400

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

Nevada

1605 Evans Avenue
Reno, Nevada

June 6, 1956

WSM

Mr. Harold J. Biaggini
Adelaida Road
Paso Robles, California

Re: Docket DMEA-3781 (Mercury)
Smith & Biaggini
Buena Vista Quicksilver Mine
San Luis Obispo County, Calif.

Dear Mr. Biaggini:

In accordance with our telephone conversation, I am enclosing seven copies of "Consent to Lien" forms, MF-203.

Five of these should be signed and returned to this office, the others are for your file.

Very truly yours,

Roscoe M. Smith
Acting Executive Officer
DMEA Field Team, Region II

Encl.

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

400 file

COPY

BUENA VISTA MINE
Adelaida Road
PASO ROBLES, CALIFORNIA

Nov. 12, 1955

3781

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

Mr. C. O. Mittendorf:

Through the new lease, which is enclosed, we are re-submitting our application for a D.M.E.A. Loan, in reference to Docket No. D.M.E.A. 3781-Mercury, Buena Vista Mine.

I believe that you have the reports in your office, which were drawn up by Mr. C. N. Schuette.

If you desire any further information, write to the above address and we will submit immediately.

Sincerely yours,

Signed: Harold J. Biaggini

Smith & Biaggini

400

DEC 13 1955

Messrs. Smith and Biaggini
Buena Vista Mine
Adelaida Road
Paso Robles, California

Re: Docket No. DMEA 3781 - Mercury
Buena Vista Mine
San Luis Obispo County, California

Gentlemen:

Reference is made to the above-docketed application for exploration assistance, denied by letter of August 29, 1955, and to your letter of November 18, 1955, with the attached new lease, which was intended as a re-submission of your application for Government participation.

While the new lease appears in better form than the original, denial of your application was based on a carefully considered judgment that the maximum expectancy of production resulting from your proposed program is not commensurate with the cost of exploration and Government participation is, therefore, not justified.

Such denials of requests for exploration assistance by the Defense Minerals Exploration Administration are made, however, without prejudice to the property. Any significant results of new work thereon that might materially alter our conclusions could, of course, be furnished to this Administration at any time. Such information should refer to the present docket and be accompanied by a revised application on Form MP-103.

The lease form accompanying your letter is returned herewith.

Sincerely yours,

C. C. Fitzsimmons

Administrator

Enclosure
cc: Docket
Code 400
Adm. Read. File
Oper. Committee

cc: T. Kiilsgaard, USGS
Helena Meyer, USBM
FT, Reg. 2

ADMcMahon/ls
12/9/55

AUG 2 9 1955

Smith & Biaggini
Buena Vista Mine
Adelaida Road
Paso Robles, California

Re: Docket No. DMEA 3781 - Mercury
Buena Vista Mine
San Luis Obispo County
California

Gentlemen:

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

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

Careful study of our information, although noting that mercury ore has been mined from the Buena Vista mine, indicates to us that the probability of disclosing minable mercury ore reserves by your proposed program 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 Program and for bringing this property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

SPHOLT/foc
8-24-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. II
H. M. Meyer, USBM
T. H. Kiilsgaard, USGS

Copy to: Hon. Charles M. Teague
House of Representatives

August 24, 1955

MEMORANDUM

To: Administrator

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $85,434.00
Docket No. DMEA 3781 - Mercury
Smith & Biaggini
Buena Vista Mine
San Luis Obispo County, California

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

1. The applicants, Smith & Biaggini, Buena Vista Mine, Adelaida Road, Paso Robles, California, requested exploration assistance in the amount of $85,434 for 420 feet of shaft sinking, cutting a shaft station 20 feet long and 680 feet of drifting and crosscutting in the Buena Vista mine.

2. The applicants control by lease from K. K. Butting, owner, the following patented mining claim.

Lot 37, Section 33, Township 26 South, Range 10 East, Mount Diablo Base and Meridian, said lot containing 34.43 acres, situated in the Salinas Mining District, San Luis Obispo County, California.

3. The proposed program is by sinking 420 feet of shaft in the Buena Vista mine, cutting a shaft station, and 680 feet of drifting and crosscutting on the new 950 ft. level of that shaft.

4. In the area explored by the Buena Vista mine mercury ore mineralization occurs as stringers, disseminations, and blebs of cinnabar in a strongly kaolinized shale breccia. 2748 flasks of mercury have been produced from the mine area, and the exploration program proposed might result in the discovery of an equal amount of ore. But only part of that ore could be expected

to be found directly by the initial work, and the maximum expectancy of production is not commensurate with the high cost of exploration and production.

