OCT 15 1956

Pick Mining Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Mining Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Gentlemen:

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

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

Careful study of our information indicates that, although mercury mineralization occurs on the property, the probability of disclosing minable mercury ore reserves is not sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application is denied.

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

Sincerely yours,

H. O. Wittendorf

Administrator

ADMcMahon/foc 10/10/56
cc to: Docket
Code 400 ✓
Admr. Read. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

October 10, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of request for exploration assistance in the amount of $137,133.85
Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Mining Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

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

(1) The applicant, Vernon J. Pick, dba Pick Mining Company, P. O. Box 67, Saratoga, California, requested assistance in the amount of $137,133.85.

(2) The applicant controls by ownership and lease 505 unpatented and patented mining claims (30 patented claims leased) located in Townships 37 and 38 North and Ranges 47 and 48 East, M.D.M., Ivanhoe Mining District, Elko County, Nevada.

(3) The original application, in the amount of $94,668.45, proposed 10,000 feet of drilling on the Fox, Silver Cloud and Butte groups of claims to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore. Upon a request for additional information a revised proposal was submitted for 10,000 feet of diamond drilling on the AL group of claims at an estimated cost of $137,133.85. The revised proposal consists of nine diamond drill holes and one churn drill hole 500 feet deep and twenty diamond drill holes 250 feet deep. The target area is a volcanic type mineralized body along a north-trending fault contact between rhyolite and basalt.

(4) Most of the development work in the district is confined to the Butte, Governor, Lark, Silver Fox, and Silver Cloud mines and consists of open pits and several thousand feet of adits, drifts, stopes, and shallow shafts. The applicant has cut numerous bulldozer trenches and has drilled about 5,000 feet of wagon, rotary, and diamond-drill

test holes. The AL claims have been tested with 1150 feet of bulldozer trenches and 1296 feet of rotary drilling in eight holes. Assays and drill hole logs indicate that the grade of the ore is marginal and that minable material is erratically distributed.

(5) The Field Team concludes that, although this deposit is of geologic interest, the drilling already completed has shown the average grade to be too low; the minable material is too erratically distributed to be of economic interest; and further exploration is unlikely to discover other deposits of larger size or higher grade. Accordingly, they recommend that Government assistance under the DMEA program be denied. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

ADMcMahon/foc
10/11/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.

400

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

COPY

1605 Evans Avenue
Reno, Nevada

September 19, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4264 (Mercury)
Vernon J. Pick dba Pick Mining Co.
Fox, Silver Cloud, Butte Claims
Elko County, Nevada
(Your letter, August 9, 1956)

Attached are four copies of a report by H. W. Jones, Bureau of Mines, and H. K. Stager, Geological Survey, in which it is recommended that the application for DMEA exploration be denied.

Roscoe Smith and I concur in the recommendation.

/s/ S. RICKER
S. Ricker

Attach.

Reviewed by
DMEA [illegible]

(Date)

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

RECEIVED
SEP 21 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-4264 (Mercury)
Pick Mining Company
Fox, Silver Cloud, Butte (Lark or Pangburn) Mines
Elko County, Nevada

by

H. W. Jones
U. S. Bureau of Mines

H. K. Stager
U. S. Geological Survey

September 17, 1956

Received
DMEA CHEMICAL [illegible]
(Date)

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SEP 21 1956

CONTENTS

Page

Introduction 1

Conclusions and Recommendations 2

Location, Accessibility, and Local Resources 3

History and Production 3

Property and Ownership 4

Development 5

General Geology 6

Ore Deposits 7

Sampling 9

Ore Reserves 10

Proposed Exploration 11

ILLUSTRATIONS

Figure 1 . . . . . Location map

RECEIVED
SEP 21 1956

INTRODUCTION

The Pick Mining Company, P. O. Box 67, Saratoga, California, applied for Government assistance in a $137,133.85 program under the Defense Minerals Exploration Administration, docket DMEA-4264, to explore for mercury on the A1 claim group, Ivanhoe district, Elko County, Nevada.

In a preliminary drilling program completed prior to the application the company discovered several thousands of tons of submarginal ore in three widely scattered small ore bodies. The applicant infers a large ore body of a different type than those that have been found and mined in the past and wishes to explore a favorable area on the A1 claim group.

A field examination was made by H. W. James, U. S. Bureau of Mines, and H. K. Stager, U. S. Geological Survey on May 24 and 25, 1956 accompanied by Mr. Leo J. Miller, chief geologist for the applicant. Inasmuch as the examiners were in the vicinity of the property on other DMEA business this examination was made prior to the formal request for field examination by the Operating Committee on August 9, 1956.

The Ivanhoe district, including the area of the application, has been mapped and sampled in detail by Geological Survey and company geologists. Inasmuch as the applicant's holdings are extensive the

examination was confined to the larger mines and more favorable areas. Available maps were carefully studied and were compared with exposures in the field. No attempt was made to remap or resample the district. As the applicant has taken and assayed over 2,000 samples in the district only ten of the best exposures in several of the mine workings and surface exposures were sampled to check and augment the applicant's sampling.

CONCLUSIONS AND RECOMMENDATIONS

The Ivanhoe district contains numerous small, low-grade, quicksilver deposits. The results of the examination and of the exploration completed by the applicant indicate that further exploration is unlikely to discover other deposits of larger size or higher grade.

The applicant originally proposed an indefinite program of 10,000 feet of exploratory drilling to test the near surface opalite-type deposits. A supplemental proposal was later submitted to confine the exploration to a volcanic-type deposit on the Al group of claims. Although this deposit is of geologic interest the drilling already completed has shown the average grade to be too low and the minable material too erratically distributed to be of economic interest.

It is recommended that Government assistance under the DMEA program be denied.

LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES

The Al group of claims is in sec. 9, T. 37 N., R. 48 E., M.D.B.&M., Ivanhoe mining district, Elko County, Nevada (fig. 1).

The property is reached by traveling northward from Battle Mountain on a graveled county road for 23 miles, then right (east) for 15 miles to the intersection of a cinder surfaced road, turn left (west) over a small bridge past the Silver Cloud mine and continue 7.6 miles to a dirt road, turn right and travel 0.5 mile to the Al claim pit and drill site. The Butte and Velvet claim areas are reached by continuing along the main cinder surfaced road an additional 3.5 miles to a cabin and sheep corral in the center of the mine area. Except for infrequent intervals during the winter the road is open and easily passable. Labor is obtainable in Battle Mountain, Winnemucca, and Elko. Water is available from springs and streams in the district. Materials and supplies for mining are obtained in Battle Mountain. The nearest housing, mail service, and railroad sidings are in Battle Mountain, 50 miles by road from the area.

HISTORY AND PRODUCTION

Quicksilver was first discovered in the Ivanhoe district in 1915 by W. F. Roseberry and W. C. Davis. During 1916 and 1917 they recovered 50 flasks of quicksilver with a 6 pipe Rocca retort.

Thereafter until 1929 little quicksilver was produced in the district. Between 1929 and 1940 the principal production came from the Butte mine. During the same period the Governor mine on the Pungbora and Hunt properties had a substantial production. In 1942 the Silver Cloud mine was taken over and operated by the New Verde Mining Company, a subsidiary of Newmont Mining Company. This property yielded considerable quicksilver during 1942 and 1943 by means of two rotary furnaces that had a combined capacity of about 100 tons per day.

The recorded production from the district through 1943 was 2,136 flasks of quicksilver. Records indicate that a few additional flasks of quicksilver was produced from the Silver Cloud mine during January and February of 1944.

There was no further activity in the district until May 1955 at which time the applicant leased most of the patented claims and staked an additional 505 claims.

PROPERTY AND OWNERSHIP

The applicant holds 505 mining claims in the Ivanhoe district and the names and recording data for 475 of these claims are listed on page 6 of the amended application. Twenty claims of the Pick group and 10 claims of the Al group are not listed although the proposed exploration is confined to the Al claims. A claim map showing the location of the 505 claims was submitted as Plate VIII

of the report attached to the application. A total of 30 additional claims were held under purchase-option agreements at the time of the original application but these claims have since been released to the owners.

The applicant has had little mining experience but is considered to be financially responsible. All exploration work is under the supervision of Mr. Leo J. Miller, chief geologist, who has had about six years experience in mine exploration work.

DEVELOPMENT

Most of the development work in the district is confined to the Butte, Governor, Lark, Silver Fox, and Silver Cloud mines and consists of open pits and several thousand feet of drifts, adits, stopes, and shallow shafts, most of which are open and accessible. The applicant has cut numerous bulldozer trenches and has drilled about 5,000 feet of wagon-, rotary-, and diamond-drill test holes.

The Al claims are developed by four bulldozer trenches with a combined length of 1,150 feet and 1,206 feet of drilling in eight rotary-drill test holes.

All of the quicksilver furnaces in the district have been removed or abandoned and the applicant has closed his camp and removed his exploration equipment pending approval of a DMEA loan.

The applicant does not intend to develop the several small opalite-type deposits found by previous drilling as the grade and tonnage of the deposits are too low to be mined economically. The minimum grade of ore economical for open pit mining to 50 feet in depth is about 5 pounds of quicksilver per ton and for underground mining about 9 pounds per ton.

GENERAL GEOLOGY

The Ivanhoe district is an area of low rolling hills and the surface is almost completely covered with alluvium. The rocks exposed in the vicinity of the mines are chiefly volcanic rocks of Tertiary age. The small quicksilver ore bodies of the district are in opalite deposits that are widespread in the rhyolitic rocks.

The geology and ore deposits of the area have been studied and mapped in detail by J. M. Nelson and R. J. Roberts[1/] and by E. H. Bailey and D. A. Phoenix[2/]. Much of the following description has been taken from these reports.

1/ Nelson, J. M., and Roberts, R. J., Quicksilver deposits in the Ivanhoe district, Elko County, Nevada: U. S. Geol. Survey, unpublished manuscript.

2/ Bailey, Edgar H., and Phoenix, David A., 1944, Quicksilver deposits in Nevada: Univ. of Nevada Bull. Vol. 38, No. 5, pp. 55-63.

The oldest rocks in the district are gray, thin-bedded to massive quartzite and chert of pre-Tertiary age. The Tertiary rocks (Upper Miocene) are divided into two groups. The older group consists of platy rhyolites, basalt, and rhyolitic ash, tuff, and fanglomerate. This group is from a few feet to 1,500 feet thick and is unconformably overlain by a younger group of quartz-rich rhyolite, ash, and tuff about 1,000 feet thick.

The older group of volcanic rocks dip from 10° to 30° east and the younger group is nearly horizontal. Normal faulting is the dominant structural feature of the district. Two sets of faults are prominent, one set trends northerly with displacements ranging up to 300 feet with the west block downthrown; the second set trends easterly and either the north or south block may be downthrown. Broad open folds are common and near some faults the rocks are sharply folded. Collapse and settling of the ash beds has resulted in the formation of numerous surface depressions from 1 to 10 feet deep and as much as 100 feet across.

ORE DEPOSITS

All of the quicksilver deposits that have been mined in the district are of the opalite-type and they are confined to the rhyolitic ash and tuff beds of the older group of volcanic rocks.

The only ore mineral in the district is cinnabar. It occurs finely disseminated in opalite and coats the walls of open spaces in the rocks. Calomel and native quicksilver have been found in the district but they are rare. Gangue minerals are chiefly chalcedony and opaline material with some alunite and montmorillonite and rarely barite and quartz.

The only ore bodies of commercial size that have been mined in the district are blanket or tabular-shaped bodies of cinnabar-bearing opalite in ash and tuff beds of rhyolitic composition. The ore shoots range from 3 to 15 feet thick and up to 350 feet long and 150 feet wide. The shoots are controlled primarily by steeply dipping faults and by permeable beds that served as channelways for the ascending metal-bearing solutions. Ore bodies were formed where folds in the beds caused restriction in the movement of solutions, or where prior silicification had reduced the permeability of favorable ash or tuff beds.

