400

So. 157 Howard Street
Spokane 4, Washington

November 20, 1956

RECEIVED

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

WSM

Re: Docket No. DMEA-4413 (Mercury)
Bonanza Oil and Mine Corp.
North Nonpareil Mercury Mine
Douglas County, Oregon

Dear Mr. Selfridge:

Enclosed are four copies of a field examination report on the referenced property by John D. Bardill, Engineer, U. S. Bureau of Mines, and D. C. Alvord, Geologist, U. S. Geological Survey.

The examiners conclude that no target for exploration could be shown to exist on this property, and that the chance of making a significant discovery is poor. Therefore, they recommend that the application be denied.

The Field Team concurs with the recommendation of the examiners.

By Field Team Region I, NW Dist.

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

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

Enclosures
cc: DMEM (2)
Alvord

Reviewed by
DMEA [illegible]

(4000)

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

RECEIVED 1956

November 6, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: John D. Bardill, Engineer, U. S. Bureau of Mines and
Donald C. Alvord, Geologist, U. S. Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4413 (Mercury), Bonanza Oil and Mine Corp., North Nonpareil Mercury Mine, Douglas County, Oregon

INTRODUCTION AND SUMMARY

An application for government aid to explore for mercury was received from the Bonanza Oil and Mine Corp. on July 12, 1956. Mr. Bardill examined the Nonpareil mine on September 15, 1956 in company with Mr. Burt Avery, superintendent for the applicant. Mr. Alvord in company with R. D. Sample, Geologist, U. S. Geological Survey, examined the mine on September 28, 1956. A company representative was not present during the examination on the 28th.

The examination consisted of a surface traverse along the outcrop of the principal structure, a careful look at all the workings shown on Plate 1 of this report, and mapping the Bonanza Adit.

No indicated or inferred reserves are present on the property. Surface and underground exposures, together with information obtained from diamond drilling formerly done by the U. S. Bureau of Mines, are sufficient to indicate that promising targets for exploration are lacking.

Further exploration would be extremely wildcat in nature and does not justify Government participation.

RECOMMENDATION

It is recommended that the application be denied.

Reviewed by
DMEA OPERATING COMMITTEE

(date)

APPLICANT

Bonanza Oil & Mine Corporation
(an Oregon corporation)
Sutherlin, Douglas County, Oregon

Arthur L. Albee, President
4 Liberty Square
Boston 9, Mass.

Dudley L. Milliken, Vice-Pres.
Cambridge, Mass.

Jack H. Beck, Treasurer
Eugene, Oregon

Hon. Frank Kopelman, Secretary
Boston, Mass.

Robert McCeogh, Director
81 Beacon Street
Boston, Mass.

The applicant operates the nearby Bonanza mine in a very efficient manner and presumably is able to finance its share of the proposed exploration program.

LOCATION

The North Nonpariel mine is in the southwestern part of sec. 3, T. 25 S., R. 5 W., Bonanza Nonpareil Mining District, Douglas County, Oregon. The mine is situated on the north side of Calapooza Creek Valley about 9 miles east of Sutherlin. It is reached by a paved road that connects Sutherlin with the town of Nonpariel.

The climate is mild with hot, dry weather during the summer and heavy rainfalls in fall, winter and spring. Freezing weather is not uncommon during the winter but heavy snowfalls are rare.

PROPERTY RIGHTS

The North Nonpariel mine property consists of the following: NW¼NW¼ of sec. 2; N½NE¼, SW¼NE¼, SE¼NW¼, W½NW¼, and NE¼SW¼ of sec. 3, T. 25 S., R. 4 W. Willamette Meridian, Douglas County, Oregon.

The Grantors, Phyllis Morning Thomas and Kenneth Edward Thomas, husband and wife, of Junction City, Lane County, Oregon, conveyed by a Bargain and Sale Deed, dated July 25, 1955, to Jack H. Beck, the above described premises in consideration of $10.00 and 5 percent royalty of all minerals mined from the property.

