DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4736

Application (Denied
(~~Withdrawn~~
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
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
(3) Envelope for maps

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
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order) Interim Summary Reports by W. O. Engineers

Right Side

Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9775

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DATE	INITIALS	CODE

APPLICATION FOR EXPLORATORY LOAN on BIG MICA MINE CHESHIRE CO., NEW HAMPSHIRE

APPLIED FOR BY

HOMER HISE - SPRUCE PINE, N. C.

J. C. BUCHANAN - SPRUCE PINE, N. C.

GUY SPARKS - SPRUCE PINE, N. C.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED APR 26 1957 D.M.E.A.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4736
Metal or Mineral Mica
Date Received 4-26-57
Estimated Cost $ 40,704.20
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

Homer Hise - Spruce Pine, North Carolina
J. C. Buchanan - Spruce Pine, North Carolina
Guy Sparks - Spruce Pine, North Carolina

a PARTNERSHIP
Homer Hise

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract No portion of lease is excluded

(*b*) State any mine name by which the property is known. Big Mine

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

RECEIVED APR 24 1957 Geologic Division Knoxville, Tenn.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Mica

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 30 days and be completed within 8 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated April 15, 1957

(Applicant)

By Homer Hise

J. R. Buchanan

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—66551-1

DESCRIPTION OF BIG MINE PROPERTY

3 (a) Beginning at an iron stake on the westerly side of the Gilsum - East Alstead highway; thence W 4° N 75 rods to the S. E. corner of the lot leased to John Maderick. Thence N 8°E 160 rods to an iron stake at the end of a stone wall. Thence E 4°N 1150 feet along an old wire fence across the highway to an iron stake in a stone wall. Thence S 27°W along stone wall to the highway. Thence southerly along the west side of highway to the place of beginning.

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4 (a) The Big Mine was opened as a mica mine about 1810 and has been operated intermittently since that time by various operators.

In recent years, the Golding Keene Co. operated it for feldspar. This work resulted in pit 300 ft. long and 150 ft. wide, with a maximum depth of 285 ft. Caving of the east wall widened the cut to 240 ft. and partly filled it. Its present depth is 140 ft. During feldspar mining, two large stopes were driven north-east from the cut. Much of the floor of the upper stope has been removed. The lower stope extends as much as 340 ft. northeast of the cut. It consists of two main chambers separated by pillars. The floor of the eastern chamber is in places, 250 ft. below the rim of the open pit. The chamber was at least 110 ft. high, but has been partly backfilled. A drift , now largely inaccessible, was driven for feldspar from the pit at least 150 ft. southward into the Gilsum mine.

Mica workings at the Victory Mine (pit & northward) prior to 1942 consisted of several tunnels and narrow stopes along the Northwest wall, or footwall of the pegmatite. From 1942 to 1945, other stopes that are now largely backfilled were opened on the west wall. The largest was about 200 ft. long, 60 ft. deep, and 8 ft. in average width and extending northeastward below the old mica stope. Another stope was dug along the footwall, southwest of the crosscut. This stope underlies old backfilled workings. The workings along the lower footwall are entered from the western chamber in the lower feldspar stope by a 20 foot crosscut. A stope 8 ft. wide was driven 70 ft. eastward along the wall, increasing in height from 8 to 30 ft. Drifts have been driven parallel to and near the east wall of the pegmatite.

A total tonnage of rock mined during mica operations from 1942 to 1945 at the Victory Mine is estimated to be 7,500 tons, of which about

(a) 4,300 tons was mined along the northwest wall. Waste was dumped into the mica workings or the lower feldspar stope.

Mica workings at the Gilsum mine (the southwest end of the pegmatite southwest of the open pit) prior to 1942 consisted of a narrow backfilled stope, now inaccessible, along the hanging wall of the pegmatite. This was reported to be 120 ft. deep and 200 ft. long. Shallow opencuts were opened along the footwall and three small cuts were opened 300 ft. south of the present open pit. The main cut was opened in 1942, and an inclined stope was driven 220 ft. southward from it along the footwall of the pegmatite. The stope is 90 ft. deep, measured down dip to the main floor, and 10 to 15 ft. wide. In the center of the main floor, a winze extends 30 ft. farther down dip. Short drifts extend along the footwall from the bottom of the winze, and a cross cut has been driven to the hanging wall. The floor of the cross cut is about 115 ft. vertically below surface. It is estimated that 15000 tons of rock was mined from October, 1942 to January, 1945.

The applicants did not have any interest in any of the above operations.

The mine workings contain some backfill as described above, and are full of water.

4 (b) The Big Mine has produced more feldspar than any other mine in New Hampshire, and from 1942 to 1945 it produced more mica. Reserves of feldspar remaining in the mine are limited and are mostly in pillars or in the floors of stopes in the Victory Mine. Most of the floors, however, are covered by considerable backfill from mica operations. Reserves of mica left at the mine are estimated to be large. At the Victory Mine, indicated and inferred reserves of crude mica developed by core drilling are respectively about 2,000 tons and 2,600 tons. These reserves are located northeast of the present workings. At the Gilsum Mine, the quality and abundance of mica have decreased down dip and southwestward along strike. Reserves cannot be estimated.

Mica from the intermediate zone near the footwall is ruby to rum in color, hard, flat and free splitting. Ruling is the most common defect, but a satisfactory percentage of sheet can be obtained. In the Gilsum Mine, the mica is commonly cracked and of smaller size. Approximately 6.6 percent mine rum mica was recovered per ton of rock mined during operations in this zone at the Victory Mine, and about 3.1 percent from the Gilsum Mine during 1943 and 1944.

Mica from the core margin zone at the Victory Mine is rum colored. It is commonly cracked and slightly stained. It is softer and has a much lower value than that from the zone near the footwall. Mica recovered from the core-margin zone was about 9.1 percent of the rock mined. The average recovery for both mica-bearing zones throughout the entire Big Mine for 1943 and 1944 was 4.75 percent.

4 (c) The wall rock of the pegmatite is medium grained quartz-mica schist of the Littleton formation containing much pegmatic material. Locally, the rock is gneissic, particularly northwest of the pegmatite.

The strike of the foliation of the wall rock is extremely varied. Southeast of the pegmatite, the strike averages N 10° to 15° E, whereas northwest of it, the strike ranges from north to approximately east. The average dip is 50° to 60° to the east or southeast.

The Big Mine pegmatite is at least 1200 ft. long and 15 to 200 ft. thick. It strikes N 40° E. The average dip is steeply southeast, but the walls locally dip northwestward. In the east face of the Victory cut, a lens-shaped offshoot of pegmatite extends southward into the schist. A large roll in the schist footwall almost pinches out the pegmatite between the Gilsum and Victory open cuts, and another large roll of the hanging wall causes an abrupt thinning of the body from 200 ft. to 75 ft. at the northeast end of the Victory Mine. A large outward roll of the pegmatite into the footwall schist is present at the Victory Mine. This roll continues on strike at least 450 ft. northeast of the opencut and has a maximum vertical height of 80 ft. between upper and lower "keels". The upper keel and the top of the perthite-quartz-plagioclase core plunge 12° to 15° NE, but other rolls in the walls plunge steeply southward.

Referring to Figure 3, the sketches show the location of the presumed mica-bearing zones within the pegmatite. This is shown at different elevations and sections of the mine.

A very well defined zonal structure is present in the pegmatite. The zones, from the walls inward, are: (1) quartz-muscovite border zone, (2) quartz-plagioclase wall zone, (3) plagioclase-quartz-muscovite outer intermediate zone (sheet bearing mica), (4) plagioclase-quartz-perthite-biotite middle intermediate zone, (5) perthite-muscovite-plagioclase core margin zone (sheet mica bearing), (6) perthite-quartz core containing quartz bodies, and a (7) plagioclase-perthite, quartz unit.

4 (c) The quartz-muscovite border zone lies against the schist contact and is much finer grained than other zones in the pegmatite. Its maximum thickness of 1 foot is shown along the footwall of the pegmatite in the Victory Mine. It consists of gray quartz, small books and flakes of greenish muscovite, and minor amounts of plagioclase, black tourmaline, pink garnet, green apatite, and green beryl.

