OUT

No. or Name	Taken By	Date Taken	No. or Name	Taken By	Date Taken	No. or Name	Taken By	Date Taken
2758	E. Dames	1/27						
7 E.J.	4563	6/26						
~~3881 400~~	~~Holt~~	~~12/23/57~~						
~~700~~	~~4054~~	~~12/8~~						
~~W.P. Williams~~	~~4564~~	~~1/10/58~~						
~~600~~	~~2549~~	~~12/10/58~~						
	~~Box 24~~							
2393 Holt - N.J. Box 25	~~400~~	~~1/29/59~~						
~~4813~~	~~600~~	~~3/3/59~~						
4823	~~400~~	~~3/31/59~~						
4685	500	4/6/59	Box 95					

OUT

No. or Name	Taken By	Date Taken	No. or Name	Taken By	Date Taken	No. or Name	Taken By	Date Taken
~~4926~~	~~Webster~~	~~5/23~~						
4852	700	5/27/58						

DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4688

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(Withdrawn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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1605 Evans Avenue
Reno, Nevada

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 18 1957

DATE	INITIALS	CODE

March 14, 1957

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Copper-Zinc-Lead)
Owen Walker
Jerry Claims
Lincoln County, Nevada

Enclosed are three sets of MF-103, Application for Aid forms, relative to above subject. The fourth set has been retained in our files.

S. Ricker

S. Ricker

Encls.

March 6, 1957

FILE COPY
DMEA
RECEIVED MAR 13 1957
CO...

Mr. Spangler Ricker
Executive Officer, DMEA
U.S. Bureau of Mines
1605 Evans Avenue
Reno, Nevada

Re: Application for Exploration Aid
Jerry Claims - Patterson Mountain
Lincoln County - Nevada

Dear Mr. Ricker:

Enclosed you will find four copies of an application to the DMEA for exploration aid on the Jerry claims located at Patterson Mountain, Lincoln County, Nevada.

It is a proposal to develop a copper orebody containing some silver, zinc and lead values in a large, attractive and untested geologic structure. This geology is easily seen and readily mapped, but some minor details are still obscure. The chances of discovering substantial orebodies are believed to be good and an entirely new mining district could ultimately result.

Please note that correspondence henceforth should be with Mr. Owen Walker, P.O. Box 196, Pioche, Nevada, but I would appreciate receiving copies of your letters, addressed to me at the Felt Building, Salt Lake City, Utah.

There is considerable snow remaining on the last two miles of the access road ending at the portal of the Contact tunnel, but if opened with a bulldozer, work could probably start within two to three weeks.

Very truly yours,

L. K. Requa

L. K. Requa

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. 4688
Metal or Mineral Lead-Zinc-Copper
Date Received 3-18-57
Estimated Cost $55,508.00
Participation (Government %)

RECEIVED MAR 18 1957 D.M.E.A.

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.

Owen Walker
P. O. Box 196
Pioche, Nevada

(*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

See Supplement

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

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

Owner

(*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 None

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

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

Copper - Zinc and Lead

(*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 60 days and be completed within 24 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)?

(*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 March 1, 1957

Owen Walker
(Applicant)

By Owen Walker

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

FORM MF-103 SUPPLEMENT
APPLICATION FOR AID IN AN EXPLORATION PROJECT
PURSUANT TO D.M.E.A. ORDER 1
UNDER DEFENSE PRODUCTION ACT OF 1950 - AS AMENDED

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 18 1957
DATE | INITIALS | CO

1. Name of Applicant

(a) The name of the applicant is: Owen Walker
P.O. Box 196
Pioche, Nevada

(b)
(c) Do not apply.
(d)

2. General - Noted.

3. Applicant's Property Rights

(a) The land on which these claims are located is not surveyed, but is the equivalent of Sections 13, 24 and 25, Township 9 North, Range 64 East, Lincoln County, Nevada.

The 42 claims comprising the property are as follows -

Claim Name	Recorded Book	Recorded Page
Jerry No. 1	S 1	71
Jerry No. 2	S 1	72
Jerry No. 3	S 1	72
Jerry No. 4	S 1	73
Jerry No. 5	S 1	73
Jerry No. 6	S 1	74
Jerry No. 7	S 1	74
Jerry No. 8	S 1	75
Jerry No. 9	S 1	75
Jerry No. 10	S 1	413
Jerry No. 11	S 1	413
Jerry No. 12	S 1	413
Jerry No. 13	S 1	414
Jerry No. 14	S 1	414
Jerry No. 15	S 1	415
Jerry No. 16	S 1	415
Jerry No. 17	S 1	402
Jerry No. 18	S 1	402
Jerry No. 19	S 1	403
Jerry No. 21	T 1	13
Jerry No. 22	S 1	403
Jerry No. 23	T 1	13
Jerry No. 24-A	T 1	13
Jerry No. 25	T 1	25
Jerry No. 26	T 1	14

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P. O. Box 196
Pioche, Nevada

Jerry No. 27	T 1	25
Jerry No. 28	T 1	14
Jerry No. 29	T 1	25
Jerry No. 30	T 1	24
Jerry No. 31	T 1	24
Jerry No. 32	T 1	21
Jerry No. 33	T 1	17
Jerry No. 34	T 1	22
Jerry No. 35	T 1	16
Jerry No. 37	T 1	16
Jerry No. 38	T 1	16
Jerry No. 39	T 1	15
Jerry No. 40	T 1	15
Jerry No. 41	T 1	23
Jerry No. 42	T 1	22
Jerry No. 47	T 1	23
Jerry No. 48	T 1	22

All being unpatented lode mining locations and recorded in the records of Lincoln County, Nevada.

Jerry Nos. 1 through 9 are located and recorded in the names of Larry Bogert, Tim Truslow and Owen Walker. The remaining claims are all recorded in the name of Owen Walker.

(b) The property is known as Patterson Mountain, or the Jerry Claims.

(c) Possessory interest in unpatented mining claims as defined above in (a).

(d) Not full owner of Jerry Nos. 1 through 9. The consent of Larry Bogert and Tim Truslow can be secured.

(e) There are no liens or encumbrances.

(f) This information has been given in (a).

4. Physical Description

(a) The workings on the Jerry claims are all of an exploratory nature. Except the Contact tunnel they were all done years ago. See Exhibit A for locations.

1. Water Tunnel. Located on Jerry Nos. 1 and 2 claims. Bearing of tunnel N 24° W. Length 300 feet plus. Open. Portal in middle part of lower Pioche Shale. Very little mineralization; some molybdenum on dump.

2. Mahogany Tunnel. Located on Jerry No. 1 claims. Bearing of tunnel N 10° W. Length 35 feet. Open. In middle limestone bed about 135 feet above base. Mixed oxidized and sulphide mineralization, 2%-5% zinc.

3. Nickel Tunnel. Located on Jerry No. 7 claim. Bearing of tunnel N 35° W. Length 200 feet plus. Open. In middle limestone bed about 100 feet above base. Low grade zinc sulphide ore, 2%-4% zinc.

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4. Saddle Shaft. Located on Jerry No. 8 claim. Depth about 20 feet. Open. In middle limestone bed near base. Oxidized zinc ore on dump, 9% zinc.

5. Copper Tunnel. Located on Jerry No. 3 claim. Completely caved at portal. Length unknown. In lower Pioche Shale member. Gossan vein 25 feet wide; 0.25% copper.

6. Porphyry Tunnel. Located on Jerry No. 10 claim. Caved near portal. Length unknown. In lower Pioche Shale. Cuts big porphyry dike. No known mineralization.

7. Copper Incline. Located on Jerry No. 22 claim. Caved at portal. Depth unknown. In lower limestone bed. Shows oxidized copper, silver, zinc ore; 1 to 13 ozs silver; 2%-9% copper; 2%-5% zinc.

8. Contact Tunnel. Located on Jerry No. 22 claim. Bearing of tunnel N 40° E. Length 401 feet. In lower limestone bed. Shows massive low grade zinc ore; 2% zinc; some copper mineralization; 0.1% copper. Sulphides and oxides.

Numerous cuts, trenches and pits all show mineralization over a wide area in the three limestone members of the Pioche Shale formation.

All of the above workings are old except the Contact tunnel, which was driven in 1956. Some of the bulldozer cuts and trenches were also dug in 1956.

(b) There has been no past production and the property now is idle. Although there are numerous outcrops showing mineral and ore, it is impossible to figure any ore reserve.

(c) Summary of Geology

The area under consideration is rugged mountain terrain and was inaccessible, except on foot or horseback, until last year when a good access road was built. The presence of oxidized zinc and copper outcrops in favorable limestones had been known for many years, but the lack of an access road had prevented any real attempt to explore these interesting showings.

The Pioche Shale formation of middle Cambrian age, known to contain favorable replacement ore beds in many near-by mining districts, outcrops on a large part of the Jerry claims. It contains a lower limestone bed 20 feet thick, a middle bed over 200 feet thick and an upper bed 28 feet thick. All of these beds have many showings of oxidized zinc mineralization and the lower bed has a good outcrop of oxidized copper ore. This orebody is the object of the present application.

Patterson Mountain is part of the Shell Creek Range and in this location the Cambrian beds have been upthrust several thousand feet above their normal position. While no intrusive is exposed one is suspected at no great depth. The position of such an intrusive is indicated by the presence of contact minerals in the northern part of the Jerry claims.

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Pioche, Nevada

One quartz porphyry dike 50 feet wide cuts the range from east to west and a smaller one is suspected. A series of N-S and E-W faults break the sedimentary beds into many fault blocks. Multiple shearing is frequently seen and trends in a general N 70° E direction. It may exert a definite control on ore deposition.

All of the surface mineralization is oxidized, but recent drilling and tunnel work indicate that sulphides can be expected below a depth of 50 feet from the surface. Sulphides so far seen include pyrrhotite, sphalerite, chalcopyrite, pyrite and cubanite. Some of these sulphides are magnetic.

The Contact tunnel was driven 401 feet in the lower limestone bed of the Pioche Shale formation. This 20 foot bed has shown consistent, but low grade, zinc mineralization throughout the entire bed. Part of this bed has been intruded by a porphyry sill. In the last 50 feet of this tunnel sulphides were encountered and low grade copper sulphides seen. If the tunnel were extended 700 feet further it would undercut the copper outcrop 550 feet below the outcrop and in a favorable shear zone.