Jack H. Beck and Mata B. Beck, by a Bargain and Sale Deed dated May 31, 1956, conveyed unto Bonanza Oil & Mine Corp. the above property in consideration of $10.00 and certain other conditions described in that certain deed filed May 9, 1955 and recorded in Volume 243, at page 939, of Deed Records of Douglas County, Oregon.

Also, another parcel of fractions of land known as the South Nonpariel adjoining and lying partially in secs. 3, 4, 9 and 10 in T. 25 S., R. 4 W. Willamette Meridian, is described in detail in a 99-year lease contract, dated May 25, 1956, between the receiver of the property of the Oregon Cinnabar and Silver Mining Company, a dissolved corporation, and Bonanza Oil and Mine Corp. The lease provides royalty payments on a sliding scale for cinnabar ore mined, royalty of 12½ percent on oil, 10 percent on gold, silver, lead or other minerals, and 50 percent of net sales revenue of uranium.

DESCRIPTION OF THE PROPERTY

The Nonpareil mine workings are on the steep east slope of a northeast-trending ridge and consist of a number of adits, surface pits and shallow shafts strung out northeastward along the hillside over a distance of 3500 feet. Most of the workings, consisting of three adit levels connected by raises and stopes, are located at the south end of the mine area and are known collectively as the South Nonpareil mine. Another somewhat scattered and unconnected group of workings, comprising 13 adits, a very small stope, a shallow shaft and several surface pits, are concentrated at the north end of the mine area and are known collectively as the North Nonpareil mine. Most of the North Nonpareil adits are only a few tens of feet long but adits 6N, 11N, and the Bonanza adit contain 290, 280, and 200 feet, respectively, of workings (see pl. 1, showing principal workings only).

The ground stands well and all of the North Nonpareil adit workings are open.

HISTORY AND PAST PRODUCTION

The Nonpareil Mine was discovered sometime during the period 1865-1870 with most of the work being done at the South Nonpareil during the 1880's. With the exception of the Bonanza adit, which was driven during the summer of 1956, activity at the North Nonpareil mine was confined to the period 1929-1932.

Reliable figures for the total production of the Nonpareil mine are not available but R. E. Brown and A. C. Waters (Quicksilver deposits of the Bonanza-Nonpareil district, Douglas County, Oregon: U. S. Geol. Survey, Bull. 955-F, p. 243-249, 1951) have estimated from maps and incomplete production figures, the total production at 340 flasks of mercury from 3,700 tons of ore (7 lbs. Hg/ton).

Apparently, almost all of the production was from the South Nonpareil workings. The only stope on the North Nonpareil is in the 5N adit (pl. 1) where a small stope and raise to the surface may have yielded 75 to 100 tons of ore containing 7 lbs. mercury per ton.

GEOLOGY

The geology of the Bonanza-Nonpareil mining district and detailed descriptions of the geology and history of the Nonpareil mine are further discussed in the following reports:

Wells, F. G., and Waters, A. C., 1934, Quicksilver deposits of southwestern Oregon: U. S. Geol. Survey Bull. 850, p. 36-40.

Diller, J. S., 1898, Roseburg Folio: U. S. Geol. Survey Geol. Atlas No. 49.

The Bonanza-Nonpareil mining district is chiefly underlain by beds of the Umpqua formation of Eocene age. In this area the Umpqua formation is made up of several thousand feet of interbedded, locally tuffaceous, sandstones and shales overlain by flows of pillow basalt interstratified with palagonite tuffs and irregular lenses of conglomerate. As part of the southeastern limb of a broad anticline, the strata strike northeasterly and dip 20°-65° SE.

The mines and prospects of the district are located along or near a mineralized shear zone that occurs at a definite stratigraphic horizon--directly beneath the contact between an overlying incompetent shale-siltstone unit and a tuffaceous sandstone unit. The shear, which generally parallels the bedding, strikes northeast and dips to the southeast. Locally steep cross faults, trending from north to northwest, cut and displace the sandstone-shale contact. At the Bonanza mine, about a mile southwest of the Nonpareil mine, ore occurs within the sheared tuffaceous sandstone immediately beneath the sandstone-shale contact, but at the Nonpareil mine the ore occurs adjacent to or within a short distance of cross faults and generally some distance below the sheared contact zone.