Two mines in the district have produced the major part of the production. The Butte mine has yielded 1,032 flasks and the Silver Cloud mine 866 flasks of quicksilver.

The deposit on the Al claims that is the target of the proposed exploration is of a different type than the deposits that have been mined in the past. It is a volcanic-type deposit in brecciated and

argillized rhyolite along a fault contact between rhyolite and basalt. The ore mineral is cinnabar and the chief gangue mineral is pyrite. Several small outcrops of opalite occur along the fault contact at the surface but they do not contain cinnabar except for trace amounts. The cinnabar-bearing material is in layers from a few inches to as much as 50 feet thick and contains from a trace to as much as 6.8 pounds of quicksilver per ton, with an average grade of about 2.5 pounds of quicksilver per ton. Mineralized material has been found by drilling over an area about 500 feet long and 100 feet wide at depths ranging from 25 feet to 220 feet below the surface. The ore grade material is erratically distributed in the deposit and cannot be projected between drill holes more than about 25 feet apart.

SAMPLING

Ten samples were taken of the more favorable mineralized exposures in the district, as follows:

Sample No.	Width, feet	Pounds Hg./ton	Description
315	5.0V	3.6	South end of open pit, Velvet claim.
316	5.0V	1.5	Center pit of Velvet claim, south wall of short adit.
317	6.0V	4.2	North end of open pit, Velvet claim.
318	7.0V	3.6	Center pillar of stope, Velvet claim.
319	5.0V	1.1	North end of pit, old Butte retort.
320	5.0V	0.5	East edge of pit, old Butte retort.
321	4.0V	2.1	Wall of inclined shaft, Silver Cloud mine.
322	6.0V	0.3	West end of pit, in flat stope, Silver Cloud mine.
323	20.0H	1.0	Face of deeper cut, Al claim.
324	19.0H	0.4	Continuation of sample 323, Al claim.

V - vertical cut sample
H - horizontal cut sample

ORE RESERVES

There are no measured reserves blocked out in the district. The applicant estimates that indicated reserves discovered by previous drilling total about 5,500 tons of ore with an average grade of about 6.5 pounds of quicksilver per ton. Most of this ore, 5,000 tons, is estimated to be in a volcanic-type deposit on the Al claims where two drill holes, T-4 and T-6, cut altered rhyolite fault breccia that contains about 6.3 pounds of quicksilver per ton. This ore is from 5 to 10 feet thick and ranges in depth from 35 to 185 feet. Most of the deposit is too deep to be mined by open pit methods and the grade is too low to be mined by underground methods.

The ore bodies that have yielded the production in the past have been found at or near the surface and with a minimum of exploration. Although the average grade of the deposits that have been mined was low, probably about 4 pounds of quicksilver per ton, the cost of mining by open pit and near surface underground workings was also low. The discovery of new reserves will require more extensive exploration and be increasingly costly, with the probability that the cost of the exploration will greatly exceed the value of the ore.

PROPOSED EXPLORATION

The applicant originally proposed an indefinite drilling project to explore for opalite- and volcanic-type ore bodies in the area of the Velvet workings on the Butte property. This proposal was later revised to a three-stage drilling project to explore a volcanic-type deposit on the Al group of claims. The original estimated cost of $94,668.45 was raised to $137,133.85. The revised proposal consists of 9 diamond drill holes and 1 churn drill hole 500 feet deep and 20 diamond drill holes 250 feet deep for a total of 10,000 feet of drilling. The location and depth of each hole is shown on plate VA of the application. The Government's share of the estimated total cost would be $102,850.39.

The target of the proposed exploration is a volcanic-type ore body along a north-trending fault contact between rhyolite and basalt. The deposit has been explored by four bulldozer cuts with a total length of 1,150 feet and 1,206 feet of test drilling in 8 rotary drill holes. Although past exploration was not well planned and the results are somewhat inconclusive, the assays and drill hole logs are sufficient to indicate that the grade of the ore is marginal and that the minable material is erratically distributed.

Although the deposit is of geologic interest, because it is of the volcanic-type rather than the opalite-type common to the district, the erratic distribution and low grade of the ore do not justify the extensive drilling program proposed by the applicant.

The previous exploratory drilling and bulldozing are considered to be adequate tests of the deposit and expose mineralized material which is representative of the average grade and character of the deposit.

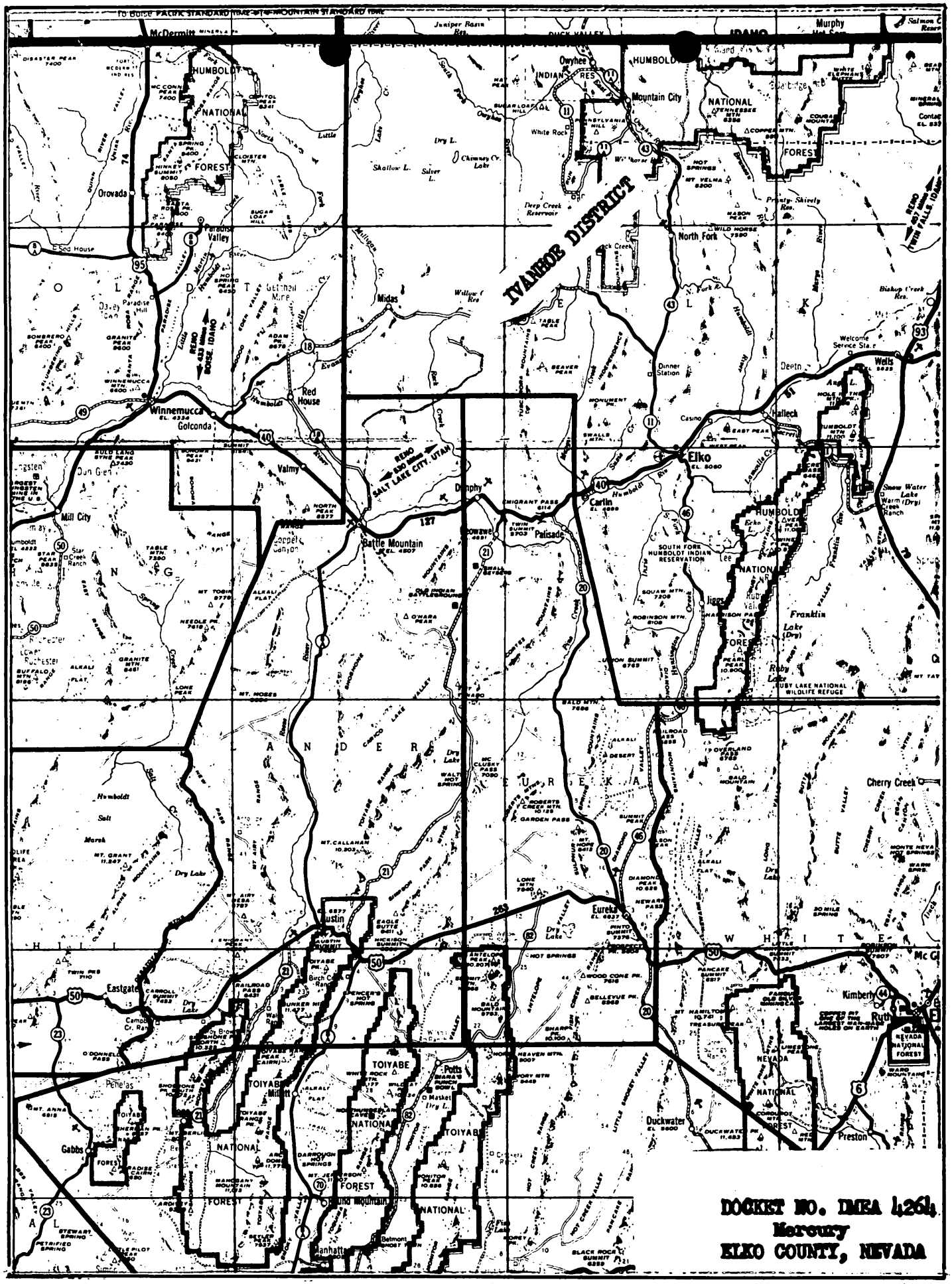

Figure 1 LOCATION MAP NEVADA

IN REPLY REFER TO:

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RECEIVED
SEP 27 1956

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

September 26, 1956

Re: DMEA 4264
Vernon J. Pick and Pick Mining Co.
Fox, etc. Claims
Elko County, Nevada
$94,668.45 - Mercury

Memorandum

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

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

Subject: Review of Field Team report.

The applicants requested assistance in doing 10,000 feet of drilling on a large number of mercury showings. Later the work was planned to explore a fault zone along which are found showings of mercury in brecciated rhyolite.

Trenching by bulldozer and drilling (non-core) have been done and many samples have been taken and assayed. No deposit of consequence has been discovered by the work of the applicants and the examiners conclude it is unlikely further exploration will discover other deposits of larger size or higher grade.

The record of production and the results of much work, including that of the applicants, support the conclusion of the examiners. The examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

Copy to: Director's Reading 4212
Branch Reading 4212
DMEA (3)
Docket File
Chron File
J. W. Pennington, 3623

Nelson:baf
G: 9/26/56

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

400

September 26, 1956

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Examination Report, Docket No DMEA-426 (Mercury), Vernon J. Pick dba Pick Mining Co., Fox, Silver Cloud, Butte Claims, Elko County, Nevada

The applicant proposed a revised program to explore a volcanic-type deposit on the Al group of claims by 10,000 feet of drilling at an estimated total cost of $137,133.85.

Examination of the property by H. W. Jones, Bureau of Mines, and H. K. Stager, Geological Survey, indicated that further exploration is unlikely to discover other deposits of larger size or higher grade than those already known. Exploration of the deposit already completed by the applicant has shown that the average grade is too low and the minable material too erratically distributed to be of economic interest.

Ten samples taken from the more favorable mineralized exposures in the district ranged from 0.3 to 4.2 pounds of mercury per ton. There are no measured reserves and the discovery of new reserves will probably cost more than the value of the ore discovered.

I concur with the recommendation of the Field Team that this application for Government assistance for exploration be denied.

J. W. Pennington
J. W. Pennington

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

402

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

RECEIVED
SEP 10 1956

1605 Evans Avenue
Reno, Nevada

September 6, 1956

Robert H. Martin
Pick Mining Company
P. O. Box 67
Saratoga, California

Copy retained 400

Re: Docket DMEA-4264 - Mercury
Vernon J. Pick, dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Dear Mr. Martin:

Our report on referenced docket will be forwarded to Washington in a short time. It had been held up temporarily owing to the delay in receiving the additional data requested from your company. We have all the data required to complete our report and recommendations.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

SRicker:gh
cc: Opr. Com., DMEA, Wash., D.C.
R. M. Smith
File

AUG - 9 1956

Pick Mining Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Gentlemen:

This will acknowledge receipt of your letter of July 13, 1956, and the accompanying supplemental report on the above-cited claims and your proposed exploration program.

The above docketed application for exploration assistance for mercury ore and the supplementary information have been reviewed by the Washington office of the Defense Minerals Exploration Administration and referred to Mr. Spangler Bicker, Executive Officer, DMEA Field Team, Region II, 1605 Evans Avenue, Reno, Nevada, for a field examination of the property.

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

Sincerely yours,

G. O. Mittendorf

Administrator

ADMcMAHON/fce
8-6-56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

AUG - 9 1956

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

Re: Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Uranium Company
Pam, Silver Cloud, Butte Claims
Elko County, Nevada

Dear Mr. Richer:

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

Copies of memoranda dated April 27 and July 30, 1956, by N. E. Nelson, Geological Survey, and April 2 and August 6, 1956, by J. W. Pennington, Bureau of Mines, relating to the project are enclosed.