5. The Field Team concludes that there is little probability of making a significant discovery and recommends denial. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

Thos. L. Chapman, Acting Chief
Iron and Ferro-Alloys Division

SPHOLT/foc
8-24-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

AUG 2 9 1955

Hon. Charles M. Teague
House of Representatives
Washington 25, D. C.

My dear Mr. Teague:

Reference is made to the inquiry by telephone from Mr. Slater of your office, concerning an application by Virgil Smith and Harold J Biaggini, Paso Robles, California, for exploration assistance, our Docket No. DMEA 3781 - Mercury, Buena Vista mine, Paso Robles, California.

As a result of a field examination of the referenced property and consideration of all available data, it has been determined that the probability of disclosing minable ore reserves by the applicants' proposed program is not sufficiently promising to justify Government participation in an exploration project. This application, therefore, has been denied.

For your information, a copy of our letter of denial to Messrs. Smith and Biaggini is enclosed.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

8/24/55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. II
H. M. Meyer, USBM
T. H. Kiilsgaard, USGS

400

Copy retained 400

August 23, 1955

Memorandum

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

From: James W. Pennington, Branch of Base Metals

Subject: Docket No. DMEA 3781 (mercury) Smith and Biaggini, Buena Vista Mine, San Luis Obispo County, California

The report by E. H. Bailey, Geological Survey, and B. H. Sheehan, Bureau of Mines, describing the Field Team examination of this property has been reviewed.

I concur with the recommendation of the report that application for exploration aid be denied.

Signed

James W. Pennington

JWPennington/vr

Copy to: Division of Minerals
Branch of Base Metals
H. M. Mayer
F i l e s
Thor Kiilsgaard, U. S. G. S.

RECEIVED
AUG 25 1955

IN REPLY REFER TO:

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

400

August 17, 1955

Re: DMEA 3781
Smith and Biaggini
Buena Vista Mine
San Luis Obispo Co., Calif.
$80,000 - 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 application asked for help in sinking a new shaft, 420 feet, cutting a station and driving 680 feet of drifts and crosscuts. The drifting and perhaps some crosscutting might be in the ore zone and thus somewhat productive, but much work would be necessary before regular production could be expected.

The analysis of the examiners with respect to the probable maximum production and the net proceeds, shows the margin would be small at the guaranteed price for mercury, and the probable production much less than needed for liquidation of the loan.

The points are well taken and the conclusions are adequately supported.

I concur with the denial recommendation of the Field Team.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-8/17/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. M. Meyer, 3623

RECEIVED
AUG 1 8 1955

469

May 12, 1955

Memorandum

To: William S. Martin, Chief, Iron & Ferro-Alloys Division

From: Helena M. Meyer, Assistant Chief, Branch of Base Metals

Subject: DMEA Docket 3781, Smith and Biaggini, Buena Vista mine, San Luis Obispo County, Calif., $85,434

The applicant proposes sinking a 420-foot shaft to a new level (at 950 feet) and drifting and crosscutting between 650 and 700 feet on that level.

There is no information in this office that would make possible an appraisal of the proposed work. U. S. Geological Survey Bulletin 922-R contains, on page 559, a description on the Mahoney (Buena Vista) mine, and a statement that "Carefully planned drilling from the present workings toward the Klau mine would seem the best way to determine the future possibilities of the mine". The ground is heavy and in the long interval since the mine was last operated (1948), according to Schuette's report, the tunnels, inclined winzes and old square set stopes have caved. Schuette says that his experience in re-opening old workings would advise him against it.

Bureau of Mines records on production verify the data given in Schuette's report for years after 1903: individual mine figures for the Buena Vista mine for the earlier years given are not available in this office.

It is possible that there is adequate information in regional offices of the Geological Survey and Bureau of Mines on which to appraise this application, but barring that possibility I recommend that a Field Team examination be made.

Helena M. Meyer

HMMeyer/vr

Helena M. Meyer

Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
F i l e s

MAY 13 1955

Smith & Higgins
Buena Vista Mine
Adelaide Road
Paso Robles, California

Re: Docket No. DMEA 3781 - Mercury
Buena Vista mine
San Luis Obispo County, California

Gentlemen:

Reference is made to the above-docketed application for exploration assistance which has been reviewed by the Defense Minerals Exploration Administration and referred to Mr. Spangler Richmond, Executive Officer, DMEA Field Team, Region II, 1605 Bruce 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

Administrator

FARutledge:fec
5-12-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. II
K. M. Meyer, USBM
T. H. Kiilsgaard, USGS

MAY 13 1955

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

Re: Docket No. DMEA 3781 - Mercury
Smith & Biaggini
Buena Vista mine
San Luis Obispo County, California

Dear Mr. Richer:

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

Two copies of a relevant memorandum dated April 27, 1955, by Z. L. Mossom, Geological Survey, and of a memorandum dated May 12, 1955, by H. M. Mayer, Bureau of Mines, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosure

APPROVED:

M. E. Volid for J. H. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

FABrtledge:fec
5-12-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. II
H. M. Mayer, USBM
T. H. Kiilsgaard, USGS

IN REPLY REFER TO:

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

400

April 27, 1955

Re: DMEA-3781
Smith & Biaggini
Buena Vista Mine
San Luis Obispo Co.,
California
$85,434 - Mercury

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The operator has proposed a project which will consist of 420 feet of shaft sinking, and 700 feet of crosscutting and drifting on a new 950 foot level.

