DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

## CONTROLLED DOCUMENT

DMA Docket No. 2188

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EXPLORATION PROJECT

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

Routing Slip
Code 340

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|---|---|---|---|
| To: | Ferro-Alloys Br. | Date | 10/30/51 |
| To: | CODE 400-RM 3538 | Date | 2-12-52 |
| To: | Open. Com. | Date | 5-14-52. |
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## DO NOT DETACH

## CONTROLLED DOCUMENT

FEB 12 1952

Giant Lodge Land and Copper Co.
Edward H. Wilhite, Secretary
927 Palm Drive
Colton, California

Re: Docket No. DMA 21RRX - Tungsten
New York Mountain Area
San Bernardino County, California

Dear Mr. Wilhite:

Your application for assistance in exploring the subject property has been reviewed by the Iron and Ferro-Alloy Division of the Defense Minerals Exploration Administration and has been referred to Mr. R. G. Miller, Executive Officer, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional Office will contact you at an early date in regard to the examination of your property. Any assistance that you can give the field team in the examination will be appreciated.

Sincerely yours,

C. U. Bettander

Acting Administrator
Defense Minerals Exploration
Administration

QLBrewer:lm
2/7/52

cc: Admn. Reading File
Docket
R. W. Geehan, USGS
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
Q. L. Brewer

J-78 a

C-MD-DPI

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

February 5, 1952

Memorandum

To: George C. Selfridge, MMA

From: D. M. Lemmon, U.S.G.S.

Subject: Letter of January 10, 1952 from Giant Ledge Lead and Copper Co. Secs. 31 and 32, T. 14 N., R. 15 E. New York Mountains San Bernardino County, California — MMS 2128 - Tungsten

The additional information submitted by Mr. L. A. Wilhite and by Mr. W. J. Johnstone for the Giant Ledge Lead and Copper Co. confirms our conclusions based on the original docket: the applicant is not competent to prepare an exploration program, and probably is not competent to direct any mining enterprise.

The maps submitted show neither useful geology nor location of the 2 proposed shafts. The old workings have not been mapped.

The applicant does not recognize the metallurgical difficulty of concentrating low-grade oxidized lead-zinc-silver ore containing some scheelite and huebnerite. The fluorite content is probably valueless.

The geologic reason is not stated for sinking 2 shafts 200 feet deep and diamond drilling from the bottom.

The proposed cost of $100,000 is unreasonable for the work outlined. For a project estimated to take 6 months, and employ 10 men, salaries of $16,900 for a manager, engineer, superintendent, secretary-treasurer, and cook are excessive. The need for 2 miles of road costing $13,975, and for housing costing $12,125 is not clearly demonstrated. The proposal to develop water at a cost of $4,650 is probably not feasible.

Recommendation: It is suggested that this application be referred to the Field Team for investigation of the geology of the deposits, for an opinion on possibility of developing a metallurgical process to treat the ores, and for preparation of a suitable exploration program if exploration is warranted. The possibility of developing sulfide ore at depth should be evaluated. Information is needed about

the experience and competence of Robert J. Ingalls, engineer for the applicant.

It is also recommended that the applicant be informed that the data submitted is inadequate both as to geology and engineering; however, the application is being referred to the Field Team so that the team can advise the applicant about the steps he should take to prepare a suitable proposal.

The property should be evaluated solely from the viewpoint of tungsten unless the metallurgists can give some hope for economic recovery of other metals.

D. M. Lemmon

DMLemmon:gt

Copies to: Director's reading file
Branch reading file
F.H.Bailey, San Francisco

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

177A

FEB 12 1952

Mr. H. C. Miller
Executive Officer, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Sir:

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

Applicant Giant Ledge Lead and Copper Co.

Docket No. 2188X

Commodity Tungsten, etc.

Amount $ 100,000.00

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

Sincerely yours,

C. O. Mittendorf

ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA-2188X

Commodity Tungsten, etc

Total Amount $100,000.00

Govt. Participation 75%

1. Name and Address of Applicant Giant Ledge Lead and Copper Co, 927 Palm Drive Colton California Edward E. Wilkite, Secretary, ~~422 Seventh St, Hesperia, Calif~~

2. Location of Property San Bernardino County, California

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

If not, application will be rejected.

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

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

a) Good

b) Poor

c) None

d) Don't know—needs field examination — Yes

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

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

6. If applicant is a lessee, is a copy of the lease attached? —

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

*question numbers are those of MF-103

7. Are subordination agreements necessary? No

a) MF-201?

b) MF-202

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

a) Available manpower Don't Know

b) Equipment and supplies Don't Know
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Don't Know

e) Power (question 13)* Yes

Is a field check needed on any of these points? Yes, as noted Above

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* No - must be checked (Also Robert J. Ingalls, Engineer)

Is a field check needed on this point? Yes

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

a) Is the project adequately described? No

If not, are there sufficient data given so that you can describe the project? No If so, attach a draft.

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

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Don't know, As [redacted] The area is ~~If not, what part of it is~~? unknown to us, and Applicants description is too vague and indefinite to form an opinion

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Not satisfactorily

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

e) Are the cost estimates reasonable? No

f) Should more information be requested from applicant? Yes

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

11. Exhibit B (question 23-d)*

a) Is it applicable? No

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

c) Is a field check needed? Yes

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

a) Is it applicable? Yes

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

c) Are rents and charges reasonable? NO

d) Is a field check needed? Yes

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

a) Are there sufficient data? NO

b) Is the schedule adequate for the work proposed? ~~No~~

c) Is the schedule excessive for the work proposed? Yes

d) Are the proposed wages and salaries reasonable? No - (See below)

e) Is a field check needed? Yes

(The total supervisory salaries noted in the application are $400.00 per month. Not over $600 will be approved. The company can privately pay the balance, if they so desire.)

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

b) Sufficient data? No

c) Reasonable? No

d) Field check needed? Yes

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

(All exploration must be completed within two years)

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

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Yes - See attached sheet

Note: Letter of Jan 21, 1952 - Citing ~~Fluorite~~ Fluorite Contour,

Reviewed by: J. J. Brown

Date 2/6

Evelyn

Copies to :-
USGS - Feb 5-1952
" Dec 3-1951
Letter Jan 21-1952 from Johnstone
" Jan 10. 1952 " Wilhite
(being, in essence, an amended Application)
" To Johnstone Dec 13, 1951
application - M7103 - Oct 25, 1951
" - M7100 (incl 2 maps)
Company balance sheet

Giant Rubies Lead and Copper Company - DMA 21884 - Tennessee

As noted in the USGS report of February 5, 1952, the inability of the applicant to supply the necessary information, maps and to present a logical proposal is apparent.

The field team is requested to make an investigation:

1. Of the geology of the deposits, as found on the surface and as expected in depth.

2. For an opinion as to the metallurgical treatment of the ores.

3. And to prepare a suitable exploration program, if exploration is warranted, in company with the applicant.

4. As to the competence of the operator and/or manager.

Your attention is called to the complex ores - tungsten, copper, lead, silver, and fluorite - and to their metallurgical treatment with possibly more than one saleable product.

Acting Administrator, DMA May 9, 1952

Iron and Ferro-Alloy Division, DMA

Denial of exploration project in the amount of $100,000
Docket No. DMA 2188 - Tungsten
Giant Ledge Lead and Copper Company
New York Mountain area
San Bernardino County, California

The subject application was denied by this Division for the following reasons:

(1) The small amount of tungsten observed on the property occurs in the oxidized zone of a complex replacement deposit along the contact of a Tertiary granite intrusive in Cambrian limestone. The vein, where exposed, is wide (averaging about 30 feet in width), but because of intensive faulting in the region only short truncated segments are traceable from present surface maps and prospect diggings. There are no apparent geologic considerations to preclude the possible extension of mineralization beyond the faults, but exploration and development costs in such an intensely faulted area would naturally become extremely high.

The tungsten exists in the forms of huebnerite and scheelite to the extent of less than 0.1% tungstic oxide, along with somewhat larger quantities of copper, lead, zinc, and fluorite, plus a small amount of silver.

In the 60-year history of haphazard prospecting about the property a large number of random test pits, trenches, drifts, and shafts have revealed about 25,000 tons of indicated ore of doubtful value in base metal content and with no economic values in tungsten.

In view of the geological and mineralogical complexity of the deposit, it is extremely doubtful that the exploration project proposed by the Operator would improve the outlook of the property or lead to any significant discovery.

(2) In the many years the property has been under observation its production has been limited to a few tons transported by mule back to the nearby Sycamore Mine about 50 years ago. Economic results of the treatment of that ore are not reported, but production was suspended. In regard to the tungsten there has been no experience whatever in its metallurgical treatment. Because of the extremely low grade of the ore (0.07% $WO_3$) and the associated minerals, it is doubtful that the tungsten could be recovered in any form but as a complex uneconomical by-product.

(3) The quality of the work already done by the present Operators and the exorbitant cost of their vague plans for the future leave serious doubt of their competency to undertake the expansive development project they propose.

(4) The Field Team recommends that the application be denied.

(5) The Commodity Division of the U. S. Geological Survey concurs with the Field Team in recommending denial.

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

NJHurley:ls
5/12/52

Copy to: Docket
Admn. Reading File
Operating Committee
N. J. Hurley
G. C. Selfridge

Mr. Edward F. Wilhite, Secretary
Giant Ledge Lead and Copper Company
927 Palm Drive
Colton, California

Re: Docket No. DMA 2189 - Tungsten
New York Mountain area
San Bernardino County, California

Dear Mr. Wilhite:

Your application for exploration assistance and other information relating to your application available to us in Washington, have been carefully reviewed.

This information, while noting a small amount of a complex low-grade ore on your property, indicates that geologically there is little probability of making a significant discovery of tungsten. I regret, therefore, to inform you that your application is denied.

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

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

NJHurley:le
5/9/52

cc: Admn. Reading File
Docket
Field Team, Region 3
G. C. Selfridge
N. J. Hurley
D. M. Lemmon, USGS
R. W. Geehan, USBM
Operating Committee

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

May 8, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1952

Mr. Edward E. Wilhite
Secretary-Treasurer
Giant Ledge Lead & Copper Co., Inc.
927 Palm Drive
Colton, California

Re: Docket DMA-2188X (Tungsten)
Giant Ledge Lead & Copper Co., Inc.
San Bernardino County, California

Dear Mr. Wilhite:

In reply to your letter of May 5, inquiring as to the status of the above-captioned loan application, our files show that the field report on your property was sent to the Washington office of the Defense Minerals Exploration Administration on April 25, 1952. Undoubtedly, you will hear directly and shortly from the Washington Office.

Sincerely yours,

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to DMEA, Washington, D.C.
E. H. Bailey, USGS

IN REPLY REFER TO:
C-MD-DM.
400

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

May 7, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Field Report — DMEA 2188 - Tungsten
Giant Ledge Lead and Copper Co.
San Bernardino County, California

The Giant Ledge property was examined March 3-6, 1952 by L. D. Clark and W. P. Irwin of the Geological Survey. Their report, dated April 24, recommends denial of the exploration project because there is no firm geologic basis for predicting the location of faulted segments of the mineralized bodies, the mineralization is highly oxidized and presents a complicated metallurgical problem, the mineralization is probably not of economic grade, and the applicant is not qualified to conduct exploration. Most of the assay values are in base metals and silver rather than in tungsten. The highest of 6 tungsten assays was only 0.22 percent of $WO_3$.

I concur with the Field Team and recommend denial of the application. Before any exploration project could be considered, an ambitious program of geologic mapping is necessary to determine exploration targets, if there are any.

D. M. Lemmon

Copy retained 400

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

C-MD-DML

February 5, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. E. Lemmon, U.S.G.S.

Subject: Letter of January 10, 1952 from Giant Ledge Lead and Copper Co. Secs. 31 and 32, T. 14 N., R. 16 E. New York Mountains San Bernardino County, California — DMA 2188 - Tungsten

The additional information submitted by Mr. E. E. Milhite and by Mr. E. J. Johnstone for the Giant Ledge Lead and Copper Co. confirms our conclusions based on the original docket: the applicant is not competent to prepare an exploration program, and probably is not competent to direct any mining enterprise.

The maps submitted show neither useful geology nor location of the 2 proposed shafts. The old workings have not been mapped.

The applicant does not recognize the metallurgical difficulty of concentrating low-grade oxidized lead-zinc-silver ore containing some scheelite and huebnerite. The fluorite content is probably valueless.

The geologic reason is not stated for sinking 2 shafts 200 feet deep and diamond drilling from the bottom.

The proposed cost of $100,000 is unreasonable for the work outlined. For a project estimated to take 6 months, and employ 10 men, salaries of $16,900 for a manager, engineer, superintendent, secretary-treasurer, and cook are excessive. The need for 2 miles of road costing $18,975, and for housing costing $12,125 is not clearly demonstrated. The proposal to develop water at a cost of $4,650 is probably not feasible.

Recommendation: It is suggested that this application be referred to the Field Team for investigation of the geology of the deposits, for an opinion on possibility of developing a metallurgical process to treat the ores, and for preparation of a suitable exploration program if exploration is warranted. The possibility of developing sulfide ore at depth should be evaluated. Information is needed about

the experience and competence of Robert J. Ingalls, engineer for the applicant.

It is also recommended that the applicant be informed that the data submitted is inadequate both as to geology and engineering; however, the application is being referred to the Field Team so that the team can advise the applicant about the steps he should take to prepare a suitable proposal.

The property should be evaluated solely from the viewpoint of tungsten unless the metallurgists can give some hope for economic recovery of other metals.

DM Lemmon

DMLemmon:gt

Copies to: Director's reading file
Branch reading file
E.H.Bailey, San Francisco

400

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

dmea 2188

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION OF PROJECT III

DMEA 2188, Giant Ledge Lead and Copper Company

San Bernardino County, California


L. D. Clark, Geologist
W. P. Irwin, Geologist
U. S. Geological Survey


April 24, 1952

Reviewed by
DMEA OPERATING COMMITTEE
5-7-52
(date)

## Introduction

The Giant Ledge Lead and Copper Company controls a group of 15 contiguous claims for lead, zinc, silver, tungsten and fluorspar on the southeast flank of the New York Mountains in San Bernardino County, California. The company applied to DMEA for Government aid in a $100,000 program to explore the Hard Cash and Nephi deposits, two of several deposits covered by the group of claims. In response to a request from DMEA, L. D. Clark, and R. P. Irwin of the Geological Survey examined the deposits during the period March 3-6,1952. The surface and underground workings of the Hard Cash prospect were mapped at a scale of 1 inch equals 50 feet, and six samples of the area were taken. Several members and guests of the company were present during one day of the examination, including R. N. Wilshire, S. A. Barnes, Lahee, and Heiney. Barnes was on the property during the entire examination.

The Hard Cash deposit contains 25,000 tons of indicated ore with a grade of approximately 0.80% Cu, 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton. Most of the ore is oxidized, and the mineralogy is complex, leading to difficult metallurgical problems. It is probable that the ore is not of economic grade. The indicated ore body has been adequately explored. Further exploration would be limited to a search for faulted portions of the deposit. The possible position of such faulted portions is highly conjectural.

In the Nephi deposit no ore was seen in place. The dump material indicates that the deposit consisted of only a narrow fracture filling, and no further exploration is warranted.

The cost of $100,000 for the proposed exploration is excessive, owing to unwarranted road building, erection of camp facilities, and padding in the form of a top-heavy supervisory staff. The request was made on the basis of tungsten, but the assays indicate that the main value of the ore is in the base-metal content.

The company plans to explore the deposits by means by a 200-foot, two-compartment shaft on each deposit. At the time of examination the applicant had no idea as to where the shafts were to be located. Work done by the applicant prior to the examination was random and inefficient. Judging from the application, and from observation made in the field, the applicant is not qualified to carry out an efficient exploration program.

It is recommended that the applicant's request for a loan be denied.

## Location

The deposits are at an altitude of 6000 feet in T. 12 N., R. 14 E. (projected) SBM, Ivanpah Quadrangle, about 6 airline miles south of Ivanpah, San Bernardino County, California. The Hard Cash deposit is in the

W½ NE¼ sec. 31; the Nephi is in the E½ NE¼ sec. 31 and W½ NW½ sec. 32, about 2000 feet ea t of the Hard Cash deposit.

## History

Little of the history of the Hard Cash prospect is known, but it is believed that during the early 1900's a small tonnage of ore was carried by pack mules to be milled at the Sagamore Mine (DMA 1102), about 1½ miles north. The quantity could not have been large, as the workings are of an exploratory nature, and most of the rock mined remains on the dumps. The Nephi prospect has no production.

## General Geology

The area covered by the claims is underlain by coarsely-crystalline limestone and granite, which are in contact along a north-trending line. The limestone is on the east side of the contact. According to D. F. Hewett, the limestone is Cambrian in age and granite is Tertiary.

The mineral deposits in the area are of three principal types: (1) replacements of sheared granite in contact with limestone by fluorite, base-metal and tungsten-bearing minerals (2) quartz veins in granite that contain no fluorite but otherwise are mineralogically similar to the first type, and (3) thin veins of copper-, lead-, and silver-bearing minerals in fractured limestone. The Hard Cash deposit is of the first type; the Nephi deposit is of the third type.

## Hard Cash Deposit

The Hard Cash deposit is largely a replacement of sheared granite, but contains considerable vein quartz. It trends east and dips moderately to the south (see plate 1). It has an average thickness of about 30 feet, but because of repetition by faulting the surface exposure appears deceptively thicker. The attitude of the replaced shear zone is virtually parallel to the bedding of the limestone, except where the shear zone and limestone are in juxtaposition owing to faults that crosscut the bedding of the limestone.

Rocks in the vicinity of the Hard Cash Vein are complexly faulted. The deposit is broken into two segments by two tranversesfaults. A third major fault that is exposed in the mine workings trends east and dips north at a moderate angle; it truncates the deposit at shallow depth. In the western segment, coarse granite like that in the footwall of the ore body is in fault contact with the ore at depth to the south. In the eastern segment, medium-grained granite like that at the surface south of the vein is in fault contact with the ore at depth to the south. The western segment is cut in addition by a number of smaller faults of diverse trends, and attitudes.

The underground workings are in the zone of oxidation. In the innermost part of the lower workings, however, oxidation is slight, and the principal minerals that constitute the deposit are quartz, fluorite, pyrite, galena, chalcopyrite, bornite, sphalerite, scheelite, and probably huebnerite. In the upper workings the sulfide minerals have been converted in large part to oxidation minerals of lead, zinc, and copper.

## Sampling

Six samples of the ore were taken (see composite plan of underground workings). Samples Nos. 1,2,5, and 6, are channel samples cut vertically on the walls of the workings. Samples Nos. 3 and 4 are chip samples taken horizontally along the wall of the workings. The average weight of the samples was about 15 pounds. The samples were split in San Francisco and splits of the samples were sent to the Bureau of Mines, Reno, Nevada for assay. Following are the assay results determined by the Bureau of Mines.

| Sample No. | Length | %Pb. | %Cu | %Zn | $\%WO_3$ | $\%CaF_2$ | Oz.Au/T | Oz.Ag/T |
|---|---|---|---|---|---|---|---|---|
| 1 | 6' | 4.0 | 0.75 | 1.2 | 0.22 | *1.0 | Trace | 5.40 |
| 2 | 6 | 4.4 | 1.95 | 5.3 | 0.13 | *1.0 | Trace | 4.70 |
| 3 | 5½ | 0.9 | 0.65 | 0.8 | 0.04 | *1.0 | Trace | 3.25 |
| 4 | 14 | 0.7 | 1.10 | 2.8 | 0.14 | *1.0 | Trace | 2.45 |
| 5 | 5 | 8.2 | 1.20 | 8.1 | *0.01 | *1.0 | 0.005 | 10.90 |
| 6 | 6 | 0.8 | 1.25 | 3.0 | 0.04 | *1.0 | Trace | 2.30 |

* Less than

## Ore

The samples are fairly representative of the general grade of the ore. The weighted average grade of the sampled material is 0.88% Cu, 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton.

Samples Nos. 1,2,3, and 4, represent material that has been oxidized to a greater extent than samples No. 5 and 6. Sample No. 5 was taken at the only place in the deposit where the sulfide minerals appear to be little oxidized. Although it gave the highest assay value in base metals it does not necessarily indicate that the average base-metal content of the ore below the oxide is of a correspondingly higher grade than that in the zone of oxidation.

The fluorite and base-metal minerals are distributed throughout the ore zone, and do not appear to be concentrated in well-defined ore shoots. The scheelite, however, appears most concentrated in a vaguely defined zone along the drift from which samples No. 1 and 2 were taken.

Judging from the weighted grade of the samples, the material that has been referred to as ore is too low in grade to be mined economically. In addition, the assay values are not representative of the recoverable metal content of the ore. The metallurgy of the ore will be complex, and the recovery will be low owing to the oxidized nature of the indicated ore. Moreover, it seems likely that the tungsten-bearing minerals can be recovered only as a minor by-product, and the fluorite can not be recovered economically.

## Ore Reserves

The deposit contains about 25,000 tons of indicated ore with a grade of approximately 0.88% Cu., 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton. This tonnage has been calculated from the cross-section areas of ore and length of surface exposures in the area of the underground workings (see plate 1). The area of ore shown on the eastern half of the map has been regarded as unimportant from the standpoint of ore reserves, fot it is faulted at shallow depth.

The examination failed to indicate extension of ore beyond the fault that terminates the known portion of the deposit, although it appears likely that other portions of the faulted deposit may be present. Considering the complexly faulted nature of the rocks that underly the area, any ore bodies encountered would probably be small, with high exploration and development costs per ton of ore mined.

## Exploration

The applicant proposes to sink a 200-foot two-compartment shaft, but when questioned during the examination of the deposit had no definite location in mind.

## The Nephi Prospect

The Nephi prospect is a 20-foot vertical shaft and several small pits in horizontally-bedded limestone. The shaft appears to have been sunk on a vertical fracture that strikes northeast. The shaft is inaccessible, but viewed from the collar, no metallic minerals were seen in the walls. A small pile (less than a ton) of ore on the dump is reported by the applicant to have come from the bottom of the shaft, and to have assayed 12.66% Cu and 24.69 oz. of Ag. per ton. The ore on the dump appears to have come from a vein an inch or two thick, possibly from the fracture exposed in the shaft.

The applicant proposes to explore the deposit by sinking a 200-foot two-compartment shaft, presumably at the location of the present shaft.

## Quartz veins

Two quartz veins that range from 12 to 18 inches thick occur near the Hard Cash deposit. Locally they contain base-metal sulfides and abundant hubnerite and scheelite. One of them has been explored by a 20-foot shaft dug by the applicant. It appears, however, to have little economic value,

owing to the narrow width of the vein and the spotty occurrence of the tungsten-bearing minerals.

The largest quartz vein in the area is the Giant Ledge (see plate 3). It forms a strikingly bold outcrop about 1500 feet southeast of the Hard Cash deposit, and is opened by small workings near the outcrop for a length of about 500 feet. The vein is about 20 feet thick. An adit several hundred feet below the outcrop is reported to intersect the vein 1200 feet from the portal, but is not accessible beyond a point 600 feet from the portal. (How about drawing)

Most of the Giant Ledge appears to consist of barren quartz, but minor amounts of base-metal sulfides, hubnerite, and scheelite are present locally.

The accessible, 600-foot portion of the adit intersects three other quartz veins in granite. One of these veins ranges from 8 to 12 inches thick, and contains abundant hubnerite and scheelite. The other two veins contain no visible tungsten minerals.

## Recommendations and Conclusions

It is recommended that the applicant be denied Government aid in further exploration of the deposits for the following reasons:

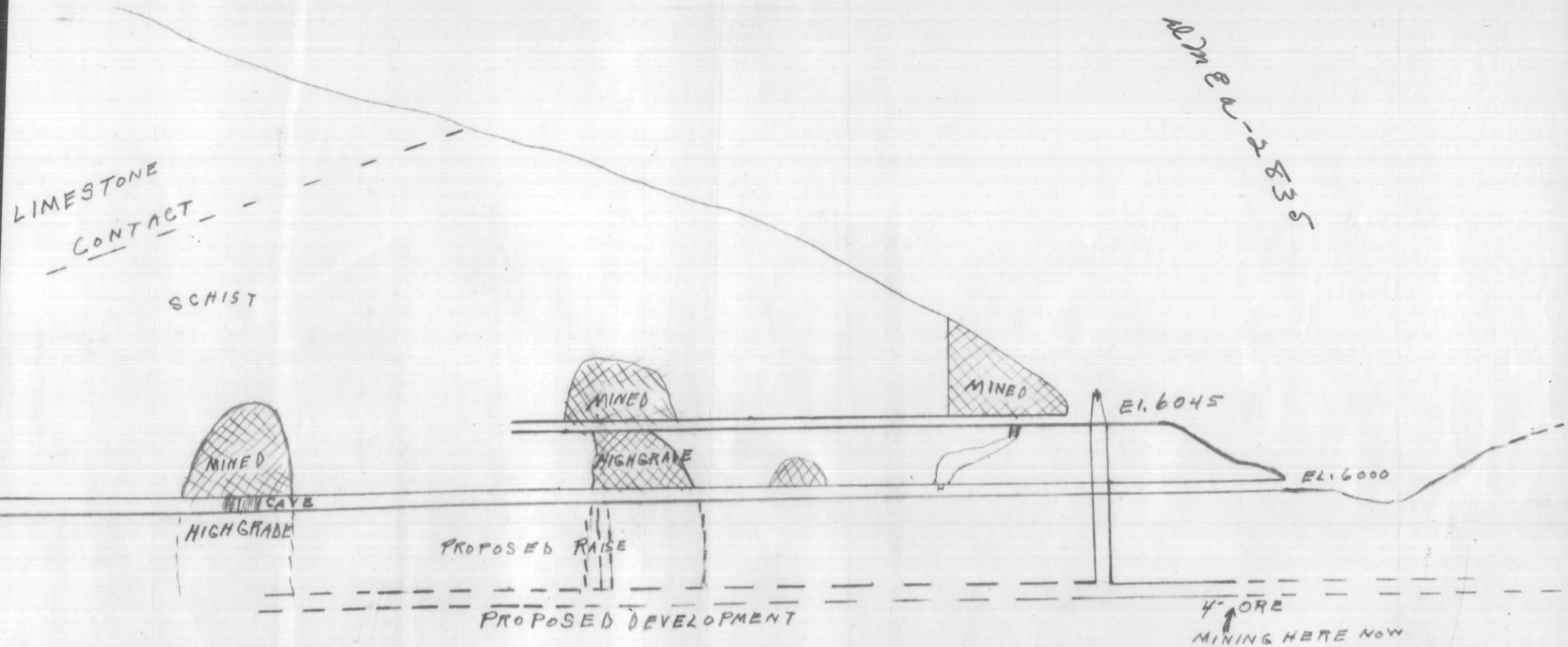
1. The deposit contains 25,000 tons of indicated ore, the outline of which is fairly well established. Additional tonnages of ore may be present in faulted portions of the ore body, but there is no firm geologic basis for predicting the location of the faulted portions of the ore body.

2. The ore is probably below economic grade. The assay value of the ore is not representative of the value of the recoverable metal content. The indicated ore is highly oxidized and the mineralogy complex. The metallurgical treatment of the ore will be difficult.

3. The applicant proposes the program on the basis of tungsten, with Government participation equal to 75 percent of the total cost. The highest value indicated by the samples is 0.22 percent $WO_3$. Most of the value is the base-metal content, and tungsten should be considered only as a by-product. The applicant apparently considers the fluorite content to be the most important according to conversations during the examination, and maintains that the run-of-mine ore can be sold for $40 per ton on the basis of its fluorite content.

4. The applicant is not qualified to conduct an exploration program. This is evident from the poorly prepared application, the lack of reasonable exploration plan, and the exhorbitant cost of the vague plan proposed. For the past year, two men have been working full time on the property, and the small results of their work reflect scattered efforts and low efficiency.

Plate 2. View of New York Mountains, looking northwest. Giant Ledge property is concealed from view by spurs shown in left third of photograph. Bald outcrops along crest is granite of Tertiary age.



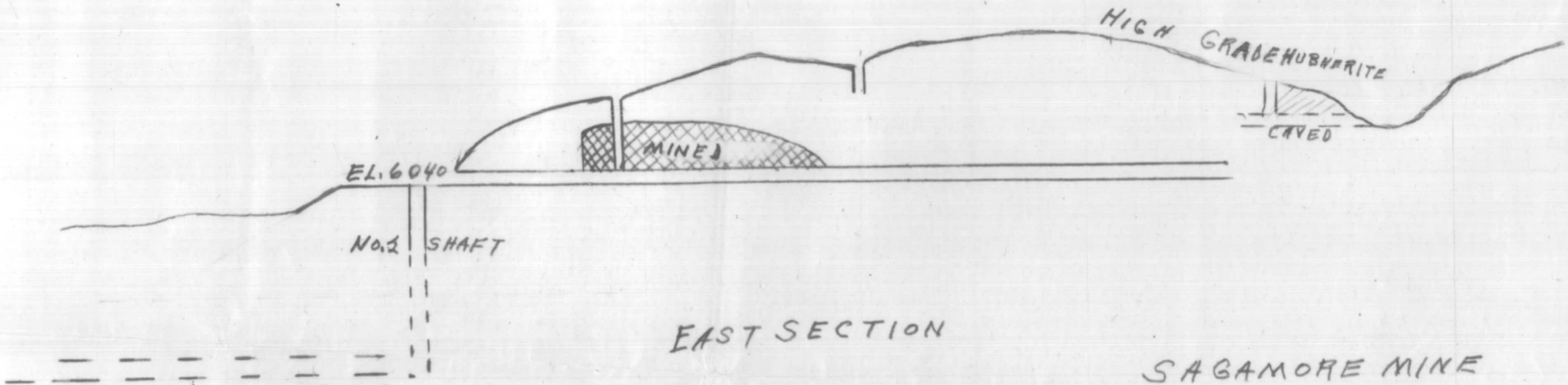

WEST SECTION

SAGAMORE MINE

CLAREMONT MINING COMPANY

ALPHA No. 1 CLAIM

SCALE 1" = 100'




EAST SECTION

PROPOSED DEVELOPMENT
VEIN IS WIDE AND WELL MINERALIZED
FROM No. 2 SHAFT TO WEST SECTION
A DISTANCE OF 600'

SAGAMORE MINE
ALPHA No. 2 CLAIM
600' EAST OF WEST SECTION
SCALE 1" = 100'

Plate 1. [illegible] Hard Cash prospect, looking eastward from end of dump. Portal [illegible] level of underground workings in foreground to right of center.

Plate 4. View of Giant Ledge quartz vein, looking northeast. Outcrop of vein shown by inked line. Adit is not visible, but is at lower right-hand corner of photograph.

FILE COPY
SURNAME:

Selfridge
Hurley
Lemmon
Geehan
Johnson

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

MAY 15 1952

Mr. Edward E. Wilhite, Secretary
Giant Ledge Lead and Copper Company
927 Palm Drive
Colton, California

Re: Docket No. DMA 2188 - Tungsten
New York Mountain area
San Bernardino County, California

Dear Mr. Wilhite:

Your application for exploration assistance and other information relating to your application available to us in Washington, have been carefully reviewed.

This information, while noting a small amount of a complex low-grade ore on your property, indicates that geologically there is little probability of making a significant discovery of tungsten. I regret, therefore, to inform you that your application is denied.

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

Sincerely yours,

C. O. Mittendorf (for) 5/15

Acting Administrator
Defense Minerals Exploration
Administration

NJHurley:ls
5/9/52

cc: Admn. Reading File
Docket
Field Team, Region 3
G. C. Selfridge
N. J. Hurley
D. M. Lemmon, USGS
R. W. Geehan, USBM
Operating Committee

STANDARD FORM NO. 64

# Office Memorandum • UNITED STATES GOVERNMENT

TO : Acting Administrator, DMEA DATE: May 9, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Denial of exploration project in the amount of $100,000
Docket No. DMA 2188 - Tungsten
Giant Ledge Lead and Copper Company
New York Mountain area
San Bernardino County, California

The subject application was denied by this Division for the following reasons:

(1) The small amount of tungsten observed on the property occurs in the oxidized zone of a complex replacement deposit along the contact of a Tertiary granite intrusive in Cambrian limestone. The vein, where exposed, is wide (averaging about 30 feet in width), but because of intensive faulting in the region only short truncated segments are traceable from present surface maps and prospect diggings. There are no apparent geologic considerations to preclude the possible extension of mineralization beyond the faults, but exploration and development costs in such an intensely faulted area would naturally become extremely high.

The tungsten exists in the forms of huebnerite and scheelite to the extent of less than 0.1% tungstic oxide, along with somewhat larger quantities of copper, lead, zinc, and fluorite, plus a small amount of silver.

In the 60-year history of haphazard prospecting about the property a large number of random test pits, trenches, drifts, and shafts have revealed about 25,000 tons of indicated ore of doubtful value in base metal content and with no economic values in tungsten.

In view of the geological and mineralogical complexity of the deposit, it is extremely doubtful that the exploration project proposed by the Operator would improve the outlook of the property or lead to any significant discovery.

(2) In the many years the property has been under observation its production has been limited to a few tons transported by mule back to the nearby Sagamore Mine about 50 years ago. Economic results of the treatment of that ore are not reported, but production was suspended. In regard to the tungsten there has been no experience whatever in its metallurgical treatment. Because of the extremely low grade of the ore (0.07% $WO_3$) and the associated minerals, it is doubtful that the tungsten could be recovered in any form but as a complex uneconomical by-product.

(3) The quality of the work already done by the present Operators and the exorbitant cost of their vague plans for the future leave serious doubt of their competency to undertake the expansive development project they propose.

(4) The Field Team recommends that the application be denied.

(5) The Commodity Division of the U. S. Geological Survey concurs with the Field Team in recommending denial.

G. C. Selfridge.

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

FILE COPY
SURNAME:

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

Acting Administrator, DMEA

May 9, 1952

Iron and Ferro-Alloy Division, DMEA

Denial of exploration project in the amount of $100,000
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Giant Ledge Lead and Copper Company
New York Mountain area
San Bernardino County, California

5/15/52

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G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

NJHurley:ls
5/12/52

Copy to: Docket
Admn. Reading File
Operating Committee
N. J. Hurley
G. C. Selfridge

G-MD-DML

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

May 7, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Field Report DMEA 2188 - Tungsten
Giant Ledge Lead and Copper Co.
San Bernardino County, California

The Giant Ledge property was examined March 3-6, 1952 by L. D. Clark and W. P. Irwin of the Geological Survey. Their report, dated April 24, recommends denial of the exploration project because there is no firm geologic basis for predicting the location of faulted segments of the mineralized bodies, the mineralization is highly oxidized and presents a complicated metallurgical problem, the mineralization is probably not of economic grade, and the applicant is not qualified to conduct exploration. Most of the assay values are in base metals and silver rather than in tungsten. The highest of 6 tungsten assays was only 0.22 percent of $WO_3$.

I concur with the Field Team and recommend denial of the application. Before any exploration project could be considered, an ambitious program of geologic mapping is necessary to determine exploration targets, if there are any.

D.M. Lemmon

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 7 1952

Copy retained 400

IN REPLY REFER TO:
G-1D-DM1

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

May 7, 1952

Memorandum

To: George C. Selfridge, DMEA

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Giant Ledge Lead and Copper Co.
San Bernardino County, California

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G-MD-DML

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

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D. M. Lemmon

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

APR 29 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

April 25, 1952

Memorandum

To: C. O. Mittendorf, Acting Chairman, Operating Committee, Defense Minerals Exploration Administration, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2188X (Tungsten) - Giant Ledge Lead and Copper Co., San Bernardino County, California

Reference is made to your "Review of Application for Exploration Assistance", dated February 12, 1952.

Attached are four copies of a report, "DMEA-2188X, Giant Ledge Lead and Copper Company, San Bernardino County, California", by L. D. Clark and W. P. Irwin, geologists, U. S. Geological Survey, dated April 24, 1952.

The examining geologists recommend that the loan be denied as there appears to be little chance of discovering additional ore at a reasonable exploration cost. The ore that is blocked out is of questionable economic value owing to its oxidized nature, and the difficult metallurgical treatment that will be involved in the recovery of the contained metal. Moreover, the applicant seems to lack the necessary competence to carry out an efficient exploration program.

Subject docket is being returned herewith.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to E. H. Bailey, USGS

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION OF REGION III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
LIBRARY
APR 2 1 1952

DMEA 2188, Giant Ledge Lead and Copper Company

San Bernardino County, California

L. D. Clark, Geologist
W. P. Irwin, Geologist
U. S. Geological Survey

April 24, 1952

Reviewed by
DMEA OPERATING COMMITTEE
5-7-52
(MB) (date)

## Introduction

The Giant Ledge Lead and Copper Company controls a group of 15 contiguous claims for lead, zinc, silver, tungsten and fluorspar on the southeast flank of the New York Mountains in San Bernardino County, California. The company applied to DMEA for Government aid in a $100,000 program to explore the Hard Cash and Nephi deposits, two of several deposits covered by the group of claims. In response to a request from DMEA, L. D. Clark, and W. P. Irwin of the Geological Survey examined the deposits during the period March 3-6,1952. The surface and underground workings of the Hard Cash prospect were mapped at a scale of 1 inch equals 50 feet, and six samples of the area were taken. Several members and guests of the company were present during one day of the examination, including E. E. Wilwhite, S. A. Barnes, Lahee, and Hainey. Barnes was on the property during the entire examination.

The Hard Cash deposit contains 25,000 tons of indicated ore with a grade of approximately 0.88% Cu, 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton. Most of the ore is oxidized, and the mineralogy is complex, leading to difficult metallurgical problems. It is probable that the ore is not of economic grade. The indicated ore body has been adequately explored. Further exploration would be limited to a search for faulted portions of the deposit. The possible position of such faulted portions is highly conjectural.

In the Nephi deposit no ore was seen in place. The dump material indicates that the deposit consisted of only a narrow fracture filling, and no further exploration is warranted.

The cost of $100,000 for the proposed exploration is excessive, owing to unwarranted road building, erection of camp facilities, and padding in the form of a top-heavy supervisory staff. The request was made on the basis of tungsten, but the assays indicate that the main value of the ore is in the base-metal content.

The company plans to explore the deposits by means by a 200-foot, two-compartment shaft on each deposit. At the time of examination the applicant had no idea as to where the shafts were to be located. Work done by the applicant prior to the examination was random and inefficient. Judging from the application, and from observation made in the field, the applicant is not qualified to carry out an efficient exploration program.

It is recommended that the applicant's request for a loan be denied.

## Location

The deposits are at an altitude of 6000 feet in T. 14 N., R. 16 E. (projected) SBBM, Ivanpah Quadrangle, about 6 airline miles south of Ivanpah, San Bernardino County, California. The Hard Cash deposit is in the

$W\frac{1}{2}$ $NE\frac{1}{4}$ sec. 31; the Nephi is in the $E\frac{1}{2}$ $NE\frac{1}{4}$ sec. 31 and $W\frac{1}{2}$ $NW\frac{1}{2}$ sec. 32, about 2000 feet east of the Hard Cash deposit.

## History

Little of the history of the Hard Cash prospect is known, but it is believed that during the early 1900's a small tonnage of ore was carried by pack mules to be milled at the Sagamore Mine (DMA 1102), about $1\frac{1}{2}$ miles north. The quantity could not have been large, as the workings are of an exploratory nature, and most of the rock mined remains on the dumps. The Nephi prospect has no production.

## General Geology

The area covered by the claims is underlain by coarsely-crystalline limestone and granite, which are in contact along a north-trending line. The limestone is on the east side of the contact. According to D. F. Hewett, the limestone is Cambrian in age and granite is Tertiary.

The mineral deposits in the area are of three principal types: (1) replacements of sheared granite in contact with limestone by fluorite, base-metal and tungsten-bearing minerals (2) quartz veins in granite that contain no fluorite but otherwise are mineralogically similar to the first type, and (3) thin veins of copper-, lead-, and silver-bearing minerals in fractured limestone. The Hard Cash deposit is of the first type; the Nephi deposit is of the third type.

## Hard Cash Deposit

The Hard Cash deposit is largely a replacement of sheared granite, but contains considerable vein quartz. It trends east and dips moderately to the south (see plate 1). It has an average thickness of about 30 feet, but because of repetition by faulting the surface exposure appears deceptively thicker. The attitude of the replaced shear zone is virtually parallel to the bedding of the limestone, except where the shear zone and limestone are in juxtaposition owing to faults that crosscut the bedding of the limestone.

Rocks in the vicinity of the Hard Cash Vein are complexly faulted. The deposit is broken into two segments by two tranverse faults. A third major fault that is exposed in the mine workings trends east and dips north at a moderate angle; it truncates the deposit at shallow depth. In the western segment, coarse granite like that in the footwall of the ore body is in fault contact with the ore at depth to the south. In the eastern segment, medium-grained granite like that at the surface south of the vein is in fault contact with the ore at depth to the south. The western segment is cut in addition by a number of smaller faults of diverse trends, and attitudes.

The underground workings are in the zone of oxidation. In the innermost part of the lower workings, however, oxidation is slight, and the principal minerals that constitute the deposit are quartz, fluorite, pyrite, galena, chalcopyrite, bornite, sphalerite, scheelite, and probably huebnerite. In the upper workings the sulfide minerals have been converted in large part to oxidation minerals of lead, zinc, and copper.

## Sampling

Six samples of the ore were taken (see composite plan of underground workings). Samples Nos. 1,2,5, and 6, are channel samples cut vertically on the walls of the workings. Samples Nos. 3 and 4 are chip samples taken horizontally along the wall of the workings. The average weight of the samples was about 15 pounds. The samples were split in San Francisco and splits of the samples were sent to the Bureau of Mines, Reno, Nevada for assay. Following are the assay results determined by the Bureau of Mines.

| Sample No. | Length | %Pb. | %Cu | %Zn | %$WO_3$ | %$CaF_2$ | Oz.Au/T | Oz.Ag/T |
|---|---|---|---|---|---|---|---|---|
| 1 | 6' | 4.0 | 0.75 | 1.2 | 0.22 | *1.0 | Trace | 5.40 |
| 2 | 6 | 4.4 | 1.95 | 5.3 | 0.13 | *1.0 | Trace | 4.70 |
| 3 | 55 | 0.9 | 0.65 | 0.8 | 0.04 | *1.0 | Trace | 3.25 |
| 4 | 14 | 0.7 | 1.10 | 2.8 | 0.14 | *1.0 | Trace | 2.45 |
| 5 | 5 | 8.2 | 1.20 | 8.1 | *0.01 | *1.0 | 0.005 | 10.90 |
| 6 | 6 | 0.8 | 1.25 | 3.0 | 0.04 | *1.0 | Trace | 2.30 |

* Less than

## Ore

The samples are fairly representative of the general grade of the ore. The weighted average grade of the sampled material is 0.88% Cu, 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton.