The quartz-plagioclase zone is commonly less than 5 ft. thick, but is as much as 12 ft. thick along the footwall of the pegmatite in the Gilsum Mine. It appears to be gradational between the border zone and the sheet mica-bearing plagioclase-quartz-muscovite zone. It is distinguished from the border zone by greater plagioclase content and larger grain size and from the mica zone by a lower mica content. It consists essentially of gray quartz and plagioclase, with minor amounts of muscovite and accessory tourmaline, garnet and apatite.

The plagioclase-quartz-muscovite zone (sheet mica-bearing) is found along all exposed parts of the footwall, commonly within a few feet of it. It has been traced below the lowest workings by diamond drilling. Its average thickness is 3½ ft, but it is thicker in the Gilsum Mine than in the Victory Mine. The mica-bearing zone near the surface along the hanging wall in the Gilsum Mine probably is similar to the plagioclase-quartz-muscovite zone near the footwall, for it lies outside the perthite-quartz-plagioclase zone, whereas the productive core-margin zone of the Victory Mine lies inside. A similar occurrence on the hanging wall at the northeast end of the pegmatite was cored by drill hole No. 7. The zone consists of plagioclase, gray quartz, and muscovite. Tourmaline, biotite, garnet, apatite, and green beryl are minor accessories and in places are intergrown with the muscovite. The muscovite content is not as high in the Gilsum Mine as in the Victory Mine, although the zone itself is commonly wider.

4 (c) A plagioclase-quartz-perthite-biotite zone forms a thick cap over the central part of the pegmatite. It thins down dip, apparently extending deeper on the footwall side of the pegmatite than on the hanging wall side. At the Gilsum Mine, it is present over the top and along the footwall of the pegmatite, but is absent along the hanging wall. The thickness of the biotite capping at the Victory Mine exceeds 75 ft. The zone consists essentially of plagioclase, chiefly massive plagioclase, but partly cleavelandite. Large perthite crystals, some of which consist of graphic intergrowths with quartz; biotite, in isolated books or flakes and in large strips that are less than 1 inch thick, but are as much as 5 ft. long and 6 inches wide; muscovite in flakes and books and as parallel intergrowths with biotite; and scattered beryl crystals are also present. In drill hole 1, between 112 and 145 ft., muscovite is as abundant as biotite in this zone.

The plagioclase-perthite-quartz unit is known only from the 45 to 62 foot interval of the core from drill hole 4. Its relations to the zones are therefore not known. It may be a separate zone or a variation of the biotite zone, or it may be part of the core, especially as the western part of the core contains the largest amount of plagioclase. The quartz body adjacent to the zone in drill hole 4 is a further indication of this relationship, for most quartz bodies at the mine are within the core. The plagioclase-perthite-quartz unit is shown in sections as separate from other units. It consists of plagioclase, perthite, and quartz, with minor amounts of muscovite. Much of the plagioclase is cleavelandite.

A second source of sheet mica is the core-margin or perthite-muscovite-plagioclase zone, which is thickest and most persistent on the southeast side of the perthite rich core at the Victory Mine, below the upper feldspar stope. Scattered mica books that occur at the top and on the northwest margin of the perthite-rich core may mark a thin, discontinuous part of the zone. In

4 (c) the southeast drift of the east wall mica workings, this zone lies between the schist wall and the perthite-rich core, because the biotite zone, which elsewhere in the workings separates it from the wall, is lacking. The occurrence along the hanging wall of the Gilsum Mine is similar. The zone ranges from less than 1 foot to 6 feet in thickness, but averages 4 feet. The mica books extend out into the core. Muscovite and plagioclase are other essential minerals in the zone, and minor amounts of quartz, tourmaline, biotite, garnet, and apatite occur in it. All the accessory minerals are in places intergrown with muscovite.

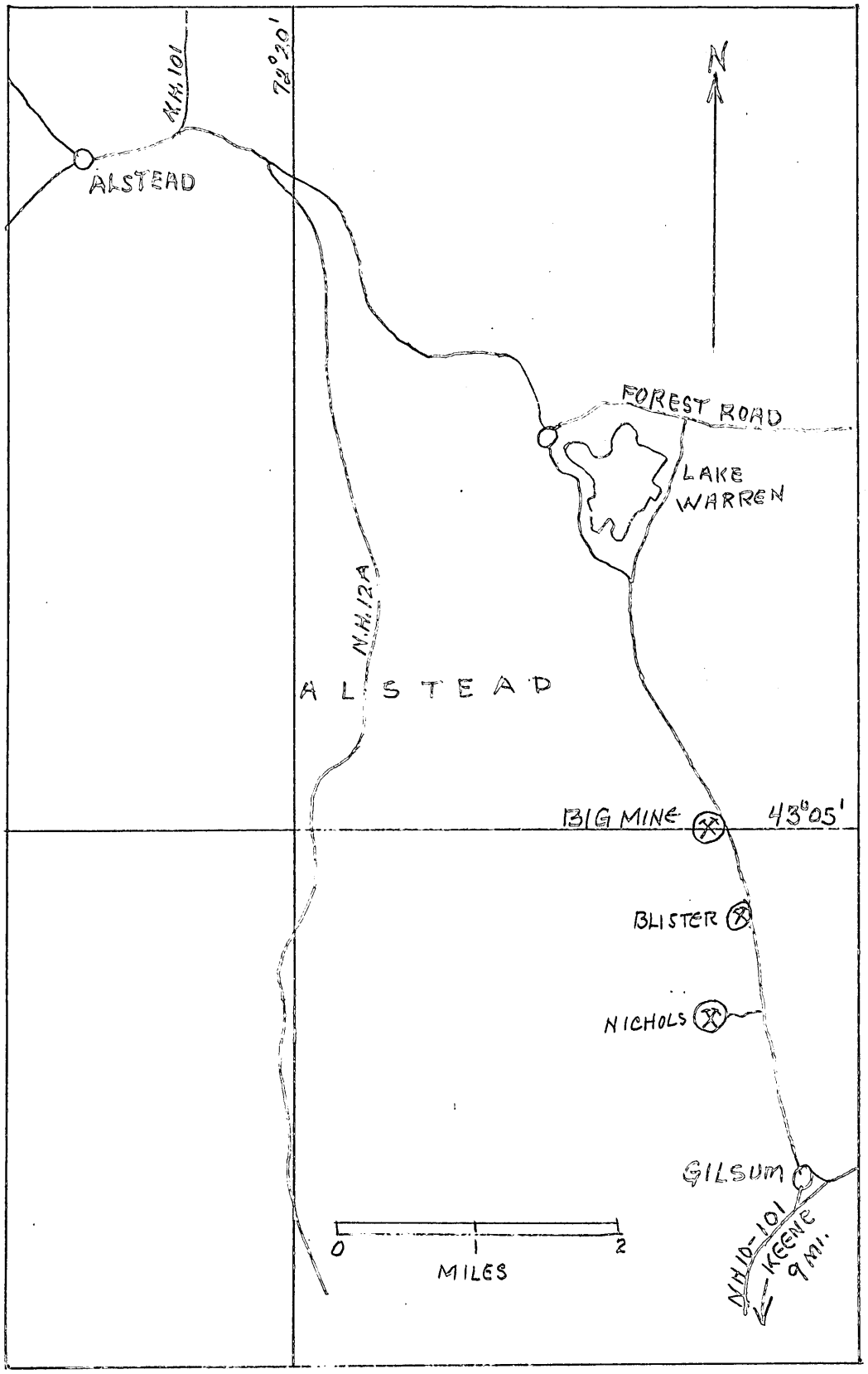
Perthite-quartz pegmatite forms the core of the pegmatite; it is closer to the hanging wall than to the footwall. The core is continuous through the entire strike length of the workings and ranges in thickness from 5 ft. in the Gilsum Mine to 180 ft. in the Victory. Perthite is the most abundant mineral. Quartz occurs as graphic intergrowths in the perthite and also as interlocking grains with plagioclase. Irregular bodies and stringers of fine grained cleavelandite and quartz surround or cut the perthite and apparently have formed partly by replacement of perthite. The cleavelandite is most abundant in the northwest part of the zone at the Victory Mine. Small quartz bodies similar to that one in drill hole 4 occur throughout the core. These commonly have gray rims that grade into milky, rose, or clear centers. Other small bodies consisting of aggregates of diversely oriented books of greenish-rum muscovite are present in the zone, commonly near the quartz bodies. This mica is usable only for scrap. Occasional pockets of beryl are present adjacent to the mica and quartz bodies. Small green beryl crystals, approaching aquamarine in color, are found in gray quartz and crystals as much as 2½ by 4 feet occur between quartz and perthite. Narrow gray quartz veins containing scrap mica and scattered beryl crystals cut the core.

