DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4823

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

Form MF-103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1035.3
Approval expires June 30, 1958

RECEIVED SEP 3 1957 D.M.E.A.

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

Lake Enterprises, Inc.
2024 Laird Drive
Salt Lake City, Utah

RECEIVED AUG 29 1957 U.C.C.S. SPOKANE, WASH.

APPLICANT NOT TO USE THIS BLOCK

Docket Number: 4823
Date Received: 9/3/57
Government Participation %:
Region: I
Division Code: 400

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [X]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized: Utah

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Jack E. Lake	2024 Laird Drive Salt Lake City, Utah	President
Lylla E. Lake	2024 Laird Drive Salt Lake City, Utah	Sec.-Treas.
Clyde E. Lake	1413 W. 18th Street Billings, Montana	Vice Pres.

Mineral(s) for which you wish to explore: Nickel (and minor copper, gold,)

Estimated Cost of Project: $ 73,680 (Phase 1-$30,900; 2-$42,780)

LOCATION OF PROPERTY

Name	County	State
Berry Prospect	Grant,	Oregon

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals,* of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

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.

August 23, 1957
Dated

Jack E. Lake
BY (Signature)

Lake Enterprises President
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 3 1957

DATE	INITIALS	CODE

August 29, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New Application (Nickel)
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon

Dear Mr. Selfridge:

Enclosed are three copies of an application to explore for nickel in Grant County, Oregon.

We are inclined to doubt the applicant's contention that secondary ore deposits will be found in limestone. However, the possibility of replacement bodies in the limestone formed by material derived from the ultra basic rocks might be worth investigation.

Sincerely yours,

A E Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: USBM (2)
Geologist

GEOLOGICAL AND GEOPHYSICAL CONSULTANTS

CHARLES E. MELBYE
STUART S. MERWIN
CHARLES F. ARNOLD

August 16, 1957

Executive Officer
Defense Minerals Exploration Adm.
Suite 157, Howard Street
Spokane 4,
Washington

Dear Sir:

Enclosed is a DMEA application together with all necessary accompanying data on a nickel prospect in Oregon. We are submitting this for Lake Enterprises, Inc., 2024 Laird Drive, Salt Lake City, Utah.

In Exhibit A are copies of all legal papers showing control of Lot 3 and 4, Section 2, T 14 S, R 32 E, which covers practically all of the mineralized area. Documents covering Lots 1 and 2, Section 2, T 14 S, R 32 E, and S½S½SE¼, Section 34, T 13 S, R 32 E, have been signed between the various parties but have been temporarily misplaced. These will be sent to you in a few days.

We would appreciate knowing what the present outlook is concerning the time needed to process this application.

If you have any questions please correspond directly with Melbye and Merwin, as we handle all affairs of this type on a retainer for Lake Enterprises, Inc.

Thank you.

Very truly yours,

CEM:sb

Charles E. Melbye

cc: Lake Enterprises, Inc.

WASHINGTON AVE

CRESTVIEW 9-1542

GOLDEN, COLORADO

APPLICATION FOR AID

IN AN EXPLORATION PROJECT

1.- Applicant's Property Rights:

(a)- The property consists of fee land: Lots 3 and 4, Section 2; Lots 1 and 2, Section 3; T 14 S, R 32 E, W.M., and S½S½SE¼ of Section 34, T 13 S, R 32 E, W.M. (See Plate 1).

(b)- Berry Prospect or Berry Ranch

(c)- Lake Enterprises, Inc. has control of the property through an option and sub-lease from R.E.Holdren, Hazel M. Holdren, W. W. Wise, and Violet Wise of Elko, Nevada. Holdren-Wise have a sub-lease from Ronald C. Begg and William Wright of John Day, Oregon. Begg-Wright have the prime lease from J. Boyd Berry and Hazel B. Berry who own the land and mineral rights. Four copies of all agreements are attached as Exhibit A.

(d)- There are no liens, encumbrances, or mortgages on the property.

2.- Physical Description:

(a)- There have been no past exploration efforts for nickel other than the surface geological study which is incorporated under category 2(e) of this application. This study consisted of 10 days of plane-tabling and geological mapping.

A small amount of bulldozing was done on a chrome occurrence in a small serpentine outcrop just east of the property line and at the east end of the main limestone outcrop.

Two short adits were driven in the west limestone ridge in early-day gold exploration by the Chinese.

(b)- Lake Enterprises, Inc. completed the geological study which is a part of this application but had no interest in any of the above mentioned chrome or gold exploration.

(c)- There has been no metal production of any kind.

(d)- There are no known ore reserves.

(e)- The following is a description of the geologic features of the property:

Petrology:

There are two principle and at least three subsidiary rock types exposed on the Berry property. Further study will be needed to establish the origin and classification of the minor types. The nickel is apparantly confined to a fractured and altered lime-

stone mass shown on Plate 2. Surrounding this mass and making an irregular or metamorphic contact with it is an extensive body of serpentine within which the limestone is apparantly situated as a remnant.

A hard, dense, layered rock, mapped as greenstone, was observed as scattered outcrops particurlarly along the southern and eastern borders of the mapped area. It is suggested that this rock either belongs to the Gabbro unit mapped by T. P. Thayer, U.S.G.S. Mineral Investigations Field Studies Map MF51, or it may be a phase of the serpentine.

In the southwestern quadrant of the mapped area several dike-like masses of light colored igneous rock were observed. The relationship of these rocks to the encompassing serpentines and gabbros (?) was obscured by soil cover. In general they fit Thayer's Quartz Diorite and Albite Granite classification, but in the field were mapped as alaskites. They are fine to medium grained and have a low percentage of dark minerals.

The third minor rock type was mapped as one isolated outcrop located at 11,000N, 12,850E on Plate 2. A dark brown to pinkish cherty breccia, possibly belonging to Thayer's Permian Meta-sedimentary series, was observed. If the rock falls into this classification, then it is possible that the other minor rock types described above would fall into the meta-volcanic or meta-sedimentary series. This, however, is essentially an academic question.

Limestone and serpentine comprise the bulk of the rocks exposed within the Berry property.

Limestone:

The potentially commercial nickel deposits are believed to be concentrated within the Permian limestone shown on Plate 2. The lime varies in color from a light pink through brown to gray. On the main outcrop, which forms a sharp serrated hill with over 500 feet of relief, the surface of the limestone is coated with a light to dark brown limonitic stain, which causes the hill to stand out in sharp contrast to the surrounding green to black serpentines.

The limestone bedding has been nearly destroyed by the mountain building and metamorphic forces. It is intensely fractured and mineralizing soultions have filled these fractures with quartz and calcite to such a degree that the rock exhibits a veined appearance. The limestone has been highly recrystallized and marbleized by metamorphism.

The limestone, where comparatively unaltered, is finely crystalline in texture and presents a grainy appearance on fresh surfaces. Nodules, believed to represent chert inclusions, are

scattered throughout the mass.

The entire outcrop has been silicified. The degree of silicification, however, varies, and was most noticible adjacent to the two major suspected faults described under Structure.

The contact between the limestone and serpentine is somewhat gradational as evidenced by the banded outcrop at 11,900N, 12,950E, Plate 2.

Serpentine:

Surrounding and in places encompassed by the limestone is a mass of intensely foliated and sheared Triassic serpentine. The color varies from black through green with an overall bluish cast. The serpentine mass is intricately sheared and slickensided.

The observed chrome deposits within the mapped area as well as throughout the John Day quadrangle occur within the serpentines.

It is probable that the serpentine was derived from alteration of gabbros, pyroxenites, or other ultra basic rocks and that the somewhat lighter colored serpentines near the suspected contact with the limestone resulted from the metamorphism of the lime.

It is interesting to note that at 12,030N, 14,150E, Plate 2, a small plug, remnant, or window of chrome bearing serpentine was mapped. Its relationship to the limestone at depth is not known but may represent a small lens of originally different material or a metamorphosed basic dike.

Structure:

The Berry nickel property is located upon an intensely deformed, sinuous limestone mass which outcrops along the north base of the Strawberry Range. Because of the fracturing and silicification, strikes and dips were apparent only after a careful survey of the entire mass, but in general the limestone dips from 45°-80° to the north and describes a curved strike which near Dean Creek is N65°E and at the eastern edge of the outcrop, S30°-45°E. This change in strike is due to a northeast plunging fold which strikes northeast. The outcrop to the west of Dean Creek is apparently overturned at its northern limit but within a few feet follows the north dipping attitude of the main mass.

The outcrop shown on Plate 2 at 13,000N, 13,500E, did not disclose any obvious dip or strike. It is possible that it represents the somewhat flat dipping northward extension of the main outcrop. If this is true, the Permian limestone was tilted when Jurassic mountain building formed the Strawberry Range to the south.

The contact between the limestone and the surrounding serpentines

and greenstones is vague. It will be noted, on Plate 2, that two major faults have considerably displaced the rocks. One is believed to follow the general strike of Dean Creek and the other strikes to the southwest near the extreme southeast corner of the mapped area. Subsidiary or minor faulting, as evidenced by the extremely numerous slickensided surfaces throughout the limestone and serpentine, was of such a nature as to be nearly impossible of representation. Most of the minor faulting apparently confined itself to slippages along, or at a slight angle, to the original bedding planes. Almost without exception they are accompanied by silicification and recrystallization of the lime.

Mineralization:

The apple green stain which is prominant and may be observed throughout the limestone outcrop, as well as in the float, was first believed to be copper mineralization. Numerous local prospectors had had samples assayed but all showed only minor amounts. Approximately three years ago nickel was suspected and several samples were assayed, all of which gave significant results.

During the summer of 1956, a chip sample was taken across the limestone outcrop, for a distance of approximately 400 feet, which assayed 1.49% Ni. Two other samples taken at this time ran approximately 0.20% Ni. These assay returns and their exact loactions are no longer available. However, because of these results, a more detailed program was laid out to surface sample the limestone exposures. The locations sampled during this program are shown on Plate 4. Individual assays are listed below, and a copy of the assayer's return is included under Exhibit B.

Sample No.	Percent Nickel
1A	0.17%
2A	0.18%
3A	0.14%
4A	0.29%
5A	0.23%
6A	0.17%
7A	0.12%
8A	0.21%
8	0.17%
7	0.15%
6	0.15%
5	0.16%
4	0.19%
3	0.23%
2	0.16%
1	0.20%
M	0.14%
Z	0.19%

A straight line average of the above results is 0.18% Ni. Exact footages of each sample were not measured so a weighted average was not made.

The apple green nickel oxide is probably annabergite or one of the numerous nickel oxides. However, the degree of green staining does not necessarily indicate the percentage of nickel. Several selected specimens were analyzed which were more intensely mineralized with this green staining but did not run any higher than those with a low amount of stain or none at all.

On the outcrop and in the talus, rudimentary boxworks of limonite were observed which would indicate sulphide mineralization. In several hand specimens, small flecks of a bright sulphide were observed which may be millerite or one of the rarer nickel sulphides. No mineralogic determinations other than megascopic have been made. As mentioned previously, there are abundant quartz and calcite veinlets throughout the limestone.

At the sample location marked X on Plate 4, a chip sample was taken across the serpentine outcrop. This ran 0.30% Ni., and may be explained by the presence of a small amount of chrome which seems to carry nickel in this district.

The limonite boxworks and the sparcity of observed sulphide mineralization would indicate a high degree of surface oxidation and leaching, which in turn would suggest that a significant increase in nickel content is possible at depth.