Samples Nos. 1,2,3, and 4, represent material that has been oxidized to a greater extent than samples No. 5 and 6. Sample No. 5 was taken at the only place in the deposit where the sulfide minerals appear to be little oxidized. Although it gave the highest assay value in base metals it does not necessarily indicate that the average base-metal content of the ore below the oxide is of a correspondingly higher grade than that in the zone of oxidation.

The fluorite and base-metal minerals are distributed throughout the ore zone, and do not appear to be concentrated in well-defined ore shoots. The scheelite, however, appears most concentrated in a vaguely defined zone along the drift from which samples No. 1 and 2 were taken.

Judging from the weighted grade of the samples, the material that has been referred to as ore is too low in grade to be mined economically. In addition, the assay values are not representative of the recoverable metal content of the ore. The metallurgy of the ore will be complex, and the recovery will be low owing to the oxidized nature of the indicated ore. Moreover, it seems likely that the tungsten-bearing minerals can be recovered only as a minor by-product, and the fluorite can not be recovered economically.

## Ore Reserves

The deposit contains about 25,000 tons of indicated ore with a grade of approximately 0.88% Cu., 1.7% Pb, 2.0% Zn, 0.07% $WO_3$, less than 1.0% $CaF_2$, and 3.72 oz. of Ag. per ton. This tonnage has been calculated from the crossssection areas of ore and length of surface exposures in the area of the underground workings (see plate 1). The area of ore shown on the eastern half of the map has been regarded as unimportant from the standpoint of ore reserves, fot it is faulted at shallow depth.

The examination failed to indicate extension of ore beyond the fault that terminates the known portion of the deposit, although it appears likely that other portions of the faulted deposit may be present. Considering the complexly faulted nature of the rocks that underly the area, any ore bodies encountered would probably be small, with high exploration and development costs per ton of ore mined.

## Exploration

The applicant proposes to sink a 200-foot two-compartment shaft, but when questioned during the examination of the deposit had no definite location in mind.

## The Nephi Prospect

The Nephi prospect is a 20-foot vertical shaft and several small pits in horizontally-bedded limestone. The shaft appears to have been sunk on a vertical fracture that strikes northeast. The shaft is inaccessible, but viewed from the collar, no metallic minerals were seen in the walls. A small pile (less than a ton) of ore on the dump is reported by the applicant to have come from the bottom of the shaft, and to have assayed 12.66% Cu and 24.69 oz. of Ag. per ton. The ore on the dump appears to have come from a vein an inch or two thick, possibly from the fracture exposed in the shaft.

The applicant proposes to explore the deposit by sinking a 200-foot two-compartment shaft, presumably at the location of the present shaft.

## Quartz veins

Two quartz veins that range from 12 to 18 inches thick occur near the Hard Cash deposit. Locally they contain base-metal sulfides and abundant hubnerite and scheelite. One of them has been explored by a 20-foot shaft dug by the applicant. It appears, however, to have little economic value,

owing to the narrow width of the vein and the spotty occurrence of the tungsten-bearing minerals.

The largest quartz vein in the area is the Giant Ledge (see plate 3). It forms a strikingly bold outcrop about 1500 feet southeast of the Hard Cash deposit, and is opened by small workings near the outcrop for a length of about 500 feet. The vein is about 20 feet thick. An adit several hundred feet below the outcrop is reported to intersect the vein 1200 feet from the portal, but is not accessible beyond a point 600 feet from the portal.

Most of the Giant Ledge appears to consist of barren quartz, but minor amounts of base-metal sulfides, hubnerite, and scheelite are present locally.

The accessible, 600-foot portion of the adit intersects three other quartz veins in granite. One of these veins ranges from 8 to 12 inches thick, and contains abundant hubnerite and scheelite. The other two veins contain no visible tungsten minerals.

## Recommendations and Conclusions

It is recommended that the applicant be denied Government aid in further exploration of the deposits for the following reasons:

1. The deposit contains 25,000 tons of indicated ore, the outline of which is fairly well established. Additional tonnages of ore may be present in faulted portions of the ore body, but there is no firm geologic basis for predicting the location of the faulted portions of the ore body.
2. The ore is probably below economic grade. The assay value of the ore is not representative of the value of the recoverable metal content. The indicated ore is highly oxidized and the mineralogy complex. The metallurgical treatment of the ore will be difficult.
3. The applicant proposes the program on the basis of tungsten, with Government participation equal to 75 percent of the total cost. The highest value indicated by the samples is 0.22 percent $WO_3$. Most of the value is the base-metal content, and tungsten should be considered only as a by-product. The applicant apparently considers the fluorite content to be the most important according to conversations during the examination, and maintains that the run-of-mine ore can be sold for $40 per ton on the basis of its fluorite content.
4. The applicant is not qualified to conduct an exploration program. This is evident from the poorly prepared application, the lack of reasonable exploration plan, and the exhorbitant cost of the vague plan proposed. For the past year, two men have been working full time on the property, and the small results of their work reflect scattered efforts and low efficiency.

Plate 2. View of New York Mountains, looking northwest. Giant Ledge property is concealed from view by spurs shown in left third of photograph. Bold outcrops along crest is granite of Tertiary age.

Plate 3. View of Hard Cash prospect, looking eastward from end of dump. Portal of main level of underground workings in foreground to right of center.

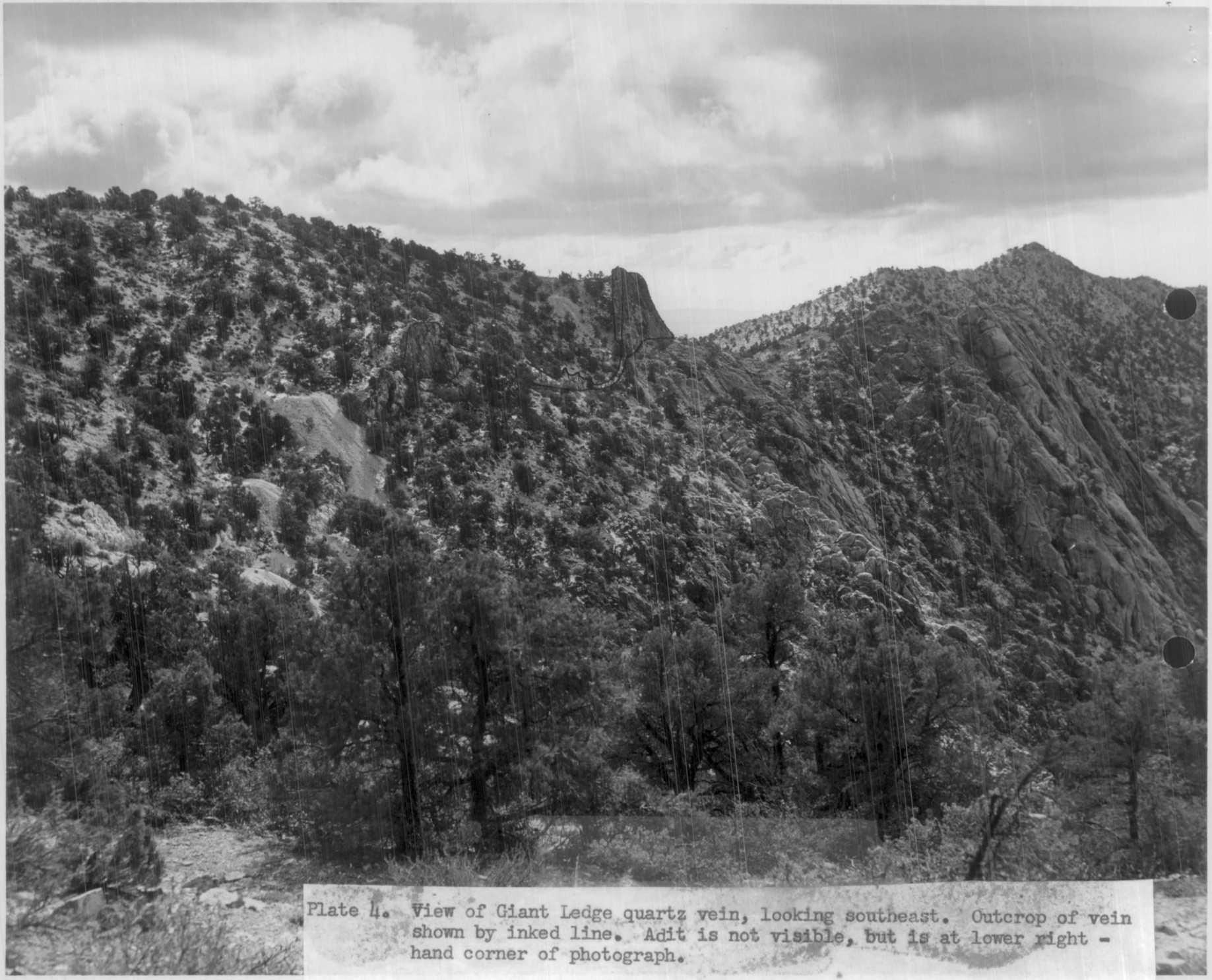

Plate 4. View of Giant Ledge quartz vein, looking southeast. Outcrop of vein shown by inked line. Adit is not visible, but is at lower right - hand corner of photograph.

400

FILE COPY
SURNAME:

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

Brewer
Geehan
Selfridge
Thayer
Hedges

FEB 12 1952

Giant Ledge Lead and Copper Co.
Edward E. Wilhite, Secretary
927 Palm Drive
Colton, California

Re: Docket No. DMA 2188X - Tungsten
New York Mountain Area
San Bernardino County, California

Dear Mr. Wilhite:

Your application for assistance in exploring the subject property has been reviewed by the Iron and Ferro-Alloy Division of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional Office will contact you at an early date in regard to the examination of your property. Any assistance that you can give the field team in the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw) J.W. 2-12-52

Acting Administrator
Defense Minerals Exploration
Administration

QLBrewer'lm
2/7/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
Q. L. Brewer

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

Original surnamed by: Jeffridge Brewer Jackson

FEB 12 1952

Mr. H. C. Miller
Executive Officer, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Sir:

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

Applicant Giant Ledge Lead and Copper Co.

Docket No. 2188X

Commodity Tungsten, etc.

Amount $ 100,000.00

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

Sincerely yours,

C. O. Mittendorf (fw)

ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J. H. Hedges (HB)

Member, Bureau of Mines

D. P. Thayer (HB)

Member, Geological Survey

D.N. 2-12-52

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA 2188X

Commodity Tungsten, etc.

Total Amount $100,000.00

Govt. Participation 75%

1. Name and Address of Applicant Giant Ledge Lead and Copper Co.

Edward E. Wilhite, Secretary, 927 Palm Drive, Colton, California

2. Location of Property San Bernardino County, California

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

If not, application will be rejected.

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

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

a) Good

b) Poor

c) None

d) Don't know--needs field examination Yes

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

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

6. If applicant is a lessee, is a copy of the lease attached? ----

Does the lease have sufficient time to run to cover a future

productive period? ----

*question numbers are those of MF-103

7. Are subordination agreements necessary? No

a) MF-201? _____

b) MF-202? _____

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

a) Available manpower Don't know

b) Equipment and supplies Don't know
(question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Don't know

e) Power (question 13)* Yes

Is a field check needed on any of these points? Yes, as noted above

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* No - Must be checked. (Also Robert J. Ingalls, Engineer)

Is a field check needed on this point? Yes

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

a) Is the project adequately described? No

If not, are there sufficient data given so that you can describe the project? No If so, attach a draft.

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

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Don't know as the area is unknown to us and the applicant's description is too vague and indefinite to form an opinion.

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? **Not satisfactorily**

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

e) Are the cost estimates reasonable? **No**

f) Should more information be requested from applicant? **Yes**

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

11. Exhibit B (question 23-d)*

a) Is it applicable? **No**

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

c) Is a field check needed? **Yes**

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

a) Is it applicable? **Yes**

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

c) Are rents and charges reasonable? **No**

d) Is a field check needed? **Yes**

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

a) Are there sufficient data? **No**

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

c) Is the schedule excessive for the work proposed? **Yes**

d) Are the proposed wages and salaries reasonable? **No (see below)**

e) Is a field check needed? **Yes**

**(The total supervisory salaries noted in the application are $2,400 per month. Not over $600 will be allowed. The company can privately pay the balance, if they so desire.)**

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

b) Sufficient data? No

c) Reasonable? No

d) Field check needed? Yes

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

(All exploration must be completed within two years)

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

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Yes - See attached sheet

Note: Letter of January 21, 1952, citing fluorite content.

Enclosures:

Memo from USGS, Feb. 5, 1952
Memo from USGS, Dec. 3, 1951
Letter from Johnstone, Jan. 21, 1952
Letter from Wilhite, Jan. 10, 1952
(Being, in essence, an amended application)
Letter to Johnstone, Dec. 13, 1951
MF-103, Oct. 25, 1951
MF-100, enclosing 2 maps
Company balance sheet

Reviewed by: Q. L. Brewer

Date 2/6/52

Giant Ledge Lead and Copper Company - EMA 21588X - Tungsten

As noted in the USGS report of February 5, 1952, the inability of the applicant to supply the necessary information, maps and to present a logical proposal is apparent.

The field team is requested to make an investigation:

1. Of the geology of the deposits, as found on the surface and as expected in depth.

2. For an opinion as to the metallurgical treatment of the ores.

3. And to prepare a suitable exploration program, if exploration is warranted, in company with the applicant.

4. As to the competence of the operator and/or manager.

Your attention is called to the complex ores - tungsten, copper, lead, silver, and fluorite - and to their metallurgical treatment with possibly more than one saleable product.

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

FEB 12 1952

Mr. H. C. Miller
Executive Officer, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Selfridge
Brewer
Gehon

Dear Sir:

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

Applicant Giant Ledge Lead and Copper Co.

Docket No. 2188X

Commodity Tungsten, etc.

Amount $ 100,000.00

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

Sincerely yours,

C Mutteneof

ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J. N. Wedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

Defense Minerals Administration

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Does the lease have sufficient time to run to cover a future

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a) Is the project adequately described? No

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

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Don't know as the area is unknown to us and the applicant's description is too vague and indefinite to form an opinion.

If not, what part of it is?

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? **Not satisfactorily**

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

e) Are the cost estimates reasonable? **No**

f) Should more information be requested from applicant? **Yes**

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

11. Exhibit B (question 23-d)*

a) Is it applicable? **No**

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

c) Is a field check needed? **Yes**

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

a) Is it applicable? **Yes**

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c) Are rents and charges reasonable? **No**

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

a) Are there sufficient data? **No**

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

c) Is the schedule excessive for the work proposed? **Yes**

d) Are the proposed wages and salaries reasonable? **No (see below)**

e) Is a field check needed? **Yes**

**(The total supervisory salaries noted in the application are $2,400 per month. Not over $600 will be allowed. The company can privately pay the balance, if they so desire.)**

14. Exhibit E (question 23-c)*

a) Is it applicable? Yes

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c) Reasonable? No

d) Field check needed? Yes

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(All exploration must be completed within two years)

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**MF-100, enclosing 2 maps**
**Company balance sheet**

Reviewed by: Q. L. Brewer

Date 2/6/52

Giant Ledge Lead and Copper Company - DMA 2188X - Tungsten

As noted in the USGS report of February 5, 1952, the inability of the applicant to supply the necessary information, maps and to present a logical proposal is apparent.

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Your attention is called to the complex ores - tungsten, copper, lead, silver, and fluorite - and to their metallurgical treatment with possibly more than one saleable product.

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

FEB 13 AM 11:16

SAN FRANCISCO, CALIFORNIA

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

FEB 12 1952

Mr. H. C. Miller
Executive Officer, Region III
1012 Flood Building
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San Francisco 2, California

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Sincerely yours,

C. O. Mittendorf

ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J H. Hedges

Member, Bureau of Mines

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Member, Geological Survey

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Date 2/6/52

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Your attention is called to the complex ores - tungsten, copper, lead, silver, and fluorite - and to their metallurgical treatment with possibly more than one saleable product.

IN REPLY REFER TO:

G-MD-DML

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

February 5, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, U.S.G.S.

Subject: Letter of January 10, 1952 from Giant Ledge Lead and Copper Co. Secs. 31 and 32, T. 14 N., R. 16 E. New York Mountains San Bernardino County, California — DMA 2188 - Tungsten

The additional information submitted by Mr. E. E. Wilhite and by Mr. W. J. Johnstone for the Giant Ledge Lead and Copper Co. confirms our conclusions based on the original docket: the applicant is not competent to prepare an exploration program, and probably is not competent to direct any mining enterprise.

The maps submitted show neither useful geology nor location of the 2 proposed shafts. The old workings have not been mapped.

The applicant does not recognize the metallurgical difficulty of concentrating low-grade oxidized lead-zinc-silver ore containing some scheelite and huebnerite. The fluorite content is probably valueless.

The geologic reason is not stated for sinking 2 shafts 200 feet deep and diamond drilling from the bottom.

The proposed cost of $100,000 is unreasonable for the work outlined. For a project estimated to take 6 months, and employ 10 men, salaries of $16,900 for a manager, engineer, superintendent, secretary-treasurer, and cook are excessive. The need for 2 miles of road costing $18,975, and for housing costing $12,125 is not clearly demonstrated. The proposal to develop water at a cost of $4,650 is probably not feasible.

Recommendation: It is suggested that this application be referred to the Field Team for investigation of the geology of the deposits, for an opinion on possibility of developing a metallurgical process to treat the ores, and for preparation of a suitable exploration program if exploration is warranted. The possibility of developing sulfide ore at depth should be evaluated. Information is needed about

copy retained
1978 files
7/6

the experience and competence of Robert J. Ingalls, engineer for the applicant.

It is also recommended that the applicant be informed that the data submitted is inadequate both as to geology and engineering; however, the application is being referred to the Field Team so that the team can advise the applicant about the steps he should take to prepare a suitable proposal.

The property should be evaluated solely from the viewpoint of tungsten unless the metallurgists can give some hope for economic recovery of other metals.

Dwight M. Lemmon

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

C-[illegible]

February 5, 1952

Memorandum

To: George C. Selfridge, LMEA

From: D. L. Lemmon, U.S.G.S.

Subject: Letter of January 10, 1952 from [illegible] 2168 - Tungsten
Giant Ledge Lead and Copper Co.
Secs. 31 and 32, T. 14 N., R. 16 E.
New York Mountains
San Bernardino County, California

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D M Lemmon

DMLemmon:gt

Copies to: Director's reading file
Branch reading file
E.H.Bailey, San Francisco

2188

1/31/52

DMA 2188 · Giant Ledge Lead & Copper Co
Tungsten, Copper, lead, silver & fluorspar
San Bernardino Co, California

Mr. Lemmon:—

Herewith :- M7100
M7103
Your opinion of Dec 3 -
- and - our request of 12/13
Letter of 1/10 answering our request, giving more details
" of 1/21 - Nothing Fluorspar analysis
Financial statement.
Blueprint - Geologic Map
Pencil Map - Claims + geology

not heretofore noted

Received in Washington Jan 23rd

This additional data sheds some light on the geology and substantiates your observation that the proposed work is ill conceived. I think it may well be referred to the field team for geologic investigations, and for the layout of a proposal suitable to the facts derived from the examination, ~~the wh~~ and with some determination of the metallurgical possibilities - (And check assays)

Your further opinion, in the light of the added information, is requested -

Geo. Delfeiss
by P G Brewer

| EA | PA |
| --- | --- |
| 2289 | 2257-58 U.S. Tungst. |
| (982) | 2252 — |
| 2302 | 2186 ✓ Am Perlite |
| 2310 | |
| 2228 ✓ US Tin | |
| 1575 | Alaska Metals? |
| 2292 | |
| 1711 x ✓ | |
| 2053 | |
| 2118 | |
| 2185 | |
| 2287 | |
| 1764 x ✓ | |
| 1452 x ✓ | |
| 2324 | |
| 2353 | |
| 2350 | |
| Moly. 2334 | |

16 + 982

William J. Johnstone
ATTORNEY AT LAW
327 SEVENTH STREET - POST OFFICE BOX 101
Victorville, California
TELEPHONE 55581

January 21, 1952

Mr. G. C. Selfridge, Acting Chief,
Iron and Ferro-Alloy Division
United States Department of the Interior
Defense Minerals Administration
Washington 25, D. C.

Re: Docket No. DMA 2188 - Tungsten
Giant Ledge Lead and Copper Co., Inc.
San Bernardino County, Calif.

Dear Mr. Selfridge:

In accordance with your letter of December 13, 1951, requesting further information on the above captioned application, I am enclosing a letter written by the Secretary-Treasurer of the Applicant, Edward E. Wilhite, submitting the additional information requested.

Also, enclosed you will find the balance sheet prepared by the company's auditor, covering the period of inception of the company in June, 1951 through November 30, 1951. The report itself will indicate that the consideration of some of the stock has not been received. Since the date of the preparation of the report the company has received the full consideration for the stock.

There is, also, enclosed a map of the Hard Cash and Nephi I claims. Clipped thereto, is the work sheets which the engineer used to prepare the enclosed map. It is felt that possibly the work sheet might be of some assistance of interpretation of the drawings as prepared by the engineer.

While tungsten is the principal ore of the applicant's property, a recent assay prepared by Smith-Emery Co. indicates the property also contains valuable and large quantities of calcium fluoride, for example the following claims carry the percentages indicated of calcium fluoride: @ 50%

| | |
|---|---|
| Henshaw | 72.42% |
| Athens extension | 69.01% |
| South drift, Main Tunnel | 69.58% |
| Tunnel extension | 48.42% |
| Underground S.E. | 56.55% |
| Underground Westside | 55.20% |

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
JAN 23 3 51 PM

Thank you for the time and attention that you have devoted to our application, and may I say that, from my personal observation of the tungsten mining properties in San Bernardino County area, I feel that the applicant's property is worthy of investigation by your office.

Very truly yours,

William J. Johnstone

William J. Johnstone

WJJ/m
Encs.

Proposal:

Housing:

| | | |
|---|---|---|
| Rehabilitation 3 buildings | $5,945 | |
| Two house trailers | 4,500 | |
| Wash House | 480 | |
| Diesel generator for lighting | 1,200 | |
| | | $ 12,125 |
| Purchase of Equipment | | 10,050 |
| Labor, Fuel, Timber and powder to sink 2 shafts 200 feet deep | | 22,812 |
| Road construction, 2 miles | | 18,975 |
| Core drilling (amount not specified) | | 7,700 |
| Assays | | 2,000 |
| Supervision, engineering, bookkeeping, and cook (6 months) | | 16,900 |
| Groceries for 10 men, 6 months | | 2,630 |
| | | 93,192 |

January 10, 1952

Mr. G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division
United States Department of the Interior
Defense Minerals Administration
Washington 25, D. C.

Re: Docket No. DMA 2188 - Tungsten
Giant Ledge Lead and Copper Co., Inc.
San Bernardino County, California

Dear Mr. G. C. Selfridge:

In reply to your letter December 13, 1951 addressed to Mr. William J. Johnstone, Attorney, in which you requested further information concerning our exploration loan application.

Item 6. Under purchase by contract with William Micou Glassell and Audrietta G. Somers by virtue of assignment from Robert J. Ingalls and Samuel A. Barnes on a monthly payment of $65.00 plus interest at 6% per annum. Balance at present is $3415.00.

Item 8. See Balance Sheet dated November 30th attached.
(Financial statement)

Item 9. $25,000.00 Yes.

Item 13. The present flow of water from Spring varies from 5 gallons per minute to 15 gallons per minute. We will sink a shaft for well water for mill use to a debth of approximately 40 ft. (See cost below)

WATER DEVELOPMENT COSTS

| | |
|---|---|
| Sinking 40 ft. shaft - labor | $ 3000.00 |
| Cost of pump and installation | 1000.00 |
| Engine for pump (Diesel power) | 250.00 |
| Pipe valves and fittings | 400.00 |
| | $ 4650.00 |

Have made extensive investigation and have been assured that we have ample water available for large milling operation.

Item 15. We expect to sell our ore to highest bidder in Western States at prevailing prices. We have already made preliminary arrangements for the selling of our ore to several companies, such as Black Rock Mining Co., Bishop, California; Lighthouse Mining Corp., Barstow, California; and U. S. Vanadium Co., Bishop, California. We also plan to have our own mill in the future at which time we will negotiate with Western Smelters for the purchase of our concentrates which we are in correspondence with at the present.

Item 16, part c. The analysis contained in this report did not include tungsten until assays for tungsten were taken in July, which are shown in the Engineers report. Reference is made in Engineers report (next to the last page) on tungsten sampling. On and after July 12, 1951, all the samples were taken across the entire face of exposed vein, which show the location of the sample and length of sample taken.

Sample No. 1 - Runs 1700 ft. from Hard Cash through the Henshaw and to the North Star, 5 ft. in width.

Sample No. 2 - Extension of Sample No. 1, 500 ft. in length and 2 ft. in width.

Sample No. 3 - Paralleling vein to Sample No. 1, 4 ft. in width and 600 ft. in length.

Sample No. 4 - Surface vein is 6 ft. wide and approximately 600 ft. long.

Sample No. 5 - This sample was taken from about 40 ft. inside tunnel at 8 ft. from intersection on east branch of tunnel - Runs 15 ft. in width. Positive of 100 ft. in length already explored.

Sample No. 6 - Same vein as Sample No. 5 which is 20 ft. lower.

Sample No. 7 - Select sample of 20 inch vein in width. Three samples taken since which show an average of 6.80%. Surface outcropping running for 400 ft.

Item 18. Surface geology maps of Hard Cash and Nephi, attached.

Item 21. The proposed rehabilitation of three buildings will require the following: (All new materials)

| | |
|---|---|
| 1280 man hours @ $2.35 per hour | $ 3008.00 |
| Lumber | 750.00 |
| Windows and doors | 150.00 |
| Plumbing | 450.00 |
| Electrical | 150.00 |
| Stucco wire 7 rolls | 84.00 |
| Cement | 35.00 |
| Nails | 65.00 |
| Bond Wire | 3.00 |
| Fir Tex | 500.00 |
| Inside furnishings | 750.00 |
| Diesel Generator (for lighting) | 1200.00 |
| | $ 7145.00 |
| Two 18 ft. House trailers $2250.00 ea. | 4500.00 |
| | $11645.00 |
| Combined wash house, shower, toilet | 480.00 |
| | $12125.00 |

The following new and used equipment will be required:

| | |
|---|---|
| D-7 Caterpillar tractor, complete overhaul - used | $ 1800.00 |
| Drills, rods and steel - new | 4500.00 |
| 1 pick-up truck with 8 ply tires - used | 1500.00 |
| Hoist (Complete with cable) - used | 1600.00 |
| Storage platform - new | 500.00 |
| Compressor - used (repairs) | 150.00 |
| | $10050.00 |

Item 21 and 23. Position to sink Hard Cash shaft will be at mouth of Hard Cash tunnel. Plan sinking two, two compartment shafts to a depth of 200 ft. - 6 ft. by 12 ft.

| | |
|---|---|
| Labor $15.00 per day - 4 men - 80 days | $ 4800.00 |
| 20,000 board ft. 2 X 12 timbers | 2200.00 |
| 2200 board ft. 4 X 4 | 240.00 |
| 600 board ft. 8 X 8 | 100.00 |
| 400 board ft. 8 X 12 | 65.00 |
| Nails | 36.00 |
| Bolts 3/4 and 1 inch | 50.00 |
| | $ 7491.00 |
| Same amount as above for Nephi claim | 7491.00 |
| | $14982.00 |

Fuel and Powder required as follows:

| | |
|---|---|
| Diesel fuel $7.50 per day - 180 days | $ 1350.00 |
| Gasoline - Compressor, trucks, cars including milage - $30.00 per day | 5400.00 |
| Flamo Gas $1.00 per day | 180.00 |
| Powder, fuses and caps, for Hard Cash and Nephi $5.00 per day | 900.00 |
| | $ 7830.00 |

Road construction for two miles:

| | |
|---|---|
| Rental of Caterpillar $10.00 per hour - 90 days | $ 7200.00 |
| Caterpillar operator $20.00 per day - 90 days | 1800.00 |
| Labor - 6 men - 90 days - $75.00 per week | 5850.00 |
| Powder, caps and fuses - $12.50 per day | 1125.00 |
| Maintenance and repairs (deferred) | 3000.00 |
| | $18975.00 |

Core Drilling:

| | |
|---|---|
| Driller operator (2) $15.00 per day each-240 days | $ 7200.00 |
| Upkeep on drills and hammers | 500.00 |
| | $ 7700.00 |
| Assays for entire project | $ 2000.00 |

Wages and Salaries for six months:

| | |
|---|---|
| Engineer $150.00 per week | $ 3900.00 |
| Superintendent $125.00 per week | 3250.00 |
| Cook $75.00 per week | 1950.00 |
| | $ 9100.00 |

Supervision:

| | |
|---|---|
| General Manager $500.00 per month | $ 3000.00 |
| Secretary-Treasurer $500.00 per month | 3000.00 |
| Bookkeeping $300.00 per month | 1800.00 |
| | $ 7800.00 |
| Groceries for ten men $105.00 per week (6 months) | $ 2630.00 |

Item 22. The geological factors which lead us to believe that the exploration work will reveal commercial ore bodies can be stated (Refer to maps - Item 18) which show five veins from 20 inches to 65 ft. wide, which intersect on the Hard Cash Lode. Note granite formation on the west and south and lime formation on the north and east. Cross fractures over the Hard Cash lode claim show surface cropping of lead, silver, copper, tungsten and zinc.

Item 24. We will start immediately after approval of loan and will complete exploration within six months. Month to month schedule as follows:

| | | |
|---|---|---|
| **First Month:** | | |
| Water Development | $ 2450.00 | |
| Rehabilitation | 11645.00 | |
| * Transportation of material, equipment, supplies | 6690.00 | |
| Food | 400.00 | |
| Wash house and shower | 480.00 | |
| Engineering and administration | 2817.00 | $24482.00 |
| **Second Month:** | | |
| Drills, rods and steel | 4500.00 | |
| Road construction | 6325.00 | |
| Water Development | 2200.00 | |
| Sinking Hard Cash Shaft | 2497.00 | |
| Food | 450.00 | |
| Upkeep of drills and hammers | 250.00 | |
| Engineering and Administration | 2817.00 | 19039.00 |
| **Third Month:** | | |
| Road Construction | 6325.00 | |
| Sinking Hard Cash Shaft | 2497.00 | |
| * Equipment, supplies and materials | 6690.00 | |
| Core drilling | 2000.00 | |
| Assays | 500.00 | |
| Food | 450.00 | |
| Engineering and Administration | 2817.00 | 21279.00 |
| **Fourth Month:** | | |
| Road Construction | 6325.00 | |
| Sinking Hard Cash Shaft | 2497.00 | |
| Core Drilling | 2000.00 | |
| Assays | 500.00 | |
| Food | 450.00 | |
| Engineering and Administration | 2817.00 | 14589.00 |
| **Fifth Month:** | | |
| Core Drilling | 3200.00 | |
| Assays | 500.00 | |
| Food | 450.00 | |
| Sinking Nephi Shaft | 3745.00 | |
| Upkeep on drills and hammers | 250.00 | |
| Engineering and Administration | 2817.00 | 10962.00 |
| **Sixth Month:** | | |
| Assays | 500.00 | |
| Food | 430.00 | |
| Sinking Nephi Shaft, complete | 3746.00 | |
| Engineering and Administration | 2815.00 | 7491.00 |
| | $97842.00 | $97842.00 |

* Includes purchasing of Equipment, material and supplies

Rental Equipment owned by Giant Ledge Lead & Copper Co.

| | |
|---|---|
| Caterpillar Tractor D-7 | $ 4600.00 |
| Ford A Burma Jeep | 500.00 |
| Portable Welder | 200.00 |
| Dodge 4 wheel drive pick-up | 500.00 |
| Chev 1½ ton truck | 1000.00 |
| Two 220 Compressors | 2500.00 |
| 300 ft. Compressor hose | 300.00 |
| Two Jack hammers @ $3 each? | 300.00 |
| 200 drill bits | 600.00 |
| Two sets drills 2 ft. to 10 ft. | 400.00 |
| Two shive wheels | 40.00 |
| Stoper | 450.00 |
| | $11390.00 |

Sincerely yours,

GIANT LEDGE LEAD & COPPER CO.

Edward E. Wilhite

Edward E. Wilhite
Secretary-Treasurer

EEW:tm

400

FILE COPY
SURNAME:

Brewer
Selfridge

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

S.P.

DEC 13 1951

Mr. William J. Johnstone, Attorney
Giant Ledge Lead & Copper Co., Inc.
422 Seventh Street
Victorville, California

Re: Docket No. DMA 2188 - Tungsten
Giant Ledge Lead & Copper Co., Inc.
San Bernardino County, California

Dear Mr. Johnstone:

Your application for an exploration loan to the above named company for the purposes of sinking two exploratory shafts has been referred to this Division for study.

We find the application insufficient to enable us to proceed without additional specific data, and we request that you favor us specifically on the following items, the notation being that of MF-103 (April, 1951) viz:

Item 6. Wherein is noted an unpaid balance of $3,500.00 due on property purchase. Please inform us as to the nature of this obligation, as it will be necessary to file a "Subordination Agreement" in favor of the Government.

Item 8 requests a current financial statement of the corporate finances. This has not been filed.

Item 9. Since Governmental participation would be 75% of your estimated cost of $100,000, Item 9 should be $25,000.

Item 13. Please give quantity of water now at hand; the seasonal variation in flow, if any; the proposed method and cost of obtaining additional water if required for the subject exploratory purposes. Please give the expected cost of establishing and using the power required for the subject exploration.

Item 15. The question of milling this ore, allegedly containing tungsten, copper, lead, zinc and silver, the tungsten content being in the form of hubnerite, is of vital importance as to the disposal of such ores as the proposed exploration may reveal. It would be most helpful, and appropriate, if a letter or other statement in regard to the

results obtained in milling this ore, or, if shipping to an ore-buyer is contemplated, a statement of the basis of settlement for this particular ore, could be included.

Item 16, part c. Althe this application is primarily for tungsten, none of the analyses shown indicate the tungsten content. Some tungsten analyses are noted in the Mining Engineer's Report, but these do not give the location of the sample in regard to its position on the particular claim, nor do they give the length of the sample taken.

Item 18, parts (a) and (b). The very brief statement in the application, in view of the lack of suitable assay or geologic maps of the specific area to be explored, should be covered in much greater detail. It is suggested that a map be prepared of the "Hard Cash" claim showing (1) surface geology, noting outcrop of various formations (2) location of known veins, with dip and strike indicated (3) the location of all old workings (4) the location of samples taken, with a tabulation of their widths and several metal contents, and (5) a delineation of the proposed exploratory work. A similar map should be prepared for the "Nephi" claim and its proposed exploratory work. Samples and old workings on adjacent areas should also be shown, if pertinent.

Item 21. The proposed work must be described precisely, and must include required rehabilitation of buildings, purchases of new and used equipment, supplies, costs of labor for each item noted, amount of road to be constructed and its cost as to materials, equipment and labor. The position and size of the shaft must be specified, as well as its cost as to materials, supplies and labor. Specify sizes and amounts of timber required and its cost. All phases of the proposed work are to be covered thoroughly and completely.

Item 22. Give the geological factors which lead you to expect that the exploratory work will reveal commercial ore bodies, especially in regard to your choice of the site of the exploratory shafts. The suggested maps, noted under Item 18, above, will to a great extent show your fundamental data in this regard.

Item 23. This tabulation of costs must be greatly itemized as to each of the shafts, and as to the access road.

In (c) the specific building is to be noted and specific costs for specific repairs are to be noted.

In (d) the installation of facilities (new) or buildings (new) are to be separately and specifically itemized as to the cost.

In (e) itemize each major item to be purchased with its cost.

In (g) give the estimated present value of the equipment you now own and will furnish for use on the project.

In (h) state, in general terms, what these small mine supplies include.

In (i) itemize the fuel required by each item of equipment by the day with its cost.

Extend the costs to cover the entire exploratory program, noting that the total thus derived must, necessarily, be the total cost of the project in which the Government will participate.

Item 24. Make a month by month (or week by week) schedule which you expect to achieve in carrying out the exploratory program, noting how soon you will start and finish after approval of the project. For example, your first entry might be "rehabilitation of buildings and moving in equipment" - 2 weeks, etc.

Sincerely yours,

SIGNED

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division

QLBrewer:lm
12/12/51

cc: Admn. Reading File
✓ Mails and Files Br.
C. O. Mittendorf
R. W. Geehan, USBM
T. P. Thayer, USGS
Field Team Reg. III
Docket
Q. L. Brewer

S.N.
12-13

ROY C. BURTON, P. A.
W. C. BRASSFIELD, P. A.

ROY C. BURTON
PUBLIC ACCOUNTANT TAX CONSULTANT
SAN BERNARDINO, CALIFORNIA
606 BASE LINE
TELEPHONE 7-4575

December 7, 1951

Board of Directors
Giant Ledge Lead and Copper Co., Inc.
927 Palm Drive
Colton, California

Gentlemen:

We submit herewith the Balance Sheet of the Giant Ledge Lead and Copper Company, Inc., with supporting notes, which we have prepared from the records of the company as of November 30, 1951. We have posted the records from check books, invoices, cancelled checks, bank statements, time cards and other supporting data furnished us.

The balance sheet notes are intended to explain, without going into too much detail, the composition of various amounts shown on the balance sheet. There has been no depreciation of fixed assets figured, as the company is still in the formative stage and in the process of acquiring machinery and constructing buildings. At the end of the fiscal year, depreciation will be computed on the fixed assets from the time they were put into use. Depletion of the mine will start when the company begins to produce ore in marketable quantities.

We would like to point out that when the mine is through with its development stage and you begin to produce and sell ore, that there will be a change in the method of accounting for expenses. All expenses to date have been deferred, as shown under "Deferred Charges" on the balance sheet. As of the date when you begin to produce and sell ore, expenses will be charged to operations, and those expenses that have been previously deferred will be written off against operations ratably as the ore is sold. This will necessitate an authoritative estimate of the amount of ore in the deposit developed, in order that the rate of amortization may be determined. So we will need (1) the date production of ore is begun, and (2) the estimated amount of ore in the deposit.

It should also be noted that when full scale operations are begun a system of internal control of cash and inventories, and a more accurate distribution of payroll time should be inaugurated.

Very truly yours,

BURTON - BRASSFIELD

By: W. C. Brassfield
W. C. Brassfield, P. A.

Encls.

GIANT LEDGE LEAD AND COPPER COMPANY, INC.
927 Palm Drive, Colton, California

BALANCE SHEET
November 30, 1951

ASSETS

| | | |
|---|---|---|
| **Current Assets:** | | |
| Cash on Hand | $ 950.00 | |
| Cash in Citizens National Bank, Colton | 199.41 | |
| Cash in Bank of Nevada, Las Vegas | 337.26 | |
| Deposits on Compensation & Liability Ins. | 289.50 | |
| Subscriptions to Capital Stock (Note 1) | 5010.00 | |
| Total Current Assets | | $ 6786.17 |
| Advances to Officers & Employees (R. J. Ingalls) | | 500.00 |
| **Fixed Assets:** | | |
| Mine Purchased (Note 2) | $ 114000.00 | |
| New Claims Located (Note 4) | 1404.56 | |
| Buildings (Note 3) | 4735.22 | |
| Mining Tools and Machinery (Note 5) | 6547.37 | |
| Trucks (Note 5) | 1700.00 | |
| Office Equipment (Note 5) | 41.60 | |
| Total Fixed Assets | | 128428.75 |
| **Deferred Charges:** | | |
| Road & Mine Development Expenses (Note 6) | $ 5020.88 | |
| Organization Expense (Note 7) | 552.21 | |
| Total Deferred Charges | | 5573.09 |
| Total Assets | | $ 141288.01 |

LIABILITIES AND NET WORTH

| | | |
|---|---|---|
| **Current Liabilities:** | | |
| Accounts Payable (Note 8) | $ 2774.85 | |
| Accrued Labor Taxes | 101.73 | |
| Accrued Income Tax Withheld from Employees | 57.00 | |
| Accrued Insurance | 74.43 | |
| Total Current Liabilities | | $ 3008.01 |
| Agreement to Purchase Mine | | 110000.00 |
| Mortgage Payable | | 3480.00 |
| Total Liabilities | | $ 116488.01 |
| **Net Worth** | | |
| Capital Stock -- $1.00 par value; | | |
| Authorized 300,000 shares | | |
| Unissued 297,000 " | | |
| Outstanding 3,000 " | $ 3000.00 | |
| Subscribed 60,400 " | 60400.00 | |
| | $ 63400.00 | |
| Less Stock Discount | 38600.00 | |
| Net Worth | | 24800.00 |
| Total Liabilities and Net Worth | | $ 141288.01 |

GIANT LEDGE LEAD AND COPPER COMPANY, INC.
927 Palm Drive, Colton, California

BALANCE SHEET NOTES
November 30, 1951

Note 1 - Subscriptions to Capital Stock:

| Name of Subscriber | Subscriptions Shares | Subscriptions Discount | Subscriptions Payable | Paid to Nov. 30 | Unpaid Balance | Shares Issued |
|---|---|---|---|---|---|---|
| Anderson Daniel | 3000 | $ 2000.00 | $ 1000.00 | $ 1000.00 | $ | |
| Anderson, Gerald V. | 9000 | 6000.00 | 3000.00 | 340.00 | 2660.00 | |
| Bowlen, Clyde | 1000 | | 1000.00 | 1000.00 | | 1000 |
| Carr, Duane S. | 6000 | 4000.00 | 2000.00 | 2000.00 | | |
| *Crane, Albert W. | 2000 | 1333.33 | 666.67 | 666.67 | | |
| Harber, Henry T. | 900 | 600.00 | 300.00 | 300.00 | | |
| Harris, Martin | 1000 | | 1000.00 | 1000.00 | | |
| Ivey, Molly | 3000 | 2000.00 | 1000.00 | 1000.00 | | |
| Johnstone, William | 3000 | 2000.00 | 1000.00 | | 1000.00 | |
| Nunn, Hal A. | 500 | | 500.00 | 500.00 | | |
| Piteck, Edward E | 1000 | | 1000.00 | 1000.00 | | |
| Robinson, Melbern J. | 1000 | | 1000.00 | 1000.00 | | 1000 |
| Sells, Edward F. | 1000 | | 1000.00 | 1000.00 | | 1000 |
| Speirs, Leo J. | 9000 | 6000.00 | 3000.00 | 3000.00 | | |
| Thompson, Reagan | 3000 | 2000.00 | 1000.00 | 1000.00 | | |
| Thorley, Douglas | 3000 | 2000.00 | 1000.00 | 1000.00 | | |
| *Scovill, W. A. | 1000 | 666.67 | 333.33 | 333.33 | | |
| Thorley, W. S. | 6000 | 4000.00 | 2000.00 | 2000.00 | | |
| Wilhite, Donald E. | 3000 | 2000.00 | 1000.00 | 1000.00 | | |
| Wilhite, Edward E. | 6000 | 4000.00 | 2000.00 | 650.00 | 1350.00 | |
| Totals | 63400 | $38600.00 | $24800.00 | $19790.00 | $ 5010.00 | 3000 |

* Assigned from Douglas Thorley's original subscription of 6000 shares.