According to C. N. Schuette, past production through 1948 has totaled about 4,200 flasks of mercury.

A description of the Buena Vista (Mahoney) deposits is given in U.S.G.S. Bulletin 922-R, (1941) Quicksilver deposits in San Luis Obispo County and southwestern Monterey County, California.

"The Buena Vista ore shoots occur in a strongly kaolinized breccia of shale. Most of them have indefinite limits, but some are definitely bounded by northwest-trending shear planes. Cinnabar occurs as stringers and disseminations in the shale breccia or as blebs, intimately associated with pyrite, in masses of white to green clay. The mine contained at least four ore shoots that have been stoped out. These shoots appear to have been controlled by a series of nearly parallel minor shear planes, but the evidence is not conclusive. They are in general roughly lenticular and relatively small. More ore shoots may yet be discovered on the property. Carefully planned drilling from the present workings toward the Klau mine (one half mile southwest of the Buena Vista) would seem the best way to determine the future possibilities of the mine."

Although drilling from the lower workings has been done, the records of the results were destroyed by fire. As the old workings are inaccessible, some new drilling will be required before deep underground exploration can be justified.

I recommend the application be referred to the Field Team for their examination. A modified drilling project should be considered, if DMEA assistance is geologically justified.

E. L. Newcomb

ELNewcomb:hlm
G-4/27/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. M. Meyer, 2623 Interior

UNITED STATES

DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEFENSE MINERALS PROCUREMENT ADMINISTRATION

ADMINISTRATION BY FIELD TEAM
REGION II

W&M

APPLICATION REPORT

RECEIVED
AUG 11 1955

DMA-3781 (Mercury)
Smith & Biagini
Buena Vista Quicksilver Mine
San Luis Obispo County, California

by

A. A. Meehan
Mining Engineer
U. S. Bureau of Mines

A. H. Bailey
Geologist
U. S. Geological Survey

August 4, 1955

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ILLUSTRATIONS

Figure 1. Location Map

2. Buena Vista Quicksilver Mine, plan and section

3. Plat - Buena Vista Quicksilver Mine

4. Photographs

INTRODUCTION

Mr. Harold J. Biaggini, Adelaida Road, Paso Robles, California and his partner Virgil Smith, Route 1, Box 265, Atascadero, California applied for Government assistance April 11, 1955 on a proposed $86,039.00 program with the Defense Minerals Exploration Administration to explore for mercury at the old Buena Vista (Mahoney) mine, San Luis Obispo County, Calif.

A field examination was requested by the Operating Committee on May 13, 1955. The property was examined on June 16, 1955 by E. H. Sheahan of the Bureau of Mines and R. H. Bailey, Geological Survey; they were accompanied by Messrs. Smith and Biaggini.

The applicants retained Mr. G. N. Schuette, consulting mining engineer, to prepare a report on the property in January, 1955. A copy of the report was included with the docketed application and was of considerable aid to the field team in preparing the application report.

All underground workings are inaccessible, there are no geologic maps, and many of the old mine records have been lost. Consequently the examination was limited to inspection of the existing surface plant and facilities, and discussions with the applicants. Much of data presented in this report was obtained from Mr. Virgil Smith. Other sources of information included production data obtained from the Bureau of Mines, Div. of Mineral Industries, Region II, and from State and Geological Survey publications and literature.

A complete examination of the mine would require a considerable expenditure for mine rehabilitation.

CONCLUSIONS AND RECOMMENDATIONS

The merits of the applicants' proposed exploration program and the revised program as suggested in this report can be based only on production records and similarity of the geology of the exploration area to the area from which the past production was made.

The proposed exploration might ultimately result in the discovery of as much quicksilver as has already been produced or 2,748 flasks, but only a part of this would be found directly by the initial work. Gross value of 2,748 flasks at the Government guaranteed price ($225 per flask) is $618,000. The cost of discovering, developing and mining the ore in this block is estimated to be about $540,000.

The maximum expectancy of production is not commensurate with the cost of exploration and production, and it is recommended that the application be denied.