(f)-We expect to find nickel ore for the following reasons:

1- The entire outcrop has been sampled (See Plate 4 for locations) at 100-foot intervals and showed unusually consistent nickel mineralization, averaging 0.18% Ni.

2- The outcrop is highly oxidized and nickel, in the sulphide form, leaches nearly as readily as copper, thereby making a strong likelihood of increased grade below the oxidized zone. Similarly the accessory metals, cobalt and copper, should also increase in grade with depth.

3- The entire limestone mass is faulted and altered in the same manner, thereby furnishing an adequate host rock for a large disseminated nickel ore body.

The samples were taken by uniformly chipping the rock across the outcrop. Each sample contained at least 25 lbs. of material.

(g)- The geological report is incorporated under part 2(e).

3.- Accessibility of Project:

(a)- A member of the firm of Melbye and Merwin, Consulting Geologists, 1117 Washington Avenue, Golden, Colorado, CRestview 9-1542, will meet the DMEA representative.

The property is reached by traveling east from John Day, Oregon on U.S. Highway 26 for 5.5 miles; then south on the Pine Creek road for 2.5 miles; thence right following the winding road for 1.5 miles to the road junction at Dean Creek, which is on the property.

The property is accessible the year around for an ordinary automobile. Occasional snows, which do not stay on the ground all winter at this elevation, may temporarily hinder transportation.

(b)- The shipping, supply, and residence point is John Day, 9.5 miles away. The only railroad is one operated by a lumber company, which connects with Burns, Oregon, and thence to the public railroads.

4.- The Exploration Project:

(a)- The proposed exploration project, to test for commercial nickel mineralization, consists of BX diamond core drilling together with preparation of drill sites. Each hole is located on the geological map which graphically shows the relationship to geological features and property boundaries.

The applicant wishes to explore in two phases or stages; the first to determine whether there is a significant increase in nickel content with depth, and, if favorable, second to further delineate the mineralization with an average hole spacing of 175 feet. Each hole has been planned to intersect the dipping limestone beds roughly at right angles. In the locations, some consideration has been given to the terrain as some slopes are very steep and would entail excessive expense to construct drill sites.

The hole locations and specifications are as follows:

Phase 1

Hole No.	Bearing	Angle	Depth	Coordinates	
1	S20°E	-10°	500'	9,480N	11,580E
2	S15°E	-10°	500'	9,590N	11,890E
3	S10°E	-10°	600'	9,690N	12,200E
4	Due S	-10°	500'	9,550N	12,600E
5	Due S	-20°	400'	9,160N	12,310E
			2,500'		

Phase 2

Hole No.	Bearing	Angle	Depth	Coordinates	
6	S40°E	-15°	600'	9,300N	11,400E
7	S15°E	-10°	500'	9,520N	11,740E
8	S15°E	-10°	600'	9,680N	12,030E
9	Due S	-10°	500'	9,640N	12,400E
10	S40°E	-10°	500'	9,040N	11,600E
11	S20°E	-10°	400'	9,630N	11,100E
12	S20°E	-10°	400'	9,490N	10,730E
			3,500'		

The first phase is designed to drill the main limestone mass east of Dean Creek on wide spacings (roughly 400 feet). The second phase will fill in halfway between the first holes, as well as test the outcrop west of Dean Creek.

Technical supervision by the geological consulting firm of Melbye and Merwin will be provided to supervise drilling, log cores, and split core samples for assay. The entire length of each hole will be cored.

It is proposed that every 5-foot run be assayed for nickel, with every fifth sample also assayed for cobalt, copper, and gold.

Complete logs and maps will be prepared and drafted by Melbye and Merwin.

(b)- No access road to the project is required, but individual roads to each drill site must be prepared. These will consist of the minimum trail necessary to move in diamond drilling equipment.

(c)- The work will start within 30 days. Phase 1 will be completed within 4 months from the date of the contract. Phase 2, if approved, will be completed within 5 months from the date of approval. The applicant anticipates a drilling progress of 40 feet per day.

5.- Experience:

Lake Enterprises, Inc., headed by Jack E. Lake, has been engaged in base-metal mining and exploration near Helena, Montana, for the past year. These efforts have resulted in a presently successful operating mine. His business experience in this successful venture can be used to advantage in this new project.

Lake Enterprises, Inc. has always retained the firm of Melbye and Merwin to not only supervise the technical aspects of the Montana operations but the Berry nickel project as well. The staff of Melbye and Merwin have each had 5-10 years of exploration and operating experience for such major firms as; New Jersey Zinc Company, Anaconda Mining Company, and the Kennecott Copper Corporation. They have been

consulting geologists for the past 3½ years for such firms as Southern Pacific Railroad, Phelps Dodge Copper Corporation, and Wyoming Uranium Corporation.

6.- Estimate of Costs:

(a)- All work will be completed by independent contractors.

Phase 1

Diamond core drilling--BX--2500' @ $10/ft.------	$25,000
Technical Supervision (including all field expenses and map drafting)----------$1/ft.---	2,500
Bulldozing---50 hours @ $12/hr.----------	600
Phase 1 Total Independent Contracts	$28,100

Phase 2

Diamond core drilling--BX--3500' @ $10/ft.------	$35,000
Technical Supervision (including all field expenses and map drafting)----------$1/ft.---	3,500
Bulldozing---30 hours @ $12/hr.----------	360
Phase 2 Total Independent Contracts	$38,860
Total Phase 1 & 2 Independent Contracts	$66,960

(b)- Personal services have been included under 6(a), above.

(c)- Operating materials and supplies:

Phase 1

100 wooden core boxes @ $3 ea.----------	$ 300

Phase 2

140 wooden core boxes @ $3 ea.----------	420
Total Supplies	$ 720

(d)- None.

(e)- None.

(f)- None.

(g)- Miscellaneous.

Phase 1

Assays-- 500 nickel @ $3 ea.----------	$ 1,500
100 nickel, cobalt, copper, gold @ $10	1,000
Total Phase 1 Assays	$ 2,500

Phase 2

Assays-- 700 nickel @ $3 ea.----------	$ 2,100
140 nickel, cobalt, copper, gold @ $10	1,400
Total Phase 2 Assays	$ 3,500
Total Phase 1 & 2 Assays	$ 6,000

Recapitulation of Costs:

Total Cost--Phase 1----------	$30,900
Total Cost--Phase 2----------	42,780
Total Cost of Project----------	$73,680

7.- (a)- Lake Enterprises, Inc. is prepared to furnish 25% of the project cost, or $7,725 under Phase 1 and $10,695 under Phase 2, according to Sect. 7, of DMDA-Order 1, Amended.

(b)- The 25% share will be furnished by providing money.

Jack E. Lake

Jack E. Lake, President
Lake Enterprises, Inc.

2114 CURTIS STREET

TELEPHONE MAin 3-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5, COLORADO

Folio 6952

Date Jan. 17, 1957.

Mr. R. L. Peterson,
Western Engineering Co.,
Box 8,
Douglas, Wyoming.

OREGON NICKEL

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

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
						Nickel (Ni)	Cobalt (Co)	
Sample No. 1-A						0.17%		
2-A						0.18%		
3-A						0.14%		
4-A	0.01		0.05			0.29%	0.03%	
5-A						0.23%		
6-A						0.17%		
7-A	trace		0.03			0.12%	TRACE	
8-A						0.21%		
1-						0.20%		
2-						0.16%		
3-						0.29%		
4-						0.19%		
5-						0.16%		
6-	0.01		0.03			0.15%	TRACE	
7-						0.15%		
8-						0.17%		
X-	0.025					0.14%	TRACE	
Y-						0.30%		
Z-	trace					0.10%	TRACE	
~~101-~~						~~0.09%~~		
~~102-~~						~~0.18%~~		
~~201-Standard~~	~~0.02~~		~~4.48~~					
~~202-~~	~~trace~~		~~0.23~~			~~(copperglobe)~~		

.19

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 142.00

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

35196

BOOK 76 PAGE

KNOW ALL MEN BY THESE PRESENTS, That we, J. BOYD BERRY and HAZEL B. BERRY, husband and wife, for and in consideration of the sum of ONE DOLLAR to us in hand paid, and other valuable consideration, the receipt of which is hereby acknowledged, do hereby add to and supplement that certain agreement made and entered into on the 5th day of November, 1956, by and between ourselves, therein referred to as the "BERRYS" and RONALD C. BEGG and WILLIAM WRIGHT, therein referred to as the "PURCHASERS" (said agreement having been recorded on the 8th day of November, 1956, in Book 75 at Page 603 of the Records of Grant County, Oregon, and assigned by the PURCHASERS therein to R. E. HOLDREN and W. W. WISE) as follows, to-wit:

1) That the following described land is included in said Agreement:

   Lot One (1) Of Section Three, Twp. 14 S., R. 32, E., W.M.

   South Half of the South Half of the Southeast Quarter of Section 34, Twp. 13 S., R. 32 E.,W.M.

   South Half of the Southeast Quarter of the Southwest Quarter of Section 34, Twp. 13 S., R. 32 E., W.M.

2) That the Purchasers, RONALD C. BEGG and WILLIAM WRIGHT, and their assigns, R. E. HOLDREN and W. W. WISE , for and in consideration of this supplement do hereby covenant and agree that any irrigation ditches that may be damaged or destroyed as a result of the prospecting, drilling or mining operations on any of the property included in the original Agreement or this Supplement will be immediately repaired and restored to its former condition, provided however, that the PURCHASERS or their Assigns may, at their disgression, pipe by good and sufficient pipe, the water carried by said irrigation ditches, provided that the location and grade shall not change.

IN WITNESS WHEREOF the parties have hereunto set their hands and seals this the 17th day of December, 1956.

Accepted by:

W. W. Wise

R. E. Holdren

Hazel B. Berry (SEAL)

J. Boyd Berry (SEAL)

Ronald C. Begg (SEAL)

William Wright (SEAL)

35196 . 193

STATE OF OREGON }
County of Grant } ss.

On this 17 day of December, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named J. BOYD BERRY and HAZEL B. BERRY, husband and wife, and RONALD C. BEGG and WILLIAM WRIGHT, who are known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Notary Public for Oregon
My Commission Expires:

STATE OF OREGON }
County of Grant } ss.

I hereby certify that the within instrument was filed for record on this 11 day of Jan A.D., 19 57 at 3:20 o'clock P M., and is duly recorded in Book 76 of Deeds at Page 192 to 193 inclusive.

Witness my hand and official seal

John Livelra, County Clerk

By Elma Campbell Deputy

Fees $

INVALID

OFFICIAL FILE COPY
D M E A
RECEIVED SEP 3 1957

DATE	INITIALS	CODE

THIS AGREEMENT Made and entered into in triplicate this 5th day of November, 1956, by and between J. BOYD BERRY and HAZEL B. BERRY, husband and wife, hereinafter referred to as the "BERRYS", and RONALD C. BEGG and WILLIAM WRIGHT, hereinafter referred to as the "PURCHASERS".

W I T N E S S E T H -

That for and in consideration of the mutual covenants herein contained and the payments herein recited, the BERRYS agree to sell and the PURCHASERS agree to purchase the following described real property in Grant County, Oregon, to-wit:

Lots Three and Four, Sec. 2, Tp. 14 S., Range 32, E., W. M.

upon the following terms and conditions:

1) For the total purchase price of $150,000.00 as hereinafter provided.

2) That the PURCHASERS have paid to the BERRYS the sum of $1.00 and other valuable consideration as the down payment hereunder, the receipt of which is hereby acknowledged by the BERRYS.

