UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 812-A (E-93)

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

Left Side

Certificate of Audit (Final).

Interim Audit(s).

✓ Report of Review.

Termination Notice or Agreement.

Recision Notice.

Assignment of Contract.

Contract Amendments (latest on top).

✓ Contract with all exhibits and annexes.

Owner's Consent to Lien.

Subordination Agreement.

Leases and assignments of leases.

✓ Application and attachments.

Schedule of Collections.

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

Right Side

✓ Project summary.

✓ Work completed analysis.

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

✓ Final Field Team Report. (Tab)

Operator's Final Report. (see narrative with Progress Report.)

Interim Reports.

✓ On-site Exam Report(s). (Tab)

Settlement Sheets.

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

Maps in folder number _____

Operator's Monthly Reports in folder number _____

B
Reviewer's Initials

7973

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Report of:

Black Hills Keystone Corporation

Box 62, Rapid City, South Dakota

pertaining to Exploration Project Contract No. IDM-E93, Docket No. DMA-812X-B, for the period of September 1951 - first and final report.

My review included an examination of the Monthly Report (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Government representative who visited and examined the project, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of an audit of the Operator's accounts and records for the reason(s) indicated by "X" below:

(x) the Monthly Report was supported by documentary proof of the costs incurred under the contract;
(x) the contract provides for payment by the Government on the basis of agreed estimated costs of unit 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		$1,441.00
Exceptions	$ None	
Total Accepted Cost		$1,441.00

The contract calls for a 90 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of One thousand two hundred ninety-six dollars and 90/100.

- $ 1,296.90 -

is considered valid and proper.

Date: June 19, 1952

Robert M. Hull
Auditor

MF-200
(June 1951)
Indexed
No. Card
Card
Reviewed
9/24/51
AUG 17 1951
G. A. O.

Docket No. DMA 812XB
Commodity Beryl Mica
Idm E 93

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 31st day of July, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2]
Black HillsKeystone Corporation
530 Fifth Avenue
New York 19, N.Y.

AUG 24 1951

hereinafter called the "Operator," as follows:

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

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of South Dakota, County of Pennington described as follows: [3] known as the Setting Bull group of claims under Patented Mineral Survey No. 1820. Located one mile from Keystone in township Two South (T2S) Range six East (R6E) B. H. M.

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

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

None

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

3. *Exploration project.* The Operator, within 30days days from the date of this contract shall commence work on a project of exploration for [5] Beryl Mica etc.; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] Eleven (11) months. from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

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

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

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

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

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

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

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

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

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

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

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 90 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 12600.00, which is 90 percent of the agreed estimated total cost of this project, $ 14000.00.

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

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

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

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

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

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

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

Executed in sextuplicate the day and year first above written.

Black Hills Keystone Corporation
(Operator)

By W. G. Wallace

President and Treasurer.

THE UNITED STATES OF AMERICA

By C. O. Mutterdorf

Director - Production Expansion Division
Defense Minerals Administration

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

EXHIBIT "A"

Performance of Work:

Work will consist of:

Sub-Project 1

One pegmatite dike is to be explored by diamond drilling to determine the continuity and lateral extent to a depth of about 200 feet (down the dip from the outcrop) as well as the mineral content at that horizon. This program will consist of three - about 200 ft. deep diamond drill holes of BX size or larger or a total not to exceed 600 feet of hole. In addition, the access road to the drilling sites must be improved. The total cost of this work is not to exceed $3,500.00.

The location, extent, and direction of all diamond drill holes to have the prior approval of the Government field engineers. This work in Sub-Project 1 to be completed within 4 months from the date of the contract, and the drilling is to be done by a contractor.

Sub-Project 2

If the exploration program in Sub-Project 1 encounters mineralization which in the opinion of the Government field engineers justifies additional exploration of this pegmatite, then with their approval a part or all of the following work will be done. From the surface drive a 240 foot (7 x 5 foot cross section size) crosscut (to cut the dike 175 feet below the outcrop), then from the crosscut in the dike drive a two compartment raise (cross section size 7 x 5 feet) 180 feet to the surface. This work is to be completed within eight months after the completion of Sub-Project 1. The total cost of Sub-Project 2 not to exceed $10,500.00.

All sampling of this project to be supervised by the Government field engineers.

Cost of the Project:

Sub-Project 1

600 feet diamond drill hole @ $5/ft.	$ 3,000	
Access road repair	200	
Miscellaneous expense supervision, engineering, core boxes and core handling, transportation, etc.	300	
Total Cost of Sub-Project 1		$ 3,500

Sub-Project 2

240 feet of crosscut @ $22.50/ft.	$ 5,400	

180 feet of raise @ $25/ft.	$ 4,500	
Crosscut portal excavation and station preparation for raise	600	
Total cost of Sub-Project 2		$ 10,500
Total cost of Project		14,000

The attached maps outline the diamond drilling crosscutting and raising to be done by this project.

Sub-Project 1

Diamond drilling @ $4.50/ft.	$ 2,700	
Core handling, transportation, etc.	200	
Access road	200	
Misc. expense, supervision, engineering	400	
Total Cost		$ 3,500

Estimated cost per foot crosscutting and raising-cross section size 7 x 5 feet

Sub-Project 2

	Raise	Crosscut
Labor	$14.00	$14.00
Supplies	4.90	3.50
Rental & repairs	4.42	4.03
Misc. expense	1.68	.97
1/ Total Cost	$25.00	$22.50

1/ Total cost includes supervision, labor, supplies, sampling, office and transportation cost.

Fixtures and Improvements:

Does not apply to this contract

Operating Equipment:

Does not apply to this contract

Labor and Supervision:

Sub-Project 1

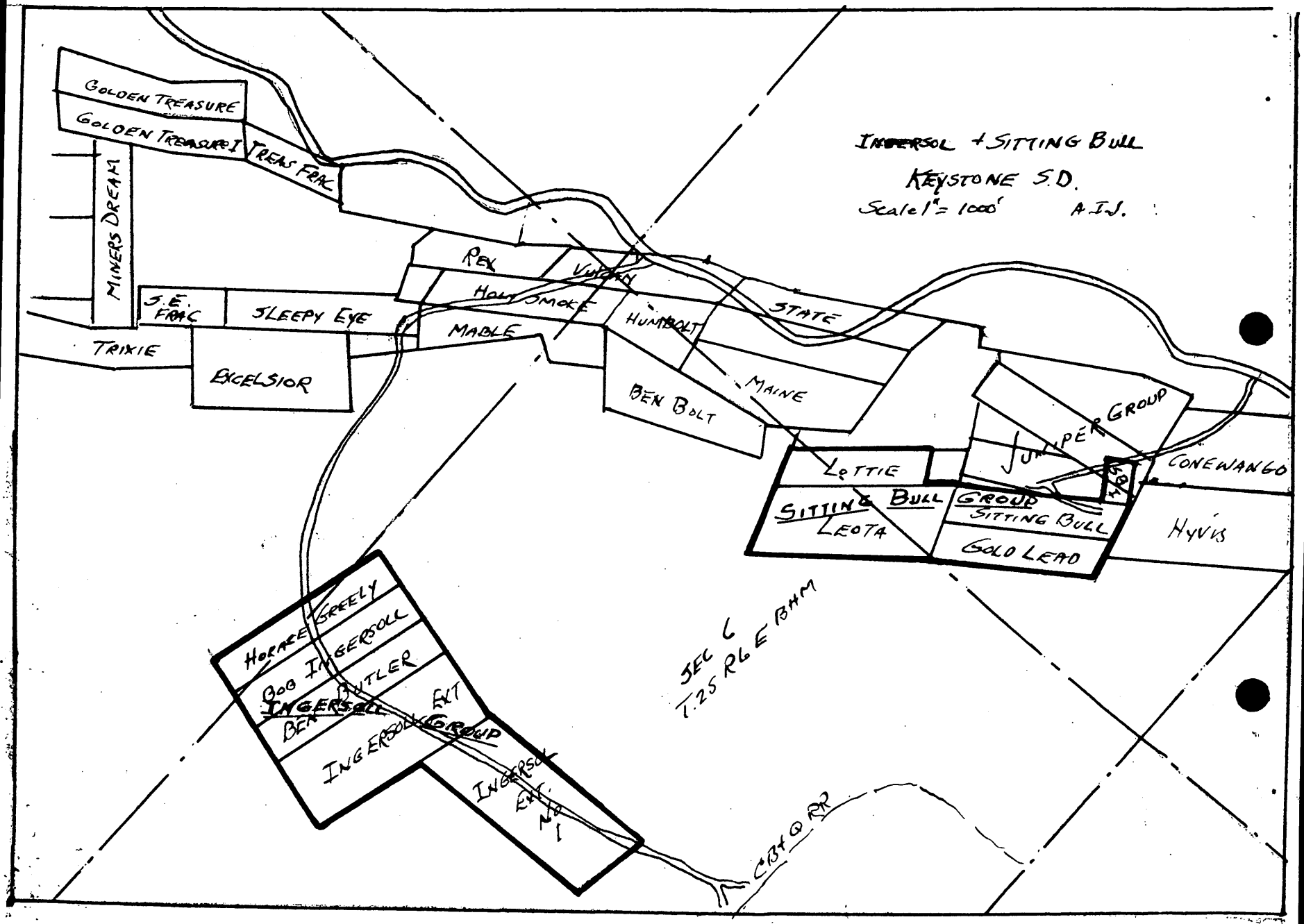
Engineer-Superintendent 2 months part time @ $50/mo.

