background of 13 microroentgens per hour, i.e., about 2.5 times background. This amount of radioactivity above background was insufficient, in the writer's opinion, to warrant the cost of having C. O. Parker run any analyses. However, it was felt worthwhile, as suggested by Mr. Trace, that an analysis be made in a Government Laboratory of certain cores in an effort to identify the minerals in their unaltered form causing the radioactivity. This might perhaps be a clue as to the source of radioactivity and perhaps indicate whether the source was of hydrothermal or sedimentary origin. This work could, of course, only be performed in a properly equipped laboratory and by personnel experienced in such work. The results of such a mineralogical study when completed could serve as a basis for possible future exploratory work in this area. If the results indicated a sedimentary source of radioactivity from the Chattanooga shale above, then no further exploration could be justified, in the writer's opinion. On the other hand, if the unaltered cores indicated a possible hydrothermal mechanism, then perhaps further exploration by core drilling or shafting through the present radioactive vein might be justified.

EVALUATION OF POTENTIAL MARKET FOR HICK'S DOME ORES

Ore concentrates containing 6% Thorium oxide are now being purchased by Lindsay Chemical Company. According to Mr. C. O. Parker in Denver, who has analyzed thousands of ore samples from the Colorado plateau, the Thorium content of our Hick's Dome ore is far above the average of the Colorado plateau ores. This is borne out by Mallinckrodt Chemical Works, who indicated to the writer that the Idaho ores near Cascade, Idaho in the Paddy Flat area averaged from .002% to .005% Thorium oxide, which were economically feasible until Lindsay began importing monazite ores from South Africa. The statement was made by the Mallinckrodt representative that the Idaho Thorium ores would have to be over .08% to be equal to the South African monazite on the assumption, of course, that the ores were amenable to commercial concentrating processes.

As shown on the Summary of Hick's Dome sample analyses, we obtained Thorium samples ranging from .18% up to 1.0%, which is several times higher than the .08% mentioned above as being the requirement for being equal to imported ores. Furthermore, the 1.0% sample was taken from the center of the 5 foot wide zone, which gave an average reading of 100 times background across the entire 5 foot width.

Our indications from several sources are that there is every likelihood that there will be an increasing demand for Thorium, particularly for industrial power reactors.

Also, we were told by the representative of Mallinckrodt that our 3.0% rare earth analysis was considered high. As high as 10% rare earth oxide is obtained in Nevada, but is a tough ore to separate. If the rare earth is a monazite type ore, it is much more easily separated. Also compared to Idaho sources, we were told that our 3.0% rare earth analysis was considered very good.

As you know, we have sent samples of our ore to Vitro Uranium, Salt Lake City for evaluation as to amenability. As of this writing, we have as yet received no reply.

It is felt that if a Thorium ore body in the Hick's Dome area of sufficient size and magnitude can be determined, then a ready market can be quickly developed. This ore body may very well be located at depths below that reached by the two core holes. Also during the core drilling operations, certain voids or mushy zones, as much as 11 feet, were encountered, in which it was impossible to obtain a core sample. These zones could very well have been an extension of the radioactive vein located on the surface in the main cut.

It is, therefore suggested that any further exploratory work be held in abeyance until after the mineralogical evaluation of the unaltered samples is completed.

Yours very truly,

B. L. Baxter

B. L. Baxter

Attachments

BLB/t

O. B. WARDLAW AND SONS

Core Drilling Contractors
Box 410
Marion, Kentucky

RECEIVED
SEP 10 1956

May 25, 1956

Mr. W. G. Reynolds
2000 S. Ninth Street
Louisville, Kentucky

Dear Mr. Reynolds:

Due to a very hard cherty formation we were compelled to buy and use a ripper on the dozer. It required ripping every inch of the way after the first five feet. Total hours were 262½. We charge $12.50 per hour so you can see we lost money doing the job at 20¢ per cu. yd.

I thank you very much for the contract. If we can be of any assistance to you in the future don't hesitate to call on us.

Yours very truly,

O. B. WARDLAW AND SONS

By /s/ O. B. Wardlaw

COPY

O. B. WARDLAW & SONS
CORE DRILLING CONTRACTORS
Box 410
MARION, KENTUCKY

May 23, 1956

TO

Mr. W. G. Reynolds
200 S. Ninth Street
Louisville, Kentucky

Attn: Mr. B. L. BAXTER

TERMS: NET

INVOICE NO. 175
CUSTOMER'S NO.
AUTHORIZATION
REQUISITION NO.
CONTRACT

For Dozer Work

Main Cut	8,900 cu. yd.			
Hampwell Cut	2,800 cu. yd.			
Total	11,700 cu yd.	at	20¢ cu. yd.	$ 2,340.00

Government Docket
DMEA 3855

PDGE-56

Engineer B.L. Baxter

Approval

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hicks Dome DNEA 3855

Page 16 of Sheet

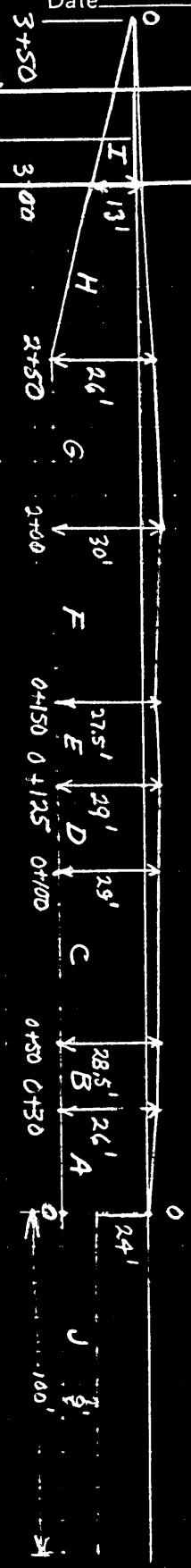
Date 7/1/56

ENGINEERING INFORMATION

TOP WIDTHS

TRENCH #1 - Measurement for Cubic Yds.

Customer	Part Name Main Cut	B/P No.	Unit	Total
	Part No. Cu. Yds.	Issue		



Area	Cu. Yds
A	727
B	602
C	1372
D	712
E	667
F	1357
G	1300
H	725
I	136
J	446
Total	8044 cu.yds.

0 inches
0 feet 50

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer B. L. Baxter

Approval

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hick's Dome DMEA 3855

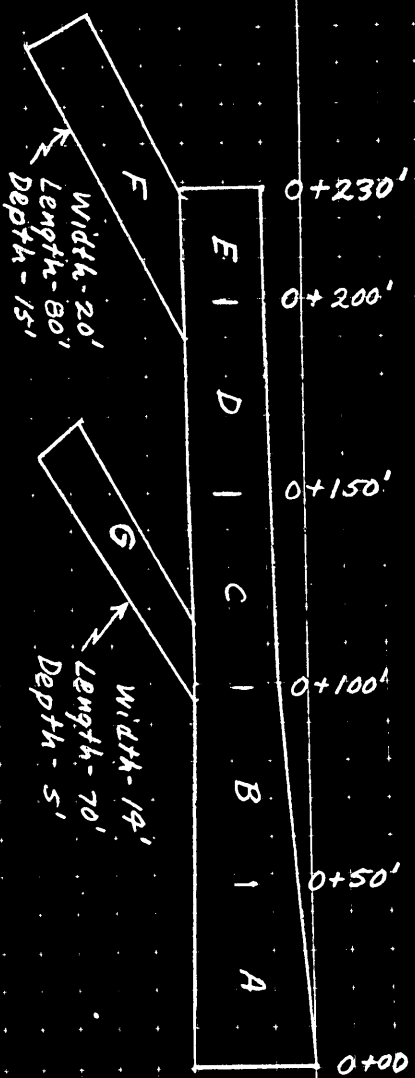
Page 17 of Sheet

Date 7/1/56

ENGINEERING INFORMATION

TRENCH #2- Measurement for Cubic Yds.

Customer	Part Name Hump Well Cut	B/P No.	Unit	Total
	Part No. Cu. Yds.	Issue		



Area - Cu. Yds

A -	401
B -	805
C -	963
D -	815
E -	222
F -	900
G -	182
Total -	4,288 cu. yds.

0 inches 1
0 feet 50

Recapitulation: Trench No. 1 - 8044 cu. yds.
Trench No. 2 - 4288 "
Total Yards Bulldozed - 12,332 "
Allowed in Contract - 11,700 "
Overage (for operators acct) - 632 cu. yds.
Allowed in Contract - 11,700
Vouchered in April Report - 4,630
Yet to be ported - 7,070 cu. yds.

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

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

SOLD TO: W. G. Reynolds
2600 S. 9th St.
Louisville, Ky.

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 98640

INVOICE DATE 7-25-56

DATE SHIPPED

SHIPPED VIA

SHIPPED TO: Hicks Dome, Ill.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
			To 406.' Core Drilling at Hicks Dome, Illinois for period ending July 25th as per agreement.					
			Prospect # / From / To		Total Feet		Unit Cost	Total Cost
			1 / 0. / 211.		211.			
			2 / 0. / 195.		195.			
					406.		$4.00	$1,624.00
			WORK COMPLETED					

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

FORM P133A 50M-1-56

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

PDGE-56

Engineer B.L. Baxter

Approval

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No.