3) That the balance of said purchase price in the amount of $149,999.00 is to be paid by the PURCHASERS to the BERRYS at the rate of 5% of the smelter returns from any minerals mined from the above described real property. Provided however, that the PURCHASERS do hereby covenant and agree that at least the sum of $5,000.00 will be paid on or before two years from the date hereof, and at least an additional sum of $10,000.00 on or before five years from the date hereof, and the balance of $134,999.00 on or before twenty years from the date hereof.

4) That the parties hereto do hereby make, constitute and appoint the GRANT COUNTY BANK at John Day, Oregon their escrow agent. That said escrow agent's liability hereunder is limited to the strict accounting of funds and the safe-keeping of instruments.

5) That when the payment of $5,000.00 is made hereunder, then the BERRYS will execute and deliver to the escrow agent a good and sufficient warranty deed conveying the above described real property to the PURCHASERS or their assigns, free and clear of all liens and encumbrances, and that when the total purchase price in the amount of $150,000.00 is paid in full, then and in that event said escrow agent is to deliver said warranty deed to the PURCHASERS, or their assigns. That in the event that said agreement is assigned by the PURCHASERS after said deed is placed in escrow, the BERRYS do hereby covenant and agree to substitute an appropriate warranty deed.

6) That the BERRYS do hereby covenant and agree that they are the owners of the above described real property, and that they have good right to sell the same.

7) That when the purchase price is paid in full, the BERRYS do hereby covenant and agree to deliver to the PURCHASERS, or their assigns, an abstract of title showing the BERRYS, or their successors in interest, to be the owners in fee simple of the above described real property, free of all liens and encumbrances.

8) That all payments from smelter returns are to be made to the BERRYS by the PURCHASERS, or their assigns, on the 10th day of each month for all smelter returns received during the previous calendar month. That said payments are to be endorsed by the escrow agent upon its copy of this agreement; all payments are to be made through said escrow agent. If any payment hereunder becomes delinquent, then said payment or payments shall bear interest at the rate of six per cent per annum from the date of the delinquency.

9) That prior to the payment of the purchase price in full, and the delivery of the Warranty Deed to the PURCHASERS or their assigns, the said PURCHASERS, or their assigns, the immediate right to go upon the above described premises to explore, prospect and develop any minerals of any nature or descriptions, and incidental thereto, shall have the right to construct a mill upon the above described premises.

10) That the BERRYS do hereby give and grant unto the PURCHASERS, or their assigns, the right to develop the two springs located in the SW¼ of Section 34, Tp. 13 S., R. 32 E., W.M., to be used in said exploration, prospecting and developing of any mining operations, provided however that the BERRYS shall have the right to use the waste water from said mining operations for the irrigation of their ranch property.

11) That the BERRYS do hereby give and grant unto the PURCHASERS, or their assigns, the right to use the existing road from Pine Creek to the above described property, provided however, that the PURCHASERS, or their assigns, do hereby covenant and agree to keep said road in a good passable condition for the use of passenger automobiles, and that if said road is used by the PURCHASERS, or their assigns, heavy equipment, then the PURCHASERS, or their assigns, will gravel said road.

12) That the PURCHASERS do hereby covenant and agree to pay any additional taxes assessed against the above described real property by virtue of its mining operations and that the BERRYS do hereby reserve the right to graze the above described land for their livestock during the term of this agreement.

13) That the PURCHASERS, or their assigns, do hereby covenant and agree that they will not allow any liens or encumbrances to attach to or accrue against the above described real property.

14) That in the event the PURCHASERS, or their assigns, abandon their mining operations upon the above

described real property during the term of this Agreement, then and in that event the PURCHASERS, or their assigns, do hereby covenant and agree to execute and deliver to the BERRYS a quit claim deed remising and releasing any interest of the PURCHASERS or their assigns, in the above described real property, and that the PURCHASERS, or their assigns, shall have a period of 90 days in which to remove their equipment, including mining fixtures, from the above described premises.

15) That time and specific performance is the essence hereof and that should the PURCHASERS, or their assigns, fail to make any of the payments due hereunder, or violate any of the provisions herein contained, then and in that event, the BERRYS at their option, may:

(1) Declare this agreement null and void.

(2) Declare the whole unpaid balance of said purchase price with interest thereon immediately due and payable and/or

(3) Foreclose this contract by a suit in equity.

Provided however, that neither party hereto may declare a default under this agreement without first giving 30 days written notice during which period of time said party may correct the matter complained of and reinstate this agreement.

16) That the above described remedy is not deemed to be exclusive and that either party hereto may pursue any other remedy available to them in a Court of law or equity.

17) That the waiver of any default hereunder shall not be deemed to constitute the waiver of any subsequent default.

18) That in the event that either party hereto finds it necessary to bring a suit in equity or an action at law to collect any monies due hereunder, to enforce any of the provisions herein contained or to foreclose this agreement, then and in that event the prevailing party shall be entitled to recover from the other party any sum that a Court of competent jurisdiction shall award as a reasonable attorney fee.

19) That this agreement shall bind equally the heirs, executors, administrators and assigns of the parties hereto, and that the PURCHASERS may assign this agreement without the permission of the BERRYS.

IN WITNESS WHEREOF, The parties have hereunto set their hands and seals this the day and year first above written.

Hazel Berry (SEAL)

J Boyd Berry (SEAL)

Ronald C Begg (SEAL)

William Wright (SEAL)

STATE OF OREGON)
) ss.
County of Grant)

On this 5th day of November, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named J. BOYD BERRY and HAZEL B. BERRY, husband and wife, and RONALD C. BEGG and WILLIAM WRIGHT, who are known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Evelyn Cates
Notary Public for Oregon 26-59
My Commission Expires 12-15-58

KNOW ALL MEN BY THESE PRESENTS That we, RONALD C. BEGG and GEORGINA L. BEGG, his wife, and WILLIAM WRIGHT, a single man, for and in consideration of the sum of ONE DOLLAR to us in hand paid, do hereby assign, transfer and set over unto R. E. HOLDREN and W. W. WISE, all of our right, title, equity, lien and interest in and to that certain agreement dated the 5th day of November, 1956, by and between J. BOYD BERRY and HAZEL B. BERRY, therein referred to as the "BERRYS" and RONALD C. BEGG and WILLIAM WRIGHT, therein referred to as the "PURCHASERS", said agreement having been recorded on the 8th day of November, 1956, in Book 75 at Page 603 of the Deed Records of Grant County, Oregon.

That this Assignment is conditioned as follows:

1) That HOLDREN and WISE do hereby covenant and agree to pay unto BEGG and WRIGHT the sum of $50,000.00 as further consideration for said assignment, all in the following manner: (A) The sum of $5,000.00 on or before November 5, 1958. (B) $5,000.00 on or before November 5, 1961, and a like sum on or before the 5th day of each and every year thereafter until the entire purchase price of the assignment has been paid. That a 1% royalty from any minerals mined from the premises described in the agreement shall be applied upon the $50,000.00 purchase price and each payment thereof. Said royalties shall terminate as of the date the purchase price shall have been paid in full. If the BERRY agreement shall be abandoned, payments hereunder may be forthwith terminated with BEGG and WRIGHT retaining all payments made to date, but with no right to enforce collection of that portion of the purchase price not then due.

2) That BEGG and WRIGHT shall have six months from the date hereof in which to place in escrow with the Grant County Bank a bargain and sale deed conveying Lots Three and Four, Section 2, Tp. 14 S., R. 32 E., W.M. to HOLDREN and WISE, and HOLDREN and WISE shall have the same period of time in which to place in escrow with the Grant County Bank at John Day, Oregon a quit claim deed remising and releasing their interest in said property in the event that they fail to perform or default under the agreement of November 5, 1956.

3) That a copy of this assignment shall be delivered to the Grant County Bank as escrow agent and all payments made hereunder shall be made to said escrow agent.

4) That the Assignees, R. E. HOLDREN and W. W. WISE, do hereby covenant and agree that they will faithfully perform and keep all of the covenants and agreements imposed by the contract of November 5, 1956, upon BEGG and WRIGHT.

5) That any notice of default given under the contract of November 5, 1956, shall be delivered promptly to BEGG and WRIGHT and that any default claimed by the BERRYS shall be corrected by HOLDREN and WISE within a period of twenty (20) days in order to allow BEGG and WRIGHT the ten day period in which to correct said default in the event that HOLDREN and WISE fail to perform.

STATE OF NEVADA,)
) SS.
COUNTY OF ELKO.)

On this 20th day of November, 1956, personally appeared before me, a Notary Public in and for said County and State, R. E. HOLDREN and W. W. WISE, known to me to be the persons described in and who executed the foregoing instrument, and acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year in this Certificate last above written.

Phyllis R. Wilson
NOTARY PUBLIC

MY COMMISSION EXPIRES
OCTOBER 18, 1957

5) That this agreement shall bind equally the heirs, executors, administrators and assigns of the parties hereto, and that the Assignees may assign this agreement without the permission of BEGG and WRIGHT.

IN WINTESS WHEREOF, The parties have hereunto set their hands and seals this the day and year first above written.

Ronald C. Begg (SEAL)

Georgina L. Begg (SEAL)

William Wright (SEAL)

R. E. Holdren (SEAL)

W. W. Wise (SEAL)

STATE OF OREGON }
County of Grant } ss.

On this 13th day of November, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named RONALD C. BEGG and GEORGINA L. BEGG, his wife, and WILLIAM WRIGHT, who are known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Notary Public for Oregon
My Commission Expires: 10-18-58

STATE OF OREGON }
County of Grant } ss.

On this ___ day of November, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named R. E. HOLDREN and W. W. WISE, who are known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Notary Public for Oregon
My Commission Expires:

OPTION

THIS OPTION made and entered into and granted this 11th day of June, 1957, by R. E. HOLDREN and HAZEL M. HOLDREN, his wife, and W. W. WISE and VIOLET WISE, his wife, all of the City of Elko, Nevada, hereinafter referred to as "Optionors", and LAKE ENTERPRISES, INC., a Utah corporation, hereinafter referred to as "Company",

W I T N E S S E T H:

For and in consideration of TEN DOLLARS ($10.00) and other good and valuable consideration, the Optionors hereby grant to the Company the exclusive right, option, and authority to explore, develop, drill, or otherwise investigate properties located in Grant County, Oregon, more particularly described as follows:

Lots 3 and 4, Section 2, Township 14 South,
Range 32 East, W. M.

Said option shall be for a period of sixty (60) days and if the Company commences its exploration, drilling, or other engineering work on said property within said sixty day period, then the Company shall have the additional period of one hundred twenty (120) days in which to complete, and within said one hundred twenty day period shall have the right, option, and authority to purchase and acquire said property pursuant to the terms contained in a Contract to Give Assignment dated this 14th day of June, 1957, between the above mentioned parties, a copy of which is attached hereto, provided, however, the payment recited in paragraph I of said Contract to Give Assignment requiring payment of $5,000.00 on or before November 1, 1957, shall be paid at the time of the exercise of this option.

Executed in triplicate this 30 day of June, 1957.