Note 2 - Mine Purchased:

| | |
|---|---|
| Agreement to purchase from Robert J. Ingalls and Samuel Alva Barnes | $ 110000.00 |
| Assumed mortgage payable to A. G. Sommers | 4000.00 |
| Total purchase price | $ 114000.00 |

Note 3 - Buildings:

| | |
|---|---|
| Old buildings purchased and moved to mine | $ 1000.00 |
| Building materials purchased | 692.70 |
| Labor | 2858.12 |
| Taxes and insurance on labor | 184.40 |
| Total cost | $ 4735.22 |

GIANT LEDGE LEAD AND COPPER COMPANY, INC.
927 Palm Drive, Colton, California

BALANCE SHEET NOTES
November 30, 1951

**Note 4 - New Claims Located:**

| | | |
|---|---|---|
| Labor | | $ 1288.25 |
| Taxes and insurance on labor | | 60.31 |
| Recording claims, etc. | | 56.00 |
| Total cost | | $ 1404.56 |

**Note 5 - Cost of tools, equipment and machinery purchases**

| | | |
|---|---|---|
| Cost of tools, equipment and machinery purchases | | $ 6547.37 |
| Cost of filing cabinet purchased | | 41.60 |
| Cost of trucks: | | |
| Dodge truck | $ 500.00 | |
| Jeep | 200.00 | |
| Chevrolet Stake truck | 1000.00 | 1700.00 |

**Note 6 - Road and Mine Development Expenses:**

| | | | |
|---|---|---|---|
| Payroll | | $ 5447.06 | |
| Less: Allocated to buildings (Note 3) $2858.12 | | | |
| " " new claims ( " 4) 1288.25 | | 4146.37 | |
| Remainder charged to general development | | | $ 1300.69 |
| Taxes and insurance | | $ 353.78 | |
| Less: Allocated to buildings (Note 3) $ 184.40 | | | |
| " " new claims( " 4) 60.31 | | 244.71 | |
| Remainder charged to general development | | | 109.07 |
| Operating supplies (including powder, etc.) | | | 219.63 |
| Repairs & Maintenance of trucks and equipment | | | 274.26 |
| Gasoline and oil | | | 565.51 |
| Mill runs, assays, and samples | | | 419.80 |
| Telephone and utilities | | | 90.22 |
| Office supplies, postage and printing | | | 115.94 |
| Legal and audit | | | 231.00 |
| Travel and mileage | | | 1356.43 |
| Interest on mortgage | | | 149.27 |
| Miscellaneous | | | 35.80 |
| Cost of food | | $ 807.81 | |
| Less: Charges to employees | | 654.55 | 153.26 |
| Total | | | $ 5020.88 |

**Note 7 - Organization Expenses:**

| | | |
|---|---|---|
| Incorporation fee, Nevada | $ 200.00 | |
| Certificate of Articles of Incorporation, Nev. | 10.00 | |
| Filing Articles of Incorporation, California | 135.00 | |
| Corporation Seal | 7.21 | |
| Attorneys Fees | 200.00 | |
| Total | | $ 552.21 |

**Note 8 - Accounts Payable:**

| | | |
|---|---|---|
| S. A. Barnes | $ 329.88 | |
| G. V. Anderson | 2406.97 | |
| Burton-Brassfield | 38.00 | |
| Total | | $ 2774.85 |

STANDARD FORM NO. 64

# *Office Memorandum* • UNITED STATES GOVERNMENT

TO : D.M.E.A. DATE: December 3, 1951

FROM : D. M. Lemmon, U. S. Geological Survey

SUBJECT: Giant Ledge Lead and Copper Co. DMA 2188 - Tungsten
927 Palm Drive
Colton, California

Property: Giant Ledge mine (Hard Cash and other claims)
New York Mountains, San Bernardino County, California
Secs. 31 and 32, T. 14 N., R. 16 E.

Property is west of Sagamore mine (DMA-1102), southwest of the Live Oak mine (DMA-1329), and east of the Dorr mine (no application!). DMA-1329 was rejected. DMA-1102 was examined by geologists who recommended rejection of a production loan but possible consideration for exploration if requested.

Proposal: Exploration project to cost $100,000 (75% government participation). Plan to sink 2 shafts, the Hard Cash to 200 feet, the Nephi to an unstated depth, presumably 200 feet. Diamond drilling is to be done from shaft bottom. No maps are attached to the copy of the docket that I have seen, and presumably no geologic or assay maps were submitted, and no plan of workings. Application mentions "enclosed geologic maps" in answer to question 22.

The mineralization is of low grade and consists of a complex metallurgical mixture of oxide and sulfide minerals of lead, zinc, copper, and silver, plus tungsten in huebnerite. No metallurgical process for treating this mixture is described in application. In answer to question 15, it is stated that ore will be shipped to the Pine Creek Mill of U. S. Vanadium Corporation at Bishop, California. This type of ore is probably not acceptable at the Pine Creek mill.

In answer to question 9, applicant states he is prepared to spend $20,000, which is $5,000 short of the amount required for a $100,000 project.

The proposed expenditures are not itemized.

Conclusion: The applicant has not submitted sufficient geologic or metallurgical information to support the proposed project. The proposed exploration is not well-conceived, although the property may warrant exploration if it can be shown that the ore can be treated successfully.

Recommendation: The applicant should be requested to provide more data on geology, assay maps, and metallurgy, and to reconsider a program for exploration. Assays should show proportions of lead, and zinc in oxide and in sulfide forms.

If a feasible proposal is made by the applicant, a field investigation should then be requested.

DM Lemmon

M 7-100

(2)

| | Shafts | Drifts | tunnels | Est Prodn | |
|---|---|---|---|---|---|
| Hard Cash | 130 | 340 | 60 | 200 t/day | |
| Athens | — | 2200 | 600 | 200 t/day | 40 ft Vein |
| Mary Stu | 90 | 260 | 60 | 25 | |
| Miami | 90 | | ✓ | | |

Form 103 (April 1951)

6- shows $3,500 incumbrance - on purchase price

Q - Should he file satisfaction by Seller under Purchase agreement? —

8- Does not give current financial statement of the corporation, but apparently confuses question with financial details of the proposed exploratory work under item 24.

9. Altho an estimated cost of $100,000 is set up by applicant on a 75% participation basis, leaving $25,000 to be invested by applicant, he notes only $20,000 + capital is sufficient to pay for his share. -

10. The Hard Cash (pat) & Nephi Claims (unpat) are the two proposed sites of exploration, but are located about 1500 feet apart, the ~~report~~ application does not show the position of the existing workings on any of the claims, nor any geologic data basic to the determination of the positioning of the proposed exploration.

13.- Quantity of water, in gallons per minute or other time interval is not given. Nor any statement as to seasonal variation of the water supply

— No mention whatever is made of power to be used, or its source, or the cost rates thereof. -

14 -

15- Altho disposition of ore, by sale to Pine Creek Mill, Inyo Co, is mentioned, no statement is made as to the efficiency of the treatment of this admittedly complex ore. Also note in Engrs Rept that Ag, Cu, Pb, Zn, Vein ore separate veins from the $WO_3$ - bearing veins -

16- (see also under (2) of Form 100 (May 1951)) does not fully answer question, especially as to a discussion of previous work done + production made, should be fully expounded.- No sample or assay map is included in application showing location of samples taken. - listing of samples does not include any samples from Nephi claim.-

(17) Notes mines not in production, but milling is planned.

(18) note - no ore reserves at present.

19

23 - (c) itemize this expenditure to specific facilities, buildings or structures

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (d) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (e) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

(g) ck with Selfridge

10,000

121 –
90
102
311 set
62

2½

65 × 4
260
125
100
3 ~~7~~ 148 × 3
2½
170
~~101~~ 121 set

(H) itemize

(i) itemize as to equipment using full

explain powder consumption – seems large for "2-compartment

shaft, size not specified. –

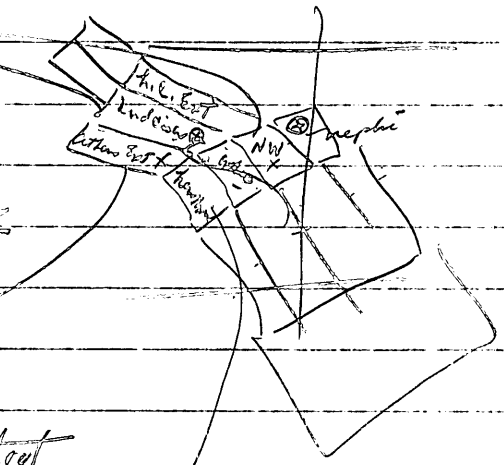
Re hand cobble lode → in Report on P5 of photostated Rept

mineralogy 9% $WO_3$ with little or no Phase Cu

✓ 18.6% $WO_3$

✓ Dump 1.10 $WO_3$ – 5000 Tons

Re. Northwestern lode 1.67 % $WO_3$




Nephi accessible by Pack Trail only

380 ∠ 95°

110

Athens Ext lode – fluorite on contact

2.16 % $WO_3$ Pb 6.4 6.01 Zn

12 ft of Ore in site at portal

Smith Emery 6.06 $WO_3$ hereshow

None Athens Ext

None Northwestern

dma 2188

WILLIAM J. JOHNSTONE
ATTORNEY AT LAW
TELEPHONE 5581
422 SEVENTH STREET
VICTORVILLE, CALIFORNIA

October 19, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 51951

Defense Minerals Administration,
Department of the Interior,
Washington 25, D. C.

Gentlemen:

Please find enclosed herewith application for aid for exploration project pursuant to Mineral Order 5, under Defense Production Act of 1950, submitted on behalf of the Giant Ledge Lead & Copper Company, 927 Palm Drive, Colton, California.

The applicant herein has heretofore filed form MF-100 on June 25th, 1951.

Respectfully yours,

William J. Johnstone

WJJ/m

Mr. William J. Johnstone, Attorney
Giant Ledge Lead and Copper Co.
422 Seventh Street,
Victorville, California

Subject: DMA-2188
Re: Exploration Loan
Giant Ledge Lead and
Copper Co., Inc.

My dear Mr. Johnstone:

This will acknowledge receipt of your application dated October 9, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA-2188 and referred to the Ferro-Alloys Branch.

Kindly refer to DMA-2188 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2188

Date received 10-25-51

Participation

RECEIVED
OCT 25 1951
Defense Minerals Administration
Department of the Interior

Giant Ledge Lead and Copper Company
927 Palm Drive
Colton, California

Name and address of applicant

Date October 9, 1951

FILL IN THIS BLOCK

Date of application October 9, 1951

Estimated cost $100,000

Mineral or metal tungsten, copper, lead & zinc

Percentage of Government participation 75 %

Location of mine New York Mining District

Date of filing MF-100 June 25, 1951

DMA Docket Number, if available unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

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

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

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

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

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

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

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

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

*16. History:

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

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

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

*17. Production:

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

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

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

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

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

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

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

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

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

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

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

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

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

## CERTIFICATION

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

Giant Ledge Lead & Copper Co.,Inc.
(Name of company)

By [signature]
(Signature of authorized official)

October 9, 1951
(Date)

Secretary-Treasurer
(Title)

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

*Same as footnote on page 1.

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

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

APPLICANT

GIANT LEDGE LEAD & COPPER COMPANY,
927 Palm Drive
Colton, California

1. The applicant is a corporation.

2. Not applicable.

3. Gerald V. Anderson - President, 608 East C Street, Colton, Calif.
Leo J. Speirs - - - Vice President, 696 East C Street, Colton, Calif.
Edward E. Wilhite - Secretary, 927 Palm Drive, Colton, Calif.
Donald E. Wilhite - Assistant Secretary, 1608 Sheridan Ave., San Bernardino, Calif.

Daniel Anderson - - Director, 848 Palm Drive, Colton, Calif.
Duene S. Carr - - - Director, 1194 Bonita Dr., Colton, Calif.
Reagan Thompson - - Director, 1207 West 2nd Street, San Bernardino, Calif.
Stewart W. Thorley - Director, 644 East C Street, Colton, Calif.
Robert J. Ingalls - Director, 820 Orange Grove Ave., Colton, Calif.
Samuel A. Barnes - - Director, 840 West G Street, Colton, Calif.

Melbern J. Robinson- Stockholder, Edwards Air Force Base, Muroc, Calif.
Edward F. Sells - - Stockholder, 1296 Holly Dr., Colton, Calif.
Clyde Bowlen - - - - Stockholder, 1262 Mt. Vernon Ave., Colton, Calif.
Martin Harris - - - Stockholder, 608 East C Street, Colton, Calif.
Molly Ivey - - - - - Stockholder, 869 West G Street, Colton, Calif.
Henry T. Harber- - - Stockholder, George Air Force Base, Victorville, Calif.
William J. Johnston- Stockholder, 422 7th St., Victorville, Calif.

4. (a) Gerald V. Anderson - General business experience.
   (b) Robert J. Ingalls - Engineer of Mines and Geology. Thirty-five years experience.

5. Owners.

6. Incumbrence at present is $3,500 balance on the purchase.

7. Not applieable.

8. See answer No. 24.

9. $20,000. Yes.

10. (a) Description of the property is under Survey No. 3985 which consists of four patented claims and eleven additional claims now being held by location by the present owners. Total property being described is as follows: No. 1. Hard Cash Lode Claim; No. 2. Athens Lode Claim; No. 3. Morning Star Lode Claim; No. 4. Miami Lode Claim; No. 5. Menlow Lode Claim: No. 6. North Star Lode Claim; No. 7 Henshaw Lode Claim; No. 8. Athens Extension Lode Claim; No. 9. Hard Cash Extension Lode Claim; No. 10. North Western Lode Claim; No. 11. Evening Star Lode Claim; No. 12. Magnaw Lode Claim; No. 13. Nephi Lode Claim; No. 14. Maybell Lode Claim; No. 15. Grace Lode Claim.

    (b) Hard Cash Lode Claim located in Section 31, Township 14 North, Range 16 East, San Bernardino Meridian is a patented claim. The Nephi Lode Claim in Section 31 and 32 is an unpatented claim. These two claims are where exploration program is planned.

11. The present name is: Giant Ledge Lead and Copper Co. Inc.; Formerly know as: The Giant Ledge Gold and Copper Co.; Also knew as: The Athens Group.

12. Located 23 miles South of Ivanpah, a railroad shipping point on the Union Pacific Railroad. Gravel surface County maintained road. Also intersection with U.S. Highway 66 and points East or West. 14 miles Northerly from Ivanpah, the County maintained gravel road intersects with U.S. Highway 91 to points North or West.

13. Contact making live water in three places. Anticline formation indicates ample subterranean flow with little development. Two live springs available at present for domestic use. It is sufficient.

14. Three bunk houses, one combination kitchen and dining room, one D C 7 bulldozer, two 210 air compressors and miscellaneous pipe and trackage material.

15. Plan milling operations on or near property. For shipping, trucks will be used to freight ore to Pine Creek Mill, Inyo County, California.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, California

16. (a) The property was opened up in 1898 for a Gold, Lead and Silver property.

(b) Adjoining on the East is the Sagamore. This mine had at one time a 10 stamp mill for the reduction and recovery of Lead, Silver and Gold ore. It is now dismantled but being reopened as a Tungsten mine.

(c) An extensive sampling program of all locations where ledges in place are exposed shows the following results:

| | | |
|---|---|---|
| Sample group No. 1 This sample is an average of 23 cuts and shows the following results: HARD CASH EXTENSION. | Silver ounces per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper % | 1.00 |
| | Zinc % | 1.7 |
| Sample group No. 2. This sample is an average of 9 cuts and shows the following results: ATHENS EXTENSION. | Silver ounces per ton | 4.04 |
| | Lead % | 4.1 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 3. This sample is an average of 5 cuts and shows the following results: ATHENS | Silver ounces per ton | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No Zinc run. | |
| Sample group No. 4 This sample is an average of 5 cuts and shows the following results: MIAMI. | Silver ounces per ton | 3.22 |
| | Lead % | 1.2 |
| | Copper % | 1.1 |
| | No Zinc run. | |
| Sample group No. 5. This sample is an average of 10 cuts and shows the following results: MORNING STAR. | Silver ounces per ton | 10.22 |
| | Lead % | 9.6 |
| | Copper % | 3.4 |
| | No Zinc run. | |
| Sample group No. 6. This sample is an average of 5 cuts and shows the following results: NORTH WESTERN. | Silver ounces per ton | 3.9 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 7. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | No Zinc run. | |
| Sample group No. 8. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Two qualitative analysis have been run on the afore mentioned sample group. These show the following results:

Silicon - - - - - - - - - - - - - - -
Calcium - - - - - - - - - - - - - - - } Main Constituents.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, California

17. Not in production at present. Plan #2 milling.

18. (a) A contact vein with a South Easterly North Westerly Strike dipping 82 deg. Westerly. Cross fractures are numerous on Hard Cash Lode Claim at the principal point of exposure.

(b) Maps and assays inclosed.

(c) No reserves at present.

19. Discovery of Tungsten in paying quantities has prompted a rearrangement of former plans to mine and mill Copper, Lead, Silver and Zinc.

20. Tungsten primarily, Copper, Lead, Silver and Zinc secondary on a Lime Granite contact vein.

21. Propose to sink two exploration shafts. First: The Hard Cash shaft, approximately six months. Second: The Nephi shaft and the access road approximately six months. Present plans are to carry on the two exploration projects simultaneously.

22. Refer to engineering report. Also enclosed geological maps.

23. (a) Labor: 4 miners @ $65.00 per week.
(b) 1 shift foreman @ $125.00 per week.
1 camp foreman @ $100.00 per week.
(c) Upkeep and maintainance: $6,000.00
(d) $20,000.00
(e) $20,000.00
(f) None
(g) $40.00 per day for two 210 compressors, one 7D Caterpillar Bulldozer, two 4-wheel drive H.D. Trucks.
(h) $2,000.00. Small mine supplies.
(i) Fuel for small equipment-$75.00 daily. Powder caps and fuses-$80.00 daily.

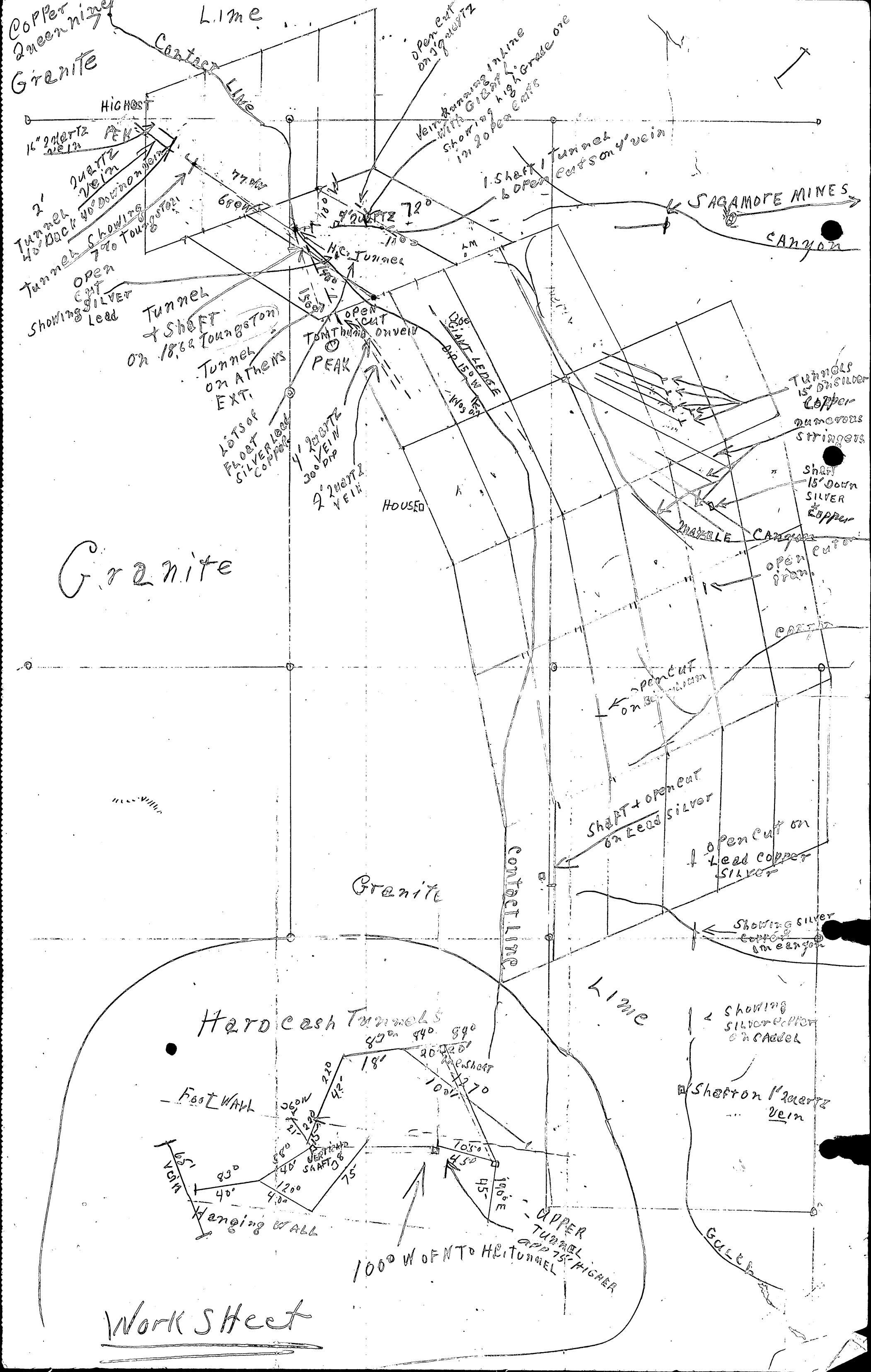
24. Will estimate 4 men making 2½ feet per day and including all timbering - 6 months. Should complete exploration shaft to the 200 foot level by basing it on 2 days to complete each 5 foot set.

Each 5 foot set will take the following:

$56 in wages.
$90 for timber.
$100 for miscellaneous equipment.

This cost will be multiplied by 40 as there will be 40 five foot sets. It is planned at this point to institute diamond drilling program.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California


Copper Queen mine
Granite
Lime
Contact Lime
Highest Peak
16" quartz vein
2' quartz vein
Tunnel 40' Back 40' Downon vein
Tunnel showing 7 to 10 Tungston
Open cut showing silver lead
Tunnel + shaft on 18,62 Tungston
Tunnel on Athens ext.
Lots of float silver lead copper
4' quartz vein 30° dip
2' quartz vein
Tom Thumb Peak
Open cut on vein
Giant Ledge Dip 15° W
Open cut on giant vein showing high grade ore in 20 open cuts
1 shaft 1 tunnel 6 open cuts on 4' vein
Sagamore Mines
Canyon
Tunnels 15' on silver copper numerous stringers
Shaft 15' down silver copper
Marble Canyon
open cut
open pit
Granite
Granite
Contact Lime
Lime
open cut on
shaft + open cut on lead silver
open cut on lead copper silver
showing silver copper on canyon
showing silver copper on saddle
Shafton 1' quartz vein
Gulch
Hardcash Tunnels
Foot wall
Hanging wall
Vertical shaft
Upper tunnel app 75' higher
100° W of N to Hc tunnel
Work Sheet

"REPORT ON THE GIANT LEDGE MINE"
Submitted July 11, 1951.

HISTORY OF THE AREA;

For many years the Ivanpah Barnwell area has been noted for it's part in the production of metals, namely, Copper, Silver, Lead and Gold. Our early records show the activity that once centered in this locality. Barnwell, once a busy town of two to three thousand inhabitants, lies dormant, only a memory to a few of the old timers who can recall the days when mule teams were relied upon. Later the T.T.&.W.R.R. conected the area with the outside world. To others who have came since, only the name of a barren spot on the desertis evidence of past activity of this once active mining center. A few miles northward the Searchlight area was active and is reputed to have produced millions in gold. Like the rest of this vast mineral belt it too is slightly more than a memory.

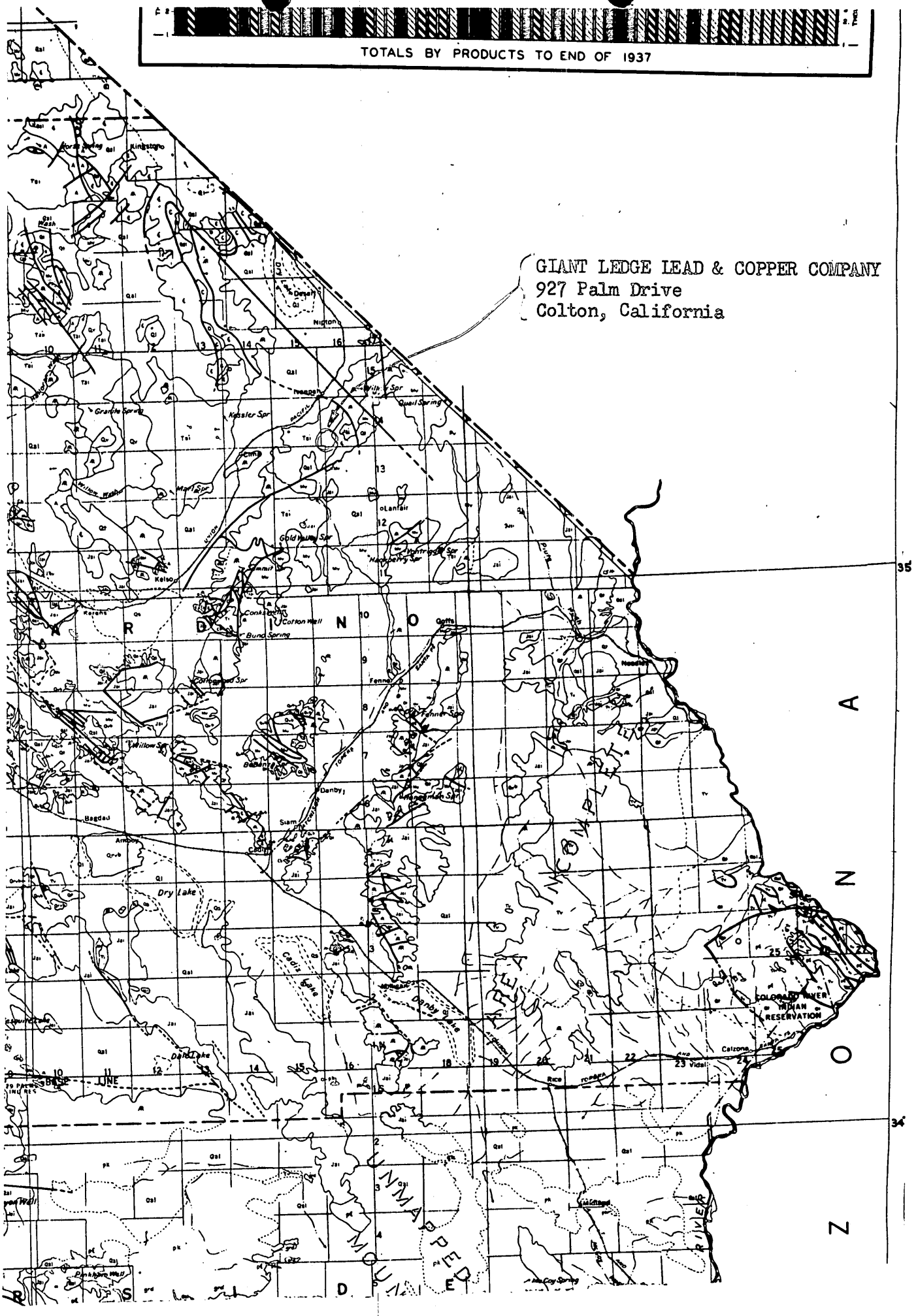
The pressure of years and monitary changes have left their mark. The rarer metals have been in some cases worked out and in others, economic changes forced shutdowns, to the extent that until recently little or no mining of any consequence has been going on. Now with the discovery of rare metals of various kinds and new improved methods of refining and extraction, the Barnwell Ivanpah Searchlight areas are looking forward to a new boom in the mining industry. Thousands of tons of material mined as waste by the early seekers of Gold and Silver, lies leeching on dumps waiting for this new era and an industry that demands just such elements as are found in plenty in this locality. When the branch line rail road that served the area suspended operation the problems of mines in this local were increased. Long hawls by mules and later trucks, over, in many cases, unimproved roads made such increased demands on the operator that in many cases if not all, suspended operations.

Special attention is called to the New York Range. This range is a veritable storehouse of strategic metals, although complex in occurence it holds in it's canyons and hills Lead, Zinc, Silver, Copper, Gold, and last but by no wise the least , strong deposits of tungsten ores have lately been discovered. With present improved methods of recovery this locality can and will see the so called boom days again and soon. From the Tacopa Goodsprings area southeasterly there occurs numerous contacts in the limes, all carrying some showing of mineral and many have proven valuable in as much as there are some very productive mines along the lime reef

The Clark Mtn area has recently made important discoveries of rare earths that will meet critical demands. The Ivanpah Mtns further southeast also have long been known to hold many deposits of both Copper, Lead and Zinc. Then on further southeast the New Yorks are now in the process of proving their wealth in needed metals. The Ivanpah Barnwell and Cima triangle form a mineral deposit that extends as far south as the Goffs basin.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

TOTALS BY PRODUCTS TO END OF 1937



"GENERAL GEOLOGY & TOPOGRAPHY"

While the country as a whole is of Granit Base, to the Northeast, we find strong showings of Tertiary or New Granits. While to the East we have some Jurassic Acid Intrusives. South of these, Terrace deposits are in evidence with a showing of Camberian Marine Sediments. These sediments extending westerly and contacting with Miocene Volcanics. West of these, the terrain is largely Alluvium.

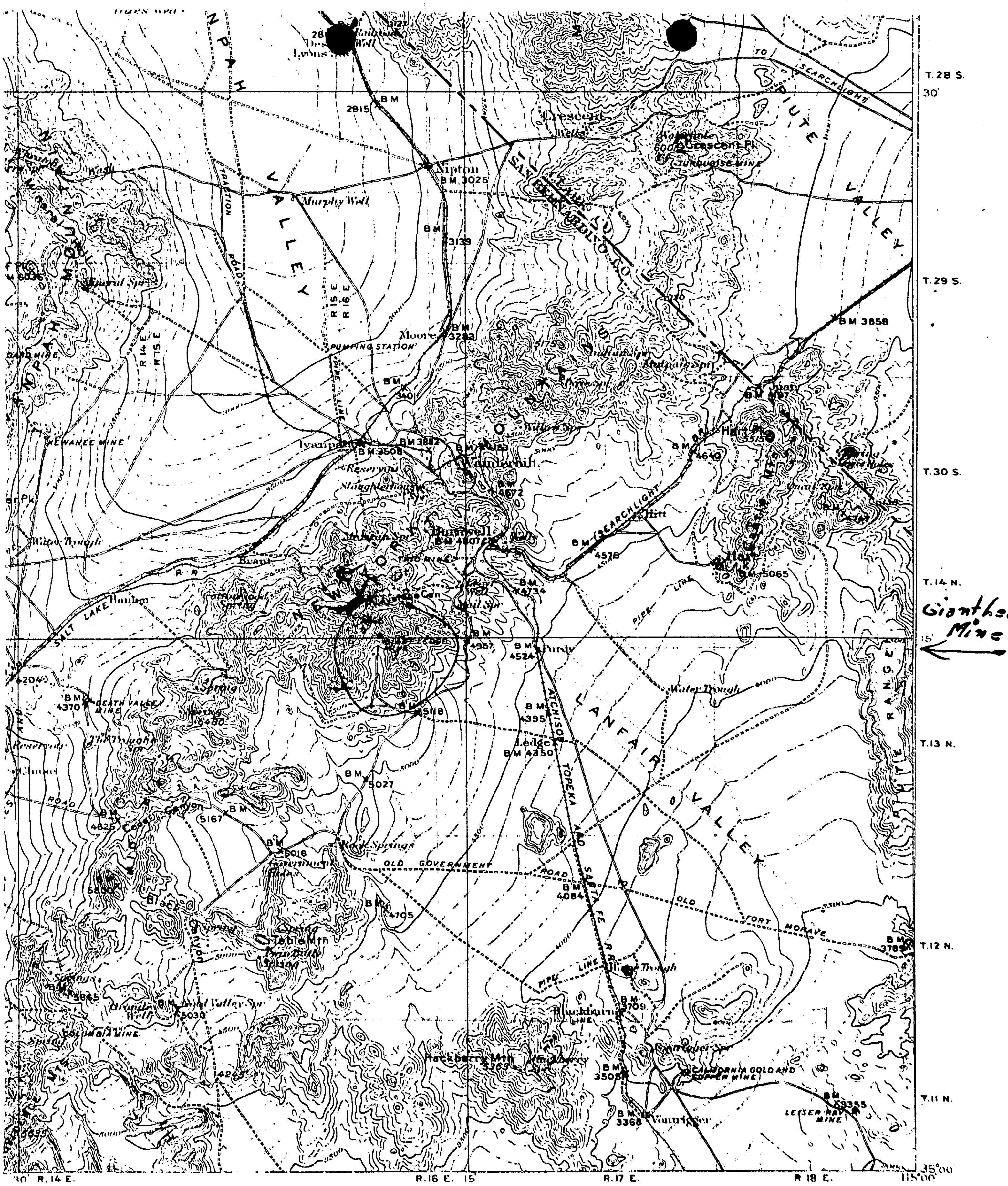
The surronding country is arid and Joshua trees with light sage and Greeswood prevails. Grazeing in the area is extensive and water is plentiful by development. Small Penion Pine is found above the 4.000 ft level with considerable Juniper. The climate is mild and ideal working condtions prevail most of the year. Many live springs are found above the 4.000 foot and fine cold water is available for most domestic uses. Cattle ranching and mining are the most prevalent and constitute the the industry of the locality.

The area is served by the A.T.&.S.F.R.R., to the south some 25 miles and to the North 21 miles distant by the U.P.R.R. which runs along the North base of the New York Range. Loading accomadations are at both Goffs and Ivanpah, much ore of various kinds being shipped from Ivanpah.

"SPECIFIC GEOLOGY OF THE GIANT LEDGE"

The Giant Ledge consists of a Porphry Lime contact to the north this giveing way to Granit Lime contact about midway the Hard Cash Claim. There are numerous surface falts and minor Granit intrusions into the Limes are frequent. Some of the oldest exposures being Quartzites and so called Mafics. Notable is the absence of any basement complex of Volcanics so often found in the Pre Cambrian. Paralleling the contact, are numerous veins back in the Limes at various depths. Indications are that depth on the true contact will open up extensive ore bodies as well located veins are all dipping strongly in that direction. On the Hard Cash Claim the vein is prominent; and devided between the Granit Lime contact to the south and the Porphry Lime contact to the North. At the south line of this claim the vein leaves the contact and occurs more Easterly in the Limes. No depth has been made on the contact and most of the workings consist of tunnel operations. There are live springs both above and below the mine and indications are that water will be encountered with little depth. A cross fracture occurs on the Hard Cash and there is exposed on the surface a strong vein of Lead Silver and Copper carrying 1.75% Tungston Trioxide. A strong vein also a cross fracture parallels this vein to the north 165 ft that shows very promiseing in Hubernite. Most of the ore on the Hard Cash is basic Florite carrying Copper, Lead, Silver and tungston. Extensive sampleing is being done and results will appear later in this report.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California




1: 250000

10 Miles

10 Kilometers

Interval 100 feet.
mean sea level.

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION 1910

Edition of June 1912, reprinted 1941

Polyconic projection. North American datum

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, Calif.

Map of the Goodsprings quadrangle, scale 1: 62,500, contour interval 50 feet, from a later and more detailed survey of the area adjacent to Goodsprings, is available.

CALIF NEV
IVANPAH

N3500 - W11500/60

"DESCRIPTION AND DEVLOPMENT"

The Giant Ledge consists of four patented claims and 17 others that are being held by location by the present owners. At an average elevation of 6.500 ft, the patented claims are the Hard Cash, Athens, Morning Star and Miami. The claims being held by location are the Hard Cash Ext, Athens Ext, Nephi, Henshaw, Northwestern, Maybell, Evening Star, North Star, Grace, Magmaw, Menlow, Sharlett, Virginia, Luetta, Terrace, Resign and Last Chance.

"THE MIAMI LODE CLAIM"
(Apatented claim)

The Miami claim is patented under survey No3985, work on this claim consists of an open cut thirty feet long exposeing a 22 inch vein of Copper Silver ore. Strike East 7 deg, South with a dip 87 deg South.

This small stringer is an offshoot fracture running in an easterly direction from the contact. Just west of this open cut a shaft has been sunk to an estimated depth of 90 feet on the vein, showing is good at collar, further inspection made impossible by there being no timber in place. Numerous open cuts prove this vein to be contenious across the width of the claim. Access to this is by pack trail only.

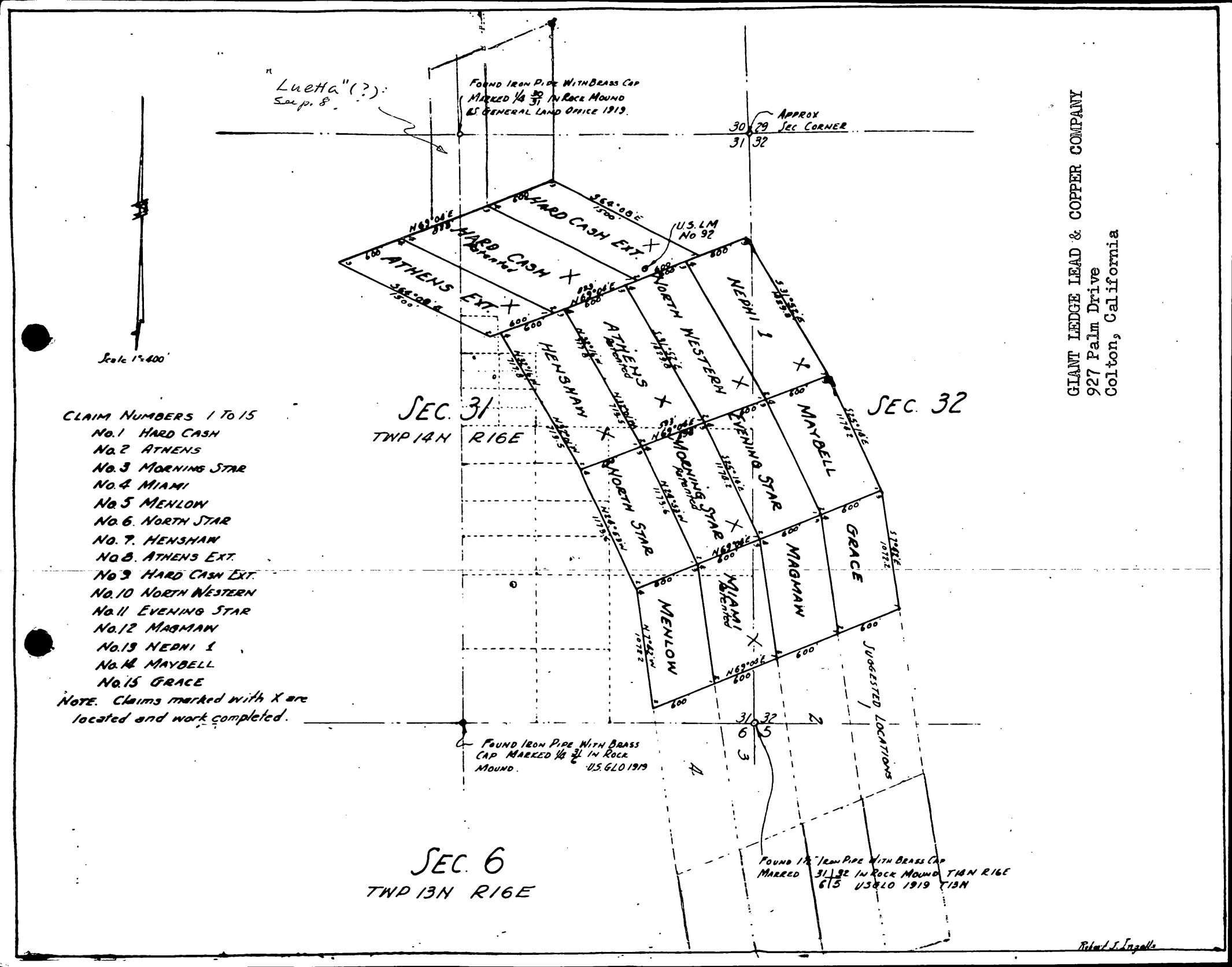
"THE MORNING STAR LODE CLAIM"
(A patented claim)

The Morning Star Lode Claim is patented under survey No.3985. Work on this clain consists of a cross cut tunnel driven easterly in the Limes, showing vein in place. This vein carries Copper, Lead and Silver. Thirty eight assays have been cut over this claim in various exposiers showing 1.7% Copper, 11 ozs Silver. South of the portal of the crosscut 28 feet a shaft has been sunk 75 feet down. Showing here is very promiseing at collar, further inspection at this time made impossible by lack of ladder ways. The only access to this claim is by pack trail. Elevation 6.052 feet.