LOCATION, ACCESSIBILITY, AND LOCAL CONDITIONS

The mine is located in section 33, T. 26 S., R. 10 E., M.D.B. & M. in the Salinas Mining District, San Luis Obispo County, Calif. at an altitude of 1,300 feet.

To reach the mine from Paso Robles, California, travel westerly on the paved Adelaide road 16 miles to the property (fig. 1). The mine is accessible all year.

The topography of the area has a mature appearance with low rounded hills covered by a sparse growth of timber, brush and grass. The climate is temperate. Rainfall during winter and spring is moderately heavy. Drainage is to the northeast to Taylor Creek. The

water supply for the mine and plant comes by gravity from springs higher on the hillside.

Electric power is available at the mine from a Pacific Gas & Electric Co. transmission line. Paso Robles is the nearest town where supplies can be obtained. There are no housing facilities for workmen at the property. In the past, workmen lived in the vicinity of the mine or at Paso Robles, which is a 30 minute drive.

Skilled mine laborers, experienced with shaft sinking operations, are scarce in this part of California. The prevailing wage scale is $14.00 per day. Wage incentive bonuses for miners at other properties often increase this scale to the equivalent of $20.00 per day.

HISTORY AND PRODUCTION

The Buena Vista quicksilver mine was also formerly known as the Mahoney, Gould, or Gould and Mahoney mine. The mine was apparently discovered and developed in 1874. In that year, the Buena Vista claim was patented by Mr. Edward Mahoney. Mr. C. N. Schuette reports that the mine was operated from 1875 to 1876 and that 1,240 flasks of quicksilver were recovered in 1876 by means of a Knox-Osborne furnace. This production, however, is not officially recorded with any Government agency. According to Mr. Virgil Smith, this early production came from workings driven in the vicinity of coordinates 1900 North, 1900 East shown on attached map, fig. 2.

Immediately after the production in 1876, the mine was shut down owing to a drop in the price of mercury, and it remained inoperative until 1899 when lessees, under the direction of Mr. H. W.

Gould, recovered 203 flasks of quicksilver during the last half of 1899 and 1900. Small scale mining and retorting continued until 1903 at which time Forstner[1] reports an ore body 10 to 15 feet wide and 30 feet high was exposed in the no. 1 tunnel at a location 400 feet from the portal.

Except for small scale lessee operation, the property remained idle from 1903 until 1937 when it was leased by Roy Wyatt who recovered about 100 flasks of quicksilver. From 1941 through 1946, Mr. Virgil Smith operated the mine. He drove most of the workings shown on the attached map (fig. 2), and during this time, 1,763 flasks of quicksilver were recovered by the operation of a 40-ton rotary furnace which was installed in 1941. No production was recorded in 1946, but in 1947 and 1948 a total of 500 flasks of quicksilver was produced. Since 1948, the property has been idle.

1/ Forstner, Wm., 1903, The Quicksilver Resources of California: Calif. State Div. of Mines Bull. 27, p. 162.

Summary of recorded production

Year	Ore furnaced short tons	% Hg/T	Mercury produced 76-pound flasks
1900			39
1901			74
1902			75
1903			150
1929			5
1930			5
1932			2
1933			2
1935			4
1938			7
1939			15
1940			94
1941			27
1942	2,950	-	106
1943	6,606	0.21	479
1944	2,135	0.344	193
1944	500	0.783	103
1945	274*	-	58
1945	3,768	0.804	797
1947	2,044	0.7	425
1948	350	-	75
1953	-	-	7 (clean up)
1954	not given		4
1955	not given		2
Total	24,400*		2,746 flasks

2036

* stimated

Calculated grade 0.2 lbs. Hg/ton.

The tailing dump from the furnace operations contains no more than 10,000 tons, however, much of the material may have been hauled away for road surfacing.

Mr. G. N. Schuette determined the total production at 4,176 flasks from the year 1876 to 1948 inclusive. For comparison, the nearby Oceanic mine, which is in 11th place on the list of California quicksilver mines, has yielded more than 41,000 flasks.

MOKELUMNE CITY CINNABAR

The property consists of one patented mining claim which covers 34.43 acres. The dimensions of the claim are 1500 feet by 1000 feet (22.7275 chains by 15.16 chains). (See fig. 3.) This claim is recorded by Government patent at San Luis Obispo County in Book G, page 360 of Patents. The property is owned by A. H. Hutting, P. O. Box 750, Salinas, Calif. The applicants, Messrs. Smith and Biaggini are lessees.

Surface rights to the land have apparently been leased to the Colwell Land and Cattle Company as judged from a sign posted at the entrance gate. The land is ideal for cattle grazing purposes and has been put to that use.

The copy of a lease between the applicant and the owners of the property was apparently forwarded to Washington, D.C. with the original application and was not examined by the engineer.