R. E. Holdren
R. E. HOLDREN

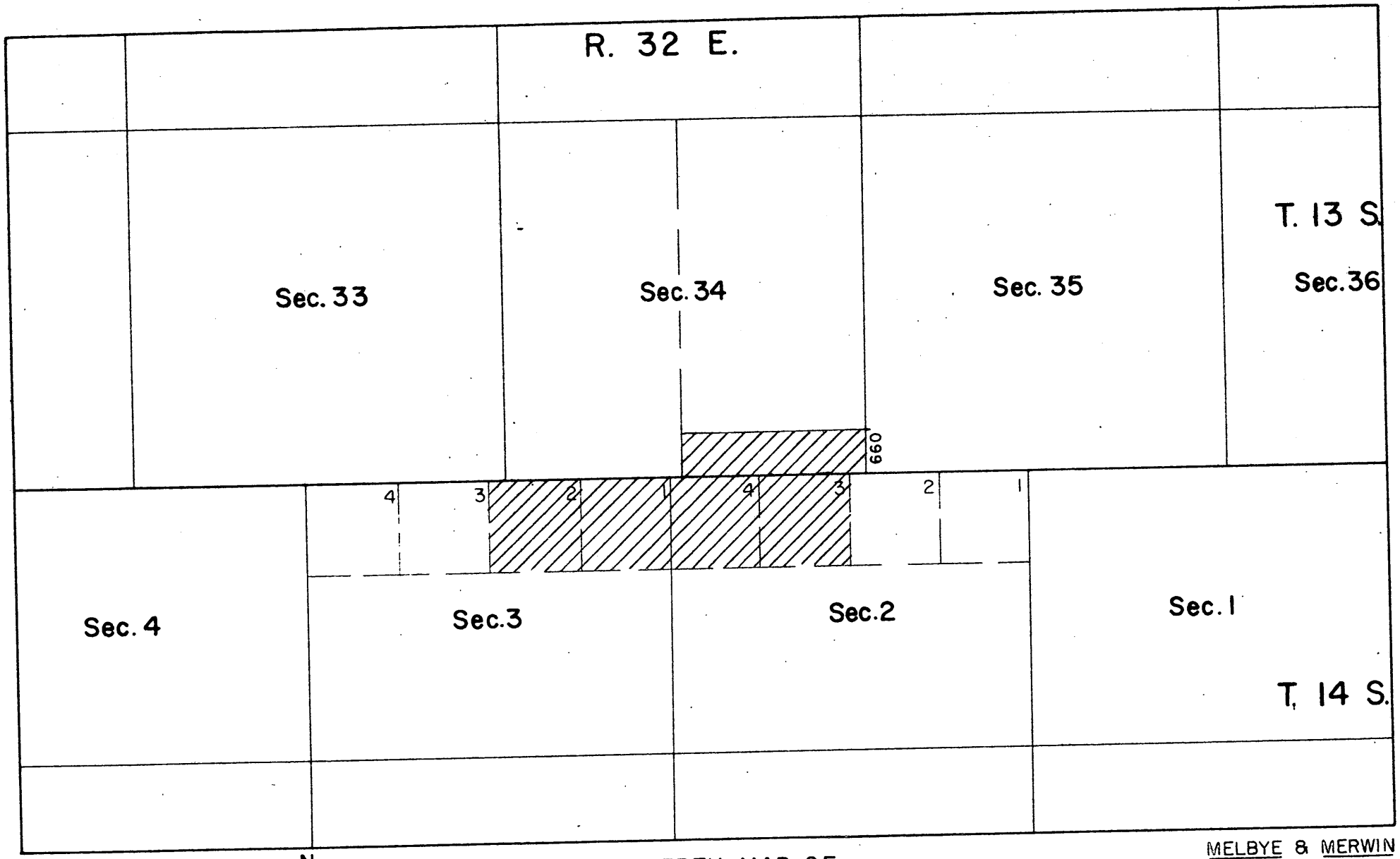
Hazel M. Holdren
HAZEL M. HOLDREN

W. W. Wise
W. W. WISE

Violet Wise
VIOLET WISE

LAKE ENTERPRISES, INC.

BY: Jack E. Lake
President



MELBYE & MERWIN

N

PROPERTY MAP OF
BERRY PROSPECT

GRANT COUNTY, OREGON
Scale: 1" = 2000'

Plate No 1

. Government Messenger Envelope

Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one at a time.
2. Void previous block.
3. Write clearly.

ME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
n Chamberlain DMEA	RUN STOP		RUN STOP
	RUN STOP		RUN STOP
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plus envelopes to
oom for reissue.

Use other side

Use RUN and STOP only when messenger service between Government buildings in Washington is required.
Your mail room has RUN and STOP information.

	STOP		STOP
	RUN		RUN
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	STOP		STOP

Use other side first

A Form 7
(2-56)

OFFICIAL FILE COPY

Date	Surname	Code
4/2	Martin	400
4/2	Selfridge	220
		~~110~~
4/3	C	220
		400
		225

APR 3 1959

Hon. Frank Church
United States Senate
Washington 25, D. C.

Dear Senator Church:

Your letter of March 19, 1959, addressed to the Administrator, Defense Minerals Exploration Administration, has come to the undersigned for reply as the Office of Minerals Exploration is the successor agency to DMEA. Enclosed with your letter was a letter to you of March 12, 1959, from Mr. Solon B. Clark, 724 N. E. 68th Avenue, Portland, Oregon, inquiring about the "Berry Nickel Property", near John Day, Grant County, Oregon.

We believe that your correspondent's inquiry refers to an application for exploration aid, our Docket No. DMEA 4823 - Nickel. The owners of the property of the same name (in secs. 2 and 3, T. 14 S., R. 32 E., and sec. 34, T. 13 S., R. 32 E., W. M.) were Mr. J. Boyd Berry and his wife, Mrs. Hazel Berry, for whom we have no address except John Day, Grant County, Oregon.

It would be entirely proper for you to refer Mr. Clark to Mr. and Mrs. Berry for any information that they may care to give him about their property.

We should like to define for Mr. Clark's benefit the policies that were followed with regard to DMEA applications. The Department did not issue to the public any information which would reveal the identity of individual applicants when the applications for aid were received. When exploration contracts were executed, the Department issued press releases giving the name of the operator, the minerals involved, the county and State in which the project was located, the total amount involved, and the cost of Government participation.

However, no information was disseminated publicly whenever financial assistance was denied. The applicant alone received notification in this event. The Department rigidly followed this policy because a public statement to the effect that an application for a loan had not been approved would very likely result in an inference that the property was of little worth, whereas in practice the denial of an application did not preclude resubmission for the same property if new data became available. An appreciable number of applications were

8623

denied on grounds other than the improbability of making a significant discovery, such as lack of sufficient information, disagreement as to method of exploration, an applicant's lack of funds to carry out the work, or for other reasons. This policy was followed purposely to protect the applicant's interest.

Enclosed for your files, as you requested, is Mr. Clark's letter.

Sincerely yours,

Frank E. Johnson

Acting Director

Enclosure

WSMARTIN:FEJOHNSON:foc
April 2, 1959
cc to: Code 400
Director
Director's Read. File
FT. REG. I (2)
J. H. Bilbrey, USBM
T. H. Kiilsgaard, USGS

United States Senate

MDM

Respectfully referred to
Administrator
Defense Minerals Exploration Adm.
Dept. of Interior
~~Washington 25, D. C.~~

with thanks for such favorable consideration as the communication herewith submitted warrants, and for a report thereon, to accompany return of inclosure.

By direction of

Frank Church

3-19-59 (Mrs. Barnes)

1806142

phoned Mrs Barnes and told her we were working on this 3/31/59 WSM

OFFICIAL FILE COPY. S. S. O. M. E.
RECEIVED MAR 3 1959

DATE		
3/31		200
3/31	WSM	400

C

NAT. RES.

Portland, Oregon
March 12, 1959

Honorable Frank Church
U. S. Senator
U. S. Senate
Washington, D. C.

Dear Frank:

Thanks for your letter of February 12th and the enclosures. They were very helpful.

I personally contacted the Office of Minerals Exploration Executive Officers in Spokane, Washington.

There has been an application made to them under the old act (Title 30, Mineral Resources, Chapter 3, Part 301); they advise me that this application was rejected, but that the information they had was secret and they could give me none of the details either as to the parties making the application or the reason for its rejection.

I would like to make an application on the same property under the new law, but as it will take a considerable amount of effort on my part, and my remuneration will be contingent, I do not like to try it again unless I have some hope of success.

If the information is highly secret, I, of course, have no desire to impose upon the Governmental Agencies interested, but I cannot see why they could not tell me the reason or reasons for the rejection of the old application, or at least advise me as to who made the application.

I am unofficially advised that the rejection is caused on account of the financial set-up of the previous owner and applicant and not on account of the potential value of the property.

Would it be imposing upon you too much to see if I cannot get this information prior to spending my time and my client's money in what might be a useless effort. The property is known as the "Berry Nickel Property", in Sections 2, 3 and 34, Townships 14 and 13 South, Range 32 East, in Grant County, Oregon, containing 200 Acres, and near the town of John Day, Oregon.

Frank, if the Government Geologists have examined this property and have concluded that it is not worth prospecting any further, I am unable to see why they cannot give me this information; I thought that is what they were for.

Honorable Frank Church March 12, 1959

I surely would appreciate any information you are able to get for me, and with kindest regards and best wishes; to you and yours,

Sincerely,

SOLON B. CLARK
724 N. E. 68th Avenue
Portland, Oregon

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1-15	Chapman	400
1-15	Martin	400
1-20	Davis	USBM 130
1/22	Selfridge	130
1/22	Brown	110
"	Mittendorf	100
1/22	glb	220
		225

1/22 Kiilsgaard 130
1/21 McNichols 130

JAN 22 1958

Lake Enterprises, Inc.
2024 Laird Drive
Salt Lake City, Utah

Re: Docket No. DMEA 4823 - Nickel
Berry Prospect
Grant County, Oregon

Gentlemen:

Your application for aid for an exploration project and other data available to us in Washington concerning the above-referenced property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of our information, although noting nickel mineralization on the Berry Prospect group of claims, indicates to us that the probability of disclosing significant nickel ore reserves is not sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing this property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

SPHOLT/dlm 1-15-58
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1-15	Chapman	400
1-15	Hearting	400
1-20	David	140

January 15, 1958

MEMORANDUM:

To: Administrator, DMEA

From: Division of Iron and Ferro-Alloys, DMEA

Subject: Denial of request for exploration assistance in the amount of $73,680.00
Docket No. DMEA 4823 - Nickel
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon

Denial of the subject application is recommended by this Division based on the following information:

(1) The Applicant, Lake Enterprises, Inc., 2024 Laird Drive, Salt Lake City, Utah, requested exploration assistance in the amount of $73,680.00 for diamond core drilling.

(2) The Applicant controls, through an option and sub-lease from R. E. Holdren, Hazel M. Holdren, W.W. Wise and Violet Wise, of Elko, Nevada, by a sub-lease from R. C. Begg and William Wright, of John Day, Oregon, who held the prime lease from the owners, J. B. Berry and Hazel Berry, the following:

Lots 3 and 4 in sec. 2, T. 14 S., R. 32 E., W. M., Grant County, Oregon.

The Applicant also claims control of the following land, purchased by R. C. Begg and William Wright and assigned to R.E. Holdren and W. W. Wise, but there is no evidence accompanying the application to show that rights in the property have been assigned or leased to the Applicant:

Lots 1 and 2, sec. 3, T. 14 S., R. 32 E., W.M., and the S½, S½, SE¼, sec. 34, T. 13 S., R. 32 E. W. M., Grant County, Oregon.

(3) The proposed program is to explore the nickel deposits on the Berry Prospect lands by a series of long diamond drill holes, inclined slightly below the horizontal.

(4) In the area of the Berry Prospect nickel occurs in the form of garnierite as small, low grade disseminations in serpentine altered to

silica-carbonate rock and to some extent in unaltered serpentine.

(5) The Field Team, concurring with the conclusion of its examiners that the chance of an appreciable increase in the nickel content at depth is geologically improbable, recommends that the application be denied.