"THE ATHENS LODE CLAIM"
(A patented claim)

The Athens Lode Claim is patented under survey No,3985. This claim has a large amount of exploration work, there being three levels opened up along the mountain slope, all with considerable footage. Crosscut tunnels have been pulled easterly into the limes to various depths. The first, or summit level consists of a tunnel driven North 16 deg East for some 75 feet on a strong vein three to four feet in width. Back 60 feet from the portal a small feeder vein intersects the main vein and heads North 38 deg East. This feeder has been followed for a distance of forty feet. A winz has been sunk at the intersection to an estimated depth of 65 feet and the vein is strong at collar. Assays here show 9% Copper and 23 ozs in Silver. Below this workings and 70 feet north another crosscut has been pulled apparently to intersect the vein above but for some reason work was suspended before makeing the contact.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California




Robert J. Ingalls

"THE ATHENS LODE CLAIM CON'T"

Directly below these workings down the mountain side 120 feet below another tunnel has been pulled, this tunnel portals in the Limes and crosscuts easterly 320 feet. This tunnel has four side cross-cuts,all seem to be following small unimportant stringers. Below this another 145 feet and portaled in the Granit, another cross-cut tunnel has been pulled. Reports are that this tunnel goes back 1.200 feet to cut the vein that occurs on the summit.This tunnel being badly caved back 645 feet from the portal inspection impossible at this time. Northerly of this portal 240 feet and 70 feet higher up another tunnel has been pulled to a depth of 365 feet. Strong veins of Copper and Zinc are cut in this workings, assays taken here show 2.7% Copper, 12% Zinc and 11 ozs Silver. No sinking has been done at any level. Access is by pack trail only. Elevation 6.110 feet.

"THE HARD CASH LODE CLAIM"
(A patented claim)

The Hard Cash Lode claim is a patented claim Under survey No,3985. This claim also has a great deal of work and is accessible by a road to the foot of the dump of the main workings. In this work a tunnel has been pulled easterly back 380 feet. An incline raise has been pulled back 110 feet from the portal. This raise conects with an upper level 90 feet above. The lower drift is collared in ore and this ore deposit continues back and ends just short of the raise. The raise inclines 67 deg south and cuts ore 7 feet above the lower drift, topping in ore on the upper level. Back 40 feet from the main portal a crosscut drift has been pulled southerly. This crosscut goes ba ck 129 feet running somewhat in the shape of a harse shoe. It starts southerly for 40 feet, here it turns easterly 60 feet, then North-easterly for another 60 feet, ore was encountered at the portal and all of this crosscut is in solid ore. The ledge of ore cut at the portal strikes North 38 deg East, with a dip South 77 deg. It can readily be seen that this is a cross fracture vein Easterly from the contact. Ledge matter from this vein is exposed on the surface Easterly for a distance of 750 feet. Numerous open cuts and shallow holes prove comercial ore over the total distance stated. The width tapering from 65 feet at the junction of the contact to 12 feet on the Easterly exposier. At the top of the raise from the main level a drift runs south for a distance of 16 feet. Also the portal drift runs westerly 40 feet to collar in ore. North of this portal another tunnel has been pulled 60 feet Easterly along the vein. This tunnel collars in ore and ends in ore. A shaft just to the right of this tunnel goes down and conects with the lower level 90 feet below. All workings on this claim are in good mill ore except a continued exploration tunnel that continues on back from the No 1 raise some 200 feet. The foot or Northerly wall has been exposed in one place back 90 feet from the main tunnel portal. North of the main tunnel portal and 65 feet away an incline shaft has been sunk, This shaft goes down 35 feet inclineing 70 deg Easterly. At the bottom a short drift has been pulled southerly 15 feet,

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927 Palm Drive,
Colton, California

"HARD CASH CLAIM CON'T"

this drift opens out into an under ground stope. Ore has been mined here over an area 40 feet Easterly and Westerly by 12 feet southerly and Northerly, with backs 8 feet. In length this stope runs North 33 deg East along the strike of the vein slightly cross cutting the vein matter. Around the hill southerly from the main Tunnel some 900 feet a shaft has been sunk down 38 feet on a vein of high grade ore. This vein is 20 inches in width and has a strike of East 7deg North with a dip 89 deg south. This quartz vein carries 9% Tungston Trioxide, in the form of Schlite and Wolfermite. Below this shaft and 28 feet westerly a tunnel goes in and cuts the vein. Samples from this tunnel assay 18.62% Tungston Trioxide with little or no Lead or Copper. Reports are that two car load shipments were mwde from the Hard Cash claim that run $44.26 and $61.52 resp; However no confirmation ofthese reports is available. There is a large dump of an estimated 5.000 tons that assays 1.10% Tungston Trioxide. Other dumps range from $26.00 to $40.55 in Lead, Copper, Zinc and Silver. Overall average shows 1.75% Copper; These four patented claims all are located in Sec 31, T14N R16E, S.B.M. At an elevation average 6.500 feet.

The claims now being held by location are described as follows.

"THE NORTH STAR LODE CLAIM"
(Not Patented)

The North Star Lode Claim is on a parallel vein of quartz occuring in a Granit intrusion Easterly of the Lime Granit contact. A good showing of Silver, Tungston and Lead. Discovery work is in the form of an open cut. This claim parallels the Morning Star on the Westerly side in Sec 31, T14N R16E. At an elevation of 5.900 feet. Access is by pack trail only.

"THE GRACE LODE CLAIM"
(Not patented)

The Grace Lode Claim adjoines the Maybell on the Southerly end and parallels the Magmaw, joining the Magmaw on the Easterly side line. This claim is a new location and discovery work is in progress on a good showing of Copper at this time. Located in Sec 32 T14N R 16E S.B.M. Elevation 5.600 feet. Access by pack trail only.

"THE MAGMAW LODE CLAIM"
(Not patented)

The Magmaw Lode Claim adjoines the Grace on the Easterly side line and the Miami on the Westerly side line. Lying and being between the two claims. Work is in progress on the continuation of vein that is exposed on the Evening Star. Some showing of Copper, Silver and Lead. No assays out. In Sec 32 T14N R16E. S.B.M.Elevation 5.700 feet. Access is by pack trail only.

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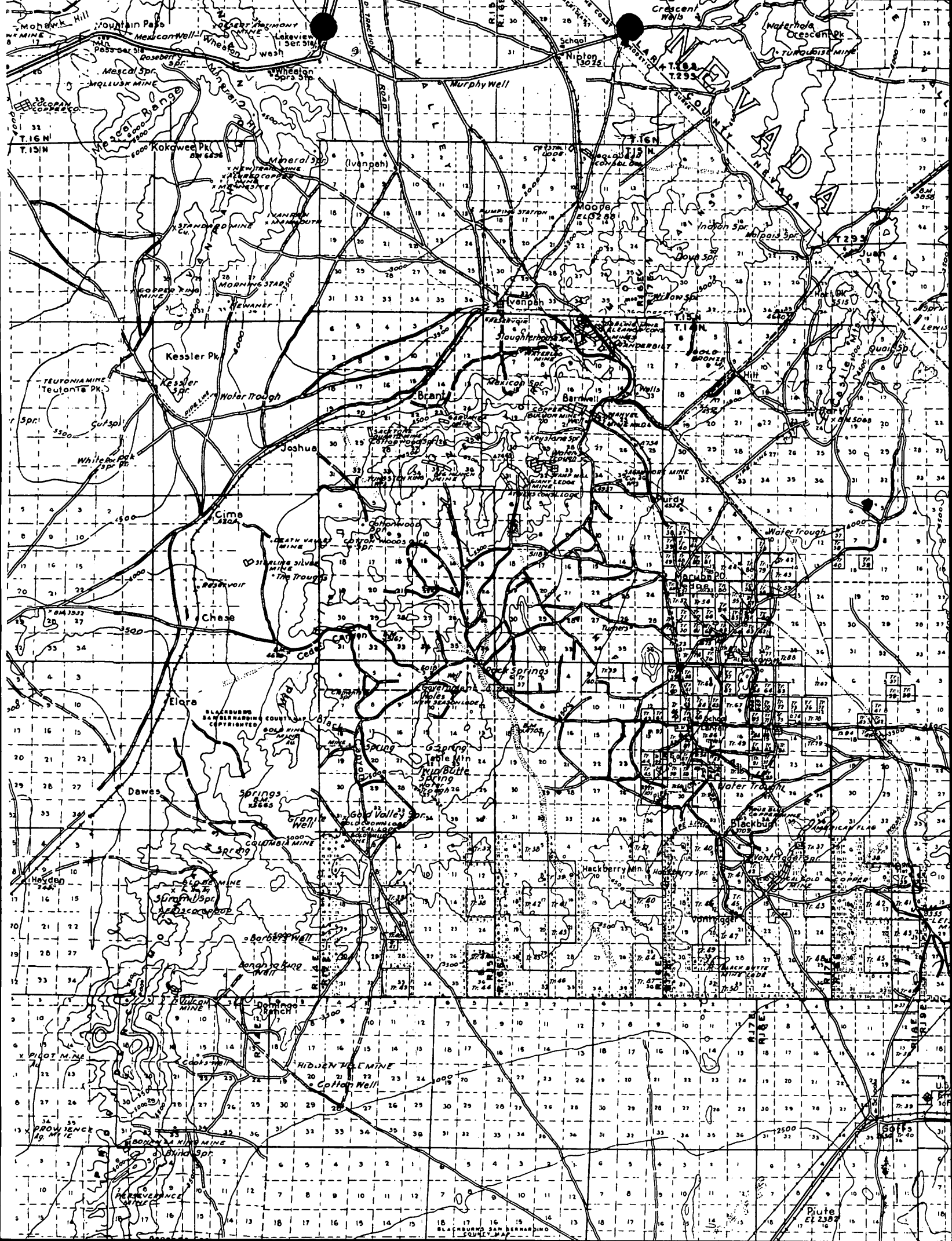
Mohawk Hill
Mountain Pass
Mexican Well
Lakeview
Wheelton
Wheelton Wash
Mescal Spr.
Mollusk Mine
Mescal Range
Mineral Hill
Kokowee Pk.
Mineral Spr.
Ivanpah
Nipton
Murphy Well
Crescent Wells
Waterhole
Crescent Pk.
Turquoise Mine
Moore
Ivanpah Spr.
Dove Spr.
Juan
Kessler Pk.
Teutonia Pk.
Water Trough
Brant
Joshua
Berwell
Hill
Cima
Chase
Cedar
Elora
Dawes
Rock Springs
Marubbio
Blackburn
Hackberry Mtn.
Vontrigger
Hayden
Cottonwood Spr.
Table Mtn.
Gold Valley Spr.
Cottonwood Well
Hidden Vein Mine
Cottonwood Well
Piute
Gotts
Bird Spr.
Perseverance Mine
Providence Mine
Pilot Mine
Vulcan Mine
Blackburn San Bernardino County Map

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"THE HARD CASH EXT LODE CLAIM"
(Not a patented claim)

The Hard Cash Ext Lode Claim paralles the Hard Cash claim on the Northerly side line. A 6 foot vein of quartz witha strike South 70deg East has been opened up and at present assay results are not in. Located in Sec 31 T14N R16E S.B.M. At an elevation of 6956 feet. Access is by pack trail only.

"THE HENSHAW LODE CLAIM"
(Not patented)

The Henshaw claim parallels the Athens on the Westerly side line. A Lime stringer has been opened up and at present is makeing 500 gals of water daily. It is planed to devlope this for domestic use. At an elevation of 5800 feet, In Sec 31 T14N R16E.S.B.M. Access by pack trail only.

"THE NEPHI LODE CLAIM"
(Not patented)

The Nephi Lode Claim is the most Northeast claim in the Giant Ledge group. This claim has a very strong showing of Copper Silver ore assaying 12.66 Copper and 24.69 ozs Silver. A prospect shaft has been sunk to a depth of 18 ft and the showing is very good at this writeing. Width of the vein as yet undetermined, this vein is a cross fracture vein with a strike North 76 deg East, dip 82 deg South. Elevation 6500 feet, in Sec 31 and 32 T14N R16E S.B.M. Access by pack trail only.

"THE NORTHWESTERN LODE CLAIM"
(Not patented)

The Northwestern Lode Claim parallels the Athens on the Westrly side line, lying and being between the Athens and the Nephi,claims. Work in progress at this time. A strong showing of green Epidote carrying 1.67% Tungston Trioxide. The vein strikes almost true Southeast and Northwest. In Sec 31 T14N R16E.S.B.M. Elevation 6900 feet. Access by pack trail only.

"THE MAYBELL LODE CLAIM"
(Not patented)

The Maybell Lode Claim Is a new location, discovery work now in progress. No assay cut at this time the vein not completly exposed. A good showing with true wall slip. Located in Sec 32 T14N R16E S.B.M. Elevation 5800 feet,access by pack trail only.

"THE ATHENS EXT LODE CLAIM"
(Not patented)

The Athens Ext Lode Claim parallels the Hard Cash on the southerly side line. A strong vein of Florite occurs along a Granit intrusion with a Lime foot wall. Strike south 38 deg East with a dip 65 deg East. This vein is a complex ore carrying Tungston Trioxide 2.16%, Lead 6.4%, 6.01% Zinc. An old caved tunnel is being reopened at this time. The width of the vein indication is that a strong deposit exists. 12 feet of ore in sight at portal. In Sec 31 T 14N R16E S.B.M. Elevation 5900 feet, access by pack trail only.

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Colton, California

"THE MENLOW LODE CLAIM"
(Not Patented)

The Menlow Lode Claim parallels the Miami Claim Adjoining this claim on the westerly side line. This is a new location. Open cut work in progress at present. No assays as yet. Located in Sec 31 T 14N R16E, S.B.M. Elevation 5600 feet Access by pack trail only.

"THE SHARLETT LODE CLAIM"
(Not patented)

The Sharlett Lode Claim is a new location, Being the Southeast most claim of the Giant Ledge Group. This claim is a new location and no vein in place exposed at this writeing. Elevation 5300 feet, located in Sec 32 and 5 T14N R16E, S.B.M. Access is by pack trail only.

"THE VIRGENIA LODE CLAIM"
(Not patented)

The Virgenia Lode Claim is a new location, lying paralled to the Sharlett and adjoining that claim on the Westerly side. and adjoining the Terrace Lode claim on the Westerly side line. Open cut work now in progress no samples cut at this time. Located in Sec 32 and 5 T 14N 16E and T 13N and R16E.S.B.M. Elevation 5200 feet, access by pack trail only.

"THE TERRACE LODE CLAIM"
(Not patented)

The Terrace Lode Claim is a new location, This claim parallels the Virgenia. Joining that claim on the Easterly line and the Last Chance Paralleing that claim on the Westerly side line. Discovery work in progress at present, no assays cut. Located in Sec's 5 and 6 T13N R16 and Sec 31 and 32 T14N R16E. S.B.M. At an elevation of 5300 feet. Access is by pack trail only.

"THE LAST CHANCE LODE CLAIM"
(Not patented)

The Last Chance Lode Claim is a new location, paralleing the Virgenia on the westerly side line, This claim is the Southwesterly most claim of the Giant Ledge Group. Located in Sec 31 and6 T 13and 14N R 16E. S.B.M. No assays cut at this time. Discovery work in progress. Elevation 5200 feet. Access by trail only.

"THE EVENING STAR LODE CLAIM"
(Not patented)

The Evening Star Lode Claim is a new location and discovery work is in progress. No samples we taken as the vein in place is not as yet exposed. This claim ties on to the North Star on the Easterly side line. Located in Sec 31 and 32 T14N R16E. S.B.M. Elevation 5800 feet, Access by pack trail only.

"THE RESIGN LODE CLAIM"

The Resign Lode Claim is an extension claim on the westerly end of the Hard Cash Ext. This is a new location and work was just starting on descovery at time of this writeing. No samples taken at this time. Located in Sec 32 T14N R16E. S.B.M. At an elevation of 5900 feet. Access by trail only.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

TRINITY 4791

FORM 1

LABORATORY REPORT

COPY

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

(Mill Copy)

LABORATORY No. 340483-90

Date July 19, 1951

Sample Ore

Received 7-12-51

Marked

Submitted by Giant Ledge Mining Co.,
c/o G. V. Anderson,
608 East "C" Street,
Colton, California.

Att: Robert Engles.

REPORT OF DETERMINATIONS

"Henshaw"

Silver (Ag) ------- 2.92 ozs/ton --- $2.64/ ton
Lead (Pb) ---------- 2.12%
Tungsten Trioxide ($WO_3$) ----- 6.06%

"Athens ExT"

Silver (Ag) ---------- 1.65 oz/ton --- $1.49/ton
Lead (Pb) ---------- 2.75%
Tungsten Trioxide ($WO_3$) --- None

"Shallow Discovery Shaft
Eastern B oundry Nephi"

Silver, (Ag) --------- 14.22 ozs/ton -- $12.87/ton
Copper (Cu) ---------- 4.25%

"20 ft. Shaft on the Nephi"

Silver, (Ag) --------- 24.66 ozs/ton -- $22.32/ton
Copper (Cu) ---------- 12.66%

"D No. 2 Sample from Northwestern"

Silver (Ag) --------- 0.42 oz/ton -- $0.38/ton
Tungsten Trioxide ($WO_3$) ----- Trace

-continued

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Colto, California

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

"THE LUETTA LODE CLAIM"

The luetta Lode Claim is a new location and adjoins the Hard Cash Claim on the Westerly end. This claim was recently discovered to hold deposits of Tungston. Discovery work in progress at present. Located in Sec 31, T14N R16E. S.B.M. Elevation 6950 feet. Access is by pack trail only.

An extensive sampleing program conducted over the 21 claims shows the following results. (By Claims.)

| | | |
|---|---|---|
| The Hard Cash Ext Claim. Sample Group No.1, 23 cuts average. | Silver ozs per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper% | 1.00 |
| | Zinc% | 1.7 |
| The Athens Ext Claim. Sample Group No.2, 9 cuts average. | Silver | 4.04 |
| | Lead% | 4.01 |
| | Copper% | 1.6 |
| | No zinc run | |
| The Athens Claim. Sample group No.3,9 cuts average. | Silver | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No zinc run. | |
| The Miami Claim. Sample group No.4, 5 cuts averaged. | Silver | 3.22 |
| | Lead % | 1.1 |
| | Copper % | 1.12 |
| | No zinc run. | |
| The Morning Star Claim. Sample group No, 6. 10 cuts av. | Silver | 9.6 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No zinc run. | |
| This group an average over all by Union Assayers. Smelter Sample. Salt Lake. | Silver | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | Zinc % | 2.3 |
| This group an average over all by Union Asseyers Smelter Sample. Selby. | Silver | 5.8 |
| | Lead % | 4.2 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Tungston assays have been kept seperate in as much as most samples were taken on seperate veins. The above samples were taken on veins not less than 5 feet in width. While most Tungston samples have been cut on smaller veins rangeing in width fron 18 inches to 16 feet.

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927 Palm Drive
Colton, California

The following is a tabluation of Tungston Assays. It will be noticed that the Tungston area immediatly surronds the Hard Cash Claim. All the veins exposed seem to fan out in various directions from the main tunnel vein of the Hard Cash.

Tungston sampleing by claims.

Sample No,1.
This sample cut just easterly of the S.E.end line of the Hard Cash.
Tungston Trioxide 0.60 %
Sample No,2.
This sample cut on the southerly line of the Hard Cash.
Tungston Trioxide 0.63 %
Sample No,3.
This Sample cut on the Henshaw southerly of the Hard Cash.
Tungston Trioxide, 0.16 %
Sample No,4.
This sample cut on the Athens Ext Southerly of the Hard Cash.
Tungston Trioxide, 0.70 %
Sample No,5.
This sample cut on the main level Hard Cash Claim.
Tungston Trioxide, 1.68 %
Sample No,6.
This sample cut 20 feet below the main level Hard Cash.
Tungston Trioxide, 1.80 %
Sample No,7.
This sample cut on small 20 inch vein S easterly of the Hard Cash.
Tungston Trioxide, 18.62 %

Careful check has disclosed that all veins found to carry Tungston are tending to Strike so that they will terminate on the Hard Cash. The dip also is favorable for the same.

It is recomended that a sinking program be adopted and that this be done on or near the contact on the Hard Cash Claim. A two compartment shaft to a depth of two hunderd feet I feel will disclose a profitable deposit of good grade milling ore.

The Geological formation of the country is fovorable. All sampleing and ledge inclination is promiseing to warrent an exploration program.

Combination assays are as follows.

| | | |
|---|---|---|
| By Claims; | | |
| Henshaw Claim, | Silver | 2.92 |
| | Lead | 2.12 |
| | Tungston Tri | 6.06 |
| Nephi Claim, | Silver | 14.22 |
| | Lead | 1.11 |
| | Copper | 4.25 |
| Northwestern, | Silver | 22.66 |
| | Copper | 12.60 |
| | Lead | none |

These samples are all surface cut.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, Calif.

IN CONCLUSION:

It has been said by many,and is here repeated, that the Giant Ledge Mine is very favorable. The Granit Lime Contact strikes South Easterly and North Westerly with a dip westerly. This is a good indication that ore's will displace the Granits formeing large deposits. Indeed the numerous veins exposed in this area are of such importance that the writer can not recomend a more favorable spot for exploration. One cannot but be most impressed by the high grade stringer found on the Hard Cash. Granted, that a very limited amount of work has been done. The dip and strike of all veins in the suronding claims tend to center in one junction. It is entirely likely that a wisely directed devlopment will disclose further such shoots of ore and there value increased.

It is a significant fact to ponder that the original discoveries on surface showing in the area are very favorable for further underground exploration. Occurances of this kind in this region are to be respected and not lost sight of.

Recomendations;

The writer recomends that a sinking program be conducted on the Hard Cash, keeping an eye on the contact at all times. The two compartment shaft should be sunk to the 100 feet level before any effort to feel out the contact is made. If this is found favorable the work should continue another 100 feet where if advisable a dimond drilling program should prove the existing values at that depth. This type shaft can be slabbed off to a larger size if needed at a later date at a minimum cost.

Diamond drilling should proceed any mineing effort whether it be drifting or stopeing. This type program has been proven to be the most profitable in many instances.

This report is respectfully submitted for the Giant Ledge & Copper Co,Inc.

This 25th day of Sept 1951.

Signed Robert J. Ingalls
J.Robert Ingalls E.M.& G.

[illegible]
[illegible]
[illegible]

Form MF-103
(April 1951)

U.S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 21188

Date received 10-25-51

Participation

RECEIVED
OCT 2 1951
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

Giant Ledge Lead and Copper Company
927 Palm Drive
Colton, California

Name and address of applicant

Date October 9, 1951

FILL IN THIS BLOCK

Date of application October 9, 1951

Estimated cost $100,000

Mineral or metal tungsten, copper, lead & zinc

Percentage of Government participation 75 %

Location of mine New York Mining District

Date of filing MF-100 June 25, 1951

DMA Docket Number, if available unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

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

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

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

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

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

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

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

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

*16. History:

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

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

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

*17. Production:

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

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

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

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

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

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

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

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

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

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

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

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

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

## CERTIFICATION

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

Giant Ledge Lead & Copper Co., Inc.
(Name of company)

By [signature]
(Signature of authorized official)

October 9, 1951
(Date)

Secretary-Treasurer
(Title)

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

*Same as footnote on page 1.

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

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

APPLICANT

GIANT LEDGE LEAD & COPPER COMPANY,
927 Palm Drive
Colton, California

1. The applicant is a corporation.

2. Not applicable.

3. Gerald V. Anderson - President, 608 East C Street, Colton, Calif.
Leo J. Speirs - - - Vice President, 696 East C Street, Colton, Calif.
Edward E. Wilhite - Secretary, 927 Palm Drive, Colton, Calif.
Donald E. Wilhite - Assistant Secretary, 1608 Sheridan Ave., San Bernardino, Calif.

Daniel Anderson - - Director, 848 Palm Drive, Colton, Calif.
Duene S. Carr - - - Director, 1194 Bonita Dr., Colton, Calif.
Reagan Thompson - - Director, 1207 West 2nd Street, San Bernardino, Calif.
Stewart W. Thorley - Director, 644 East C Street, Colton, Calif.
Robert J. Ingalls - Director, 820 Orange Grove Ave., Colton, Calif.
Samuel A. Barnes - - Director, 840 West G Street, Colton, Calif.

Melbern J. Robinson- Stockholder, Edwards Air Force Base, Muroc, Calif.
Edward F. Sells - - Stockholder, 1296 Holly Dr., Colton, Calif.
Clyde Bowlen - - - - Stockholder, 1262 Mt. Vernon Ave., Colton, Calif.
Martin Harris - - - Stockholder, 608 East C Street, Colton, Calif.
Molly Ivey - - - - - Stockholder, 869 West G Street, Colton, Calif.
Henry T. Harber- - - Stockholder, George Air Force Base, Victorville, Calif.
William J. Johnston- Stockholder, 422 7th St., Victorville, Calif.

4. (a) Gerald V. Anderson - General business experience.
(b) Robert J. Ingalls - Engineer of Mines and Geology. Thirty-five years experience.

5. Owners.

6. Incumbrence at present is $3,500 balance on the purchase.

7. Not applicable.

8. See answer No. 24.

9. $20,000. Yes.

10. (a) Description of the property is under Survey No. 3985 which consists of four patented claims and eleven additional claims now being held by location by the present owners. Total property being described is as follows: No. 1. Hard Cash Lode Claim; No. 2. Athens Lode Claim; No. 3. Morning Star Lode Claim; No. 4. Miami Lode Claim; No. 5. Menlow Lode Claim: No. 6. North Star Lode Claim; No. 7 Henshaw Lode Claim; No. 8. Athens Extension Lode Claim; No. 9. Hard Cash Extension Lode Claim; No. 10. North Western Lode Claim; No. 11. Evening Star Lode Claim; No. 12. Magmaw Lode Claim; No. 13. Nephi Lode Claim; No. 14. Maybell Lode Claim; No. 15. Grace Lode Claim.

(b) Hard Cash Lode Claim located in Section 31, Township 14 North, Range 16 East, San Bernardino Meridian is a patented claim. The Nephi Lode Claim in Section 31 and 32 is an unpatented claim. These two claims are where exploration program is planned.

11. The present name is: Giant Ledge Lead and Copper Co. Inc.; Formerly know as: The Giant Ledge Gold and Copper Co.; Also know as: The Athens Group.

12. Located 23 miles South of Ivanpah, a railroad shipping point on the Union Pacific Railroad. Gravel surface County maintained road. Also intersection with U.S. Highway 66 and points East or West. 14 miles Northerly from Ivanpah, the County maintained gravel road intersects with U.S. Highway 91 to points North or West.

13. Contact making live water in three places. Anticline formation indicates ample subterranean flow with little development. Two live springs available at present for domestic use. It is sufficient.

14. Three bunk houses, one combination kitchen and dining room, one D C 7 bulldozer, two 210 air compressors and miscellaneous pipe and trackage material.

15. Plan milling operations on or near property. For shipping, trucks will be used to freight ore to Pine Creek Mill, Inyo County, California.

16. (a) The property was opened up in 1898 for a Gold, Lead and Silver property.

(b) Adjoining on the East is the Sagamore. This mine had at one time a 10 stamp mill for the reduction and recovery of Lead, Silver and Gold ore. It is now dismantled but being reopened as a Tungsten mine.

(c) An extensive sampling program of all locations where ledges in place are exposed shows the following results:

| | | |
|---|---|---|
| Sample group No. 1 This sample is an average of 23 cuts and shows the following results: HARD CASH EXTENSION. | Silver ounces per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper % | 1.00 |
| | Zinc % | 1.7 |
| Sample group No. 2. This sample is an average of 9 cuts and shows the following results; ATHENS EXTENSION. | Silver ounces per ton | 4.04 |
| | Lead % | 4.1 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 3. This sample is an average of 5 cuts and shows the following results: ATHENS | Silver ounces per ton | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No Zinc run. | |
| Sample group No. 4 This sample is an average of 5 cuts and shows the following results: MIAMI. | Silver ounces per ton | 3.22 |
| | Lead % | 1.2 |
| | Copper % | 1.1 |
| | No Zinc run. | |
| Sample group No. 5. This sample is an average of 10 cuts and shows the following results: MORNING STAR. | Silver ounces per ton | 10.22 |
| | Lead % | 9.6 |
| | Copper % | 3.4 |
| | No Zinc run. | |
| Sample group No. 6. This sample is an average of 5 cuts and shows the following results: NORTH WESTERN. | Silver ounces per ton | 3.9 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 7. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | No Zinc run. | |
| Sample group No. 8. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Two qualitative analysis have been run on the afore mentioned sample group. These show the following results:

Silicon - - - - - - - - - - - - - - -
Calcium - - - - - - - - - - - - - - -
} Main Constituents.

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17. Not in production at present. Plan #2 milling.

18. (a) A contact vein with a South Easterly North Westerly Strike dipping 82 deg. Westerly. Cross fractures are numerous on Hard Cash Lode Claim at the principal point of exposure.

    (b) Maps and assays inclosed.

    (c) No reserves at present.

19. Discovery of Tungsten in paying quantities has prompted a rearrangement of former plans to mine and mill Copper, Lead, Silver and Zinc.

20. Tungsten primarily, Copper, Lead, Silver and Zinc secondary on a Lime Granite contact vein.

21. Propose to sink two exploration shafts. First: The Hard Cash shaft, approximately six months. Second: The Nephi shaft and the access road approximately six months. Present plans are to carry on the two exploration projects simultaneously.

22. Refer to engineering report. Also enclosed geological maps.

23. (a) Labor: 4 miners @ $65.00 per week.
    (b) 1 shift foreman @ $125.00 per week.
        1 camp foreman @ $100.00 per week.
    (c) Upkeep and maintainance: $6,000.00
    (d) $20,000.00
    (e) $20,000.00
    (f) None
    (g) $40.00 per day for two 210 compressors, one 7D Caterpillar Bulldozer, two 4-wheel drive H.D. Trucks.
    (h) $2,000.00. Small mine supplies.
    (i) Fuel for small equipment-$75.00 daily. Powder caps and fuses-$80.00 daily.

24. Will estimate 4 men making 2½ feet per day and including all timbering - 6 months. Should complete exploration shaft to the 200 foot level by basing it on 2 days to complete each 5 foot set.

    Each 5 foot set will take the following:

    $56 in wages.
    $90 for timber.
    $100 for miscellaneous equipment.

    This cost will be multiplied by 40 as there will be 40 five foot sets. It is planned at this point to institute diamond drilling program.

GIANT LEDGE LEAD & COPPER COMPANY
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Colton, California

"REPORT ON THE GIANT LEDGE MINE"
Submitted July 11, 1951.

HISTORY OF THE AREA;

For many years the Ivanpah Barnwell area has been noted for it's part in the production of metals, namely, Copper, Silver, Lead and Gold. Our early records show the activity that once centered in this locality. Barnwell, once a busy town of two to three thousand inhabitants, lies dormant, only a memory to a few of the old timers who can recall the days when mule teams were relied upon. Later the T.T.&.W.R.R. conected the area with the outside world. To others who have came since, only the name of a barren spot on the desertis evidence of past activity of this once active mining center. A few miles northward the Searchlight area was active and is reputed to have produced millions in gold. Like the rest of this vast mineral belt it too is slightly more than a memory.

The pressure of years and monitary changes have left their mark. The rarer metals have been in some cases worked out and in others, economic changes forced shutdowns, to the extent that until recently little or no mining of any consequence has been going on. Now with the discovery of rare metals of various kinds and new improved methods of refining and extraction, the Barnwell Ivanpah Searchlight areas are looking forward to a new boom in the mining industry. Thousands of tons of material mined as waste by the early seekers of Gold and Silver, lies leeching on dumps waiting for this new era and an industry that demands just such elements as are found in plenty in this locality. When the branch line rail road that served the area suspended operation the problems of mines in this local were increased. Long hawls by mules and later trucks, over, in many cases, unimproved roads made such increased demands on the operator that in many cases if not all, suspended operations.

Special attention is called to the New York Range. This range is a veritable storehouse of strategic metals, although complex in occurence it holds in it's canyons and hills Lead, Zinc, Silver, Copper, Gold, and last but by no wise the least , strong deposits of tungsten ores have lately been discovered. With present improved methods of recovery this locality can and will see the so called boom days again and soon. From the Tacopa Goodsprings area southeasterly there occurs numerous contacts in the limes, all carrying some showing of mineral and many have proven valuable in as much as there are some very productive mines along the lime reef

The Clark Mtn area has recently made important discoveries of rare earths that will meet critical demands. The Ivanpah Mtns further southeast also have long been known to hold many deposits of both Copper, Lead and Zinc. Then on further southeast the New Yorks are now in the process of proving their wealth in needed metals. The Ivanpah Barnwell and Cima triangle form a mineral deposit that extends as far south as the Goffs basin.

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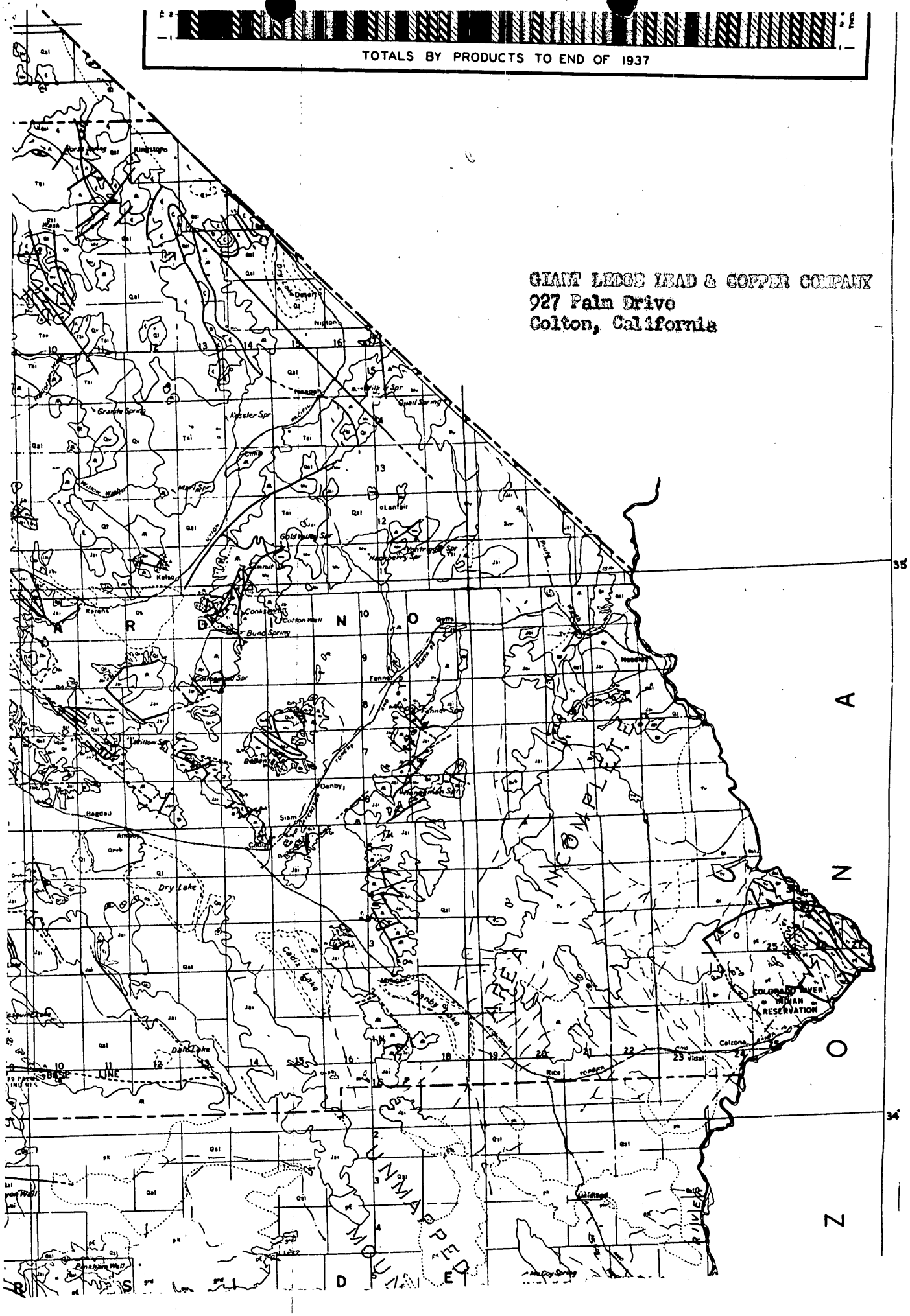
TOTALS BY PRODUCTS TO END OF 1937



"GENERAL GEOLOGY & TOPOGRAPHY"

While the country as a whole is of Granit Base, to the Northeast, we find strong showings of Tertiary or New Granits. While to the East we have some Jurassic Acid Intrusives. South of these, Terrace deposits are in evidence with a showing of Camberian Marine Sediments. These sediments extending westerly and contacting with Miocene Volcanics. West of these, the terrain is largely Alluvium.

The surronding country is arid and Joshua trees with light sage and Greeswood prevails. Grazeing in the area is extensive and water is plentiful by development. Small Penion Pine is found above the 4.000 ft level with considerable Juniper. The climate is mild and ideal working condtions prevail most of the year. Many live springs are found above the 4.000 foot and fine cold water is available for most domestic uses. Cattle ranching and mining are the most prevalent and constitute the the industry of the locality.

The area is served by the A.T.&.S.F.R.R., to the south some 25 miles and to the North 21 miles distant by the U.P.R.R. which runs along the North base of the New York Range. Loading accomadations are at both Goffs and Ivanpah, much ore of various kinds being shipped from Ivanpah.

"SPECIFIC GEOLOGY OF THE GIANT LEDGE"

The Giant Ledge consists of a Porphry Lime contact to the north this giveing way to Granit Lime contact about midway the Hard Cash Claim. There are numerous surface falts and minor Granit intrusions into the Limes are frequent. Some of the oldest exposures being Quartzites and so-called Mafics. Notable is the absence of any basement complex of Volcanics so often found in the Pre-Cambrian. Paralleling the contact, are numerous veins back in the Limes at various depths. Indications are that depth on the true contact will open up extensive ore bodies as well located veins are all dipping strongly in that direction. On the Hard Cash Claim the vein is prominent; and devided between the Granit Lime contact to the south and the Porphry Lime contact to the North. At the south line of this claim the vein leaves the contact and occurs more Easterly in the Limes. No depth has been made on the contact and most of the workings consist of tunnel operations. There are live springs both above and below the mine and indications are that water will be encountered with little depth. A cross fracture occurs on the Hard Cash and there is exposed on the surface a strong vein of Lead Silver and Copper carrying 1.75% Tungston Trioxide. A strong vein also a cross fracture parallels this vein to the north 165 ft that shows very promiseing in Hubernite. Most of the ore on the Hard Cash is basic Florite carrying Copper, Lead, Silver and tungston. Extensive sampleing is being done and results will appear later in this report.

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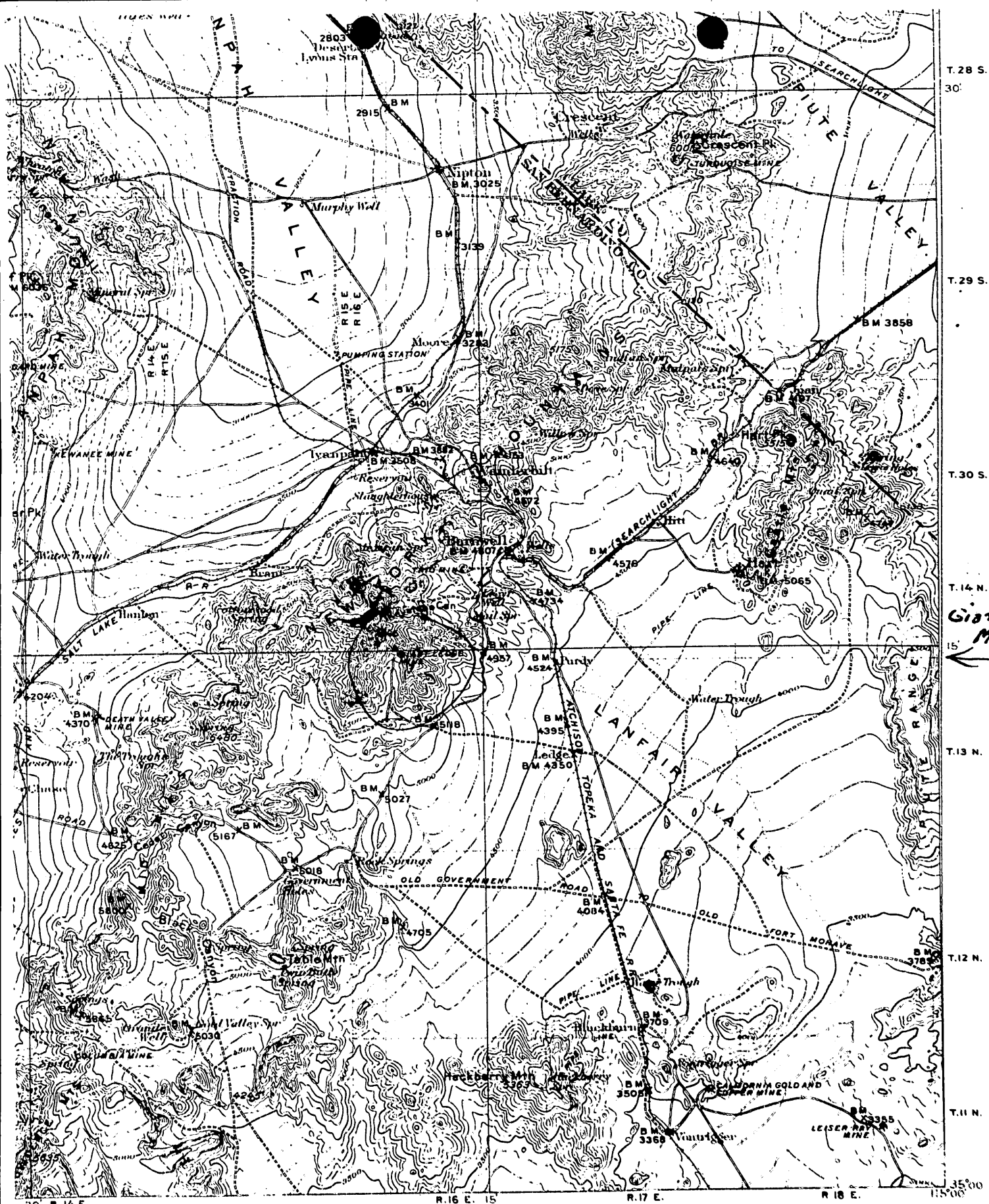


Edition of June 1912, reprinted 1941

Polyconic projection, North American datum

1 in. = 2 miles

4 0 4 8 10 Miles

4 0 4 8 10 Kilometers

Contour interval 100 feet, mean sea level.

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Map of the Goodsprings quadrangle, scale 1:62,500, contour interval 50 feet, from a later and more detailed survey of the area adjacent to Goodsprings, is available.