The copper outcrop has been bulldozed and shows 150 feet of mineralized bed five feet thick. Part of this showing is leached and iron-stained bed, but at least 100 feet shows oxidized copper mineralization. Samples range from 2% to 9% copper; 2% to 11% zinc, and 2 ozs to 13 ozs silver. The full length and thickness of this mineralized bed has not been exposed.

If the drive to explore this copper showing is satisfactory and a commercial orebody is found, it would be logical to look for additional ore in the big middle limestone bed, which lies 200 feet stratigraphically above the lower bed. Due to the southeast dip a crosscut of 500 feet would be necessary to reach this objective.

Within this property there exist many chances to find large replacement bodies of copper, lead, zinc sulphide ore with good silver values.

The above summary is a digest of reports made by L. K. Requa on this property over the past two years. More details of the geology follow.

History

The geologic features of this property have never been described in the geologic literature, but some adjacent areas have been so described. The Patterson Pass area to the south is known as the Patterson Mining District. Lincoln, in his "Mining Districts and Mineral Resources of Nevada" (1923), says it was first shown to white men in 1869 and the rich silver ores were shortly thereafter the basis of a boom. However these rich ores were soon exhausted and there has only been intermittent production in recent years.

The Patterson Mountain district, where the Jerry claims are located, was too remote and too rugged for easy access and did not share in the Patterson Pass boom.

The recent interest in this area started when the first nine Jerry claims were located in the summer of 1955 by Larry Bogert, Tim Truslow and Owen Walker. In 1956, Owen Walker located the balance of the 42 claims in his own name.

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P. O. Box 196
Pioche, Nevada

Part of this area had been, at one time, located by Jacob Swartz who had done most of the early digging. Later Combined Metals Reduction Company held some ground by location, but all of these claims were long since abandoned when the Jerry claims were staked.

Jacob Swartz drove three, or four, short tunnels which were obviously done without any knowledge of geology. However all of them show some mineralization and were useful in the present work.

Owen Walker did some surface trenching, in the lower part of the middle limestone bed, which all shows oxidized zinc in the range of 1% to 4%.

Near by an unknown prospector explored a 25 foot wide gossan vein in the lower Pioche Shale member. On assay this ran .25% copper for the entire width. This is on the Jerry No. 3 claim. This is of interest as it is the only known fissure vein.

To the south, on Jerry No. 22 claim, another unknown person sank an incline on a copper outcrop. This is completely caved at the collar. Probably the same person drove the Contact tunnel, on this same claim, for 150 feet in the lower limestone bed on a showing of oxidized zinc.

The recent work started in the spring of 1956 when a good access road was surveyed and built from the base of the range up to the Saddle, which is on Jerry No. 8 claim. The starting elevation was 6850 feet, at the base of the range, and 3.5 miles it rose to 8900 feet above the Porphyry tunnel on the Jerry No. 10 claim. It continued for another 1.5 miles over the Saddle at elevation 9400 feet, to the Copper outcrop, elevation 9600 feet, and thence to the Contact tunnel at elevation 9300 feet.

Three diamond drill holes were drilled in 1956 totaling 233.9 feet of drilling. These holes will not be described as they are all on the north end of the claims and away from the proposed project, but they did demonstrate the depth of the sulphide zone, the presence of contact metamorphic minerals and the possible location of the granitic intrusive mass.

Also in 1956 the Contact tunnel was extended to 401 feet in the lower mineralized limestone bed of the Pioche Shale formation.

Stratigraphy

In the adjacent Cave Valley district, located five miles to the west of Patterson Mountain, H.E. Wheeler measured a well exposed section of Cambrian rocks. including the Pioche Shale, and published this information in the University of Nevada Bulletin, Volume XXXVII, May 1944, No. 3, pages 1799-1800. The Cave Valley section of the Pioche Shale is 505 feet thick.

L. K. Requa measured a fairly well exposed section of the Pioche Shale on the Jerry claims and found its total thickness in this location was 630 feet and markedly different from the Cave Valley section, although only five miles away. The Cambrian section, as seen on the Jerry claims, is as follows (See Exhibit A) -

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Pioche, Nevada

MIDDLE TO LOWER CAMBRIAN

Prince Limestone

Massive white to grey limestone (top eroded)	200+	Feet

Pioche Shale

Grey to green micaceous shale	80	Feet
Upper limestone - white	28	
Shale - green micaceous	50	
Middle limestone - thin bedded with some siliceous shale parting - (not entirely exposed)	200+	
Shale - upper 50 feet quite siliceous - balance is hard green micaceous shale	190	
Lower limestone - altered	20	
Total Thickness of the Pioche Shale	630	Feet

Prospect Mountain Quartzite

Massive reddish quartzite (bottom not exposed)	500+	Feet

Structure

The most impressive structural feature is the big upthrust of Cambrian beds of several thousand feet. These beds dip either to the east, or to the southeast. North of the Jerry claims the ridge of the Shell Creek Range is all quartzite, which continues for about five miles, where a very large fault again depresses the quartzite well below the surface and Carboniferous beds are thereafter encountered.

To the south of this property the regional southeast dip brings in higher beds progressively. At Dutchman Mountain, ten miles south, Devonian and Carboniferous beds are seen.

Faulting consists of a series of north-south faults of considerable magnitude, possibly 500 to 1000 feet and lesser east-west faults are numerous. These faults all appear to be normal.

Shearing has been noted and may be very extensive in some areas. The usual strike is N 70° E and is a very possible control of ore deposition in the various limestone beds. Such shearing was well seen in the last 100 feet of the Contact tunnel and it is quite likely that only a portion of this shear zone has been cut in the tunnel. It is also seen in the copper outcrop, the subject of this application.

Mineralization

Mineralization is quite extensive in the various limestone beds of the Pioche Shale formation. For years oxidized zinc has been known to occur in numerous

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Pioche, Nevada

outcrops in these beds. More recently copper has become important and these orebodies, in which zinc is associated, may be the important ores of the property. The mineralization is widespread enough to be impressive.

All of the surface outcrops are oxidized. The zinc oxidized ores contain little else than zinc and the lack of lead values is a common characteristic. The usual oxidized zinc mineralization runs from 1% to 10%, with an average of between 2% to 3%. It is seen over wide areas.

The oxidized copper outcrop contains malachite and azurite with much leaching and iron staining. Zinc minerals are present but undetermined. They are presumed to be smithsonite. Lead is also present.

The depth of oxidation is relatively shallow, as proven by drilling and underground exploration. While this depth will naturally vary it may not greatly exceed 50 feet. Some very heavy sulphides occur sporadically, but in most cases are largely pyrite and pyrrhotite. The sulphide minerals were found to be by microscopic examination pyrrhotite, sphalerite, pyrite and cubanite. Some of these sulphedes were found to be magnetic to such a degree that magnetic prospecting may be a possibility as the property develops.

In the northern portion of the claims contact metamorphic minerals were seen in some of the limestone beds associated with the ore minerals. These minerals have been determined to be diopside, chlorite, flourite, zoisite and scheelite. Their presence in the northern area of the claims suggests that a granitic intrusive may not be too far below the surface.

While chlorite and scheelite are seen near the south end of the claims, the contact minerals there appear to be scantier in occurrence.

All of this mineralization occurs as replacement deposits in the three limestone beds of the Pioche Shale and it is suspected the shearing that has been noted in several places may control this mineralization.

Igneous Rocks

The only igneous rocks seen on the property is the quartz porphyry dike, which strikes through the northern portion of the claims in a general N 65° W direction. This dike is 50 feet wide and is a light colored, acidic, medium grained hard porphyry. It has been altered to some extent and contains numerous flecks of limonite.

Other dikes are probably present and a smaller, parallel dike is suggested about 600 feet north of the large dike, but has not been actually seen.

The granitic intrusive, referred to previously, undoubtedly does exist at depth. One diamond drill hole encountered porphyry at a depth of 133 feet, which is not related to the known dike.

Ore Deposits

While a number of exploration projects could be proposed on the zinc outcrops, the copper outcrop has been selected as the objective for this project.

Copper Outcrop

The bed in which the copper occurs is the lower limestone bed of the

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P. O. Box 196
Pioche, Nevada

Pioche Shale formation. It rests directly on the quartzite and is overlain by shale. This bed is less well exposed than the big middle limestone bed or the upper limestone, but where seen it is more consistently mineralized than any of the other beds. An old incline sunk years ago is completely caved.

The copper outcrop has only been exposed by bulldozing for a length of 150 feet. About 100 feet of this length is oxidized copper ore, five feet thick. The remaining 50 feet exposed is leached and iron stained bed with low copper values.

It is doubtful if the entire extent of copper deposit has been seen. The lower limestone bed is normally 20 feet thick and at the most five feet of this has been uncovered. In addition the two ends of the mineralized bed give evidence that there is more ore to uncover, both on the north end and on the south end of the deposit.

Samples taken are as follows -

	Au	Ag	Pb	Zn	Cu
Old Dump, Inclined Shaft (General Sample)	Tr	2.0	0.4	5.5	2.05
Old Incline at Collar	.02	13.98	0.5	2.2	9.1
Old Incline, yellow clay	.01	.79	Tr	11.1	-

It would be difficult to completely expose this outcrop due to the heavy slide rock cover, so the project of cutting this bed 550 feet down the dip, with the Contact tunnel, has been proposed. It will undoubtedly be in the sulphide zone. However no zone of secondary enrichment can be predicted, even if one may actually exist. The reason for this being that no accurate data exists on the position of the water table.

Contact Tunnel

At a distance of 824 feet S 11° W from the old copper incline, in the same lower limestone bed, a tunnel was driven for 151 feet years ago. This showed the bed to be 20 feet thick and was mineralized with oxidized zinc throughout. This tunnel was cleaned out and advanced to a total distance of 400 feet from the portal, during the 1956 season.

The mineralization was consistent in all of the bed seen. Exhibit B, attached herewith, shows the extent of the workings, the geology and assay results. The first 300 feet averaged 1.95% zinc and the last 100 feet averaged 2.44% zinc, with .10% to .15% copper. Part of this last interval was sulphide.

The shear zone seen in this last 100 feet may continue well beyond the present face.

It should be noted that a porphyry sill occupies part of the bed, but is not seen in the last 100 feet.