The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

W S Martin

W. S. Martin, Director
Division of Iron and Ferro-Alloys

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 9 1958

DATE	INITIALS	CODE
1/9	gb	220
	WSM	400

January 8, 1958
Re: DMEA 4823
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon
$73,680.00 - Nickel

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Supplement to review of Field Team Report of January 2, 1958. The review is mislabled "Review of application".

Mr. T. P. Thayer whose mapping is mentioned on page 2 of the Examiners' Report was consulted regarding the classification of the rock called limestone in the application. Mr. Thayer agrees with the conclusion of the examiners that the outcropping reddish orange silica-carbonate rocks are not derived from limestone and are not underlain by sulfide-bearing rock. He has seen numerous examples of fresh 'carbonatized' serpentine in the general area and sulfides are practically lacking in such rocks.

Again I concur with the recommendation of the examiners and Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 20 1957

DATE	INITIALS	CODE
12/20	gb	220
12/23	[illegible]	130
12/23	C	220
12/23	WSM	400

December 16, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4823 (Nickel)
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon

Dear Mr. Selfridge:

Enclosed are three copies of a memorandum examination report on the subject property by Howard F. Albee, Geologist, U. S. Geological Survey and G. G. Waddell, Mining Engineer, U. S. Bureau of Mines.

The basement complex has been intruded by peridotite and dunite, partly altered to serpentine which, in turn, appears to have been altered to a silica-carbonate rock. Nickel, probably in the mineral garnierite, occurs as a low grade dissemination in the silica-carbonate rock and to some extent in the unaltered serpentine. The assays of 18 samples of the silica-carbonate rock taken by the applicant range from 0.12 to 0.29 percent nickel and average 0.18 percent nickel. These results compare favorably with the assays of 7 samples of the silica-carbonate rock taken by the examiners and assayed by Peter Mack of Wallace, Idaho and the U. S. Bureau of Mines laboratory at Albany, Oregon, which range from 0.11 to 0.22 percent nickel and average 0.155 percent nickel. The assay of one sample of unaltered serpentine taken by the applicant is 0.30 percent nickel which also compares favorably with a serpentine sample taken by the examiners from a different locality which assayed 0.26 percent nickel by Peter Mack and 0.31 percent nickel by the U. S. Bureau of Mines laboratory.

ON-SITE EXAM

Albee and Waddell conclude that an appreciable increase in the nickel content at depth is geologically improbable and, therefore, they recommend that the application be denied.

Reviewed by
DMEA OPERATING COMMITTEE
12-23-57
(date)

We concur with this recommendation.

By Field Team, Region I

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USGS (SRO)
Albee

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 20 1957

DATE	INITIALS	CODE
12/23	JB	130
		220

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

December 3, 1957

MEMORANDUM

To: DMEA Field Team, Region I

From: Howard F. Albee, Geologist, U. S. Geological Survey, and G. G. Waddell, Mining Engineer, U. S. Bureau of Mines

Subject: Examination report, Docket No. DMEA-4823 (Nickel), Lake Enterprises, Inc., Berry Prospect, Grant County, Oregon

INTRODUCTION AND SUMMARY

Lake Enterprises, Inc., applied on August 23, 1957, to DMEA for assistance to explore for nickel on subleased fee land consisting of lots 3 and 4, sec. 2, and lots 1 and 2, sec. 3, T. 14 S., R. 32 E. Willamette meridian, and the S½S½SE¼ sec. 34, T. 13 S., R. 32 E. Willamette meridian. The proposed work consists of 6,000 feet of diamond core drilling in two stages at a total cost of $73,680.

The property was examined on October 15, 1957, by Howard F. Albee, Geological Survey, and G. G. Waddell, Bureau of Mines. About 6 hours were spent on the property and 8 samples were taken. The examining team was accompanied by Charles E. Melbye, representing the applicant, and Kenneth Purdy, geologist from Climax Molybdenum Company.

The property lies about 8 miles southeasterly from John Day, Oregon, on the northern edge of the Strawberry Range. Nickel is found in an irregular mass of silica-carbonate rock as well as in adjoining serpentine and peridotite. The silica-carbonate rock is in an area of chromium-bearing, partly serpentinized peridotites which have intruded a basement complex of metavolcanic, sedimentary, and igneous rocks of Paleozoic age.

CONCLUSIONS AND RECOMMENDATIONS

The nickel on the property is thought by the examining team to have been associated originally with olivine in peridotite. The peridotite was serpentinized and the serpentine was later

Reviewed by
DMEA OPERATING COMMITTEE
12-23-57
(date)

hydrothermally altered to silica-carbonate rock with a resulting impoverishment of the nickel. The nickel content of all samples is much below ore grade and as an appreciable increase in nickel with depth is geologically improbable, denial of the application is recommended.

LOCATION, ACCESSIBILITY, AND DESCRIPTION

The property is southeast from John Day, Oregon, at an altitude of 3,800-4,400 feet above sea level. Following is a road log to the Berry Prospect: Travel U. S. Highway 26 east from the Anchor Motel at John Day 5.8 miles; turn right and travel over secondary road 2.5 miles; turn right (west) and travel 1.1 miles; and turn left at "Y" and travel 1.0 mile to Dean Creek which is on the property. The last 2 miles of road are unimproved and may become too muddy in the spring for passenger cars. All of the property lies on private land just outside the Malheur National Forest.

Surface work is hampered in the winter by moderate to heavy snowfall and cold weather which might cause some delays. The hills are well-covered with juniper and other scrub trees.

GEOLOGY

The property lies on the northern flank of the Strawberry Range which is eroded from an east-west anticline between the John Day syncline on the north and a broad structural basin on the south. In the region of the property the anticline is symmetrical and the dips in the Tertiary rocks on both flanks are between 30° and 60°.

The oldest rocks of the district are a basement complex of Paleozoic age or older that consists of metavolcanic, sedimentary, and igneous rocks. The Mesozoic rocks consist mainly of sandstone, shale, chert, and limestone beds. Peridotite and dunite, partly altered to serpentine, intrude both the basement complex and the Mesozoic rocks.

The nickel is in a silica-carbonate rock that T. P. Thayer, (Mineral Investigations Field Studies Map MF31, 1956) has mapped as part of the basement complex. The silica-carbonate rock forms mainly a west-trending precipitous ridge terminated on the west by a stream valley (pl. 1). To the west of the stream valley is a smaller remnant of silica-carbonate rock that forms a southwest-trending steep-sided hogback. To the east of the ridge and to the southwest of the hogback the rocks are peridotite and serpentinite. The remainder of the area surrounding the silica-carbonate rock consists of landslide material and alluvium. The float, however, indicates that peridotite and serpentinite may surround the area.

The silica-carbonate rock is a moderate reddish orange color on most fresh surfaces and weathers to a dark yellowish orange to light brown. In places a limonitic boxwork, from about an inch to several inches thick, is abundant, much of which apparently was derived from the oxidation of ferro-magnesian minerals. Some limonite may have been derived from sulfides but no recognizable sulfides were seen in the fresher rocks during the examination.

Because of the intense silicification that has caused a network of veinlets throughout most of the rock, and the innumerable shears and fractures, dips and strikes are hard to obtain. In general, however, the rocks strike in an arc from northeast to north to southeast and dip from 45° to 80° northerly (pl. 1).

Several small pluglike masses and two sill-like masses of serpentine were seen cropping out within the silica-carbonate rock. The sills and the silica-carbonate rock were strongly faulted in the planes of contact. Numerous other faults were seen along apparent bedding planes and still others were seen at high angles to the bedding and striking in many directions.

Small concentrations of a light-green material, presumed by the applicant to be a nickel mineral, were seen throughout the silica-carbonate rock. A greater concentration of the green material is commonly in and near many of the faults. The material occurs as blebs within massive rock, as coatings on fracture surfaces, and in a very few places it was seen apparently associated with tiny veinlets of quartz. The small blebs of the material are a very pale green, while that on fracture coatings is a light green. It appears to be amorphous and has a hardness of about 3-3.5. It would seem more likely to be garnierite than annabergite as suggested in the application; however, as a selected sample containing considerable green material shows no better assay than a sample with little or no green, it is doubtful that the green material is nickel. Negative results from chemical and bead tests bear this out.

The applicant calls the host rock silicified limestone. Although the cliff-forming and weathering characteristics of the rock are those of a limestone, the authors believe the rock to be hydrothermally altered serpentinized peridotite and analogous to the host rock of the Mount Vernon nickel-gold deposits described by S. W. Hobbs and W. T. Pecora in Geological Survey Bulletin 931D, 1942.

T. P. Thayer's map shows no limestone on the applicant's property although he mentions the occurrence of some crystalline limestone near Dog Creek about 2 miles to the west. Examination by microscope of many samples of the rock from the property shows no relict textures or minerals that would lead to the belief that it was silicified limestone.

The evenly distributed, although extremely low, values of nickel would not be expected if the rocks were silicified limestone, whereas an even distribution of values would be expected in rocks derived from peridotites as the nickel probably would have been tied up in the olivine. The apparent impoverishment in nickel values of the silica-carbonate rock relative to the adjacent serpentinite bears out the theory of hydrothermal alteration. The highest assays were from samples from serpentinite and the lowest were from samples along a prominent fault. Hydrothermal solutions, rising through and altering the serpentine, probably removed part of the nickel, and in zones of the greatest permeability where the largest volume of solutions would pass, the most nickel would be removed.

The applicant submitted 18 assays from the silica-carbonate rock that ranged from 0.12 to 0.29 percent nickel and averaged arithmetically 0.18 percent nickel. The assays were from chip samples taken completely across the outcrop at 100-foot intervals and would seem to be representative of the total outcrop. Samples taken across such widths, however, will not show the higher or lower grade parts of the outcrop. One other assay submitted was from serpentine and it ran 0.30 percent nickel.

The limonite boxworks indicate oxidation and leaching at the surface. The depth of the oxidation and leaching is not known, but if the leaching represents removal of nickel-bearing material, then below the zone of oxidation the grade should be increased. It is doubtful that such an increase in grade would be caused by secondary enrichment although this is possible. More probably it would represent only the original nickel content of the rock. As it is believed the original nickel content of the silica-carbonate is no more and probably less, than that of the surrounding country rock, the increase would be negligible.

The assay results of the samples taken by the applicant are:

Sample No.	Percent nickel	
1A	0.17	(Silica-carbonate)
2A	0.18	" "
3A	0.14	" "
4A	0.29	" "
5A	0.23	" "
6A	0.17	" "
7A	0.12	" "
8A	0.21	" "
8	0.17	" "
7	0.15	" "
6	0.16	" "
5	0.16	" "
4	0.19	" "
3	0.23	" "
2	0.16	" "
1	0.20	" "
M	0.14	" "
Z	0.19	" "
X	0.30	(Serpentine)

The samples taken by the examining team were assayed by two separate assayers. The results are:

Sample No.	Type	Width (feet)	Description	Peter Mack % Ni	USBM % Ni
CGW-20A	Chip	350.0	S-C*	0.15	0.22
21A	Channel	3.0	S-C FW fault	0.12	0.17
22A	"	1.5	S-C In fault	Tr	0.09
23A	"	2.0	S-C FW fault	None	0.05
24A	Chip	10.0	Serpentine Plug	0.26	0.31
25A	"	500.0	Mostly S-C	0.11	0.17
CGW-1B	"	200.0	S-C Below Rd.	0.13	0.13
2B	"	10.0	S-C Near Serp.	0.13	0.12
			Average	0.13	0.18

*Silica-carbonate rock

All sample locations and the assay results of the examining team samples are shown on plate 1.