CALIF-NEV
IVANPAH

N3500—W11500/60

"DESCRIPTION AND DEVLOPMENT"

The Giant Ledge consists of four patented claims and 17 others that are being held by location by the present owners. At an average elevation of 6.500 ft, the patented claims are the Hard Cash, Athens, Morning Star and Miami. The claims being held by location are the Hard Cash Ext, Athens Ext, Nephi, Henshaw, Northwestern, Maybell, Evening Star, North Star, Grace, Magmaw, Menlow, Sharlett, Virginia, Luetta, Terrace, Resign and Last Chance.

"THE MIAMI LODE CLAIM"
(Apatented claim)

The Miami claim is patented under survey No3985, work on this claim consists of an open cut thirty feet long exposeing a 22 inch vein of Copper Silver ore. Strike East 7 deg, South with a dip 87 deg South.

This small stringer is an offshoot fracture running in an easterly direction from the contact. Just west of this open cut a shaft has been sunk to an estimated depth of 90 feet on the vein, showing is good at collar, further inspection made impossible by there being no timber in place. Numerous open cuts prove this vein to be contenious across the width of the claim. Access to this is by pack trail only.

"THE MORNING STAR LODE CLAIM"
(A patented claim)

The Morning Star Lode Claim is patented under survey No.3985. Work on this clain consists of a cross cut tunnel driven easterly in the Limes, showing vein in place. This vein carries Copper, Lead and Silver. Thirty eight assays have been cut over this claim in various exposiers showing 1.7% Copper, 11 ozs Silver. South of the portal of the crosscut 28 feet a shaft has been sunk 75 feet down. Showing here is very promiseing at collar, further inspection at this time made impossible by lack of ladder ways. The only access to this claim is by pack trail. Elevation 6.052 feet.

"THE ATHENS LODE CLAIM"
(A patented claim)

The Athens Lode Claim is patented under survey No,3985. This claim has a large amount of exploration work, there being three levels opened up along the mountain slope, all with considerable footage. Crosscut tunnels have been pulled? easterly into the limes to various depths. The first, or summit level consists of a tunnel driven North 16 deg East for some 75 feet on a strong vein three to four feet in width. Back 60 feet from the portal a small feeder? vein intersects the main vein and heads North 38 deg East. This feeder has been followed for a distance of forty feet. A winz has been sunk at the intersection to an estimated depth of 65 feet and the vein is strong at collar. Assays here show 9% Copper and 23 ozs in Silver. Below this workings and 70 feet north another crosscut has been pulled? apparently to intersect the vein above but for some reason work was suspended before makeing the contact.

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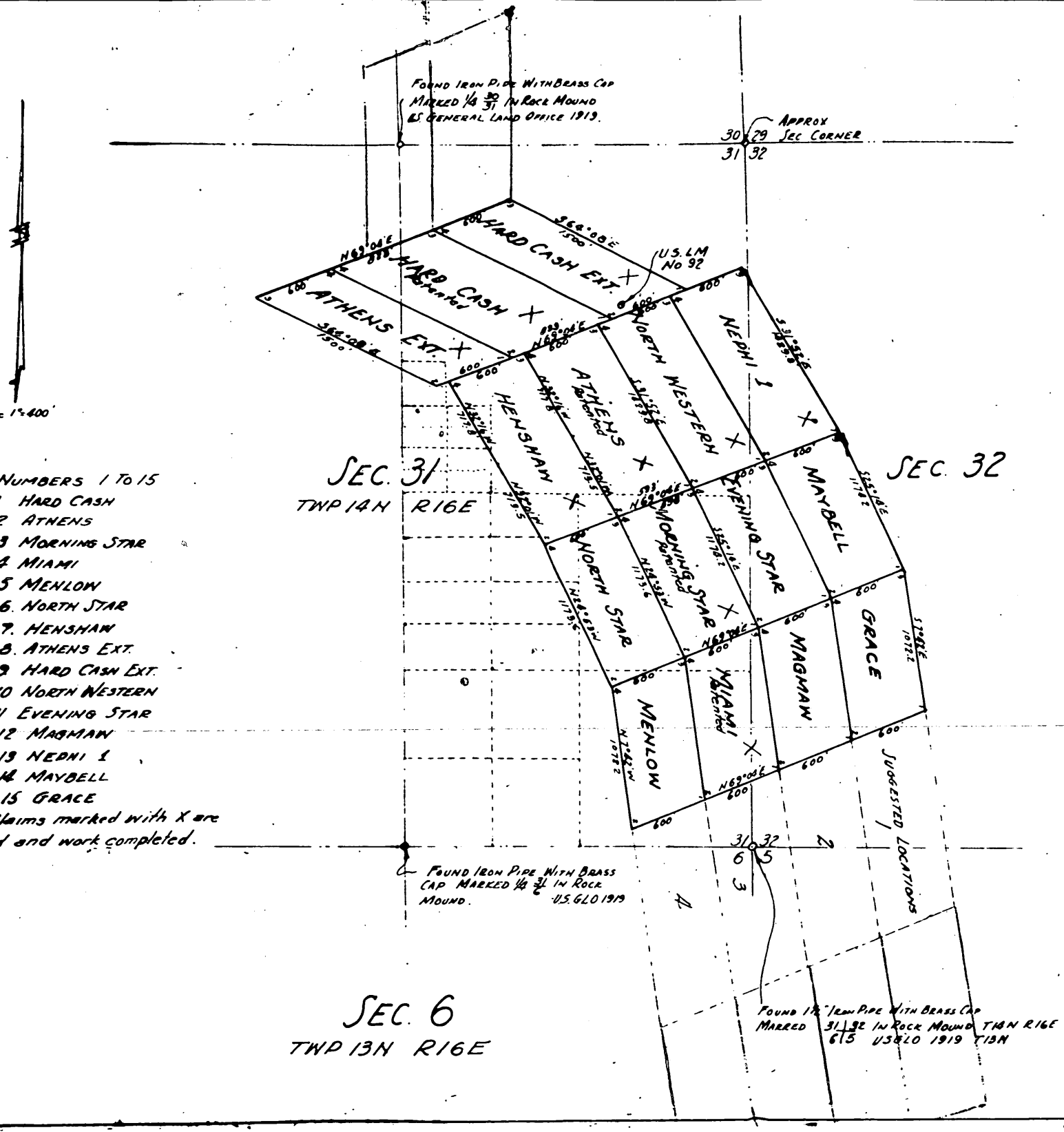


CLAIM NUMBERS 1 TO 15

No. 1 HARD CASH
No. 2 ATHENS
No. 3 MORNING STAR
No. 4 MIAMI
No. 5 MENLOW
No. 6. NORTH STAR
No. 7. HENSHAW
No. 8. ATHENS EXT.
No. 9 HARD CASH EXT.
No. 10 NORTH WESTERN
No. 11 EVENING STAR
No. 12 MAGMAN
No. 13 NEPHI 1
No. 14 MAYBELL
No. 15 GRACE

NOTE. Claims marked with X are located and work completed.

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Robert J. Ingalls

"THE ATHENS LODE CLAIM CON'T"

Directly below these workings down the mountain side 120 feet below another tunnel has been pulled, this tunnel portals in the Limes and crosscuts easterly 320 feet. This tunnel has four side cross-cuts,all seem to be following small unimportant stringers. Below this another 145 feet and portaled in the Granit, another cross-cut tunnel has been pulled. Reports are that this tunnel goes back 1.200?feet to cut the vein that occurs on the summit.This tunnel being badly caved back 645 feet from the portal inspection impossible at this time. Northerly of this portal 240 feet and 70 feet higher up another tunnel has been pulled to a depth of 365 feet. Strong veins of Copper and Zinc are cut in this workings, assays taken here show 2.7% Copper, 12% Zinc and 11 ozs Silver. No sinking has been done at any level. Access is by pack trail only. Elevation 6.110 feet.

"THE HARD CASH LODE CLAIM"
(A patented claim)

The Hard Cash Lode claim is a patented claim Under survey No,3985. This claim also has a great deal of work and is accessible by a road to the foot of the dump of the main workings. In this work a tunnel has been pulled easterly back 380 feet. An incline raise has been pulled back 110 feet from the portal. This raise conects with an upper level 90 feet above. The lower drift is collared in ore and this ore deposit continues back and ends just short of the raise. The raise inclines 67 deg south and cuts ore 7 feet above the lower drift, topping in ore on the upper level. Back 40 feet from the main portal a crosscut drift has been pulled southerly. This crosscut goes ba ck 129 feet running somewhat in the shape of a harse shoe. It starts southerly for 40 feet, here it turns easterly 60 feet, then North-easterly for another 60 feet, ore was encountered at the portal and all of this crosscut is in solid ore.? The ledge of ore cut at the portal strikes North 38 deg East, with a dip South 77 deg. It can readily be seen that this is a cross fracture vein Easterly from the contact. Ledge matter from this vein is exposed on the surface Easterly for a distance of 750 feet. Numerous open cuts and shallow holes prove comercial ore over the total distance stated.? The width tapering from 65 feet at the junction of the contact to 12 feet on the Easterly exposier. At the top of the raise from the main level a drift runs south for a distance of 16 feet. Also the portal drift runs westerly 40 feet to collar?in ore. North of this portal another tunnel has been pulled 60 feet Easterly along the vein. This tunnel collars?in ore and ends in ore. A shaft just to the right of this tunnel goes down and conects with the lower level 90 feet below. All workings on this claim are in good mill ore? except a continued exploration tunnel that continues on back from the No 1 raise some 200 feet. The foot or Northerly wall has been exposed in one place back 90 feet from the main tunnel portal. North of the main tunnel portal and 65 feet away an incline shaft has been sunk, This shaft goes down 35 feet inclineing 70 deg Easterly. At the bottom a short drift has been pulled southerly 15 feet,

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"HARD CASH CLAIM CON'T"

this drift opens out into an under ground stope. Ore has been mined here over an area 40 feet Easterly and Westerly by 12 feet southerly and Northerly, with backs 8 feet. In length this stope runs North 33 deg East along the strike of the vein slightly cross cutting the vein matter. Around the hill southerly from the main Tunnel some 900 feet a shaft has been sunk down 38 feet on a vein of high grade ore. This vein is 20 inches in width and has a strike of East 7deg North with a dip 89 deg south. This quartz vein carries 9% Tungston Trioxide, in the form of Sohlite and Wolfermite. Below this shaft and 28 feet westerly a tunnel goes in and cuts the vein. Samples from this tunnel assay 18.62% Tungston Trioxide with little or no Lead or Copper. Reports are that two car load shipments were mwde from the Hard Cash claim that run $44.26 and $61.52 resp; However no confirmation ofthese reports is available. There is a large dump of an estimated 5.000 tons that assays 1.10% Tungston Trioxide. Other dumps range from $26.00 to $40.55 in Lead, Copper, Zinc and Silver. Overall average shows 1.75% Copper; These four patented claims all are located in Sec 31, T14N R16E, S.B.M. At an elevation average 6.500 feet.

The claims now being held by location are described as follows.

"THE NORTH STAR LODE CLAIM"
(Not Patented)

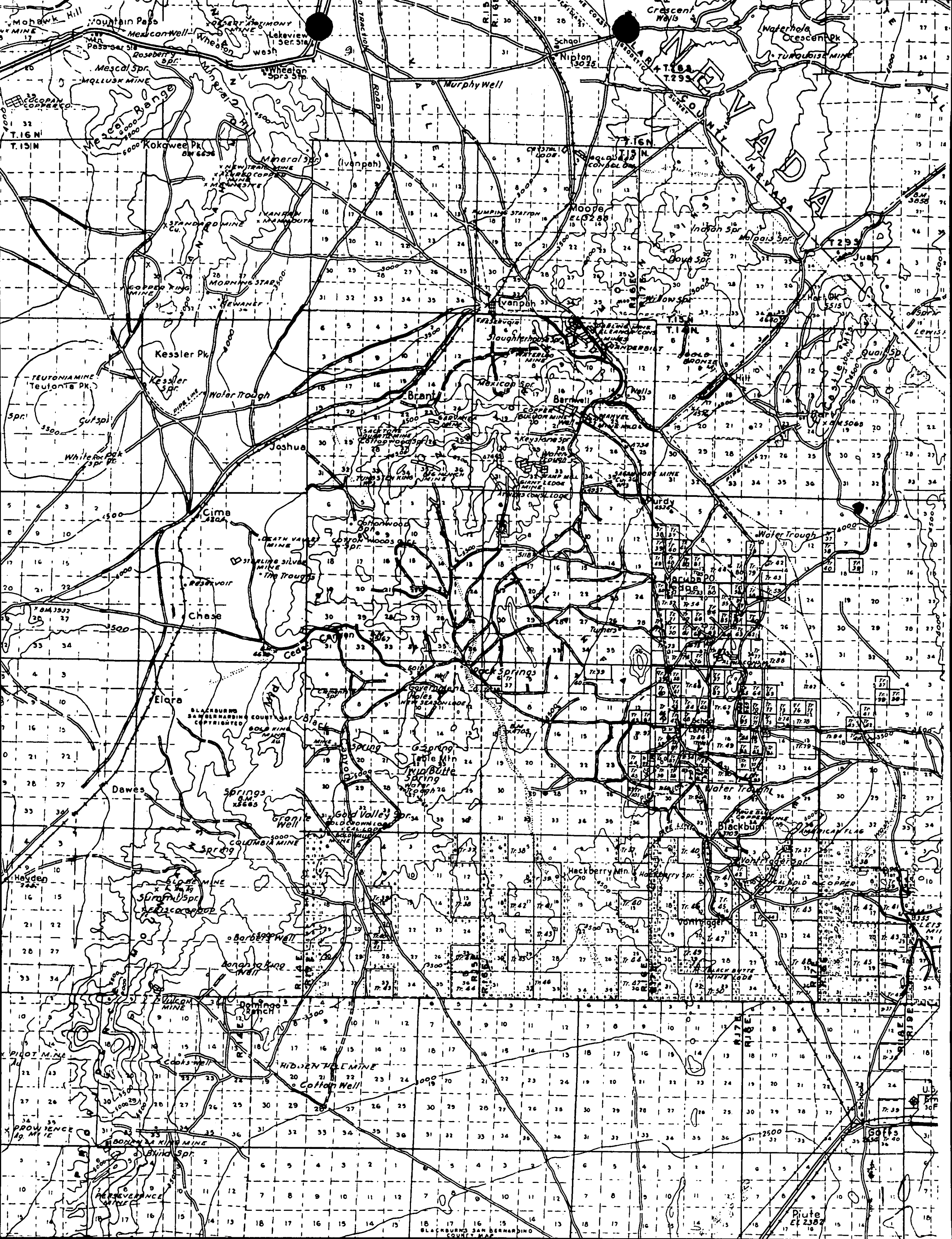
The North Star Lode Claim is on a parallel vein of quartz occuring in a Granit intrusion Easterly of the Lime Granit contact. A good showing of Silver, Tungston and Lead. Discovery work is in the form of an open cut. This claim parallels the Morning Star on the Westerly side in Sec 31, T14N R16E. At an elevation of 5.900 feet. Access is by pack trail only.

"THE GRACE LODE CLAIM"
(Not patented)

The Grace Lode Claim adjoines the Maybell on the Southerly end and parallels the Magmaw, joining the Magmaw on the Easterly side line. This claim is a new location and discovery work is in progress on a good showing of Copper at this time. Located in Sec 32 T14N R 16E S.B.M. Elevation 5.600 feet. Access by pack trail only.

"THE MAGMAW LODE CLAIM"
(Not patented)

The Magmaw Lode Claim adjoines the Grace on the Easterly side line and the Miami on the Westerly side line. Lying and being between the two claims. Work is in progress on the continuation of vein that is exposed on the Evening Star. Some showing of Copper, Silver and Lead. No assays out. In Sec 32 T14N R16E. S.B.M. Elevation 5.700 feet. Access is by pack trail only.



Mohawk Hill
Mountain Pass
Mexican Well
Wheaton
Lakeview Ser. Sta.
Mtn Pass Ser. Sta
Roseberry Spr.
Wheaton wash
Wheaton Sprs Sta.
Mescal Spr.
MOLLUSK MINE
COCOPAH COPPER CO.
Mescal Range
Mineral Hill
Murphy Well
ROAD
School
Nipton 3025
Crescent Wells
Waterhole
Crescent Pk
TURQUOISE MINE
CLARK COUNTY
NEVADA
T.28S
T.29S
T.16N
T.15N
Kokowee Pk.
BM 6656
Mineral Spr.
(Ivanpah)
NEW TRAIL MINE
ALURED COPPER MINE
MAGNESITE
STANDARD MINE Cu.
IVANPAH MAMMOUTH
PUMPING STATION
Moore EL 3288
CRYSTAL LODE
GOLD BAR CONSOL OIL
Indian Spr.
Malpais Spr.
Dove Spr.
Willow Spr.
T29S
Juan
B.M. 3858
Hart Pk 5515
COPPER KING MINE
MORNING STAR
HEWANEE
Ivanpah
RESERVOIR
Slaughterhouse Spr.
VANDERBILT
WATERLOO MINE
T.15N
T.14N
GOLD BRONZE MINE
Hill
Castle Mts
Quail Sp
Lewis
Kessler Pk.
TEUTONIA MINE
Teutonia Pk.
Kessler Spr.
Water Trough
PIPE LINE
Gut Spr.
Spr.
White Rock Spr.
Brant
Mexican Spr.
Barnwell
Wells
GARVANZA MINE
COPPER BULLION MINE
MANVEL
Hart
BM 5068
SACKTONE QUARTZ MINE
Cottonwood Spr.
Keystone Spr.
Water Trough
Joshua
TUNGSTEN KING
BIG MUNCH MINE
STAMP MILL
GIANT LEDGE MINE
ATHENS CONS'L LODE
SAGAMORE MINE
Purdy 4536
PIPE LINE
Cima 4204
DEATH VALLEY MINE
Cottonwood Spr.
COTTON WOODS GULCH Spr.
STERLING SILVER MINE
The Troughs
Reservoir
Water Trough
Maruba P.O.
Ledge
Chase
BM 3932
Cedar Canyon
BM 5067
Turners
Rock Springs
Government Holes
NEW SEASON LODE
Elora
BLACKBURNS SAN BERNARDINO COUNTY MAP COPYRIGHTED
GOLD KING MINE Au
Black Canyon
Mid Hills
Spring
Table Mtn
Twin Butte Spring
Water Trough
School
Carrol
Water Trough
Dawes
Springs B.M. x5665
Granite Well
Gold Valley Spr.
GOLD CROWN LODE
COLUMBIA MINE
Spring
TRUE BLUE COPPER MINE
Blackburn 3709
AMERICAN FLAG
Hayden
GLOBE MINE
Summit Spr.
FRISCO GROUP
Hackberry Mtn.
Hackberry Spr.
Vontrigger Spr.
CAL GOLD & COPPER MINE
Vontrigger
Barber's Well
Bonanza King Well
BLACK BUTTE MINE LODE
VULCAN MINE
Domingo Ranch
R.14E
R.15E
R.16E
R.17E
R.18E
PILOT MINE
Cook's Well
HIDDEN HILL MINE
Cotton Well
PROVIDENCE Ag. MINE
BONANZA KING MINE
Blind Spr.
PERSEVERANCE MINE
School
U.S. Em.
Goffs
Piute EL 2382
BLACKBURNS SAN BERNARDINO COUNTY MAP

"THE HARD CASH EXT LODE CLAIM"
(Not a patented claim)

The Hard Cash Ext Lode Claim paralles the Hard Cash claim on the Northerly side line. A 6 foot vein of quartz witha strike South 70deg East has been opened up and at present assay results are not in. Located in Sec 31 T14N R16E S.B.M. At an elevation of 6956 feet. Access is by pack trail only.

"THE HENSHAW LODE CLAIM"
(Not patented)

The Henshaw claim parallels the Athens on the Westerly side line. A Lime stringer has been opened up and at present is makeing 500 gals of water daily. It is planed to devlope this for domestic use. At an elevation of 5800 feet, In Sec 31 T14N R16E.S.B.M. Access by pack trail only.

"THE NEPHI LODE CLAIM"
(Not patented)

The Nephi Lode Claim is the most Northeast claim in the Giant Ledge group. This claim has a very strong showing of Copper Silver ore assaying 12.66 Copper and 24.69 ozs Silver. A prospect shaft has been sunk to a depth of 18 ft and the showing is very good at this writeing. Width of the vein as yet undetermined, this vein is a cross fracture vein with a strike North 76 deg East, dip 82 deg South. Elevation 6500 feet, in Sec 31 and 32 T14N R16E S.B.M. Access by pack trail only.

"THE NORTHWESTERN LODE CLAIM"
(Not patented)

The Northwestern Lode Claim parallels the Athens on the Westrly side line, lying and being between the Athens and the Nephi,claims. Work in progress at this time. A strong showing of green Epidote carrying 1.67% Tungston Trioxide.? The vein strikes almost true Southeast and Northwest. In Sec 31 T14N R16E.S.B.M. Elevation 6900 feet. Access by pack trail only.

"THE MAYBELL LODE CLAIM"
(Not patented)

The Maybell Lode Claim Is a new location, discovery work now in progress. No assay cut at this time the vein not completly exposed. A good showing with true wall slip.? Located in Sec 32 T14N R16E S.B.M. Elevation 5800 feet,access by pack trail only.

"THE ATHENS EXT LODE CLAIM"
(Not patented)

The Athens Ext Lode Claim parallels the Hard Cash on the southerly side line. A strong vein of Florite occurs along a Granit intrusion with a Lime foot wall. Strike south 38 deg East with a dip 65 deg East. This vein is a complex ore carrying Tungston Trioxide 2.16%,? Lead 6.4%, 6.01% Zinc. An old caved tunnel is being reopened at this time. The ? width of the vein indication is that a strong deposit exists. 12 feet of ore in sight at portal. In Sec 31 T 14N R16E S.B.M. Elevation 5900 feet, access by pack trail only.

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"THE MENLOW LODE CLAIM"
(Not Patented)

The Menlow Lode Claim parallels the Miami Claim Adjoining this claim on the westerly side line. This is a new location. Open cut work in progress at present. No assays as yet. Located in Sec 31 T 14N R16E, S.B.M. Elevation 5600 feet Access by pack trail only.

"THE SHARLETT LODE CLAIM"
(Not patented)

The Sharlett Lode Claim is a new location, Being the Southeast most claim of the Giant Ledge Group. This claim is a new location and no vein in place exposed at this writeing. Elevation 5300 feet, located in Sec 32 and 5 T14N R16E, S.B.M. Access is by pack trail only.

"THE VIRGENIA LODE CLAIM"
(Not patented)

The Virgenia Lode Claim is a new location, lying paralled to the Sharlett and adjoining that claim on the Westerly side. and adjoining the Terrace Lode claim on the Westerly side line. Open cut work now in progress no samples cut at this time. Located in Sec 32 and 5 T 14N 16E and T 13N and R16E.S.B.M. Elevation 5200 feet, access by pack trail only.

"THE TERRACE LODE CLAIM"
(Not patented)

The Terrace Lode Claim is a new location, This claim parallels the Virgenia. Joining that claim on the Easterly line and the Last Chance Paralleing that claim on the Westerly side line. Discovery work in progress at present, no assays cut. Located in Sec's 5 and 6 T13N R16 and Sec 31 and 32 T14N R16E. S.B.M. At an elevation of 5300 feet. Access is by pack trail only.

"THE LAST CHANCE LODE CLAIM"
(Not patented)

The Last Chance Lode Claim is a new location, paralleing the Virgenia on the westerly side line, This claim is the Southwesterly most claim of the Giant Ledge Group. Located in Sec 31 and6 T 13and 14N R 16E. S.B.M. No assays cut at this time. Discovery work in progress. Elevation 5200 feet. Access by trail only.

"THE EVENING STAR LODE CLAIM"
(Not patented)

The Evening Star Lode Claim is a new location and discovery work is in progress. No samples we taken as the vein in place is not as yet exposed. This claim ties on to the North Star on the Easterly side line. Located in Sec 31 and 32 T14N R16E. S.B.M. Elevation 5800 feet, Access by pack trail only.

"THE RESIGN LODE CLAIM"

The Resign Lode Claim is an extension claim on the westerly end of the Hard Cash Ext. This is a new location and work was just starting on descovery at time of this writeing. No samples taken at this time. Located in Sec 32 T14N R16E. S.B.M. At an elevation of 5900 feet. Access by trail only.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

TRINITY 4791

FORM 1

LABORATORY REPORT

COPY

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

Mill Copy

LABORATORY No. 340483-90 Date July 19, 1951

Sample Ore

Received 7-12-51 Marked

Submitted by Giant Ledge Mining Co.,
c/o G. V. Anderson,
608 East "C" Street,
Colton, California.

Att: Robert Engles.

not comprised in claims under consideration

REPORT OF DETERMINATIONS

"Henshaw"

Silver (Ag) ------- 2.92 ozs/ton --- $2.64/ ton
Lead (Pb) ---------- 2.12%
Tungsten Trioxide ($WO_3$) ----- 6.06%

"Athens ExT"

Silver (Ag) ---------- 1.65 oz/ton --- $1.49/ton
Lead (Pb) ---------- 2.75%
Tungsten Trioxide ($WO_3$) --- None

"Shallow Discovery Shaft
Eastern B oundry Nephi"

Silver, (Ag) --------- 14.22 ozs/ton -- $12.87/ton
Copper (Cu) ---------- 4.25%

"20 ft. Shaft on the Nephi"

Silver, (Ag) --------- 24.66 ozs/ton -- $22.32/ton
Copper (Cu) ---------- 12.66%

"D No. 2 Sample from Northwestern"

Silver (Ag) --------- 0.42 oz/ton -- $0.38/ton
Tungsten Trioxide ($WO_3$) ----- Trace

-continued

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Corona, California

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

"THE LUETTA LODE CLAIM"

The luetta Lode Claim is a new location and adjoins the Hard Cash Claim on the Westerly end. This claim was recently discovered to hold deposits of Tungston. Discovery work in progress at present. Located in Sec 31, T14N R16E. S.B.M. Elevation 6950 feet. Access is by pack trail only.

An extensive sampleing program conducted over the 21 claims shows the following results. (By Claims.)

| | | |
|---|---|---|
| The Hard Cash Ext Claim. Sample Group No.1, 23 cuts average. | Silver ozs per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper% | 1.00 |
| | Zinc% | 1.7 |
| The Athens Ext Claim. Sample Group No.2, 9 cuts average. | Silver | 4.04 |
| | Lead% | 4.01 |
| | Copper% | 1.6 |
| | No zinc run | |
| The Athens Claim. Sample group No.3,9 cuts average. | Silver | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No zinc run. | |
| The Miami Claim. Sample group No.4, 5 cuts averaged. | Silver | 3.22 |
| | Lead % | 1.1 |
| | Copper % | 1.12 |
| | No zinc run. | |
| The Morning Star Claim. Sample group No, 6. 10 cuts av. | Silver | 9.6 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No zinc run. | |
| This group an average over all by Union Assayers. Smelter Sample. Salt Lake. | Silver | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | Zinc % | 2.3 |
| This group an average over all by Union Asseyers Smelter Sample. Selby. | Silver | 5.8 |
| | Lead % | 4.2 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Tungston assays have been kept seperate in as much as most samples were taken on seperate veins. The above samples were taken on veins not less than 5 feet in width. While most Tungston samples have been cut on smaller veins rangeing in width fron 18 inches to 16 feet.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, Calif.

The following is a tabluation of Tungston Assays. It will be noticed that the Tungston area immediatly surronds the Hard Cash Claim. All the veins exposed seem to fan out in various directions from the main tunnel vein of the Hard Cash.

Tungston sampleing by claims.

Sample No,1.
This sample cut just easterly of the S.E.end line of the Hard Cash.
Tungston Trioxide 0.60 %
Sample No,2.
This sample cut on the southerly line of the Hard Cash.
Tungston Trioxide 0.63 %
Sample No,3.
This Sample cut on the Henshaw southerly of the Hard Cash. X
Tungston Trioxide, 0.16 %
Sample No,4.
This sample cut on the Athens Ext Southerly of the Hard Cash. X
Tungston Trioxide, 0.70 %
Sample No,5.
This sample cut on the main level Hard Cash Claim.
Tungston Trioxide, 1.68 %
Sample No,6.
This sample cut 20 feet below the main level Hard Cash.
Tungston Trioxide, 1.80 %
Sample No,7.
This sample cut on small 20 inch vein S easterly of the Hard Cash.
Tungston Trioxide, 18.62 % — ?

Careful check has disclosed that all veins found to carry Tungston are tending to Strike so that they will terminate on the Hard Cash. The dip also is favorable for the same.

It is recomended that a sinking program be adopted and that this be done on or near the contact on the Hard Cash Claim. A two compartment shaft to a depth of two hunderd feet I feel will disclose a profitable deposit of good grade milling ore.

The Geological formation of the country is fovorable. All sampleing and ledge inclination is promiseing to warrent an exploration program.

Combination assays are as follows.

| | | |
|---|---|---|
| By Claims; | Silver | 2.92 |
| Henshaw Claim, | Lead | 2.12 |
| | Tungston Tri | 6.06 |
| Nephi Claim, | Silver | 14.22 |
| | Lead | 1.11 |
| | Copper | 4.25 |
| Northwestern, | Silver | 22.66 |
| | Copper | 12.60 |
| | Lead | none |

These samples are all surface cut.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

IN CONCLUSION:

It has been said by many,and is here repeated, that the Giant Ledge Mine is very favorable. The Granit Lime Contact strikes South Easterly and North Westerly with a dip westerly. This is a good indication that ore's will displace the Granits formeing large deposits.? Indeed the numerous veins exposed in this area are of such importance that the writer can not recomend a more favorable spot for exploration. One cannot but be most impressed by the high grade stringer found on the Hard Cash. Granted, that a very limited amount of work has been done. The dip and strike of all veins in the suronding claims tend to center in one junction. It is entirely likely that a wisely directed devlopment will disclose further such shoots of ore and there value increased.

It is a significant fact to ponder that the original discoveries on surface showing in the area are very favorable for further underground exploration. Occurances of this kind in this region are to be respected and not lost sight of.

Recomendations;

The writer recomends that a sinking program be conducted on the Hard Cash, keeping an eye on the contact at all times. The two compartment shaft should be sunk to the 100 feet level before any effort to feel out the contact is made. If this is found favorable the work should continue another 100 feet where if advisable a dimond drilling program should prove the existing values at that depth. This type shaft can be slabbed off to a larger size if needed at a later date at a minimum cost.

Diamond drilling should proceed any mineing effort whether it be drifting or stopeing. This type program has been proven to be the most profitable in many instances.

This report is respectfully submitted for the Giant Ledge & Copper Co,Inc.

This 25th day of Sept 1951.

Signed Robert G. Ingalls
J.Robert Ingalls E.M.& G.

GIANT LEDGE LEAD & COPPER COMPANY
987 Palm Drive,
Colton, California

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2188

Date received 10-25-51

Participation

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 2 5 1951
Defense Minerals Administration

Giant Ledge Lead and Copper Company
927 Palm Drive
Colton, California

Name and address of applicant

Date October 9, 1951

FILL IN THIS BLOCK

Date of application October 9, 1951

Estimated cost $100,000

Mineral or metal ~~tungsten, copper, lead & zinc~~

Percentage of Government participation 75 %

Location of mine New York Mining District

Date of filing MF-100 June 25, 1951

DMA Docket Number, if available unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

10. (*a*) Give a description of the re[illegible]perty that will be in any way involved in th[illegible]oration project, including any existing mine or operating property.

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

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

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

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

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

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

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

*16. History:

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

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

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

*17. Production:

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

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

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

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

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

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

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

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

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

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

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

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

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

## CERTIFICATION

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

Giant Ledge Lead & Copper Co., Inc.
(Name of company)

By [signature]
(Signature of authorized official)

October 9, 1951
(Date)

Secretary-Treasurer
(Title)

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

*Same as footnote on page 1.

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

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

APPLICANT

GIANT LEDGE LEAD & COPPER COMPANY,
927 Palm Drive
Colton, California

1. The applicant is a corporation.

2. Not applicable.

3. Gerald V. Anderson - President, 608 East C Street, Colton, Calif.
Leo J. Speirs - - - Vice President, 696 East C Street, Colton, Calif.

Edward E. Wilhite - Secretary, 927 Palm Drive, Colton, Calif.
Donald E. Wilhite - Assistant Secretary, 1608 Sheridan Ave., San Bernardino, Calif.

Daniel Anderson - - Director, 848 Palm Drive, Colton, Calif.
Duene S. Carr - - - Director, 1194 Bonita Dr., Colton, Calif.
Reagan Thompson - - Director, 1207 West 2nd Street, San Bernardino, Calif.

Stewart W. Thorley - Director, 644 East C Street, Colton, Calif.
Robert J. Ingalls - Director, 820 Orange Grove Ave., Colton, Calif.

Samuel A. Barnes - - Director, 840 West G Street, Colton, Calif.

Melbern J. Robinson- Stockholder, Edwards Air Force Base, Muroc, Calif.

Edward F. Sells - - Stockholder, 1296 Holly Dr., Colton, Calif.
Clyde Bowlen - - - - Stockholder, 1262 Mt. Vernon Ave., Colton, Calif.

Martin Harris - - - Stockholder, 608 East C Street, Colton, Calif.
Molly Ivey - - - - - Stockholder, 869 West G Street, Colton, Calif.
Henry T. Harber- - - Stockholder, George Air Force Base, Victorville, Calif.

William J. Johnston- Stockholder, 422 7th St., Victorville, Calif.

4. (a) Gerald V. Anderson - General business experience.
(b) Robert J. Ingalls - Engineer of Mines and Geology. Thirty-five years experience.

5. Owners.

6. Incumbrence at present is $3,500 balance on the purchase.

7. Not applicable.

8. See answer No. 24.

9. $20,000. Yes.

10. (a) Description of the property is under Survey No. 3985 which consists of four patented claims and eleven additional claims now being held by location by the present owners. Total property being described is as follows: No. 1. Hard Cash Lode Claim; No. 2. Athens Lode Claim; No. 3. Morning Star Lode Claim; No. 4. Miami Lode Claim; No. 5. Menlow Lode Claim: No. 6. North Star Lode Claim; No. 7 Henshaw Lode Claim; No. 8. Athens Extension Lode Claim; No. 9. Hard Cash Extension Lode Claim; No. 10. North Western Lode Claim; No. 11. Evening Star Lode Claim; No. 12. Magmaw Lode Claim; No. 13. Nephi Lode Claim; No. 14. Maybell Lode Claim; No. 15. Grace Lode Claim.

(b) Hard Cash Lode Claim located in Section 31, Township 14 North, Range 16 East, San Bernardino Meridian is a patented claim. The Nephi Lode Claim in Section 31 and 32 is an unpatented claim. These two claims are where exploration program is planned.

11. The present name is: Giant Ledge Lead and Copper Co. Inc.; Formerly know as: The Giant Ledge Gold and Copper Co.; Also know as: The Athens Group.

12. Located 23 miles South of Ivanpah, a railroad shipping point on the Union Pacific Railroad. Gravel surface County maintained road. Also intersection with U.S. Highway 66 and points East or West. 14 miles Northerly from Ivanpah, the County maintained gravel road intersects with U.S. Highway 91 to points North or West.

13. Contact making live water in three places. Anticline formation indicates ample subterranean flow with little development. Two live springs available at present for domestic use. It is sufficient.

14. Three bunk houses, one combination kitchen and dining room, one D C 7 bulldozer, two 210 air compressors and miscellaneous pipe and trackage material.

15. Plan milling operations on or near property. For shipping, trucks will be used to freight ore to Pine Creek Mill, Inyo County, California.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, California

16. (a) The property was opened up in 1898 for a Gold, Lead and Silver property.

(b) Adjoining on the East is the Sagamore. This mine had at one time a 10 stamp mill for the reduction and recovery of Lead, Silver and Gold ore. It is now dismantled but being reopened as a Tungsten mine.

(c) An extensive sampling program of all locations where ledges in place are exposed shows the following results:

| | | |
|---|---|---|
| Sample group No. 1 This sample is an average of 23 cuts and shows the following results: HARD CASH EXTENSION. | Silver ounces per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper % | 1.00 |
| | Zinc % | 1.7 |
| Sample group No. 2. This sample is an average of 9 cuts and shows the following results: ATHENS EXTENSION. | Silver ounces per ton | 4.04 |
| | Lead % | 4.1 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 3. This sample is an average of 5 cuts and shows the following results: ATHENS | Silver ounces per ton | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No Zinc run. | |
| Sample group No. 4 This sample is an average of 5 cuts and shows the following results: MIAMI. | Silver ounces per ton | 3.22 |
| | Lead % | 1.2 |
| | Copper % | 1.1 |
| | No Zinc run. | |
| Sample group No. 5. This sample is an average of 10 cuts and shows the following results: MORNING STAR. | Silver ounces per ton | 10.22 |
| | Lead % | 9.6 |
| | Copper % | 3.4 |
| | No Zinc run. | |
| Sample group No. 6. This sample is an average of 5 cuts and shows the following results: NORTH WESTERN. | Silver ounces per ton | 3.9 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 7. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | No Zinc run. | |
| Sample group No. 8. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Two qualitative analysis have been run on the afore mentioned sample group. These show the following results:

Silicon - - - - - - - - - - - - - - -
Calcium - - - - - - - - - - - - - - - } Main Constituents.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, California

17. Not in production at present. Plan #2 milling.

18. (a) A contact vein with a South Easterly North Westerly Strike dipping 82 deg. Westerly. Cross fractures are numerous on Hard Cash Lode Claim at the principal point of exposure.

(b) Maps and assays inclosed.

(c) No reserves at present.

19. Discovery of Tungsten in paying quantities has prompted a rearrangement of former plans to mine and mill Copper, Lead, Silver and Zinc.

20. Tungsten primarily, Copper, Lead, Silver and Zinc secondary on a Lime Granite contact vein.

21. Propose to sink two exploration shafts. First: The Hard Cash shaft, approximately six months. Second: The Nephi shaft and the access road approximately six months. Present plans are to carry on the two exploration projects simultaneously.

22. Refer to engineering report. Also enclosed geological maps.

23. (a) Labor: 4 miners @ $65.00 per week.
(b) 1 shift foreman @ $125.00 per week.
1 camp foreman @ $100.00 per week.
(c) Upkeep and maintainance: $6,000.00
(d) $20,000.00
(e) $20,000.00
(f) None
(g) $40.00 per day for two 210 compressors, one 7D Caterpillar Bulldozer, two 4-wheel drive H.D. Trucks.
(h) $2,000.00. Small mine supplies.
(i) Fuel for small equipment-$75.00 daily. Powder caps and fuses-$80.00 daily.

24. Will estimate 4 men making 2½ feet per day and including all timbering - 6 months. Should complete exploration shaft to the 200 foot level by basing it on 2 days to complete each 5 foot set.

Each 5 foot set will take the following:

$56 in wages.
$90 for timber.
$100 for miscellaneous equipment.

This cost will be multiplied by 40 as there will be 40 five foot sets. It is planned at this point to institute diamond drilling program.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California

"REPORT ON THE GIANT LEDGE MINE"
Submitted July 11, 1951.

HISTORY OF THE AREA;

For many years the Ivanpah Barnwell area has been noted for it's part in the production of metals, namely, Copper, Silver, Lead and Gold. Our early records show the activity that once centered in this locality. Barnwell, once a busy town of two to three thousand inhabitants, lies dormant, only a memory to a few of the old timers who can recall the days when mule teams were relied upon. Later the T.T.&.W.R.R. conected the area with the outside world. To others who have came since, only the name of a barren spot on the desertis evidence of past activity of this once active mining center. A few miles northward the Searchlight area was active and is reputed to have produced millions in gold. Like the rest of this vast mineral belt it too is slightly more than a memory.

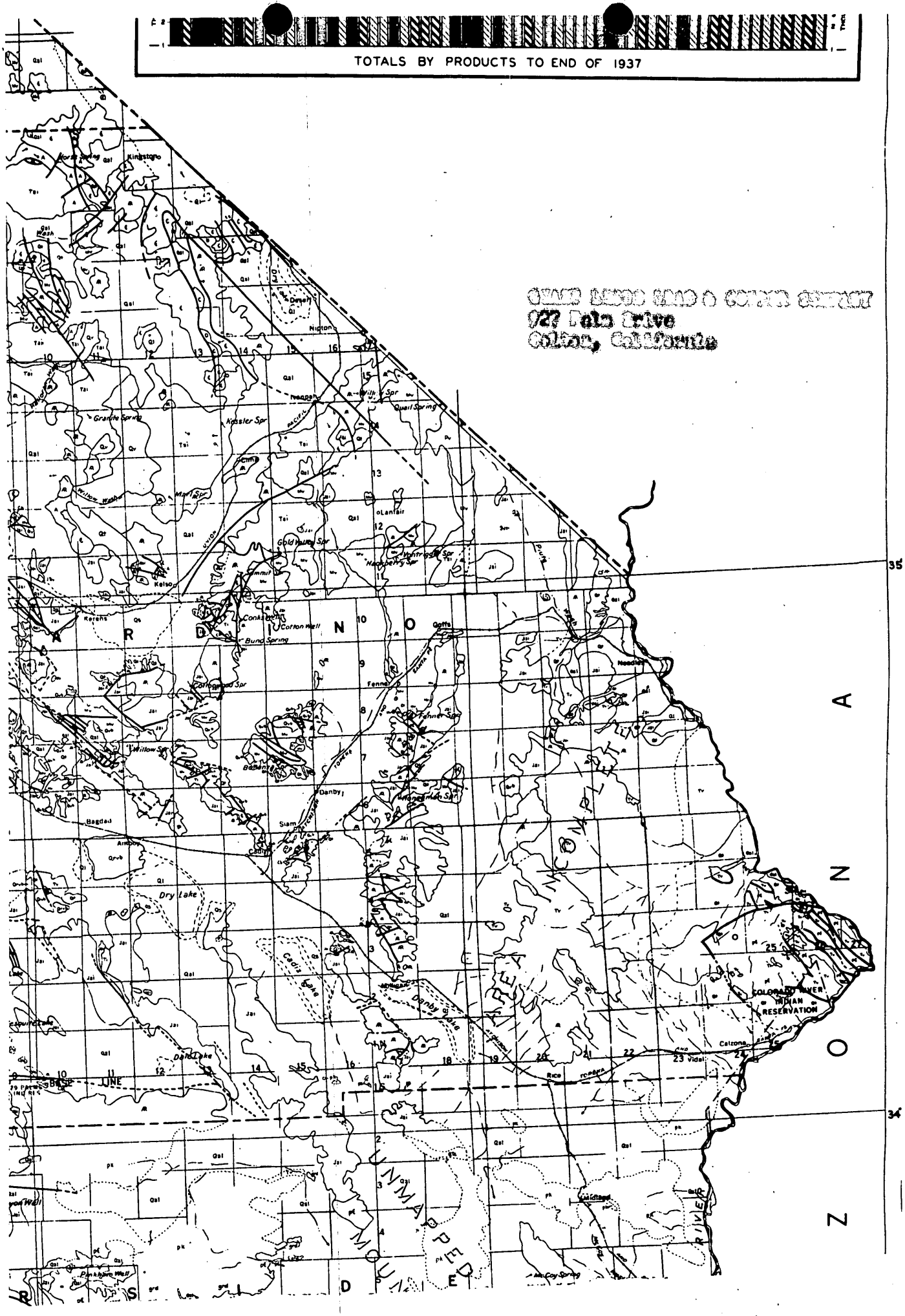
The pressure of years and monitary changes have left their mark. The rarer metals have been in some cases worked out and in others, economic changes forced shutdowns, to the extent that until recently little or no mining of any consequence has been going on. Now with the discovery of rare metals of various kinds and new improved methods of refining and extraction, the Barnwell Ivanpah Searchlight areas are looking forward to a new boom in the mining industry. Thousands of tons of material mined as waste by the early seekers of Gold and Silver, lies leeching on dumps waiting for this new era and an industry that demands just such elements as are found in plenty in this locality. When the branch line rail road that served the area suspended operation the problems of mines in this local were increased. Long hawls by mules and later trucks, over, in many cases, unimproved roads made such increased demands on the operator that in many cases if not all, suspended operations.