If extended another 700 feet this tunnel will explore the lower bed below the copper outcrop and this is part of the present proposal. The

OWEN WALKER
P. O. Box 193
Pioche, Nevada

balance of the proposal is to cross cut for 500 feet more to the lower part of the middle bed, where ore has been seen in several other parts of the property. In other words we believe that this lower section of the middle bed may also be a favorable horizon.

(d) This property is 50 miles north of Pioche, which is the end of the Pioche branch of the Union Pacific Railroad and 57 miles south of Ely, the end of the Nevada Northern Railroad.

U.S. Highway 93 is 3.5 miles east of the base of this range. The Contact tunnel is 8.5 miles from this highway.

The new access road has already been described.

This access road could be used in winter, with some slight improvement and, if snow removal equipment was provided.

There are no camp facilities on the property. Two cabins, located at the Cinch tungsten mine at the base of the range, were used during 1956 and would be available again.

(e) Manpower is available at both Ely and Pioche in normal times.

Material, supplies and equipment are available at the same towns, or at Salt Lake City or Los Angeles.

The only adequate water supply is located at the base of the range near the Jerry No. 15 claim. This flows all year and might be increased by digging.

The nearest power is at Jackrabbit, on the end of the Lincoln County Power line, a distance of about 40 miles.

5. <u>The Exploration Project</u>

(a) The primary mineral for which we wish to explore is copper; the secondary minerals are lead and zinc.

(b) The proposed project is illustrated by Exhibit C, attached herewith. This project is to drive a 8 x 6 foot tunnel, starting at the present face of the Contact tunnel, for a distance of 700 feet in, or near, the footwall contact of the lower limestone bed with the underlying quartzite.

Such a drive should be under the copper outcrop in another 400 feet and in a total of 700 feet it should thoroughly explore this horizon and make allowance for the control of the ore by the searing, which would have the effect of raking the copper oreshoot to the north from the outcrop.

If this development is satisfactory, it is proposed to cross cut for 500 feet to the basal part of the middle bed, which is known to be a favorable ore horizon in several exposures elsewhere on the property.

Total footage for the project is 1200 feet of tunneling.

OWEN WALKER
P. O. Box 196
Pioche, Nevada

(c) The work will start within 60 days and will be complete within 24 months from the date of the exploration project contract.

(d) The applicant has had forty years of experience in mining and prospecting and is thoroughly competent to carry on this project and to supervise the same. He will have available the services of L. K. Requa, a consulting geologist of Salt Lake City, with thirty-five years of experience in geology, prospecting and mine management, should the need arise.

6. Estimate of Costs

(a) Independent contractors may be used, but the cost on an owner basis is given herewith.

(b)
(c) As below -
(d)

COST ESTIMATE
1200 Feet of 8' x 6' Tunnel
52% Timbered

Cost Per Foot

Item	Labor	Material	Total
Labor	$12.00	$	$12.00
Explosives		1.50	1.50
Timber	2.66	2.34	5.00 - separate item
Drills-Steel-Hoses		1.00	1.00
Miscellaneous		1.00	1.00
Rock Haulage	2.20		2.20
Track		3.00	3.00 - ?
Ventilation		2.34	2.34 - ?
Compressed Air		8.40	8.40 - ?
Rentals - Mucking Machine		.66	.66
Water Trucking	2.00	.20	2.20
Pipe-Compressed Air-Water		.74	.74
Small Tools & Repairs		1.00	1.00
Supervision	3.00	1.80	4.80 - ?
Total Cost Per Foot	$21.86	$23.98	$45.84

1200 Feet	@ $45.84	=	$55,008.00
100 Assays	5.00		500.00 - Samples to be assayed for?
	Total Cost		$55,508.00

It is requested that the contract be settled, if allowed, on the basis of $45.84 per foot of tunnel advance.

OWEN WALKER
P. O. Box 196
Pioche, Nevada

(e) Rehabilitation and Repair - None

(f) New Buildings, Etc. - None

(g) Miscellaneous - None

(h) Contingencies - None

7. (a) Yes

(b) In Cash

Owen Walker

Owen Walker

K

OWEN WALKER
P. O. Box 196
Fiache, Nevada

DMEA [redacted] 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/23	[illegible]	500
	[illegible]	500
8/23	Kiilsgaard	130
8/23	[illegible]	130
8/23	[illegible]	130
"	[illegible]	110
"	[illegible]	100
8/26	[illegible]	225
		225

AUG 26 1957

Mr. Owen Walker
Post Office Box 196
Pioche, Nevada

Re: Docket No. DMEA-4688 (Copper-Lead-Zinc)
Owen Walker
Jerry Claims
Lincoln County, Nevada

Dear Mr. Walker:

Your application for aid for an exploration project and other data available to us in Washington 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 all our information, although noting some copper-lead-zinc mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/er (rewritten 8/23/57) 8/21/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region II (2)
Chron.

8623

DMEA [redacted] 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/21	[illegible]	500
8/21	[illegible]	500
		130
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		100
		220

Mr. Owen Walker
Post Office Box 196
Pioche, Nevada

Re: Docket No. DMEA-4688 (Copper-Lead-Zinc)
Owen Walker
Jerry Claims
Lincoln County, Nevada

Dear Mr. Walker:

Your application for aid for an exploration project and other data available to us in Washington 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 all our information, although noting some copper-lead-zinc mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We regret the necessity of taking such action, however, it is taken without prejudice to your property. If you do additional work which reveals evidence which could materially alter this opinion, be assured that we will be pleased to consider a new application.

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

Sincerely yours,

Administrator

JWAlt/bjm (8/21/57)
Copy to: Docket
Admr. R. File
Op. Committee
Mr. McMahon
Mr. Kiilsgaard
Region II (2)
Chron.

8623

Selfridge:

If trenching is justified we should participate on cost. However, the target appears to be too small for higher grade ore and possibility of large tonnage of lower grade material seems remote.

FEJohnson

File

DMEA Form 7
(12-56)

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August 21, 1957

Memorandum

To: The Administrator

From: Director, Division of Base Metals

Subject: Denial of Application, Docket No. DMEA-4688, Owen Walker (Copper-Lead-Zinc), Jerry Claims, Lincoln County, Nevada

The cited application, dated March 1, 1957, was received by this office on March 18. On April 5, the application was referred to the Field Team for their consideration, a field examination of the property if warranted, and recommendation.

The Applicant's proposal consisted of extending the Contact tunnel 700 feet and to crosscut 500 feet. The estimated total cost of the proposed work is $55,508.00.

The Field Team examined the property on June 18 and 19, 1957. Field work was delayed owing to snow coverage at the mine until the middle of June. Their report was received by this office on August 14.

The only exploration work on the pertinent part of the property consists of the Contact adit amounting to approximately 455 feet, and a bulldozer trench approximately 600 feet long by 15 feet wide and averaging about 6 feet deep. No production has been made from the property.

Ten samples taken by the Field Team from the surface exposure (surface bulldozer cut) have a weighted average of 1.39 per cent copper, 0.2 per cent lead, and 2.21 per cent zinc. Nineteen samples taken in the Contact adit have a weighted average of 0.223 per cent copper, 0.2 per cent lead, and 1.86 per cent zinc.

The Field Team states:

"Strong justification for additional exploration cannot be made in view of the size and grade of exposures of copper and zinc which indicate a deposit of marginal economics.

"The inferred reserves are not large enough in copper, or high enough grade in zinc, to be economic under present conditions or to warrant a DMEA project. Additional work is warranted however and we recommend that the applicant trench the mineralized area along the middle bed. If the results of the trenching indicate a larger or higher grade copper deposit than can now be inferred, then a DMEA project may be warranted."

We concur with the recommendations of the Field Team and the commodity members of the USGS and the USBM that the application be denied, and that it be denied without prejudice to the property.

W. R. Griswold

W. R. GRISWOLD

JWAlt/bjm

Copy to Docket
Admr. R. File
Op. Committee
Chron.

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

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DMEA
RECEIVED AUG 16 1957

DATE	INITIALS	CODE
8/19	B	220
8/19	Jun	500

August 15, 1957

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Application Report, Docket No. DMEA 4688 (Copper-Lead-Zinc), Owen Walker, Jerry claims, Lincoln County, Nevada, $55,508.00

As a result of a field examination of the property, the examiners identified inferred reserves amounting to 2,500 tons averaging 2.5 percent copper and 275,000 tons averaging 2.0 percent zinc. They conclude that the size and grade of the mineralized ground do not present an attractive target for government participation in exploration and recommend that the application be denied.

However, the examiners state that additional trenching should be done by the applicant to determine if a larger or higher grade copper deposit can be inferred. I concur in the examiners' recommendation but suggest that the application be denied without prejudice to the property.

A. D. McMahon

A. D. McMahon

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U. S. G. S.
F. D. Lamb
F i l e s

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

IN REPLY REFER TO:

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8/15	Jura	500

August 14, 1957 8/16
Re: DMEA 4688
Owen Walker
Jerry Claims
Lincoln County, Nevada
$55,508.00 - Copper-lead-zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

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

Subject: Review of Field Team Report

The applicant requested assistance in exploring, by extending a drift adit driven in a zinc-bearing bed and by a crosscut, parts of the lower and middle limestone beds of the Pioche shale formation. The drift extension would explore the lower limestone zinc structure and the inferred down dip extension of an oxidized copper-bearing structure, also in the lower limestone, at a down dip depth of about 550 feet. The crosscut, driven across the low dipping Pioche shale which parts the lower and middle limestones, would test the middle limestone at a dip depth of about 850 feet, where the middle limestone may be conditioned by shearing and perhaps is mineralized. The zinc-bearing material in the drift adit, especially the inner part of the adit, is sheared, and the shearing may continue through the shale into the middle limestone.

The concepts are reasonable so far as the structures are concerned, but sampling indicates the copper and zinc values are not now commensurate with the work involved and the examiners and the Field Team recommend that the application be denied.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1605 Evans Avenue
Reno, Nevada

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DMEA
RECEIVED AUG 9 1957

DATE	INITIALS	CODE
8/9	QK	220
		130
8/14	Q	220
8/14	Jwa	500

August 6, 1957 8/15

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4688 (Copper-Lead-Zinc)
Owen Walker
Jerry Claims
Lincoln County, Nevada
(Your letter, April 5, 1957)

Enclosed are three copies of a report by Glenn G. Gentry, Bureau of Mines, and Paul F. Taylor and Donald B. Tatlock, Geological Survey, on subject property.