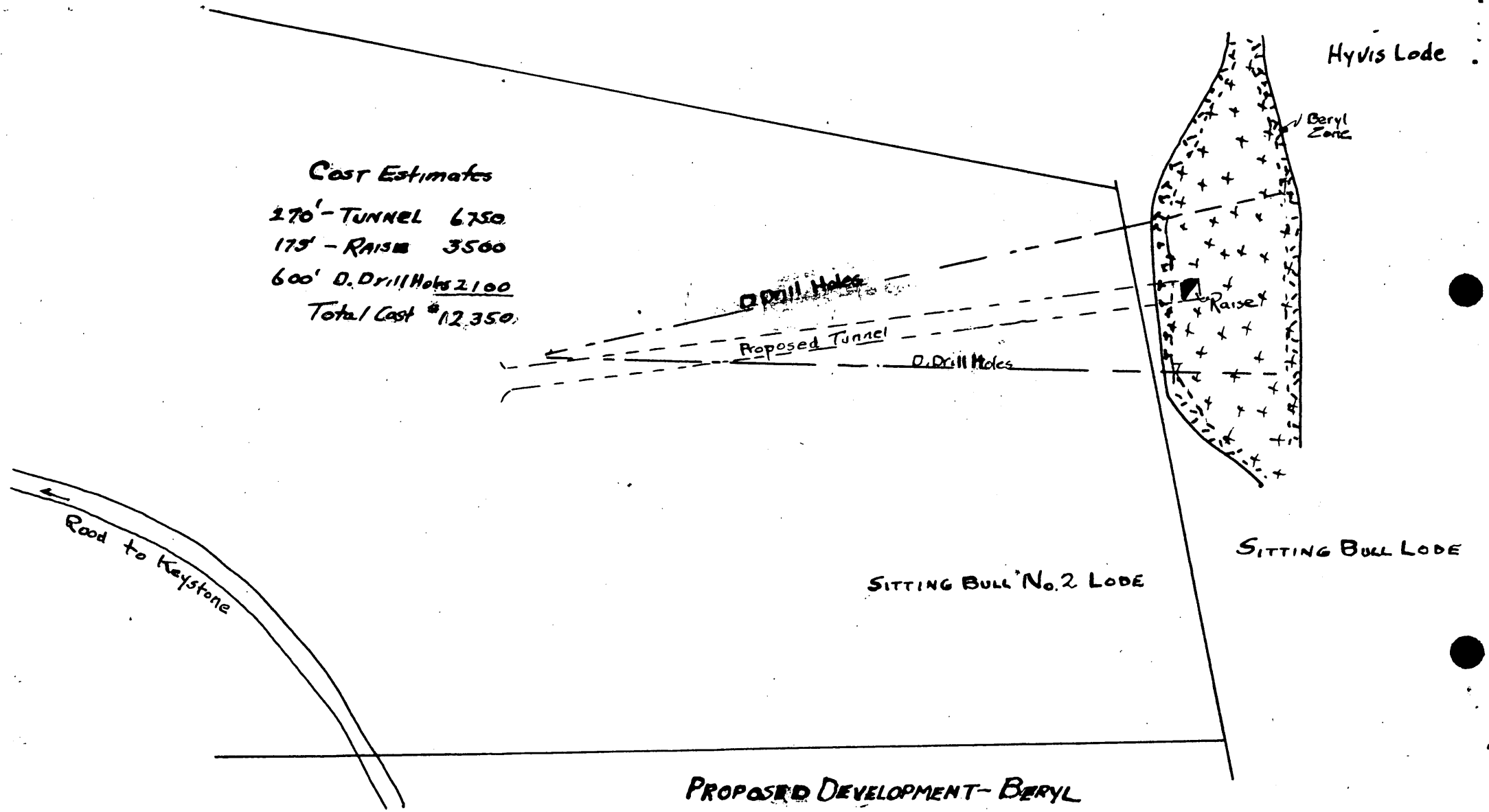
Sub-Project 2

1 - Engineer-Superintendent 8 months part time @ $50/mo.
1 - Miner @ $1.25/hr.
1 - Mucker @ $1.10/hr.
1 - Laborer @ $1.70/hr.

Rehabilitation and Repairs:

Access road to drill sites	$ 200


INGERSOL + SITTING BULL
KEYSTONE S.D.
Scale 1" = 1000'
A.I.J.
GOLDEN TREASURE
GOLDEN TREASURE I
TREAS FRAC
MINERS DREAM
S.E. FRAC
SLEEPY EYE
TRIXIE
EXCELSIOR
REX
VULCAN
HOLY SMOKE
MABLE
HUMBOLT
STATE
BEN BOLT
MAINE
JUNIPER GROUP
LOTTIE
SITTING BULL
LEOTA
GROUP
SITTING BULL
GOLD LEAD
CONEWANGO
HYVIS
HORACE GREELY
BOB INGERSOLL
BUTLER
INGERSOLL
BEN
EXT
INGERSOLL GROUP
INGERSOLL EXT. No 1
SEC 6
T.25 R6E BHM
C.B.&Q RR



PROPOSED DEVELOPMENT - BERYL
SITTING BULL LODE

BLACK HILLS KEYSTONE CORP. - KEYSTONE, S.D.

April 24, 1951 Scale 1" = 50'
A.I.J.

Copied for E. D. Talbert, Wash.
ABNeedham:dg-11[illegible]/52

hold

FILLMORE DRILLING COMPANY
CONTRACTORS
Deadwood, South Dakota

Aug. 20, 1951

Drilling Contract

Contractor	Fillmore Drilling Co. 32 Lincoln Ave. Deadwood, So. Dak.
Property Owner	Black Hills Keystone Corp. 503 5th Ave. N. Y. 19, New York William K. Wallace, Pres.
Contract for.	Exploratory Drilling & Related Services
Place	Sitting Bull and Ingersol Mining claims, Near Keystone
Amount of Footage	Minimum 600 ft. Size of core. BX Price per Ft. $4.50 Maximum 3000 Ft. 1-5/8" core
Related Services	Water Hauling $0.25 per ft. Cementing, Reaming and casing if ordered by the Resident Engineer $3.00 per ft.
Resident Engineer	Fremont Clark, Box 62, Rapid City, So. Dak.
Direction of Work	The work will be performed under the direction of the Res. Engineer who will designate the locations, diameters, number, position, depths, and inclinations of all holes to be drilled.

Performance of the work - The Contractor shall keep accurate records of drilling operations and shall furnish the Res. Engineer with a daily log showing the inclinations of holes, type of drilling, and footage and depths of each type of drilling, hours worked, nature of rock penetrated and all pertinent information regarding the conditions of each hole. All work shall be performed with the understanding that the objective is to secure accurate samples of the formations penetrated and shall be directed to this end.

The contractor will not give any information regarding the results of the drilling to any third party.

Contractor will procure the necessary core boxes and see that the core is placed in its proper position therein, boxes will be marked as to footage and number of hole. Cost of core boxes will be assumed by the Property owners.

Payments to Contractor - The contractor shall properly certify and present invoices or vouchers either upon the completion of each hole or monthly for holes completed during the preceeding month, showing the footage drilled, and all other work for which payment is claimed, and the amount due. Each voucher or invoice to be signed and approved by the Res. Engineer.

Signed:

Fillmore Drilling Co.
By M. F. Fillmore, owner Contractor
Black Hills Keystone Corp. Corporation
W. K. Wallace President

Witnessess:

Signed. T. J. Oltmans
Joe Kluinschmit

W. D. Wallace, Secretary

C
O
P
Y

True copy of original contract
Fremont F. Clarke

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma-812X

Date received 5/16/51

Participation

Black Hills Keystone Corp.
530 Fifth Avenue
New York 19, N.Y.

Name and address of applicant

Date May 4, 1951

FILL IN THIS BLOCK

Date of application April 26, 1951

Estimated cost 15,500.00

Mineral or metal Beryl

Percentage of Government participation 90%

Location of mine Keystone, S.D.

Sitting Bull Claims.

Date of filing MF-100 May 11, 1951

DMA Docket Number, if available Dma-812X

INSTRUCTIONS

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

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

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

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

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

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

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

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

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

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

Black Hills Keystone Corp.
(Name of company)

By W. G. Wallace
(Signature of authorized official)

May 10,1951
(Date)

President & Treasurer
(Title)

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

*Same as footnote on page 1.

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

Company is sole owner
There are no claims, liens,or encumbrances whatsoever

Not Lessee

Financial Statement Fiscal year 1950

Current Assets	$65,087.99
Capital Assets	$52, 778.17
	$117,859.00

Current Liabilities.....	$ 3,082.16
*Other Liabilites.....	$39,157.97
Net Worth	$ 75,619.07
	$117,859. 66

* Owed to Owners of Property

The company is prepared to invest all sums that may be required under the terms of this application whether in cash or equipment or both as may be required by the regulations.

a. The Sitting Bull Group of Claims consist of some 150 acres of Mining Claims Mineral Survey No. 1820 and adjacent unpatented Mining Claims of what is known as Hyvis Lode and part of Juniper Lode. See attached Plat. T 2S R6 E.BHM.

Ore to be processed at Mill belonging to company situated on the adjacent Ingersoll Claims. See plat attached. Hand sorted ore as recovered in adequate tonnages can be shipped direct via CBQ RR without further processing. However beryl on this property occurs as a dessemination of small crystals for the most part ina matrix of albite and quartz. It is proposed in this project to produce a milling grade of ore by sorting out after crushing on a sorting belt as much waste as possible prior to hauling to mill.

Beryl is the principal ore found in this mine and the surface showing indicate a beryl zone some 6 ft. in width surround the entire dike core.

It is proposed by driving a tunnel some 200 ft. below the outcrop to contact the heart of the dike thus making available if conditions remain uniform some 100,000 tons of low grade beryl ore that will average about 2%-3% beryl. (See sketch attached). Prior to driving this tunnel diamond drilling as provided for in this application will serve to confirm the outlines of ths dike and reveal other pertinent information.

Surface operations to date have produced some 30 tons of beryl from mining of the beryl zone as well as some 25 tons of high grade pure white mica free from all stain or contamination that can be processed for flake mica or ground at the mill for micromica.

The time required to complete the exploration project is estimated at not more than six months.

The Sitting Bull Claims have been thoroughly prospoected and explored and the availability of large tonnages of beryl seems assured. The property is well known to the Bureau of Mines and has been inspected a number of imtes by the latter.

Ore from this property has been studied by the Bureau of Mines and investigations carried out by the College Park, Md. branch of the Bureau confirm the belief that it is feasible to make good recoveries of the beryl by electrostatic methods. Under date of Dec.4,1950 Mr. P.M.Ambrose Chief, Mineral Technlogy Division Region VIII, forwarded a report to our company of the results obtained with electrostatic separation of our Sitting Bull beryl ore which which showed a concentrate of 14% by weightwas recovered from an average sample of beryl ore containing small crystals embedded in quartz-albite matrix.

The company proposes to employ a firm approved by the Government to undertake the diamond drilling as outlined, as the first stpp in the project.

Upon completion of this work and approval thereof, the work of the driving the tunnel will be undertaken, a crushing plant with sorting belt will be installed and ores from the operation immediately processed.

No provision is made in this exploration project for cost of this equipment and installation.

It is proposed to use three shifts in driving the tunnel and raise and thereafter as the situation warrants employ such miners and other labor as required to bring to completion not only the work required to put the operation in production.

No accurate figures can at this time be given in detail except that the total sums submitted are esttimated to be ample to cover the actual cost of operation without any profit whatsoever to the company.

As the work progresses further data will be furnished

The sum of $15,500.00 is submitted as being required for the work as outlined.

It is estimated that six months should be sufficient to carry through the project and that within nine months operation should be well under way to produce substantial tonnages of beryl ore and a full scale operation.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma-812X

Date received 5/21/51

Black Hills Keystone Corp.
530 Fifth Avenue
New York 19, N.Y.

Name and address of applicant

Date Nov 14, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

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

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

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production 10 years

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
William K. Wallace	Pres. D.	-	000 omitted 500	100	-	-	-
Winifred D. Wallace	VP. D.	-	1,500	100	-	-	-
	Total		x x x x x	200		x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$20,000	$all	$100.00	200	15% 45
Preferred stock	$-	$-	$-	-	-

*Indicate period covered.