Also enclosed are two copies of a supplement to the above docketed application submitted by the applicant to provide the additional information requested in the Administrator's letter of May 2, 1956. The proposed drilling program is not encouraging in light of the logs of the holes drilled by the applicant and the geologist's statement on page 14 of the report: "Minimum allowable grade for stripping to fifty feet has been set at five pounds per ton. For underground mining minimum grade has been set at nine pounds per ton."

Moreover, the costs which were questioned in the above mentioned letter do not seem to have been satisfactorily revised in the report. Therefore, should the engineers' examination of the claims reveal that Government participation in exploration of the property is warranted, a more reasonable program should be proposed.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

APPROVED:

FRANK D. LAMB
Member, Bureau of Mines

N. E. Nelson
Member, Geological Survey

ADMcMahon/fcc 8/6/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. II
J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

P.S. Please determine for the purposes of the application whether Vernon J. Pick is doing business as Pick Uranium Company or Pick Mining Company.

40 C

RECEIVED
AUG - 6 1956

August 6, 1956

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Supplement to Application, Docket No. DMEA 4264 (mercury), Vernon J. Pick dba Pick Uranium Company, Silver Cloud, Butte, and Fox (Lark or Pengburn) Mines, Elko County, Nevada

The supplement to the application provides insufficient information to evaluate the application. Moreover, it contains items which should not be included as exploration or appear excessive in costs.

Apparently the best method to obtain the desired information is a field examination and I recommend that the application be referred to the Field Team for action.

J. W. Pennington

J. W. Pennington

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

IN REPLY REFER TO:

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

RECEIVED
JUL 31 1956

July 30, 1956

Re: DMEA 4264
Vernon J. Pick d/b/a Pick
Uranium Co.
Fox, Silver Cloud, Butte Mines
Elko County, Nevada
$94,668.45 - Mercury

Copy retained 400

Memorandum

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

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

Subject: Review of supplementary information.

In answer to a request by the Administrator for additional information and a layout of the proposed drilling, the applicant has now furnished slightly better correlated maps and a report by the resident geologist.

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

N. E. Nelson

N. E. Nelson

NENelson:iml
G-7/30/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. W. Pennington, 3623

400

C O P Y

PICK MINING COMPANY
A Division of PICK ENTERPRISES

P. O. Box 67
SARATOGA, CALIFORNIA
Tel. UNION 7-3481
UNION 7-3482

July 13, 1956

Mr. C. O. Mithendorf, Administrator
United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Reference to Docket No. DMEA 4264 - Mercury
Fox, Silver Cloud, Butte (Lark or Pangburn) Mines
Elko County, Nevada

Dear Mr. Mithendorf:

We are enclosing a supplement to our DMEA application #4264 Mercury - Fox, Silver Cloud, Butte Mines, Elko County, Nevada. I trust the enclosed information answers the questions in your letter of May 21, 1956.

Since our application for this loan on March 23, 1956 we have necessarily gone through a change of programming due to the information derived from the drilling that has been completed by our company on the property. I believe that the report by Mr. Raymond J. Garcia enclosed will express our present needs for any further exploration on our Battle Mountain property.

If you require any further information, please let us know at your earliest convenience.

Very truly yours,

PICK MINING COMPANY
A Division of Pick Enterprises

by /s/ Leo J. Miller
Leo J. Miller
Chief Geologist

LJM:jz
Enclosures

MAY 21 1956

Pick Uranium Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMEA 4264 - Mercury
Fox, Silver Cloud, Butte (Lark or Pangburn) Mines
Elko County, Nevada

Gentlemen:

Careful review of your application for assistance in exploring for mercury at the properties above cited raises questions with respect to the size and location of the proposed exploration program, supporting maps and costs. In order to process your application the following additional information is required:

1. Item 5(b) of the application Form (IT-103) calls for a full description of the proposed work, including map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. For this item your application states only that the proposed work is to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore.

Under paragraph 6 you have indicated an undistributed 10,000 feet of drilling and on the accompanying sketches you have shown "drilling areas", but we also require the following additional information:

a. State the number, size and estimated depth of the holes to be drilled in each area.

b. Indicate on a map the locations of the proposed diamond drill holes in each area.

2. The supporting sketches submitted with your application do not permit identification of the workings shown with the several mines of the Ivanhoe District from which mercury has been produced. In this connection it would be desirable to have a location map or maps of all claims listed in the application showing thereon their relative positions to the Fox, Silver Cloud and Butte mines and the proposed exploration areas.

400

IN REPLY REFER TO:

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

April 27, 1956

Re: DMEA 4264
Vernon J. Pick d/b/a Pick
Uranium Company
Fox, Silver Cloud, Butte
(Lark or Pangburn Mines)
Elko County, Nevada
$94,668.45 - Mercury

Memorandum

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

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

Subject: Review of application.

The applicant requests assistance in exploring by diamond drilling (10,000 feet) fault zones on 3 groups of claims. Opalite cap rocks are assumed to be the surface expressions of hot spring action, and the faults are assumed to have been the channels of the mercury-bearing hot spring waters. Alignment of the caps is believed by the applicant to support the supposition as perhaps does drilling.

The maps which are part of the application lack reference lines showing their relationships and no regional map shows the locations of the properties or their relative locations. Several drill areas are indicated but no drill program is outlined, other than an undistributed 10,000 feet.

The sketchy maps and information do not permit identification of the workings shown and mentioned with the several mines of the Ivanhoe District from which mercury has been produced. As of 1942 nine properties had had some production. The Rand mine (Butte) is credited with the largest output, 933 flasks of mercury, the Silver Cloud with 165, and the Governor (Pangburn-Hunt) with 107 flasks.

The Governor property, financed by Governor Curry of Massachusetts and associates, did not live up to the sampling. The "Y" workings yielded 2,800 tons of ore estimated to contain about 2 pounds of mercury to the ton, whereas 4 to 5 pounds had been expected. At the Sheep Corral, 18 pounds per ton were expected and 3.6 pounds were recovered.

The price of mercury is now high. Nevertheless, if new concepts of mercury deposition of striking importance have not been formed since the period of unsuccessful operations, care should be exercised in judging the potential of the referenced properties.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

NENelson:iml
G-4/27/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. W. Pennington, 3623

400

RECEIVED
APR 27 1956

April 26, 1956

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4264 (mercury), Vernon J. Pick dba Pick Uranium Company, Silver Cloud, Butte, and Fox (Lark or Pangburn) mines, Elko County, Nevada, $94,668.45

The applicant proposes to explore the property by 10,000 feet of drilling at a total estimated cost of $94,668.45.

According to assay data submitted with the application further exploration to determine the mercury mineralization may be warranted. However, the program is indefinite in that insufficient information is given on type of drilling, drilling locations, justifications for drilling, and other pertinent data.

Moreover, for this program, it is believed that full time employment of a geologist, assayer, surveyor, sampler, and bulldozer operator is not warranted. It would be more economical to have the samples assayed by a competent laboratory than to employ an assayer and support a laboratory at the mine. The purchase of assaying and surveying instruments is questioned. Also, the estimated food and lodging item, if allowed, appears high.

It seems to me that this application needs additional data and some revision - especially of costs.

Referral of the application to the Field Team is recommended.

J. W. Pennington

J. W. Pennington

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

DOCKET
SURNAME
McMahon
Martin
Lamb
Kilgaard
Selfridge

400

OCT 1 0 1956

Pick Mining Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Mining Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Gentlemen:

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

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

Careful study of our information indicates that, although mercury mineralization occurs on the property, the probability of disclosing minable mercury ore reserves is not sufficiently promising to justify Government participation. Under those circumstances, we regret to advise you that your application is denied.

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

Sincerely yours,

E. S. Mittendorf
Acting

Administrator

ADMcMahon/foc 10/10/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

R.C.L.

400

DOCKET
SURNAME
McMahon
Martin

October 10, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of request for exploration assistance in the amount of $137,133.85
Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Mining Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

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

(1) The applicant, Vernon J. Pick, dba Pick Mining Company, P. O. Box 67, Saratoga, California, requested assistance in the amount of $137,133.85.

(2) The applicant controls by ownership and lease 505 unpatented and patented mining claims (30 patented claims leased) located in Townships 37 and 38 North and Ranges 47 and 48 East, M.D.M., Ivanhoe Mining District, Elko County, Nevada.

(3) The original application, in the amount of $94,668.45, proposed 10,000 feet of drilling on the Fox, Silver Cloud and Butte groups of claims to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore. Upon a request for additional information a revised proposal was submitted for 10,000 feet of diamond drilling on the AL group of claims at an estimated cost of $137,133.85. The revised proposal consists of nine diamond drill holes and one churn drill hole 500 feet deep and twenty diamond drill holes 250 feet deep. The target area is a volcanic type mineralized body along a north-trending fault contact between rhyolite and basalt.

(4) Most of the development work in the district is confined to the Butte, Governor, Lark, Silver Fox, and Silver Cloud mines and consists of open pits and several thousand feet of adits, drifts, stopes, and shallow shafts. The applicant has cut numerous bulldozer trenches and has drilled about 5,000 feet of wagon, rotary, and diamond-drill

test holes. The AL claims have been tested with 1150 feet of bulldozer trenches and 1206 feet of rotary drilling in eight holes. Assays and drill hole logs indicate that the grade of the ore is marginal and that minable material is erratically distributed.

(5) The Field Team concludes that, although this deposit is of geologic interest, the drilling already completed has shown the average grade to be too low; the minable material is too erratically distributed to be of economic interest; and further exploration is unlikely to discover other deposits of larger size or higher grade. Accordingly, they recommend that Government assistance under the DMEA program be denied. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

ADMcMahon/foc
10/11/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.

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

October 10, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of request for exploration assistance in the amount of $137,133.85
Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Mining Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

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

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(3) The original application, in the amount of $94,668.45, proposed 10,000 feet of drilling on the Fox, Silver Cloud and Butte groups of claims to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore. Upon a request for additional information a revised proposal was submitted for 10,000 feet of diamond drilling on the AL group of claims at an estimated cost of $137,133.85. The revised proposal consists of nine diamond drill holes and one churn drill hole 500 feet deep and twenty diamond drill holes 250 feet deep. The target area is a volcanic type mineralized body along a north-trending fault contact between rhyolite and basalt.

(4) Most of the development work in the district is confined to the Butte, Governor, Lark, Silver Fox, and Silver Cloud mines and consists of open pits and several thousand feet of adits, drifts, stopes, and shallow shafts. The applicant has cut numerous bulldozer trenches and has drilled about 5,000 feet of wagon, rotary, and diamond-drill

test holes. The AL claims have been tested with 1150 feet of bulldozer trenches and 1206 feet of rotary drilling in eight holes. Assays and drill hole logs indicate that the grade of the ore is marginal and that minable material is erratically distributed.

(5) The Field Team concludes that, although this deposit is of geologic interest, the drilling already completed has shown the average grade to be too low; the minable material is too erratically distributed to be of economic interest; and further exploration is unlikely to discover other deposits of larger size or higher grade. Accordingly, they recommend that Government assistance under the DMEA program be denied. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

W S Martin

W. S. Martin, Chief
Iron and Ferro-Alloys Division

Docket

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

September 26, 1956

WSM

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Examination Report, Docket No DMEA-4264 (Mercury), Vernon J. Pick dba Pick Mining Co., Fox, Silver Cloud, Butte Claims, Elko County, Nevada

The applicant proposed a revised program to explore a volcanic-type deposit on the Al group of claims by 10,000 feet of drilling at an estimated total cost of $137,133.85.

Examination of the property by H. W. Jones, Bureau of Mines, and H. K. Stager, Geological Survey, indicated that further exploration is unlikely to discover other deposits of larger size or higher grade than those already known. Exploration of the deposit already completed by the applicant has shown that the average grade is too low and the minable material too erratically distributed to be of economic interest.