Special attention is called to the New York Range. This range is a veritable storehouse of strategic metals, although complex in occurence it holds in it's canyons and hills Lead, Zinc, Silver, Copper, Gold, and last but by no wise the least , strong deposits of tungsten ores have lately been discovered. With present improved methods of recovery this locality can and will see the so called boom days again and soon. From the Tacopa Goodsprings area southeasterly there occurs numerous contacts in the limes, all carrying some showing of mineral and many have proven valuable in as much as there are some very productive mines along the lime reef

The Clark Mtn area has recently made important discoveries of rare earths that will meet critical demands. The Ivanpah Mtns further southeast also have long been known to hold many deposits of both Copper, Lead and Zinc. Then on further southeast the New Yorks are now in the process of proving their wealth in needed metals. The Ivanpah Barnwell and Cima triangle form a mineral deposit that extends as far south as the Goffs basin.

GRAND RIVER GOLD & COPPER CORPORATION
[illegible] Pedro Drive
[illegible], California

TOTALS BY PRODUCTS TO END OF 1937




OWNER BUDD AND O COTTON DEPOT
927 Palo Drive
Colton, California

"GENERAL GEOLOGY & TOPOGRAPHY"

While the country as a whole is of Granit Base, to the Northeast, we find strong showings of Tertiary or New Granits. While to the East we have some Jurassic Acid Intrusives. South of these, Terrace deposits are in evidence with a showing of Camberian Marine Sediments. These sediments extending westerly and contacting with Miocene Volcanics. West of these, the terrain is largely Alluvium.

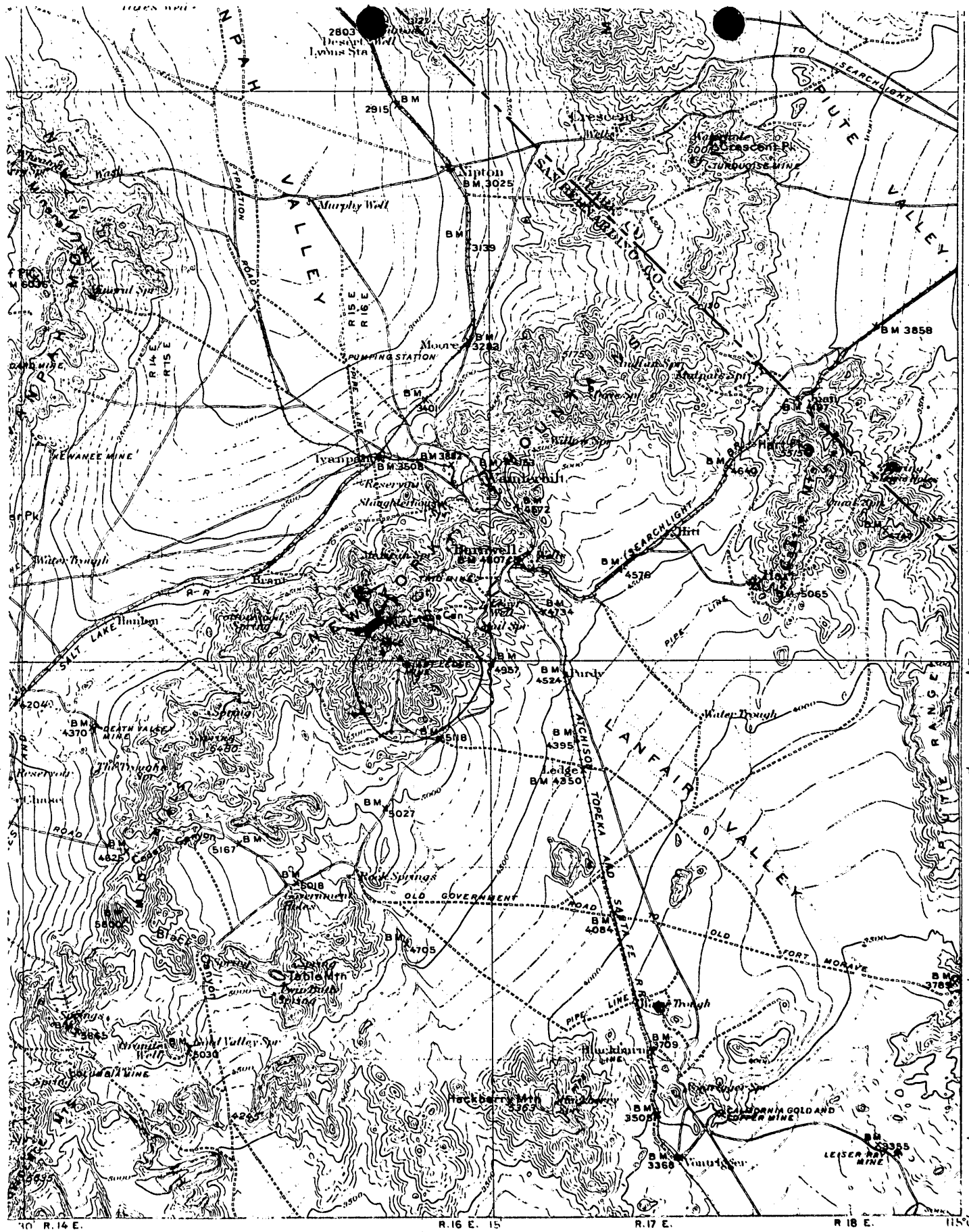
The surronding country is arid and Joshua trees with light sage and Greeswood prevails. Grazeing in the area is extensive and water is plentiful by development. Small Penion Pine is found above the 4.000 ft level with considerable Juniper. The climate is mild and ideal working condtions prevail most of the year. Many live springs are found above the 4.000 foot and fine cold water is available for most domestic uses. Cattle ranching and mining are the most prevalent and constitute the the industry of the locality.

The area is served by the A.T.&.S.F.R.R., to the south some 25 miles and to the North 21 miles distant by the U.P.R.R. which runs along the North base of the New York Range. Loading accomadations are at both Goffs and Ivanpah, much ore of various kinds being shipped from Ivanpah.

"SPECIFIC GEOLOGY OF THE GIANT LEDGE"

The Giant Ledge consists of a Porphry Lime contact to the north this giveing way to Granit Lime contact about midway the Hard Cash Claim. There are numerous surface falts and minor Granit intrusions into the Limes are frequent. Some of the oldest exposures being Quartzites and so called Mafics. Notable is the absence of any basement complex of Volcanics so often found in the Pre Cambrian. Paralleling the contact, are numerous veins back in the Limes at various depths. Indications are that depth on the true contact will open up extensive ore bodies as well located veins are all dipping strongly in that direction. On the Hard Cash Claim the vein is prominent; and devided between the Granit Lime contact to the south and the Porphry Lime contact to the North. At the south line of this claim the vein leaves the contact and occurs more Easterly in the Limes. No depth has been made on the contact and most of the workings consist of tunnel operations. There are live springs both above and below the mine and indications are that water will be encountered with little depth. A cross fracture occurs on the Hard Cash and there is exposed on the surface a strong vein of Lead Silver and Copper carrying 1.75% Tungston Trioxide. A strong vein also a cross fracture parallels this vein to the north 165 ft that shows very promiseing in Hubernite. Most of the ore on the Hard Cash is basic Florite carrying Copper, Lead, Silver and tungston. Extensive sampleing is being done and results will appear later in this report.

GIANT [illegible] AND O [illegible] COMPANY
[illegible] Bldg. [illegible]
[illegible], California


Giantledge Mine
Lipton
Murphy Well
Moore
Ivanpah
Vanderbilt
Barnwell
Hart
Ledge
Hackberry Mth
Table Mth
Yantis
Crescent
Crescent Pk
TURQUOISE MINE
DEATH VALLEY MINE
CALIFORNIA GOLD AND COPPER MINE
LEISER BOY MINE
SALT LAKE
SEARCHLIGHT
TO SEARCHLIGHT
PUMPING STATION
OLD GOVERNMENT ROAD
OLD FORT MOHAVE
ATCHISON TOPEKA AND SANTA FE R.R.
PIPE LINE
TRACTION ROAD
PINTO VALLEY
FANFAIR VALLEY
PINTO RANGE
PIUTE VALLEY
T. 28 S.
T. 29 S.
T. 30 S.
T. 14 N.
T. 13 N.
T. 12 N.
T. 11 N.
R. 14 E.
R. 16 E.
R. 17 E.
R. 18 E.
30'
15'
35°00'
115°00'
Edition of June 1912, reprinted 1941
Polyconic projection, North American datum
10 Miles
10 Kilometers
Map of the Goodsprings quadrangle, scale 1:62,500, contour interval 50 feet, from a later and more detailed survey of the area adjacent to Goodsprings, is available.
CALIF NEV
IVANPAH
N3500 - W11500/60

"DESCRIPTION AND DEVLOPMENT"

The Giant Ledge consists of four patented claims and 17 others that are being held by location by the present owners. At an average elevation of 6.500 ft, the patented claims are the Hard Cash, Athens, Morning Star and Miami. The claims being held by location are the Hard Cash Ext, Athens Ext, Nephi, Henshaw, Northwestern, Maybell, Evening Star, North Star, Grace, Magmaw, Menlow, Sharlett, Virginia, Luetta, Terrace, Resign and Last Chance.

"THE MIAMI LODE CLAIM"
(Apatented claim)

The Miami claim is patented under survey No3985, work on this claim consists of an open cut thirty feet long exposeing a 22 inch vein of Copper Silver ore. Strike East 7 deg, South with a dip 87 deg South.

This small stringer is an offshoot fracture running in an easterly direction from the contact. Just west of this open cut a shaft has been sunk to an estimated depth of 90 feet on the vein, showing is good at collar, further inspection made impossible by there being no timber in place. Numerous open cuts prove this vein to be contenious across the width of the claim. Access to this is by pack trail only.

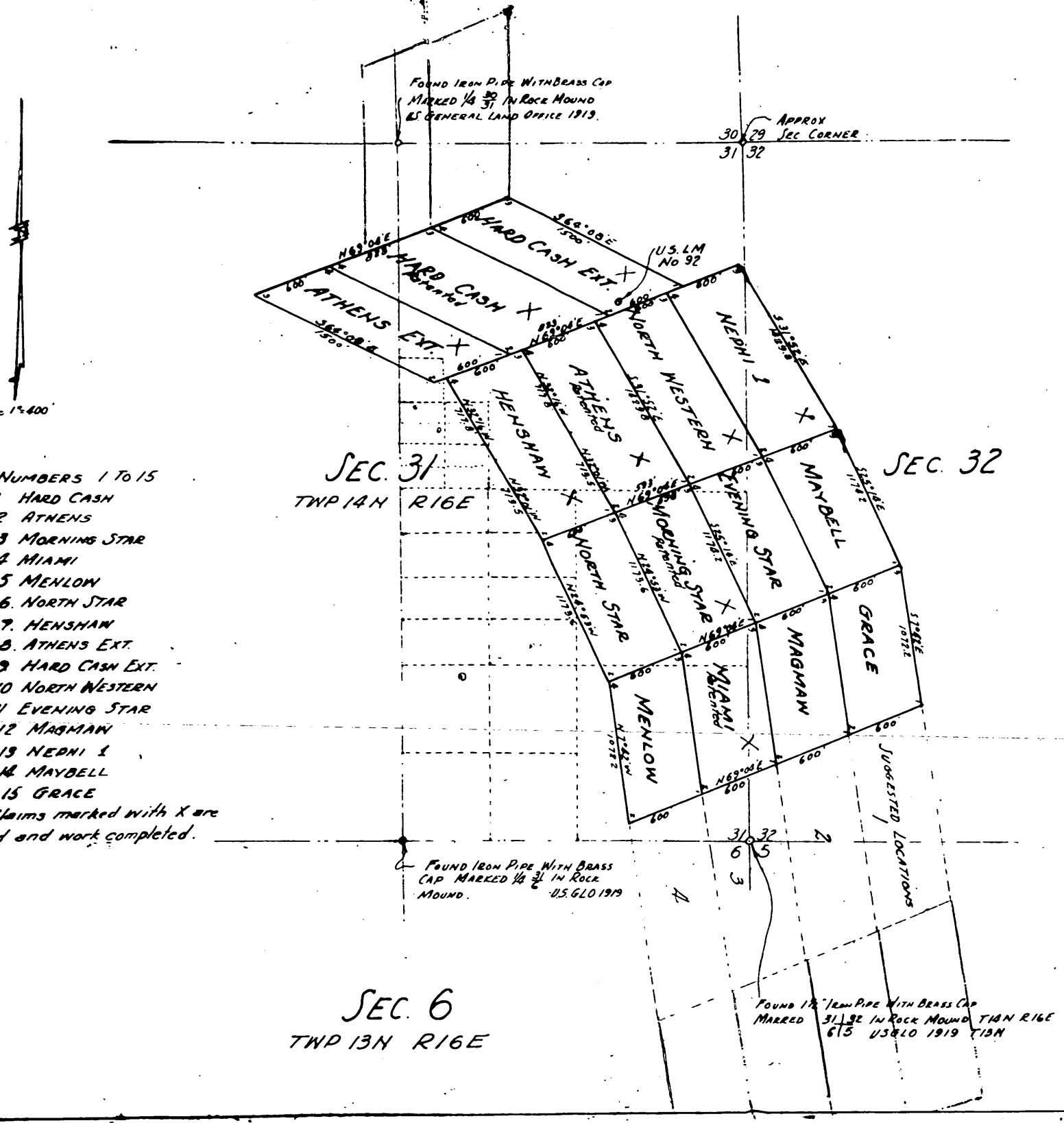
"THE MORNING STAR LODE CLAIM"
(A patented claim)

The Morning Star Lode Claim is patented under survey No.3985. Work on this clain consists of a cross cut tunnel driven easterly in the Limes, showing vein in place. This vein carries Copper, Lead and Silver. Thirty eight assays have been cut over this claim in various exposiers showing 1.7% Copper, 11 ozs Silver. South of the portal of the crosscut 28 feet a shaft has been sunk 75 feet down. Showing here is very promiseing at collar, further inspection at this time made impossible by lack of ladder ways. The only access to this claim is by pack trail. Elevation 6.052 feet.

"THE ATHENS LODE CLAIM"
(A patented claim)

The Athens Lode Claim is patented under survey No,3985. This claim has a large amount of exploration work, there being three levels opened up along the mountain slope, all with considerable footage. Crosscut tunnels have been pulled easterly into the limes to various depths. The first, or summit level consists of a tunnel driven North 16 deg East for some 75 feet on a strong vein three to four feet in width. Back 60 feet from the portal a small feeder vein intersects the main vein and heads North 38 deg East. This feeder has been followed for a distance of forty feet. A winz has been sunk at the intersection to an estimated depth of 65 feet and the vein is strong at collar. Assays here show 9% Copper and 23 ozs in Silver. Below this workings and 70 feet north another crosscut has been pulled apparently to intersect the vein above but for some reason work was suspended before makeing the contact.

GRAD DEPT MINERAL & MINING CIRCLE
227 MINING BLDG.
BERKELEY, CALIFORNIA




CLAIM NUMBERS 1 TO 15

No. 1 HARD CASH
No. 2 ATHENS
No. 3 MORNING STAR
No. 4 MIAMI
No. 5 MENLOW
No. 6. NORTH STAR
No. 7. HENSHAW
No. 8. ATHENS EXT.
No. 9 HARD CASH EXT.
No. 10 NORTH WESTERN
No. 11 EVENING STAR
No. 12 MAGMAN
No. 13 NEPHI 1
No. 14 MAYBELL
No. 15 GRACE

NOTE. Claims marked with X are located and work completed.

Robert J. Ingalls

"THE ATHENS LODE CLAIM CON'T"

Directly below these workings down the mountain side 120 feet below another tunnel has been pulled, this tunnel portals in the Limes and crosscuts easterly 320 feet. This tunnel has four side crosscuts,all seem to be following small unimportant stringers. Below this another 145 feet and portaled in the Granit, another crosscut tunnel has been pulled. Reports are that this tunnel goes back 1.200 feet to cut the vein that occurs on the summit.This tunnel being badly caved back 645 feet from the portal inspection impossible at this time. Northerly of this portal 240 feet and 70 feet higher up another tunnel has been pulled to a depth of 365 feet. Strong veins of Copper and Zinc are cut in this workings, assays taken here show 2.7% Copper, 12% Zinc and 11 ozs Silver. No sinking has been done at any level. Access is by pack trail only. Elevation 6.110 feet.

"THE HARD CASH LODE CLAIM"
(A patented claim)

The Hard Cash Lode claim is a patented claim Under survey No,3985. This claim also has a great deal of work and is accessible by a road to the foot of the dump of the main workings. In this work a tunnel has been pulled easterly back 380 feet. An incline raise has been pulled back 110 feet from the portal. This raise conects with an upper level 90 feet above. The lower drift is collared in ore and this ore deposit continues back and ends just short of the raise. The raise inclines 67 deg south and cuts ore 7 feet above the lower drift, topping in ore on the upper level. Back 40 feet from the main portal a crosscut drift has been pulled southerly. This crosscut goes ba ck 129 feet running somewhat in the shape of a harse shoe. It starts southerly for 40 feet, here it turns easterly 60 feet, then Northeasterly for another 60 feet, ore was encountered at the portal and all of this crosscut is in solid ore. The ledge of ore cut at the portal strikes North 38 deg East, with a dip South 77 deg. It can readily be seen that this is a cross fracture vein Easterly from the contact. Ledge matter from this vein is exposed on the surface Easterly for a distance of 750 feet. Numerous open cuts and shallow holes prove comercial ore over the total distance stated. The width tapering from 65 feet at the junction of the contact to 12 feet on the Easterly exposier. At the top of the raise from the main level a drift runs south for a distance of 16 feet. Also the portal drift runs westerly 40 feet to collar in ore. North of this portal another tunnel has been pulled 60 feet Easterly along the vein. This tunnel collars in ore and ends in ore. A shaft just to the right of this tunnel goes down and conects with the lower level 90 feet below. All workings on this claim are in good mill ore except a continued exploration tunnel that continues on back from the No 1 raise some 200 feet. The foot or Northerly wall has been exposed in one place back 90 feet from the main tunnel portal. North of the main tunnel portal and 65 feet away an incline shaft has been sunk, This shaft goes down 35 feet inclineing 70 deg Easterly. At the bottom a short drift has been pulled southerly 15 feet,

[illegible]
[illegible]
[illegible]

"HARD CASH CLAIM CON'T"

this drift opens out into an under ground stope. Ore has been mined here over an area 40 feet Easterly and Westerly by 12 feet southerly and Northerly, with backs 8 feet. In length this stope runs North 33 deg East along the strike of the vein slightly cross cutting the vein matter. Around the hill southerly from the main Tunnel some 900 feet a shaft has been sunk down 38 feet on a vein of high grade ore. This vein is 20 inches in width and has a strike of East 7deg North with a dip 89 deg south. This quartz vein carries 9% Tungston Trioxide, in the form of Sohlite and Wolfermite. Below this shaft and 28 feet westerly a tunnel goes in and cuts the vein. Samples from this tunnel assay 18.62% Tungston Trioxide with little or no Lead or Copper. Reports are that two car load shipments were mwde from the Hard Cash claim that run $44.26 and $61.52 resp; However no confirmation ofthese reports is available. There is a large dump of an estimated 5.000 tons that assays 1.10% Tungston Trioxide. Other dumps range from $26.00 to $40.55 in Lead, Copper, Zinc and Silver. Overall average shows 1.75% Copper; These four patented claims all are located in Sec 31, T14N R16E, S.B.M. At an elevation average 6.500 feet.

The claims now being held by location are described as follows.

"THE NORTH STAR LODE CLAIM"
(Not Patented)

The North Star Lode Claim is on a parallel vein of quartz occuring in a Granit intrusion Easterly of the Lime Granit contact. A good showing of Silver, Tungston and Lead. Discovery work is in the form of an open cut. This claim parallels the Morning Star on the Westerly side in Sec 31, T14N R16E. At an elevation of 5.900 feet. Access is by pack trail only.

"THE GRACE LODE CLAIM"
(Not patented)

The Grace Lode Claim adjoines the Maybell on the Southerly end and parallels the Magmaw, joining the Magmaw on the Easterly side line. This claim is a new location and discovery work is in progress on a good showing of Copper at this time. Located in Sec 32 T14N R 16E S.B.M. Elevation 5.600 feet. Access by pack trail only.

"THE MAGMAW LODE CLAIM"
(Not patented)

The Magmaw Lode Claim adjoines the Grace on the Easterly side line and the Miami on the Westerly side line. Lying and being between the two claims. Work is in progress on the continuation of vein that is exposed on the Evening Star. Some showing of Copper, Silver and Lead. No assays out. In Sec 32 T14N R16E. S.B.M.Elevation 5.700 feet. Access is by pack trail only.

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[illegible]
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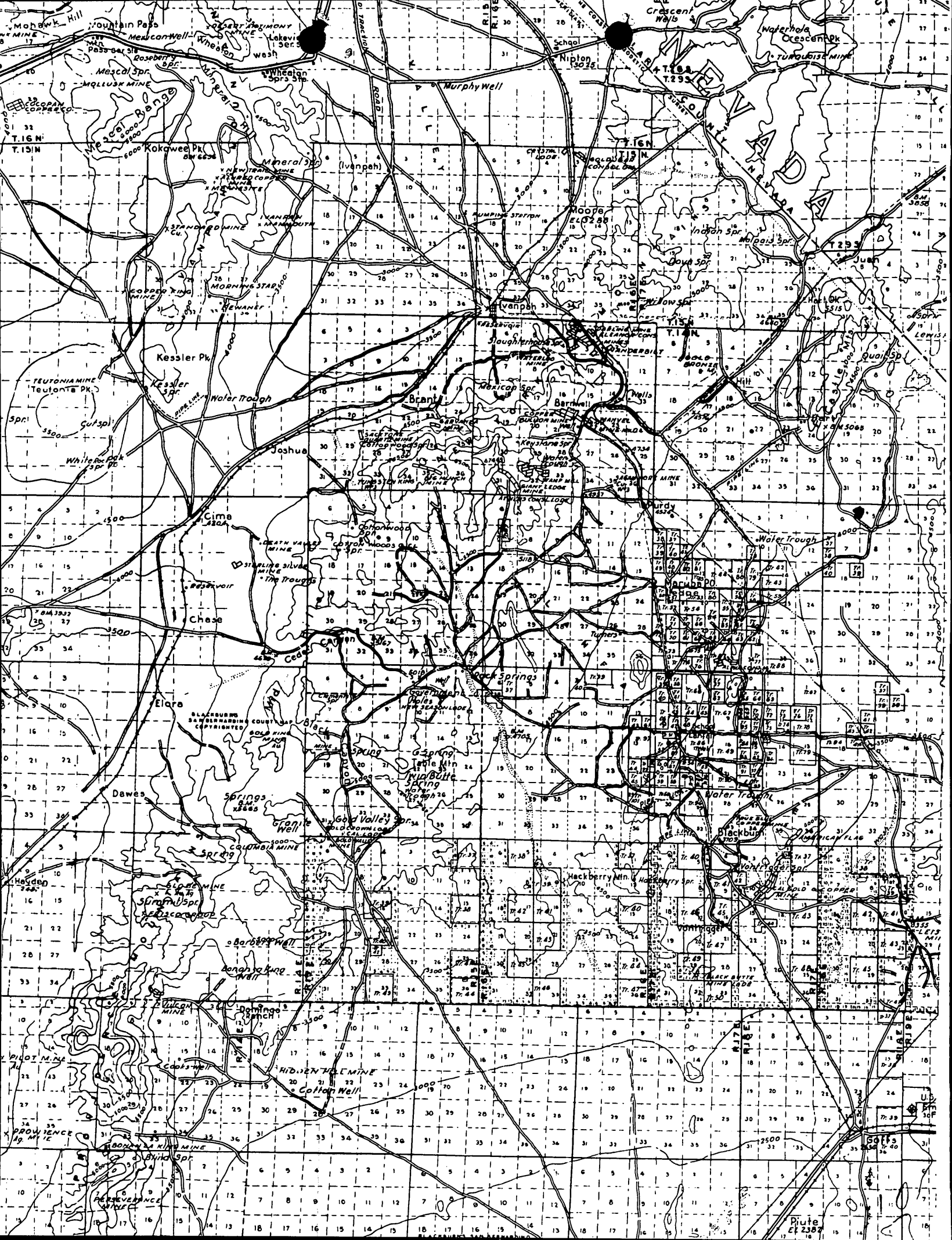
Mohawk Hill
Mountain Pass
Mexican Well
Wheaton
Wheaton Wash
Wheaton Spr Sta
Mescal Spr
Mescal Range
Kokowee Pk
Mineral Spr
(Ivanpah)
Ivanpah
Moapa
Nipton
School
Crescent Wells
Waterhole
Crescent Pk
Murphy Well
Kessler Pk
Kessler Spr
Water Trough
Teutonia Pk
Brant
Barnwell
Joshua
Cima
Chase
Cedar
Elora
Dawes
Hayden
Rock Springs
Table Mtn
Wildbutte Spring
Gold Valley Spr
Granite Well
Blackburn
Hackberry Mtn
Vontrigger
Cottonwood Spr
Cotton Well
Domingo Ranch
Hidden Vale Mine
Piute
Goffs
Nevada
Clark County
T.16N
T.15N
T.17N
T.18N
T.29S
R.17E
R.18E

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

"THE HARD CASH EXT LODE CLAIM"
(Not a patented claim)

The Hard Cash Ext Lode Claim paralles the Hard Cash claim on the Northerly side line. A 6 foot vein of quartz witha strike South 70deg East has been opened up and at present assay results are not in. Located in Sec 31 T14N R16E S.B.M. At an elevation of 6956 feet. Access is by pack trail only.

"THE HENSHAW LODE CLAIM"
(Not patented)

The Henshaw claim parallels the Athens on the Westerly side line. A Lime stringer has been opened up and at present is makeing 500 gals of water daily. It is planed to devlope this for domestic use. At an elevation of 5800 feet, In Sec 31 T14N R16E.S.B.M. Access by pack trail only.

"THE NEPHI LODE CLAIM"
(Not patented)

The Nephi Lode Claim is the most Northeast claim in the Giant Ledge group. This claim has a very strong showing of Copper Silver ore assaying 12.66 Copper and 24.69 ozs Silver. A prospect shaft has been sunk to a depth of 18 ft and the showing is very good at this writeing. Width of the vein as yet undetermined, this vein is a cross fracture vein with a strike North 76 deg East, dip 82 deg South. Elevation 6500 feet, in Sec 31 and 32 T14N R16E S.B.M. Access by pack trail only.

"THE NORTHWESTERN LODE CLAIM"
(Not patented)

The Northwestern Lode Claim parallels the Athens on the Westrly side line, lying and being between the Athens and the Nephi,claims. Work in progress at this time. A strong showing of green Epidote carrying 1.67% Tungston Trioxide. The vein strikes almost true Southeast and Northwest. In Sec 31 T14N R16E.S.B.M. Elevation 6900 feet. Access by pack trail only.

"THE MAYBELL LODE CLAIM"
(Not patented)

The Maybell Lode Claim Is a new location, discovery work now in progress. No assay cut at this time the vein not completly exposed. A good showing with true wall slip. Located in Sec 32 T14N R16E S.B.M. Elevation 5800 feet,access by pack trail only.

"THE ATHENS EXT LODE CLAIM"
(Not patented)

The Athens Ext Lode Claim parallels the Hard Cash on the southerly side line. A strong vein of Florite occurs along a Granit intrusion with a Lime foot wall. Strike south 38 deg East with a dip 65 deg East. This vein is a complex ore carrying Tungston Trioxide 2.16%, Lead 6.4%, 6.01% Zinc. An old caved tunnel is being reopened at this time. The width of the vein indication is that a strong deposit exists. 12 feet of ore in sight at portal. In Sec 31 T 14N R16E S.B.M. Elevation 5900 feet, access by pack trail only.

OWNER [illegible] LAND & COPPER COMPANY
937 Main Drive
Colton, California

"THE MENLOW LODE CLAIM"
(Not Patented)

The Menlow Lode Claim parallels the Miami Claim Adjoining this claim on the westerly side line. This is a new location. Open cut work in progress at present. No assays as yet. Located in Sec 31 T 14N R16E, S.B.M. Elevation 5600 feet Access by pack trail only.

"THE SHARLETT LODE CLAIM"
(Not patented)

The Sharlett Lode Claim is a new location, Being the Southeast most claim of the Giant Ledge Group. This claim is a new location and no vein in place exposed at this writeing. Elevation 5300 feet, located in Sec 32 and 5 T14N R16E, S.B.M. Access is by pack trail only.

"THE VIRGENIA LODE CLAIM"
(Not patented)

The Virgenia Lode Claim is a new location, lying paralled to the Sharlett and adjoining that claim on the Westerly side. and adjoining the Terrace Lode claim on the Westerly side line. Open cut work now in progress no samples cut at this time. Located in Sec 32 and 5 T 14N 16E and T 13N and R16E.S.B.M. Elevation 5200 feet, access by pack trail only.

"THE TERRACE LODE CLAIM"
(Not patented)

The Terrace Lode Claim is a new location, This claim parallels the Virgenia. Joining that claim on the Easterly line and the Last Chance Paralleing that claim on the Westerly side line. Discovery work in progress at present, no assays cut. Located in Sec's 5 and 6 T13N R16 and Sec 31 and 32 T14N R16E. S.B.M. At an elevation of 5300 feet. Access is by pack trail only.

"THE LAST CHANCE LODE CLAIM"
(Not patented)

The Last Chance Lode Claim is a new location, paralleing the Virgenia on the westerly side line, This claim is the Southwesterly most claim of the Giant Ledge Group. Located in Sec 31 and6 T 13and 14N R 16E. S.B.M. No assays cut at this time. Discovery work in progress. Elevation 5200 feet. Access by trail only.

"THE EVENING STAR LODE CLAIM"
(Not patented)

The Evening Star Lode Claim is a new location and discovery work is in progress. No samples we taken as the vein in place is not as yet exposed. This claim ties on to the North Star on the Easterly side line. Located in Sec 31 and 32 T14N R16E. S.B.M. Elevation 5800 feet, Access by pack trail only.

"THE RESIGN LODE CLAIM"

The Resign Lode Claim is an extension claim on the westerly end of the Hard Cash Ext. This is a new location and work was just starting on descovery at time of this writeing. No samples taken at this time. Located in Sec 32 T14N R16E. S.B.M. At an elevation of 5900 feet. Access by trail only.

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[illegible]
[illegible]

TRINITY 4791 FORM 1

COPY

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

(Mill Copy)

LABORATORY No. 340483-90 Date July 19, 1951

Sample Ore

Received 7-12-51 Marked

Submitted by Giant Ledge Mining Co.,
c/o G. V. Anderson,
608 East "C" Street,
Colton, California.

Att: Robert Engles.

REPORT OF DETERMINATIONS

"Henshaw"

| | | |
|---|---|---|
| Silver (Ag) ------- | 2.92 ozs/ton --- | $2.64/ ton |
| Lead (Pb) ---------- | 2.12% | |
| Tungsten Trioxide ($WO_3$) ----- | 6.06% | |

"Athens ExT"

| | | |
|---|---|---|
| Silver (Ag) ---------- | 1.65 oz/ton --- | $1.49/ton |
| Lead (Pb) ---------- | 2.75% | |
| Tungsten Trioxide ($WO_3$) --- | None | |

"Shallow Discovery Shaft
Eastern B oundry Nephi"

| | | |
|---|---|---|
| Silver, (Ag) --------- | 14.22 ozs/ton -- | $12.87/ton |
| Copper (Cu) ---------- | 4.25% | |

"20 ft. Shaft on the Nephi"

| | | |
|---|---|---|
| Silver, (Ag) --------- | 24.66 ozs/ton -- | $22.32/ton |
| Copper (Cu) ---------- | 12.66% | |

"D No. 2 Sample from Northwestern"

| | | |
|---|---|---|
| Silver (Ag) --------- | 0.42 oz/ton -- | $0.38/ton |
| Tungsten Trioxide ($WO_3$) ----- | Trace | |

-continued

GIANT LEDGE LEAD & COPPER CO. LTD.
027 Colo Drive
Colton, California

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

"THE LUETTA LODE CLAIM"

The luetta Lode Claim is a new location and adjoins the Hard Cash Claim on the Westerly end. This claim was recently discovered to hold deposits of Tungston. Discovery work in progress at present. Located in Sec 31, T14N R16E. S.B.M. Elevation 6950 feet. Access is by pack trail only.

An extensive sampleing program conducted over the 21 claims shows the following results. (By Claims.)

| | | |
|---|---|---|
| The Hard Cash Ext Claim. Sample Group No.1, 23 cuts average. | Silver ozs per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper% | 1.00 |
| | Zinc% | 1.7 |
| The Athens Ext Claim. Sample Group No.2, 9 cuts average. | Silver | 4.04 |
| | Lead% | 4.01 |
| | Copper% | 1.6 |
| | No zinc run | |
| The Athens Claim. Sample group No.3,9 cuts average. | Silver | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No zinc run. | |
| The Miami Claim. Sample group No.4, 5 cuts averaged. | Silver | 3.22 |
| | Lead % | 1.1 |
| | Copper % | 1.12 |
| | No zinc run. | |
| The Morning Star Claim. Sample group No, 6. 10 cuts av. | Silver | 9.6 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No zinc run. | |
| This group an average over all by Union Assayers. Smelter Sample. Salt Lake. | Silver | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | Zinc % | 2.3 |
| This group an average over all by Union Asseyers Smelter Sample. Selby. | Silver | 5.8 |
| | Lead % | 4.2 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Tungston asseys have been kept seperate in as much as most samples were taken on seperate veins. The above samples were taken on veins not less than 5 feet in width. While most Tungston samples have been cut on smaller veins rangeing in width fron 18 inches to 16 feet.

GREAT NORTH LEAD & COPPER COMPANY
227 Polk Street
Colfax, Calif.

The following is a tabluation of Tungston Assays. It will be noticed that the Tungston area immediatly surronds the Hard Cash Claim. All the veins exposed seem to fan out in various directions from the main tunnel vein of the Hard Cash.

Tungston sampleing by claims.

Sample No,1.
This sample cut just easterly of the S.E.end line of the Hard Cash.
Tungston Trioxide 0.60 %
Sample No,2.
This sample cut on the southerly line of the Hard Cash.
Tungston Trioxide 0.63 %
Sample No,3.
This Sample cut on the Henshaw southerly of the Hard Cash.
Tungston Trioxide, 0.16 %
Sample No,4.
This sample cut on the Athens Ext Southerly of the Hard Cash.
Tungston Trioxide, 0.70 %
Sample No,5.
This sample cut on the main level Hard Cash Claim.
Tungston Trioxide, 1.68 %
Sample No,6.
This sample cut 20 feet below the main level Hard Cash.
Tungston Trioxide, 1.80 %
Sample No,7.
This sample cut on small 20 inch vein S easterly of the Hard Cash.
Tungston Trioxide, 18.62 %

Careful check has disclosed that all veins found to carry Tungston are tending to Strike so that they will terminate on the Hard Cash. The dip also is favorable for the same.

It is recomended that a sinking program be adopted and that this be done on or near the contact on the Hard Cash Claim. A two compartment shaft to a depth of two hunderd feet I feel will disclose a profitable deposit of good grade milling ore.

The Geological formation of the country is fovorable. All sampleing and ledge inclination is promiseing to warrent an exploration program.

Combination assays are as follows.

| | | |
|---|---|---|
| By Claims; | Silver | 2.92 |
| Henshaw Claim, | Lead | 2.12 |
| | Tungston Tri | 6.06 |
| Nephi Claim, | Silver | 14.22 |
| | Lead | 1.11 |
| | Copper | 4.25 |
| Northwestern, | Silver | 22.66 |
| | Copper | 12.60 |
| | Lead | none |

These samples are all surface cut.

[illegible]
[illegible]
[illegible]

IN CONCLUSION:

It has been said by many,and is here repeated, that the Giant Ledge Mine is very favorable. The Granit Lime Contact strikes South Easterly and North Westerly with a dip westerly. This is a good indication that ore's will displace the Granits formeing large deposits. Indeed the numerous veins exposed in this area are of such importance that the writer can not recomend a more favorable spot for exploration. One cannot but be most impressed by the high grade stringer found on the Hard Cash. Granted, that a very limited amount of work has been done. The dip and strike of all veins in the suronding claims tend to center in one junction. It is entirely likely that a wisely directed devlopment will disclose further such shoots of ore and there value increased.

It is a significant fact to ponder that the original discoveries on surface showing in the area are very favorable for further underground exploration. Occurances of this kind in this region are to be respected and not lost sight of.

Recomendations;

The writer recomends that a sinking program be conducted on the Hard Cash, keeping an eye on the contact at all times. The two compartment shaft should be sunk to the 100 feet level before any effort to feel out the contact is made. If this is found favorable the work should continue another 100 feet where if advisable a dimond drilling program should prove the existing values at that depth. This type shaft can be slabbed off to a larger size if needed at a later date at a minimum cost.

Diamond drilling should proceed any mineing effort whether it be drifting or stopeing. This type program has been proven to be the most profitable in many instances.

This report is respectfully submitted for the Giant Ledge & Copper Co,Inc.

This 25th day of Sept 1951.

Signed Robert A. Ingalls
J.Robert Ingalls E.M.& G.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2188

Date received 10-25-51

Participation

RECEIVED
1951 OCT 25 AM 8:
Department of the Interior
Defense Minerals Administration

Giant Lodge Lead and Copper Company
927 Palm Drive
Colton, California

Name and address of applicant

Date October 9, 1951

FILL IN THIS BLOCK

Date of application October 9, 1951

Estimated cost $100,000

Mineral or metal tungsten, copper, lead & zinc

Percentage of Government participation 75 %

Location of mine New York Mining District

Date of filing MF-100 June 25, 1951

DMA Docket Number, if available unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

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

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

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

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

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

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

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

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

*16. History:

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

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

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

*17. Production:

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

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

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

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

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

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

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

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

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

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

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

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

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

## CERTIFICATION

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

Giant Ledge Lead & Copper Co., Inc.
(Name of company)

By Edward [illegible]
(Signature of authorized official)

October 9, 1951
(Date)

Secretary-Treasurer
(Title)

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

*Same as footnote on page 1.

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

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

APPLICANT

GIANT LEDGE LEAD & COPPER COMPANY,
927 Palm Drive
Colton, California

1. The applicant is a corporation.

2. Not applicable.

3. Gerald V. Anderson - President, 608 East C Street, Colton, Calif.
Leo J. Speirs - - - Vice President, 696 East C Street, Colton, Calif.

Edward E. Wilhite - Secretary, 927 Palm Drive, Colton, Calif.
Donald E. Wilhite - Assistant Secretary, 1608 Sheridan Ave., San Bernardino, Calif.

Daniel Anderson - - Director, 848 Palm Drive, Colton, Calif.
Duene S. Carr - - - Director, 1194 Bonita Dr., Colton, Calif.
Reagan Thompson - - Director, 1207 West 2nd Street, San Bernardino, Calif.

Stewart W. Thorley - Director, 644 East C Street, Colton, Calif.
Robert J. Ingalls - Director, 820 Orange Grove Ave., Colton, Calif.

Samuel A. Barnes - - Director, 840 West G Street, Colton, Calif.

Melbern J. Robinson- Stockholder, Edwards Air Force Base, Muroc, Calif.

Edward F. Sells - - Stockholder, 1296 Holly Dr., Colton, Calif.
Clyde Bowlen - - - - Stockholder, 1262 Mt. Vernon Ave., Colton, Calif.

Martin Harris - - - Stockholder, 608 East C Street, Colton, Calif.
Molly Ivey - - - - - Stockholder, 869 West G Street, Colton, Calif.
Henry T. Harber- - - Stockholder, George Air Force Base, Victorville, Calif.

William J. Johnston- Stockholder, 422 7th St., Victorville, Calif.

4. (a) Gerald V. Anderson - General business experience.
(b) Robert J. Ingalls - Engineer of Mines and Geology. Thirty-five years experience.

5. Owners.

6. Incumbrence at present is $3,500 balance on the purchase.

7. Not applicable.

8. See answer No. 24.

9. $20,000. Yes.

10. (a) Description of the property is under Survey No. 3985 which consists of four patented claims and eleven additional claims now being held by location by the present owners. Total property being described is as follows: No. 1. Hard Cash Lode Claim; No. 2. Athens Lode Claim; No. 3. Morning Star Lode Claim; No. 4. Miami Lode Claim; No. 5. Menlow Lode Claim: No. 6. North Star Lode Claim; No. 7 Henshaw Lode Claim; No. 8. Athens Extension Lode Claim; No. 9. Hard Cash Extension Lode Claim; No. 10. North Western Lode Claim; No. 11. Evening Star Lode Claim; No. 12. Magmaw Lode Claim; No. 13. Nephi Lode Claim; No. 14. Maybell Lode Claim; No. 15. Grace Lode Claim.

(b) Hard Cash Lode Claim located in Section 31, Township 14 North, Range 16 East, San Bernardino Meridian is a patented claim. The Nephi Lode Claim in Section 31 and 32 is an unpatented claim. These two claims are where exploration program is planned.

11. The present name is: Giant Ledge Lead and Copper Co. Inc.; Formerly know as: The Giant Ledge Gold and Copper Co.; Also know as: The Athens Group.