10. Production: $49,50 only operated part time.

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) Tons	Lithium Ory Mica, Spar	3,109	715	506	
2. Quantity of product processed (specify unit of measure and type of process) Tons	-	2,867.84	623.66	1112.06	-
3. Quantity and grade of product sold or shipped (specify units of measure)			partly	sales from stock pile.	

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

12. Ore or Mineral Reserves:

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

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

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

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

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable) Beryl In Mine On Dumps	150,000 100,000	3% Boo 2%-3% Beryl	$30.00 10.00	2%-3%	10 Boo $150.00

(*c*) If placer:

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

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

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

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

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

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

13. Access Roads:

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

14. Water Supply:

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

15. Power:

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

16. Labor:

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

17. Equipment and Facilities:

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

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

CERTIFICATION

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

Black Hills Keystone Corp
(Name of company)

By H. R. Wallace
(Signature of authorized official)

May 18, 1951
(Date)

President & Treasurer
(Title)

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

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

Black Hills Keystone Corp.

Ingersoll Mine

a. Chief products are: Beryl
Lithium ores:
Amblygonite
Spodumene
Lepidolite
Mica
Quartz
Feldspar
Columbite
Cassiterite
Uranium ores

b. By-products:
From floatation of Lithium ores:
Microlite
Columbite- uranium - cassiterite concentrate

Ingersoll Mine, Patented Mineral Survey No.720; 100-ton mill, fully equipped for beneficiation of lithium ores can be converted to beneficiation of beryl with slight modificaitions of flow sheet. Open cut, shaft, tunnel, dry.

a. Dike No.1 2 compt. 5'x50'
   Dike No.2 8 compt. 50' incline
b. Dike No.2 50' level -135' - Surface level 135'
   Dike No.1 50' level 80'. Tunnel level 480'
c. Raise Dike No.1 78' Dike No.2 65'

d. Open cut Dike 1 60' x 110' Dike No.2 70x 100'

Not flooded

a. Distance to town 2-1/2 miles. To shiipin; point companies own loading siding 5/8 of a mile

b. Keystone mining district

c. T-2S, R-6E. HM

d. Penningto County, South Dakora

a. Property in operation by Owner

b. As Owner

a. The Applicant has been President of the company engaged in mining beryl and other ores since 1933. His general business experience includes : President of the White River Lumber Co. that owned and operated a tract of some 67, 000 acres of timber along the White River in Arkansas; Director of the Kalamazoo Paper Co. of Kalamazoo, Michigan; real estate management; investment management etc.

b. The management of the project will be in charge of a graduate mining engineer of wide experience in pegamtite and other mining who has been in the employ of the company since its inception in 1933. He has directed operations ~~xxxxxxx~~ of the Applicant and other Black Hills mining operations since 1930 and has wide experience in this field.

Company has been engaged in rare minerals mining since 1933. It developed techniques for the beneficiation of lithium ores in cooperation with the Bureau of Mines, College Park MD station in 1941-42, and in the latter year built a new mill on the property which was operated successfully for three years in the beneficiation of Lepidolite. This 100-ton mill is at present not operating but it is beleived can be with slight modification of its flow sheet be adapated to the beneficiation of beryl. Much work along these lines has been done by the companyand the Bureau of Mines has and is at present carrying on work with the companys ores with a view to working out an economically sound technique.

One of the essential features isto assure an adequate beryl ore supply and while all indications are that the company as well as others in the Keystone-Custer mining district have very adequate supplies of beryl ore as shown by testing of existing dumps etc. the program of exp,oration as outlined in the proposals herewith would materially confirm the factual presence of very large reserves of beryl ore essential to a successful beneficiation program.

The company profitably beneficiated some 10,000 tons of Lepidolite and its plant is is AI operating condition at present and available for beryl beneficiation, because when plat was built it was laid out with the idea of ultimately using this mill for beryl production ona commercial scale and our program when carried through will produce without much extension of equipment some 125-150 tons of 10%BeO per month and this capacity can be greatly increased as operating efficiency is improved.

In addition to Lithium and Beryl ores, the company during the last war produced and sold to Metals Reserve substantial tonnages of columbite and Cassiterite. Very recently it was found that these ores contains substantial amounts of uranium ores. These ores have been tested by AEC - New York and some run as high as 5% U3O8. However no extensive exploration has as yet been undertaken for these ores as it is planned to operate the property with a view to extracting all of the values, rather than gouge for just one ore.

For this reason production has been limited pending the development of suitable beneficiation techniques for beryl. In the mean time mica, feldspar and other easily identified ores have been mined and sold but the company has not operated at anything like capacity.

Reports on the property are available in various annual publications of the Bureau of Mines and USGS. To date only two of the five large dikes have been opened up and the three remaining seem from outcrop measurements to be far more extensive than any yet mined and the latter have only been partly opened up and worked from surface levels.

b. Within a radius of some 5 miles there are various other rare minerals properties that have been in production for many years. The Etta Mine has produced large tonnages of Spodumene, The Peerless has produced mica and beryl. The Edison is now being operated by the Lithium Co. of America. With a radius of some 25 miles from the companies mill is the richest rare minerals mining district in the United States and very ample supplies of beryl too low grade for any other but beneficiation would afford very ample resveres in addition to the ore that can be produced by the Applicant should the market demand an expnasion beyond presently forseeable needs of beryl ore.

c. We would refer to Bureau of Mines and USGS files covering work done on beryl as well as annual reports published by the Bureau which give some idea of our past perfromance though the methods of production used were by hand srting and as such quite inefficient to commercial to say nothing of defense needs.

The Ingersoll Mine consists of five pegmatite dikes of which to date only two have been opened up. These dikes lie on the same strike and are separated from each other by lenses of slate varying in thickness from 200' to 1000'.

The core of Dike No. 1 consists of of a massive body of Lepidolite from which some 10,000 tons have been mined down to the 50' level were the ore body seems to expand. This 50' is some 280' below the outcrop.
Surrounding the core is a mica-beryl zonevarying in width from 10' to 30'. In this zone on Dike No.1, numerous large beryl crystals have been mined the largest of these weighed 61 tons. Mica,Spar Columbite, cassiterite have been recovered in the mining for beryl as well as large tonnages of mica. In the process of Lepidolite beneficiation in the company mill as a by-product a substantial tonnage of a heavy mineral were recovered by tabling. Within the year this ore was found to contain up to 6% U_3O_8, as analysed by AEC - New York. It is beleived that the beneficiation of beryl from Dike ore will yield very considerable tonnages of uranium ores. While it may not be profitable to operate for uranium ores as such, as a by product it would be a commercially sound venture.

The core of Dike No. 2 consists of Spoudmene. Here no Lepidolite is found as in Dike No.1, no Spodumene is found. Also in Dike No. 2, large beryl crystals have been found the largest weighing 35 tons. In Dike two recently there was uncovered a mica conglomerate ore body containing substantial percentages of of columbite and this ore also carries uranium. This ore body has to date not been fully explored but the indications are very favorable.

Dike No.1A and Dike No.3, lie above Dike No. 1 and the outcrop of Dike No.1A shows a fine grained ore body extending some 150 in length and about on average 10' in width. This outcrop shows indications of a Mica conglomerate similar to that of Dike 2, which contains columbite and uranium ores and as part of the exploration program it is proposed to cross-cut this Dike at depth of about 200' Below the outcrop on the way to,Dike 3 and if values are encountered a subsequent exploration program is proposed. The present proposal however is confined to drifting to Dike No.3 which lies about 100' beyond Dike 1A and then runa raise to the outcrop where substantial showing of beryl are to be found.

Dike 4, lies in a similar relation to Dike 2, as that above outlined However here the outcrop is far more extensive and shows up to height of some 50' and is rich in beryl mica and at depth may prove to be joined with Dike 1, it is proposed to contact it on the 50' level. Plans and sketches have been included with Form MF-103 forwarded May 14th. As the project is concerned with beryl ores primarily other tonnages have not been included, but can be furnished if required.

-13-

Shipping point private siding on C.B.&Q belonging to company 5/8 of a mile from mine. Road good.

Residence and supply points: Private road through property about one mile, then two miles on U.S.Highway 16. Private road fair. U.S.Highway excellent.

-14-

Water Supply: Deep well adjacent to mine and mill, adequate at all times for needs of normal operations. If additional water supplies should be needed can be pumped from Battle Creek adjacent to property. Mill has 20,000 gallon storage tanks

-15-

Power Sub-station at Mine with private power line connected with Black Hills Power & Light transmission line. Present connected load 50 kilowatts. Can be increased to any required amount.

-16-

Number of men recently employed 6. 2 miners 4 muckers. Operations have been curtailed pending mechanization of operations and milling of beryl contingent on exploration program

The principal items of equipment are:

Milling Plant

1- 10 x 20 Jaw Crusher Pacific Model 10420 Type ECH No.252 - 25 HP Motor
1- 2' Symons Cone Crusher No.257-Reg.No.212757-30 HP motor.
1- Conditioner - Denver Equipment Co 4'x4' with Allis Chalmers motor Serial 709 D - 1 new tank.
1- Akins Classifier - order No.60-37-3 with 1 HP Westinghouse motor
1- Conditioner dismantled - motor used on 1 cell flotation unit.
1- Dryer -25'x42"-with 41/2HP.motor serial 25304
1- Exhauster- Type Hx size 30 order No.41J-24288 with piping.
1- Elevator- 5x8 buckets - 10"belt-5 ply-45' centers head pulleys-motor
1- Elevator 5x8 buckets -32' centers-with 3 HP.motor
1- Portland type drum filter 5'x4'
1- Denver 3 cell-Guba # 18 sp.Flotation unit
2- Gyrotset Screens 3'x10' Double deck open type-with 5 HP motors
1- Denver Equipment CO Diaphram pump size 4
1- Deming pump-filtrate pump for filter.
1- F.E.Meyer Depp well pump 5 HP motor - 350' head
2- # 6 rougher tables serial 3850-5
2- wildfley tables 6x15
1- 10x12 Denver Equipment Co. Thickener No.H 210T-3 HP motor.
1- 8x10 Denver Equipment Co.Thickener with Diaphram pump F 258 Z
1- Vacuum pump
1- Denver Fire Clay burner and blower for dryer furnace
1- Dryer furnace with piping
1- 4 unit Denver Equipment Co.reagent feeder.
1- Blower compressor-size 7x4- with 5 HP motor.
1- Single cell-flot cell-Denver Equipment Co.
Motors complete with starting equipment and v- belt drives.
Piping and conduit to all motors complete with switchboard.
Mill layout has 2 coarse ore - bins 2 intermediate ore - bins
4 fine ore - bins.Concentarte bins and finish bins - 4-50ton units.
Mill building - 92 feet long - 50 feet wide - and total height 60 feet.
All in A-1 condition. Mill built in 1942

Mine Plant

1- Gardner Denver WHH compressor 7½x53 / 4x5- with 50 HP motor and starter
1- Gardner Denver G.D.9 mucking machine.
1- Mine hoist with 10 HP.motor drive - Dike No.2.
1- Air driven hoist - converted from steam drive -Dike No.1.
1- R 91 stoper drill- Gardner Denver
1- S 91 Sullivan stoper drill- Gardner Denver,Joy Mfg.Co. - S 2
1-G.D. #79 drifter with shell mounting etc.
1- G.D. 79 drifter converted to jackhammer mounting.
1- S55 jackhammer drill -Gardner Denver
1- Ingersoll Rand jackhammer -dry type
1- Compressor Bldg. 12x16.
1- Blacksmith shop - 14x18.