Ten samples taken from the more favorable mineralized exposures in the district ranged from 0.3 to 4.2 pounds of mercury per ton. There are no measured reserves and the discovery of new reserves will probably cost more than the value of the ore discovered.

I concur with the recommendation of the Field Team that this application for Government assistance for exploration be denied.

J. W. Pennington

J. W. Pennington

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

Copy retained 400

IN REPLY REFER TO:

Hackett

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

RECEIVED
SEP 27 1956

September 26, 1956

Re: DMEA 4264
Vernon J. Pick and Pick Mining Co.
Fox, etc. Claims
Elko County, Nevada
$94,668.45 - Mercury

W309

Memorandum

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

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

Subject: Review of Field Team report.

The applicants requested assistance in doing 10,000 feet of drilling on a large number of mercury showings. Later the work was planned to explore a fault zone along which are found showings of mercury in brecciated rhyolite.

Trenching by bulldozer and drilling (non-core) have been done and many samples have been taken and assayed. No deposit of consequence has been discovered by the work of the applicants and the examiners conclude it is unlikely further exploration will discover other deposits of larger size or higher grade.

The record of production and the results of much work, including that of the applicants, support the conclusion of the examiners. The examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

Copy returned 400

Docket

RECEIVED
SEP 21 1956

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

1605 Evans Avenue
Reno, Nevada

September 19, 1956

Memorandum

WSM

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4264 (Mercury)
Vernon J. Pick dba Pick Mining Co.
Fox, Silver Cloud, Butte Claims
Elko County, Nevada
(Your letter, August 9, 1956)

Attached are four copies of a report by H. W. Jones, Bureau of Mines, and H. K. Stager, Geological Survey, in which it is recommended that the application for DMEA exploration be denied.

Roscoe Smith and I concur in the recommendation.

S. Ricker

Attach.

Reviewed by
DMEA OPERATING COMMITTEE
9-26-56
(date)

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

RECEIVED
SEP 21 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-4264 (Mercury)
Pick Mining Company
Fox, Silver Cloud, Butte (Lark or Pangburn) Mines
Elko County, Nevada

by

H. W. Jones
U. S. Bureau of Mines

H. K. Stager
U. S. Geological Survey

September 17, 1956

Reviewed by
DMEA OPERATIONS COMMITTEE
9-26-56
(date)

CONTENTS

	Page
Introduction	1
Conclusions and Recommendations	2
Location, Accessibility, and Local Resources	3
History and Production	3
Property and Ownership	4
Development	5
General Geology	6
Ore Deposits	7
Sampling	9
Ore Reserves	10
Proposed Exploration	11

ILLUSTRATIONS

Figure 1 . . . . . Location map

RECEIVED
SEP 21 1956

INTRODUCTION

The Pick Mining Company, P. O. Box 67, Saratoga, California, applied for Government assistance in a $137,133.85 program under the Defense Minerals Exploration Administration, docket DMEA-4264, to explore for mercury on the Al claim group, Ivanhoe district, Elko County, Nevada.

In a preliminary drilling program completed prior to the application the company discovered several thousands of tons of submarginal ore in three widely scattered small ore bodies. The applicant infers a large ore body of a different type than those that have been found and mined in the past and wishes to explore a favorable area on the Al claim group.

A field examination was made by H. W. Jones, U. S. Bureau of Mines, and H. K. Stager, U. S. Geological Survey on May 24 and 25, 1956 accompanied by Mr. Leo J. Miller, chief geologist for the applicant. Inasmuch as the examiners were in the vicinity of the property on other DMEA business this examination was made prior to the formal request for field examination by the Operating Committee on August 9, 1956.

The Ivanhoe district, including the area of the application, has been mapped and sampled in detail by Geological Survey and company geologists. Inasmuch as the applicant's holdings are extensive the

examination was confined to the larger mines and more favorable areas. Available maps were carefully studied and were compared with exposures in the field. No attempt was made to remap or resample the district. As the applicant has taken and assayed over 2,000 samples in the district only ten of the best exposures in several of the mine workings and surface exposures were sampled to check and augment the applicant's sampling.

CONCLUSIONS AND RECOMMENDATIONS

The Ivanhoe district contains numerous small, low-grade, quicksilver deposits. The results of the examination and of the exploration completed by the applicant indicate that further exploration is unlikely to discover other deposits of larger size or higher grade.

The applicant originally proposed an indefinite program of 10,000 feet of exploratory drilling to test the near surface opalite-type deposits. A supplemental proposal was later submitted to confine the exploration to a volcanic-type deposit on the A1 group of claims. Although this deposit is of geologic interest the drilling already completed has shown the average grade to be too low and the minable material too erratically distributed to be of economic interest.

It is recommended that Government assistance under the DMEA program be denied.

LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES

The Al group of claims is in sec. 9, T. 37 N., R. 48 E., M.D.B.&M., Ivanhoe mining district, Elko County, Nevada (fig. 1).

The property is reached by traveling northward from Battle Mountain on a graveled county road for 23 miles, then right (east) for 15 miles to the intersection of a cinder surfaced road, turn left (west) over a small bridge past the Silver Cloud mine and continue 7.6 miles to a dirt road, turn right and travel 0.5 mile to the Al claim pit and drill site. The Butte and Velvet claim areas are reached by continuing along the main cinder surfaced road an additional 3.5 miles to a cabin and sheep corral in the center of the mine area. Except for infrequent intervals during the winter the road is open and easily passable. Labor is obtainable in Battle Mountain, Winnemucca, and Elko. Water is available from springs and streams in the district. Materials and supplies for mining are obtained in Battle Mountain. The nearest housing, mail service, and railroad sidings are in Battle Mountain, 50 miles by road from the area.

HISTORY AND PRODUCTION

Quicksilver was first discovered in the Ivanhoe district in 1915 by W. F. Roseberry and W. C. Davis. During 1916 and 1917 they recovered 50 flasks of quicksilver with a 6 pipe Rocca retort.

Thereafter until 1929 little quicksilver was produced in the district. Between 1929 and 1940 the principal production came from the Butte mine. During the same period the Governor mine on the Pangborn and Hunt properties had a substantial production. In 1942 the Silver Cloud mine was taken over and operated by the New Verde Mining Company, a subsidiary of Newmond Mining Company. This property yielded considerable quicksilver during 1942 and 1943 by means of two rotary furnaces that had a combined capacity of about 100 tons per day.

The recorded production from the district through 1943 was 2,136 flasks of quicksilver. Records indicate that a few additional flasks of quicksilver was produced from the Silver Cloud mine during January and February of 1944.

There was no further activity in the district until May 1955 at which time the applicant leased most of the patented claims and staked an additional 505 claims.

PROPERTY AND OWNERSHIP

The applicant holds 505 mining claims in the Ivanhoe district and the names and recording data for 475 of these claims are listed on page 6 of the amended application. Twenty claims of the Pick group and 10 claims of the Al group are not listed although the proposed exploration is confined to the Al claims. A claim map showing the location of the 505 claims was submitted as Plate VIII

of the report attached to the application. A total of 30 additional claims were held under purchase-option agreements at the time of the original application but these claims have since been released to the owners.

The applicant has had little mining experience but is considered to be financially responsible. All exploration work is under the supervision of Mr. Leo J. Miller, chief geologist, who has had about six years experience in mine exploration work.

DEVELOPMENT

Most of the development work in the district is confined to the Butte, Governor, Lark, Silver Fox, and Silver Cloud mines and consists of open pits and several thousand feet of drifts, adits, stopes, and shallow shafts, most of which are open and accessible. The applicant has cut numerous bulldozer trenches and has drilled about 5,000 feet of wagon-, rotary-, and diamond-drill test holes.

The AL claims are developed by four bulldozer trenches with a combined length of 1,150 feet and 1,206 feet of drilling in eight rotary-drill test holes.

All of the quicksilver furnaces in the district have been removed or abandoned and the applicant has closed his camp and removed his exploration equipment pending approval of a DMEA loan.

The applicant does not intend to develop the several small opalite-type deposits found by previous drilling as the grade and tonnage of the deposits are too low to be mined economically. The minimum grade of ore economical for open pit mining to 50 feet in depth is about 5 pounds of quicksilver per ton and for underground mining about 9 pounds per ton.

GENERAL GEOLOGY

The Ivanhoe district is an area of low rolling hills and the surface is almost completely covered with alluvium. The rocks exposed in the vicinity of the mines are chiefly volcanic rocks of Tertiary age. The small quicksilver ore bodies of the district are in opalite deposits that are widespread in the rhyolitic rocks.

The geology and ore deposits of the area have been studied and mapped in detail by J. M. Nelson and R. J. Roberts[1/] and by E. H. Bailey and D. A. Phoenix[2/]. Much of the following description has been taken from these reports.

1/ Nelson, J. M., and Roberts, R. J., Quicksilver deposits in the Ivanhoe district, Elko County, Nevada: U. S. Geol. Survey, unpublished manuscript.

2/ Bailey, Edgar H., and Phoenix, David A., 1944, Quicksilver deposits in Nevada: Univ. of Nevada Bull. Vol. 38, No. 5, pp. 55-63.

The oldest rocks in the district are gray, thin-bedded to massive quartzite and chert of pre-Tertiary age. The Tertiary rocks (Upper Miocene) are divided into two groups. The older group consists of platy rhyolites, basalt, and rhyolitic ash, tuff, and fanglomerate. This group is from a few feet to 1,500 feet thick and is unconformably overlain by a younger group of quartz-rich rhyolite, ash, and tuff about 1,000 feet thick.

The older group of volcanic rocks dip from 10° to 30° east and the younger group is nearly horizontal. Normal faulting is the dominant structural feature of the district. Two sets of faults are prominent, one set trends northerly with displacements ranging up to 300 feet with the west block downthrown; the second set trends easterly and either the north or south block may be downthrown. Broad open folds are common and near some faults the rocks are sharply folded. Collapse and settling of the ash beds has resulted in the formation of numerous surface depressions from 1 to 10 feet deep and as much as 100 feet across.

ORE DEPOSITS

All of the quicksilver deposits that have been mined in the district are of the opalite-type and they are confined to the rhyolitic ash and tuff beds of the older group of volcanic rocks.

The only ore mineral in the district is cinnabar. It occurs finely disseminated in opalite and coats the walls of open spaces in the rocks. Calomel and native quicksilver have been found in the district but they are rare. Gangue minerals are chiefly chalcedony and opaline material with some alunite and montmorillonite and rarely barite and quartz.

The only ore bodies of commercial size that have been mined in the district are blanket or tabular-shaped bodies of cinnabar-bearing opalite in ash and tuff beds of rhyolitic composition. The ore shoots range from 3 to 15 feet thick and up to 350 feet long and 150 feet wide. The shoots are controlled primarily by steeply dipping faults and by permeable beds that served as channelways for the ascending metal-bearing solutions. Ore bodies were formed where folds in the beds caused restriction in the movement of solutions, or where prior silicification had reduced the permeability of favorable ash or tuff beds.

Two mines in the district have produced the major part of the production. The Butte mine has yielded 1,032 flasks and the Silver Cloud mine 866 flasks of quicksilver.

The deposit on the Al claims that is the target of the proposed exploration is of a different type than the deposits that have been mined in the past. It is a volcanic-type deposit in brecciated and

argillized rhyolite along a fault contact between rhyolite and basalt. The ore mineral is cinnabar and the chief gangue mineral is pyrite. Several small outcrops of opalite occur along the fault contact at the surface but they do not contain cinnabar except for trace amounts. The cinnabar-bearing material is in layers from a few inches to as much as 50 feet thick and contains from a trace to as much as 6.8 pounds of quicksilver per ton, with an average grade of about 2.5 pounds of quicksilver per ton. Mineralized material has been found by drilling over an area about 500 feet long and 100 feet wide at depths ranging from 25 feet to 220 feet below the surface. The ore grade material is erratically distributed in the deposit and cannot be projected between drill holes more than about 25 feet apart.