4 (c)

We think the prospects are good for producing strategic mica for the government stock pile and it is our desire to participate in this program.

For additional information relative to the Big Mine, we refer you to Geological Survey Professional Paper 255 and U.S. Bureau of Mines Report of Investigations NO 4410 - February, 1949, "Investigations of Big Mica Mine", Cheshire County, N. H.

4 (d) There is an all weather, hard top road to the Big Mine. This road is maintained by the town, including snow plowing during the snow season. Mica recovered would be transported by truck to the General Services Mica Purchase Depot at Franklin, N. H., a distance of 65 miles. Equipment and supplies are obtainable at Keene, N. H., a distance of 12 miles from the mine. The village of Gilsum, N. H. is 2-1/2 miles from the mine. This is a suitable residence area with churches, schools, stores, filling stations, restaurants, etc. Refer to Fig. 1 which is a sketch showing the location of the mine with respect to the above mentioned places.



BIG MINE APPLICATION.

FIG 1

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4 (e) There is sufficient experienced manpower available to operate the mine.

Materials and supplies are available at Keene, N. H. There are a Mill Supply house, equipment dealers, explosive agencies, etc., who all carry large stocks.

We have made a tentative survey of equipment houses and determined that all necessary equipment is available.

There is sufficient water at the mine for all mining purposes.

An electric power line crosses the mine. We contacted the Power Company representative, and were assured that adequate power is available and can be connected without delay.

5 (b) Refer to figures 2 and 3 of this report for magnitude of old workings and proposed exploratory work.

The proposed work is in two phases.

Phase 1 — consists of dewatering the existing works. This entails construction of a 10' x 14' tool shed which can also be used to house the electrical control equipment such as switches, meters, etc; Construction of 2 rafts on which to set the pumps; erection of a derrick and placing of a hoist to get the pumps in the mine and maneuver them about; set transformers, connect power and wire the mine; install the necessary pipe and fittings to discharge the water from the mine; moving equipment to the job and placing same.

Phase 2 — consists of sinking a 5' x 7' shaft to a depth of 250 feet in the footwall northeast of all existing workings, driving a 5' x 7' cross cut to, and across the pegmatite, an estimated distance of 125 ft., and driving a 5' x 7' drift along the mica zone within the pegmatite adjacent to the foot wall for a distance of 60 ft. in each direction from the cross cut. This necessitates the erection of a headframe for hoisting material from the shaft, moving in and placing equipment, building a shed over the hoist, timbering the shaft until solid ground is encountered, and construction of a suitable change house. Proposed shaft, cross cut and drift is shown in red on Figure 2. Refer to Figure 4 for type of headframe to be used over shaft.

5 (d) Homer Hise has had 30 years experience in pegmatite mining as Mine Superintendent for Consolidated Feldspar Corporation; in charge of mining operations for Morton Mining Co. (producers of mica); as an independent mine operator on feldspar, beryl, and mica; and as a contractor on shaft sinking operations on a tungsten property at Henderson, N.C.

J. C. Buchanan has had 40 years experience in mica preparation as mica shop foreman for various companies, and as an independent operator of mica shops. Has also operated mica mines.

Guy Sparks has had 35 years pegmatite mining experience as Mine Superintendent for Consolidated Feldspar Corporation, and as an independent operator.

PHASE 1 — DEWATERING EXISTING WORKS

6 It is estimated there is 121,713,125 gallons, counting flow-in, to be pumped.

It is proposed to use ~~one~~ TWO Aurora two stage horizontal split case centrifugal pump, mounted on cast iron base plate, directly connected by means of a flexible coupling to 75 H.P. - 1750 R.P.M. drip-proof motor. The capacity of this pump is 1,200,000 gallons per 24 hour day. Using two pumps, 2,400,000 gallons per 24 hours. Allowing for interrupted pumping due to shifting pumps, adding pipe lines, greasing and repairs, it will take 60 days to dewater mine. Pumping seven days per week will require the payment of time and one-half for two days per week overtime. Supervision base on $75.00 per week straight time.

6 (a) No independent contracts

6 (b)	3 men (1 man per shift)	1056 hrs. @ $1.25 per hr.	$ 1320.00
	3 men Overtime	384 hrs. @ $1.875 per hr.	720.00
	Supervision	480 hrs. @ $1.25 per hr.	600.00
		Total labor & supervision	$ 2640.00

6 (c)	Power for pumps	$ 1000.00
	Gasoline and oil for hoist	10.00
	Grease	5.00
	Total supplies	$ 1015.00

PHASE 1

6 (d)	1 - Hoist & derrick for placing & shifting pumps-rent 1.66/day	100.00
	2 - Rental on pumps $58.34 per day	3500.00
	2 - Rental on reduced voltage starters - $29.34 per day	1760.00
	2 - Rental on 20' lgth., 6" suction hose with nipples, foot valve, and strainers - $8.27 per day	496.00
	2 - Rental on 100' lgth. 6" discharge hose with King nipples- - $17.47 per day	1048.00
	1520 ft., 6" aluminum pipe with all fittings - $30.40 rent/day	1824.00
	2 - Rafts for pumps - cost of constructing	200.00
		$ 8928.00
	1 - Pick-up truck hauling men to and from work, supplies etc., use allowance -- $5.00 per day for 60 days	300.00
	TOTAL	$ 9228.00
6 (e)	None.	
6 (f)	Buildings Shack for housing power switches, tools, etc.,12 x 20, constructed of native lumber, covered with building paper	$ 350.00
	Wiring mine for pumping and connecting power	1600.00
	Install hoist & derrick for placing & shifting pumps	100.00
	Building ladders into mine	100.00
	TOTAL	$ 2150.00
6 (g)	Accounting	300.00
	Workmen's Compensation Insurance 5% of $2640.00	132.00
	Employers Liability Insurance $200 per yr.	33.34
	Liability Insurance on truck $40 per yr.	7.00
	Federal Old Age Tax 2.25% State Unemployment Tax 2.70% Federal Unemployment Tax .30%	
	Total Payroll Tax.....5.25% -- 5.25% x $2640 payroll	138.60
	TOTAL	$ 610.94

TOTAL COST OF PHASE 1.....$15,643.39

PHASE 2

SHAFT SINKING - CROSS CUTS - DRIFTS

6 (a) Independent Contracts

None

6 (b) Labor, supervision consultants

2 shaft men	2528 hrs.	@ $1.35 per hr.	$ 3412.80	
1 hoist man	1264 hrs.	@ 1.47 per hr.	1858.08	
1 Top man	1264 hrs.	@ 1.35 per hr.	1706.40	
1 Supervisor	1264 hrs.	@ 1.90 per hr.	2401.60	
				$ 9378.88

(c) Operating materials and supplies

1800 lineal ft. 2x8 for timbering shaft	@ $ .08 per Lin. ft.	124.00
50 lbs. 20d nails	@ .15 per lb.	7.50
2800 gal. fuel for compressor	@ .17 per gal.	476.00
35 gal. oil for compressor	@ 1.40 per gal.	49.00
800 gal. fuel for hoist	@ .30 per gal.	240.00
15 gal. oil for hoist	@ 1.40 per gal.	21.00
10 sets of Drill rods	@ 25.50 per set	255.00
100 Tungsten Carbide bits	@ 18.00 ea.	1800.00
40 gal. Drill oil	@ 1.50 per gal.	60.00
5 gal. anti-freeze for compressor	@ 4.00 per gal.	20.00
2 gal. anti-freeze for hoist	@ 4.00 per gal.	8.00
75 lbs. grease for equipment	@ .25 per lb.	18.75
10 Spud nuts	@ 1.15 ea.	11.50
4000 lbs. dynamite	@ .30 per lb.	1200.00
1800 Electric blasting caps	@ .27 ea.	486.00
10 rolls connecting wire	@ 1.50 ea.	15.00
500 ft. lead line	@ .04 per ft.	20.00
8000 Tamping bags	@ 4.50 per M	36.00
1 Blasting machine	@ 48.75 ea.	48.75