4 mine ore bins - Dike No.1 - 50 tons capacity
3mine ore bins - Dike No.2 40 tons capacity
1- Car hoist - Dike No.1 motor drive.
2- mine columns - with arm attachments etc.
1- Sorting belt - motor drive - 16" belt - installed Dike No.1.
1- Sorting room - Dike No.1. 16x20.
8- Mine cars - 2 roller bearing balance straight bearing type.
Drill steel - 1" O. D. -estimate 1600#.
Pipe lines installed -Compressor to Dike # 1 and 2 -est.2400'.
Mine track - 700 feet installed Dike No.1 - 800' est.Dike No.2.
Dike No.2 - Trestle 45' - Height 24' - tracked.
Mill approach -Trestle 40'-tracked -height 16'.

Attention may be called to the fact that since the last war operations of the mine have been curtailed awaiting such time as the presently wasteful techniques of beryl and other ore recover by hand sorting methods could be replaced by the milling of the entire ore body and the recovering of all values contained rather than continuing as at present to waste more than 50% of the values through handing sorting methods in vogue.

If the Exploration project as outlined proves the ore bodies of the Mine to be such as seems indicated it is proposed to mechanize the mine completely operate ona 3 shift schedule and produce beryl ore on a commercial scale as well as all of the by-products including Columbite Uranium and Lithium ores in such substantial tonnages as are so urgently needed by national defense. In is confidently beleived that this is feasible to-day. It might be added that both the College Park and the Rapid City stations of the Bureau have done substantial work with our beryl ores and are presently engaged on this project. College Park also is working on our Columbite-Uranium and have assured me that a separation seems feasible, while the electrostatic separation work done there on our beryl is most encouraging. Rapid City station also reports very good progress.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 2 1 1951
LANDON F. STROBEL
Executive Secretary

MF-104
(April 1951)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 2 1952

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

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

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

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

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

CERTIFICATION

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

Black Hills Keystone Corporation
(Name of Company)

By /s/ Fremont F. Clarke
(Signature of Authorized Official)

October 2, 1951
(Date)

Manager
(Title)

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

16—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator: Black Hills Keystone Corporation
Project No. DMA: 812x-b, Contract Idm E-93
Total contract amount: $14,000.00
Government participation percent: 90%

Distribution of Expenditures for Month of September 1951

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries						
Equipment purchase [1]						
Equipment rental [2]						
Buildings						
Explosives						
Repair parts						
Other supplies						
Power						
Transportation						
Withholding taxes						
Compensation insurance						
~~Other insurance~~	1,358.50	None	1,358.50	1,358.50	None	1,358.50
Contract work Engineering	50.00	None	50.00	50.00	None	50.00
Other (specify) Core boxes	32.50	None	32.50	32.50	None	32.50
Total	1,441.00		1,441.00	1,441.00		1,441.00
Totals previously reported	None		None	None		None
Totals to date	1,441.00		1,441.00	1,441.00		1,441.00

FOR GOVERNMENT USE ONLY

Checked by: G. Walker
Entered by:
Approved by: D. H. Mullen, Supervising Engineer
Amount approved for payment: $1,296.90
Remarks:

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

10—64008-1

Strategic and Critical Mineral Exploration Program DMA 812x-b, Contract Idm E-93

OPERATION MONTHLY PROGRESS REPORT for September 1951

Narrative

A contract was signed July 31st for a beryl-mica exploration program on the Sitting Bull group of claims located one mile from Keystone in Township 2 South of Range 6 East of the Black Hills Meridian.

The objective of the initial program was to determine by core drilling, the beryl, mica content and the configuration of the outcropping Sitting Bull dike which in the surface exposure contains beryl, a mineral of strategic importance and in short supply.

The Sitting Bull dike outcrops as a small lenticular pegmatite 140 feet in length indicating an average surface width of approximately 35 feet, with a northwesterly strike and a dip to the east.

Three core drill holes were drilled in September to length of 100, 71, and 115 feet each. Each drill hole intersected the Sitting Bull dike 35, 75, and 120 feet below the surface which clearly showed the dike narrowing to 11.0 feet at the 120 feet level (down dip).

Additional drilling was not undertaken as the three holes drilled identified the configuration characteristics of the dike.

The pegmatite intervals were logged by the Federal Geological Survey at Custer, South Dakota.

On the basis of their examination the beryl content of the wall zone several feet in width, may contain 1.0% beryl whereas the balance of the pegmatite, the intermediate zone contains less than 0.5% beryl. The pegmatite tonnage above the 100.0 foot level (down dip) for a length of 150 feet is indicated by drilling at 15,000 tons. Approximately one third of this tonnage is in the wall zone.

AREA	PEGMATITE (tons)	%Beryl	Beryl (Tons)
Wall Zone	5,000	1.0	50
Intermediate Zone	10,000	0.2-0.5	20-40

Less than half of the beryl could be recovered by hand-sorting as the crystals are small.

Scrap mica and potash feldspar were observed in minor quantities in the expoxure and drill core, tantalite-columbite occurs in a thin zone 1/2 foot wide as extremely thin plates.

Based upon a value of $350.00 a ton the average grade of the pegmatite ore a ton of beryl content is calculated at 1.75 a ton.

Conclusions:

Core drilling indicates the Sitting Bull dike to be rapidly narrowing with depth and short in length. Further exploration by an adit is not justified.

Approximately half of the indicated 15,000 tons of pegmatite ore can be mined by open cut if it is essential to provide some 7,500 tons containing one half of one percent beryl grade to a beryl recovery mill.

Present prices of $350.00 a ton for clean beryl crystals would not permit economic recovery from the Sitting Bull dike of beryl even on a limited basis.

Other minerals, potash feldspar and scrap mica are indicated in only very light tonnage.

Attached is sketch map showing plan and sections of the Sitting Bull dike.

/s/ Fremont F. Clarke

Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

October 4, 1951

Mr. Fremont Clarke, Manager
Black Hills Keystone Corporation
Box 62
Rapid City, South Dakota

Dear Mr. Clarke:

The results of the first three diamond drill holes on the Sitting Bull dike, drilled under DMA Project No. 812X, Contract Idm E-93, have shown that the dike is rapidly narrowing with depth. The beryl content of the dike appears to be confined to the very narrow wall zone.

Further drilling will not, in the opinion of the government, provide any additional information. Because the project has not resulted in a significant discovery and it is improbable that a substantial beryl deposit exists, sub-project 1 is hereby terminated with the completion of three drill holes under Article 17, section C of the contract.

Because of the conditions previously stated, the government does not approve the work provided under sub-project 2 of the contract, and that portion of the contract is also terminated.

Very truly yours,

D. H. Mullen
Supervising Engineer

FILLMORE DRILLING COMPANY
Contractors
Deadwood, South Dakota
Sept. 27, 1951

In account with
Black Hills Keystone Corp.
503 5th Ave.
New York 19, N. Y.

Invoice No. 1-51
Date: Sept. 27, 1951

****

Core Hole No. 1, 2, and 3.
Sitting Bull Pegmatite
Keystone, S. Dak.

Item	FOOTAGE		UNIT PRICE	TOTALS
Hole No. 1	100 ft.		$4.50 per ft.	$ 450.00
Hole No. 1	100 ft.	Furnishing water	.25 ft.	25.00
Hole No. 2	71 ft.		4.50	319.50
Hole No. 2	71 ft.	Furnishing water	.25 ft.	17.75
Hole No. 3	115 ft.		4.50	517.50
Hole No. 3	115 ft.	Furnishing water	.25 ft.	28.75
Additional Supplies				
13 Core Boxes at $2.50 each				32.50
			Total	$1,391.00

I certify that the above bill is correct and just : that payment therefor has not been received : that all statutory requirements as to American production and labor standards, and all conditions of purchase applicable to the transactions have been complied with : and that State and - or local taxes are not included in the amount billed.

Fillmore Drilling Company

/s/ M. F. Fillmore, Owner

Approved:

/s/ Fremont F. Clarke
Resident Engineer

Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

October 4, 1951

Memorandum

To: A. B. Needham, Executive Officer, DMA Field Team, Region V

From: Supervising Engineer, Rapid City Field Office

Subject: Termination of DMA Project 812X, Contract Idm E-93
Sitting Bull dike; Black Hills Keystone Corporation

Enclosed are monthly reports on the subject project, together with our report, the report of the Geological Survey, and notice of termination.

The accounts are all in order and have been approved. The operator agrees with our action, as shown in his narrative report.

As far as we are concerned, this completes the subject contract except for repayment from any future production. No operation on the dike is planned at present, and I doubt if any will start in the foreseeable future.

Check for reimbursement of the Government's share of the costs should be made in favor of Black Hills Keystone Corporation and sent to Fremont Clarke, Manager, Box 62, Rapid City, South Dakota.

/s/ D. H. Mullen

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF September 1951

Name of operator: Black Hills Keystone Corporation
Project No. DMA: 812x-b, Contract Idm E-93
Total contract amount: $14,000.00
Government participation percent: 90%

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners				
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers		1 mo.	$50.00	$50.00
Geologists				
Bookkeeper				
Foreman				
Clerks				
Stenographers				
Other				
Total				$50.00

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

FOR GOVERNMENT USE ONLY

Checked by: G. Walker
Entered by:
Approved by: D. H. Mullen, Supervising Engineer
Remarks:

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF September 1951

Name of operator: Black Hills Keystone Corporation
Project No. DMA: 812-xb, Contract Idm E-93
Total contract amount: $14,000.00
Government participation, percent: 90%

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes Contract at	$4.75 a	foot 286.0 ft.		$1,358.50		foot	286	none	286	600
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify) Core boxes				32.50						
Engineer				50.00						
Totals				1,441.00						

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

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by: G. Walker
Entered by:
Approved by: D. H. Mullen, Supervising Engineer
Remarks:

DMA Form 1

370

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 812X-B.