SAMPLING

Ten samples were taken of the more favorable mineralized exposures in the district, as follows:

Sample No.	Width, feet	Pounds Hg./ton	Description
315	5.0V	3.6	South end of open pit, Velvet claim.
316	5.0V	1.5	Center pit of Velvet claim, south wall of short adit.
317	6.0V	4.2	North end of open pit, Velvet claim.
318	7.0V	3.6	Center pillar of stope, Velvet claim.
319	5.0V	1.1	North end of pit, old Butte retort.
320	5.0V	0.5	East edge of pit, old Butte retort.
321	4.0V	2.1	Wall of inclined shaft, Silver Cloud mine.
322	6.0V	0.3	West end of pit, in flat stope, Silver Cloud mine.
323	20.0H	1.0	Face of dozer cut, Al claim.
324	19.0H	0.4	Continuation of sample 323, Al claim.

V - vertical cut sample
H - horizontal cut sample

ORE RESERVES

There are no measured reserves blocked out in the district. The applicant estimates that indicated reserves discovered by previous drilling total about 5,500 tons of ore with an average grade of about 6.5 pounds of quicksilver per ton. Most of this ore, 5,000 tons, is estimated to be in a volcanic-type deposit on the A1 claims where two drill holes, T-4 and T-6, cut altered rhyolite fault breccia that contains about 6.3 pounds of quicksilver per ton. This ore is from 5 to 10 feet thick and ranges in depth from 35 to 185 feet. Most of the deposit is too deep to be mined by open pit methods and the grade is too low to be mined by underground methods.

The ore bodies that have yielded the production in the past have been found at or near the surface and with a minimum of exploration. Although the average grade of the deposits that have been mined was low, probably about 4 pounds of quicksilver per ton, the cost of mining by open pit and near surface underground workings was also low. The discovery of new reserves will require more extensive exploration and be increasingly costly, with the probability that the cost of the exploration will greatly exceed the value of the ore.

PROPOSED EXPLORATION

The applicant originally proposed an indefinite drilling project to explore for opalite- and volcanic-type ore bodies in the area of the Velvet workings on the Butte property. This proposal was later revised to a three-stage drilling project to explore a volcanic-type deposit on the A1 group of claims. The original estimated cost of $94,668.45 was raised to $137,133.85. The revised proposal consists of 9 diamond drill holes and 1 churn drill hole 500 feet deep and 20 diamond drill holes 250 feet deep for a total of 10,000 feet of drilling. The location and depth of each hole is shown on plate VA of the application. The Government's share of the estimated total cost would be $102,850.39.

The target of the proposed exploration is a volcanic-type ore body along a north-trending fault contact between rhyolite and basalt. The deposit has been explored by four bulldozer cuts with a total length of 1,150 feet and 1,206 feet of test drilling in 8 rotary drill holes. Although past exploration was not well planned and the results are somewhat inconclusive, the assays and drill hole logs are sufficient to indicate that the grade of the ore is marginal and that the minable material is erratically distributed.

Although the deposit is of geologic interest, because it is of the volcanic-type rather than the opalite-type common to the district, the erratic distribution and low grade of the ore do not justify the extensive drilling program proposed by the applicant.

The previous exploratory drilling and bulldozing are considered to be adequate tests of the deposit and expose mineralized material which is representative of the average grade and character of the deposit.

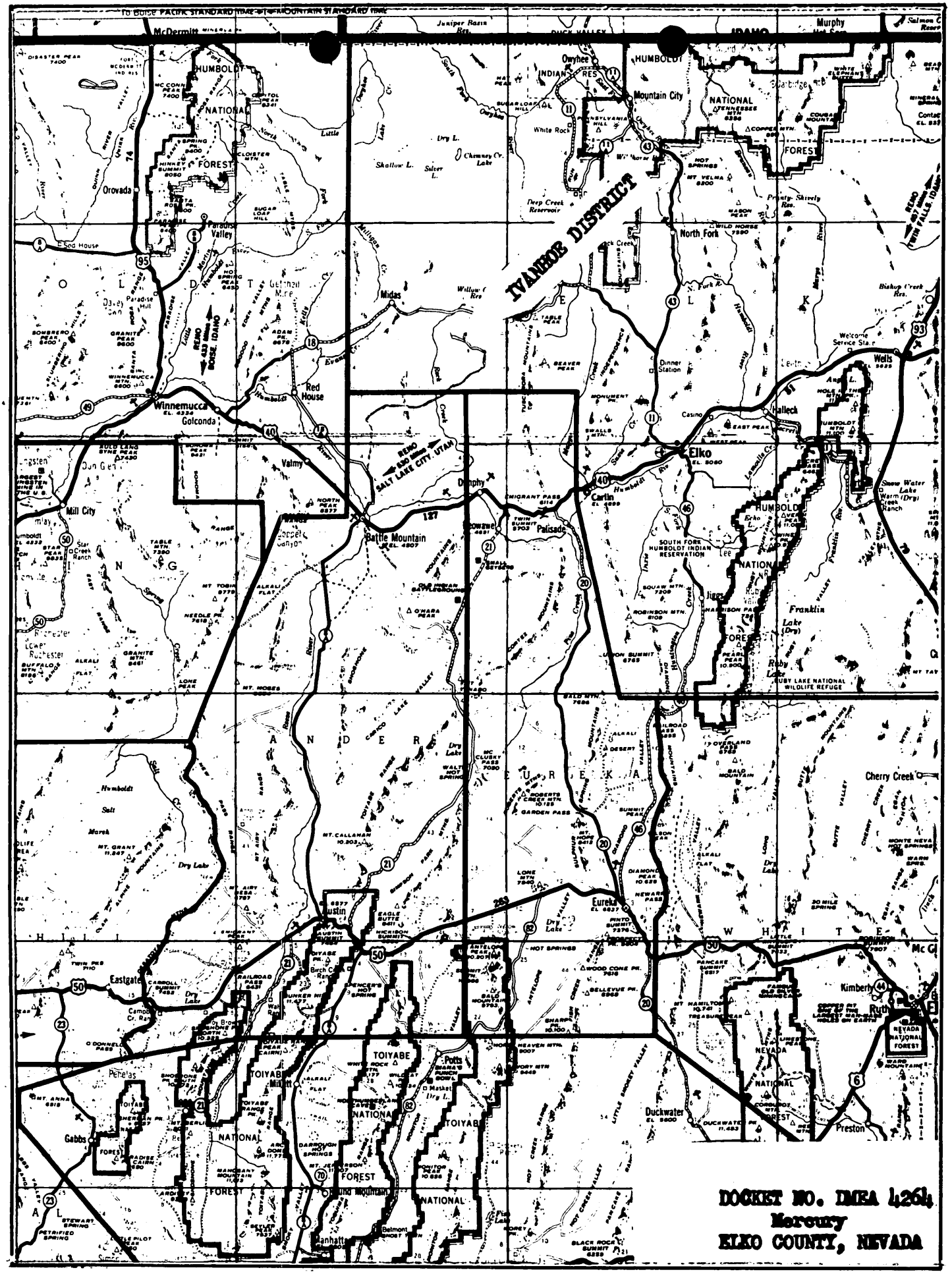


Figure 1 LOCATION MAP NEVADA

Docket

RECEIVED
SEP 10 1956

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

1605 Evans Avenue
Reno, Nevada

September 6, 1956

WSM

Robert H. Martin
Pick Mining Company
P. O. Box 67
Saratoga, California

Copy retained 400

Re: Docket DMEA-4264 - Mercury
Vernon J. Pick, dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Dear Mr. Martin:

Our report on referenced docket will be forwarded to Washington in a short time. It had been held up temporarily owing to the delay in receiving the additional data requested from your company. We have all the data required to complete our report and recommendations.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

SRicker:gh
cc: Opr. Com., DMEA, Wash., D.C.
R. M. Smith
File

DOCKET
SURNAME
400 McMahon
Martin
Ferguson

AUG - 9 1956

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

Re: Docket No. DMEA 4264 - Mercury
Vernon J. Pick, dba Pick Uranium Company
Fox, Silver Cloud, Butte Claims
Elko County, Nevada

Dear Mr. Ricker:

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

Copies of memoranda dated April 27 and July 30, 1956, by N. E. Nelson, Geological Survey, and April 26 and August 6, 1956, by J. W. Pennington, Bureau of Mines, relating to the project are enclosed.

Also enclosed are two copies of a supplement to the above docketed application submitted by the applicant to provide the additional information requested in the Administrator's letter of May 2, 1956. The proposed drilling program is not encouraging in light of the logs of the holes drilled by the applicant and the geologist's statement on page 14 of the report: "Minimum allowable grade for stripping to fifty feet has been set at five pounds per ton. For underground mining minimum grade has been set at nine pounds per ton."

Moreover, the costs which were questioned in the above mentioned letter do not seem to have been satisfactorily revised in the report. Therefore, should the engineers' examination of the claims reveal that Government participation in exploration of the property is warranted, a more reasonable program should be proposed.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (WB)

APPROVED:

FRANK D. LAMB (WB)
Member, Bureau of Mines

N. E. Nelson (WB)
Member, Geological Survey

ADMcMahon/foc 8/6/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. II
J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

P.S. Please determine for the purposes of the application whether Vernon J. Pick is doing business as Pick Uranium Company or Pick Mining Company.

DOCKET
SURNAME
McMahon
Martin
Nelson
Lamb
H Johnson

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

400

AUG - 9 1956

Pick Mining Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMEA 426h - Mercury
Vernon J. Pick, dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

Gentlemen:

This will acknowledge receipt of your letter of July 13, 1956, and the accompanying supplemental report on the above-cited claims and your proposed exploration program.

The above docketed application for exploration assistance for mercury ore and the supplementary information have been reviewed by the Washington office of the Defense Minerals Exploration Administration and referred to Mr. Spangler Ricker, Executive Officer, DMEA Field Team, Region II, 1605 Evans Avenue, Reno, Nevada, for a field examination of the property.

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

Sincerely yours,

C. O. Mittendorf (for)

Administrator

ADMcMAHON/foc
8-6-56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

R.C.L.

Docket

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

RECEIVED
AUG 6 1956

August 6, 1956

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Supplement to Application, Docket No. DMEA 4264 (mercury), Vernon J. Pick dba Pick Uranium Company, Silver Cloud, Butte, and Fox (Lark or Pangburn) Mines, Elko County, Nevada

The supplement to the application provides insufficient information to evaluate the application. Moreover, it contains items which should not be included as exploration or appear excessive in costs.

Apparently the best method to obtain the desired information is a field examination and I recommend that the application be referred to the Field Team for action.

J. W. Pennington

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

8/7/56
Copy retained in "400" file.

Docket

RECEIVED

JUL 27 1956

PICK MINING COMPANY

A Division of PICK ENTERPRISES

July 13, 1956

P. O. BOX 67 SARATOGA, CALIFORNIA
TEL. UNION 7-3481 UNION 7-3482

WSay

Mr. C. O. Mithendorf, Administrator
United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Copy retained 400

Reference to Docket No. DMEA 4264 - Mercury
Fox, Silver Cloud, Butte (Lark or Pangburn) Mines
Elko County, Nevada

Dear Mr. Mithendorf:

We are enclosing a supplement to our DMEA application #4264 Mercury - Fox, Silver Cloud, Butte Mines Elko County, Nevada. I trust the enclosed information answers the questions in your letter of May 21, 1956.

Since our application for this loan on March 23, 1956 we have necessarily gone through a change of programming due to the information derived from the drilling that has been completed by our company on the property. I believe that the report by Mr. Raymond J. Garcia enclosed will express our present needs for any further exploration on our Battle Mountain property.

If you require any further information, please let us know at your earliest convenience.

Very truly yours,

PICK MINING COMPANY
A Division of Pick Enterprises

by Leo J. Miller
Leo J. Miller
Chief Geologist

LJM:jz
Enclosures

One copy sent USGS
rec'd U.S.B.M. on 7/26
Jz.