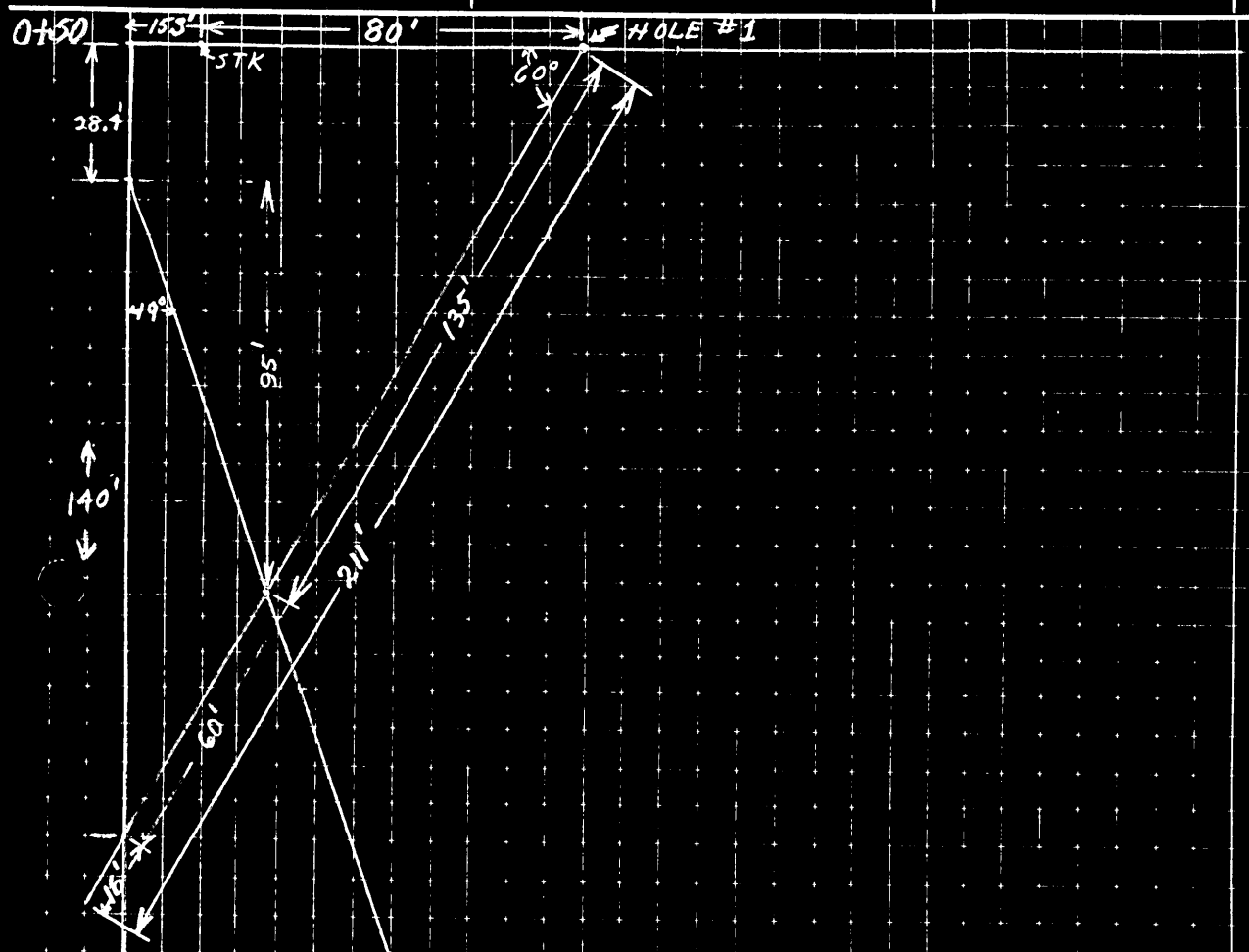
Page 14 of Sheet

Date 7/1/56

ENGINEERING INFORMATION

Drill Hole #1 (Total Depth - 211 FT - Angle 60°)

Customer	Part Name 0+50 Sta.	B/P No.	40' = 1" Unit	Total
	Part No.	Issue		



Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer B. L. Baxter

Approval

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No.

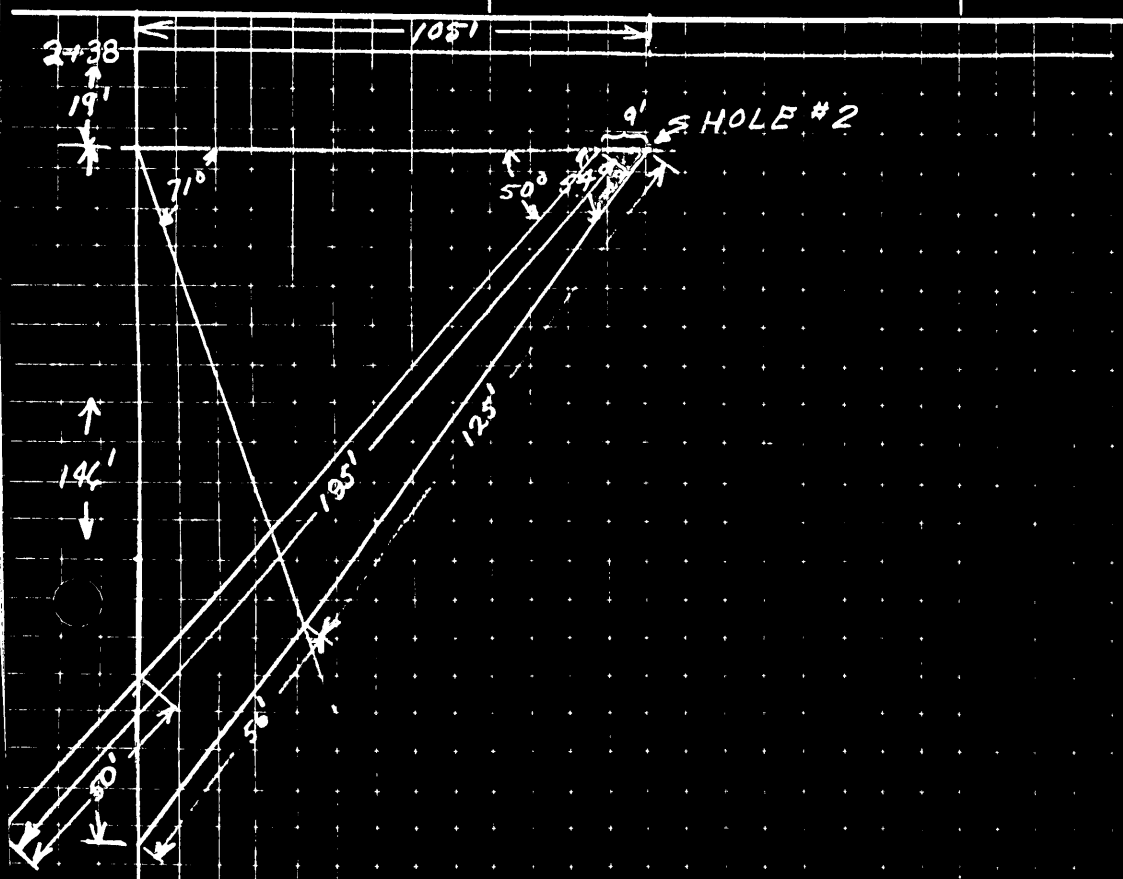
Page 15 of Sheet

Date 7/1/56

ENGINEERING INFORMATION

Drill Hole #2 (Total Depth - 195FT. Angle - 50°)

Customer	Part Name 2+38 Sta.	B/P No.	40' = 1" Unit	Total
	Part No.	Issue		



Use to show all engineering sketches, calculations and information other than where standard forms are provided.

TMEA #3955
Idm-2914

RECEIVED
SEP 19 1956

SUMMARY OF HICKS DOME SAMPLE ANALYSIS

Analyst	Sample Number	Thor.	U3O8	Cb	Ta	Rare Earths	Zirc.	Lith.	DMEA Cost
C.O. Parker	11-A	.13 10.	.048 5.	Tr. 20.	Tr.	.67 10.	Tr.		45.00
"	11-B	.17 10.	.02 5.			.40 10.			25.00
"	12-A	.11 10.							10.00
"	12-B	Tr. 10.							10.00
"	13-A	.19 10.	.038 5.			.84 10.			25.00
"	13-B	Tr. 10.	.096 5.			Tr. 10.			25.00
"	14-A	.14 10.							10.00
"	14-B	Tr. 10.							10.00
"	15-A	.09 10.				.38 10.			20.00
"	15-B	Tr. 10.				.15 10.			20.00
	16-A	.21 10.							10.00
"	16-B	.12 10.							10.00
"	17-A	.47 10.	.040 5.			1.47 10.			25.00
"	17-B	.07 10.				.32 10.			20.00
"	18-A	.17 10.							10.00
"	18-B	Tr. 10.							10.00
"	19-C	.49 10.	.034 5.	Tr. 20.	Tr.	1.65 10.	Tr.	Tr.	45.00
"	21-C	Tr. 10.	.006 5.			.12 10.			25.00
"	3-A	.13 10.	.07 5.	Tr. 20.	Tr.	.58 10.	Tr.		45.00
Lindsay Chemical	1-A	.50				2.20			
"	19-C	1.0				3.0			
"	20-C	.60				3.1			
Vanadium Corp.	19-C	1.0 Est.	.06						

Total DMEA Sample Cost $400.00

Note: Zirconia & Lithium analyses' cost to be borne by W. G. Reynolds

Approved: B. L. Baxter
B. L. Baxter

August 13, 1956

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6753

Date May 16, 1956.

W. G. Reynolds,
Attention: Mr. E. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

RECEIVED
SEP 10 1956

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#11-4 Main Out Blake Dam Dis 3895	0.046%				0.15%	0.67%	TRACE

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 45.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6793

Date May 18, 1956

W. G. Reynolds,
Attention: Mr. H. L. Becker,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS [redacted]	COMBINED COLUMBIUM TANTALUM OXIDES
#11-B Main Oak Hicks Dome [redacted]	0.02%				0.17%	0.40%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 25.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6793

Date May 18, 1956.

E. C. Reynolds,
Attention: Mr. [illegible],
Stanegate Road,
Anchorage, Kendally.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#12-A [illegible] Out [illegible] Dump IMA 3855					0.11%		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6793

Date May 18, 1956.

W. G. Reynolds,
Attention: Mr. R. L. Baxter,
Stonegate Road,
Anderson, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#12-B Main Cut Hicks Dome DDRA 3855					trace		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6799

Date May 18, 1956.

M. G. Reynolds,
Attention: Mr. B. L. Lauber,
Stonegate Road,
Louisville, Kentucky.

RECEIVED
SEP 10 1956

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#13-A Main Cut Hicks Dump DDH 3855	0.038%				0.19%	0.86%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 25.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6793

Date May 18, 1956.

W. G. Reynolds,
Attention Mr. B. L. Baxter,
Stonegate Road,
Lucherage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#33-B Main Oak Hicks Dam DXRA 3855	0.096%				trace	trace	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 25.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6793

Date May 18, 1956.

W. G. Harrison,
Attention Mr. D. L. Baker,
Stonegate Road,
Anderson, Kentucky.

RECEIVED
SEP 10 1956

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#14-A Main Cut Hicks Dome DDA 3855					0.165		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6734

Date May 18, 1956.

U. G. Reynolds,
Attention: Mr. B. L. Baxter.
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#14-B Hicks Dome Main Cut SMA 3855					trace		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6794

Date May 18, 1956.

E. G. Reynolds,
Attention: Mr. B. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#15-A Flake Dome Main Cut DMEA 3895					0.09%	0.30%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ ~~20.00~~ 20.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6756

Date May 18, 1956.

W. G. Reynolds,
Attention: Mr. R. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#15-5 Hicks Dam Main Cut DEA 3855					trace	0.15%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 20.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6794

Date May 18, 1956.

E. C. Reynolds,
Attention: Mr. R. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#36-A Hidden Dome Main Cut DHM 3855					0.21%		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6794

Date May 18, 1956.

W. G. Reynolds,
Attention: Mr. B. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#14-B Blake Dome Main Cut EMRA 3855					0.12%		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ ~~10.00~~

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6796

Date May 18, 1956.