6 (c) Cont'd —Operating materials and supplies

Electricity for pumping		375.00
20 wire rope clamps	@ .90 ea.	18.00
4 hose menders	@ 2.35 ea.	9.40
8 hose clamps	@ .50 ea.	4.00
1 Timken "No Go" gauge	@ 9.00 ea.	9.00
2 #8 picks	@ 4.25 ea.	8.50
6 pick handles	@ 1.75 ea.	10.50
4 shovels	@ 4.00 ea.	16.00
1 hand saw	@ 11.00 ea.	11.00
1 24" square	@ 2.50 ea.	2.50
3 hammers	@ 3.00 ea.	9.00
2 rubber-tired wheelbarrows	@ 30.00 ea.	60.00
20 lbs. 1/2" chain	@ .40 per lb.	8.00
3 padlocks	@ 1.50 ea.	4.50
2 air line oilers	@ 42.00 ea.	84.00
2 18" Stillson wrenches	@ 8.60 ea.	17.20
1 double-bitted axe	@ 4.75 ea.	4.75
1 cross cut saw	@ 15.00 ea.	15.00
10 hammer handles (sledge)	@ 1.10 ea.	11.00
1 carpenters level	@ 4.50 ea.	4.50
2 5-gal. oil cans	@ 2.00 ea.	4.00
2 spar forks	@ 8.50 ea.	17.00
2 crow bars	@ 2.00 ea.	4.00
	TOTAL	$ 5603.35

6 (d) Operating Equipment

1 - 210 ft. Diesel air compressor	@ 18.00 per day rent	$2700.00		
1 Joy Model B 111 Hoist (gasoline)	@ 5.00 per day rent	750.00		
2 - 50 ft. length of air hoses/rent	@ .25 per day ea.	75.00		
2 L-47 Jackhammer Drills	Rent @ 1.35 per day ea.	405.00		
1 #35 Sump pump	Rent @ 1.35 per day	202.50		
2 Jacklegs	Rent @ 1.35 per day ea.	405.00		
300 ft. 2½" discharge hose	Rent @ 2.30 per day	345.00		
2 Mine buckets	Rent @ 1.00 per day ea.	300.00		
500 ft. 1½" pipe & fittings	Rent @ 1.25 per day	187.50		
400 ft. 5/8" wire rope	Rent @ .50 per day	75.00		
1 Muck truck	Rent @ 5.00 per day	750.00		
	TOTAL			$ 6195.00

6 (e) Rehabilitation and Repairs

None

6 (f) New Buildings, Improvements, Installations

Headframe for shaft	$ 1092.25	
Building to enclose hoist 10 x 10	150.00	
Building for change house & eating shack 10 x 14	200.00	
TOTAL		$ 1442.25

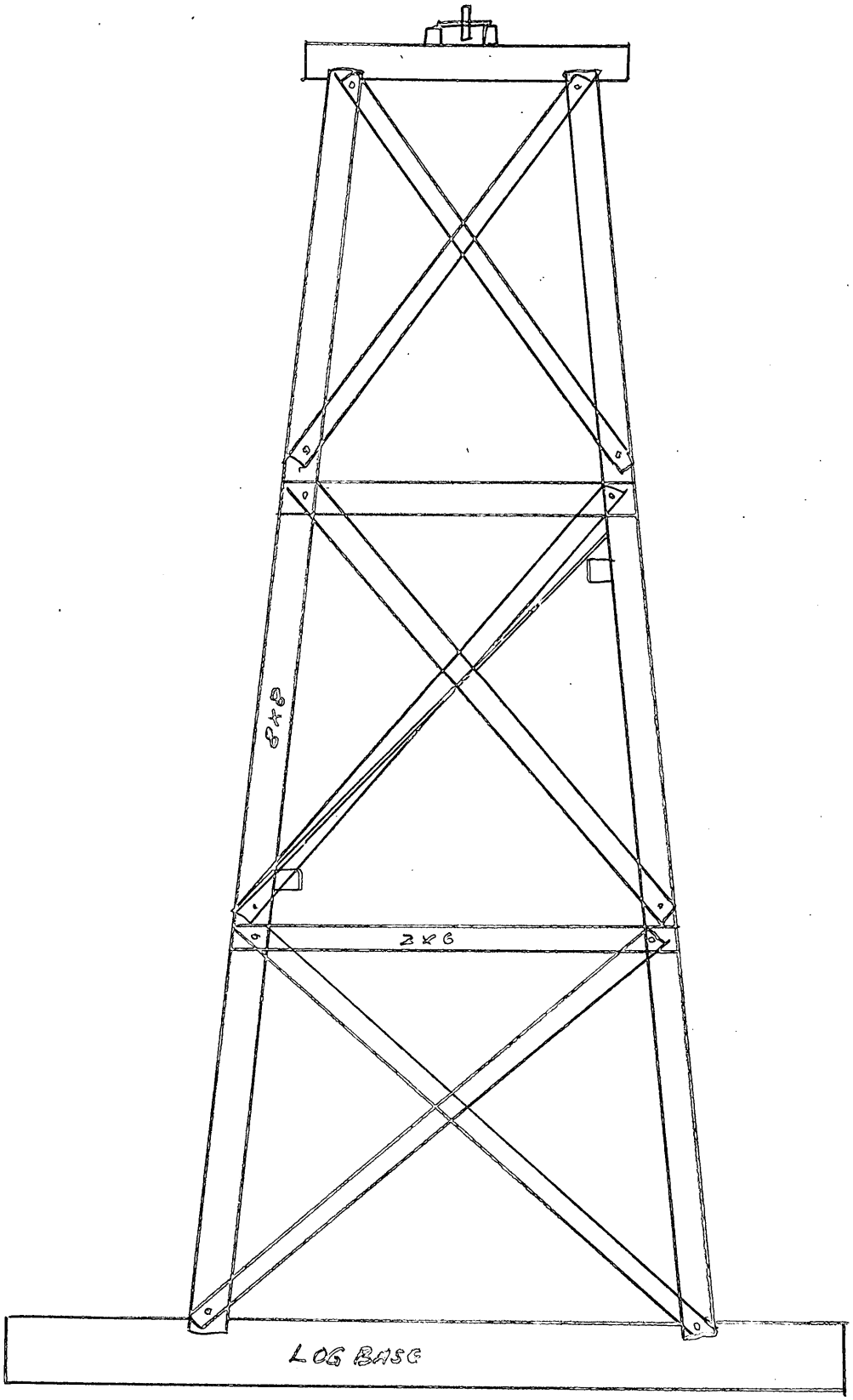
6 (g) Miscellaneous

Repairs to Jackhammers	200.00	
Repairs to Sump Pump	150.00	
50 Timken threads on steel @ 2.00	100.00	
50 Shanks on steel @ 2.00	100.00	
Accounting	810.00	
Workmans Compensation Insurance 5% of $9378.88	468.94	

6 (g) Miscellaneous - Cont'd.

Employers Liability Insurance		$ 100.00
Liability Insurance on truck		20.00
Federal Old Age Tax	2.25%	
State Unemployment Tax	2.70%	
Federal Unemployment Tax	.30%	
Total Payroll Tax.....5.25% - 5.25% x $9378.88		492.39
TOTAL		$ 2441.33

TOTAL COST OF PHASE 2.....$ 25,060.81



HEADFRAME
SCALE 1/4 IN = 1 FT.

FIG 4

ALTERNATE PLAN

6 After dewatering mine, lay an incline track from the open pit to the head of the underground workings at the 1200 ft. level. This is a distance of approximately 300 ft., and will necessitate double hoisting. From the head of the old works at the 1200 ft. level drive a cross cut, approximately 50 ft., to intersect the mica zone along the footwall. Drive another crosscut to the hanging wall, a distance of approximately 60 ft.,to intersect mica zones along that side of the pegmatite. Drive 200 ft. of drifts along the mica zones to explore for quantity and quality of mica. Refer to Plan at elevation 1200 ft. on Figure 3 for crosscut and drifts.