Docket

IN REPLY REFER TO:

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

RECEIVED
JUL 31 1956

Case retained 460

July 30, 1956

Re: DMEA 4264
Vernon J. Pick d/b/a Pick Uranium Co.
Fox, Silver Cloud, Butte Mines
Elko County, Nevada
$94,668.45 - Mercury

WSM

Memorandum

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

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

Subject: Review of supplementary information.

In answer to a request by the Administrator for additional information and a layout of the proposed drilling, the applicant has now furnished slightly better correlated maps and a report by the resident geologist.

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

N. E. Nelson

N. E. Nelson

PICK MINING COMPANY
A DIVISION OF PICK ENTERPRISES

P. O. BOX 67 SARATOGA, CALIFORNIA
TEL. UNION 7-3481 UNION 7-3482

May 25, 1956

RECEIVED
MAY 29 1956

Mr. C. O. Mithendorf, Administrator
The Defense Minerals Exploration Administration
Washington 25, D. C.

Dmea 4264-Hg

Dear Sir:

We have received your letter dated May 21, 1956. In regard to the additional information you requested, we will carefully reconsider previous application and submit complete re-estimates of the various items under estimate of costs.

WSM

We are now preparing a final report to cover activities on the project. This report will undoubtedly supply much of the information you request including cost analysis. At its completion, we will submit a supplement to our original application.

Thank you for your consideration in this matter.

Very truly yours,

PICK MINING COMPANY
A Division of Pick Enterprises

by Raymond Garcia
Raymond Garcia
Assistant Geologist

RG:jz

DOCKET
SURNAME
McMahon
Martin
Hefferman

400

MAY 21 1956

Pick Uranium Company
P. O. Box 67
Saratoga, California

Re: Docket No. DMRA 426h - Mercury
Fox, Silver Cloud, Butte (Lark or Pangborn) Mines
Elko County, Nevada

Gentlemen:

Careful review of your application for assistance in exploring for mercury at the properties above cited raises questions with respect to the size and location of the proposed exploration program, supporting maps and costs. In order to process your application the following additional information is required:

1. Item 5(b) of the application Form (MF-103) calls for a full description of the proposed work, including map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. For this item your application states only that the proposed work is to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore.

Under paragraph 6 you have indicated an undistributed 10,000 feet of drilling and on the accompanying sketches you have shown "drilling areas", but we also require the following additional information:

a. State the number, size and estimated depth of the holes to be drilled in each area.

b. Indicate on a map the locations of the proposed diamond drill holes in each area.

2. The supporting sketches submitted with your application do not permit identification of the workings shown with the several mines of the Ivanhoe District from which mercury has been produced. In this connection it would be desirable to have a location map or maps of all claims listed in the application showing thereon their relative positions to the Fox, Silver Cloud and Butte mines and the proposed exploration areas.

3. Exploration Costs:

(a) Under item (6a) of your application "Estimate of costs" you have not indicated your company would do the drilling although it is understood that you are now operating a Porta-drill and a C.P. 15 diamond drill. The unit cost of $7.00 per foot of diamond drilling seems excessive according to our experience with similar projects. We would, therefore, appreciate your furnishing us with at least three bids from independent contractors for your proposed drilling program and a breakdown of your present drilling costs.

(b) You have listed, as exploration costs, the salaries for five months of a geologist, assayer, surveyor, sampler and part time supervisor totaling $10,000.00. This is also excessive for the amount of drilling contemplated and we would appreciate your submitting a more realistic estimate of the necessary costs to determine the value of the drilling.

(c) The item of $5,000.00 for food and lodging is a questionable exploration cost in view of the salaries and the unit cost of diamond drilling shown.

(d) The Government contribution towards amortization or depreciation of equipment necessary for the exploration project is limited to 1/60 of the fair market value, at the time an application is made, for each month that the project operates.

We shall appreciate your submitting at your early convenience a supplement to your application providing us with the above requested additional information and indicated adjustments. Your application will be held in abeyance for a reasonable time to allow you to provide the requested data.

Sincerely yours,

C. O. Mittendorf

Administrator

ADMcMahon/foc
cc to: Docket
Code 400
Admr. Read. File
FT. REG. II
J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

Docket

IN REPLY REFER TO:

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

April 27, 1956

Re: DMEA 4264
Vernon J. Pick d/b/a Pick
Uranium Company
Fox, Silver Cloud, Butte
(Lark or Pangburn Mines)
Elko County, Nevada
$94,668.45 - Mercury

Memorandum

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

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

Subject: Review of application.

WSM

The applicant requests assistance in exploring by diamond drilling (10,000 feet) fault zones on 3 groups of claims. Opalite cap rocks are assumed to be the surface expressions of hot spring action, and the faults are assumed to have been the channels of the mercury-bearing hot spring waters. Alignment of the caps is believed by the applicant to support the supposition as perhaps does drilling.

The maps which are part of the application lack reference lines showing their relationships and no regional map shows the locations of the properties or their relative locations. Several drill areas are indicated but no drill program is outlined, other than an undistributed 10,000 feet.

The sketchy maps and information do not permit identification of the workings shown and mentioned with the several mines of the Ivanhoe District from which mercury has been produced. As of 1942 nine properties had had some production. The Rand mine (Butte) is credited with the largest output, 933 flasks of mercury, the Silver Cloud with 165, and the Governor (Pangburn-Hunt) with 107 flasks.

Curley? Curly?

The Governor property, financed by Governor Curry of Massachusetts and associates, did not live up to the sampling. The "F" workings yielded 2,200 tons of ore estimated to contain about 2 pounds of mercury to the ton, whereas 4 to 5 pounds had been expected. At the Sheep Corral, 18 pounds per ton were expected and 3.6 pounds were recovered.

Copy retained 400

The price of mercury is now high. Nevertheless, if new concepts of mercury deposition of striking importance have not been formed since the period of unsuccessful operations, care should be exercised in judging the potential of the referenced properties.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

BUREAU OF MINES
WASHINGTON, D. C.

APR 30 1 35 PM '56

Docket

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

April 26, 1956

RECEIVED
APR 27 1956

WSM

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4264 (mercury), Vernon J. Pick dba Pick Uranium Company, Silver Cloud, Butte, and Fox (Lark or Pangburn) mines, Elko County, Nevada, $94,668.45

The applicant proposes to explore the property by 10,000 feet of drilling at a total estimated cost of $94,668.45.

According to assay data submitted with the application further exploration to determine the mercury mineralization may be warranted. However, the program is indefinite in that insufficient information is given on type of drilling, drilling locations, justifications for drilling, and other pertinent data.

Moreover, for this program, it is believed that full time employment of a geologist, assayer, surveyer, sampler, and bulldozer operator is not warranted. It would be more economical to have the samples assayed by a competent laboratory than to employ an assayer and support a laboratory at the mine. The purchase of assaying and surveying instruments is questioned. Also, the estimated food and lodging item, if allowed, appears high.

It seems to me that this application needs additional data and some revision - especially of costs.

Referral of the application to the Field Team is recommended.

J. W. Pennington

J. W. Pennington

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

Copy retained 400

April 24, 1956
Subject: DMEA-4264
Re: Exploration Assistance
Fox, Silver Cloud, Butte Claims

Pick Uranium Company
P. O. Box 67
Saratoga, California

Gentlemen:

The receipt of your application dated March 23, 1956, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4264 and referred to the Iron & Ferro-Alloys Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

April 24, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II.

DMEA - 4264 Pick Uranium Company

Robert E. Adams
Chief, Operation's Control
and Statistics Division

Cn

RECEIVED
APR 4 - 1956

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

4264

1605 Evans Avenue
Reno, Nevada

April 2, 1956

Leo J. Miller, Chief Geologist
Pick Mining Company
P. O. Box 67
Saratoga, California

Dear Mr. Miller:

In compliance with your request of March 30, 1956, we are returning your DMEA application relative to your Battle Mountain property.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

Encl.

SRicker:gh
cc: Opr. Com., DMEA, Wash., D.C.
R. M. Smith
File

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

RECEIVED
MAR 29 1956

4264

1605 Evans Avenue
Reno, Nevada

March 27, 1956

Vernon J. Pick dba Pick Uranium Company
P O Box 67
Saratoga, California

Dear Mr. Pick:

Reference is made to your letter of March 23, 1956 relative to your application for a Defense Minerals Exploration Administration loan.

You will please note that Item 2 - General - on the MF-103 form states that application and all accompanying papers should be sent in quadruplicate.

Perhaps you have forwarded extra copies of your application and maps to our Washington office. Otherwise, will you please forward the required number of copies to this office.

We note that your estimate of costs is on a unit cost basis of $30/per foot. This is by far the highest cost estimate ever presented to this office and we would like to have a breakdown as to how it was arrived at. The DMEA allows rental or depreciation of equipment on a monthly rate based on five years amortization period. Your salary rates for supervision, labor costs, supplies, etc. should be shown in the breakdown.

We appreciate your interest in our program and will be pleased to hear from you at your earliest convenience so that your application can be given our early attention.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

SRikker:gh
cc: Opr. Com., DMEA, Wash., D. C.

R. M Smith
File

R m E a

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

RECEIVED
APR 23 1956

1605 Evans Avenue
Reno, Nevada

April 19, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Mercury)
Vernon J. Pick dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

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

For: S. Ricker

Attach.

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

RECEIVED
APR 2 8 1956

1605 Evans Avenue
Reno, Nevada

April 19, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Mercury)
Vernon J. Pick dba Pick Uranium Company
Fox, Silver Cloud, Butte claims
Elko County, Nevada

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

S. Ricker

Attach.

SRicker:gh
cc: R. M. Smith
File

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
APR 23 1956

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

Not to be filled in by applicant

Docket No. DMEA-4264
Metal or Mineral Mercury
Date Received ~~Mch 26, 1956~~ 4/23/56
Estimated Cost $94,668.45
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Vernon J. Pick dba Pick Uranium Company
P. O. box 67
Saratoga, California

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Exhibit A.

(*b*) State any mine name by which the property is known. Fox, Silver Cloud, Butte

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Purchaser under contract for and ownership of unpatented claims.

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

(*e*) If you own the land, describe any liens or encumbrances on it None

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

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

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

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

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

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

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

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

(*c*) The work will start within 15 days and be completed within 4 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated March 23, 1956

Vernon J. Pick - dba
PICK MINING CO. (Applicant)

By Leo J. Miller
Leo J. Miller
Chief Geologist

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

RECEIVED
APR 23 1966

4. PHYSICAL DESCRIPTION:

(a) The Silver Cloud, Butte, and Fox (Lark or Pangburn) mines were worked during the first and Second World Wars. These properties have been described in the Nevada Bureau of Mines publication, "Quicksilver Deposits of the Nevada," by Phoenix and Yates, 1945.

At the present time, the Pick Mining Company is carrying out a drilling exploration program to test both the opalitic type ore and the volcanic type ore beneath the opalite caps. A Porta-drill and a C. P. 15 diamond drill are being used to test for cinnabar in the altered rhyolite. A new contract is being let for a wagon drill to explore the opalite.

The properties are readily accessible by a graded road from Battle Mountain, Nevada.

(b) Approximately 3000 flasks were the total production for the mines mentioned above.

There are no blocked out ore reserves, but the mine headings average from five to eleven lbs/ton mercury.

(c) The ore mineral cinnabar, occurs in two types of rocks, opalite and altered volcanics. The massive opalite is postulated to be a surface expression of an once active, hot spring or fumarole. Portions of the opalite probably represents a subsurface replacement. Detailed plane table mapping as demonstrated that the opalite bodies occurs in clusters along faults. Since the mine headings are considered ore grade for open pit operations (4 to 11 lbs.) these opalitic bodies are being explored.