W. O. Reynolds,
Attention: Mr. R. L. Baxter,
Glenmgate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
#17-A Hicks Dome Main Cut INRA 3855	0.040%				[illegible] 0.47%	1.47%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 25.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6794

Date May 16, 1956.

W. O. Reynolds,
Attention Mr. B. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS oxides	COMBINED COLUMBIUM TANTALUM OXIDES
17-B Main Cut Hicks Dome INDEX 3655					0.07%	0.32%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 20.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6794

Date May 18, 1956.

W. G. Reynolds,
Attention: Mr. B. L. Baxter,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#18-A Hicks Dome Main Cut IMSA 3855					0.175		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 10.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio [redacted]

Date [redacted]

RECEIVED
SEP 10 1956

W. G. Reynolds,
Attention: Mr. R. L. Baxter,
Stonegate Road,
Louisville, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#12-B Hicks Dome Main Cut DERA 3855					[redacted]		

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ [redacted]

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio [redacted]

Date May 12, 1956.

W. G. Reynolds,
Attention: Mr. B. L. Barber,
Stonegate Road,
Ashbrooke, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS [redacted]	COMBINED COLUMBIUM TANTALUM OXIDES
#19-G Main Cut Hicks Dome DMEA 3695	0.08[redacted]				0.49%	1.65%	TRACE

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 45.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio [redacted]

Date May 18, 1956.

W. G. Reynolds,
Attention Mr. B. L. Baker,
Stonegate Road,
Anchorage, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#21-G Well Out Kinkar Dome DMEA 3855					trace	0.12%	

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 20.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6834

Date July 7, 1956.

Reynolds Metals Company,
2000 South Ninth Street,
Louisville 1, Kentucky.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#21-G	0.006						

Second set of certificates. Original mailed July 11th, 6 P.M. AIRMAIL, as shown above on address. CP

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ 5.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio [redacted]

Date [redacted]

[redacted]

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	URANIUM OXIDE U_3O_8	VANADIUM PENTOXIDE V_2O_5	LIME $CaCO_3$	RADIOMETRIC EQUIVALENT eU	THORIUM OXIDE ThO_2	TOTAL RARE EARTHS	COMBINED COLUMBIUM TANTALUM OXIDES
#3-A Hicks Dome DDA 3855	[redacted]				[redacted]	[redacted]	[redacted]

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

Charge $ [redacted]

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED
MAY 1 6 1956

Month of April, 1956 Docket No. DMEA 3855 Contract No. Idm-E914
Operator's Name William G. Reynolds Minerals
Address Stonegate Road, Anchorage, Kentucky
Contract Amount, $ 5,620.00 Government Participation: 75% Amount, $ 1,051.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing 4630 x .20	$ 926.00	-0-	$ 926.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services Surveying & Mapping	125.00	-0-	125.00			
(3) Operating Matls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$ 1051.00	-0-	$ 1051.00	1051.00	-	1051.00

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

Date May 9, 1956 *Payee William G. Reynolds

Per _____ Title _____

*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:

$ 788.25

Signature Helen R. Meiler
(Authorized Certifying Officer)

MAY 1 5 1956

Date _____ Vou. No. _____
(See other side)

262.75

(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. Idm E 914 in accordance with the terms of the contract.

Signature H. L. Turmeister Title Mining Eng'r Date 5/10/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature N. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA REGION V Date MAY 14 1956

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

RECEIVED
MAY 16 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1956 Docket No. DMEA 3855 Contract No. Idm-E914
Operator's Name William G. Reynolds Minerals
Address Stonegate Road, Anchorage, Kentucky

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 Bulldozing	1 cu. yd.	$926.	4360	-0-	-0-	4360	11,700	$0.20
Trenching								
Test Pits								
Roads and Trails Surveying & Mapping	1 map	125.						
TOTAL DISTRIBUTED COSTS		$1051.	4360	$1051.00				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 May 9, 1956 Operator William G. Reynolds

Per 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)

4630 cu. yds. on MF-104 is probably correct as it checks the calculation on photostat of excavation section — Cubic yardage of 4360 is obviously a transposition on MF-104A

H. L. Burmeister H. L. B.

INSTRUCTIONS

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

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

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

GPO 872894

RECEIVED
MAY 1 6 1956

Route #6
Box 574
Louisville, Kentucky

May 9, 1956

Mr. H. L. Burmeister
U. S. Department of the Interior
Defense Minerals Exploration Administration
College Park, Maryland

Re: DMEA Docket No. 3855
Contract Idm-E914
Hick's Dome, Hardin County, Illinois
Uranium, Thorium and Rare Earths

Dear Mr. Burmeister:

We are attaching six copies of Operator's Unit Cost and Progress Report, Form MF-104A, and Operator's Monthly Report and Voucher, Form MF-104 (Rev.), for the month of April, 1956, covering initial exploratory work under subject docket.

We are attaching photostats of Pages 1 through 6, showing Scintillator readings at various depths in the main cut.

The radioactive vein has been pin pointed at the 19½ ft. depth in the south end of the main cut and the 7½ ft. depth in the north end of the main cut. Exact measurements were taken from fixed stakes, located at both sides of the trench to a point over the highest reading in the trench, using the string measurement method which you suggested. These measurements are shown on Pages #4 and #5 of the photostatic copies. We will take similar measurements at full depth which should then determine the dip of the radioactive vein.

Also attached are photographs, Figures 101 through 108, taken April 28, 1956, which are self-explanatory.

In general, the vein continues in a north 21° west direction throughout the entire length of the main cut. The entire length and breadth of the trench continues to be highly radioactive. The center of the trench continues around 1000 microroentgens per hour with a background of 14 microroentgens per hour, or 70 times background.

The east and west walls of the trench gave readings of about 350 microroentgens per hour taken at a depth of 4 ft. throughout the entire length of the trench (25 times background). One pronounced vertical highly radioactive vein was noticed on the west wall about the center of the trench. This vein was fairly narrow (about 1 ft.). Readings as high as 1500 microroentgens were noticed at this point at a depth elevation of approximately 22 ft. from the top. A stake was driven in at this point.

A second highly radioactive vertical vein was noticed in the east wall at the north end of the main cut at a depth of 7½ ft. from the top. Readings of about 1500 microroentgens per hour were observed. This vertical vein appeared to be about 3 ft. in width at this elevation.

Plans were made with the bulldozing contractor, O. B. Wardlaw & Sons, to proceed with the Hamp well cut after completion of the main cut. This cut appeared to be very rocky, which indicated that bulldozing work would be fairly difficult. Bulldozing work at the north end of the main cut proceeded slowly because of very rocky soil, requiring almost constant use of the ripper tool on the blade of the bulldozer.

As agreed upon, Sample #3-A was taken from the main cut, consisting of 6½ lbs. and forwarded to C. O. Parker, Denver, Colorado, April 23, 1956, for chemical analyses for Thorium, rare earths, Uranium and Columbium-Tantalum under the contract.

Sample #1-A from the main cut was sent the same day to Lindsay Chemical Company, Chicago, Illinois for analyses for Thorium and rare earths at no charge.

All bulldozing is expected to be completed by this week, at which time we should be ready to make a decision regarding location of the diamond core drilling under Stage II of the contract.

It is felt that the amount of bulldozing done through April (4630 cubic yards) represents a very conservative estimate of the amount of earth moved.

Also included in this report is a topographical map, which we have prepared, showing elevations in the vicinity of the main cut and Hamp well cut.

If there are any questions or corrections to be made regarding Operator's Progress Report and Voucher, please advise.

Again we wish to express our sincere thanks to you for the excellent assistance and advice, which has been most helpful to us.

Yours very truly,

B. L. Baxter

B. L. Baxter

Attachments

PDGZ-56

Engineer: [illegible]

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. [illegible]

Page 1 of Sheet _____

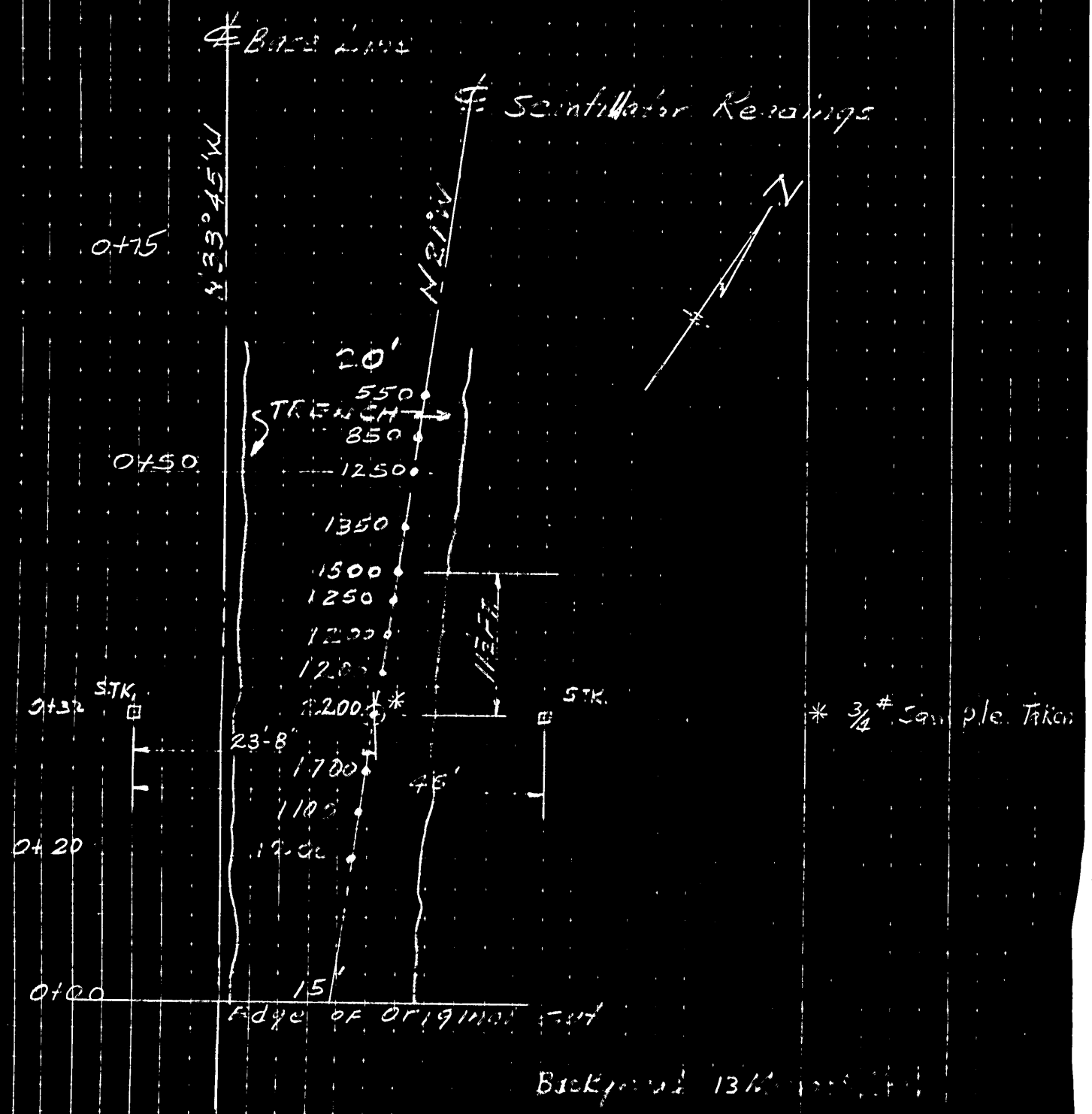
Approval _____

ENGINEERING INFORMATION

Date [illegible]