Roscoe Smith and I concur in the recommendation that the application for exploration aid be denied.

Field work was delayed owing to show coverage at mine until the middle of June.

Glenn G. Gentry
For: S. Ricker

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
8-14-57
(date)

On-site
return Rpt

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 9 1957

DATE	INITIALS	CODE
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		220

APPLICATION REPORT

DMEA-4688 (copper, zinc, lead)
Owen Walker
Jerry claims, Lincoln County, Nevada

by

Glenn G. Gentry
U. S. Bureau of Mines

Paul F. Taylor
Donald B. Tatlock
U. S. Geological Survey

August 1, 1957

Reviewed by
DMEA OPERATING COMMITTEE
8-14-57
(date)

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Ore Reserves	15
Exploration	16

ILLUSTRATIONS

Figure 1 . . . . . Index map

2 . . . . . Geologic map of the mine area

3 . . . . . Geologic map, Contact adit

4 . . . . . Geologic section, cut at Copper incline

INTRODUCTION

On March 1, 1957, Mr. Owen Walker, P. O. Box 196, Pioche, Nevada, applied for Government assistance in a $55,508.00 program under the Defense Minerals Exploration Administration, docket DMEA-4688, to explore for copper, zinc, and lead on the Jerry group of claims in Lincoln County, Nevada.

From mineralized exposures on the surface and in the Contact adit, the applicant infers the area between these locations contains a significant tonnage of copper, lead, and zinc minerals of economic grade.

He proposes to explore the area by drifting and crosscutting from the face of the adit to determine if a sufficient tonnage can be developed which will justify a large-scale mining and milling program.

A field examination was requested by the Operating Committee and was made by Glenn G. Gentry, U. S. Bureau of Mines, with D. B. Tatlock and P. F. Taylor, U. S. Geological Survey, on June 18 and 19, 1957, accompanied by Messrs. Owen Walker and L. K. Requa. During the examination 33 samples were taken to compare with analyses reported by the applicant.

CONCLUSIONS AND RECOMMENDATIONS

Three parallel limestone members of the Pioche shale each contain replacement deposits of zinc ore estimated to total 275,000 tons and to average about two percent zinc. One of the members also contains copper-zinc ore in an ore shoot estimated to contain 2,500 tons averaging 2.5 percent copper and 2.0 percent zinc. The copper content is inferred to be only slightly higher in depth than at the surface where it averages 1.39 percent.

Indications of copper-zinc deposits in one other member consist of float and are too sparse to permit an inference of other copper ore bodies. Additional trenching by the operator may be warranted but the reserves that can be inferred now do not constitute an attractive target for DMEA assistance.

This grade of ore is not economic in an area where high mining and transportation costs will prevail and it is unlikely that the operator could make a profit by mining it at current prices (copper 28¢, zinc 11¢).

We recommend, therefore, that the application be denied.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Jerry group of mining claims are in the Patterson mining district, secs. 13, 24, and 25, T. 9 N., R. 64 E., Lincoln County, Nevada.

The claims are reached from Ely, Nevada, by traveling south on U. S. Highway 93, and all-weather road, a distance of 64.6 miles, thence turn right (west) via an unimproved road a distance of 9.1 miles. The last 7.2 miles of mine access road is over steep grades and the use of a four-wheel-drive vehicle is necessary. The trip requires approximately two hours.

The altitude of the mine is approximately 9,200 feet and severe weather conditions are to be expected from November to May. Snow falls are usually heavy during the winter, making it difficult or impossible to operate unless adequate snow removal equipment is available.

Experienced mining labor can usually be obtained in Pioche and Ely, Nevada. It will be necessary to haul water by truck from springs approximately 4 miles east of the Contact adit. Telephone, mail, railroad and trucking services, and mining supplies are available in Pioche, approximately 50 miles south.

Mining machinery would be operated by gasoline and/or diesel engines.

HISTORY AND PRODUCTION

Mineralization in the district has been known since 1869 and some rich silver ore was produced shortly thereafter.

During the early 1900's some limited prospecting, with negative results, had been conducted in an area three to four miles east of the Contact adit.

The rugged region was isolated until 1956 when Mr. Walker constructed the mine access road.

Expenditures for the access road and the Contact adit were reported to have been $30,000.00.

No production has been made from the property.

PROPERTY AND OWNERSHIP

Unpatented mining claims Jerry Nos. 1 through 9 are recorded in the names of Larry Bogert, Tim Truslow, and Owen Walker.

Mr. Walker has requested these claims be deleted from the application as they are remote from the area to be explored and would add no value to such exploration. Mr. Walker also requests deletion of claims Jerry Nos. 10, 21, and 28 for the same reason.

Unpatented mining claims, owned by Owen Walker, and pertinent to the application are:

Jerry Nos. 11 through 19

Jerry Nos. 22 through 25

Jerry No. 27

Jerry Nos. 29 through 48

The above 29 mining claims are all recorded in the Lincoln County Recorder's Office, Pioche, Nevada.

DEVELOPMENT

The only development work on the pertinent part of the property consists of the Contact adit amounting to approximately 455 feet and a bulldozer trench approximately 600 feet long by 15 feet wide, and averaging about 6 feet deep.

The mine track from the dump to the face of the adit is the only mining facility remaining at the mine. Housing for four or five men is available at the idle Cinch tungsten mine, owned by Mr. Walker, and 7.2 miles east of the Contact adit.

GENERAL GEOLOGY

The mining claims extend for two miles along the top of an eastward-titled horst of Lower Cambrian quartzites and Middle Cambrian shales and limestone which are elevated 3,500 feet above Lake Valley on the east and somewhat less above Cave Valley on the west, the uplift forming the south end of the Schell Creek Range. A section at Swartz Canyon whose summit extends

through Jerry claims Nos. 1, 2, 3, and 7 has been described by J. M. Hill[1/] and by L. K. Requa in the operator's application,

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1/ Notes on mining districts in eastern Nevada: USGS Bull. 648, 1916.

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and at Cave Valley 5 miles to the west by Wheeler[2/]. The

2/ Wheeler, H. E., 1944: Univ. of Nev. Bull. Vol. XXXVII, No. 3, pp. 1799-1800.

---

basement consists of more than 1,000 feet of thick-bedded Prospect Mountain quartzite which is pink and buff at the top and grades to micaceous red-brown medium beds near the base. Above a conformable contact 550 feet of Pioche shale contains three limestone interbeds. The brown-green shale is fine-grained and thin-bedded, micaceous or sericitic near the top and arenaceous toward the quartzite contact. The lowest limestone bed, 20 feet in thickness, is at the base of the shale and may correspond to the Combined Metals limestone which is the principal ore-bearing bed exposed in the Pioche district (DMEA-2482, Idm-E409). The lower limestone is gray-brown,

thin-bedded, arenaceous and locally is extensively iron stained. One hundred ninety feet of a hard, brown-green, micaceous shale separates the lower limestone from a 200-foot thick middle limestone member, which is similar in appearance to unaltered portions of the lower limestone. Underlying an upper limestone member, which is 30 feet thick, medium-bedded, and near white in color, is 50 feet of greenish mica-bearing shale. An additional 80 feet of gray-green shale completes the Pioche shale sequence, which is overlain conformably by hard, massive, light gray Prince limestone in excess of 200 feet.

At the head of Swartz Canyon a nearly vertical dike 50 feet thick of quartz monzonite porphyry with one-quarter inch euhedral biotite scales trends N 60° W (fig. 2). It weathers easily and contains pink calcite which has replaced feldspar, and brown limonite flecks. There is little contact effect. A 7-foot sill of quartz monzonite porphyry, heavily altered by iron-, lead-, and zinc oxides, is exposed at the top of the lowest limestone bed for nearly 300 feet in the Contact adit. These are the only igneous exposures which were seen in this area, but igneous metamorphic minerals including small amounts of scheelite, diopside, fluorite, and epidote occur on the Jerry No. 1 claim and to the north of claims No. 2, 3, and 7.

The tilted fault block strikes regionally N 35° E and dips 25° SW, and in this locality is broken by numerous cross fractures which are oriented in three patterns. Nearly vertical north-striking faults which parallel the larger faults associated with the regional deformation and uplift, border the property on the east and west; steep N 60° W faults cross the claims at intervals of several hundred feet; and a N 65°-75° E set of steep fractures cuts all the rock types over a width of at least three miles. These are spaced a few inches apart in mineralized areas and seldom more than 10 feet elsewhere. Where the quartz monzonite porphyry dike is cut by the northeast fissure system one-quarter to one-half inch fissures are filled with barren quartz. More closely spaced northeast fracture zones in the lower limestone member of the Pioche shale contain metallic sulfides and oxides.

ORE DEPOSITS

The ore bodies are replacement deposits in favorable parts of three limestone interbeds within the Pioche shale; the conduits are closely spaced N 65° E vertical fractures from which solutions have first penetrated the lower limestone and then replaced progressively less the two higher limestone members, depositing iron-, zinc-, copper-, and minor lead sulfides which are oxidized

within a shallow zone of the order of 50 feet. Mineral deposits in the lower limestone are exposed in the Contact adit and in a bulldozer cut at the Copper incline (fig. 2). A 5-foot thickness contains blue and green copper silicates and carbonates with abundant iron oxides in the vicinity of N 75° E fissures with values up to 3.2 percent for a strike length of 30 feet, and up to 0.6 percent for an additional 50 feet. In addition to copper silicates, malachite, azurite, zinc carbonates, and abundant limonite, relict sulfides notably pyrite and pyrrhotite, are present. A sample from the dump of the Copper incline shaft assayed 2.5 percent copper and samples from the cut averaged 1.4 percent copper.

The Contact adit has been driven N 35° E 400 feet along the lower limestone bed (figs. 2 and 3). Here a quartz monzonite porphyry sill 7 feet thick separates the shale from the limestone for the first 300 feet and a zone of N 65° E vertical shears extends an additional 100 feet to the face. In the first 300 feet of the adit oxide and sulfide mineralization is related to N 65° E fractures that tend to 40-foot intervals usually dipping 75° to 80° NW. Within the shear zone shale has slumped and broken to form a gouge and closely spaced slickensided surfaces, within which one-quarter inch horizontal veinlets of a white fibrous sulfate have been precipitated. Massive pyrite, pyrrhotite, chalcopyrite, and

cubanite occur within this shear zone at an estimated depth of 325 feet below the surface. Zinc values are consistent throughout the 400 feet of the adit averaging 2.5 percent, but copper assays which are negligible in the first 200 feet increase beyond the shear zone to 0.5 percent at the face of the adit.