Mr. Virgil Smith is an experienced quicksilver miner. He is past middle age but appears to be in good health. Mr. Harold J. Biaggini has had but little mining experience. He has lived in the region most of his life and has been employed as a cattle rancher.

Underground workings are inaccessible, and no attempt had been made by the applicants to open any of them. A bulldozer had recently been used to freshly grade the surface of the mine roads. There was no activity at the open cut trench above and to the east of the portal of the No. 4 Tunnel. Only traces of cinnabar were observed there.

The applicants' share of the loan which they requested would amount to $21,509.75. They proposed to furnish that amount by

contributing equipment which they value at approximately $5,000.00, but the annual depreciation would amount to only $1,000.00. They proposed to furnish the balance with money. This balance would amount to about $20,509.75 and is more capital than they are financially able to raise unless an exploration loan was first granted.

The proposed exploration work outlined by the applicants or any similar equivalent work is a difficult undertaking except by experienced operators. The proposed shaft and drift would require heavy timber for ground support. Most of the proposed work would be within a wet sheared and brecciated fault zone. Virgil Smith reported that some water was encountered in deeper portions of the old mine where the flow amounted to about 30 gallons per minute.

DEVELOPMENT

The mine was developed by a series of tunnels running southerly into the hillside (see fig. 2). Ore mined below the elevation of the No. 1 tunnel had to be handled several times, consequently, mining costs were unusually high, according to Virgil Smith. The present condition of the mine workings (all of which are inaccessible) was undetermined. The best available information was obtained from Virgil Smith who claimed that the incline winze from the No. 1 Tunnel to the No. 2 Tunnel was caved about half way down from the collar in 1948. All of the workings required timber for ground support. Most of the workings are believed to be caved at the present time.

The following facilities are on the property:

1. One quicksilver rotary furnace treatment plant. Capacity 32 to 38 tons per day. Reported recovery 92 percent. See fig. 4 - condition fair.

2. One timber framing shed, containing miscellaneous used tools, equipment, and junk. Condition poor.

3. One house trailer - poor condition.

4. One small galvanized shed - condition fair.

5. One air compressor, 285 c.f.m. with receiver and 440 volt induction motor and belt drive - condition poor.

6. One bulldozer, HD-10, Allis Chalmers - condition fair.

7. Ten used mine cars; one in good condition, nine in poor condition.

8. Miscellaneous scrap timber, pipe and rail, air and water pipe lines, oil and water storage tanks, and scrap. Poor to fair condition.

Mining costs at the property were undoubtedly high because of the nature of the deposit. When the market price of quicksilver dropped in 1948, the mine was forced to close.

GENERAL GEOLOGY

The entire Buena Vista property lies in a wide shear zone which traverses graywacke and shale of the Franciscan group, generally assigned a Jurassic age. East of the mine area the Franciscan rocks and the shear zone are overlain by light-colored shale and siltstone of Miocene age.

The shear zone, which is the dominant structure of the mine area, trends westerly for many miles from the Buena Vista mine, and it reaches its maximum width of about a half a mile in the mine area.

locally, as for example at the Glen mine less than half a mile west of the Buena Vista mine, the shear zone includes lenses of serpentine; but neither serpentine, nor its derivative, silica-carbonate rock, was seen on the Buena Vista property. The rocks in the shear zone near the mine consist of altered, probably kaolinized, graywacke and black shale, with a few lenses of chert and altered basic volcanic rocks. These rocks are highly, but not uniformly, sheared with discontinuous blocks of the harder rocks engulfed in a matrix of sheared shale. The gross structure within the zone is somewhat similar to normal fault breccias in that the directions of most of the shears, and the residual bedding in the shale, tend to conform to the outlines of the more resistant blocks rather than being parallel to the walls of the zone. The resulting shear zone is, therefore, characterized by innumerable shear or fault surfaces which are discontinuous, arcuate, and without apparent pattern to their distribution or orientation.

ORE DEPOSITS

The ore in the Buena Vista mine consist of cinnabar that fills minute fractures in the harder rocks and pore spaces in the altered graywacke. The ore bodies that have been found ranged in size from mere pods to bodies containing as much as 10,000 tons. The grade of the ore mined varied between 5 and 15 pounds of quicksilver to the ton.

The features responsible for the localization of the ore bodies could not be determined as the mine was inaccessible, but some inferences may be drawn from knowledge of the local geology and the distribution of stopes as shown on the accompanying map, figure 2.