A comparison of the applicant's assay results with those taken by the field examiners indicates that the rock is fairly uniform in nickel content, ranging from 0.13 to 0.18 percent nickel. The examiners' sample of fresh serpentine which assayed 0.26 and 0.31 percent nickel checks very closely with the applicant's serpentine sample, taken from a different outcrop which assayed 0.30 percent nickel.

PROPERTY RIGHTS

Lake Enterprises, Inc., has control of certain property in Grant County, Oregon, through an option and sublease from R. E. Holdren, Hazel M. Holdren, W. W. Wise, and Violet Wise of Elko, Nevada, to-wit: lots 3 and 4, sec. 2, T. 14 S., R. 32 E. W.M. Holdren-Wise have a sublease from R. C. Begg and William Wright of John Day, Oregon, who, in turn, have the prime lease from J. B. and Hazel B. Berry who own the land and mineral rights. Copies of these agreements were attached as "Exhibit A" accompanying the application.

The applicant also claimed control of the following property: lots 1 and 2, sec. 3, T. 14 S., R. 32 E. W.M., and the S½S½SE¼ of sec. 34, T. 13 S., R. 32 E. W.M. This property was purchased by R. C. Begg and William Wright and assigned to R. E. Holdren and W. W. Wise; however, there were no copies of any such property rights having been leased by Lake Enterprises, Inc., accompanying this application.

All of the property examined lies within the boundaries of lots 3 and 4 as described and assigned to the applicant except the limestone below the road where sample CGW-1B was cut.

The field examiners did not ask the applicant to obtain a consent to lien but informed them that it might be requested later.

THE APPLICANT

Lake Enterprises, Inc., has been successful in a mining operation in Montana during the past year. The corporation retains Meltzye and Merwin, consulting geologists of Golden, Colorado, to supervise the technical aspects of its mining operations.

AVAILABLE MANPOWER AND SUPPLIES

The shipping, supply, and resident point is John Day, Oregon, 9.5 miles away where there is usually ample manpower available. Although bulldozers can be rented there, a diamond drill contractor would probably have to come from Prineville, Oregon, or Boise, Idaho.

The only railroad is a private one operated by a lumber company from John Day to Burns, Oregon (70 miles) where it connects with a public railroad.

APPLICANT'S PROPOSAL

The applicant wishes to explore in two stages as follows:

Stage I is to determine whether there is a significant increase in nickel content with depth to make the deposit commercially interesting. Five diamond drill holes at spacings of approximately 400 feet and totaling 2,500 feet of drilling have been proposed to accomplish this at a cost of approximately $30,900.

Stage II was planned to commence only if the applicant and the Government believed Stage I to be successful. Diamond drilling at a closer interval (200 feet) was proposed to further delineate the mineralization. For this, 7 holes totaling 3,500 feet of drilling were allowed at an estimated cost of $42,780. This would make the total estimated cost of the contract $73,680.

DISCUSSION OF APPLICANT'S PROPOSAL

The applicant has had an adequate study made of the property in preparation for an exploration project, although its conclusion drawn from this study differs from those of the field examiners.

The exploration program has been well-planned and adapted to the topography although the holes may be too deep (500 feet) for Stage I. Also, the holes were designed too flat, having a dip of 10°-20° from the horizontal. The purpose of this angle was to crosscut the bedding at a right angle; however, the primary purpose of the diamond drilling was to penetrate the fresh rock at depth. A 10° hole 500 feet long would only gain about 100 feet of depth at the bottom of the hole which is quite shallow for that amount of drilling. The field examiners suggested that a minimum angle of 30° would be better.

Enclosures:
cc: DMEA (3) Docket
USBM (5) Albee
USGS (SRO)

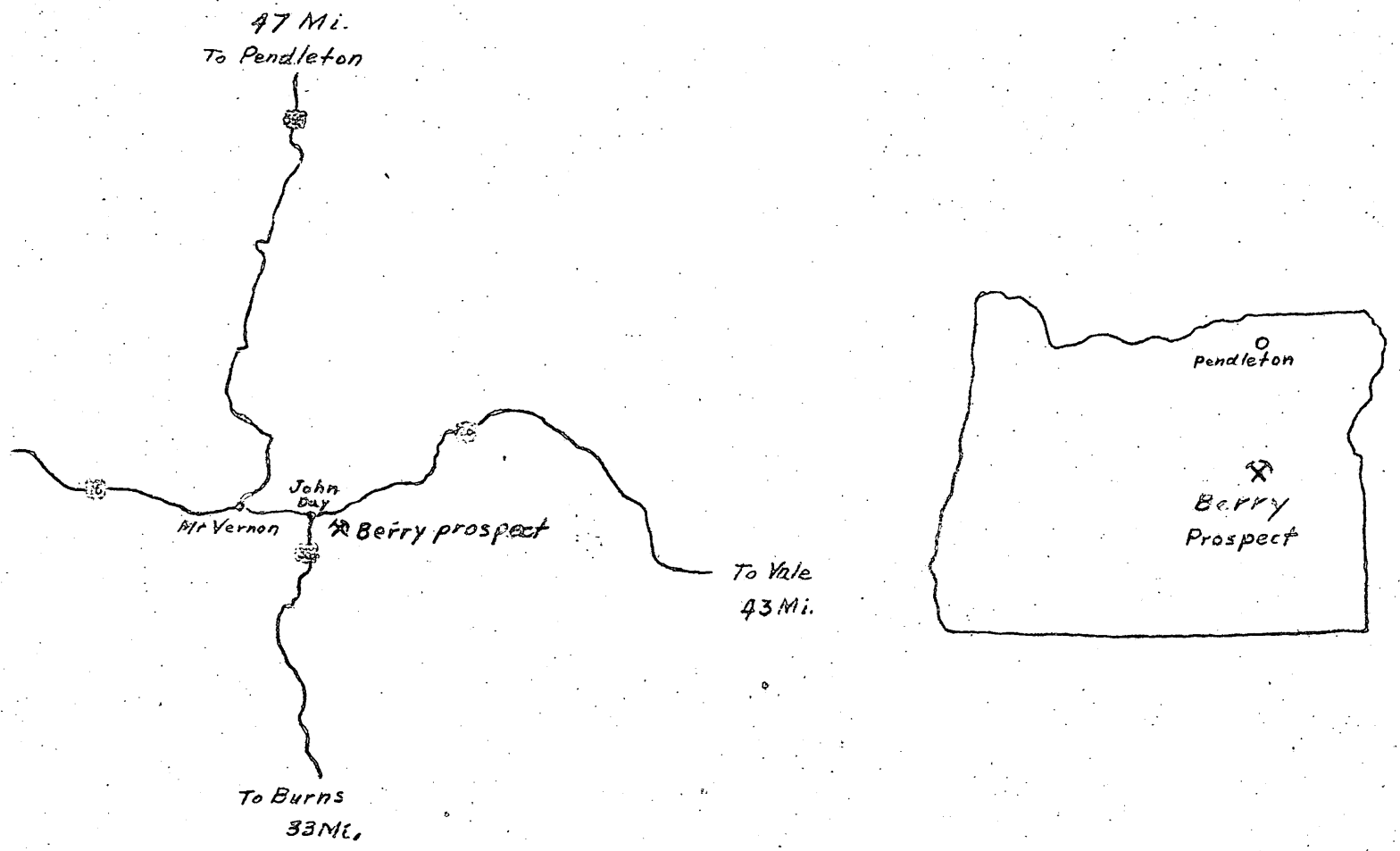

Fig 1. Location Map, Lake Enterprises, Berry Prospect, Grant County, Oregon

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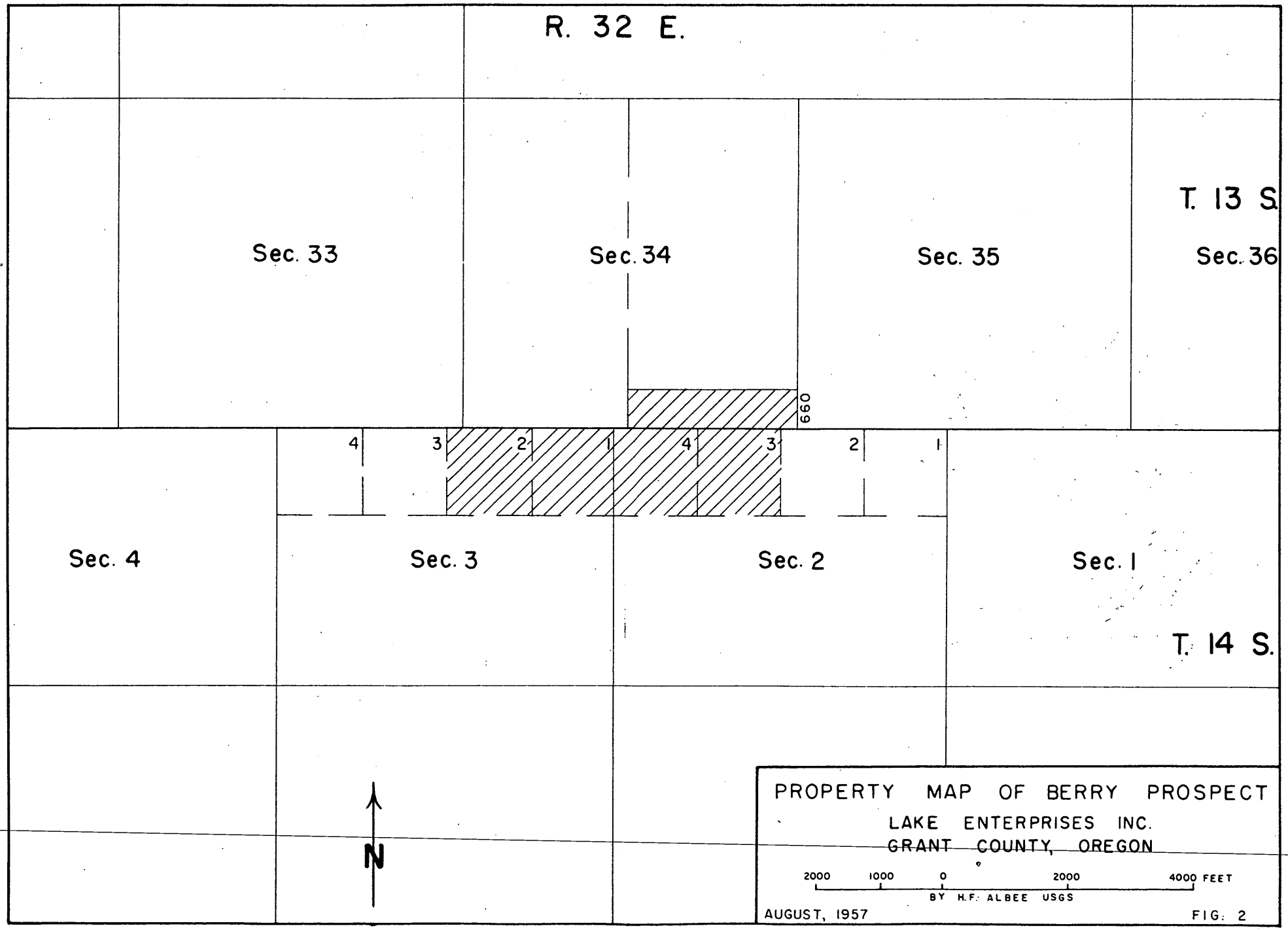
DATE	INITIALS	CODE

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
APPLICATION REPORT

DOCKET NO. DMEA 4823



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DMEA
RECEIVED DEC 20 1957

DATE	INITIALS	COD

IN REPLY REFER TO:

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DATE	INITIALS	CODE
1/3	gb	220
	WSM	400

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

January 2, 1958
Re: DMEA 4823
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon
$73,680.00 - Nickel

Memorandum ✓

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of ~~application~~ Field Team Report (See N. E. Nelson memo of 1.8.58)

The applicant requested assistance in exploring at depth, by drilling, bodies of nickel-bearing silica-carbonate rock. The grade of the outcropping rock, taken by the applicant to be limestone, is low and the applicant proposes to determine the grade of the underlying and less altered rock.