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as an exploration application

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

To:	Parsons	Date	7/23/51
To:	Lyon	Date	
To:	Mittendorf	Date	7-23-51
To:	F.L. KNOUSE	Date	7-24-51
To:	J. L. Hatland	Date	7/30/51
To:	P.E.D	Date	7/31/51
To:	R & R	Date	8/15/51
To:	Ogw Corr	Date	11-24-51
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

INT.-DUP. SEC., WASH., D.C. 98868

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Project Summary Report

By: James Hopkins

FEBRUARY 18, 1955

1. Docket No. DMEA-812X-B - Beryl-Mica
Contract No. Idm-E93
Sitting Bull Mine
Pennington County, South Dakota

Operator: Black Hills Keystone Corporation
530 Fifth Avenue
New York 19, New York

Application: Form MF-103 (April, 1951) received May 16, 1951.
Work proposed:

600 feet diamond drilling
Crosscutting 240 feet
Raising 120 feet
Total cost of $15,500.00

Operator's property rights: Owner of Sitting Bull patented claims, Mineral Survey No. 1820.

2. Contract: Form MF-200 (June, 1951) dated July 31, 1951.

Work authorized:

Stage A	
600 feet diamond core drilling	$3,500.00
Stage B	
240 feet crosscut @ $22.50/ft.	$5,400.00
180 feet raise @ $25.00/ft.	4,500.00
Clearing preliminary excavation etc.	600.00
Total	$14,000.00
Government participation @ 90%	$12,600.00

Amendments: None

Work completed:

286 feet BX DD. holes @ $4.75	$1,358.50
Core boxes	32.50
Engineer	50.00
Total cost of project	$1,441.00
Government participation @ 90%	$1,296.00

Work began September, 1951, and was completed September 25, 1951. Project was terminated and Operator advised by letter from Supervising Engineer, Rapid City Field Office, October 4, 1951.

Field Team final report received December 12, 1952. Operator's narrative report for September, 1951.

Ore reserves shown by drilling:

Area	Pegmatite (tons)	% Beryl	Beryl tons
Wall zone	5,000	1.0	50
Intermediate zone	10,000	0.2 - 0.5	20 - 40

Based upon a value of $350.00 per ton the average grade of beryl content is calculated at $1.75 per ton.

3. Audit: Report of Review dated June 19, 1952.

Total cost as billed by contractor	$1,441.00
Exceptions	none
Total accepted cost	$1,441.00
Government participation @ 90 %	$1,296.00

4. Certification of Discovery - none issued.

5. Comments:

The work was conducted in an efficient and workmanlike manner.

The operation although of short duration was good.

Engineering report was very intelligently prepared.

Geological premise: The premise that a pegmatite would continue in depth and yield substantial quantities of beryl and mica was proved wrong by the drilling operations.

Geological criteria on which project was founded: The sitting Bull dike outcrops as a small lenticular pegmatite 140 feet in length indicating an average surface width of approximately 35 feet.

Criteria developed during the project: Pegmatite flattened in dip to the northeast with depth and is thinning with increasing depth. Beryl having a grade of 1% was found in the footwall zone and intermediate zone.

Gross value per ton of the recoverable economic minerals at present prices is approximately $1.40.

Future possibilities: The geologic evidence disclosed by the drilling indicates that further exploration is not needed and that the chances of a significant discovery by construction of an adit are very remote.

Recommendations: The exploration of this pegmatite can be considered completed and no significant discovery has been made. The Field Team recommends that a certification of discovery or development should not be issued. This recommendation has the concurrence of the Nonmetallic Minerals Division and the commodity divisions of the Bureau of Mines and the Geological Survey.

☒ Audited

☐ Certified

WORK ANALYSIS SHEET -- DMEA PROJECT

Analysis as of 12-3-54
Incl. Voucher for 9-51

☒ Actual Cost

☐ Agreed Unit Costs

Mine: Black Hills Keystone Corporation

Docket No. 812-x D

State: South Dakota

Commodity: Beryl - Mica

Idn-E No. 93

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	240 ft	$5400 00	~~240 ft~~	~~$441 00~~	~~$441~~
Raising	180 ft	$4500			
Shafts					
Winzes					
Drilling (Specify) Bx Diamond	600 ft	3300 00	286	$144 00	$144 00
Surface Excavation					
Underground Excavation		$600	—		—
Roads and Trails		$200 00	—		—
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$10000 00		$144 00	$144 00

Prepared by Keating

COPY

March 4, 1955

Memorandum

To: Jay L. Chambers

From: Lawrence G. Houk (initialed) L. G. H.

Subject: Closing dockets

The Nonmetallic Minerals Division have reviewed the following contracts and do not intend to make certifications of discovery or development:

Idm-E52	DMFA-1212	Idm-E	DMFA-
40	1213	217	1969
13	1679	244	1955
73	519	253	2134
74	1390	257	2077
78	1664	272	2360
93	8128	288	2344
97	1224	324	2255
121	1517	344	2156
124	1318	373	2439
125	1720	411	2528
129	1665	430	2524
134	1732	433	2620
140	1813	444	2646
179	1122	450	2681
180	1250	480	2725
191	1914	497	2778
195	1812	507	2840
198	1929	518	2785
211	1721	524	2909
216	2104	543	2950
		565	3030

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

December 10, 1952

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: Docket DMEA-812x-b, Contract Idm-E93
Black Hills Keystone Corporation
(Sitting Bull pegmatite)

Reference is to your letter of November 24, 1952.

Here are the original and three copies of the Field Team final report on the subject project.

The narrative report with the one and only monthly report constitutes the operator's final report.

A. B. Needham
Executive Officer
Field Team, Region V

Attachments

ABNeedham:dg
cc Dutton
Region V
files
df

cal
12/12

Reviewed by
DMEA OPERATING COMMITTEE
12-17-52
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 18 1952

FINAL REPORT

EXPLORATION OF SITTING BULL PEGMATITE

Beryl-Mica

DMEA Docket 812X

Contract Idm E-93

by

J. A. Redden, Geologist
U. S. Geological Survey

Glen Walker, Mining Engineer
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
12-17-52
(date)

FINAL
F. T. RPT.

FINAL REPORT OF FIELD TEAM ON EXPLORATION AT THE SITTING BULL PEGMATITE DMEA-812X, KEYSTONE, PENNINGTON COUNTY, SOUTH DAKOTA

The drilling phase of the exploration on the Sitting Bull pegmatite, Keystone, South Dakota, was completed on September 25, 1951.

Three BX diamond drill holes were drilled, having an aggregate footage of 286 feet. Hole No. 1 was collared at an elevation of approximately 4862 feet, and had a length of 100 feet, a bearing of S. $64\frac{1}{2}^{\circ}$ W., and an inclination of -5°. Hole No. 2 was collared at an elevation of 4,861 feet and had a length of 71 feet, a bearing of S. $64\frac{1}{2}^{\circ}$ W., and an inclination of -44°. The collar of hole No. 3 had an elevation of approximately 4,833 feet and the hole had a length of 115 feet, a bearing of S. $64\frac{1}{2}^{\circ}$ W., and an inclination of $-44\frac{1}{2}^{\circ}$.

The geologic results of the drilling are shown on the accompanying maps and sections. The core was logged to determine zones and beryl content. The pegmatite flattened in dip to the northeast with depth and is thinning with increasing depth.

The results of the drilling were consistent enough so as to eliminate the necessity for additional holes. The possibility of a substantial discovery by additional holes is very small and the applicant's engineer agreed that additional drilling was unwarranted.

Computations were made of the probable tonnage of the wall zone and intermediate zone which was disclosed by the drilling. An estimate of the grade of the beryl in these two zones was made by taking the area of the beryl exposed on the outcrop of the pegmatite and in the drill core. On the basis of this examination it is estimated that the footwall zone contains one percent of beryl, of which 25 percent is hand cobbable,

and the intermediate zone contains 0.5 percent beryl of which 80 percent is cobbable. The grade of the beryl in the intermediate zone may be as low as 0.2 percent.

The results of the tonnage and beryl reserves are tabulated below:

	Tonnage	Percent Beryl	Beryl Tonnage	Cobbable Beryl
Wall Zone (footwall)	3,200	1.0	32	8
Intermediate Zone	10,000	0.2-0.5	25-50	20-40

It is estimated that 1 percent of scrap mica could be recovered during mining. Very thin plated columbite-tantalite occurs in a unit 0.5 to 1.0 foot thick on the inner side of the wall zone but no recovery can be anticipated due to the extremely small size of the plates. The amount of columbite-tantalite in this unit is less than 0.5 percent.

The gross value per ton of the recoverable economic minerals in the pegmatite, at present prices, is approximately $1.40. The value of the ore is too low for expectation of a profitable mining operation.

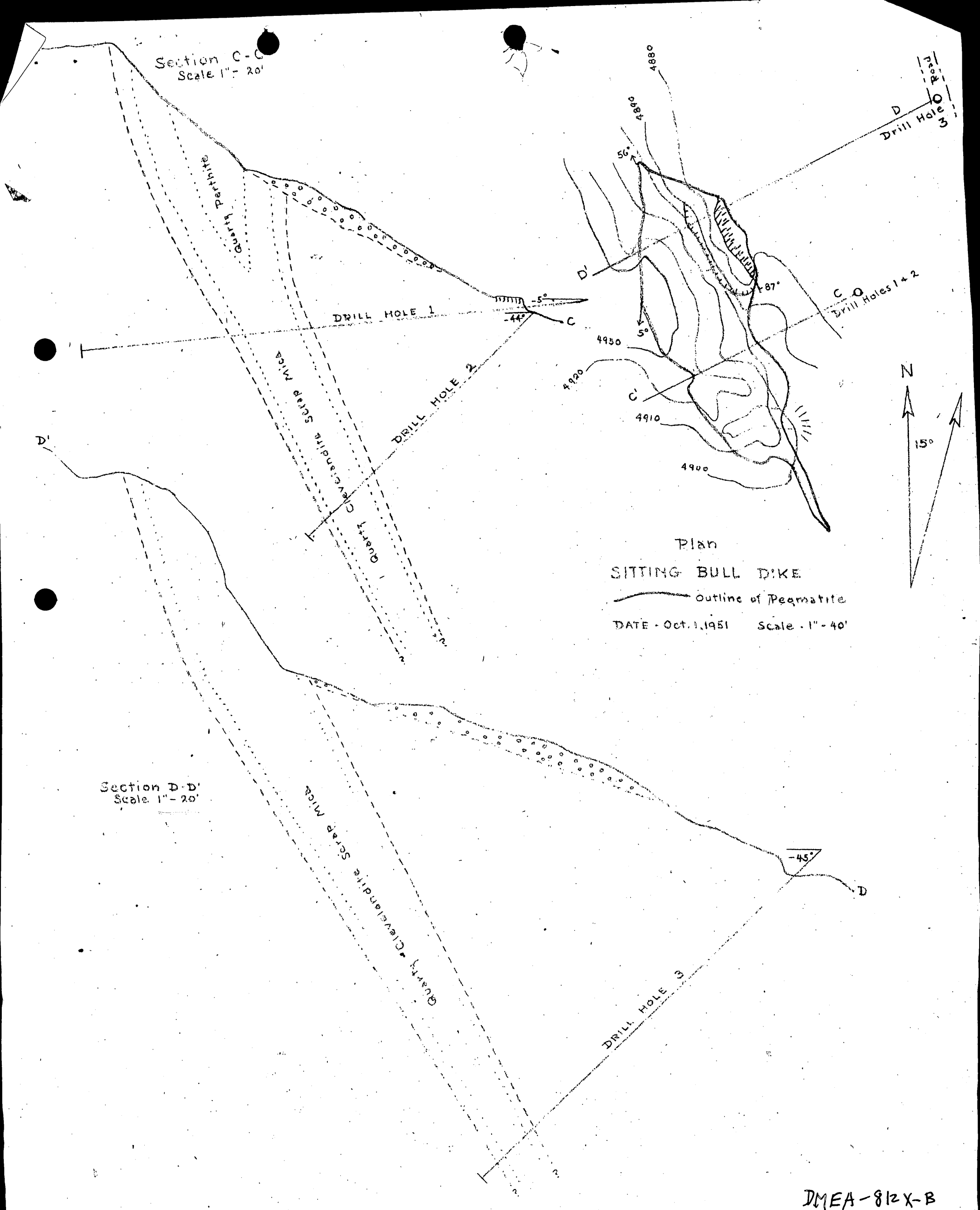
There is a very small possibility that the footwall zone of the pegmatite could be mined selectively if the beryl prices were considerably higher and a custom beryl flotation mill was available to handle the ore. This possibility can not be considered at present in determining whether or not a discovery has been made.