Reading Taken in Trench - 8 FT. CUT AT Station 0+32

Customer	Part Name / Part No.	B/P No. / Issue	Unit	Total



Background [illegible]

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer E. L. Brown

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hick- Dome

Page 2 of Sheet

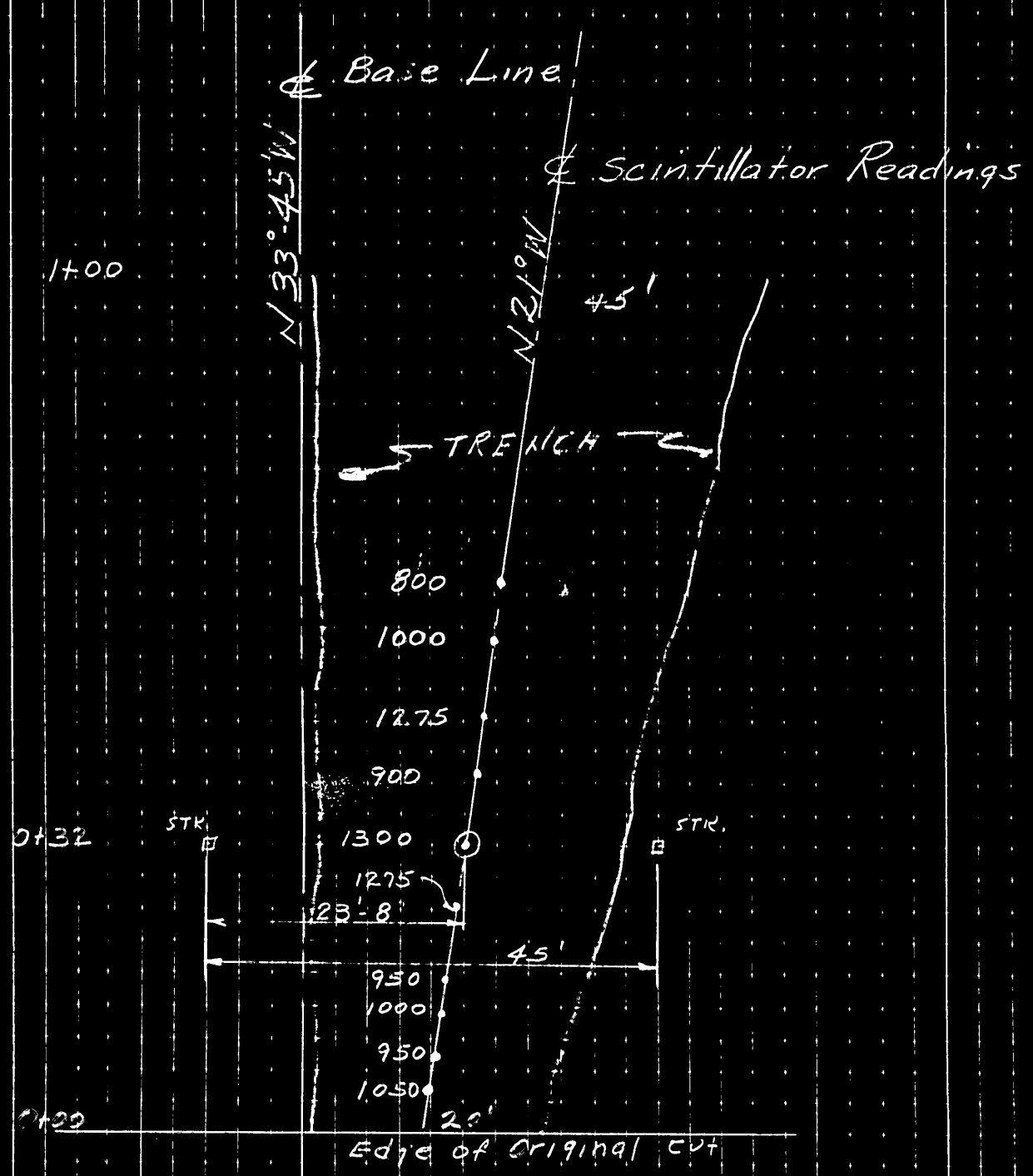
Approval

ENGINEERING INFORMATION

Date 4-15-56

Readings Taken in Trench - 11½ Ft. Cut At Station 0+32

Customer	Part Name / Part No.	B/P No. / Issue	Unit	Total



Background- 13 Micro-R/HR

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer E. L. [illegible]

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hicks Dome

Page 3 of Sheet

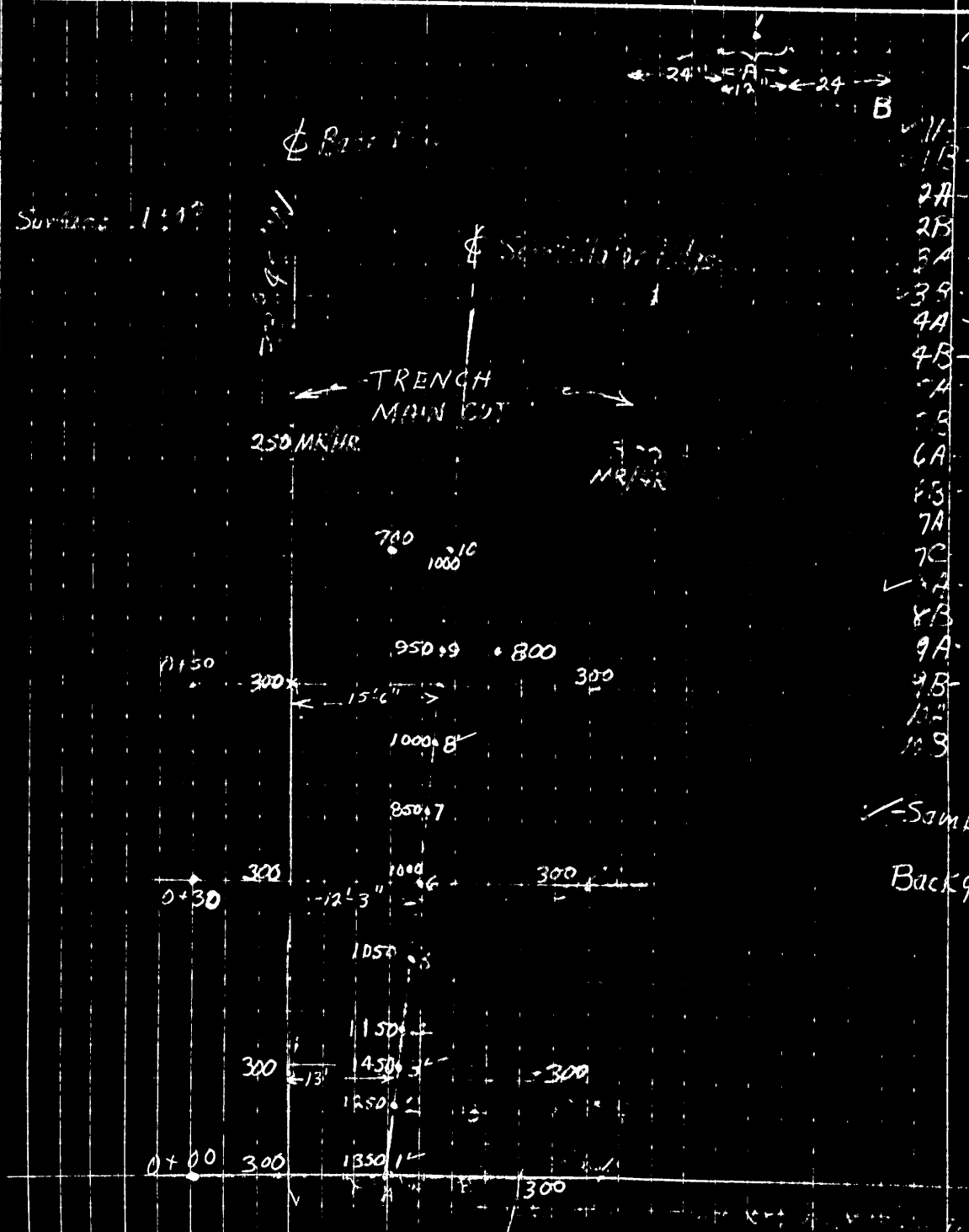
Approval

ENGINEERING INFORMATION

Date 4/18/56

Readings Taken in Trench ~19½ Ft Cut at Station 0+32

Customer	Part Name / Part No.	B/P No. / Issue	Unit	Total



A- 12'
B- 2'0" [illegible]

1A	1350	8# Lindsay Ch. 4 h3
1B	675	
2A	1250	
2B	650	
3A	1450	6½# C.O. Parker 4 h3
3B	900	
4A	1150	
4B	750	
5A	1250	
5B	800	
6A	1000	
6B	750	
7A	850	
7B	550	
8A	1150	
8B	600	
9A	[illegible]	
9B	[illegible]	
10A	1000	
10B	700	