6 (a) Independent Contracts

None

6 (b) Labor, supervision, consultants

4 men building incline	832 hrs.	@ $1.35 per hr.	1123.20	
1 Supervisor building incline	208 hrs.	@ 1.90 per hr.	395.20	
2 Drift men	1440 hrs.	@ 1.35 per hr.	1944.00	
2 Hoist men	1440 hrs.	@ 1.47 per hr.	2116.80	
1 Supervisor	720 hrs.	@ 1.90 per hr.	1368.00	
		TOTAL		$ 6947.20

6 (c) Operating Materials and Supplies

1350 gal. fuel for compressor	@ .17 gal.	229.50
20 gal. oil for compressor	@ 1.40 per gal.	28.00
1000 gal. fuel for hoists	@ .30 per gal.	300.00
20 gal. oil for hoists	@ 1.40 per gal.	28.00
8 sets of Drill Rods	@ 25.50 per set	204.00
65 Tungsten Carbide bits	@ 18.00 ea.	1170.00
25 gal. Drill Oil	@ 1.50 per gal.	37.50
5 gal. anti-freeze for compressor	@ 4.00 per gal.	20.00

6 (c) Operating Materials and Supplies (Cont'd.)

4 gal. anti-freeze for hoist	@ 4.00 per gal.	16.00
150 lbs. grease for equipment	@ .25 per lb.	37.50
8 Spud Nuts	@ 1.15 Ea.	9.20
2250 lbs. dynamite	@ .30 per lb.	675.00
1100 Electric Blasting Caps	@ .27 ea.	297.00
10 Rolls connecting wire	@ 1.50 ea.	15.00
500 ft. lead line	@ .04 per ft.	20.00
5000 Tamping bags	@ 4.50 per M	22.50
1 Blasting Machine	@ 48.75 ea.	48.75
Electricity for pumping		225.00
24 wire rope clamps	@ .90 ea.	21.60
4 hose menders	@ 2.35 ea.	9.40
8 hose clamps	@ .50 ea.	4.00
1 Timken "No Go" gauge	@ 9.00 ea.	9.00
2 #8 picks	@ 4.25 ea.	8.50
6 Pick handles	@ 1.75 ea.	10.50
4 shovels	@ 4.00 ea.	16.00
1 hand saw	@ 11.00 ea.	11.00
1 24" square	@ 2.50 ea.	2.50
3 hammers	@ 3.00 ea.	9.00
2 Rubber-tired wheelbarrows	@ 30.00 ea.	60.00
3 padlocks	@ 1.50 ea.	4.50
2 Air line oilers	@ 42.00 ea.	84.00
2 18" Stillson wrenches	@ 8.60 ea.	17.20
2 double-bitted axes	@ 4.75 ea.	9.50
2 Cross cut saws	@ 15.00 ea.	30.00
10 Sledge hammer handles	@ 1.10 ea.	11.00

6 (c) Operating Materials and Supplies (Cont'd.)

1 Carpenters level	@ 4.50 ea.	$ 4.50	
3 5-gal. oil cans	@ 2.00 ea.	6.00	
2 Spar forks	@ 8.50 ea.	17.00	
2 crowbars	@ 2.00 ea.	4.00	
1 blow torch	@ 9.00 ea.	9.00	
200 ft. 3/4" manila rope 32½ lbs.	@ .80 per lb.	26.00	
	TOTAL		$ 3767.15

(d) Operating Equipment

1 - 210 ft. Diesel air compressor		@ 18.00 per day rent	1620.00
2 Joy Model B 11 Hoists	Rent	@ 5.00 per day ea.	900.00
2 - 50 ft. lenghts of air rope		@ .25 per day ea.	45.00
2 L-47 Jackhammer drills	Rent	@ 1.35 per day ea.	243.00
1 #35 Sump pump	Rent	@ 1.35 per day ea.	121.50
2 Jacklegs	Rent	@ 1.35 per day ea.	243.00
300 ft. 2½" discharge hose	Rent	@ 2.30 per day	207.00
5 Mine skips	Rent	@ .50 per day ea.	225.00
2 Mine cars	Rent	@ 1.50 per day ea.	270.00
750 ft. 1½" pipe & fittings	Rent	@ 1.88 per day	169.20
1000 ft. 5/8" wire rope	Rent	@ 1.25 per day	112.50
1 Muck truck	Rent	@ 5.00 per day	450.00
		TOTAL	$ 4606.20

6 (e) Rehabilitation and Repairs

None

6 (f) New Buildings, Improvements, Installations

Building to enclose lower hoist, 10 x 10	$ 150.00	
Building to enclose upper hoist, 10 x 10	150.00	
Building for change house and eating shack, 10 x 14	200.00	
Derrick for hoisting to surface	393.00	
Incline from pit to working face (not including erection labor)	1900.00	
TOTAL		$ 2793.00

6 (g) Miscellaneous

Repairs to jackhammers	200.00	
Repairs to Sump Pump	150.00	
50 Timken threads on steel @ 2.00	100.00	
50 Shanks on steel @ 2.00	100.00	
Accounting	510.00	
Workmans Compensation Insurance 5% of $6947.20	347.36	
Employers Liability Insurance	70.00	
Liability Insurance on Truck	14.00	
Federal Old Age Tax 2.25% State Unemployment Tax 2.70% Federal Unemployment Tax .30%		
Total Payroll Tax.....5.25% of $6947.20	364.73	
TOTAL		$ 1856.09

TOTAL ALTERNATE PLAN.....$ 19,969.64

GOLDING - KEENE COMPANY,
226 MAIN STREET,
KEENE, NEW HAMPSHIRE

OFFICIAL FILE COPY
DMEA
RECEIVED APR 1957
DATE | INITIALS | CODE

March 7, 1957

Mr. Homer Hise
Sparks and Buchanan Mica Company
Canaan, New Hampshire

Dear Mr. Hise:

COPY

This letter will confirm that there has this day been recorded in Cheshire County Registry of Deeds, a lease of Golding-Keene Company to M. G. Sparks, J. C. Buchanan and Homer Hise, co-partners doing business under the name and style of Sparks and Buchanan Mica Company, covering a portion of the "Big Mine", so-called, in Alstead, New Hampshire. It is understood that the recording of the lease was necessary in order for the partnership to be in a position to obtain financing from the United States Government.

This lease has been recorded on the express understanding that the parties will file a written mutual rescission of said lease unless the following events occur not later than sixty days from the date hereof:

1. The partnership will produce a government contract which will pass the approval of counsel for the Lessor.

2. The Lessor receives an opinion from its counsel that it should execute all documents which may be required by the government in connection with the proposed government contract and financing.

Please confirm your understanding of this agreement by signing and returning the enclosed extra copy of this letter.

Very truly yours,

THE GOLDING-KEENE COMPANY

A. J. Dube', Assistant Treasurer

OFFICIAL - COPY
DMEA
RECEIVED APR 23 1957
DATE | INITIALS | CODE

LEASE

THIS INDENTURE made as of the 18th day of March, 1957 by and between GOLDING-KEENE COMPANY, a New Hampshire Corporation having its principal place of business in Keene, New Hampshire, party of the first part, hereinafter called the LESSOR, and M. G. SPARKS of Grafton, New Hampshire and Marion, North Carolina, J. C. BUCHANAN of Spruce Pine, North Carolina and HOMER HISE of Spruce Pine, North Carolina, co-partners doing business under the name and style of Sparks and Buchanan Mica Company, parties of the second part, hereinafter called the LESSEES.

(1) WITNESSETH: - That in consideration of the royalties to be paid and the agreements to be performed on the part of the LESSEES, the LESSOR does hereby grant, demise and let to the LESSEES the exclusive right and privilege of prospecting, mining, drilling, boring or digging for feldspar, mica, and any other ores or minerals in, upon or under the following described premises, in Alstead, County of Chesire, The State of New Hampshire together with the exclusive right and privilege of removing such minerals therefrom:

> A certain tract of land in said Alstead, being a portion of the "Big Mine", so called, owned by the lessor and further bounded and described as follows:
>
> Beginning at an iron stake on the westerly side of the Gilsum-East Alstead highway; thence West 4° North 75 rods to the Southeast corner of the lot leased to John Maderick; thence North 8° East 160 rods to an iron stake at the end of a stone wall; thence East 4° North 1150 feet along an old wire fence across the highway to an iron stake in a stone wall; thence South 27° West along stone wall to the highway; thence southerly along the west side of highway to the place of Beginning.