The geologic evidence disclosed by the drilling indicates that further exploration by an adit as proposed in the contract is not needed, and that chances of a significant discovery by construction of this adit are very remote.

The exploration of this pegmatite can be considered completed and no significant discovery has been made. The applicant's engineer is in

agreement with the conclusions reached by the Geological Survey.

RECEIVED
DEC 10 1952
DEPT. OF INTERIOR
BUREAU OF MINES
MINNEAPOLIS, MINN.
REGION V


Section C-C'
Scale 1" = 20'
Quartz Pegmatite
DRILL HOLE 1
DRILL HOLE 2
Quartz Clevelandite Scrap Mica
-5°
-44°
C
D'
Section D-D'
Scale 1" = 20'
Quartz Clevelandite Scrap Mica
DRILL HOLE 3
-45°
D
4880
4890
56°
D'
87°
5°
4950
4920
C'
4910
4900
D
Drill Hole 3
C
Drill Holes 1 & 2
N
15°
Plan
SITTING BULL DIKE
Outline of Pegmatite
DATE - Oct. 1, 1951
Scale - 1" = 40'

DMEA-812X-B

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Houck

NOV 24 1952

Mr. A. E. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Ave., South
Minneapolis 6, Minnesota

Subject: Docket No. DMA-812L-B - Beryl-Mica
Black Hills Keystone Corp.
Sitting Bull Mine
Pennington County, South Dakota
Contract No. Idm-893

Dear Mr. Needham:

Reference is made to Docket No. DMA-812L-B, Black Hills Keystone Corp., Sitting Bull Mine, Contract No. Idm-893.

In checking our files we find that we do not have a final field team report on Docket No. DMA-812L-B, Black Hills Keystone Corp., Contract No. Idm-893, terminated last year, nor do we find any correspondence in our docket that the applicant was formally notified of termination. We would appreciate receiving this information in order that we may advise Defense Materials Procurement Agency of the results of the exploration project.

Sincerely yours,

(signed) FRANK E. JOHNSON
(JHS)
Chairman, Operating Committee

F.N. 11-24-52

Approved:

J. H. Hedges (JHB)
Member, Bureau of Mines

A. R. Kinkel Jr. (HB)
Member, Geological Survey

LGHouk:gad 11/21/52

Copy to: Admr. R. File
Docket File
Operating Committee (2)
Mr. Dietrich, 3526
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

Taken from Memo. 4/3/52 from Executive Officer, Region V to Operating Committee; Status of projects in re. to discoveries.

The following projects have terminated without a certification of discovery or development to be made: Docket DMA-654x, Contract Idm-E58, Keenan Properties, Inc.; and Docket DMA-812x-b, Contract Idm-E93, Black Hills Keystone Corp., Sitting Bull.

The foregoing is the status of all projects to April 1, 1952.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 25 1952

January 23, 1952

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Operator's Monthly Progress Report for Docket DMA-812x-b, Contract Idm-E93 Black Hills Keystone Corporation (Sitting Bull Deposit)

Here are two copies of the subject report.

This project was completed with the drilling of the three holes, and the operator's negative report accompanied his first and only report.

Final voucher has been paid and, as indicated in my memo to you dated November 21, 1951, there is a balance of $11,303.10 of Government obligated funds that can be applied to the general exploration program fund.

A. B. Needham
Executive Officer
DMEA Field Team, Region V

Attachments 2

OFFICE OF THE ADMINISTRATOR

410

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

BH

November 29, 1951

Memorandum

To: Reports and Records Section

From: Acting Administrator

Subject: Docket No. DMA 812X-B
Black Hills Keystone Corporation
Exploration Project Contract Idm-E93

Enclosed is an original of a memorandum dated November 21, 1951 from Mr. A. B. Needham, Executive Officer, Region V, in reference to the subject Docket, in which it is disclosed that work on the subject contract has been terminated. Please take the necessary action in connection with this contract.

Enclosures

OFFICE OF THE ADMINISTRATOR

Mr. Krumsee

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 26 1951
Defense Minerals Administration,
Production Expansion Division.

November 21, 1951

Memorandum

To: C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Expenditures - Docket DMA-812x-b, Contract Idm-E93, Black Hills Keystone Corporation

Work on the subject contract has been terminated. The Government share on a 90 percent basis was to be $12,600. A total of $1,296.90 (Government share) was spent in drilling three holes resulting that the Government determined to terminate the project and not recommend Phase 2. Therefore, there is a balance of $11,303.10 which can be made available to the general program.

A. B. Needham
Executive Officer
DMEA Field Team, Region V

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
NOV 26 9 06 AM '51

BERYL MICA

DMA - 812B

Contract Terminated ~~11-21-51~~ 10-4-51

Contract.....$14,000

Government's share..... 12,600

Total spent.....$1,441.00

Government's share 1,296.90

Applicant's share.....$ 144.10

Government's balance.....$11,303.10

Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

October 4, 1951

Mr. Fremont Clarke, Manager
Black Hills Keystone Corporation
Box 62
Rapid City, South Dakota

Dear Mr. Clarke:

The results of the first three diamond drill holes on the Sitting Bull dike, drilled under DMA Project No. SLEX, Contract Nbr B-65, have shown that the dike is rapidly narrowing with depth. The beryl content of the dike appears to be confined to the very narrow wall zone.

Further drilling will not, in the opinion of the government, provide any additional information. Because the project has not resulted in a significant discovery and it is improbable that a substantial beryl deposit exists, sub-project 1 is hereby terminated with the completion of three drill holes under Article 17, section C of the contract.

Because of the conditions previously stated, the government does not approve the work provided under sub-project 2 of the contract, and that portion of the contract is also terminated.

Very truly yours,

D. H. MULLEN

D. H. Mullen
Supervising Engineer

cc: Needham (5)
Dutton
Redden
files

C O P Y C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

October 4, 1951

Memorandum

To: A. B. Needham, Executive Officer, DMA Field Team, Region V

From: Supervising Engineer, Rapid City Field Office

Subject: Termination of DMA Project 812X, Contract Idm E-93
Sitting Bull dike; Black Hills Keystone Corporation

Enclosed are monthly reports on the subject project, together with our report, the report of the Geological Survey, and notice of termination.

The accounts are all in order and have been approved. The operator agrees with our action, as shown in his narrative report.

As far as we are concerned, this completes the subject contract except for repayment from any future production. No operation on the dike is planned at present, and I doubt if any will start in the foreseeable future.

Check for reimbursement of the Government's share of the costs should be made in favor of Black Hills Keystone Corporation and sent to Fremont Clarke, Manager, Box 62, Rapid City, South Dakota.

/s/ D. H. Mullen
D. H. Mullen

cc: Reg. Director, Reg. V
files

C O P Y

FILLMORE DRILLING COMPANY
Contractors
Deadwood, South Dakota
Sep. 27, 1951

C O PY

In account with
Black Hills Keystone Corp.
503 5th Ave.
New York, 19, N. Y.

Invoice No. 1-51
Date: September 27, 1951

****

Core Hole No. 1, 2 and 3.
Sitting Bull Pegmatite
Keystone, S. Dak.

Item	FOOTAGE		UNIT PRICE	TOTALS
Hole No. 1	100 ft.		$4.50 per ft.	$ 450.00
Hole No. 1	100 ft.	Furnishing water	.25 ft.	25.00
Hole No. 2	71 ft.		4.50	319.50
Hole No. 2	71 ft.	Furnishing water	.25 ft.	17.75
Hole No. 3	115 ft.		4.50	517.50
Hole No. 3	115 ft.	Furnishing water	.25 ft.	28.75
Additional Supplies				
13 Core Boxes @ $2.50 each				32.50
			Total	$1391.00

I certify that the above bill is correct and just : that payment therefor has not been received : that all statutory requirements as to American production and labor standards, and all conditions of purchase applicable to the transactions have been complied with : and that State and - or local taxes are not included in the amount billed.

Fillmore Drilling Company

/s/ M. F. Fillmore
M. F. Fillmore, Owner

Approved:

/s/ Fremont F. Clarke
Fremont Clark
Resident Engineer

100
71
115

C O P Y

FILE COPY 410
SURNAME:

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

F. Knouse
Mittendorf

AUG 16 1951

Mr. A. B. Needham
Executive Officer
Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Re: Docket No. DMA - 812X-B
Black Hills Keystone Corporation
Exploration Project Contract

Dear Mr. Needham:

We are enclosing your copy of the executed contract No. Idm-E93, with Exhibit "A" and two maps. A copy of this contract was retained by the Operator and a copy will be forwarded to the Regional Finance Officer by the Washington Finance Officer.

Sincerely yours,

C. O. Mittendorf

C. O. Mittendorf, Director
Production Expansion Division

J.F. 8/16

Enclosure

FLKnouse/meb
Admr's Reading File
Reports & Records
Mittendorf - Olund
Barr
Norton
Knouse
Docket

FILE COPY 410
SURNAME:

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

F.L. Knouse
Mittendorf

AUG 16 1951

G.E.P.

Contract Service Section
General Accounting Office
4th Floor - New GAO Building
Washington 25, D.C.