Sample Taken

Background = 13 Micro-Roentgens/HR

Plan of Main Cut at 19½' Deep @ 0+32

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer B.I. Exton

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. [illegible] Dam

Page 4 of Sheet

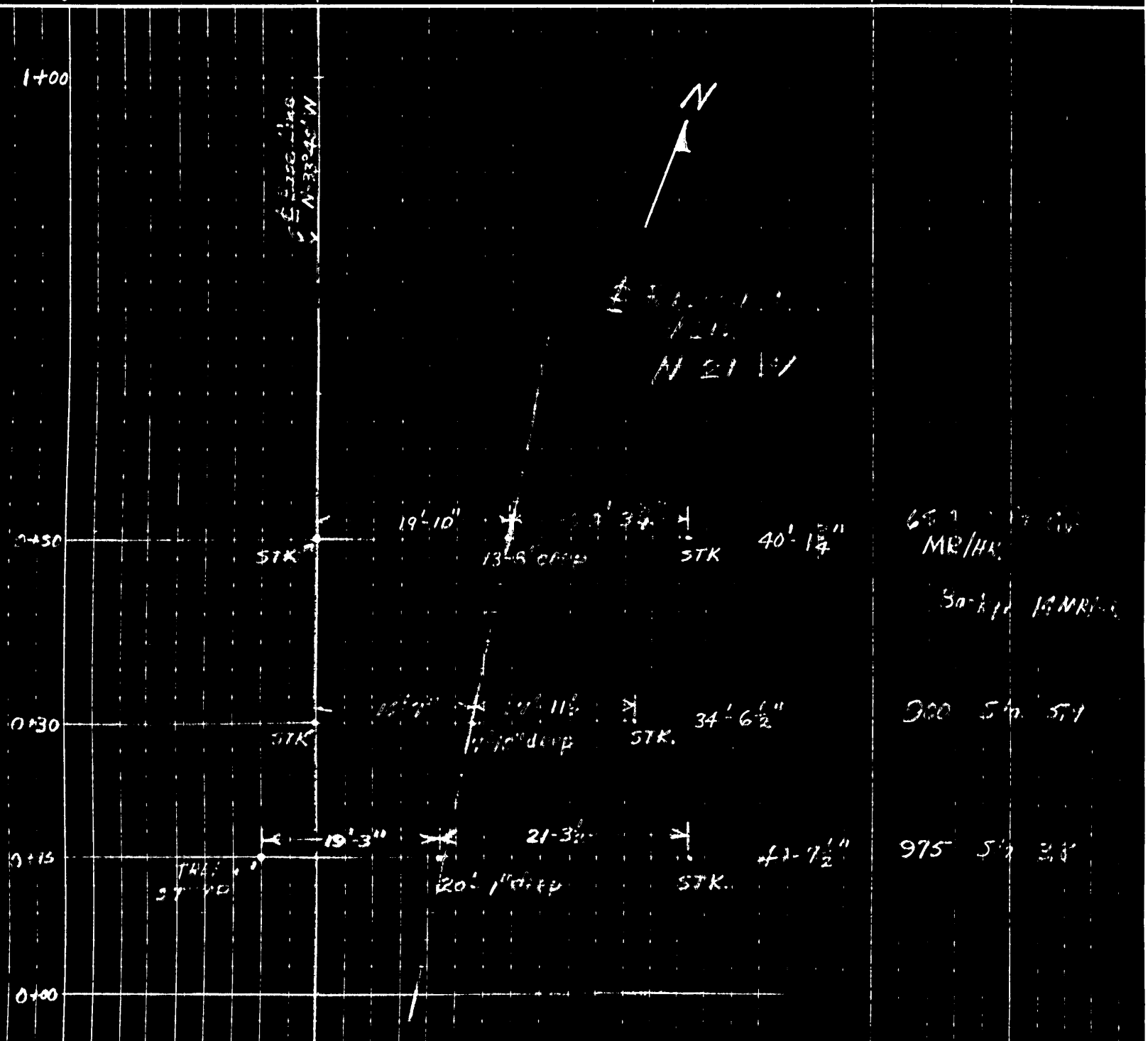
Approval

ENGINEERING INFORMATION

Date 4/20/56

Location of [illegible] in Main Cut at 19½' Deep [illegible]

Customer	Part Name South End	B/P No.	Unit	Total
[illegible] 3 ft.	Part No.	Issue		



Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer [illegible]

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hicks Dome

Page 5 of Sheet ____

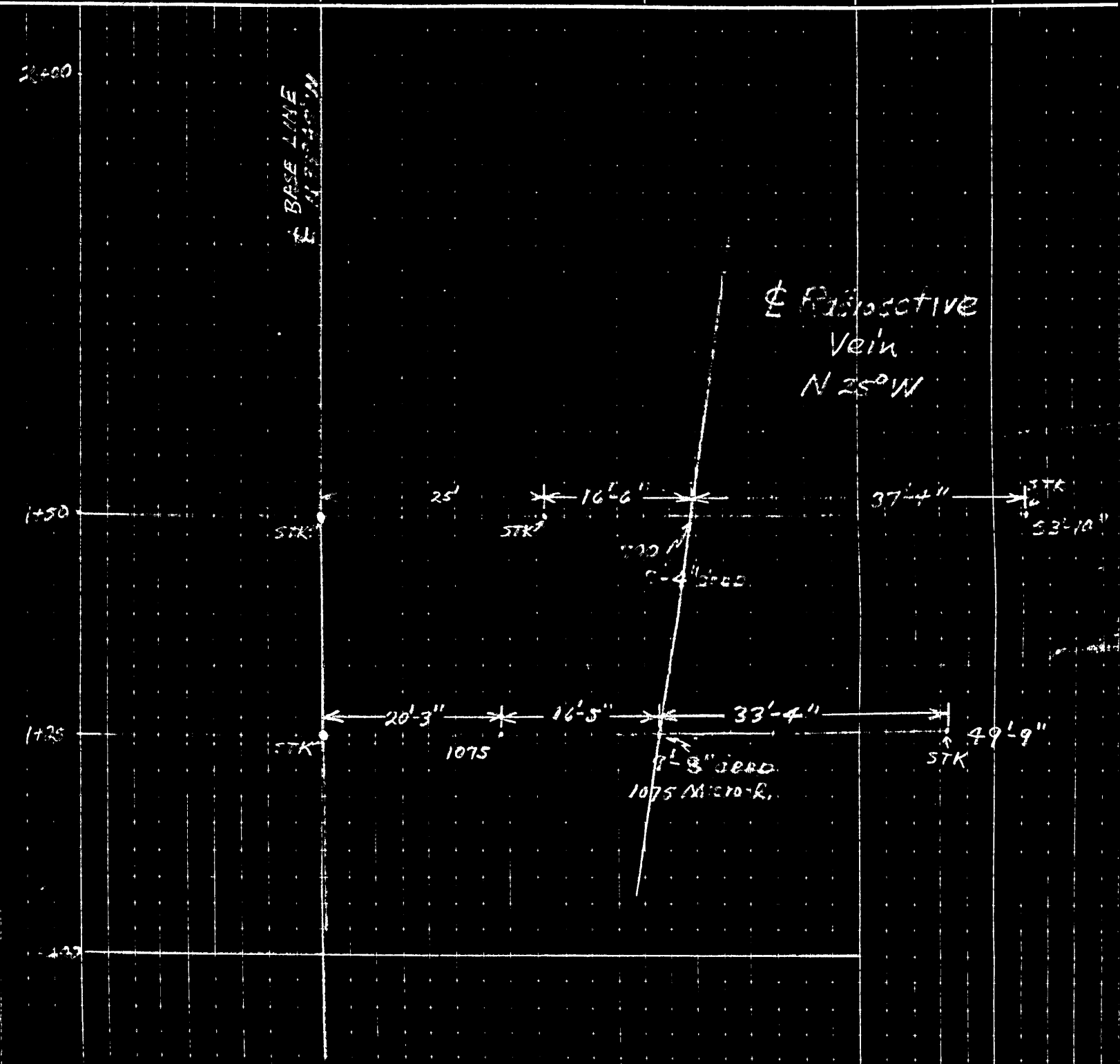
Approval ____

ENGINEERING INFORMATION

Date 4/21/56

[illegible] of ℄ Hot Spot in Main Cut at 7½" [illegible] 1+50

Customer	Part Name / Part No.	B/P No. / Issue	Unit	Total
1500 : 3 ft.				



Use to show all engineering sketches, calculations and information other than where standard forms are provided.

PDGE-56

Engineer: R. L. Baxter

REYNOLDS METALS CO.
PARTS DIVISION
GENERAL ENGINEERING

File No. Hick's Dome

Page 6 of Sheet

Approval

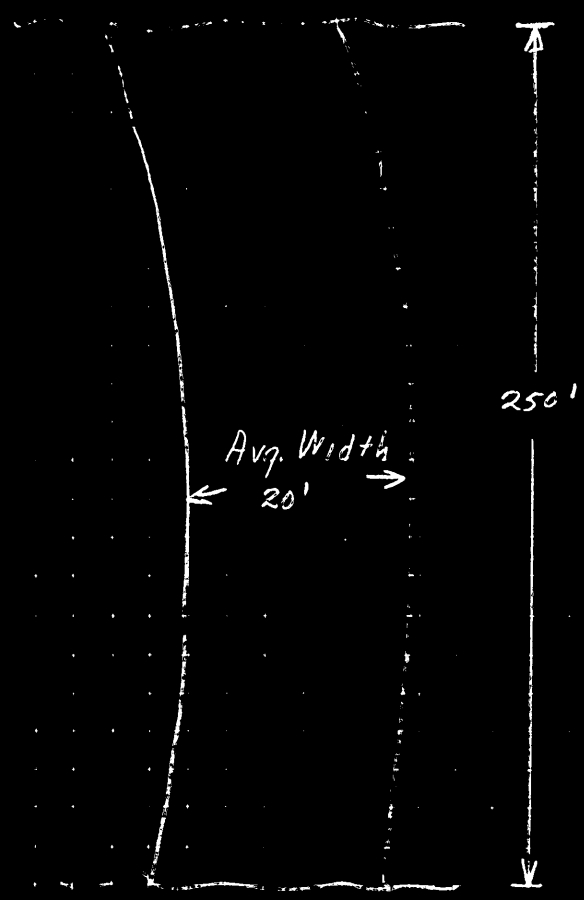
ENGINEERING INFORMATION

Date 4/28/56

Longitudinal Cross-Section + Plan of Main Cut

Customer	Part Name / Part No.	B/P No. / Issue	Unit	Total

Cross-Section



Plan

Amt of Earth Bulldozed thru 4/28/56 =

$$\frac{25' \times 250' \times 20'}{27} = 46300 \text{ cu yds}$$

Use to show all engineering sketches, calculations and information other than where standard forms are provided.

700

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

800

Mr. William [illegible] Reynolds
[illegible] Road
[illegible]chorage, [illegible]tucky

MAR - 1 1957

Re: Docket No. [illegible]-3855 (thorium, uranium, and rare earths)
Nick's Cove
Harrisburg County, Illinois
~~Contract No. [illegible]~~

Dear Mr. Reynolds:

Reference is made to your completed exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of discovery or development under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this project. Your attention, however, is called to the provisions of the contract which require the operator to keep and preserve certain records for the period indicated.

Your interest in the DMEA exploration program and participation therein are fully appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

[illegible]Murphy/iam 2-28-57
cc to: William H. A. Chenault & Louise Ryan Chenault
Code 700
Mr. Murphy
Admr.'s Reading File
Contract Adm. & Audit Div.
[illegible] Reg. V (2)

700

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

MAR 1 1957

William A. Chenault
Louise Ryan Chenault

1279 Cherokee Road
Louisville, Kentucky

Re: Docket No. [illegible]-2[illegible] (thorium, uranium, and rare earths)
Contract No. [illegible]-911
William G. Reynolds
Nick's Dome
Hardin County, Illinois

Dear Mr. and Mrs. Chenault:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the above-cited contract.