The examiners found no limestone. The rock is hydrothermally altered serpentine derived from peridotite. Samples of the outcrop indicate it assays about 0.18% nickel.

The examiners conclude the unaltered rock does not contain enough more nickel to constitute an ore body, and recommend denial of the application.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

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DATE	INIT.	CODE
10/14	C	220
		[redacted]
10/18	WSM	400

So. 157 Howard Street
Spokane 4, Washington

Air Mail

October 8, 1957

Messrs. Charles S. Melbye and
Stuart S. Merwin
Geological and Geophysical Consultants
1117 Washington Avenue
Golden, Colorado

Re: Docket No. DMEA-4023 (Nickel)
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon

Gentlemen:

Mr. Galen Waddell of the U. S. Bureau of Mines and I have been assigned by DMEA to examine the Lake Enterprises, Inc., Berry prospect near John Day, Oregon.

We plan to be in John Day, Oregon, the evening of October 15, 1957, and will meet your representative in front of the Post Office the following day at 8:00 a. m. If this arrangement is not satisfactory, please notify this office by Friday, October 11, 1957.

Sincerely yours,

Howard F. Albee
Geologist

cc: DMEA (2)
USBM (2)
Albee

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-11	Chapman	400
9-11	Martin	400
9/11	Selbridge	130
9/11	Smith	130
9/11	Kilsgaard	130
		~~410~~
		~~100~~
9/12	G	220
		400

Lake Enterprises, Inc.
2024 Laird Drive,
Salt Lake City, Utah

Re: Docket No. DMEA 4823 - Nickel
Berry Prospect
Grant County, Oregon

Gentlemen:

The above-referenced application for exploration assistance for nickel ores has been referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, South 157 Howard Street, Spokane 4, Washington, for a field examination of the property.

Any assistance you can give the members of the Field Team will be appreciated.

Sincerely yours,

Frank E. Johnson
(signed)
ACTING Administrator

TLChapman/dlm 9-11-57
cc to : Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-11	Chapman	400
9-11	Martin	400
9/11	GCS	130
"	Johnson	110
		109
		220

SEP 11 1957

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4823 - Nickel
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon

Dear Mr. Weissenborn:

The above-docketed application for exploration assistance is being referred to your office for a field examination of the property.

Copies of memoranda dated September 4, 1957, by H. B. Nelson, Geological Survey, and H. W. Davis, Bureau of Mines, relating to the project are enclosed. Also enclosed is an extra copy of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

TLChapman/dlm 9-11-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

Enclosures

8623

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DMEA
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DATE	INITIALS	CODE
9/5	G	220
9/5	WSM	400
	Memorandum	

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

September 4, 1957

Re: DMEA 4823
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon
$73,680 - Nickel

To: W. S. Martin, Chief, Iron and Ferroalloys Division, Defense Minerals Exploration Administration

From: H. W. Davis, Branch of Ferrous Metals and Ferroalloys

Subject: Review of Application

The applicant's proposal pertains to a loan of $73,680 to explore a nickel prospect in Grant County, Oregon. Applicant wishes to explore in two phases: First, to determine whether there is a significant increase in nickel content with depth (loan of $30,900), and second, if favorable, to further delineate the mineralization with an average hole spacing of 175 feet (loan of $42,780).

There is no known published information concerning the subject prospect, which is undeveloped, and little exploration has been done by applicant.

Inasmuch as insufficient information is available on which to base an opinion concerning the loan, it is recommended that the application be referred to the Field Team for its review and recommendations.

Attachment

H. W. Davis
H. W. Davis

Copy to: Ferrous Metals
H. W. Davis
Div. of Minerals
Thor H. Kiilsgaard, U.S.Geol.Survey
Frank D. Lamb
Files

OFFICIAL FILE COPY
DMEA
SEP 5 1957
INITIALS | CODE
9/5 | Q | 220
9/5 | WSM | 400

IN REPLY REFER TO:

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

September 4, 1957
Re: DMEA 4823
Lake Enterprises, Inc.
Berry Prospect
Grant County, Oregon
$73,680.00 - Nickel

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of application

The applicant requests assistance in exploring at depth, by drilling, 2 irregular bodies of fractured limestone. The limestone bodies are surrounded by serpentine, are variously altered and appear to be pendant masses 'caught up' in a rock now represented by serpentine.

The main part of the largest limestone mass is 1150 feet long and ranges in width from 230 to 500 feet. The body has been chip sampled on 12 lines and the composed samples show from 0.14% to 0.29% nickel, the numerical average being 0.18%.

The nickel occurs as an oxide, probably "nickel bloom" annabergite, and the applicant expects to determine, by drilling, the nature of the primary nickel mineral, believed to be a sulfide, and the nickel content of the limestone bodies.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

September 4, 1957

Lake Enterprises, Inc.
2024 Laird Drive
Salt Lake City, Utah

Subject: DMEA 4823

Gentlemen:

Your application for exploration assistance, dated August 23, 1957 submitted to our office at Spokane, Washington has been assigned Docket Number 4823 and referred to the Division of Iron & Ferro-Alloys in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:
Region I

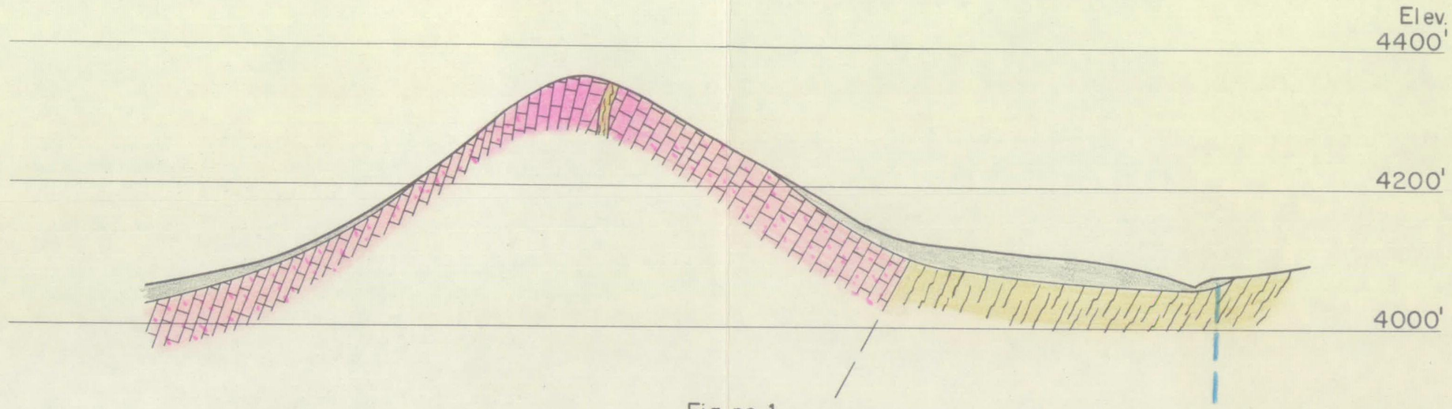

Fig. no. 1

N-S CROSS SECTION AA'

Coord. 12,200 E
Looking East

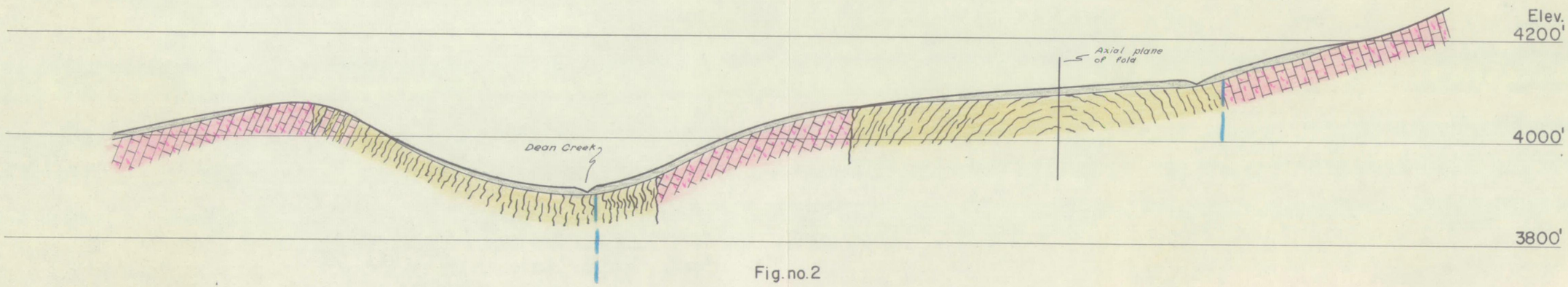

Fig. no. 2

CROSS SECTION BB'

Bearing N. 66° W.
Looking North

BERRY PROSPECT

CROSS SECTIONS

Scale: 1" = 200' — August, 1957

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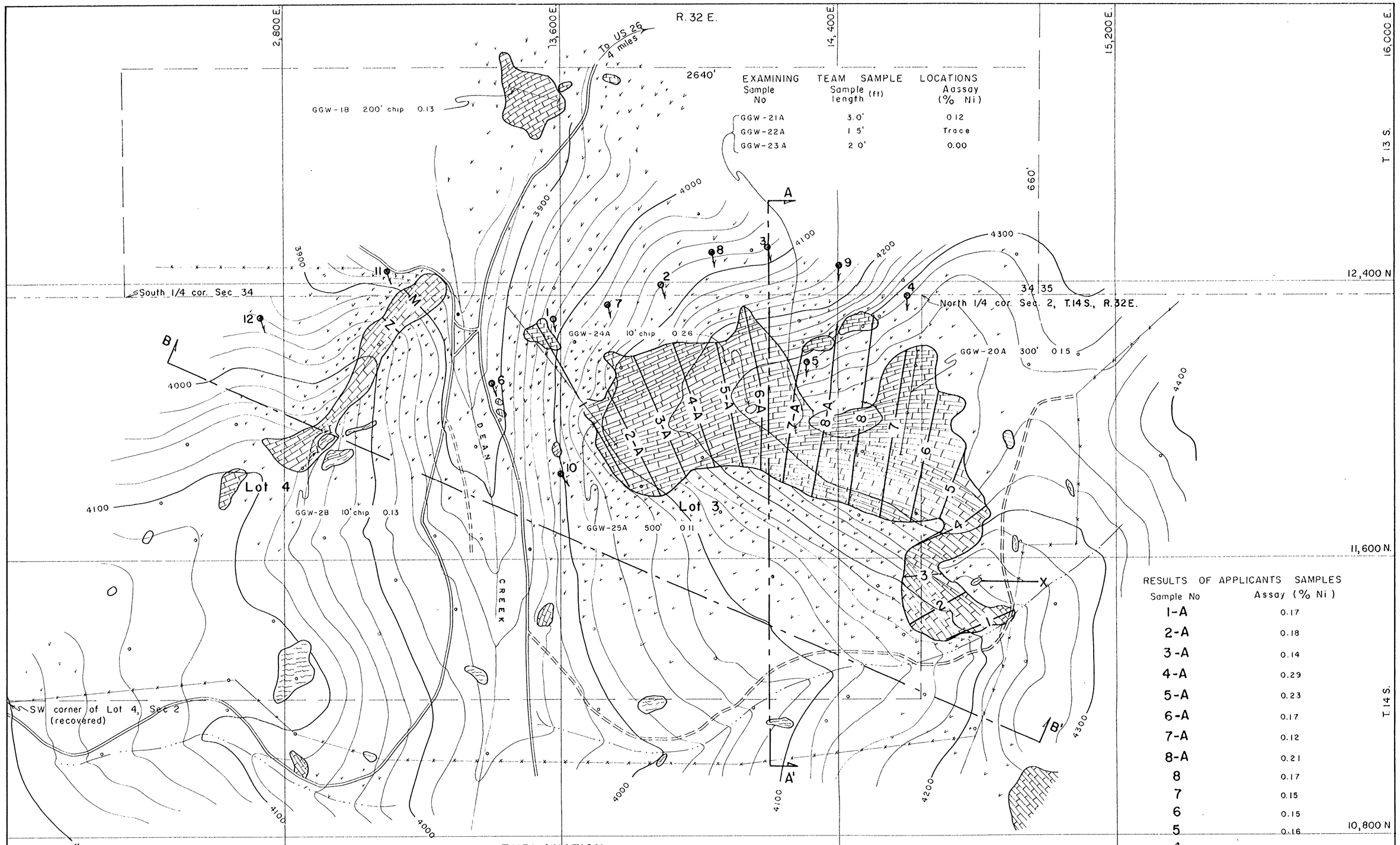
DATE | INITIALS | CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
APPLICATION REPORT