(2) TO HAVE AND TO HOLD the same to the LESSEES for a term of years expiring on March 18, , 1967, upon the payment by the LESSEES of the royalties hereinafter specified.

(3) The LESSOR agrees that the LESSEES may renew this lease for a further term of ten years under the same terms and conditions as set forth in this lease upon giving notice in

LAW OFFICES
FOUTS & WATSON
SPRUCE PINE, N. C.

writing to the LESSOR not later than six months prior to the date of expiration of this lease.

(4) For the consideration aforesaid and for the term aforesaid, the LESSOR also hereby grants, demises and lets to the LESSEES the right to bring on to said premises all tools, machinery, blasting materials, drilling equipment, teams, vehicles, supplies and all other machinery and equipment necessary or convenient in connection with carrying on said mining operations; the right to construct, erect, maintain, and remove all shops, buildings, bins, roadways, tracks, trestles, tanks and machinery necessary or convenient in connection with carrying on said mining operations; the right to lay pipes, erect telephone lines, and to erect such poles with wires and attachments thereon as may be necessary for the transmission of electric current to be consumed in connection with said mining operations; the right to dump waste materials on said premises; and all rights of ingress and egress to and from said premises and all rights of way over, under or across said premises as may be necessary or convenient in connection with the enjoyment of any of the rights granted hereunder.

(5)The LESSEES covenant and agree to carry on their mining operations in a workmanlike manner, and agree not to cause any damage to, or to commit or suffer any waste of, the demised premises other than that reasonably necessary in the conduct of their mining operations, and the LESSOR hereby releases all claim for damages to said premises reasonably incident to said mining operations.

(6) The LESSEES hereby agree to pay to the LESSOR royalties on all minerals removed from said premises computed on the following basis:

(A) In the case of all minerals except feldspar, royalties shall be payable at the rate of 10 per cent of the gross sales price of such minerals.

(B) In the case of feldspar, which shall not be sold to anyone except the LESSOR, as hereinafter provided, no

royalties shall be payable on such sales to the LESSOR. If by mutual agreement of the parties feldspar is ever sold to anyone other than the LESSOR, then the royalties payable with respect to feldspar shall be the same as those which apply with respect to other minerals.

(7) The royalties payable under the preceding paragraph shall be computed and shall be credited and/or payable monthly. The LESSEES hereby guarantee to the LESSOR minimum royalties per annum of $2,000. Said minimum annual royalties shall be payable in advance, the first payment to be on the date of execution of this lease, and subsequent payments to be made annually on each anniversary date of this lease. The monthly royalties, computed as set forth above, which shall become due shall be credited against said advance payment of $2,000, so that further payments shall not be made until royalties payable during a twelve month period shall exceed $2,000 in the aggregate.

(8) It is contemplated that the LESSEES will sell all minerals with the exception of feldspar to the United States Government. The LESSEES hereby covenant and agree that they will instruct the appropriate purchasing agent of the United States Government to furnish the LESSOR copies of all public vouchers showing sales of minerals, said vouchers to be furnished at least monthly. In the event that minerals are sold to parties other than the United States Government or to the LESSOR, the LESSEES hereby covenant and agree to furnish the LESSOR, at least monthly, with copies of all billings covering minerals so sold. Insofar as there are sales to persons other than the United State s Government or the LESSOR, the LESSEES also grant to the LESSOR the right to audit their books relative to sales of minerals for the purpose of determining whether or not the royalty provisions of this lease are being complied with, said audits to be made at reasonable times at the pleasure of the LESSOR.

(9) The LESSEES hereby covenant and agree that except

upon written instructions from the LESSOR they will not sell any feldspar removed from the premises to any person, firm, corporation or government other than the LESSOR.

(10) The LESSOR agrees that the LESSEES, on complying with the terms of this lease, shall and may peacebly and quietly have, hold and enjoy the premises for the term of this lease; provided, however, that if all or a part of the premises or the premises of which they are a part are taken by condemnation or other process of law by the United States of America, The State of New Hampshire, or a political subdivision or agency thereof, this lease and the LESSEES' obligation to pay royalties shall terminate without notice or other act of either party, and the LESSOR shall return any royalties paid beyond the date of such taking.

(11) The LESSEES agree that the LESSOR or its agents may enter the premises for the purpose of observing whether the LESSEES are complying with the terms, conditions and provisions of this lease and for the purpose of showing the premises or the premises of which they are a part to persons desiring or contemplating the purchase or lease thereof.

(12) The LESSEES agree that they will not lease, sublease, underlet or assign the demised premises, or assign or transfer this lease without the written consent of LESSOR.

(13) The LESSOR may terminate this lease for breach of any of the terms and conditions hereof, including the payment of royalties upon the giving of written notice to the LESSEES not less than sixty (60) days in advance of the proposed termination date which said notice shall specify the particular breaches claimed to have been committed by the LESSEES; provided, however, that if the LESSEES shall cure any such alleged default in the performance of their agreements hereunder, including the payment of royalties, within thirty (30) days after receipt of such notice, then the right to terminate for such existing default or defaults shall cease for the time being; and, provided further, that in the

event of termination, the LESSEES shall have a reasonable time after the termination date in which to remove their property from the leased premises. Any assent, express or implied, by the LESSOR to any breach of any agreement or condition herein contained or any waiver, express or implied, by the LESSOR of any such agreement or condition shall operate as such only in the specific instance and shall not be construed as an assent or waiver of any such agreement or condition generally or of any subsequent breach thereof.

(14) The LESSEES agree that if their estate hereby created shall be taken on exedution or other process of law or if any assignment shall be made of the LESSEES' property for the benefit of creditors or if a receiver or other similar officer shall be appointed to take charge of any property of or to wind up the affairs of the LESSEES, or if a petition in bankruptcy or incolvency is filed by or against the LESSEES upon which an adjudication of bankruptcy or insolvency is made, such event shall constitute a breach of this lease.

(15) It is mutually agreed between the parties hereto that the LESSOR shall not be liable for any damage of whatsoever kind, or by whomsoever caused, to person or property of the LESSEES or to anyone on or about the premises by consent of the LESSEES, however, caused and whether due in whole or in part to acts of negligence on the part of the LESSOR, its agents or servants, whether such acts be active or passive, and the LESSEES agree to hold the LESSOR harmless against all loss, cost and expense, including attorneys' fees, arising out of such damage claims.

(16) The LESSEES covenant and agree to purchase public liability insurance for the protection of both the LESSOR and the LESSEES with respect to injuries to persons or property on or about the leased premises or arising out of the mining operations carried on thereon. With respect to claims for personal injuries, the policy of insurance so purchased shall afford the following

minimum protection: $100,000 for injuries to any one person, and $300,000 for injuries arising out of any one accident. With respect to property damage, the policy so purchased shall afford the following minimum protection: $100,000 to any one person, and $100,000 during any one year. Said property damage insurance shall be written on an occurrence basis rather than on an accident basis. All policies required hereunder shall be kept in full force and effect ~~to~~ for the duration of this lease and any renewal thereof. The LESSEES shall furnish the LESSOR with copies of all such policies.

(17) The ~~LESSORS~~ LESSEES further agree to purchase, and to keep in full force and effect during the term of this lease or any renewal, a policy of insurance affording coverage under any applicable Workmen's Compensation law. The LESSEES further agree to purchase additional employer's liability insurance affording minimum coverage of $100,000 for protection against claims for injuries to employees or their property not covered by workmens compensation.

(18) All of the agreements, conditions and undertakings herein contained shall extend to and be binding upon the legal representatives, heirs, executors, administrators, successors and assigns of the LESSOR and LESSEES and any other parties hereto.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals as of the day and year first above written.

GOLDING-KEENE CO.

By Armand J. Duke

M. G. Sparks

M. G. SPARKS

J. C. Buchanan

J. C. BUCHANAN

Homer Hise

HOMER HISE

THE STATE OF NEW HAMPSHIRE
, SS.