This correspondence relates to the Subordination Agreement signed by you on November 16, 1955.

Sincerely yours,

C. O. Mittenderf

Administrator

Enclosure

FMurphy/izm 2-28-57
cc to: Code 700
Mr. Murphy
Admr.'s Pending File
Contract Adm. & Audit Division
DMA PT Reg. 5 (2)

Government Copy

RECEIVED

SEP 17 1956

EXPLORATION PROJECT CONTRACT

AMENDMENT No.2

DMEA-3855, Idm-E914, HICKS DOME PROJECT
(Thorium, Uranium, and Rare Earths)
Hardin County, Illinois

Contract Idm-E914, Docket No. DMEA-3855, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration and William G. Reynolds, Anchorage, Kentucky, dated January 26, 1956, is hereby further amended as follows:

1. Article 3 is amended to provide that the Operator shall complete the work on or before October 1, 1956, instead of June 1, 1956 as originally provided in the contract.

July 6, 1956

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be obligated to pay, or the percentage of the cost which the Government may be obligated to pay, under the provisions of Article 5 of the contract.

THE UNITED STATES OF AMERICA

William G. Reynolds
William G. Reynolds, Operator

By Robert A. Lawrence
Executive Officer, DMEA
Field Team, Region V

RECEIVED
SEP 19 1956

September 5, 1956

Mr. Robert S. Laurence
Executive Officer, AEC
U. S. Department of the Interior
Post Office Building
Knoxville 2, Tennessee

Re: [illegible] 3955, Idm-1014
Dick's Home Project
Hardin County, Illinois

Dear Mr. Laurence:

Attached are five executed copies of Amendment No. 2 regarding the completion of work on or before October 1, 1956. We have retained the Operator's Copy.

We do not plan to have any chemical assays made on the drill cores, since after a thorough examination of drill cores by the writer, the amount of radioactivity was so small (2.5 times background), that we could not justify the expense of running chemical analyses.

In talking with Mr. Bob Bruce, he indicated that the Government Laboratories might run a thorough mineralogical study of the cores in an effort to ascertain the source of the radioactivity present. This, of course, could only be done in a Government Laboratory since very few private laboratories are equipped to run such a complete study. Such a study is not included in the scope of the present contract.

We were, of course, disappointed that the two drill holes did not produce samples of higher radioactivity. This radioactive vein may have been passed through at a lower depth in one of the open cavities. Several of these open cavities were encountered on both drill holes, ranging from 2 ft. to 12 ft. in length in which it was impossible to recover a core. Also, the source of radioactivity may be at depths much lower than the depths reached by the two drill holes. As a matter of fact it is our belief that if the veins are of hydrothermal origin, then there is every indication that deposits of commercial value, if present, would be reached at much lower depths, rather than at the relatively shallow depths of the two drill holes. This thinking is borne out by the exceptionally high grade ore encountered at depths in four

RECEIVED
SEP 7 - 1956
U. S. Geologic Division
Knoxville, Tenn.

of the worlds largest uranium mines, whereas it had previously been thought that there was commercial ore only relatively near the surface. These mines are: Shinkolobwe, Belgian Congo, Joachimsthal, Czechoslovakia, Eldorado Mine, Great Bear Lake in Canada, and the Urgeirica Mine in Portugal. The Urgeirica Mine initially produced secondary uranium minerals that were not recognized as of primary origin until substantial pitchblende was recently discovered in the deeper mine workings at Urgeirica. Also the surface description of the Urgeirica Mine in Portugal appears to be similar to the kaolinized veinlets of Nick's Dome and the dark red jasper is similar to the dark reddish brown radioactive rock of Nick's Dome. Thus if the Nick's Dome structure is of Precambrian origin, there may be a possibility of a commercial mother lode at depths. If the mineralization emanated from the Chattanooga Shale from above and is consequently sedimentary in origin, then it is our opinion that the minerals produced from such sedimentary mineralization would be of insufficient quality to be of commercial significance, and in such a case no further exploration work could be justified. Therefore, the mineralogical study would be very worthwhile if a clue could be obtained as to whether the origin of the radioactivity was hydrothermal or sedimentary.

The results of two core holes of shallow depths are, of course, insufficient to draw any conclusions. At least fifty or more core holes to depths ranging from 200 ft. to 1000 ft. in vertical depth would be necessary, in our opinion, before any definite conclusions could be drawn. In Canada it is not uncommon to mine radioactive ores to depths of 2000 to 3000 ft. As an alternative to core drilling, shafting might yield conclusive results if two or more incline shafts were sunk starting from points along the radioactive vein in the main trench and the direction of the shaft changed to conform to the direction of the radioactive vein. Such a program of core drilling and shafting would, in all probability, yield conclusive information as to the existence of a commercial ore body at Nick's Dome. Such a program if taken in stages might be justified. We should like to have an expression from DMA as to whether or not they would entertain granting further exploratory aid in view of the findings to date, if not, we would probably close out the project.

As to our estimate of the reserves indicated by the present contract work, we can not estimate this since we feel that the two core holes, which were drilled under the present contract, furnished inconclusive evidence as to the extent in depth of the radioactive vein which extended the full 300 ft. length of the main trench. The width of this vein was approximately 5 ft., but only the center portion of one foot width contained radioactive materials, which might be considered approaching commercial grade. Therefore, since the depth to which these radioactive materials extended is unknown, there is no way of estimating the extent of any commercial reserves. Therefore, we can only conclude that within the scope of this contract no significant commercial deposits were found.

As a supplement to our July Report, we are attaching a longitudinal sketch showing locations of all samples taken in both trenches.

Summarizing, we request that you accept the contents of this letter, along with our July Report, as a Final Report.

Cordially,

B. L. Baxter

Bruce L. Baxter

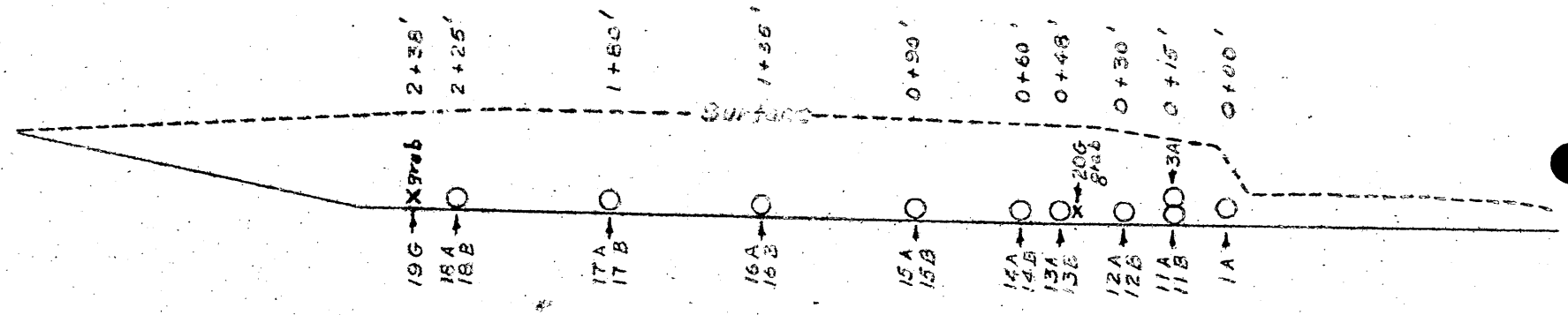
Attachment

c/c Messrs: H. L. Burmeister
[illegible] Reynolds

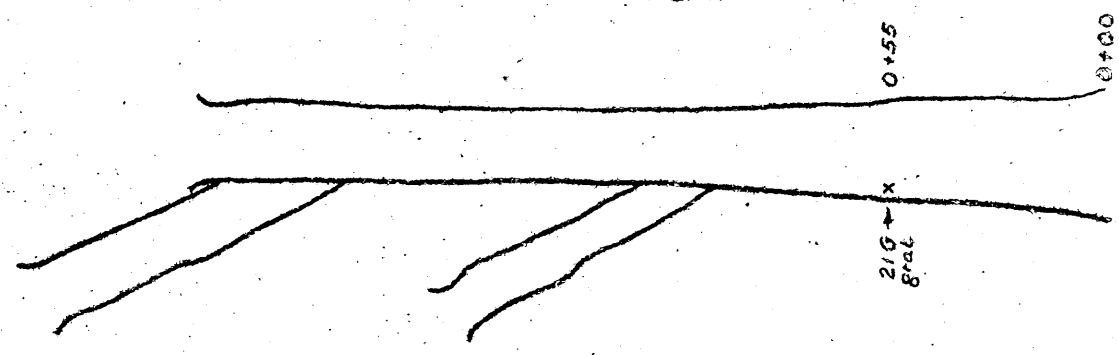
gre/t

SAMPLE LOCATIONS

TRENCH No. 2 LONGITUDINAL SECT.



TRENCH No. 2 PLAN

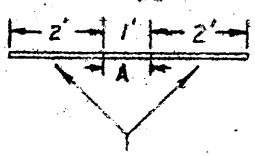


EXPLANATION

X Grab Sample

O Cut Sample in floor

thus



B - COMPOSITE

WM. G. REYNOLDS

OMEA 3855 - CONTRACT E 914

HICKS DOME - HARDIN, CO. ILL.

0 inches 1

0 feet 50

H.L.B.

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SEP 10 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

July 5, 1956

Mr. William G. Reynolds

Anchorage, Kentucky

Re: DMEA-3855, Idm-E914
(Thorium, uranium and rare earths)
Hicks Dome, Hardin County, Ill.

Dear Mr. Reynolds:

This will confirm the verbal approval given by Mr. Burmeister and Mr. Trace to Mr. B. L. Baxter, to begin Stage II of the exploration project at Hicks Dome.

Please have the drill core boxed and preserved, so that it may be examined by our field representatives before sampling.

Very truly yours,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RAL/mg
cc
Governemtn Copy of Contract
Docket " " "
Division " " "
Finance Office " "
Field Team " " "
Millar
Lynch
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Government's Copy

EXPLORATION PROJECT CONTRACT
WILLIAM G. REYNOLDS
DOCKET NO. DMEA-3855

Amendment No. 1

WHEREAS, when the draft of Exploration Project Contract Idm-E914 (Docket No. DMEA-3855) was presented to the Operator for signature, it was found that it failed to reflect the understanding of the parties with respect to the costs allowed for analyses to determine the uranium, thorium, columbium, tantalum, and rare earths content of samples, and the necessity for trenching, if hard rock requiring shooting or blasting is encountered; and,

WHEREAS, the parties then agreed that the Contract would be signed with the understanding that an amendment would be promptly executed to correct the afore-mentioned matters with respect to which the draft of Contract failed to reflect the understanding of the parties.