The ore bodies are distributed without definite pattern through a northerly trending zone about 200 feet wide. This doubtless reflects some sort of cross structure, probably a zone of distributed shearing, transverse to the westerly trend of the main shear zone. Within this northerly trending zone, the ore bodies have a fairly random orientation, but the larger stopes all pitch southeasterly. Because of the highly sheared character of the ground, it is doubtful if the ore bodies are localized by any single continuous fault, and it is likely that they cross from one local structure to another. In many respects the deposits of the Buena Vista mine are very similar to those of the nearby, highly productive Klau mine, which had large ore bodies controlled by minor fractures transverse to the trend of the wide shear zone.

ORE RESERVES

There are no known ore reserves of any kind in the Buena Vista mine, although cinnabar is reported to have been found in several exploratory drill holes.

Judging from the proportion of ore bodies thus far mined along the mineralized zone, it is inferred that additional ore bodies may be discovered down the dip and along the strike of the zone. The triangular block to be explored that is bounded by the proposed shaft and drift (fig. 2) is about the same size as the triangular block that was mined. If it is assumed that unexplored parts of the mineralized zone contain about the same relative proportion of ore and waste as the parts already mined, the inferred reserves are

about the same as the total ore produced, or 24,000 ± tons. It is expected that any new ore bodies discovered would be about the same grade as the ore that was mined, or 8 pounds per ton.

PROPOSED EXPLORATION

The applicant proposes to put down a 400-foot shaft with a collar at an altitude of 1,350 feet, and to follow this with 700 feet of drifting some 68 feet below the lowest level. We believe better exploration can be accomplished at the same or less cost, and the same target area reached, by a shaft located 100 feet lower in the place indicated on figure 2, followed by 600 feet of drifting and 500 feet of diamond drilling. The drift proposed by the applicant would test only for the continuation of ore bodies that pitch south-easterly. The revised proposal would explore not only this same area but other areas underlying the old workings. Further advantages of less access road and 100 feet less shaft are gained by the proposed new site for the shaft collar.

The revised alternative program has been discussed with the applicant and meets with his approval.

ESTIMATED EXPLORATION COSTS

The alternate exploration program would involve sinking a new, two compartment (4'6" x 8'6" clear of timber), vertical, 320 foot shaft; preparing a station on 300-foot level; driving 600 feet of drift (5' x 7' clear of timber), and 600 feet of underground diamond drilling. Time required to complete the project would amount to at least 64 weeks or 16 months. Estimated rate of advance: Shaft - 2 feet per day; drifts - 4 feet per day.

a. Independent contracts

(1) Grading for shaft site, access road, starting shaft and construction of reinforced concrete collar, power line to shaft site, headframe and hoist house . . . . . $ 3,400.00

(2) Core drilling - Note from C. M. Schuette estimate 600 feet diamond drilling at $6/foot - BX size 3,600.00

b. Labor

Consulting engineer	$250/mo.	
Superintendent	600/mo.	
1 hoistman - $2/hr.	360/mo.	
1 topman - $1.75/hr.	350/mo.	
3 miners - $2/hr.	1050/mo.	
16 months at	$2640/mo.	42,240.00

c. Operating Material and Supplies

Timber at $80/M 64 M	$5,120	
Air & water pipe, 2000 feet 2-inch	1,000	
Drill steel & bits	300	
Air & water hose	160	
Pump column	500	
Hanger rods	300	
Powder fuse, caps & carbide	2,700	
Power	2,500	
Miscellaneous supplies & tools	1,000	
1400 feet 12# mine rail	500	
Fish plates, bolts & spikes	200	
1000 feet 12-inch ventilation pipe	1,250	
		15,530.00

d. Operating equipment

	Used	
Mine hoist, single drum, 50 - horsepower motor, reversible drum controller with grids	$2,500	
Ventilation blower & motor	400	
Safety cross head	400	
Sinking buckets (2)	200	
Hoist cable - 5/8 inch plow steel 6/19	200	
2 Jackhammers, wet, 1-inch hex chuck	900	

d. Operating equipment (Cont'd.)

Sump & station pump with motor and cable	$2,000	
4 Mine cars, 16-inch gage, 20 cu. ft.	600	
1 Cage	700	
Mine safety equipment, first aid equipment and breathing masks	400	
Miscellaneous mine tools	400	
		$ 8,700.00

The operator owns equipment which he values at $5,000. Most of this equipment would be of some value to the project, but equipment and supplies needed are listed above.

e. Initial rehabilitation and repairs (Listed above with independent contracts)	-
f. New buildings (Listed above with independent contracts)	-
g. Insurance, CAB, Taxes, and State Unemployment - 15% of $42,240	$ 6,336.00
Cost of Project	$79,806.00*

*Note: See the following summary on a unit cost basis.