12. Located 23 miles South of Ivanpah, a railroad shipping point on the Union Pacific Railroad. Gravel surface County maintained road. Also intersection with U.S. Highway 66 and points East or West. 14 miles Northerly from Ivanpah, the County maintained gravel road intersects with U.S. Highway 91 to points North or West.

13. Contact making live water in three places. Anticline formation indicates ample subterranean flow with little development. Two live springs available at present for domestic use. It is sufficient.

14. Three bunk houses, one combination kitchen and dining room, one D C 7 bulldozer, two 210 air compressors and miscellaneous pipe and trackage material.

15. Plan milling operations on or near property. For shipping, trucks will be used to freight ore to Pine Creek Mill, Inyo County, California.

16. (a) The property was opened up in 1898 for a Gold, Lead and Silver property.

(b) Adjoining on the East is the Sagamore. This mine had at one time a 10 stamp mill for the reduction and recovery of Lead, Silver and Gold ore. It is now dismantled but being reopened as a Tungsten mine.

(c) An extensive sampling program of all locations where ledges in place are exposed shows the following results:

| | | |
|---|---|---|
| Sample group No. 1 This sample is an average of 23 cuts and shows the following results: HARD CASH EXTENSION. | Silver ounces per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper % | 1.00 |
| | Zinc % | 1.7 |
| Sample group No. 2. This sample is an average of 9 cuts and shows the following results: ATHENS EXTENSION. | Silver ounces per ton | 4.04 |
| | Lead % | 4.1 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 3. This sample is an average of 5 cuts and shows the following results: ATHENS | Silver ounces per ton | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No Zinc run. | |
| Sample group No. 4 This sample is an average of 5 cuts and shows the following results: MIAMI. | Silver ounces per ton | 3.22 |
| | Lead % | 1.2 |
| | Copper % | 1.1 |
| | No Zinc run. | |
| Sample group No. 5. This sample is an average of 10 cuts and shows the following results: MORNING STAR. | Silver ounces per ton | 10.22 |
| | Lead % | 9.6 |
| | Copper % | 3.4 |
| | No Zinc run. | |
| Sample group No. 6. This sample is an average of 5 cuts and shows the following results: NORTH WESTERN. | Silver ounces per ton | 3.9 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No Zinc run. | |
| Sample group No. 7. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | No Zinc run. | |
| Sample group No. 8. This is a Union assay sample sent to the smelter. AVERAGE. | Silver ounces per ton | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Two qualitative analysis have been run on the afore mentioned sample group. These show the following results:

Silicon - - - - - - - - - - - - - - -
Calcium - - - - - - - - - - - - - - - } Main Constituents.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive, Colton, California

17. Not in production at present. Plan #2 milling.

18. (a) A contact vein with a South Easterly North Westerly Strike dipping 82 deg. Westerly. Cross fractures are numerous on Hard Cash Lode Claim at the principal point of exposure.

(b) Maps and assays inclosed.

(c) No reserves at present.

19. Discovery of Tungsten in paying quantities has prompted a rearrangement of former plans to mine and mill Copper, Lead, Silver and Zinc.

20. Tungsten primarily, Copper, Lead, Silver and Zinc secondary on a Lime Granite contact vein.

21. Propose to sink two exploration shafts. First: The Hard Cash shaft, approximately six months. Second: The Nephi shaft and the access road approximately six months. Present plans are to carry on the two exploration projects simultaneously.

22. Refer to engineering report. Also enclosed geological maps.

23. (a) Labor: 4 miners @ $65.00 per week.
(b) 1 shift foreman @ $125.00 per week.
1 camp foreman @ $100.00 per week.
(c) Upkeep and maintainance: $6,000.00
(d) $20,000.00
(e) $20,000.00
(f) None
(g) $40.00 per day for two 210 compressors, one 7D Caterpillar Bulldozer, two 4-wheel drive H.D. Trucks.
(h) $2,000.00. Small mine supplies.
(i) Fuel for small equipment-$75.00 daily. Powder caps and fuses-$80.00 daily.

24. Will estimate 4 men making 2½ feet per day and including all timbering - 6 months. Should complete exploration shaft to the 200 foot level by basing it on 2 days to complete each 5 foot set.

Each 5 feet set will take the following:

$56 in wages.
$90 for timber.
$100 for miscellaneous equipment.

This cost will be multiplied by 40 as there will be 40 five foot sets. It is planned at this point to institute diamond drilling program.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California

"REPORT ON THE GIANT LEDGE MINE"
Submitted July 11, 1951.

HISTORY OF THE AREA;

For many years the Ivanpah Barnwell area has been noted for it's part in the production of metals, namely, Copper, Silver, Lead and Gold. Our early records show the activity that once centered in this locality. Barnwell, once a busy town of two to three thousand inhabitants, lies dormant, only a memory to a few of the old timers who can recall the days when mule teams were relied upon. Later the T.T.&.W.R.R. conected the area with the outside world. To others who have came since, only the name of a barren spot on the desertis evidence of past activity of this once active mining center. A few miles northward the Searchlight area was active and is reputed to have produced millions in gold. Like the rest of this vast mineral belt it too is slightly more than a memory.

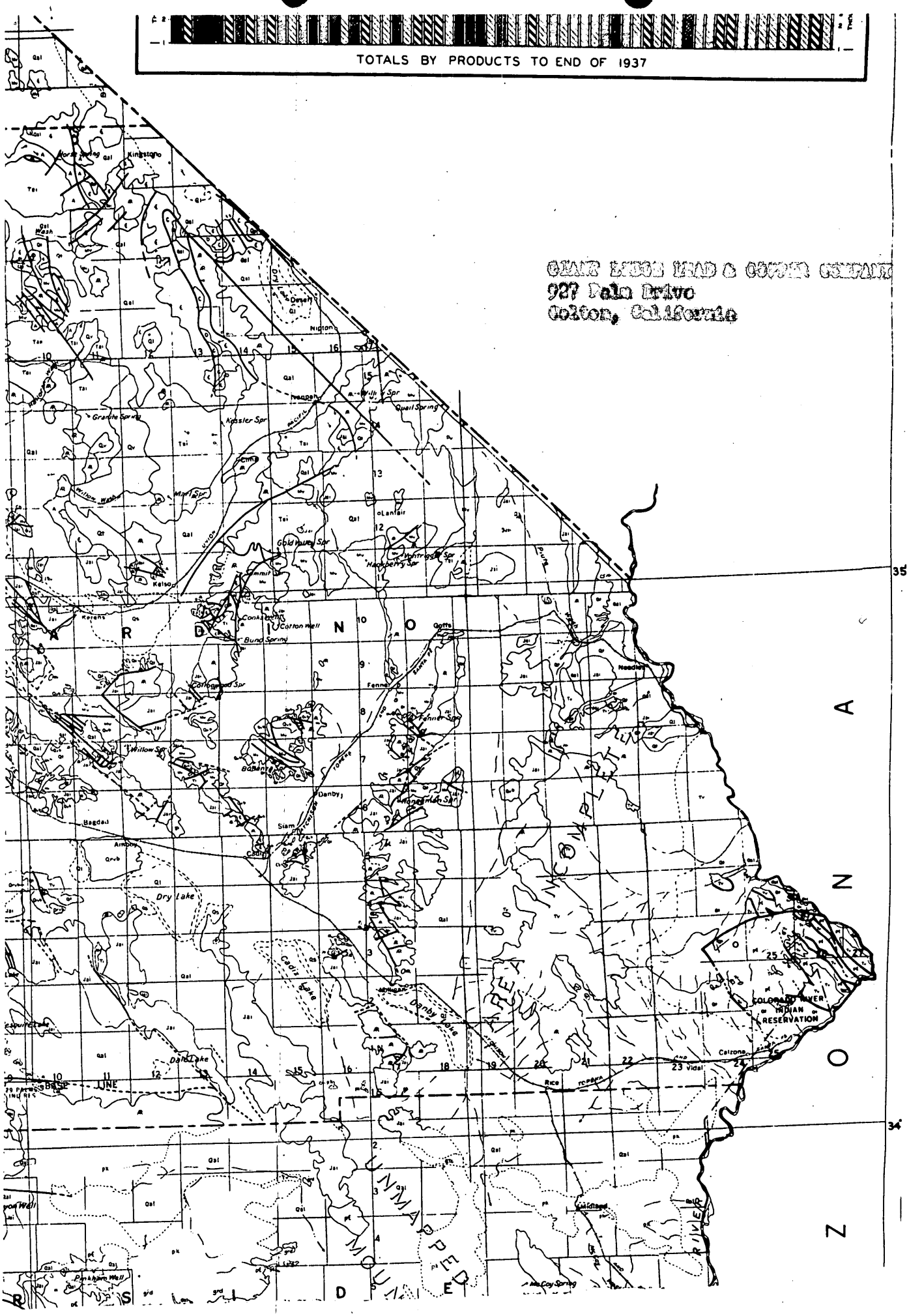
The pressure of years and monitary changes have left their mark. The rarer metals have been in some cases worked out and in others, economic changes forced shutdowns, to the extent that until recently little or no mining of any consequence has been going on. Now with the discovery of rare metals of various kinds and new improved methods of refining and extraction, the Barnwell Ivanpah Searchlight areas are looking forward to a new boom in the mining industry. Thousands of tons of material mined as waste by the early seekers of Gold and Silver, lies leeching on dumps waiting for this new era and an industry that demands just such elements as are found in plenty in this locality. When the branch line rail road that served the area suspended operation the problems of mines in this local were increased. Long hawls by mules and later trucks, over, in many cases, unimproved roads made such increased demands on the operator that in many cases if not all, suspended operations.

Special attention is called to the New York Range. This range is a veritable storehouse of strategic metals, although complex in occurence it holds in it's canyons and hills Lead, Zinc, Silver, Copper, Gold, and last but by no wise the least , strong deposits of tungsten ores have lately been discovered. With present improved methods of recovery this locality can and will see the so called boom days again and soon. From the Tacopa Goodsprings area southeasterly there occurs numerous contacts in the limes, all carrying some showing of mineral and many have proven valuable in as much as there are some very productive mines along the lime reef

The Clark Mtn area has recently made important discoveries of rare earths that will meet critical demands. The Ivanpah Mtns further southeast also have long been known to hold many deposits of both Copper, Lead and Zinc. Then on further southeast the New Yorks are now in the process of proving their wealth in needed metals. The Ivanpah Barnwell and Cima triangle form a mineral deposit that extends as far south as the Goffs basin.

GIANT LEDGE LAND & GRAZING COMPANY
987 Palm Drive
Colton, California

TOTALS BY PRODUCTS TO END OF 1937




CHAR LESS LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

"GENERAL GEOLOGY & TOPOGRAPHY"

While the country as a whole is of Granit Base, to the Northeast, we find strong showings of Tertiary or New Granits. While to the East we have some Jurassic Acid Intrusives. South of these, Terrace deposits are in evidence with a showing of Camberian Marine Sediments. These sediments extending westerly and contacting with Miocene Volcanics. West of these, the terrain is largely Alluvium.

The surronding country is arid and Joshua trees with light sage and Greeswood prevails. Grazeing in the area is extensive and water is plentiful by development. Small Penion Pine is found above the 4.000 ft level with considerable Juniper. The climate is mild and ideal working condtions prevail most of the year. Many live springs are found above the 4.000 foot and fine cold water is available for most domestic uses. Cattle ranching and mining are the most prevalent and constitute the the industry of the locality.

The area is served by the A.T.&.S.F.R.R., to the south some 25 miles and to the North 21 miles distant by the U.P.R.R. which runs along the North base of the New York Range. Loading accomadations are at both Goffs and Ivanpah, much ore of various kinds being shipped from Ivanpah.

"SPECIFIC GEOLOGY OF THE GIANT LEDGE"

The Giant Ledge consists of a Porphry Lime contact to the north this giveing way to Granit Lime contact about midway the Hard Cash Claim. There are numerous surface falts and minor Granit intrusions into the Limes are frequent. Some of the oldest exposures being Quartzites and so called Mafics. Notable is the absence of any basement complex of Volcanics so often found in the Pre Cambrian. Paralleling the contact, are numerous veins back in the Limes at various depths. Indications are that depth on the true contact will open up extensive ore bodies as well located veins are all dipping strongly in that direction. On the Hard Cash Claim the vein is prominent; and devided between the Granit Lime contact to the south and the Porphry Lime contact to the North. At the south line of this claim the vein leaves the contact and occurs more Easterly in the Limes. No depth has been made on the contact and most of the workings consist of tunnel operations. There are live springs both above and below the mine and indications are that water will be encountered with little depth. A cross fracture occurs on the Hard Cash and there is exposed on the surface a strong vein of Lead Silver and Copper carrying 1.75% Tungston Trioxide. A strong vein also a cross fracture parallels this vein to the north 165 ft that shows very promiseing in Hubernite. Most of the ore on the Hard Cash is basic Florite carrying Copper, Lead, Silver and tungston. Extensive sampleing is being done and results will appear later in this report.

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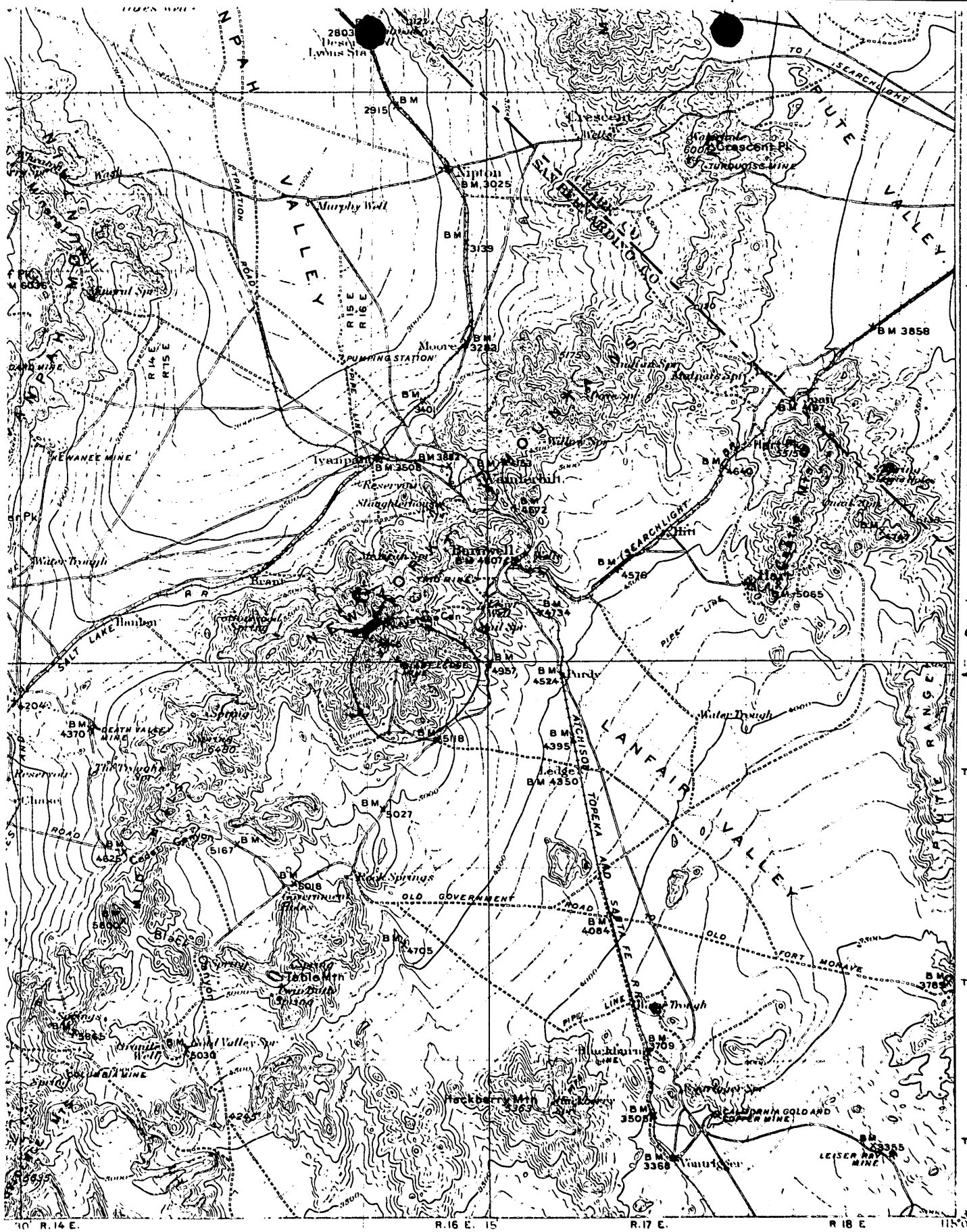



Edition of June 1912, reprinted 1941

Polyconic projection, North American datum

Map of the Goodsprings quadrangle, scale 1:62,500, contour interval 50 feet, from a later and more detailed survey of the area adjacent to Goodsprings, is available.

CALIF NEV
IVANPAH

83500 - W11500/60

GRAY BROS ROAD & SUPPLY COMPANY
927 Palm Drive, Colton, Calif.

"DESCRIPTION AND DEVLOPMENT"

The Giant Ledge consists of four patented claims and 17 others that are being held by location by the present owners. At an average elevation of 6.500 ft, the patented claims are the Hard Cash, Athens, Morning Star and Miami. The claims being held by location are the Hard Cash Ext, Athens Ext, Nephi, Henshaw, Northwestern, Maybell, Evening Star, North Star, Grace, Magmaw, Menlow, Sharlett, Virginia, Luetta, Terrace, Resign and Last Chance.

"THE MIAMI LODE CLAIM"
(Apatented claim)

The Miami claim is patented under survey No3985, work on this claim consists of an open cut thirty feet long exposeing a 22 inch vein of Copper Silver ore. Strike East 7 deg, South with a dip 87 deg South.

This small stringer is an offshoot fracture running in an easterly direction from the contact. Just west of this open cut a shaft has been sunk to an estimated depth of 90 feet on the vein, showing is good at collar, further inspection made impossible by there being no timber in place. Numerous open cuts prove this vein to be contenious across the width of the claim. Access to this is by pack trail only.

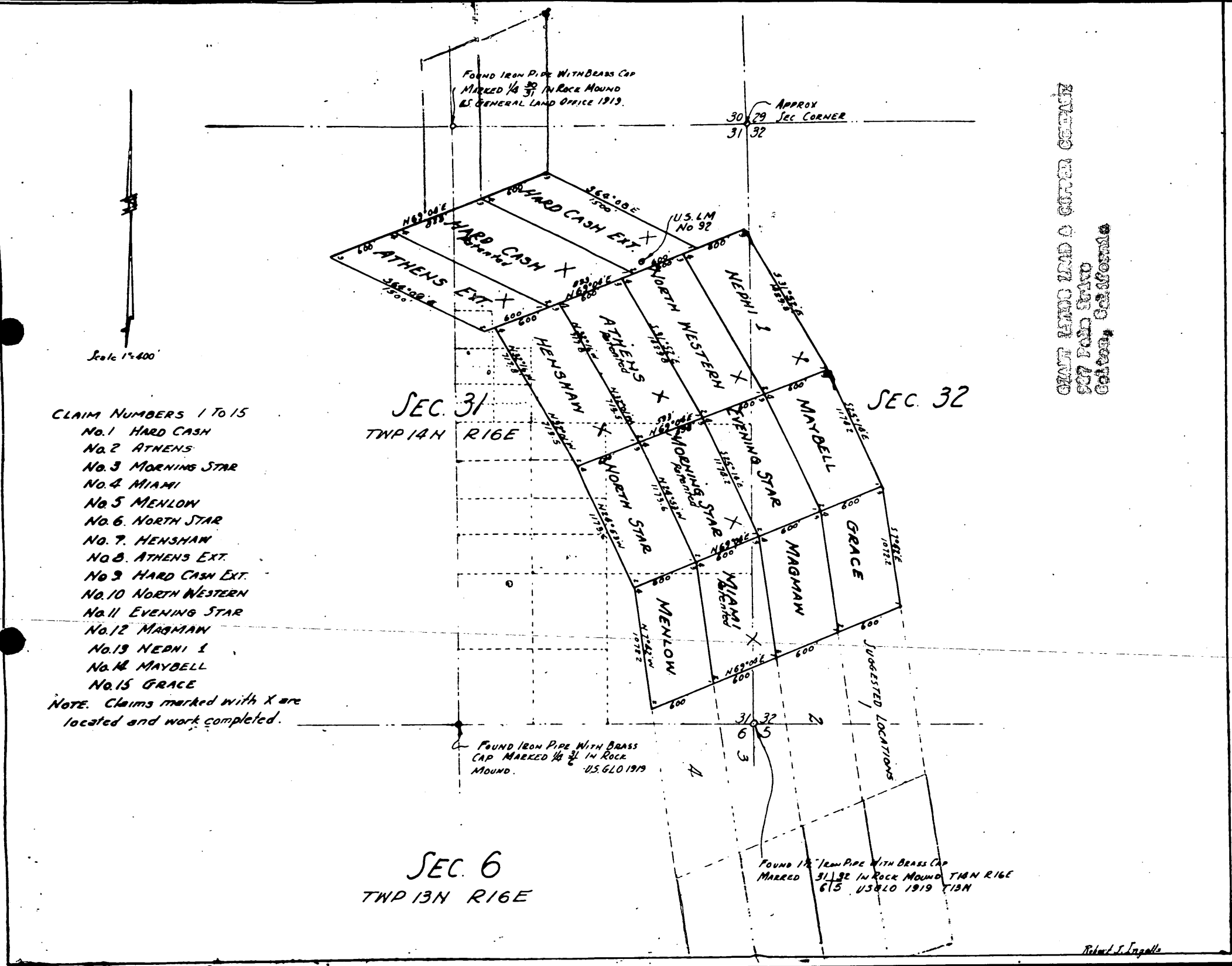
"THE MORNING STAR LODE CLAIM"
(A patented claim)

The Morning Star Lode Claim is patented under survey No.3985. Work on this clain consists of a cross cut tunnel driven easterly in the Limes, showing vein in place. This vein carries Copper, Lead and Silver. Thirty eight assays have been cut over this claim in various exposiers showing 1.7% Copper, 11 ozs Silver. South of the portal of the crosscut 28 feet a shaft has been sunk 75 feet down. Showing here is very promiseing at collar, further inspection at this time made impossible by lack of ladder ways. The only access to this claim is by pack trail. Elevation 6.052 feet.

"THE ATHENS LODE CLAIM"
(A patented claim)

The Athens Lode Claim is patented under survey No,3985. This claim has a large amount of exploration work, there being three levels opened up along the mountain slope, all with considerable footage. Crosscut tunnels have been pulled easterly into the limes to various depths. The first, or summit level consists of a tunnel driven North 16 deg East for some 75 feet on a strong vein three to four feet in width. Back 60 feet from the portal a small feeder vein intersects the main vein and heads North 38 deg East. This feeder has been followed for a distance of forty feet. A winz has been sunk at the intersection to an estimated depth of 65 feet and the vein is strong at collar. Assays here show 9% Copper and 23 ozs in Silver. Below this workings and 70 feet north another crosscut has been pulled apparently to intersect the vein above but for some reason work was suspended before makeing the contact.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California


Found Iron Pipe With Brass Cap Marked 1/4 30/31 In Rock Mound U.S. General Land Office 1919.
Approx Sec Corner
30 29
31 32
Scale 1"=400'
Hard Cash Ext.
Hard Cash Located
Athens Ext.
Athens Located
Henshaw
North Western
Nephi 1
Morning Star Located
North Star
Evening Star
Maybell
Miami Located
Menlow
Magman
Grace
U.S. LM No 92
Sec. 31
TWP 14N R16E
Sec. 32
Suggested Locations
Found Iron Pipe With Brass Cap Marked 1/4 31/6 In Rock Mound. U.S.G.L.O 1919
Found 1½" Iron Pipe With Brass Cap Marked 31/32 6/5 In Rock Mound U.S.G.L.O 1919 T13N R16E
Sec. 6
TWP 13N R16E
Claim Numbers 1 To 15
No. 1 Hard Cash
No. 2 Athens
No. 3 Morning Star
No. 4 Miami
No. 5 Menlow
No. 6. North Star
No. 7. Henshaw
No. 8. Athens Ext.
No. 9 Hard Cash Ext.
No. 10 North Western
No. 11 Evening Star
No. 12 Magman
No. 13 Nephi 1
No. 14 Maybell
No. 15 Grace
Note. Claims marked with X are located and work completed.
Robert J. Ingalls

"THE ATHENS LODE CLAIM CON'T"

Directly below these workings down the mountain side 120 feet below another tunnel has been pulled, this tunnel portals in the Limes and crosscuts easterly 320 feet. This tunnel has four side crosscuts,all seem to be following small unimportant stringers. Below this another 145 feet and portaled in the Granit, another crosscut tunnel has been pulled. Reports are that this tunnel goes back 1.200 feet to cut the vein that occurs on the summit.This tunnel being badly caved back 645 feet from the portal inspection impossible at this time. Northerly of this portal 240 feet and 70 feet higher up another tunnel has been pulled to a depth of 365 feet. Strong veins of Copper and Zinc are cut in this workings, assays taken here show 2.7% Copper, 12% Zinc and 11 ozs Silver. No sinking has been done at any level. Access is by pack trail only. Elevation 6.110 feet.

"THE HARD CASH LODE CLAIM"
(A patented claim)

The Hard Cash Lode claim is a patented claim Under survey No,3985. This claim also has a great deal of work and is accessible by a road to the foot of the dump of the main workings. In this work a tunnel has been pulled easterly back 380 feet. An incline raise has been pulled back 110 feet from the portal. This raise conects with an upper level 90 feet above. The lower drift is collared in ore and this ore deposit continues back and ends just short of the raise. The raise inclines 67 deg south and cuts ore 7 feet above the lower drift, topping in ore on the upper level. Back 40 feet from the main portal a crosscut drift has been pulled southerly. This crosscut goes ba ck 129 feet running somewhat in the shape of a harse shoe. It starts southerly for 40 feet, here it turns easterly 60 feet, then Northeasterly for another 60 feet, ore was encountered at the portal and all of this crosscut is in solid ore. The ledge of ore cut at the portal strikes North 38 deg East, with a dip South 77 deg. It can readily be seen that this is a cross fracture vein Easterly from the contact. Ledge matter from this vein is exposed on the surface Easterly for a distance of 750 feet. Numerous open cuts and shallow holes prove comercial ore over the total distance stated. The width tapering from 65 feet at the junction of the contact to 12 feet on the Easterly exposier. At the top of the raise from the main level a drift runs south for a distance of 16 feet. Also the portal drift runs westerly 40 feet to collar in ore. North of this portal another tunnel has been pulled 60 feet Easterly along the vein. This tunnel collars in ore and ends in ore. A shaft just to the right of this tunnel goes down and conects with the lower level 90 feet below. All workings on this claim are in good mill ore except a continued exploration tunnel that continues on back from the No 1 raise some 200 feet. The foot or Northerly wall has been exposed in one place back 90 feet from the main tunnel portal. North of the main tunnel portal and 65 feet away an incline shaft has been sunk, This shaft goes down 35 feet inclineing 70 deg Easterly. At the bottom a short drift has been pulled southerly 15 feet,

GOLD LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California

"HARD CASH CLAIM CON'T"

this drift opens out into an under ground stope. Ore has been mined here over an area 40 feet Easterly and Westerly by 12 feet southerly and Northerly, with backs 8 feet. In length this stope runs North 33 deg East along the strike of the vein slightly cross cutting the vein matter. Around the hill southerly from the main Tunnel some 900 feet a shaft has been sunk down 38 feet on a vein of high grade ore. This vein is 20 inches in width and has a strike of East 7deg North with a dip 89 deg south. This quartz vein carries 9% Tungston Trioxide, in the form of Schlite and Wolfermite. Below this shaft and 28 feet westerly a tunnel goes in and cuts the vein. Samples from this tunnel assay 18.62% Tungston Trioxide with little or no Lead or Copper. Reports are that two car load shipments were mwde from the Hard Cash claim that run $44.26 and $61.52 resp; However no confirmation ofthese reports is available. There is a large dump of an estimated 5.000 tons that assays 1.10% Tungston Trioxide. Other dumps range from $26.00 to $40.55 in Lead, Copper, Zinc and Silver. Overall average shows 1.75% Copper; These four patented claims all are located in Sec 31, T14N R16E, S.B.M. At an elevation average 6.500 feet.

The claims now being held by location are described as follows.

"THE NORTH STAR LODE CLAIM"
(Not Patented)

The North Star Lode Claim is on a parallel vein of quartz occuring in a Granit intrusion Easterly of the Lime Granit contact. A good showing of Silver, Tungston and Lead. Discovery work is in the form of an open cut. This claim parallels the Morning Star on the Westerly side in Sec 31, T14N R16E. At an elevation of 5.900 feet. Access is by pack trail only.

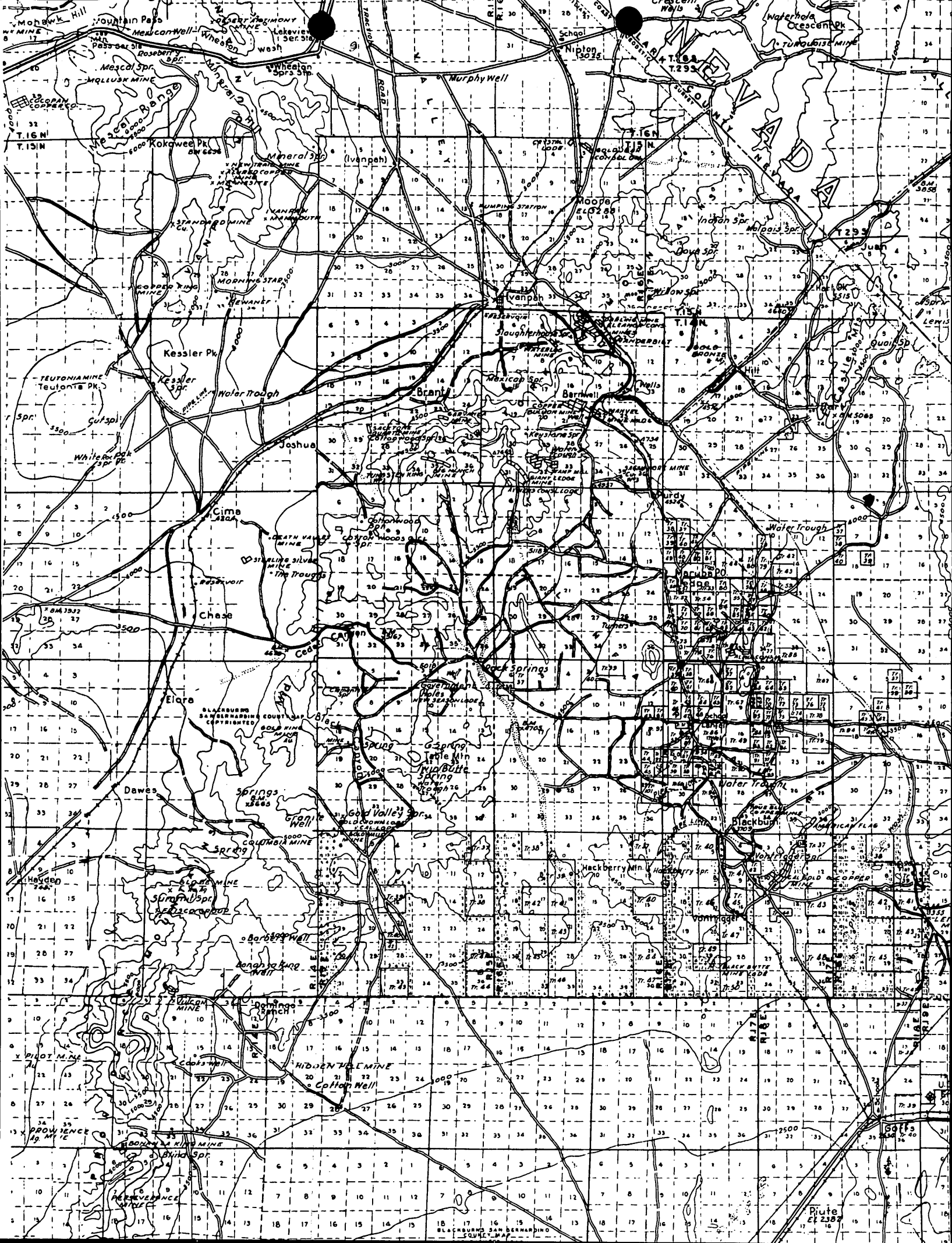
"THE GRACE LODE CLAIM"
(Not patented)

The Grace Lode Claim adjoines the Maybell on the Southerly end and parallels the Magmaw, joining the Magmaw on the Easterly side line. This claim is a new location and discovery work is in progress on a good showing of Copper at this time. Located in Sec 32 T14N R 16E S.B.M. Elevation 5.600 feet. Access by pack trail only.

"THE MAGMAW LODE CLAIM"
(Not patented)

The Magmaw Lode Claim adjoines the Grace on the Easterly side line and the Miami on the Westerly side line. Lying and being between the two claims. Work is in progress on the continuation of vein that is exposed on the Evening Star. Some showing of Copper, Silver and Lead. No assays out. In Sec 32 T14N R16E. S.B.M.Elevation 5.700 feet. Access is by pack trail only.

GRANT TUNGSTEN LEAD & COPPER COMPANY
927 Palm Drive
Colton, California


Mohawk Hill
Mountain Pass
Mexican Well
Wheelon Wash
Lakeview Ser. Sta.
Nipton
School
Crescent Wells
Waterhole
Crescent Pk.
Turquoise Mine
Mescal Spr.
Mollusk Mine
Murphy Well
Mescal Range
Kokowee Pk.
Mineral Spr.
(Ivanpah)
Moope
Indian Spr.
Walpais Spr.
Dove Spr.
Juan
Willow Spr.
Ivanpah
Slaughterhouse Spr.
Kessler Pk.
Kessler Spr.
Teutonia Pk.
Water Trough
Brant
Mexican Spr.
Bernwell
Cut Spr.
White Rock Pk.
Joshua
Keystone Spr.
Cima
Cottonwood Spr.
Cottonwood Pass
Chase
Cedar
Elora
Dawes
Springs
Granite Well
Gold Valley Spr.
Table Mtn.
Twin Butte Spring
Rock Springs
Hackberry Mtn.
Hackberry Spr.
Vontrigger
Blackburn
Water Trough
Hayden
Barber's Well
Bonanza King Well
Domingo Ranch
Cooks Well
Hidden Vale Mine
Cotton Well
Providence Mts.
Bonanza King Mine
Bynd Spr.
Perseverance Mine
Piute
Goffs
Nevada
California
Clark County
Nevada
T.16N.
T.15N.
T.14N.
T.29S.
R.16E.
R.17E.
R.18E.
R.19E.
Blackburns San Bernardino County Map

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

"THE HARD CASH EXT LODE CLAIM"
(Not a patented claim)

The Hard Cash Ext Lode Claim paralles the Hard Cash claim on the Northerly side line. A 6 foot vein of quartz witha strike South 70deg East has been opened up and at present assay results are not in. Located in Sec 31 T14N R16E S.B.M. At an elevation of 6956 feet. Access is by pack trail only.

"THE HENSHAW LODE CLAIM"
(Not patented)

The Henshaw claim parallels the Athens on the Westerly side line. A Lime stringer has been opened up and at present is makeing 500 gals of water daily. It is planed to devlope this for domestic use. At an elevation of 5800 feet, In Sec 31 T14N R16E.S.B.M. Access by pack trail only.

"THE NEPHI LODE CLAIM"
(Not patented)

The Nephi Lode Claim is the most Northeast claim in the Giant Ledge group. This claim has a very strong showing of Copper Silver ore assaying 12.66 Copper and 24.69 ozs Silver. A prospect shaft has been sunk to a depth of 18 ft and the showing is very good at this writeing. Width of the vein as yet undetermined, this vein is a cross fracture vein with a strike North 76 deg East, dip 82 deg South. Elevation 6500 feet, in Sec 31 and 32 T14N R16E S.B.M. Access by pack trail only.

"THE NORTHWESTERN LODE CLAIM"
(Not patented)

The Northwestern Lode Claim parallels the Athens on the Westrly side line, lying and being between the Athens and the Nephi,claims. Work in progress at this time. A strong showing of green Epidote carrying 1.67% Tungston Trioxide. The vein strikes almost true Southeast and Northwest. In Sec 31 T14N R16E.S.B.M. Elevation 6900 feet. Access by pack trail only.

"THE MAYBELL LODE CLAIM"
(Not patented)

The Maybell Lode Claim Is a new location, discovery work now in progress. No assay cut at this time the vein not completly exposed. A good showing with true wall slip. Located in Sec 32 T14N R16E S.B.M. Elevation 5800 feet,access by pack trail only.

"THE ATHENS EXT LODE CLAIM"
(Not patented)

The Athens Ext Lode Claim parallels the Hard Cash on the southerly side line. A strong vein of Florite occurs along a Granit intrusion with a Lime foot wall. Strike south 38 deg East with a dip 65 deg East. This vein is a complex ore carrying Tungston Trioxide 2.16%, Lead 6.4%, 6.01% Zinc. An old caved tunnel is being reopened at this time. The width of the vein indication is that a strong deposit exists. 12 feet of ore in sight at portal. In Sec 31 T 14N R16E S.B.M. Elevation 5900 feet, access by pack trail only.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive
Golden, California

"THE MENLOW LODE CLAIM"
(Not Patented)

The Menlow Lode Claim parallels the Miami Claim Adjoining this claim on the westerly side line. This is a new location. Open cut work in progress at present. No assays as yet. Located in Sec 31 T 14N R16E, S.B.M. Elevation 5600 feet Access by pack trail only.

"THE SHARLETT LODE CLAIM"
(Not patented)

The Sharlett Lode Claim is a new location, Being the Southeast most claim of the Giant Ledge Group. This claim is a new location and no vein in place exposed at this writeing. Elevation 5300 feet, located in Sec 32 and 5 T14N R16E, S.B.M. Access is by pack trail only.

"THE VIRGENIA LODE CLAIM"
(Not patented)

The Virgenia Lode Claim is a new location, lying paralled to the Sharlett and adjoining that claim on the Westerly side. and adjoining the Terrace Lode claim on the Westerly side line. Open cut work now in progress no samples cut at this time. Located in Sec 32 and 5 T 14N 16E and T 13N and R16E.S.B.M. Elevation 5200 feet, access by pack trail only.

"THE TERRACE LODE CLAIM"
(Not patented)

The Terrace Lode Claim is a new location, This claim parallels the Virgenia. Joining that claim on the Easterly line and the Last Chance Paralleing that claim on the Westerly side line. Discovery work in progress at present, no assays cut. Located in Sec's 5 and 6 T13N R16 and Sec 31 and 32 T14N R16E. S.B.M. At an elevation of 5300 feet. Access is by pack trail only.

"THE LAST CHANCE LODE CLAIM"
(Not patented)

The Last Chance Lode Claim is a new location, paralleing the Virgenia on the westerly side line, This claim is the Southwesterly most claim of the Giant Ledge Group. Located in Sec 31 and6 T 13and 14N R 16E. S.B.M. No assays cut at this time. Discovery work in progress. Elevation 5200 feet. Access by trail only.

"THE EVENING STAR LODE CLAIM"
(Not patented)

The Evening Star Lode Claim is a new location and discovery work is in progress. No samples we taken as the vein in place is not as yet exposed. This claim ties on to the North Star on the Easterly side line. Located in Sec 31 and 32 T14N R16E. S.B.M. Elevation 5800 feet, Access by pack trail only.

"THE RESIGN LODE CLAIM"

The Resign Lode Claim is an extension claim on the westerly end of the Hard Cash Ext. This is a new location and work was just starting on descovery at time of this writeing. No samples taken at this time. Located in Sec 32 T14N R16E. S.B.M. At an elevation of 5900 feet. Access by trail only.

GIANT LEDGE LEAD & ZINC COMPANY
927 Palm Drive
Colton, California

TRINITY 4791

FORM 1

COPY

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS

METALLURGICAL AND TESTING ENGINEERS

920 SANTEE STREET

LOS ANGELES 15

(Mill Copy)

LABORATORY No. 340483-90

Date July 19, 1951

Sample Ore

Received 7-12-51

Marked

Submitted by Giant Ledge Mining Co.,
c/o G. V. Anderson,
608 East "C" Street,
Colton, California.

Att: Robert Engles.

## REPORT OF DETERMINATIONS

**"Henshaw"**

Silver (Ag) ------- 2.92 ozs/ton --- $2.64/ ton
Lead (Pb) ---------- 2.12%
Tungsten Trioxide ($WO_3$) ----- 6.06%

**"Athens ExT"**

Silver (Ag) ---------- 1.65 oz/ton --- $1.49/ton
Lead (Pb) ---------- 2.75%
Tungsten Trioxide ($WO_3$) --- None

**"Shallow Discovery Shaft Eastern B oundry Nephi"**

Silver, (Ag) --------- 14.22 ozs/ton -- $12.87/ton
Copper (Cu) ---------- 4.25%

**"20 ft. Shaft on the Nephi"**

Silver, (Ag) --------- 24.66 ozs/ton -- $22.32/ton
Copper (Cu) ---------- 12.66%

**"D No. 2 Sample from Northwestern"**

Silver (Ag) --------- 0.42 oz/ton -- $0.38/ton
Tungsten Trioxide ($WO_3$) ----- Trace

-continued

OZARK LEAD & COPPER COMPANY
027 Palm Drive
Oak Park, Illinois

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

"THE LUETTA LODE CLAIM"

The luetta Lode Claim is a new location and adjoins the Hard Cash Claim on the Westerly end. This claim was recently discovered to hold deposits of Tungston. Discovery work in progress at present. Located in Sec 31, T14N R16E. S.B.M. Elevation 6950 feet. Access is by pack trail only.