NOW, THEREFORE, it is agreed this 9th day of April, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and William G. Reynolds, hereinafter called the "Operator," that Exploration Project Contract Idm-E914 (Docket No. DMEA-3855), dated January 26, 1956, is amended, as follows:

1. In Exhibit "A", Description of the Work, delete all of item 2 in Stage I, and replace it with the following provisions:

> "2. Not in excess of the following chemical determinations shall be made: 70 for thorium, 10 for uranium, and 3 for columbium-tantalum (combined); and not in excess of 30 spectrographic analyses for rare earths shall be made for these elements, or groups of elements, in samples procured under this Stage I of the Contract. Samples may be analyzed for any or all of the individual elements or groups of the elements mentioned above. However, at least one sample from each of the trenches excavated under Stage I shall be analyzed for all the individual elements and for the three rare-earth groups, namely, cerium, terbium, and ytterbium groups of the rare earths series of elements."

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2. In Exhibit "A", Description of the Work, delete all of item 2 of Stage II and replace it with the following provision:

> "2. Not in excess of 405 feet of drilling shall be performed under this Stage II of the Contract and not in excess of 12 chemical determinations for thorium and 2 spectrographic analyses for rare earths shall be made for these elements, or groups of elements, in samples procured under this Stage II of the Contract."

3. In Exhibit "A", Fixed Unit Costs, delete item 2 under Stage I, which reads as follows:

> "2. 420 analyses @ $3.00/each element analyzed - $1,260.00"

renumber item 3 to become item 4, and insert the following provisions in lieu of item 2:

"2.	Chemical analyses:		
	(a)	70 determinations for thorium @ $10.00 each	$700.00
	(b)	10 determinations for uranium @ $5.00 each	50.00
	(c)	3 determinations for columbium-tantalum (combined) @ $20.00 each	60.00
3.	Spectrographic analysis:		
		30 determinations for rare earths @ $15.00 each	450.00 $1,260.00."

4. In Exhibit "A", Fixed Unit Costs, delete item 2 under Stage II which reads as follows:

> "2. 50 analyses @ $3.00 each element analyzed $150.00"

and replace it with the following provisions:

"2.	(a)	Chemical analyses:	
		12 determinations for thorium @ $10.00 each	$120.00
	(b)	Spectrographic analyses:	
		2 determinations for rare earths @ $15.00 each	30.00 $ 150.00"

5. The Operator shall have the option to discontinue the trench excavation provided for in item 1 under Stage I of Exhibit "A", if hard rock is encountered which, in the opinion of the Government, can not be bulldozed without shooting or blasting.

6. In Article 3 of the Contract, the time for commencing the work is extended from March 15, 1956, to May 1, 1956.

7. In Article 3 of the Contract, the word "uranium" is deleted and the words "thorium, uranium and rare earths" are substituted in lieu thereof.

This amendment shall not be construed to increase the estimated total cost of the project, or the aggregate total amount which the Government may be required to contribute.

THE UNITED STATES OF AMERICA

By C. Mitchenor
Administrator, Defense Minerals
Exploration Administration

W. G. Reynolds
William G. Reynolds

DMEA Form 14

Contract No. Idm-E 914

Docket No. 3855

DEPARTMENT OF THE INTERIOR

Additional release

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
January 26, 1956	V	Illinois	Thorium, Uranium, Rare earths

Name and Address of Operator: William G. Reynolds
Stonegate Road
Anchorage, Kentucky

	Reserve	Obligation
Prior Amount	0	3,498.75
Increase	0	0
Decrease	0	41.25
Revised Amount	0	3,457.50

Remarks:

(Name)
Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date delivered to Bureau of Mines, Washington 8/8/58

22845

Contract No. Idm-E 924

Docket No. 3055

DEPARTMENT OF THE INTERIOR

Terminated contract

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
January 26, 1956	V	Illinois	Thorium, Uranium, Rare Earths

Name and Address of Operator: William O. Reynolds
Stonegate Road
Anchorage, Kentucky

	Reserve	Obligation
Prior Amount	0	04,215.00
Increase	0	0
Decrease	0	716.25
Revised Amount	0	03,498.75

Remarks:

ALLEN S. DAKAN
(Name)

Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 3/22/57

989

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 25, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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MAR 21 1956

March 19, 1956

Memorandum

To: Operating Committee, DMEA - Washington

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

Subject: Signed Contract - DMEA-3855, Idm-E91h- Thorium, uranium, rare earths. Wm. G. Reynolds, Anchorage, Kentucky. Hicks Dome, Hardin County, Illinois

Enclosed are the executed Government, Division and Docket copies of the subject contract. The usual distribution has been made of the other copies. Also enclosed are 2 copies of the Operator's letter.

We recommend preparation of an amendment authorizing a change in the unit amounts for assays, in accordance with the enclosed prices quoted by two commercial laboratories, with the total amount to remain the same. We have advised the Operator not to send any samples for assay until the amendment has been executed. We suggest that this be incorporated in an amendment extending the starting time to May 1, 1956. The delay in starting is due to heavy floods along the lower Ohio River.

RAL/sm
cc:
Ames
Miller
Lynch
Files

R. A. Laurence, Executive Officer
DMEA Field Team, Region V

Wm. A. Beck, for V. J. Lynch, Member
Bureau of Mines

Government's Copy

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MAR 21 1956

MF-200A
(Revised June 1954)

Docket No. DMEA 3855
Commodity Thorium Uranium Rare Earths
Contract No. Idm-E 914

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this JAN 26 1956 day of ....., 195...., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] William G. Reynolds, whose mailing address is Stonegate Road, Anchorage, Kentucky, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and maps Figure I and Figure 2

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Illinois, County of Hardin, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Lessee-assignee of [5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] lease, [7] recorded in Book 5, page 219, official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: 10 percent royalty held by William A. Chenault

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows: (Consent to Lien of lessor waived.) Subordination Agreement signed by William A. Chenault and his wife, Louise Ryan Chenault.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

16—70618-1

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Uranium. The work to be performed is described in Exhibit "A." The Operator on or before MAR 15, 1956 shall commence the work, and on or before June 1, 1956 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work., **except as otherwise provided in Exhibit "A" with respect to stages of work.**

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $5,620.00 The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $4,215.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

WILLIAM G. REYNOLDS
(Operator)

By C. F. Mitkendorf
Administrator, Defense Minerals
Exploration Administration

By William G. Reynolds

I, ..., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70618-1

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MAR 21 1956

EXPLORATION PROJECT CONTRACT
WILLIAM G. REYNOLDS
DOCKET NO. DMEA-3855

ANNEX I

The land referred to in Article 2 of the contract consists of 51.80 acres, situated in sec. 30, T. 11 S., R. 8 E., Hardin County, Illinois, more fully described as follows:

> The N½ of the NW¼ of the SW¼ and a part of the E½ of the SW¼ described by metes as follows:
>
> Beginning at the NW corner of the said E½ of the SW¼, thence running south with the west line thereof to the center point of the west line of the SE¼ of the SW¼, being the NW corner of the Silas Stacey tract, thence east 40 rods, thence north to a point 30 rods north of the north line of the SE¼ of the SW¼, thence east 33 rods to the west line of the Pleas Rose tract, thence north to the north line of the said E½ of the SW¼, thence west to the place of beginning.

The approximate location of the above-described land is shown on the map entitled, "Figure 2, DMEA-3855, Reconnaissance Geologic Map of Hick's Dome Area ....," attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
WILLIAM G. REYNOLDS
DOCKET NO. DMEA-3855

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MAR 21 1956

Exhibit "A"

Description of the Work

The object of this project is to explore two high radioactivity anomaly areas which have been exposed in trenches near the apex of "Hick's Dome" on the subject property.

The work shall be performed in two stages. The Operator shall complete all the work under Stage I, and so much of the work under Stage II as is approved in advance in writing by the Government.

Stage I

1. Bulldoze two large trenches at the approximate locations shown on the attached map entitled, "Figure I. Plan of Hamp Lease - Hick's Dome, Hardin County, Illinois," as follows:

Starting from the 9-foot vein (indicated as "Anomaly 100" on map Figure I), one trench shall be bulldozed in a northwesterly direction for a distance of about 250 feet. The trench shall be approximately 48 feet wide at the top and taper to about 15 feet wide at the bottom. The bottom of the trench shall be approximately 30 feet below the crest of the cut. It is estimated that 8,900 cubic yards of material will be excavated to complete this trench.

The second trench shall begin at the edge of the hill just north of "Hamp Drill Hole," (See Figure I) and run in a northerly direction for a distance of approximately 80 feet. The other dimensions of this trench shall be approximately the same as the dimensions of the first trench described. It is estimated that 2,800 cubic yards of material will be excavated to complete this trench.

2. Not in excess of 420 analyses shall be made for the elements uranium, and/or thorium, columbium, tantalum, and rare earths.

3. Prepare a topographic map of the areas excavated including the surrounding areas.

Stage II

1. Core drill one or more holes, not less than AX core size, to explore favorable ground indicated by the work completed under Stage I.

2. Not in excess of 405 feet of drilling shall be done under this Stage II of the contract and not in excess of 50 analyses shall be made for the elements uranium, and/or thorium, columbium, tantalum, and rare earths.

3. On the map prepared under Stage I, show the drilling performed under Stage II.

General Provisions

Mineralized portions of the core, and all other samples, shall be split, one-half used for assay purposes, and the remainder stored by the Operator in suitable containers, properly identified, for Government use. Non-mineralized sections of the core shall be stored by the Operator for Government inspection and disposal.

The location of drill holes and trenches, the extent and method of mapping and sampling, and the laboratory making the analyses, are all subject to Government approval.

Fixed Unit Costs

Stage I

1.	Excavation of 2 trenches 11,700 cubic yards @ $0.20/cu. yd.	$2,340.00	
2.	420 Analyses @ $3.00/each element analyzed	1,260.00	
3.	Surveying and mapping the Stage I project area 1/	125.00	$3,725.00

Stage II

1.	Diamond core drilling 405 feet @ $4.00/ft.	$1,620.00	
2.	50 Analyses @ $3.00/each element analyzed	150.00	
3.	Surveying and mapping the Stage II project area 1/	125.00	1,895.00
	Total Agreed Unit Cost of the Project		$5,620.00
	Government Participation @ 75% (		$4,215.00

1/ The completed map constitutes the unit.