On Jerry No. 8 claim a small hole 4 feet wide and 20 feet long has been dug on a series of N 75° E fractures exposed 250 feet south of the quartz monzonite dike. These fractures contain abundant contact minerals including epidote and actinolite but small copper values.

The middle and upper limestone beds contain sporadic deposits of zinc oxides for several thousand feet but there are fewer exposures than in the lower limestone although the grade is about the same. The N 65° E fracture system exposed in the cut at the Copper incline was followed on strike across the middle and upper limestone beds, and float containing copper sulfides and oxides assaying up to 4 percent total copper was found within a 50-foot width of the middle bed. This float material showed more sulfide and less of the copper silicates than the material in the lower bed. The few outcrops here not covered by talus are barren, and do not show the alteration observed in the lower bed.

Small scale horizontal zoning over an unexposed intrusive may explain the increase in the ratio of copper to zinc assays toward the north.

Because there is some increase in the copper values within the Contact adit to the north, and because there is evidence of leaching shown by the various oxide products, it follows that some increase in grade could be expected down dip. The presence of sulfides at the surface suggests that the oxide zone is not greatly higher grade in copper than the primary zone, and that only a minor chalcocite zone is to be expected.

SAMPLING

Ten samples taken from the surface exposure have a weighted average of 1.39 percent copper, 0.2 percent lead, and 2.21 percent zinc, and 19 samples taken in the Contact adit have a weighted average of 0.223 percent copper, 0.2 percent lead, and 1.86 percent zinc including samples taken in quartzite and porphyry.

BM Sample No.	Width, feet	Percent			Ozs./Ton		Description
		Cu	Pb	Zn	Au	Ag	
2079	2.5	0.52	<0.01	2.2	Tr.	0.30	Contact tunnel, west wall 17 ft. south of face.
2080	5.5	0.33	<0.01	1.7	Tr.	0.50	Contact tunnel, east wall 23 ft. south of face, heavy sulfides.

BM Sample No.	Width, feet	Percent Cu	Percent Pb	Percent Zn	Ozs./Ton Au	Ozs./Ton Ag	Description
2081	6.0	0.17	<0.01	2.2	Tr.	0.10	Contact tunnel, face of adit, porphyry shows some sulfides.
2082	4.0	0.13	<0.01	1.8	Tr.	Tr.	Contact tunnel, east wall, 20 ft. south of No. 2086.
2083	4.5	0.10	<0.01	3.4	Tr.	Tr.	Contact tunnel, east wall, 28 ft. south of No. 2082.
2084	7.0	0.12	<0.01	1.5	Tr.	Tr.	Contact tunnel, across back, 24 ft. south of No. 2083, highly leached, oxidized.
2085	7.0	0.23	<0.01	1.6	Tr.	0.60	Contact tunnel, across back and on west wall 16 ft. south of No. 2082.
2086	3.5	0.50	<0.01	2.9	Tr.	1.40	Contact tunnel, west wall, 31 ft. south of face, sulfides in black shale.
2087	5.0	1.12	<0.01	3.1	Tr.	0.60	Surface, east wall of bulldozer cut, 200 ft. from north end of cut.
2088	4.0	4.60	<0.01	1.7	0.005	3.50	Surface, east wall of bulldozer cut, 30 ft. south from No. 2087.
2254	2.5	0.10	0.2	3.3			Discovery cut No. 8 claim, limestone bedding, iron stained.
		(Note: Not included in weighted average)					
2255	3.3	0.98	0.2	3.0			Surface, east bank of bulldozer cut, 194 ft. south of north end of cut.

BM Sample No.	Width, feet	Percent Cu	Pb	Zn	Description
2256	4.0	1.57	0.2	2.3	Surface, east bank of bulldozer cut, 310 ft. south of north end of cut.
2257	4.0	1.43	0.2	2.7	Surface, east bank of bulldozer cut, 315 ft. south of north end of cut.
2258	4.0	3.17	0.2	1.3	Surface, east bank of bulldozer cut, 326 ft. south of north end of cut.
2259	3.0	0.50	0.2	2.1	Surface, east bank of bulldozer cut, 335 ft. south of north end of cut.
2260	2.0	0.55	0.2	3.0	Surface, east bank of bulldozer cut, 344 ft. south of north end of cut.
2261	5.5	0.28	0.2	2.2	Surface, east bank of bulldozer cut, 300 ft. south of north end of cut.
2262	3.5	0.32	0.1	0.8	Surface, east bank of bulldozer cut, 282 ft. south of north end of cut.
2263	3.7	0.10	0.2	1.2	Contact tunnel, east crosscut, oxidized material, north side 16 ft. from adit.
2264	3.7	0.08	0.2	3.7	Contact tunnel, across back of first west crosscut, oxidized material 14 ft. west of adit.
2265	3.0	0.07	0.2	3.7	Contact tunnel, south wall of crosscut 12 ft. west of No.2264.
2266	6.0	0.30	0.1	1.9	Contact tunnel, across back and west side of adit, oxidized, 11 ft. north of No. 2084.

BM Sample No.	Width, feet	Percent Cu	Pb	Zn	Description
2267	3.5	0.50	0.2	2.6	Contact tunnel, 8 ft. south of face, west wall, oxidized.
2268	4.7	0.10	0.2	0.5	Contact tunnel, across back, 12 ft. south of No. 2084, oxidized.
2269	3.7	0.28	0.2	0.3	Contact tunnel, west wall of adit, 20 ft. south of No. 2268, oxidized, iron stained.
2270	4.2	0.12	0.2	0.2	Contact tunnel, west wall of adit, 13 ft. south of No. 2269, oxidized, iron stained.
2271	3.7	0.32	0.2	0.8	Contact tunnel, east wall of adit, 33 ft. south of No. 2270, leached, oxidized material in shear zone, iron and manganese stains.
2272	3.0	0.30	0.2	2.2	Contact tunnel, west wall of adit, 9 ft. south of No. 2085, taken along fault, shows manganese.
2273	1.5	0.10	0.2	3.1	Contact tunnel, west wall of adit and above No. 2086, shows iron sulfides.
2274	15.0 (length)	0.008	0.2	1.0	Surface exposure of middle bed of limestone, north bank of east-west bulldozer cut, shows iron sulfides, S 45° E, 400 ft. from portal of Contact tunnel.
2294	(not included in weighted average)	3.98	0.2	0.7	Sample from Jerry No. 23 claim.
2295	(not included in weighted average)	0.32	0.2	0.2	Sample from Jerry No. 19 claim.

Weighted Average of Samples

	Percent		
	Cu	Pb	Zn
19 samples (Contact tunnel)	0.223	0.2	1.86
10 samples (Surface bulldozer cut)	1.39	0.2	2.21

ORE RESERVES

Twenty five hundred tons of copper ore averaging 2.5 percent copper and two percent zinc are inferred in the lower limestone bed in a block 30 feet on strike, 5 feet wide, and 200 feet deep, partly exposed at the surface in the cut at the Copper incline.

Although the application is primarily for copper, these reserves are part of an inferred block 800 feet long, 10 feet wide, and 400 feet deep, of which two-thirds or 176,000 tons may be two percent zinc ore. Within the middle limestone bed another ore body is inferred to be 800 feet long, 10 feet wide, and 200 feet deep, of which one-third or 44,000 tons may be two percent zinc ore. In the upper limestone bed a third body is inferred in a block 400 feet long, 5 feet wide, and 100 feet deep, of which one-third or 55,000 tons may be one percent zinc ore. Total inferred zinc reserves are 275,000 tons averaging about two percent zinc.

Copper-bearing float containing massive sulfides and copper silicates, some of which assayed four percent, was found on a talus covered slope for a width of 50 feet along the middle limestone bed 500 feet northeast of the Copper incline. Additional reserves of copper-zinc ore might be inferred in this area if it were trenched by the applicant.

EXPLORATION

Strong justification for additional exploration cannot be made in view of the size and grade of the exposures of copper and zinc which indicate a deposit of marginal economics.

The inferred reserves are not large enough in copper, or high enough grade in zinc, to be economic under present conditions or to warrant a DMEA project. Additional work is warranted however and we recommend that the applicant trench the mineralized area along the middle bed. If the results of the trenching indicate a larger or higher grade copper deposit than can now be inferred, then a DMEA project may be warranted.