Re: Docket No. DMA - 812X-B - Idm-E93
Black Hills Keystone Corporation
Exploration Project Contract

Gentlemen:

Enclosed for recording in your office is the original of executed Exploration Project Contract between the Operator named in the reference above and the Government of the United States.

Sincerely yours,

C. O. Mittendorf

cc 8/16

C. O. Mittendorf, Director
Production Expansion Division

Enclosure

FLKnouse/meb
cc to: Admr's Reading File
Reports & Records
Messrs.Mittendorf/Olund
Holderer
Field Team,Reg V (2)
Miss Terry
FLKnouse
Docket

BLACK HILLS KEYSTONE CORP.

KEYSTONE, SOUTH DAKOTA

WILLIAM KAY WALLACE
PRESIDENT

PLEASE REPLY TO:
530 FIFTH AVENUE
NEW YORK 17, N. Y.

Mr. C.O.Mittemdorf, Director
Production Expansion Division
Defense Minerals Administration
Washington 25, D.C.

August 8,1951

Re: Docket No. DMA-812XB - IdaE93
Exploration Contract

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1951

Dear Mr. Mittendorf:

Referring to yours of July 31,1951 enclosed herewith please find the original and four copies of the above-captioned contract duly executed as you request.

We take note of the supplementary instructions given and will see to it that they are duly carried out.

The actual work will be under the direct supervision of our local manager Mr. Fremont F.Clarke, P.O.Box 62, Rapid City, South Dakota and should you have occasion to make any inquiry or give any additional directions regarding the technical aspects of the contract in order to save time would suggest that he be contacted directly. He will also be authorised to sign requisitions for payments under the contract as provided for on behalf of the company. However any other matters should be taken up with our New York office.

Assuring we will do our best to carry the work forward to a successful conclusion in as brief a time as possible,

Sincerely yours

W. K. Wallace

President

Enclosures:

FILE COPY
SURNAME:

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

July 31, 1951

Black Hills Keystone Corporation
530 Fifth Avenue
New York 19, New York

Re: Docket No. DMA-812XB - IdmE93
Black Hills Keystone Corporation
Exploration Contract

Gentlemen:

We are enclosing the original and five copies of Exploration Contract No. DMA-812XB - IdmE93, Black Hills Keystone Corporation, signed by me, together with five copies of Form MF-104 Monthly Progress Reports, and one copy of Int. 3337 "Questions and Answers on the Mineral Exploration Program."

If the terms of this contract meet with your approval, please sign all six copies, retain one copy, and return the original and four copies to this office. If any part of this contract does not meet with your approval, all of the copies of the contract must be returned to this office together with your proposed change, so it can be considered.

If the contract is signed by you, it will be in effect and four copies of Form MF-104 are to be completed and transmitted monthly to the office of the Executive Director, Region V, 2908 Colfax Avenue, Minneapolis 8, Minnesota. Additional copies of Form MF-104 may be obtained from the office of Region V.

In accordance with Article 4 of your contract, the contract to do the diamond drilling as outlined in this contract is subject to the approval of the Government field engineers.

Sincerely yours,

C. O. Mittendorf

C. O. Mittendorf, Director
Production Expansion Division

Enclosures
FLKnouse/meb
cc to: Admr's.Reading File
Messrs.Mittendorf- Olund
Reports & Records
Docket
Barr
Norton
Reg. V (2)
Knouse

FILE COPY
SURNAME:

Guthrie

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

July 30, 1951

Memorandum delivered by hand

To: Mr. C. O. Mittendorf,
Chief, Production Expansion Division

A. E. C.

From: General Counsel

Subject: Black Hills Keystone Corporation, exploration project contract--Docket No. DMA-812XB

The contract in the captioned case is approved as to legal form and sufficiency, subject to the following changes and additions:

1. Insertion in paragraph 2(a) of the word "None", if there are no encumbrances on the land.

2. Clarification of the section of Exhibit A headed "Operating Equipment." The items there listed are listed under the heading "To be rented" but the statement following the list indicates that they are to be supplied by the Operator. Under "To be rented" should be listed only those items of operating equipment which are to be rented from some outside source and the estimated rental for each item should be shown. If the equipment is to be supplied by the Operator, it should be listed under that head and the charge in lieu of rental based upon the estimated life of the equipment should be shown for each item. Compressed air is not a piece of operating equipment. If the compressor with accessories is to be rented or supplied, it should be so listed under the appropriate heading. The drill bits, etc., mentioned in the second sentence of this section are miscellaneous supplies and expenses and have no place in this section.

3. Government approval of any subcontract under which work upon the project is to be performed.

The contract should be dated as of time of delivery.

Your file is returned herewith.

RRGuthrie/em
Copy to: J. L. Hofflund } delivered by hand
R. R. Guthrie
✓Files

not physical here

J. L. Hofflund
J. L. Hofflund
General Counsel

Attachment

FILE COPY
SURNAME:

Barr

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

[illegible]

[illegible]

[illegible]

[illegible]

SIGNED [illegible] 8/16

this was not stuffed here

[illegible]

cc: [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

June 20, 1951

Black Hills Keystone Corp.
530 Fifth Avenue
New York, New York

Subject: DMA-8121

Gentlemen: Beryl

Your application is being referred to Mr. A.S. Needham, 8908 Colfax Ave. So., Minneapolis 8, Minnesota, Executive Officer of the Field Team, Region V, for further information.

Sincerely yours,

Tom Lyon, Director
Supply Division

HW:mas

ec: Administrator's Reading File
Mr. Strobel
Field Team
Mr. Barr
DMA Files

5538

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

Mailed JUN 26 1951

Mr. A.B. Needham
2908 Colfax Ave. So.
Minneapolis 8, Minn.

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Applicant ~~Black Hills Keystone Corp., 530 Fifth~~ Ave., N.Y., N.Y.

Docket No. ~~DMA-812X~~

Commodity ~~Beryl~~

Amount $ ~~15,500~~

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review".

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

RW:mas

cc: Mr. Moon
Mr. Barr

Memorandum:

To: Director, Production Expansion Division
Defense Minerals Administration

From: Director, Supply Division
Defense Minerals Administration

Subject: Recommendation for Contract Approval

Name of Applicant: Black Hills Keystone Corporation
530 Fifth Avenue
New York 19, N. Y.

DMA No.: 812-~~X~~B (Sitting Bull Mine)

Commodity: mica, beryl

Amount Requested: $ 15,500

Amount Approved: $ 14,000 –

Government Participation: 90 % $ 12,600

Ian Lyon
Ian Lyon

Code 370

Recommendation

1) That an Exploration Aid Contract be granted in the amount of $14,000, Government Participation 90 % in accordance with attached Exhibits.

2) That expenditure of above amount be authorized in two stages; stage "A" authorizing a total of $ 3,500, stage "B", $ 10,500.

3) That stage "B" will be authorized subject to satisfactory completion of stage "A" and recommendation by Field Team that stage "B" is justified by results obtained in stage "A".

Docket DMA-812-X
(Sitting Bull Mine)

Code 370

July 18, 1951

EXHIBIT "A"

Stage "A" Work will consist of coreing three diamond drill holes about 200' in length each. Location and direction of holes will be mutually agreeable to Field Team and Operator. Drilling will be done by contract; Operator will supply general supervision and handle cores. A minor amount of road improvement will be necessary to enable drill to be moved into position. Allowable cost $ 3,500; time limit 3 months.

Stage "B" Subject to satisfactory completion of Stage "A" and recommendation by Field Team that such additional work is justified, a crosscut terminal will be driven to intersect the pegmatite about 175' beneath its outcropping and a raise will be put from the crosscut to surface. Allowable cost $ 10,500, time limit 12 months.

Recapitulation of Costs

Stage "A"	600' diamond drilling	$ 3,500
Stage "B"	240' crosscut @ $22.50/ft.	5,400
	180' raise @ $25/ft.	4,500
	Clearing, preliminary excavation etc.	600
		$ 10,500
	TOTAL	$ 14,000

EXHIBIT "B"

Stage "A" Not applicable.

Stage "B" " "

Docket DMA 812-X
(Sitting Bull Mine)

July 18, 1951
Code 370

EXHIBIT "C"

Stage "A" Diamond drilling by contract 600' @ $5/ft.	$ 3,000
Road repair--bulldozing by contract or hourly rate	100
Core boxes, handling, shipment, testing, etc.	300
Total	3,400

Stage "B" Rental from Operator of all necessary mining equipment, compressor, drills, steel, mine cars, etc. @ $350/mo.	2,800
Powder, fuse, carbide, bit replacement, etc.	620
Total	$ 3,420

EXHIBIT "D"

Stage "A"

Superintendent part time 2 months @ $50	$ 100

Stage "B"

Superintendent part time 8 months @ $50	$ 400
1 miner @ $1.25/hr. 8 months	2,250
1 mucker @ $1.10/hr. 8 months	1,980
1 laborer @ $1.10/hr. 8 months	1,980
	$ 6,610
Payroll taxes	470
	$ 7,080

EXHIBIT "E"

Not Applicable.

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA-812 X

Commodity Beryl

Total Amount $15,500.00

Govt. Participation 90%

1. Name and Address of Applicant Black Hills Keystone Corp.
530 Fifth Avenue, N.Y., N.Y.

2. Location of Property Keystone, South Dakota; Pennington Co.

3. Mineral or metal Beryl Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project?
(If so, attach an explanation)

see attached sheet; JMR 3/13/51

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? No - owner

Does the lease have sufficient time to run to cover a future productive period?

*question numbers are those of MF-103

Application DMA-812X. Black Hills-Keystone Corporation,
Keystone Route
Rapid City, South Dakota.

The applicant states that the Sitting Bull pegmatite should contain 100,000 tons of beryl ore to a depth of 200 feet. The grade of this ore is stated at 2-3% beryl, if conditions remain uniform with depth. In the accompanying letter the president of the company makes a "little" slip and converts this ore to 100,000 tons of beryl.

The lesser figure of 100,000 tons of ore at 2-3% beryl would be a very large amount of beryl--if it were true.

The Geological Survey mapped this property during the recent war. They agree with the applicant in that the wall and intermediate zone of the pegmatite contain the beryl. The file report states that the rich concentrations of beryl, containing 5-6% are irregularly distributed, and that the large central part of the pegmatite contains very little beryl. The tables of beryl reserves from the South Dakota pegmatites give the average beryl grade of the wall and intermediate zone as 0.5 percent. The inferred resources to a depth of 100 feet are calculated at 40 tons, of which 15 tons are hand cobbable.

I do not know who computed the above reserves but there is a very large discrepancy compared with the applicant's reserves. The applicant has apparently included the entire bulk of the pegmatite in his estimates. The figure he uses for the grade of the beryl in the pegmatite is apparently based on the samples which he sent for experimental work on beryl beneficiation. It is fairly clear from the USGS report that these are not representative of the entire beryl zone and are from the beryl-rich pockets. There are no examples to my knowledge where entire zones in a pegmatite will carry as much as 5 percent beryl. Zones with as much as 1 percent beryl are rare. Rich pockets may contain that much beryl.