DOCKET NO. DMEA 4823



EXAMINING TEAM SAMPLE LOCATIONS

Sample No	Sample length (ft)	Assay (% Ni)
GGW-21A	3.0'	0.12
GGW-22A	1.5'	Trace
GGW-23A	2.0'	0.00

RESULTS OF APPLICANTS SAMPLES

Sample No	Assay (% Ni)
1-A	0.17
2-A	0.18
3-A	0.14
4-A	0.29
5-A	0.23
6-A	0.17
7-A	0.12
8-A	0.21
8	0.17
7	0.15
6	0.15
5	0.16
4	0.19
3	0.23
2	0.16
1	0.20
M	0.14
Z	0.19
X	0.30

EXPLANATION

CULTURAL

- Topographic contours (4200)
- Roads
- Fences
- Drainage
- Stream
- Phase 1 DDH (2)
- Phase 2 DDH (8)
- Applicants sample location (1)

GEOLOGICAL

- Serpentine
- Silica – carbonate rock
- Silica – carbonate and serpentine float

TRUE NORTH
MAGNETIC NORTH
20°

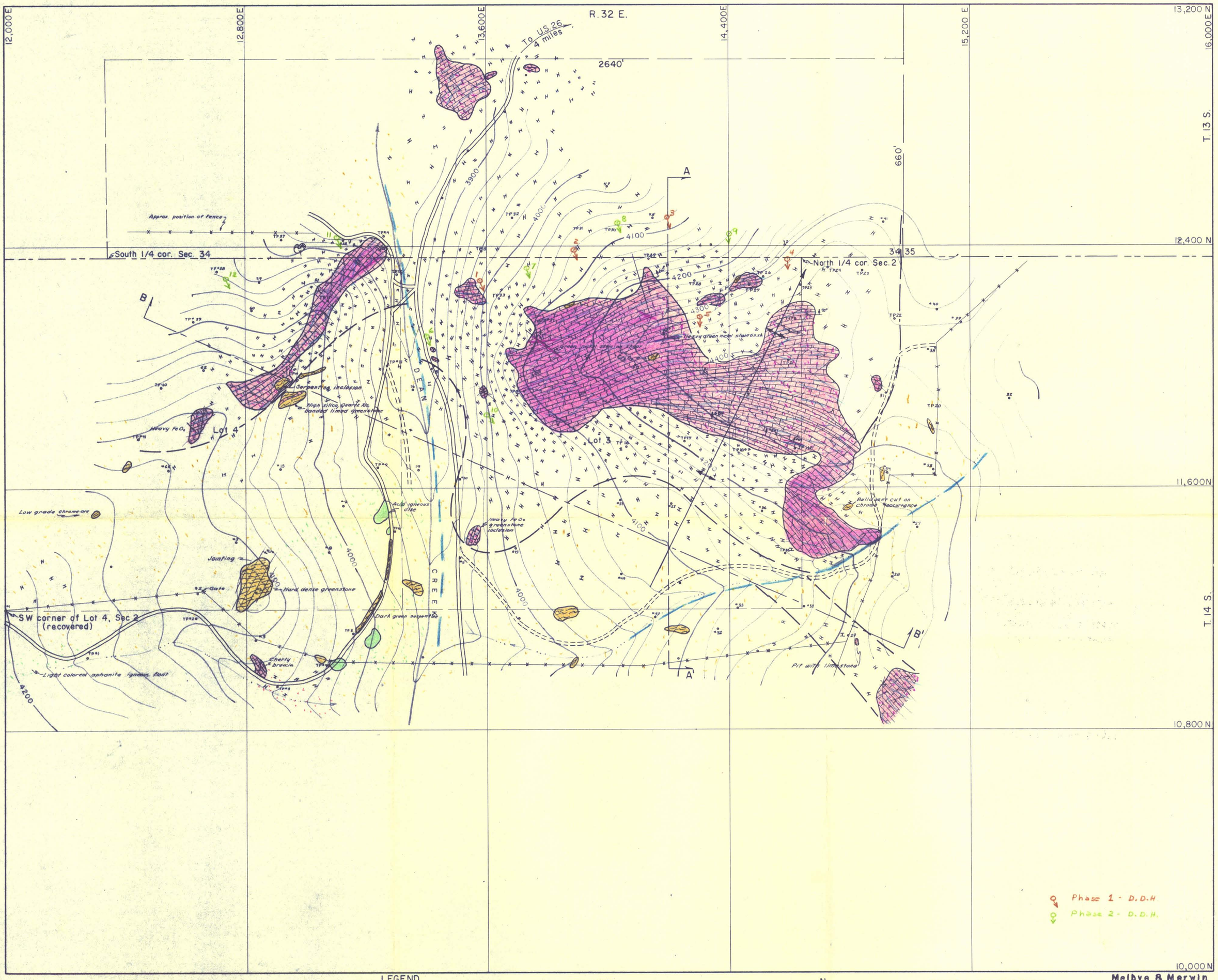
From applicants maps with minor modifications.

GEOLOGICAL MAP
BERRY PROSPECT
LAKE ENTERPRISES INC.
GRANT COUNTY, OREGON

200 100 0 200 FEET
BY H.F. ALBEE, USGS

AUGUST, 1957

PLATE 1



Melbye & Merwin

LEGEND

CULTURAL

- Topographic contours (4200)
- Roads
- Fence
- Drainage
- Stream
- Survey station-turning point (TP 21)
- " " side shot (#24)
- Adit & dump

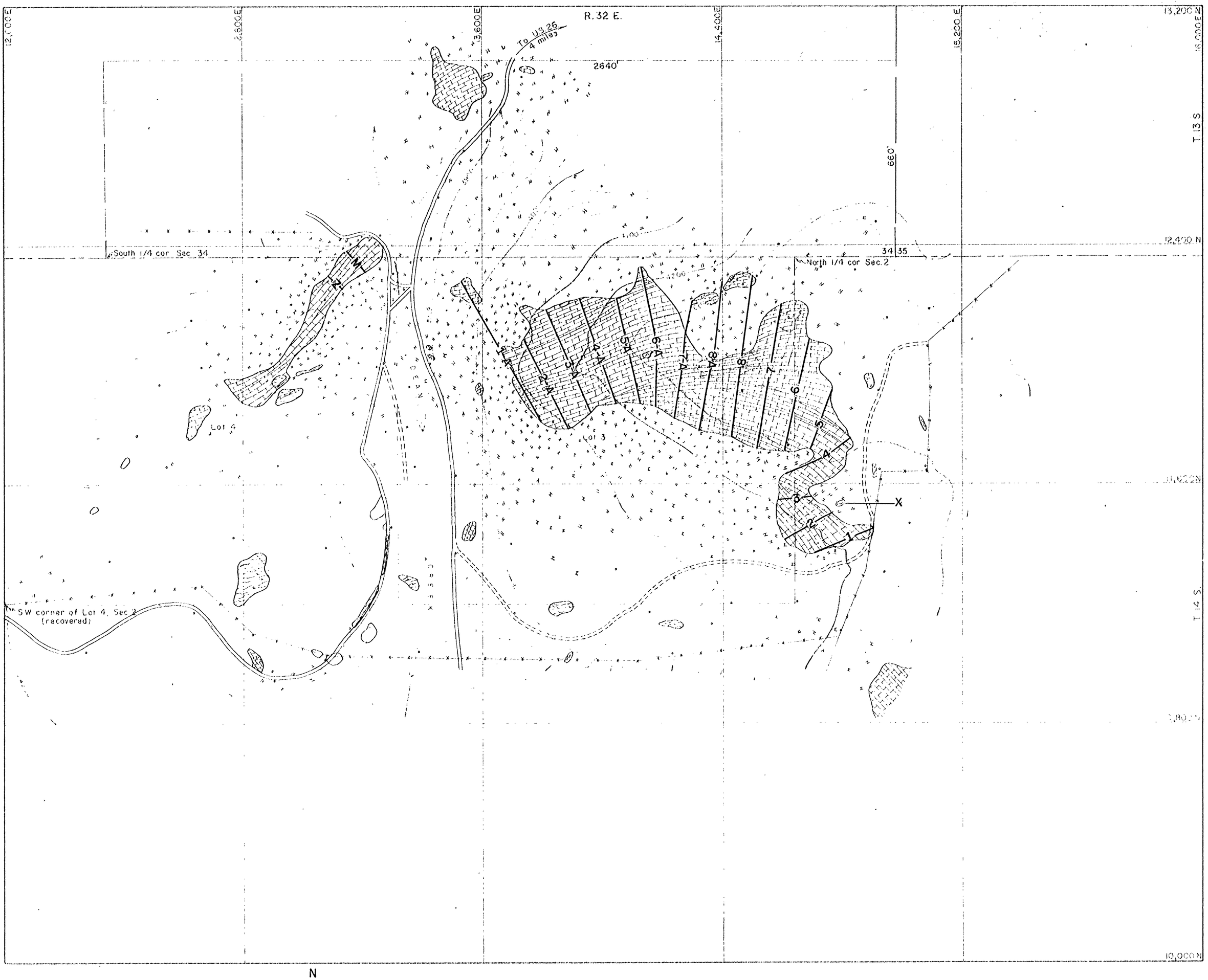
GEOLOGICAL

- Triassic: Alaskite
- Triassic: Serpentine
- Permian: Limestone
- Float: alaskite, limestone, serpentine
- Silicification (shaded according to intensity)
- Nickel mineralization (shaded where more concentrated)
- Fault (dashed where indefinite)
- Contact (dashed where indefinite)
- Anticline

N — MN 20°

BERRY PROSPECT
GEOLOGICAL MAP
GRANT COUNTY, OREGON
Sec 2, T. 14 S., R. 32 E.

Scale: 1" = 200' August, 1957 Plate no. 2



N

BERRY PROSPECT
SAMPLE LOCATION MAP

Scale 1"=200'

Plate no. 4