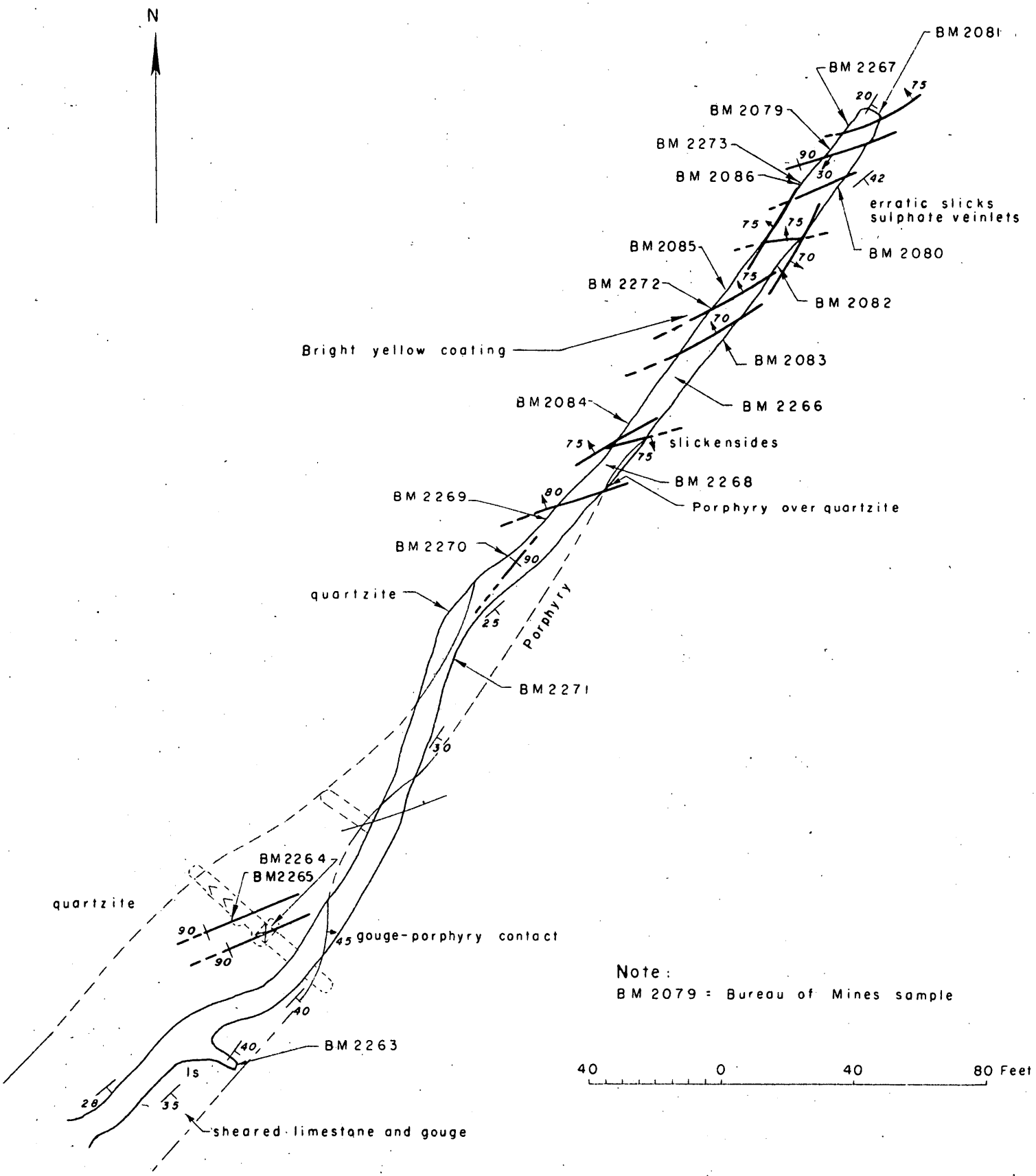


FIGURE 3. CONTACT ADIT, JERRY CLAIMS, LINCOLN COUNTY, NEVADA

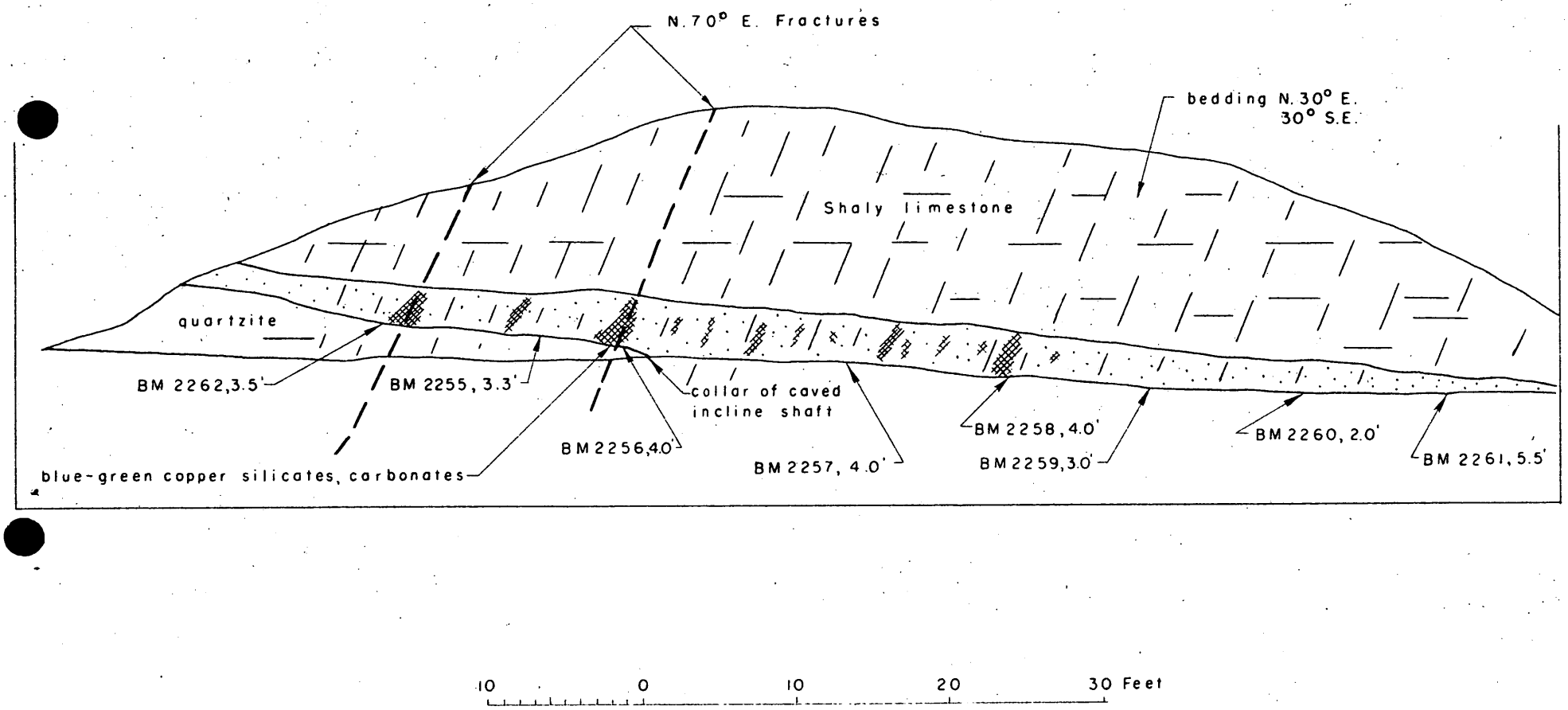


FIGURE 4.

N. 30° E. SECTION ALONG CUT AT COPPER INCLINE, JERRY CLAIMS, LINCOLN COUNTY, NEVADA

OFFICIAL FILE COPY.
D M E A
RECEIVED AUG 9 1957

DATE	INITIALS	CODE

DMEA Form 7
(12-56)

500

OFFICIAL FILE COPY

Date	Surname	Code
4/3	[illegible]	500
4/3	[illegible]	500
4/5	Selfridge	130
4	[illegible]	110
4	[illegible]	100
		225

500

APR 5 - 1957

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-4688 (Copper-Lead Zinc)
Owen Walker
Jerry Claims
Lincoln County, Nevada

Dear Mr. Ricker:

The cited application is being referred to your office for consideration, a field examination of the property if warranted, and recommendation.

In the event that you should consider the application favorably, we would appreciate receiving a property map showing the proposed work of a size which can be attached to the copies of the contract, if the Applicant should be granted Government exploration assistance. Also, the Applicant's estimated costs for drifting and crosscutting are high and should be carefully reviewed by the Field Team.

Copies of memoranda dated March 21 and March 27, 1957, by N. E. Nelson, Geological Survey, and A. D. McMahon, Bureau of Mines, respectively, relating to the project, are enclosed for your information.

Also enclosed is one copy of the application for the cited property for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures
APPROVED:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

JWAlt/er 4/3/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron.

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
4/3	all	500
4/3	Manuel	500
4/5	Selfridge	120
"	Jones	110
"	Mittendorf	100
4/8	C	220
		500.

APR 3 1957

Mr. Owen Walker
Post Office Box 196
Pioche, Nevada

Kilsgaard
Lamb

Re: Docket No. DMEA-4688 (Copper-Lead-Zinc)
Owen Walker
Jerry Claims
Lincoln County, Nevada

Dear Mr. Walker:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and is being referred to:

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

If additional information concerning your application is needed, the Field Team will get in touch with you at an early date.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/er 4/3/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region II (2)
Chron.

8623

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

March 27, 1957

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4688 (copper, lead, zinc), Owen Walker, Jerry Claims, Lincoln County, Nevada

The applicant proposes to continue the exploration of limestone beds for copper with 700 feet of drifting and 500 feet of crosscutting.

The old contact tunnel driven 151 feet some years ago was advanced to 400 feet by the applicant in the same limestone bed. This limestone bed was consistently mineralized throughout and the applicant believes the drift should be under the copper outcrop in another 400 feet. The additional 300 feet will thoroughly explore the bed at this horizon. If this project is encouraging, the 500 foot crosscut is proposed to explore another bed known to be a favorable horizon elsewhere on the property.

It would seem that the target area should be tested with a few adequate drill holes, if practicable, before driving the proposed drift. Also, the estimated cost for the type of work contemplated seems excessive.

Referral of the application to the Field Team is recommended.

A. D. McMahon

A. D. McMahon

Attachment
Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
Files

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 28 1957

DATE	INITIALS	CODE
28	C	220
3/28	alb	500

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 22 1957

DATE	INITIALS	CODE
3/23	C	220
3/25	JWA	500

3/26

March 21, 1957
Re: DMEA 4688
Owen Walker
Jerry Group
Lincoln County, Nevada
$55,508.00 - copper, zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

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

Subject: Review of application

The applicant requests assistance in exploring, by extending a drift adit and crosscut, the lower and middle limestone beds of the Pioche Shale formation, 550 to 850 feet downdip of near-outcrop showings of oxidized copper and zinc minerals.

The applicant has done considerable work rehabilitating and extending an old drift adit driven to explore the zinc showing, and in his opinion the indications are more favorable than near the surface, inasmuch as the lower bed in the inner part of the adit is more sheared than nearer the portal. The proposed crosscut from the drift adit would penetrate the middle limestone where it may be conditioned favorably by the shearing if the shearing is continuous through the lower Pioche Shale and into the middle limestone.

The conception on which the drift adit in the lower bed is based is not unreasonable. If results should be favorable, the crosscut might be warranted.

Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

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

March 20, 1957

Mr. Owen Walker
Post Office Box 196
Pioche, Nevada

Subject: DMEA-4688
Re: Exploration Assistance

Dear Mr. Walker:

Your application for exploration assistance, dated March 1, 1957 submitted to our office at Reno, Nevada has been assigned Docket Number DMEA-4688 and referred to the Base Metals 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 II

3571

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-4688
(Copper-Lead-Zinc)

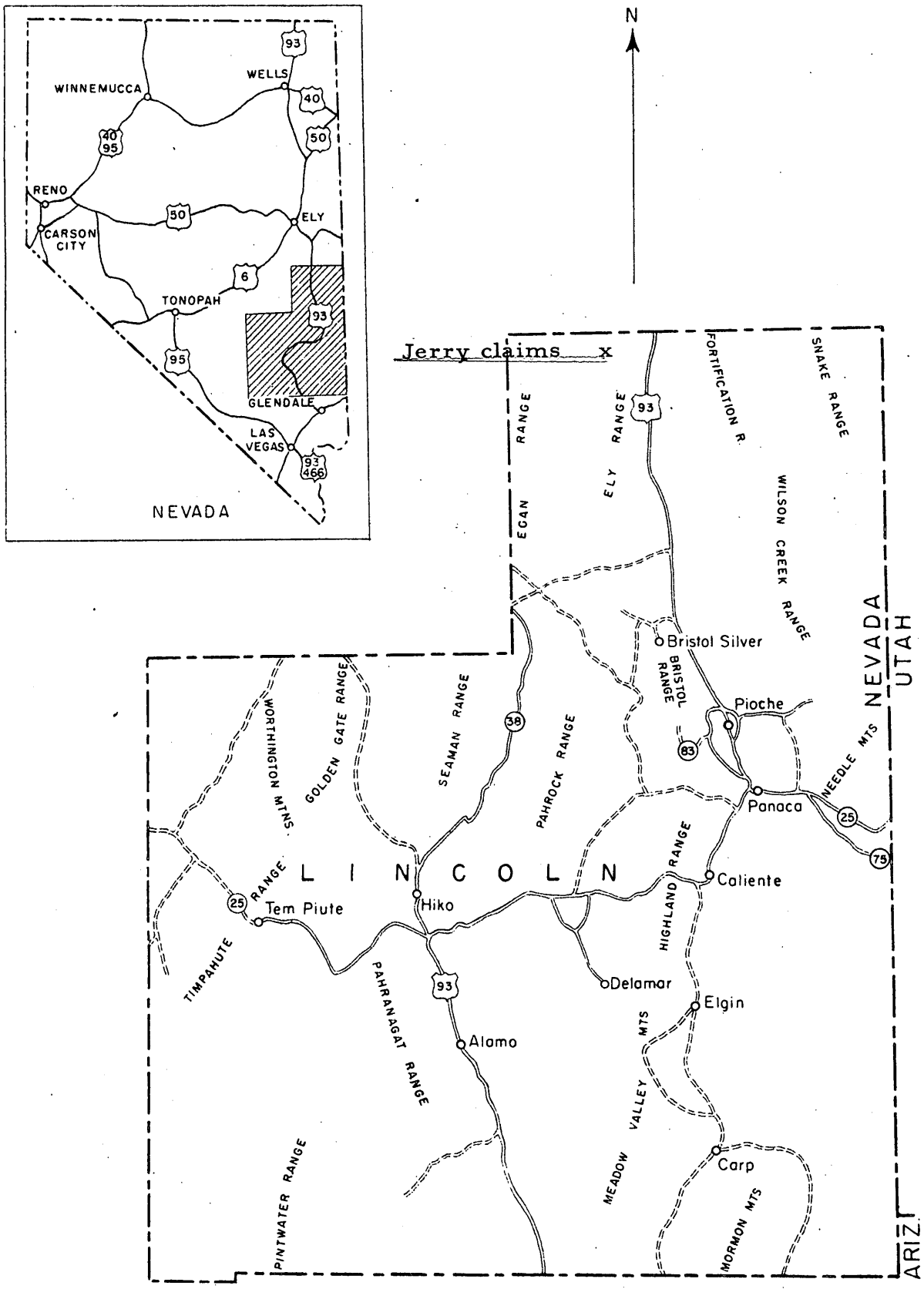
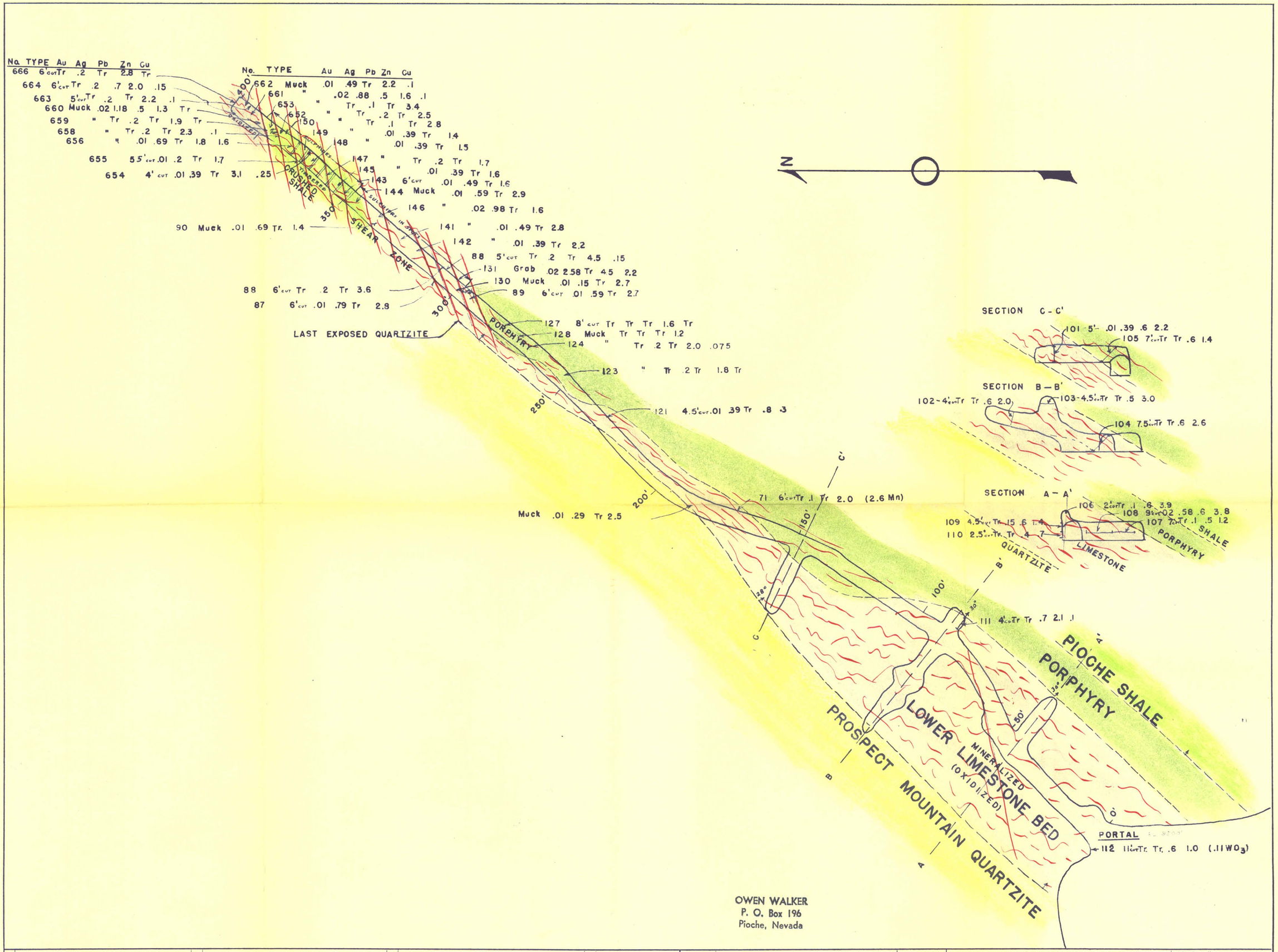