An extensive sampleing program conducted over the 21 claims shows the following results. (By Claims.)

| | | |
|---|---|---|
| The Hard Cash Ext Claim. Sample Group No.1, 23 cuts average. | Silver ozs per ton | 9.54 |
| | Lead % | 6.1 |
| | Copper% | 1.00 |
| | Zinc% | 1.7 |
| The Athens Ext Claim. Sample Group No.2, 9 cuts average. | Silver | 4.04 |
| | Lead% | 4.01 |
| | Copper% | 1.6 |
| | No zinc run | |
| The Athens Claim. Sample group No.3,9 cuts average. | Silver | 4.32 |
| | Lead % | 4.1 |
| | Copper % | 4.1 |
| | No zinc run. | |
| The Miami Claim. Sample group No.4, 5 cuts averaged. | Silver | 3.27 |
| | Lead % | 1.1 |
| | Copper % | 1.12 |
| | No zinc run. | |
| The Morning Star Claim. Sample group No, 6. 10 cuts av. | Silver | 9.6 |
| | Lead % | 3.58 |
| | Copper % | 1.6 |
| | No zinc run. | |
| This group an average over all by Union Assayers. Smelter Sample. Salt Lake. | Silver | 5.8 |
| | Lead % | 3.4 |
| | Copper % | 1.31 |
| | Zinc % | 2.3 |
| This group an average over all by Union Asseyers Smelter Sample. Selby. | Silver | 5.8 |
| | Lead % | 4.2 |
| | Copper % | 1.26 |
| | Zinc % | 5.27 |

Tungston asseys have been kept seperate in as much as most samples were taken on seperate veins. The above samples were taken on veins not less than 5 feet in width. While most Tungston samples have been cut on smaller veins rangeing in width fron 18 inches to 16 feet.

OWNR [illegible] LEAD & SILVER [illegible]
927 [illegible] Drive
[illegible]

The following is a tabluation of Tungston Assays. It will be noticed that the Tungston area immediatly surronds the Hard Cash Claim. All the veins exposed seem to fan out in various directions from the main tunnel vein of the Hard Cash.

Tungston sampleing by claims.

Sample No,1.
This sample cut just easterly of the S.E.end line of the Hard Cash.
Tungston Trioxide 0.60 %
Sample No,2.
This sample cut on the southerly line of the Hard Cash.
Tungston Trioxide 0.63 %
Sample No,3.
This Sample cut on the Henshaw southerly of the Hard Cash.
Tungston Trioxide, 0.16 %
Sample No,4.
This sample cut on the Athens Ext Southerly of the Hard Cash.
Tungston Trioxide, 0.70 %
Sample No,5.
This sample cut on the main level Hard Cash Claim.
Tungston Trioxide, 1.68 %
Sample No,6.
This sample cut 20 feet below the main level Hard Cash.
Tungston Trioxide, 1.80 %
Sample No,7.
This sample cut on small 20 inch vein S easterly of the Hard Cash.
Tungston Trioxide, 18.62 %

Careful check has disclosed that all veins found to carry Tungston are tending to Strike so that they will terminate on the Hard Cash. The dip also is favorable for the same.

It is recomended that a sinking program be adopted and that this be done on or near the contact on the Hard Cash Claim. A two compartment shaft to a depth of two hunderd feet I feel will disclose a profitable deposit of good grade milling ore.

The Geological formation of the country is fovorable. All sampleing and ledge inclination is promiseing to warrent an exploration program.

Combination assays are as follows.

| | | |
|---|---|---|
| By Claims; | Silver | 2.92 |
| Henshaw Claim, | Lead | 2.12 |
| | Tungston Tri | 6.06 |
| Nephi Claim, | Silver | 14.22 |
| | Lead | 1.11 |
| | Copper | 4.25 |
| Northwestern, | Silver | 22.66 |
| | Copper | 12.60 |
| | Lead | none |

These samples are all surface cut.

GIANT MECK LEAD & COPPER COMPANY
927 Palm Drive
Colton, California

IN CONCLUSION:

It has been said by many,and is here repeated, that the Giant Ledge Mine is very favorable. The Granit Lime Contact strikes South Easterly and North Westerly with a dip westerly. This is a good indication that ore's will displace the Granits formeing large deposits. Indeed the numerous veins exposed in this area are of such importance that the writer can not recomend a more favorable spot for exploration. One cannot but be most impressed by the high grade stringer found on the Hard Cash. Granted, that a very limited amount of work has been done. The dip and strike of all veins in the suronding claims tend to center in one junction. It is entirely likely that a wisely directed devlopment will disclose further such shoots of ore and there value increased.

It is a significant fact to ponder that the original discoveries on surface showing in the area are very favorable for further underground exploration. Occurances of this kind in this region are to be respected and not lost sight of.

Recomendations;

The writer recomends that a sinking program be conducted on the Hard Cash, keeping an eye on the contact at all times. The two compartment shaft should be sunk to the 100 feet level before any effort to feel out the contact is made. If this is found favorable the work should continue another 100 feet where if advisable a dimond drilling program should prove the existing values at that depth. This type shaft can be slabbed off to a larger size if needed at a later date at a minimum cost.

Diamond drilling should proceed any mineing effort whether it be drifting or stopeing. This type program has been proven to be the most profitable in many instances.

This report is respectfully submitted for the Giant Ledge & Copper Co,Inc.

This 25th day of Sept 1951.

Signed Robert J. Ingalls
J.Robert Ingalls E.M.& G.

GIANT LEDGE LEAD & COPPER COMPANY
927 Palm Drive,
Colton, California

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. dma 2188

Date received MS 1444

34425

GIANT LEDGE LEAD AND COPPER COMPANY
840 G Street
Colton, California

Name and address of applicant

Date June 14, 1951

## INSTRUCTIONS

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

## GENERAL TECHNICAL DATA

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

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

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

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Robert J. Ingalls, 820 Orange Grove, Colton, Calif | President Director | None | 10,000 | 55,000 | | None | |
| Samuel A. Barnes, 840 G St Colton, Calif. | Treasurer Director | None | 12,000 | 55,000 | | None | |
| Leo J. Spears, 196 East G St, Colton, California | Director | None | 15,000 | 9,000 | | None | |
| Gerald V. Anderson, 608 East G St, Colton, Calif. | Director | None | 7,000 | 9,000 | | None | |
| Edward C. Wilhite, 927 Palm Drive, Colton, Calif | Vice-Pres. Director | None | 12,000 | 6,000 | | None | |
| Stewart Thorley 644 East G St, Colton, Cal | Director | None | 8,000 | 6,000 | | None | |
| Duane S. Carr, 1194 Bonita Drive, Colton, Calif. | Secretary Director | None | 12,000 | 6,000 | | None | |
| Douglas Thorley 644 East G St, Colton, Cal. | Director | None | 7,000 | 6,000 | | None | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ 300,000 | $ 170,000 | $ 1.00 | 170,00 | None |
| Preferred stock | $ None | $ | $ | | |

*Indicate period covered.

10. Production: Not yet in production.

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

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

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. Ore occu[illegible] along a granite line contact w[illegible] a [illegible] strike di[illegible] 87° East. The gangue is chiefly florite; Values are in both sulphides and carbonates.

16—63792-1

Giant Ledge Lead & Copper Company
840 West G. Street
Colton, California

1. Materials produced:

   (a) Chief mine products are: Lead, copper, Tungsten and silver.
   (b) Byproduct Florite.

2. Names of mines, etc.:

   A. HARD CASH LODE MINE:
      (a) 130 feet of shaft.
      (b) 340 feet of drifts and crosscuts.
      (c) 60 feet of tunnels.
      (d) Inapplicable.
      Mine making some water, not flooded. Estimated production 200 tons per day.

   B. ATHENS
      (a) None.
      (b) 2200 feet of drifts and crosscuts.
      (c) 600 feet of tunnels.
      (d) Numerous open cuts and shallow pits, 40 foot vein.
      Mine is making some water, but no pumping problem; not flooded; Estimated daily production 200 tons.

   C. MORNING STAR
      (a) 90 feet of shafts.
      (b) 200 feet of drifts, 60 feet of crosscuts.
      (c) 60 feet of tunnels.
      (d) None.
      Mine is making no water; estimate of daily production: 25 tons.

   D. MIAMI
      (a) 90 feet of shaft
      (b) None
      (c) None
      (d) None
      No water or pumping problem. Mine has yet to be developed.

3. The following applies to all of the above named mines:

   (a) 28 miles north of Goffs on the Santa Fe Railroad; 21 miles south of Ivanpah on the Union Pacific Railroad.
   (b) New York Mining District
   (c) Section 31, Township 14 North, Range 16 East SBBM.
   (d) County of San Bernardino, State of California

4. (a) Not in operation.
   (b) Under development by owner, Giant Ledge Lead and Copper Company.

5. Number of years in operation. History of operation 1902 to 1912; present owner engaged in exploration and development. Estimated date of full operation is December, 1952.

6. Experience of operators:
   (a) The applicant is a newly formed corporation.
   (b) The operation is in charge of Robert J. Ingalls, E.M., 1913, Missouri School of Mines, Rolla, Missouri. Twenty-eight years experience in mine and mill work.

7. History:
   (a) The four mines owned by the applicant were originally developed by the Giant Ledge Lead and Copper Company beginning about 1890 and operated for silver, gold and copper until about 1912. Property patented 1902. It is believed that operations were suspended because of the complexity of the ore.
   (b) The Dorr Tungsten property adjoining on the West is producing 50 ton daily. The sagamore on the East is shipping lead and silver. The Live Oak on the Northeast is installing mill; while the Copper Queen to the North is reopening.
   (c) 700 foot assay cut showing $30.00 value in lead, silver, copper and zinc. R1.75 tungstate acid content.

12. (b)
   (1) Twenty-five assays taken over vein 60 feet wide by 700 feet long and 180 feet deep show an average of $34.00 per ton lead, copper and silver. Later tests show dump and mine to carry 1.75% tungstate acid.
   (2) Ore occurs in complex form, carrying 1½ to 4% copper, 5% to 9% Lead, and 3 to 15 ounces of silver per ton.

13. Access Roads: With the exception of the last mile the roads are good. It is 28 miles to Goffs, the Santa Fe shipping point and 21 miles to Ivanpah, the Union Pacific shipping point. Needles, California is the nearest supply center, some 40 miles distance. Residence at mine.

14. Water Supply: Ample water for year round operation from springs and well. There is a proven well 1/2 mile from mine.

15. Power: 500 HP diesel proposed.

16. Labor: 3 miners, 1 carpenter, 1 engineer.

17. Equipment and facilities; One 210 compressor, one 105 compressor, two hoists, six buildings.

18. None.

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

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

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

**TOTAL ORE OR MINERAL RESERVES**

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | | | | | |
| Indicated (probable) | | | | | |

(*c*) If placer:

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

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

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

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

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

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

13. Access Roads:

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

14. Water Supply:

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

15. Power:

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

16. Labor:

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

17. Equipment and Facilities:

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

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

**CERTIFICATION**

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

GIANT LEDGE LEAD AND COPPER COMPANY
(Name of company)

By Robert A. Ingalls
(Signature of authorized official)

June 14, 1951
(Date)

President
(Title)

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

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

Speedy
Air Mail

WILLIAM J. JOHNSTONE
ATTORNEY AT LAW
TELEPHONE 5581
422 SEVENTH STREET
VICTORVILLE, CALIFORNIA

June 25, 1951

Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Gentlemen,

Please find enclosed 4 copies of Form FM 100 submitted on behalf of the Giant Ledge Lead and Copper Company for your action.

Very truly yours,

William J. Johnstone

Incl.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. dma 2188

Date received MS 1444

34425

GIANT LEDGE LEAD AND COPPER COMPANY
840 G Street
Colton, California

Name and address of applicant

Date June 14, 1951

## INSTRUCTIONS

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

## GENERAL TECHNICAL DATA

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

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

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

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

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

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Robert J. Ingalls, 820 Orange Grove, Colton, Calif | President Director | None | 10,000 | 55,000 | | None | |
| Samuel A. Barnes, 840 G St Colton, Calif. | Treasurer Director | None | 12,000 | 55,000 | | None | |
| Leo J. Spears, 196 East C St, Colton, California | Director | None | 15,000 | 9,000 | | None | |
| Gerald V. Anderson, 608 East C St, Colton, Calif. | Director | None | 7,000 | 9,000 | | None | |
| Edward A. Wilhite, 927 Palm Drive, Colton, Calif | Vice-Pres. Director | None | 12,000 | 6,000 | | None | |
| Stewart Thorley 644 East C St, Colton, Cal | Director | None | 8,000 | 6,000 | | None | |
| Duane S. Carr, 1194 Boneta Drive, Colton, Calif. | Secretary Director | None | 12,000 | 6,000 | | None | |
| Douglas Thorley 644 East C St, Colton, Cal. | Director | None | 7,000 | 6,000 | | None | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ 300,000 | $ 170,000 | $ 1.00 | 170,00 | None |
| Preferred stock | $ N one | $ | $ | | |

*Indicate period covered.

10. Production: **Not yet in production.**

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

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

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. **Ore occurs along a granite lime contact with SE-NW strike dip 87° East. The gangue is chiefly florite; Values are in both sulphides and carbonates.**

Giant Ledge Lead & Copper Company
840 West G. Street
Colton, California

1. Materials produced:

   (a) Chief mine products are: Lead, copper, Tungsten and silver.
   (b) Byproduct Florite.

2. Names of mines, etc.:

   A. HARD CASH LODE MINE:
      (a) 130 feet of shaft.
      (b) 340 feet of drifts and crosscuts.
      (c) 60 feet of tunnels.
      (d) Inapplicable.
      Mine making some water, not flooded. Estimated production 200 tons per day.

   B. ATHENS
      (a) None.
      (b) 2200 feet of drifts and crosscuts.
      (c) 600 feet of tunnels.
      (d) Numerous open cuts and shallow pits, 40 foot vein.
      Mine is making some water, but no pumping problem; not flooded; Estimated daily production 200 tons.

   C. MORNING STAR
      (a) 90 feet of shafts.
      (b) 200 feet of drifts, 60 feet of crosscuts.
      (c) 60 feet of tunnels.
      (d) None.
      Mine is making no water; estimate of daily production: 25 tons.

   D. MIAMI
      (a) 90 feet of shaft
      (b) None
      (c) None
      (d) None
      No water or pumping problem. Mine has yet to be developed.

3. The following applies to all of the above named mines:

   (a) 28 miles north of Goffs on the Santa Fe Railroad; 21 miles south of Ivanpah on the Union Pacific Railroad.
   (b) New York Mining District
   (c) Section 31, Township 14 North, Range 16 East SBBM.
   (d) County of San Bernardino, State of California

4. (a) Not in operation.
   (b) Under development by owner, Giant Ledge Lead and Copper Company.

5. Number of years in operation. History of operation 1902 to 1912; present owner engaged in exploration and development. Estimated date of full operation is December, 1952.

6. Experience of operators:
   (a) The applicant is a newly formed corporation.
   (b) The operation is in charge of Robert J. Ingalls, E.M., 1913, Missouri School of Mines, Rolla, Missouri. Twenty-eight years experience in mine and mill work.

7. History:
   (a) The four mines owned by the applicant were originally developed by the Giant Ledge Lead and Copper Company beginning about 1890 and operated for silver, gold and copper until about 1912. Property patented 1902. It is believed that operations were suspended because of the complexity of the ore.
   (b) The Dorr Tungsten property adjoining on the West is producing 50 ton daily. The sagamore on the East is shipping lead and silver. The Live Oak on the Northeast is installing mill; while the Copper Queen to the North is reopening.
   (c) 700 foot assay cut showing $30.00 value in lead, silver, copper and zinc. R1.75 tungstate acid content. ?

12. (b)
   (1) Twenty-five assays taken over vein 60 feet wide by 700 feet long and 180 feet deep show an average of $34.00 per ton lead, copper and silver. Later tests show dump and mine to carry 1.75% tungstate acid.
   (2) Ore occurs in complex form, carrying 1½ to 4% copper, 5% to 9% Lead, and 3 to 15 ounces of silver per ton.

13. Access Roads: With the exception of the last mile the roads are good. It is 28 miles to Goffs, the Santa Fe shipping point and 21 miles to Ivanpah, the Union Pacific shipping point. Needles, California is the nearest supply center, some 40 miles distance. Residence at mine.

14. Water Supply: Ample water for year round operation from springs and well. There is a proven well 1/2 mile from mine.

15. Power: 500 HP diesel proposed.

16. Labor: 3 miners, 1 carpenter, 1 engineer.

17. Equipment and facilities; One 210 compressor, one 105 compressor, two hoists, six buildings.

18. None.

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

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

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

TOTAL ORE OR MINERAL RESERVES

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | 100,000 | 22% | $34.00 | $28.00 | $9.00 |
| Indicated (probable) | 900,000 | 22% | $45.00 | $37.00 | $9.00 |

(*c*) If placer:

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

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

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

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

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

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CERTIFICATION

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

GIANT LEDGE LEAD AND COPPER COMPANY
(Name of company)

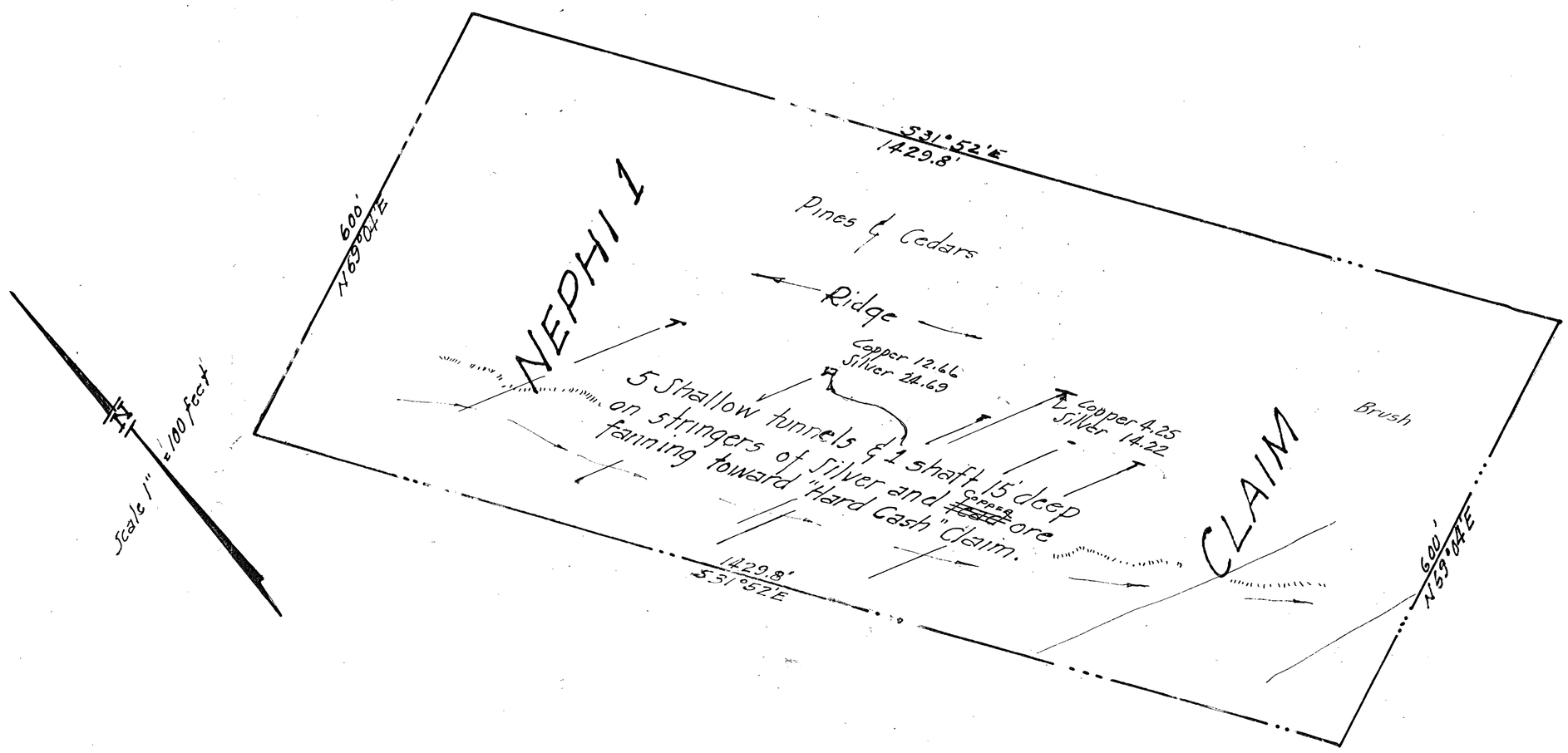
By Robert J. Dugalla
(Signature of authorized official)

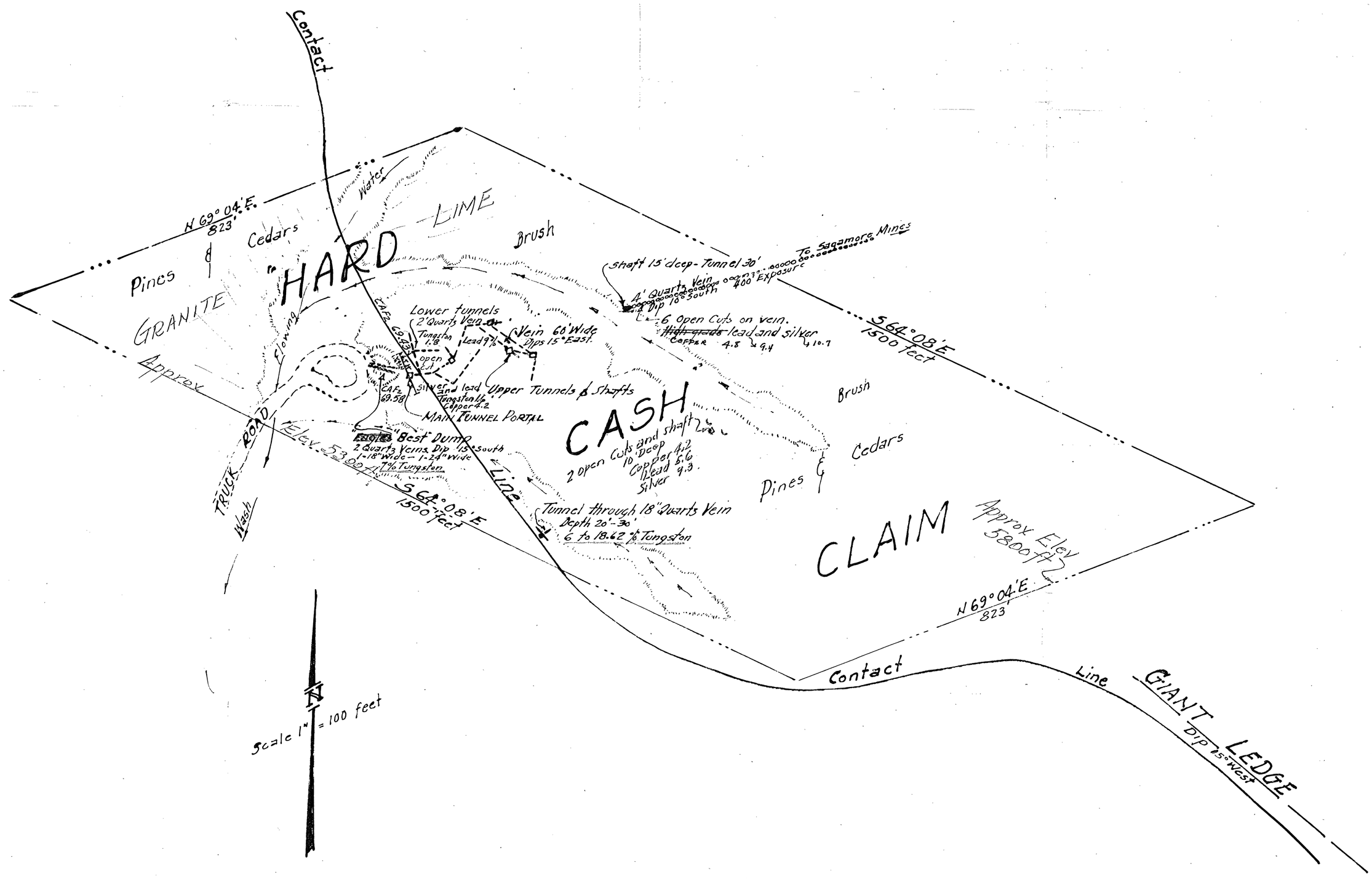
June 14, 1951
(Date)

President
(Title)

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

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

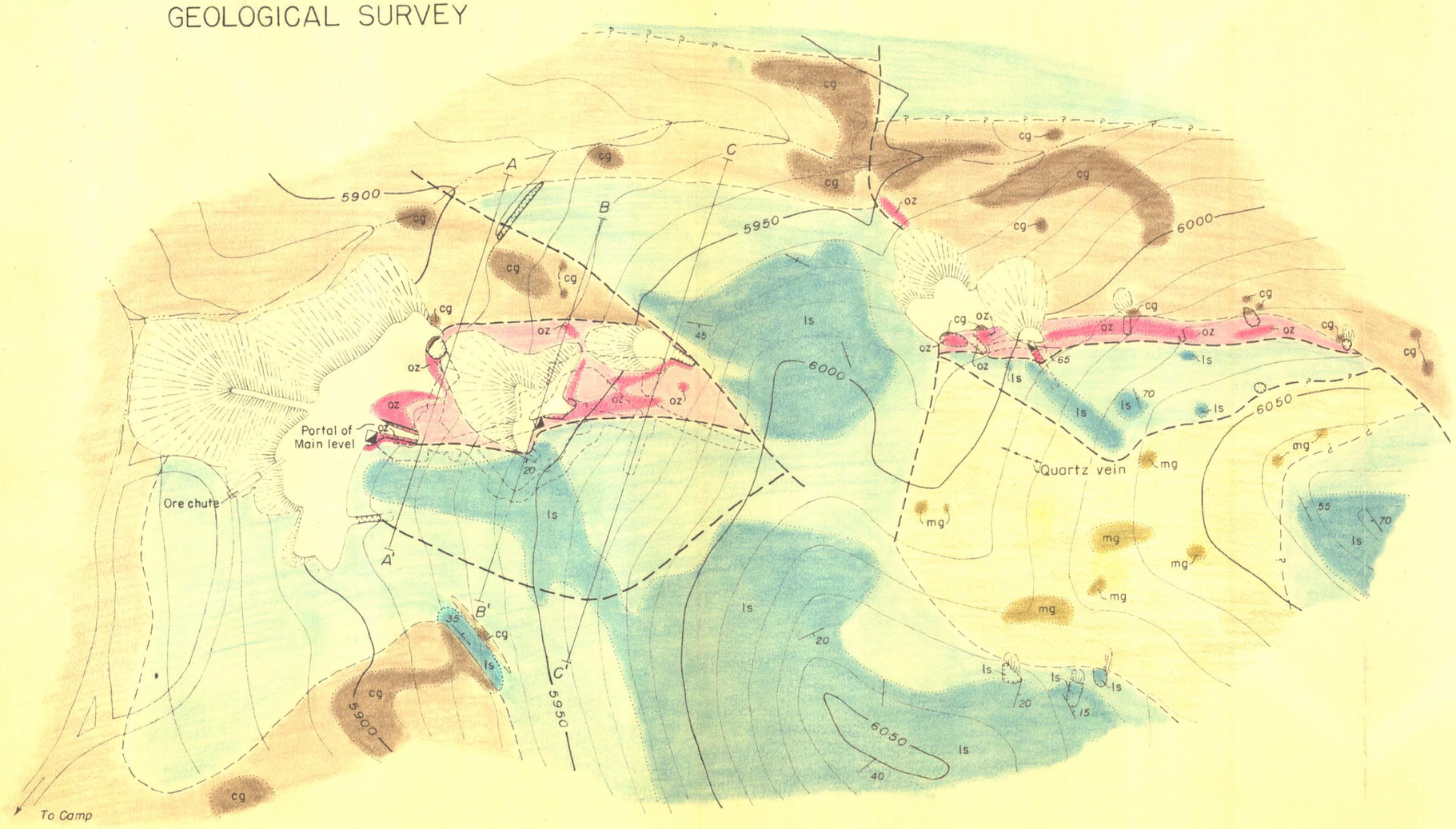

NEPHI 1
CLAIM
S31°52'E
1429.8'
600'
N69°04'E
Pines & Cedars
Ridge
Copper 12.66
Silver 24.69
5 Shallow tunnels & 1 shaft 15' deep
on stringers of silver and copper ore
fanning toward "Hard Cash" Claim.
Copper 4.25
Silver 14.22
Brush
1429.8'
S31°52'E
600'
N69°04'E
Scale 1" = 100 feet


Contact
N69°04'E
823'
Pines & Cedars
Water
HARD LIME
Brush
GRANITE
Flowing
Approx
Lower tunnels
2' Quartz Vein
Tungsten 1.8
Lead 9%
Vein 60' Wide
Dips 15° East.
open
Shaft 15' deep - Tunnel 30'
To Sagamore Mines
A' Quartz Vein
Dip 10° South
400' Exposure
6 Open Cuts on vein.
High grade lead and silver
Copper 4.8
9.4
10.7
S64°08'E
1500 feet
Silver and lead
Tungsten 1.6
Copper 4.2
Upper Tunnels & Shafts
MAIN TUNNEL PORTAL
CASH
Brush
Best Dump
2 Quartz Veins Dip 15° south
1-18" Wide — 1-24" Wide
7% Tungsten
2 open Cuts and shaft 20' Deep
Copper 4.2
Lead 5.6
Silver 9.3
Pines & Cedars
TRUCK ROAD
Wash
Elev. 5300 ft
S64°08'E
1500 feet
Line
Tunnel through 18" Quartz Vein
Depth 20'-30'
6 to 18.62 % Tungsten
CLAIM
Approx Elev 5800 ft
N69°04'E
823
Contact
Line
GIANT LEDGE
Dip 75° West
Scale 1" = 100 feet

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE NO. I

DMEA 2188




SURFACE MAP

N

EXPLANATION

Overburden
(Shown only in sections)

oz
Ore zone
(Consisting mainly of replaced granite and quartz)

mg
Medium grained granite

cg
Coarse grained granite

ls
Coarsely crystalline limestone

70
Contact, showing dip
(Dashed where approximately located)

40
Fault, showing dip
(Dashed where approximately located)

45
Strike and dip of beds

50
Strike and dip of banding in ore zone

Strike of vertical beds

Shaft at surface

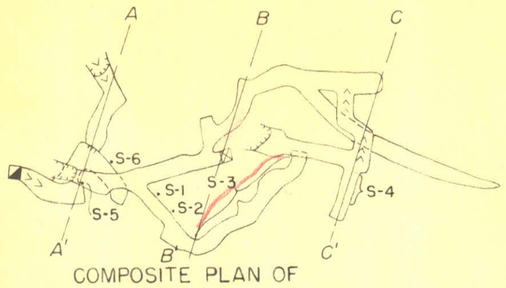
Outline of open cut

Dump

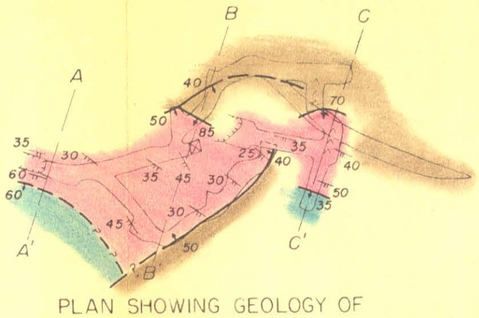
Bottom of shaft

Outline of underground workings on surface map

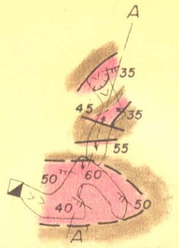
S-2 •
Sample locality




COMPOSITE PLAN OF UNDERGROUND WORKINGS




PLAN SHOWING GEOLOGY OF MAIN LEVEL AND UPPER LEVEL

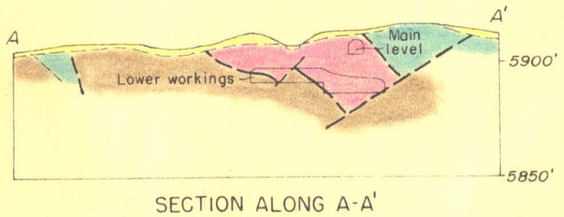



PLAN SHOWING GEOLOGY OF LOWER WORKINGS

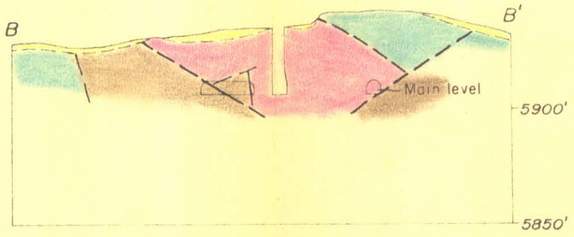
ASSAYS

| Sample No | %, Cu | %, Pb | %, Zn | %, $WO_3$ | %, $CaF_2$ | Oz Au/T | Oz Ag/T |
|---|---|---|---|---|---|---|---|
| S-1 | 0.75 | 4.0 | 1.2 | 0.22 | *1.0 | Trace | 5.40 |
| S-2 | 1.95 | 4.4 | 5.3 | 0.13 | *1.0 | Trace | 4.70 |
| S-3 | 0.65 | 0.9 | 0.8 | 0.04 | *1.0 | Trace | 3.25 |
| S-4 | 1.10 | 0.7 | 2.8 | 0.14 | *1.0 | Trace | 2.45 |
| S-5 | 1.20 | 8.2 | 8.1 | *0.01 | *1.0 | 0.005 | 10.90 |
| S-6 | 1.25 | 0.8 | 3.0 | 0.04 | *1.0 | Trace | 2.30 |

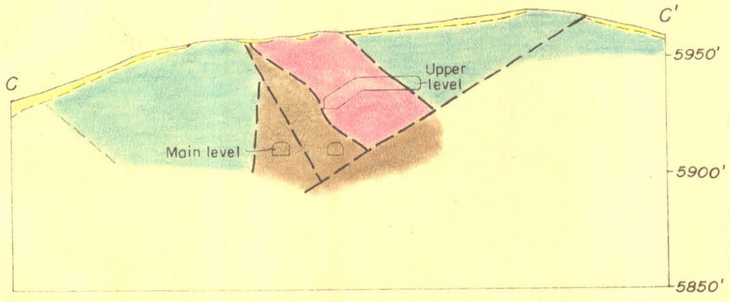
*Less than




SECTION ALONG A-A'




SECTION ALONG B-B'




SECTION ALONG C-C'

Surface geology by L. D. Clark
Underground geology by W. P. Irwin
March 3-6, 1952

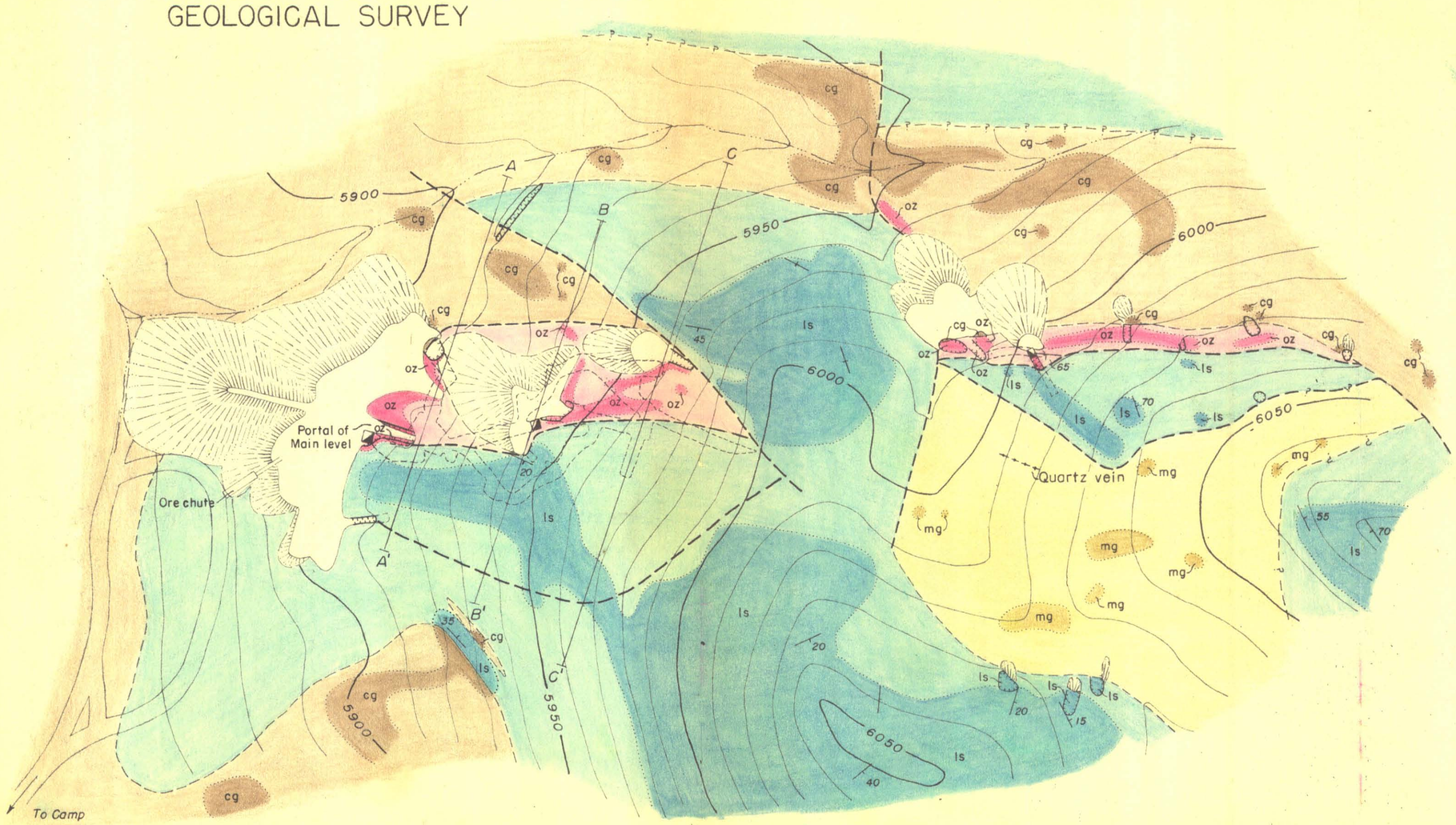
# HARD CASH PROSPECT, NEW YORK MOUNTAINS, SAN BERNARDINO COUNTY, CALIFORNIA

0 50 100 150 200 Feet

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE NO. I

DMEA 2188




SURFACE -MAP

N

EXPLANATION

Overburden
(Shown only in sections)

oz
Ore zone
(Consisting mainly of replaced granite and quartz)

mg
Medium grained granite

cg
Coarse grained granite

ls
Coarsely crystalline limestone

70
Contact, showing dip
(Dashed where approximately located)

40
Fault, showing dip
(Dashed where approximately located)

45
Strike and dip of beds

50
Strike and dip of banding in ore zone

Strike of vertical beds

Shaft at surface

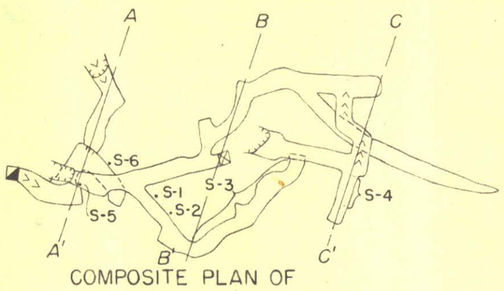
Outline of open cut

Dump

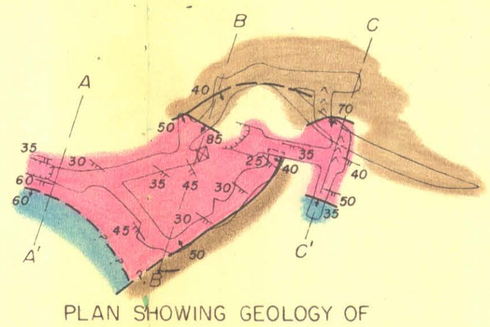
Bottom of shaft

Outline of underground workings on surface map

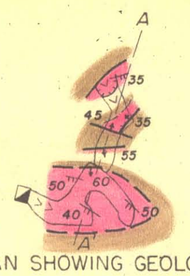
S-2 •
Sample locality




COMPOSITE PLAN OF UNDERGROUND WORKINGS




PLAN SHOWING GEOLOGY OF MAIN LEVEL AND UPPER LEVEL




PLAN SHOWING GEOLOGY OF LOWER WORKINGS

ASSAYS

| Sample No | %, Cu | %, Pb | %, Zn | %, $WO_3$ | %, $CaF_2$ | Oz Au/T | Oz Ag/T |
|---|---|---|---|---|---|---|---|
| S-1 | 0.75 | 4.0 | 1.2 | 0.22 | *1.0 | Trace | 5.40 |
| S-2 | 1.95 | 4.4 | 5.3 | 0.13 | *1.0 | Trace | 4.70 |
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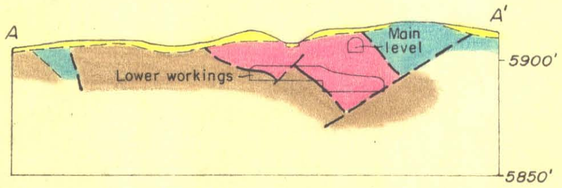
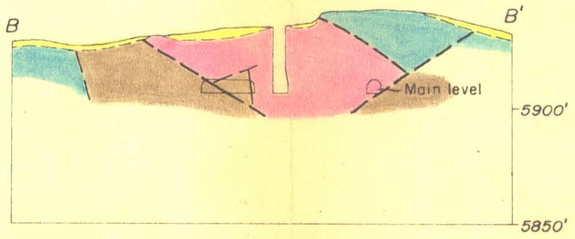
| S-4 | 1.10 | 0.7 | 2.8 | 0.14 | *1.0 | Trace | 2.45 |
| S-5 | 1.20 | 8.2 | 8.1 | *0.01 | *1.0 | 0.005 | 10.90 |
| S-6 | 1.25 | 0.8 | 3.0 | 0.04 | *1.0 | Trace | 2.30 |

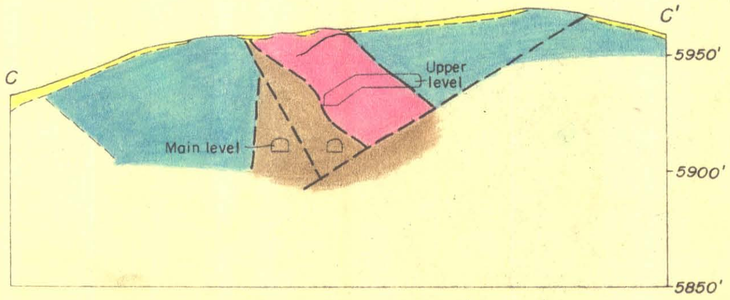
*Less than




SECTION ALONG A-A'
LOOKING EAST




SECTION ALONG B-B'




SECTION ALONG C-C'

Surface geology by L. D. Clark
Underground geology by W. P. Irwin
March 3-6, 1952

# HARD CASH PROSPECT, NEW YORK MOUNTAINS, SAN BERNARDINO COUNTY, CALIFORNIA

0 50 100 150 200 Feet