The proposed exploration work on the Sitting Bull pegmatite consists of diamond drilling, followed by the driving of a tunnel some 200 feet below the present top of the pegmatite. It appears to me that the driving of this tunnel will be entirely development work and should not be included under the exploration grant. Since the beryl is fine-grained, the diamond drilling should verify the existence or non-existence of the beryl-bearing zone at depth.

A field examination would determine the exact amount of exploration drilling needed and would verify the grade of the beryl in the pegmatite. This would enable more accurate computation of the reserves, although I believe our reserve figures are much more accurate than those of the applicant's.

It must be remembered that in recommending the sending of this application to the field team I am making the assumption that beryl in a deposit like this will be recovered largely by a to-be-developed milling process. Acting on the basis of the inferred cobbable beryl resources in this pegmatite I would recommend that the applicant be denied on the basis that there were insufficient inferred recoverable beryl. The fact that there is no existing mill for this ore should be strongly considered in the final decision. This exploration will not materially increase our present recoverable beryl.

If our figures on the grade of the beryl in the beryl-bearing zone are correct the ore is worth about $2 per ton. The value for the entire bulk of the pegmatite is less than $1 per ton compared to the applicant's value of around $10 per ton.

To field?

J. A. Redden

7. Are subordination agreements necessary? No

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes -

Is a field check needed on any of these points? _____

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? No

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Partly - see Question 4

If not, what part of it is? Diamond drilling - exploration - Driving of adit - should be held in abeyance & [illegible] as development + preparation for production

Is this part a worthwhile exploration project? Yes

d) Are the cost estimates detailed? No

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? No If so, attach a draft.

e) Are the cost estimates reasonable? None given

f) Should more information be requested from applicant? By field team

g) Is a field examination necessary to complete Exhibit A? Probably - Yes

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? No If so, attach a draft.

c) Is a field check needed? If visited by field team - yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? none given

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes - drilling to be contracted

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? None given

e) Is a field check needed? No

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

b) Sufficient data? No

c) Reasonable? Not mentioned

d) Field check needed? Yes

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Check BofM records in Pequot Cty - + USGS records in Custer - Should be viewed from angle of dealing only. - underground work not included. -

Reviewed by: [illegible]
BofM

Date 6/15/51

97692

6/15/51.

Docket No. - DMA 812 X

Section 10 - Exhibit "A"

The diamond drilling would be good exploration but the underground work should be postponed or loan applied for as production preparation. The mill on the adjoining Ingersoll property could be used after production starts.

The drilling would take only short time although no footage is proposed.

The field team should discuss the footage of drill hole & location of the holes with applicant.

Section 11 - Exhibit B.

New buildings & facilities would probably not be needed. although the bringing in of electric power should be considered. Gasoline or diesel power would ~~probably~~ be satisfactory for the drilling program

Section 12. Exhibit C

If the drill work is done by a contractor no other equipment would be needed & rental of any that became necessary could be cheaply arranged.

Section 13 Exhibit D

Drilling to be contracted so this becomes unimportant.

6/13/51

DMA 812X

Section 14 Exhibit "E"

Probably no rehabilitation or repairs would be necessary.

Section 16 - Recommendations.-

The diamond drilling on this property is definitely an exploration project but the driving of an adit is in reality a development & preparation for production project As such the driving of the adit should be covered by an application for a loan. The applicant should be advised of this.

No mention is made of the footage to be drilled nor of the location of the holes. If this work is to be contracted an approximate cost should be given.

The field team should check the Bureau of Mines records in Rapid City & the Geological Survey records in Custer & discuss the project with the applicant. Mr. A. I Johnson of Keystone has been the Black Hills Keystone Corp. representative in the Black Hills & would probably be a good contact there The Bureau of Mines offices in Minneapolis & Rapid City, S. D have considerable data on the Sitting Bull.

The drilling part of this project is probably a good project & should be given consideration.

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

DMA-812X

SITTING BULL PEGMATITE, KEYSTONE DISTRICT

Pennington County, South Dakota

L. E. Shaffer, Minerals Technologist
U. S. Bureau of Mines

July 5, 1951

On-Site Rpt.

DEFENSE MINERALS ADMINISTRATION
Report of Field Examination

by

L. E. Shaffer, Minerals Technologist
U. S. Bureau of Mines

Docket No.: DMA-812X
Property: Sitting Bull
Applicant: Black Hills Keystone Corporation
Commodity: Beryl

Conclusions and Recommendations

The proposal submitted is, in part, for development rather than for exploration. The Bureau of Mines suggests instead that a two-phase exploration project be set up on the following basis:

1. Diamond drilling to prove the continuity and mineral content of the dike at a depth of 200 feet below the outcrop.

2. If justified by the results of the diamond drilling in (1) above, a crosscut would be driven to the dike, and a raise driven from the crosscut to the outcrop of the dike.

Drill holes would be located with the advice and approval of engineers of the Bureau of Mines, but the project would be supervised by Fremont F. Clarke, who represents the applicant, and who is a competent engineer and mine operator.

The cost of the first part of the project is estimated to be about $3,500. The second phase, if undertaken, would cost about $10,500.

Exhibit A

The Sitting Bull pegmatite has been mapped in detail by the Geological Survey. Most of the following geological description has been abstracted from unpublished reports by John Hanley and Walter Stoll of that organization.

The deposit is a lenticular pegmatite about 180 feet long and 48 feet thick. It strikes N. 26° W. and dips 70° NE. Four zones make up the pegmatite. These consist of a border zone of quartz and muscovite; a wall zone of albite, quartz, and muscovite; an intermediate zone of quartz and cleavelandite; and a core of quartz and perthite.

Beryl is found in both the wall zone and the intermediate zone. Most of the beryl is in the wall zone, where beryl crystals from as large as 3 inches in diameter constitute from 0.5 to 1 percent of the material. Beryl crystals in the intermediate zone are as large as 10 inches in diameter, but the average beryl content is low.

Two open cuts have been made in the deposit. A large cut, made by slabbing off the face of the pegmatite, is 107 feet long, 1 to 15 feet wide, and 25 feet deep. The second cut is 20 feet long, 24 feet wide, and 25 feet deep.

Recorded production is 15 tons of beryl, 75 tons of scrap mica, and 25 tons of feldspar.

The Bureau of Mines suggests that the Sitting Bull pegmatite be explored by drilling three Bx (or larger) diamond drill holes to cut the pegmatite 200 feet down dip from the outcrop. These holes, drilled from the hillside below the outcrop, would be about 200 feet long and should be inclined downward at 20° to 25° to intersect the pegmatite normal to the dip.

Drilling would be supervised by Fremont F. Clarke, who represents the applicant. Bureau of Mines engineers will act as consultants, and will determine if the results of the drilling warrant additional exploration.

If the drilling indicates the continuity and beryl content of the dike to a depth of 200 feet below the outcrop, the Bureau of Mines suggests that additional exploration be done. This second phase of the project would involve driving a crosscut into the hillside below the outcrop to intersect the dike about 175 feet below the outcrop. From this crosscut a raise would be driven in the dike to the surface.

It is emphasized that the second phase of the project will not be undertaken without the advice and approval of engineers of the Bureau of Mines, after consideration of the results of phase one.

The first part of the exploration project suggested above would cost about $3,500 and require about 2 months to complete. Drilling could start as soon as the equipment arrived at the property.

A monthly progress and cost analysis follows:

Progress	Cost
First month:	
Clear road, set-up and drill 1st hole, part of 2nd hole	$ 2,000.00
Second month:	
Finish drilling 2nd hole, drill 3d hole	1,500.00
Total cost	$ 3,500.00

The second part of the project, if undertaken, would involve driving about 240 feet of crosscut to the pegmatite, and 175 or 180 feet of raise to the outcrop. This work would cost about $10,500, as tabulated below:

240 ft. of crosscut @ $22.50	$5,400.00
180 ft. of raise @ $25.00	4,500.00
Clearing, preliminary excavation, and miscellaneous	600.00
Total	$10,500.00

This second phase of the project would require at least 8 months to complete.

Exhibit B

A small frame building at the property is currently used as a compressor house. No additional structures will be needed for the first part of the project as outlined above. If the second part of the project is undertaken, the existing building should be adequate.

Exhibit C

Drilling suggested for the first part of the project would be contracted; no equipment would have to be purchased or rented. The applicant's answers to Question 23 are construed to mean that he is prepared to supply the equipment needed to drive the crosscut and raise.

Exhibit D

In the first phase of the exploration suggested above the labor would be supplied by the drill contractor. Direct supervision would be furnished by the applicant.

If the second phase of the exploration is undertaken, the following labor would be needed:

	Rate per hour
1 miner	$ 1.25
1 mucker	$ 1.10
1 surface man	$ 1.10
1 supervisor (part time)	$ 50.00 a month

Exhibit E

No repairs are necessary for existing buildings. The present road would require clearing; the cost of this should not exceed $100.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
2908 Colfax Avenue South
Minneapolis 8, Minnesota

July 9, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee - Defense Minerals Administration - Interior Building - Washington 25, D. C.

From: Executive Officer - DMA Field Team - Region V

Subject: DMA Dockets 1554-X and 812-X

Enclosed is Docket No. 812-X - Black Hills Keystone Corp. - for exploring the Sitting Bull Pegmatite in the Black Hills of South Dakota, together with four copies of the Field Team report recommending a project.

Also enclosed are four copies of the Field Team report on DMA Docket No. 1554-X - Stewart and Roseberry - for sheet mica and beryl exploration of the Gap. No. 1 property in South Dakota. The project has been determined as worthy.

Enclosures:

A. B. Needham

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 12 1951
LANDON F. STROBEL
Executive Secretary

June 11, 1951

Black Hills Keystone Corporation
530 Fifth Avenue
New York 19, New York

Subject: DPA-512X
Re: Exploration Loan -
The Ingersoll Mine and
The Sitting Bull Mine

Gentlemen:

Receipt is acknowledged of your application and attachments of May 23, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DPA-512X and referred to Mr. James A. Barr, Chief, Industrial Minerals Branch on May 23, 1951.

In any future correspondence relating to your application, kindly refer to DPA-512X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:hb

Copy to: Mr. Strobel ✓
Mr. Barr
Mr. Lyon
Files

June 6, 1951

Mr. William Kay Wallace, President
Black Hills Keystone Corp.
Holy Smoke Lodge
Keystone, South Dakota

Dear Mr. Wallace:

Subject: Docket DMA-812X

We have your letter of May 28, in regard to your milling facilities for beryl and lithium.

Your proposition will be given the fullest consideration.

Sincerely yours,

James Barr mp

James A. Barr, Sr., Chief
Industrial Minerals Branch

JABARR:mp

cc: Mr. Strobel
Mr. Barr
DMA Files