Figure I. INDEX MAP OF LINCOLN COUNTY, NEVADA

0 20 40 60 Miles

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 9 1957

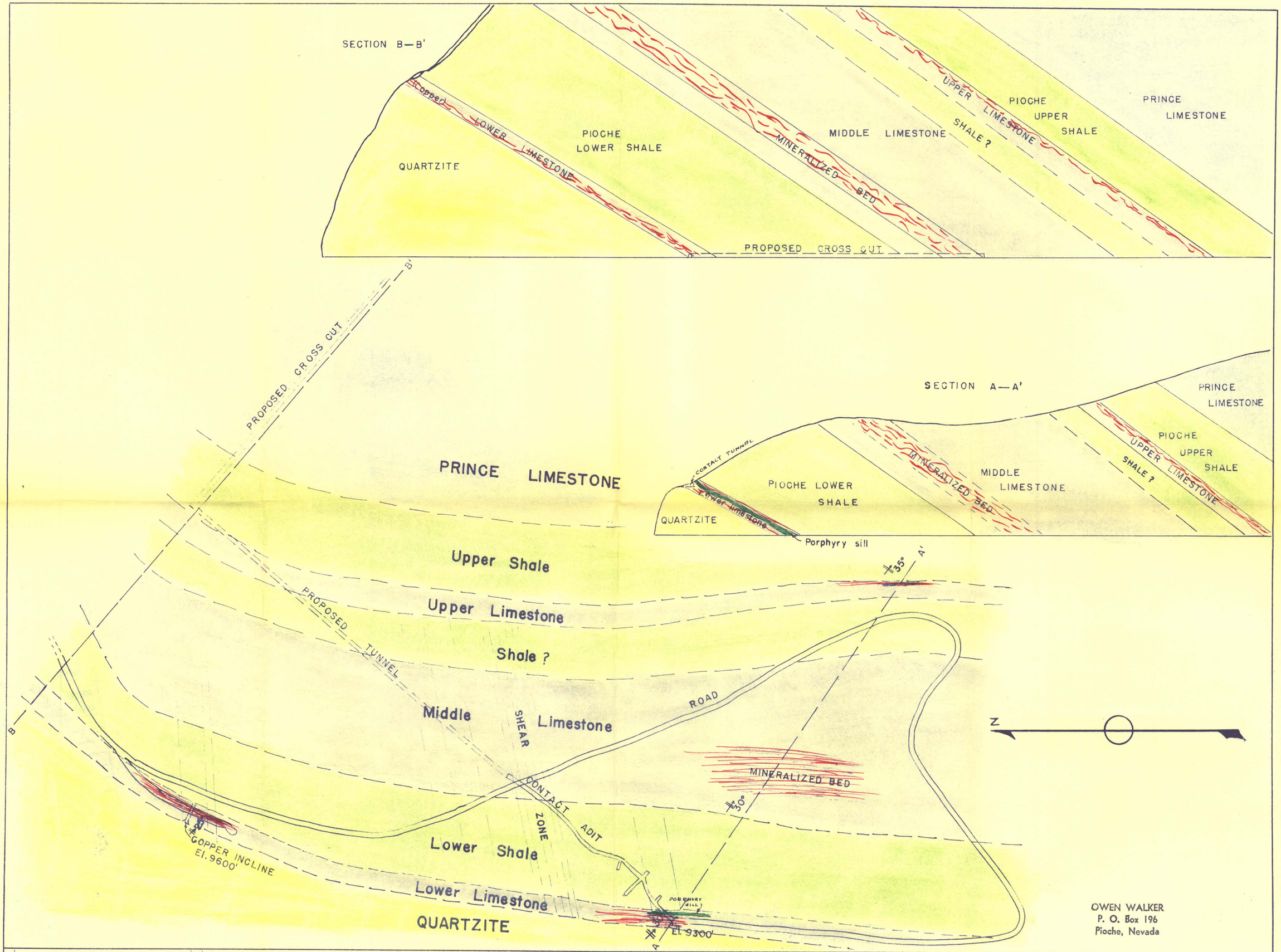
DATE	INITIALS	CODE



OWEN WALKER
P. O. Box 196
Pioche, Nevada

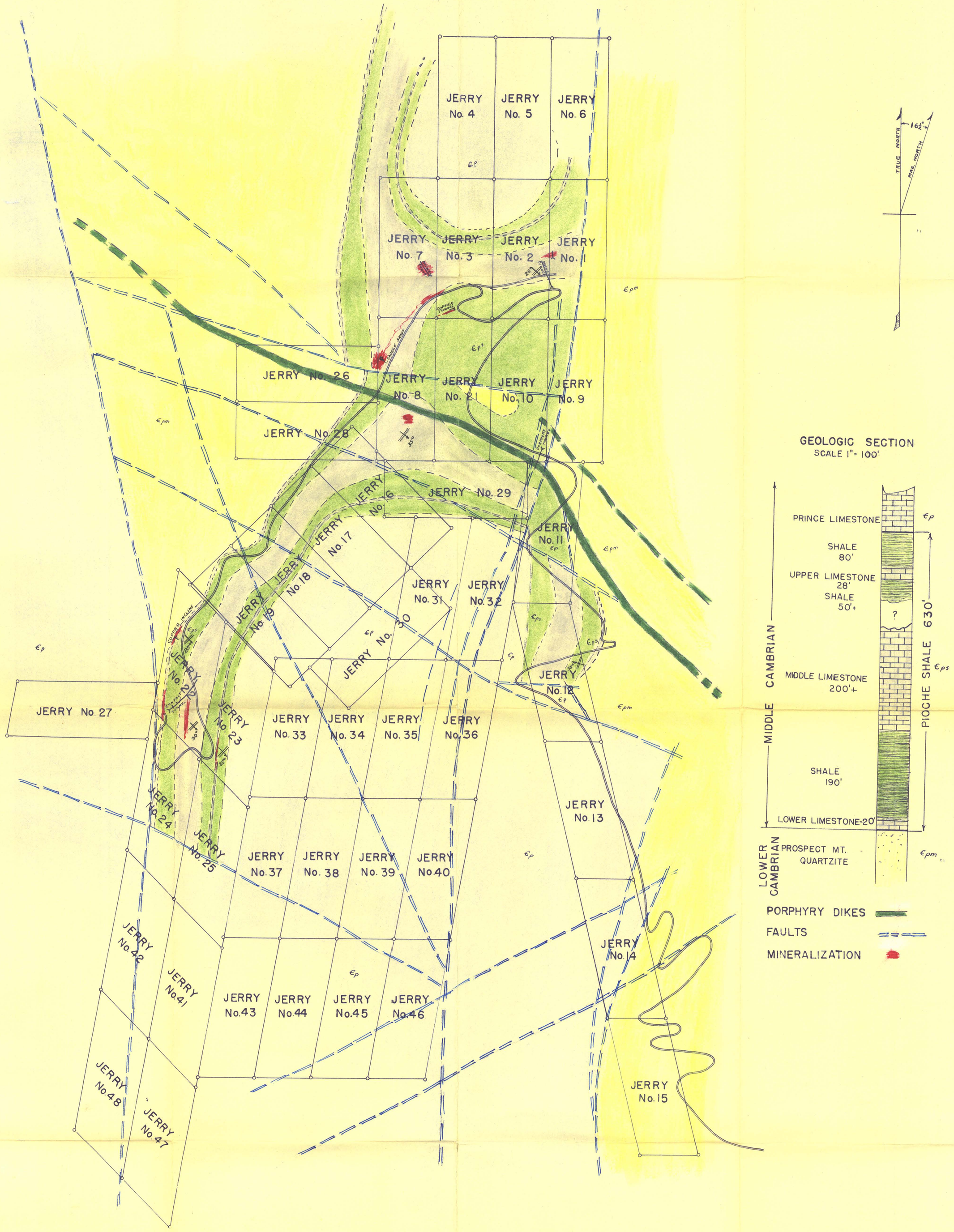
REVISIONS	REVISIONS	REFERENCES	WORK			ASSAY PLAN AND GEOLOGY	PLANT	CONTACT TUNNEL JERRY CLAIMS — PATTERSON MOUNTAIN LINCOLN COUNTY, NEVADA	SCALE 1" = 20' C -
				DRAWN	L.K.R.				
				TRACED	1/22/57				
				CHECKED					
				APPROVED					

CESCO-10004



REVISIONS	REVISIONS	REFERENCES	WORK			D.M.E.A. PROJECT	PLANT	PLAN & SECTIONS-CONTACT ADIT JERRY CLAIMS PATTERSON MT. LINCOLN COUNTY NEVADA	SCALE 1" = 100' C-
			DRAWN	L.K.R.					
			TRACED	1/22/57					
			CHECKED						
			APPROVED						

GESCO-1000H



JERRY GROUP OF CLAIMS
PATTERSON MINING DISTRICT
LINCOLN COUNTY
NEVADA

Scale 1in = 500 ft.

GEOLOGY By L. K. REQUA

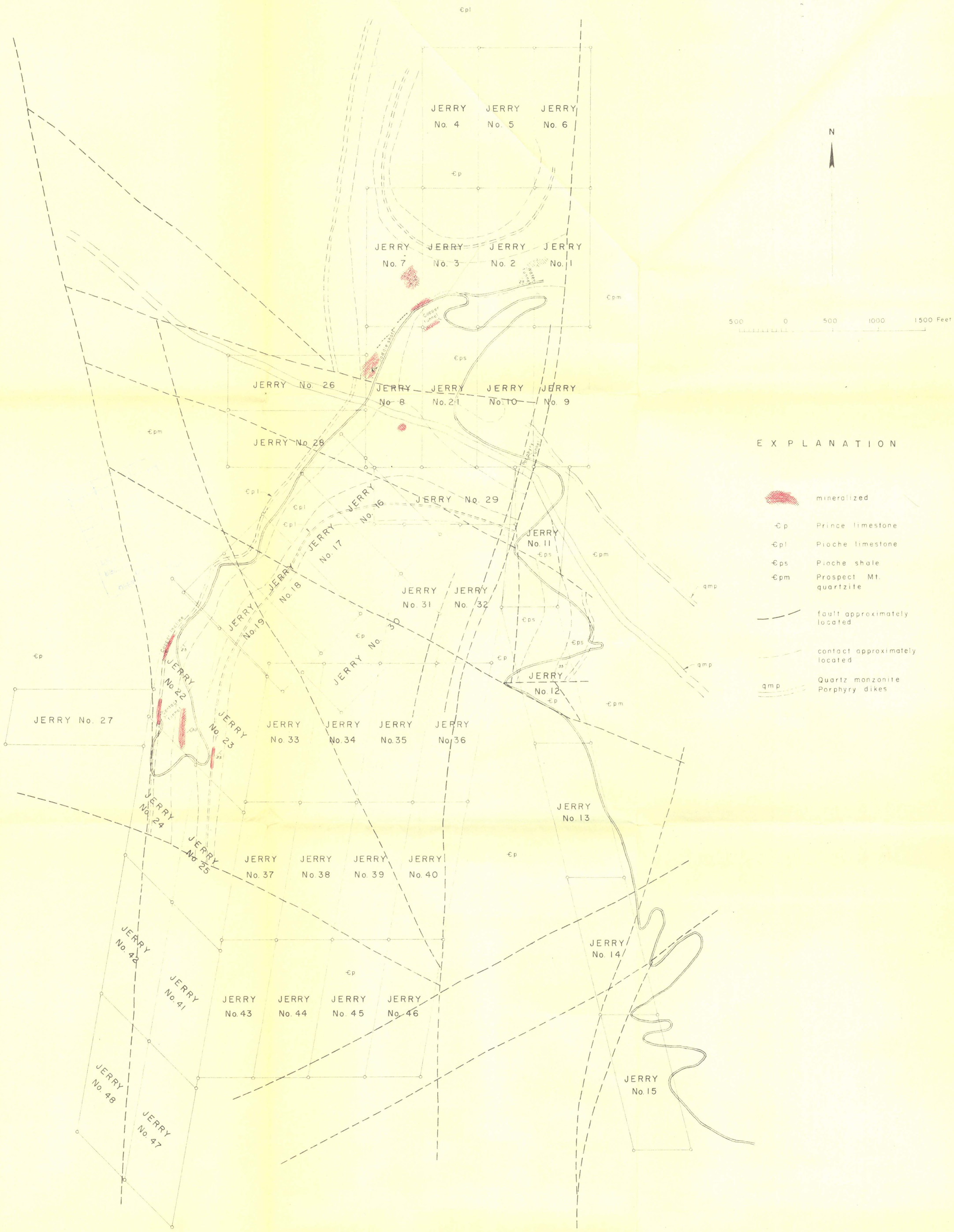
CLAIM SURVEY By C.E. THOMPSON

NOVEMBER 1956

OWEN WALKER
P. O. Box 196
Pioche, Nevada

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 4688
(COPPER, ZINC, LEAD)



Geology by L. K. Requa
November, 1956

FIGURE 2. GEOLOGIC MAP, JERRY CLAIMS, LINCOLN COUNTY, NEVADA