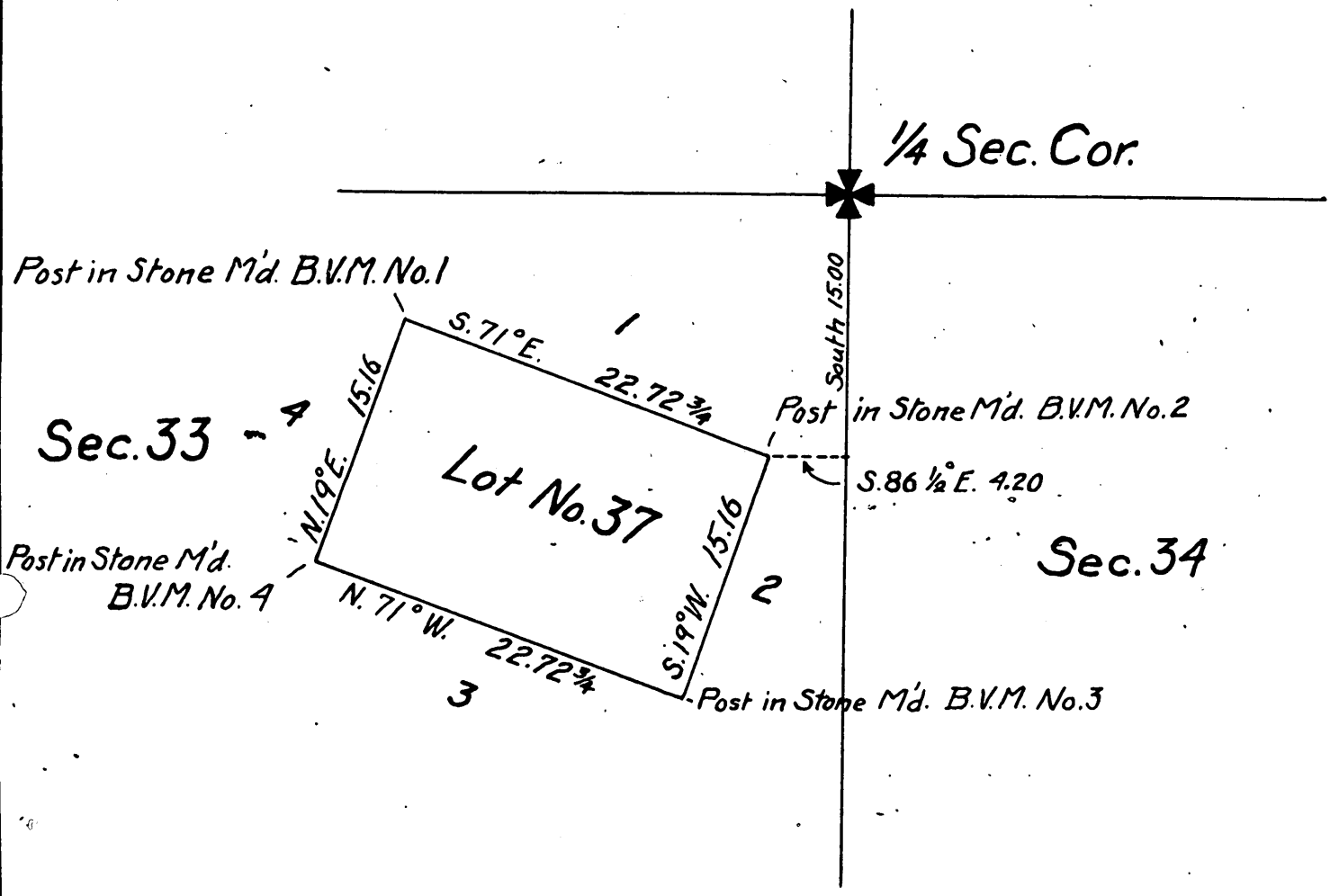
Shaft sinking, 2-compartment, 4'6" x 8'6" in clear, 320 feet at $145/ft.	$46,400.00
Drifting (new 300 level, elev. 950), 5' x 7' in clear, 600 feet at $49/ft.	29,600.00
Core drilling, BX size, from drift 600 feet at $6/ft.	3,600.00
Total	$79,600 or $80,000
Applicant's share 25%	$20,000
Government share 75%	$60,000

ESTIMATED PRODUCTION COSTS

Total gross cost of production from the estimated possible production of 24,000 tons of ore would approximate $541,000 broken down as follows:

1947 exploration costs	$ 80,000
Additional exploration and development costs $2/ton	48,000
Mining 24,000 tons $14 (square sets)	336,000
Furnacing 24,000 tons at $3	72,000
Maintenance (2 years)	5,000
	$541,000

Plat
of the claim of
Edward Mahoney
upon the
Buena Vista Quicksilver Mine
Salinas Mining District., S.L.O. County, Cal.,
containing 34-43/100 Acres. Scale - 10 chs. to 1 inch.
T. 26 S., R. 10 E., Mount Diablo Meridian. Var. 15-1/2° E.