Cinnabar has been encountered beneath the opalite in altered volcanics by drilling and it is hoped that further exploration in the subsurface will uncover an ore body similar to the Cordero mine near McDermitt, Nevada.

Refer to figures 1 to 4 for above discussion.

(d) The access roads are graded surface roads of burned opalite. The nearest rail line is 50 miles south of the property. Supplies are obtained from Battle Mountain, 55 miles south of camp. A 2000 foot airstrip is maintained at the main camp. All employees reside on the property.

(e) Manpower is readily available in Battle Mountain. Materials and supplies are either trucked in or flown to the property. Water is plentiful for drilling and domestic use. Water wells can be developed for mill - furnane use. Power is supplied by diseal or gasoline piston engines. The nearest electric line is 40 miles to the south.

(5a) Cinnabar is the mineral being explored for:

(b) The proposed work is to continue testing for the altered volcanic mercury ore and to test for opalite mercury ore.

Several drill holes have been completed in an altered volcanic fault zone with favorable results. One hole cut a zone which averaged 6.5 lbs/ton of mercury for 10 feet. The area was abandoned due to winter conditions, but plans are in operation to continue drilling this spring. An angle drill hole is being completed at the Butte mine area. Diseminated cinnabar is present at 120 feet.

A wagon drill contract is now being let to drill the opalite. It is believed that enough ore is present in the mine headings to justify the drilling.

(d) The applicant successfully operated the Delta Uranium Mine on the Colorado Plateau, and has subsequently been engaged in exploration for copper, nickel, lead, zinc, and mercury. The work will be supervised by Leo J. Miller, Ph.D. Geologist, who has had six years experience in this type exploration. Raymond Garcia, will be Geologist on the project and Roy Tyler will be the engineer in charge of operations.

(6) Estimate of Costs for five months of operation.

DRILLING (10,000 ft. at $7.00 per ft.)	$70,000.00
SALARIES	
Geologist - $500.00 per mo.	$ 2,500.00
Assayer - $400.00 per mo.	2,000.00
Surveyor - $400.00 per mo.	2,000.00
Sampler - $300.00 per mo.	1,500.00
Bulldozer Operator - $500.00 per mo.	2,500.00
Supervisory (Part Time Basis - $400.00 per mo.)	2,000.00
CHEMICALS & GLASSWARE FOR ASSAYING	$ 700.00
MAINTENANCE OF BULLDOZER & VEHICLES	$ 1,500.00
GAS, OIL, DISEL FUEL, & BUTANE	$ 2,000.00
FOOD & LODGING @ 7.00 per day per man	$ 5,000.00
DEPRECIATION:	
Bulldozer D6 @ 236.45/mo. 14,187	$ 1,182.25
Ford 3/4T Pickup @ 34.66/mo. 2080.	173.30
1 Jeep Universal @ 37.42/mo. 2245	187.10
1 Jeep Pickup @ 35.00/mo. 2100	175.00
2 Trailers @ 40.16/mo 2410.	200.80
1 ALLIDADE PLANE TABLE, TRIPOD, STADIA ROD	500.00
OFFICE SUPPLIES	50.00
MISC.	500.00
TOTAL	$94,668.45

(7a) The operator is prepared to furnish his share of the cost of the proposed project in accordance with the regulations on Government participation. The cost will be furnished by cash payment.

EXHIBIT "A"

VERNON J. PICK dba
PICK URANIUM CO.
P. O. Box 67
Saratoga, California

NO.	NAME	DATE	BOOK NO.	PAGE NO.	LOCATED BY AGENTS
1 through 40	Bloody Lode	5/10/55	36	391-430	L. L. Clements & Demars
1 through 40	Ruth	5/10/55	36	431-470	Roy E. Tyler - Henry Crew
1 through 40	Vern	5/10/55	36	471-510	Roy E. Tyler - Henry Crew
1 through 34	Marilyn	5/10/55	36	511-544	Roy E. Tyler - Henry Crew
35 through 39	Marilyn	5/10/55	37	196-200	Roy E. Tyler - Henry Crew
1 through 40	Roy	5/18/55	37	201-240	Roy E. Tyler - Henry Crew
1 through 28	Bill	5/18/55	37		
30 through 40	Bill	5/18/55	37	241-279	Roy E. Tyler - Henry Crew
1 through 4	Madge	5/18/55	37	280-283	Ry E. Tyler - Henry Crew
40	Marilyn	5/18/55	37	284	
29	Bill	5/18/55	37		
1 and 2	Blue	5/26/55	38	85-86	Roy E. Tyler - Henry Crew
1 through 29	Don	5/26/55	38	92-120	Roy E. Tyler - Henry Crew
31 through 39	Don	5/26/55	38	121-129	Roy E. Tyler - Henry Crew
1 through 7	Mary	5/26/55	38	258-264	Roy E. Tyler - Henry Crew
1 through 40	Red	5/26/55	38	265-304	Roy E. Tyler - Henry Crew
1 through 10	Rock	6/13/55	38	375-384	Roy E. Tyler - Henry Crew
1 through 6	Dale	6/13/55	38	385-390	Roy E. Tyler - Henry Crew
1 through 40	Ren	5/26/55	38	130-169	Roy E. Tyler - Henry
21 through 40	Pick	5/26/55	38	170-189	Roy E. Tyler - Henry Crew
1 through 20	Glen	5/26/55	38	190-209	Roy E. Tyler - Henry Crew
1 through 8	Jay	5/26/55	38	210-217	Roy E. Tyler - Henry Crew
1 through 40	Reese	5/26/55	38	218-257	Roy E. Tyler - Henry Crew

PURCHASE OPTION PROPERTY

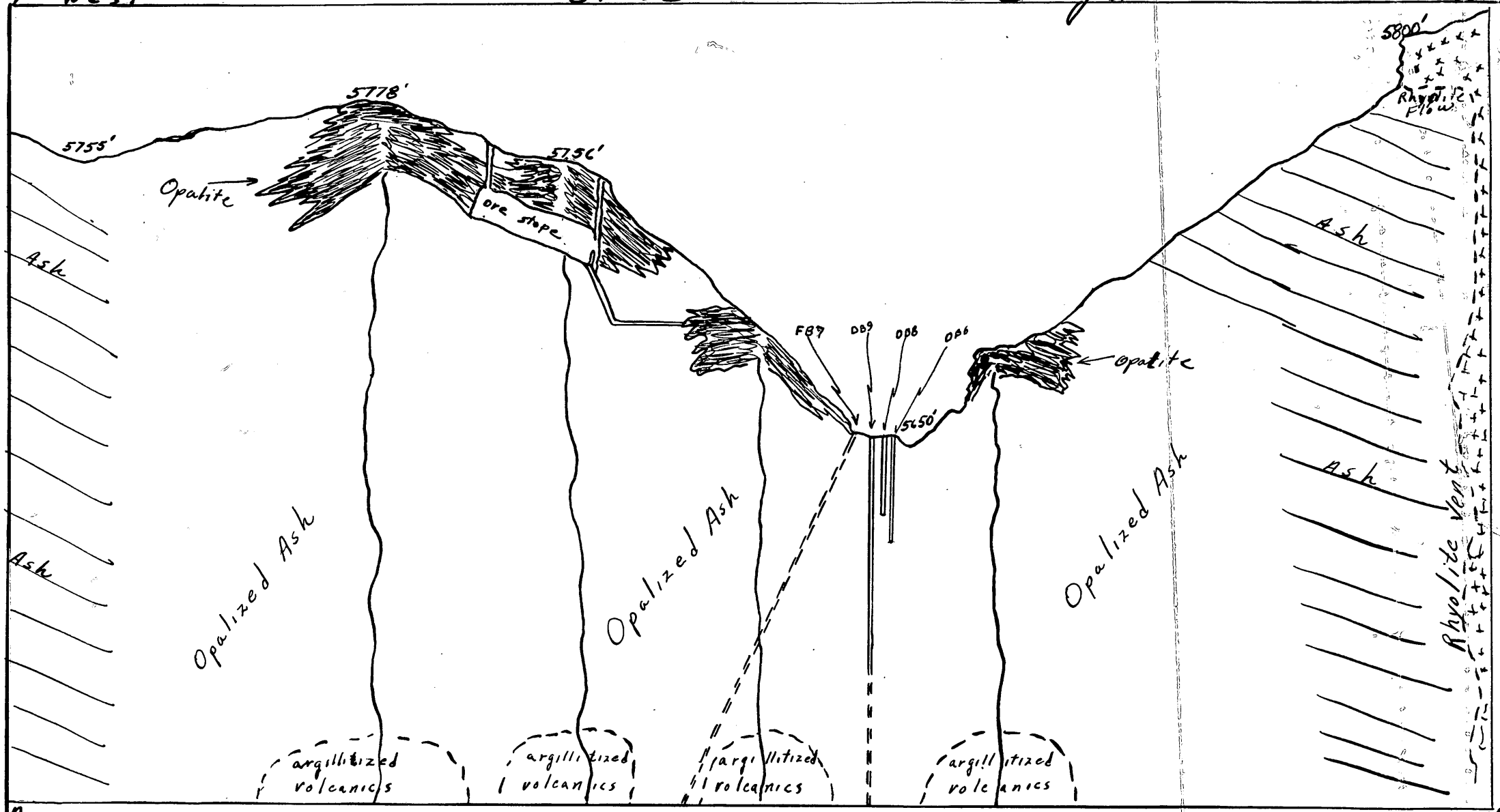
The Silver Cloud Group of mining claims, known as Clipper No. One and Clipper No. Two, situated in Sections 25 and 26, Township 37 North, Range 47 East, M. D. B. & M.; and,

The Fox Group of mining claims known as Fox, Fox No. One, Fox No. Two, Fox No. Three, Fox No. Four, Fox No. Five, Fox No. Six, Fox No. Seven, and Fox No. Eight, situated in Section 25, Township 38 North, Range 47 East, M. D. B. & M.

NAME OF CLAIM	PAGE NO.	BOOK NO.
BILLY NO. 6	164	32
BILLY NO. 7	347	32
HAROLDS CLUB NO. 1	316	29
HAROLDS CLUB NO. 2	315	29
HAROLDS CLUB NO. 3	314	29
HAROLDS CLUB NO. 4	313	29
HAROLDS CLUB NO. 5	312	29

NAME OF CLAIM	PAGE NO.	BOOK NO.
HAROLDS CLUB NO. 8	379	33
PICKUP NO. 1	31	33
PICKUP NO. 2	32	33
PICKUP NO. 3	33	33
PICKUP NO. 4	34	33
PICKUP NO. 5	35	33
PICKUP NO. 6	36	33
(Location notice for this claim gave name as PICKUP NO. 7)		
PICKUP NO. 7	37	33
PICKUP NO. 8	38	33
PICKUP NO. 9	39	33
PICKUP NO. 10	40	33
PICKUP NO. 11	41	33
PICKUP NO. 12	79	33

A west — Cross Section see figure 3 — East A'



A — A'

Cross Section

Scale:

Vertical 1 inch = 50 feet

Horizontal 1 inch = 100 feet

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS
EXPLORATION ADMINISTRATION

OFFICIAL BUSINESS
U. S. GEOLOGICAL SURVEY
SOUTH 157 HOWARD ST.
SPOKANE 4, WASHINGTON

SPOKANE, WASH.

SPOKANE, WASH.

UNITED STATES POSTAGE 20 CENTS

Mr. George C. Selfridge
Chairman, Operating Committee
Defense Minerals Explor. Admin.
Department of the Interior
Washington 25, D. C.