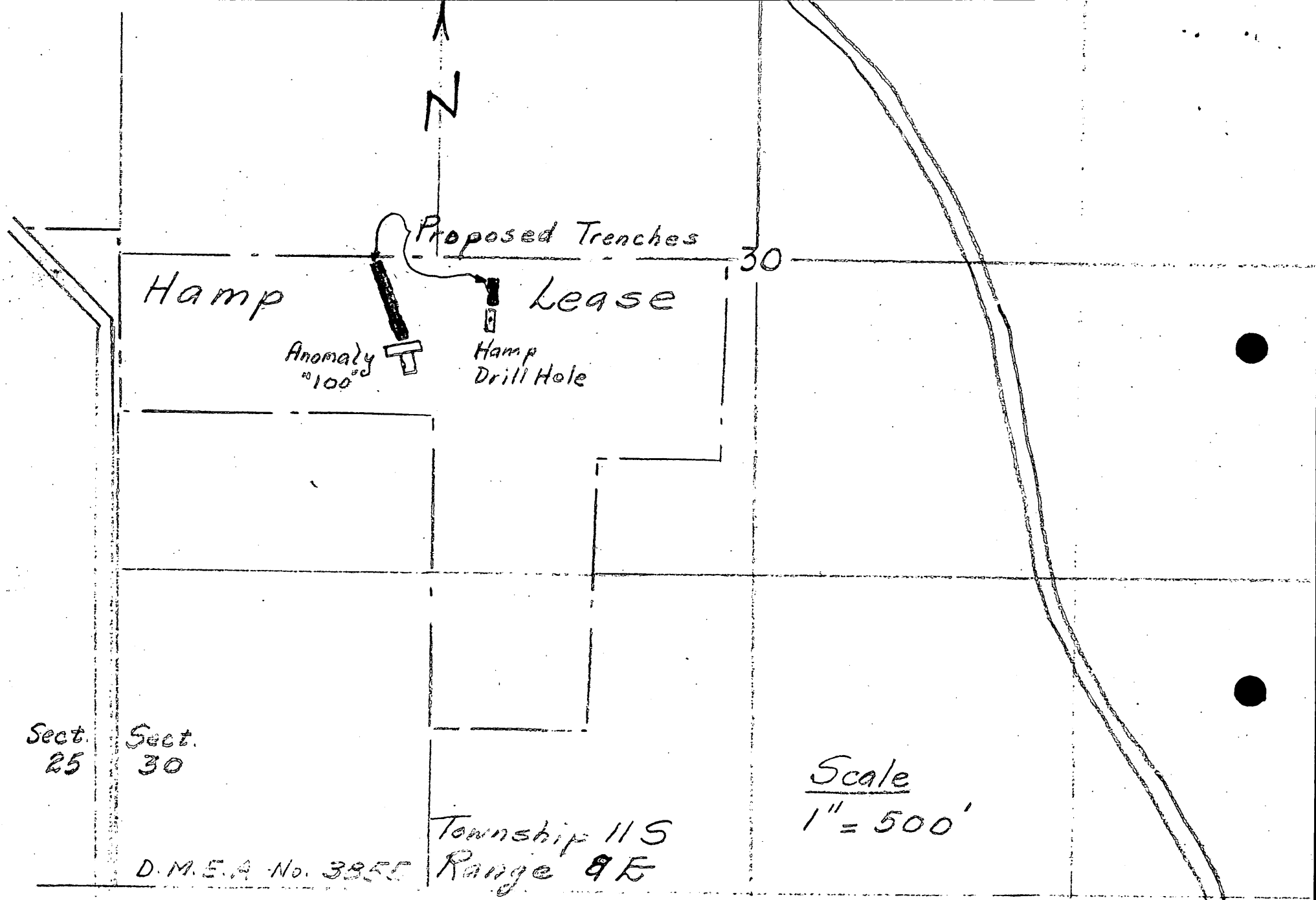

Figure 1. PLAN OF HAMP LEASE - HICK'S DOME
Hardin County, Illinois

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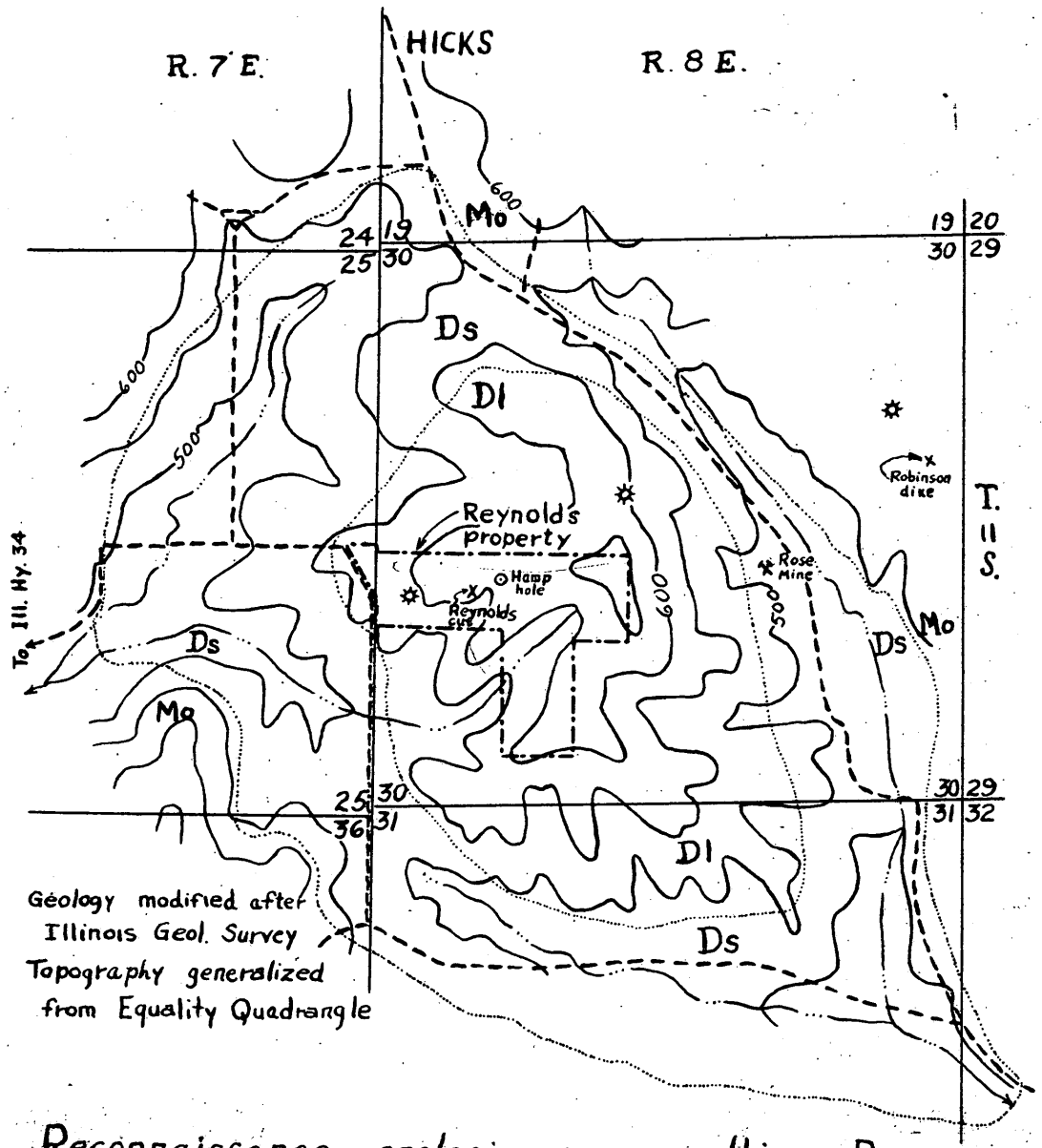
Figure 2
DMEA 3855



Reconnaissance geologic map of Hicks Dome area
Hardin County, Illinois

EXPLANATION

Mo
Mississippian, Osage fm.

Ds
Devonian shale

Dl
Devonian limestone

Geologic contact (approximate)

Breccia

x
Pit or open cut

Fluorspar mine

Graded road

0 ¼ ½ 1 mile

Contour interval 50 feet
Datum is mean sea level

R.D.T.
10-16-55

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MF-201
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator W. G. Reynolds
Docket No. DMEA- 3855
Contract No. Idm-E
Contract Date

SUBORDINATION AGREEMENT

To the United States of America:

Referring to that certain land in the County of Hardin, State of Illinois, described as follows:1/

See "ANNEX I" attached hereto.

which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. Subordinates whatever right, claim, lien or encumbrance the undersigned may have in or against the land to whatever interests, equities, and rights the Government may acquire under the contract (a) with respect to purchased property in or upon the land to the cost of which it has contributed, including the right to dismantle, sever, and remove it from the land; and (b) with respect to a percentage royalty on production from the land and a lien to secure the payment thereof; and

2. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Subordination Agreement; and (b) to give advance notice of this Subordination Agreement to any transferee of the right, claim, lien, or encumbrance hereby subordinated; and

3. Consents to all amendments and assignments of the contract without notice thereof, and agrees that this Subordination Agreement shall extend and apply thereto.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

(OVER)

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Dated this 18th day of November, 1955.

William A. Chenault [Seal]

Louise Ryan Chenault [Seal]

_____ [Seal]

I, _____, certify that I am the _____, (Secretary, etc.) of the corporation named herein; that _____ who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____

[Corporate Seal]

I, Lucille B. Walston, a Notary Public, do certify that the foregoing instrument of writing from William A. Chenault and Louise Ryan Chenault, his wife, was this day produced to me in my county by the parties and acknowledged before me by the said William A. Chenault and Louise Ryan Chenault his wife, respectively, to be their act and deed for the uses and purposes therein set forth.

Given under my hand and seal of office this 18 day of November 1955.

My commission expires My Commission expires Mar. 7, 1959.

Lucille B. Walston
NOTARY PUBLIC

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"ANNEX I"

The land referred to in this Subordination Agreement is in Section 30, Township 11 South, Range 7 East, Third principal meridian, Hardin County, Illinois, and described as follows:

The N½ of the NW¼ of the SW¼ and a part of the E½ of the SW¼ described by metes as follows: Beginning at the NW corner of the said E½ of the SW¼, thence running South with the West line thereof to the center point of the West line of the SE¼ of the SW¼, being the NW corner of the Silas Stacy tract, thence East 40 rods, thence North to a point 30 rods North of the North line of the SE¼ of the SW¼, thence East 33 rods to the West line of the Pleas Rose tract, thence, North to the N. line of the said E/2 SW¼ thence West to the place of beginning in Section 30.

Docket No. 3855
Rare Earths
Commodity Thorium, Uranium

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Contract No. Idm-E 914

Date of Contract ~~Amendment~~: January 26, 1956

Name and Address of Operator:

William G. Reynolds
Stonegate Road
Anchorage, Kentucky

Amount of Government participation ____ $4,215.00

Percent of Government participation 75 %

Region: V State: Illinois

E. R. Talbot
(Name)
for J. L. Chambers, Chief
Contract Administration and
Audit Division
(Title)

Date Delivered to Bureau of Mines, Washington. 1/26/56

54458