This is a tracing taken from Patents, Book G, Page 363.

Patent Date: Oct. 22, 1874.

Recorded in the General Land Office, Vol. 12, Pages 339 to 345.

Recorded in San Luis Obispo, Feb. 6, 1901.

Note: From C.N. Schuette Report

Figure 3

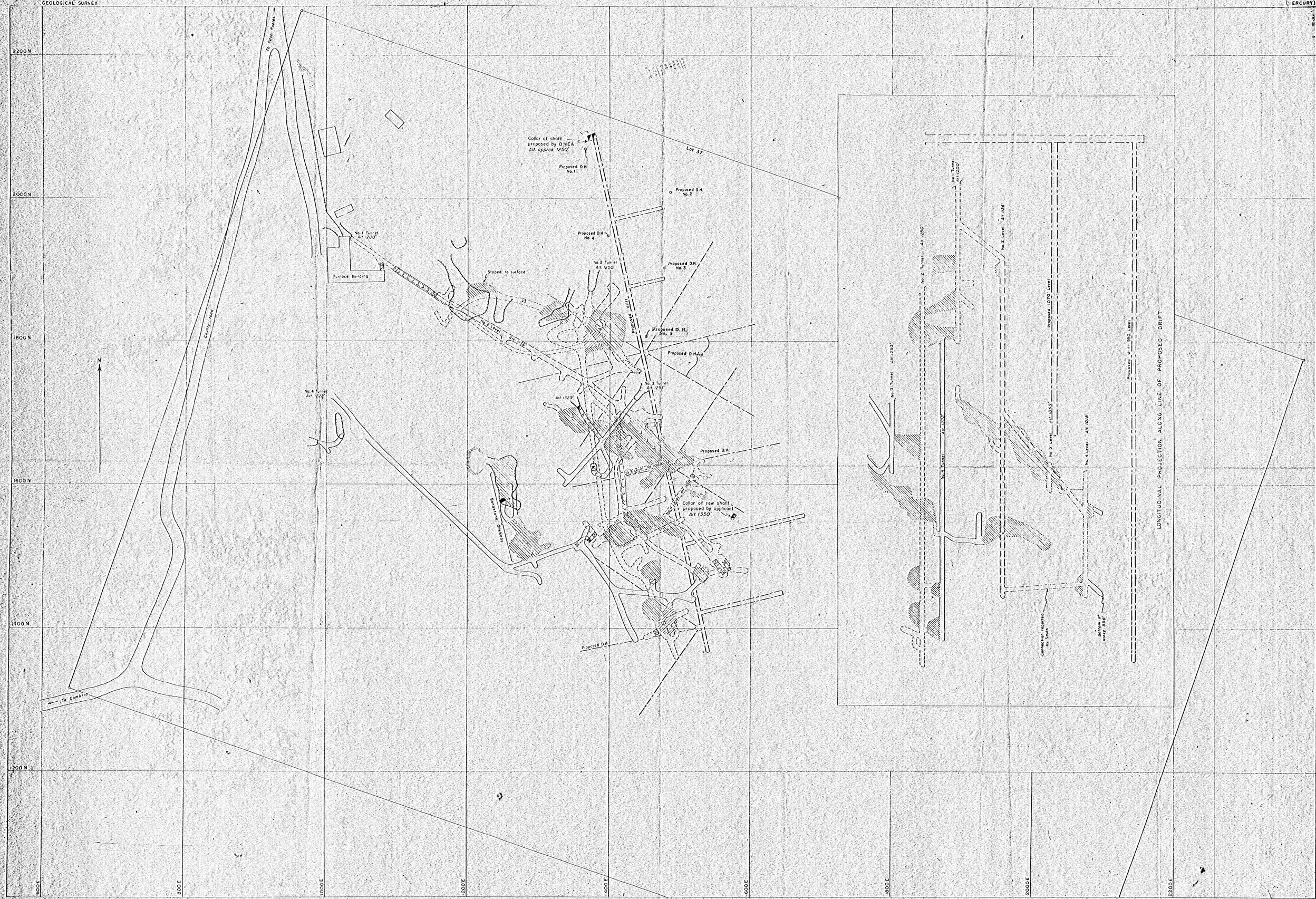
C.N. Schuette

DMEA-3781 (Mercury)
Smith & Biaggini
Buena Vista Mine
San Luis Obispo County, California

Fig. 1 LOCATION MAP CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3781
(MERCURY)



Compiled from maps and sections by Roy Wyatt, 1955

BUENA VISTA QUICKSILVER MINE, SAN LOUIS OBISPO COUNTY, CALIFORNIA

40 0 40 80 120 feet

Figure 2