On the 18th day of March, 1957, personally appeared M. G. Sparks, and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Barbara G. Johnson
~~Justice of the Peace~~-Notary Public

MY COMMISSION EXPIRES SEPTEMBER 19, 1960

THE STATE OF ~~NEW HAMPSHIRE~~ North Carolina
, SS.

On the 11 day of March, 1957, personally appeared J. C. Buchanan, and acknowledged the foregoing instrument to be his free act and deed.

Before me,

My Com Exp; 8-29-1957

Pie McKinney
~~Justice of the Peace~~-Notary Public

THE STATE OF ~~NEW HAMPSHIRE~~ North Carolina
, SS.

On the 11 day of March, 1957, personally appeared Homer Hise, and acknowledged the foregoing instrument to be his free act and deed.

Before me,

my Com. Expires: 8/26/1957

Pie McKinney
~~Justice of the Peace~~-Notary Public

THE STATE OF NEW HAMPSHIRE
, SS.

On this the 18th day of March, 1957, before me, the undersigned officer, personally appeared Armand J. Hulé, who acknowledged himself to be the clerk of Gdding-Keene Co., a corporation, and that he, as such clerk being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as clerk.

In witness whereof I hereunto set my hand and official seal.

Barbara G. Johnson
~~Justice of the Peace~~-Notary Public

MY COMMISSION EXPIRES SEPTEMBER 19, 1960

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 23 1957

DATE	INITIALS	CODE
5/23	C	220
		600
		225
May 22, 1957		

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Donald R. Irving, Acting Chief, Branch of Ceramic and Fertilizer Materials

Subject: DMEA-4736 (mica)

Applicant: Homer Hise, et al.

Name and Location of Property: Big Mine, Cheshire County, New Hampshire

Date Application Rec'd. by Br. of Ceramic & Fertilizer Materials: 4/26/57

Comments:

1. The applicants request assistance in a two-stage project consisting of (a) dewatering an old feldspar-mica mine and (b) sinking a 250 foot shaft and drifting 245 feet.

2. The pegmatite is well described in Geological Professional Paper 255 and U. S. Bureau of Mines Report of Investigations No. 4410, which credit the mine with large production and large mica reserves.

3. In view of Government reports stating that large reserves of mica exist, the proposed work is more in the nature of development than exploration.

4. Cost of Stage I is all for dead work and cost for Stage II is about 20 percent higher than for DMEA projects.

Recommendation:

In view of the above remarks it is recommended that the application be denied.

Donald R. Irving

Donald R. Irving

DMEA Form 7
(12-56)

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Date	Surname	Code
5/6	Houk	600
5/8	Selbridge	130
"	Johnson	110
"	Mittendorf	100
5/9	Jones	220
		225

MAY - 9 1957 600

Messrs. Homer Hise, J. C. Buchanan
and Guy Sparks
Spruce Pine, North Carolina

Re: Docket No. DMEA-4736-Mica
Homer Hise, et al.
Big Mine
Cheshire County, New Hampshire

Gentlemen:

Nelson
Dietrich
Kiilsgaard
Kamb

Your application for aid for an exploration project and other reports available to us in Washington relating to the subject property have been reviewed.

A careful study of all our information, including the character of the mica mineralization, past production records and Government reports and drill hole data, shows that mica reserves occur on the subject property.

Your proposed program and alternate program are directed toward gaining access to these reserves after which the property would be ready for production. The DMEA does not participate in work of this nature. Therefore, under these circumstances, we regret to advise you that your application for exploration assistance is denied.

Thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

LGHouk:gad 5/6/57
Copy to: Admr. R. File
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Field Team, Region V
Mr. Houk

8623

May 6, 1957

Justification for denial - Docket No. DMEA-4736-Mica
Homer Hise, et al.
Big Mine
Cheshire County, New Hampshire

Applicants' proposal:

Phase 1 - Dewater	$15,643.39	
Phase 2 - 250 ' shaft, 245' crosscuts & Drifts	25,060.81	$40,704.20

Phase 2 alternate thru old works: Drive 50' crosscut to footwall mica zone - 60' to hanging wall mica zone and 200' along mica zone	$19,969.64	$35,613.03

The applicants' proposal to dewater this mine and sink a 250' shaft and drive 245' of drifts and crosscuts in the mica zone, and alternate Phase 2 plan to go thru the old workings and drive 310 feet of drifts and crosscuts in the mica zone is preparation for mining and actual mining of known reserves.

The property was drilled by Bureau of Mines and mapped by the Survey and the indicated reserves are about 2,000 tons, and inferred 2,600 tons of crude mica developed by surface and underground diamond drilling.

The Big Pegmatite is zoned at least 1,200' long and 15 to 200' wide. It was the largest single producer in the U. S. in World War II.

It is recommended that the subject application be denied without field referral as the USGS, Professional Paper 255 describes the workings and gives an excellent description of the geology. Mr. Laurence agreed that a field examination was not justified.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

May 2, 1957

Re: DMEA 4736
Homer Hise et al
Big Mine
Cheshire Co. N. H.
$40,704.20 - Mica

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicants request assistance in unwatering and developing an old feldspar-mica mine credited with a large production of feldspar and, according to U. S. Government reports, the site of mica reserves.

The large zoned pegmatite is well described by Cameron, et al 1954, in Geological Survey Professional Paper 255, Pegmatite Investigations, 1942-45, New England. The applicants quoted the report freely in the application. Perhaps the statement, in the Government Report, "Reserves of mica left at the mine are large", p. 115 influenced the applicants.

Because of flooding, little is to be seen at the property and examiners, like the applicants must rely upon the Government Report for guidance.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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DMEA
RECEIVED MAY 6 1957

DATE	REMARKS	CODE
5/6	2002	220
		600

OFFICIAL FILE COPY DMEA RECEIVED APR 26 1957		
DATE	INITIALS	CODE

April 24, 1957

Mr. Homer Rise

Spruce Pine, North Carolina

Re: Big Mine (Mica)
Cheshire County, New Hampshire

Dear Mr. Rise:

Your application for aid in exploration for strategic mica at the Big Mine in Cheshire County, New Hampshire, has been forwarded to our Washington office, in accordance with established procedure. We will notify you in advance if a field examination is to be made.

I note that item 1 of the Lessor's letter of March 7, 1957, states that the lease will be rescinded after 60 days (i.e. May 6) unless you "produce a government contract which will pass the approval of counsel for the Lessor". I strongly urge you to obtain a cancellation of this restriction. It is impossible to complete the processing of the application before May 6.

Sincerely yours,

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

RAL/mg
cc
Oper. Comm. (2)
Lynch
Millar
File

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

April 26, 1957

Mr. Homer Hise,
Spruce Pine, North Carolina

Subject: DMEA 4736
Re: Exploration Assistance

Dear Mr. Hise:

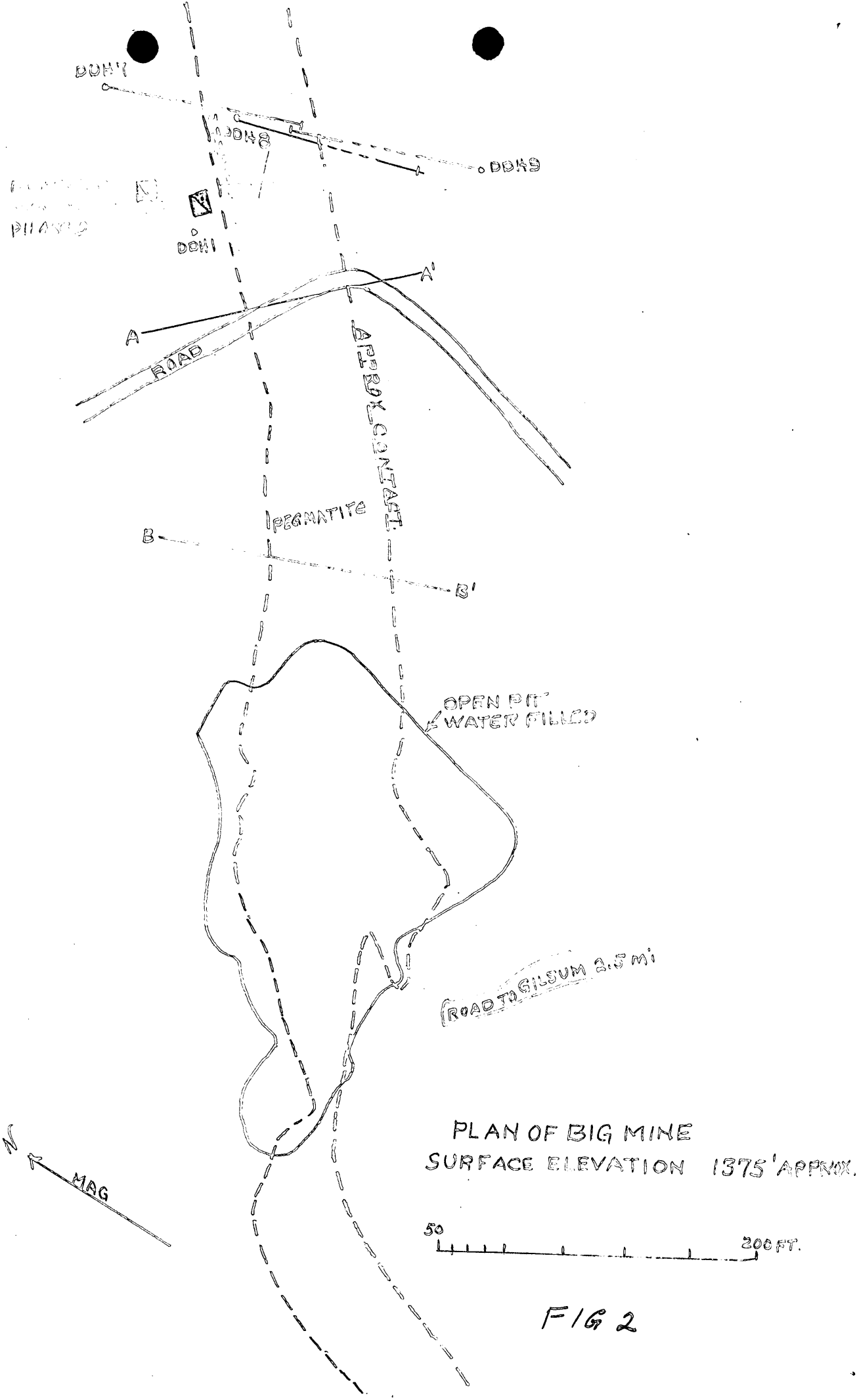
Your application for exploration assistance, dated April 15, 1957, submitted to our office at Knoxville, Tennessee, has been assigned Docket Number DMEA 4736 and referred to the Nonmetallic Minerals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Chief
Operations Control and
Statistics Division

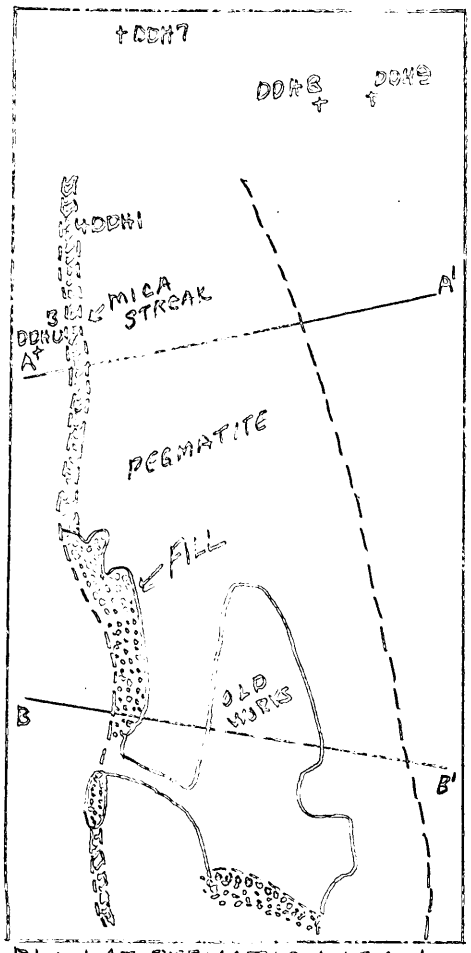
Copy to: Region V.

3571

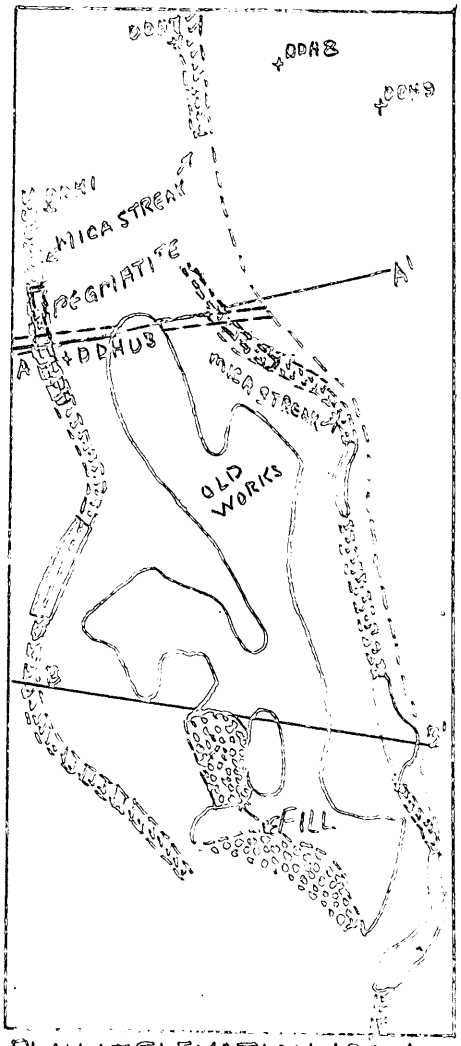


PLAN OF BIG MINE
SURFACE ELEVATION 1375' APPROX.

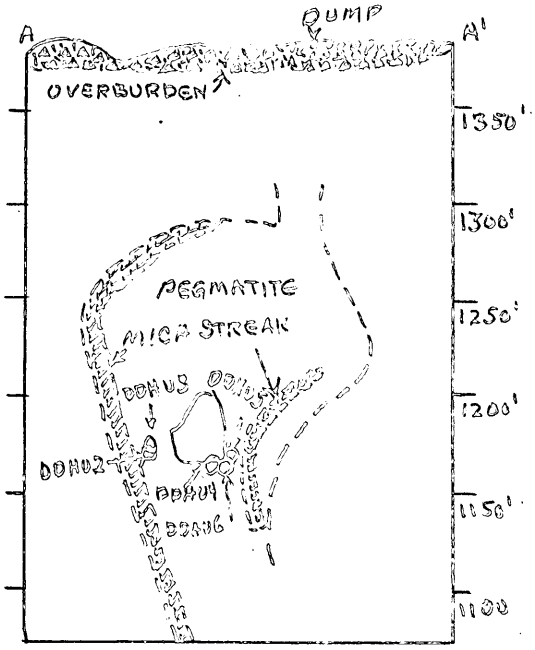
FIG 2



PLAN AT ELEVATION 1260'



PLAN AT ELEVATION 1200'
PROPOSED WORK.



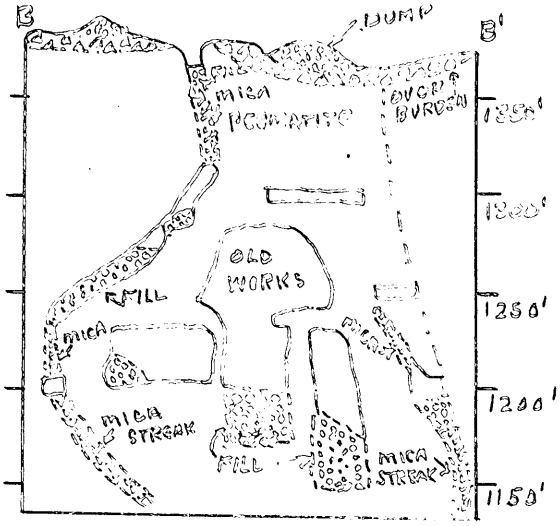


FIG 3

SCALE 1IN = 100 FT