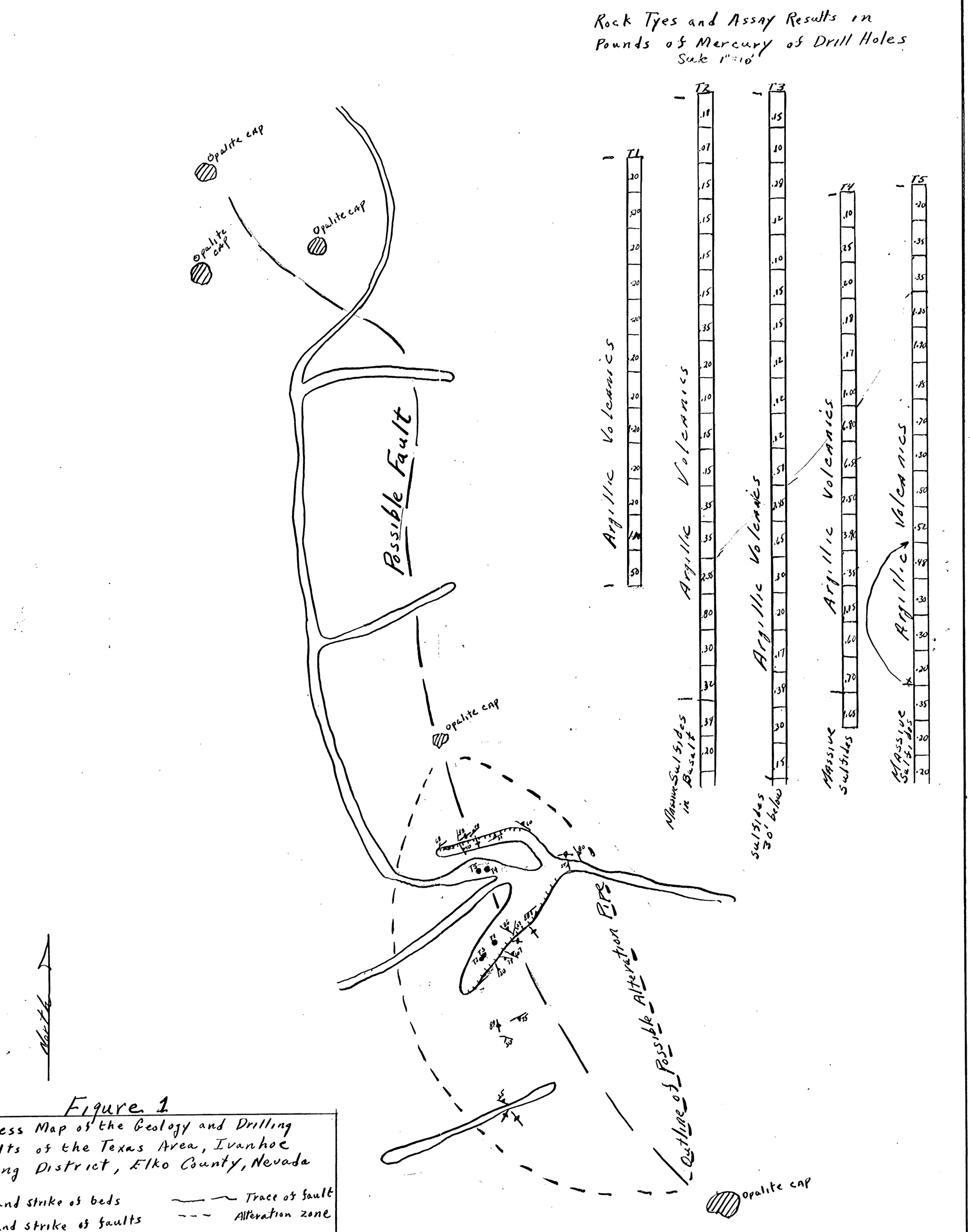


Figure 1

Progress Map of the Geology and Drilling Results of the Texas Area, Ivanhoe Mining District, Elko County, Nevada

Figure 2

GEOLOGIC MAP OF THE BUTTE MIN

AREA, IVANHOE DISTRICT, NEVADA

Opalite cap

Underground working

Road

Scale 1" = 100'

Leo J. Miller, March 2, 1956

RECEIVED
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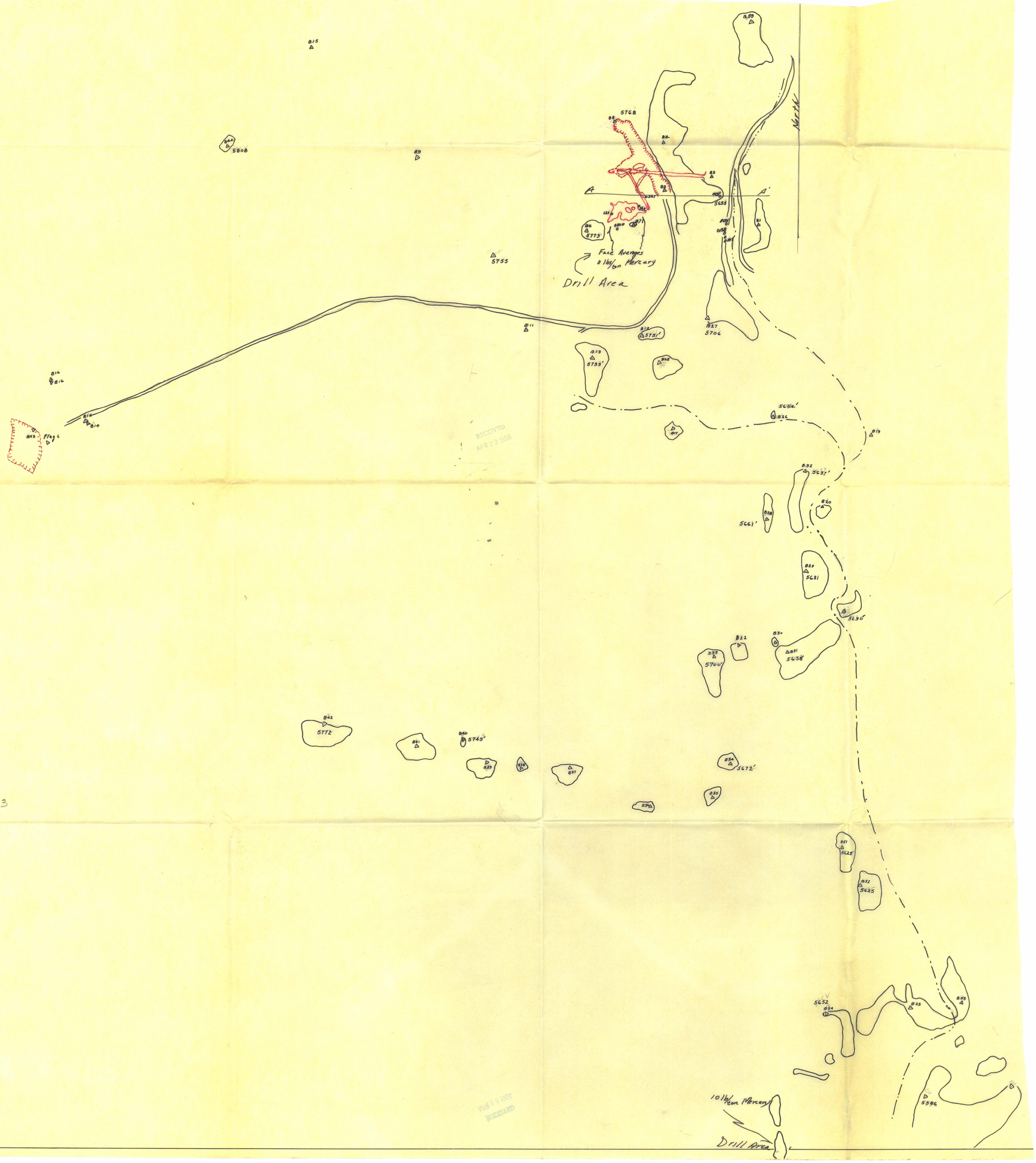

Figure 3

RECEIVED
APR 23 1986

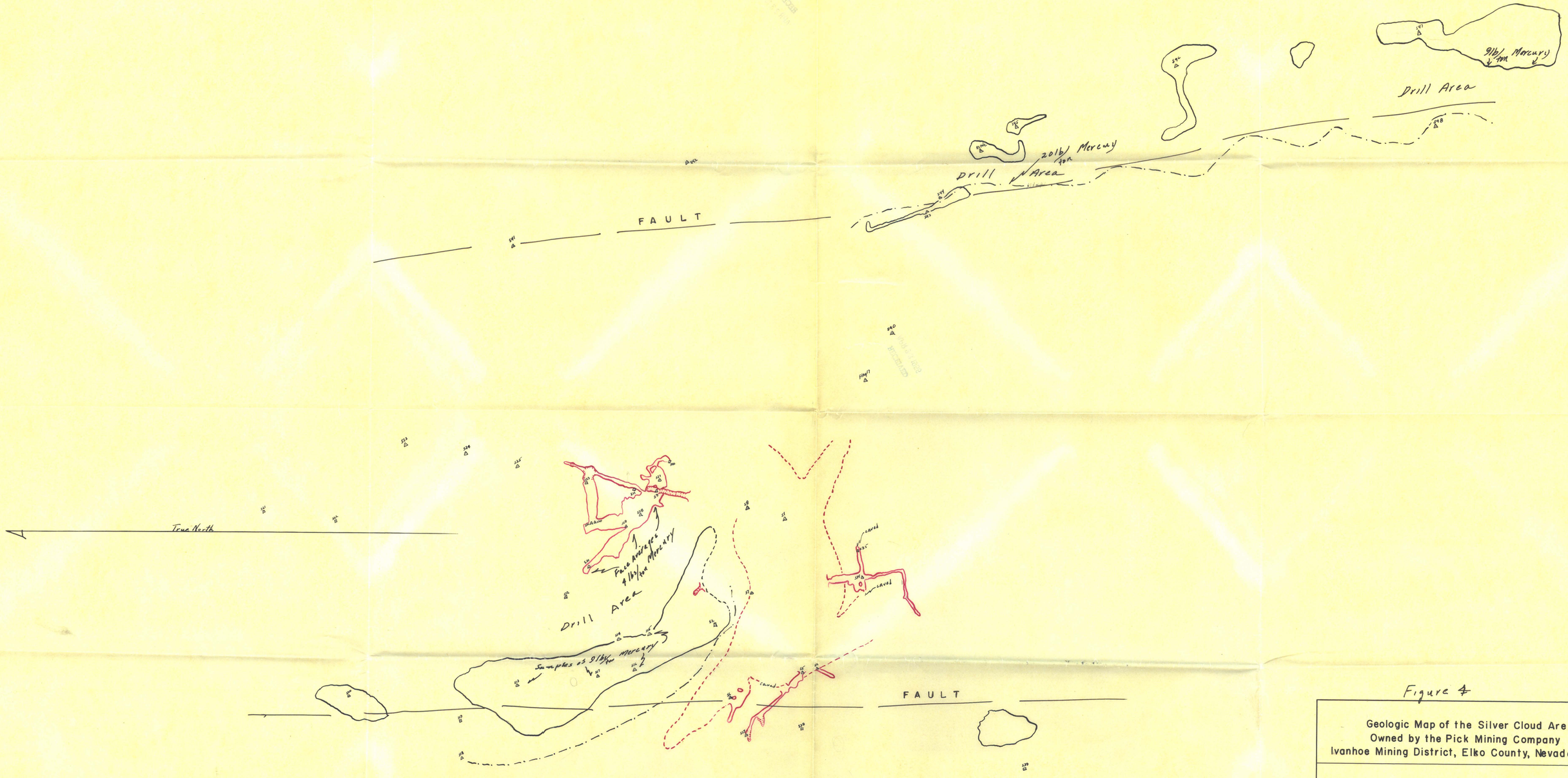

Figure 4

Geologic Map of the Silver Cloud Area
Owned by the Pick Mining Company
Ivanhoe Mining District, Elko County, Nevada

Leo J. Miller

Scale: 1" = 100'
March 1, 1956

Opalite cap
Open pit
Underground working
Alidade station
Shaft