At the North Nonpareil mine most exploration has been concentrated on the Crag fault, a broken and sheared zone a few feet wide that strikes northwest and dips steeply southwest to vertical (pl. 1). The Crag fault is characterized by intensively altered and brecciated rock laced with siliceous siderite veinlets.

The only ore mined at the North Nonpareil was taken from a small stope in adit 5N; although the applicant was able to obtain samples of 7-pound rock from this stope and infer a 50-ton reserve, we were unable to obtain more than 1-pound rock and could infer no likely reserve (pl. 1). Adits 11N and 4N disclosed fine veinlets and disseminated cinnabar related to the Crag fault and a trace of cinnabar is present in a shaft at the north end of adit 6N. No other cinnabar was seen during the examination. The shale-sandstone contact zone, prolific producer at the Bonanza mine, has been cut by the Bonanza adit and by two diamond drill holes but it is barren (see next section of this report and pl. 1).

BUREAU OF MINES EXPLORATION AND ORE RESERVES

Between February and April 1944, the Bureau of Mines conducted a diamond drilling project to test the possible occurrence of mineralized shear zones at or near the shale-sandstone contact at both the North and South Nonpariel mines. Drilling explored the areas at the intersection of the Nonpariel and Crag faults with the shale-sandstone contact. Four holes were drilled at North Nonpariel, aggregating 521.6 feet (pl. 1). Vertical hole 3 was drilled within the acute angle formed by the intersection of the Crag fault and the shale-sandstone contact which strikes about N. 36° E. and dips 40°-45° SE. at this point. The hole passed through 51 feet of landslide material, intersected the shale-sandstone contact at 61 feet, but cut no shear zones and found no ore. The second hole drilled, hole 4, was located 75 feet S. 30° E. of hole 3 and was inclined 45° in a N. 70° W. direction. The hole passed through 61 feet of landslide material, intersected the shale-sandstone contact at a depth of 84 feet and the Crag fault between 110 and 126 feet, and bottomed in sandstone at a depth of 219 feet. No shear zones were cut either at the contact or at greater depth. The Crag fault, as revealed in the drill cores, consists of 16 feet of intensely brecciated, fine-grained sandstone, cemented and mineralized with carbonates, silica, marcasite, and some realgar. No cinnabar was seen.
AsS

Two holes (Nos. 1 and 2) were drilled from a point 12 feet in front of 5 North Adit to determine the possible downward extension of the N. 26° W. trending and 42° SE. pitching ore shoot. The ore shoot was localized along the intersection of the Crag fault and a bedding shear. Hole 1 was drilled to a depth of 80 feet and hole 2 to a depth of 101 feet. No ore was encountered in either hole.

The ore body in 5 North Adit is apparently an isolated pocket of ore, not connected with any ore at depth.

Some of the above information was taken almost verbatim from U. S. Geol. Survey Bull. 955-F by Brown and Waters. Other information was taken from an unpublished Bureau of Mines report on the project.

There are no reserves at the North Nonpariel mine.

MERIT OF THE PROPERTY

No indicated or inferred reserves are present on the North Nonpareil property. Exposures on the surface and underground, together with information obtained from U. S. Bureau of Mines drilling, are sufficient to indicate that neither the Crag fault nor the shale-sandstone contact present targets of sufficient potential to warrant exploration under a DMEA program.

APPLICANT'S PROPOSAL

The applicant has proposed to crosscut, in a northwest direction, to the Crag fault and drift along the fault for a total distance of 474 feet to a point vertically below the 5 North Adit portal. From here the applicant proposes to drift along the mineralized footwall contact 200 feet southwesterly and 200 feet northeasterly. The applicant also proposes to crosscut 200 feet at right angles from the main drift to explore ore possibilities northeast and southwest of the Crag fault and to raise 200 feet at favorable locations from the main crosscut level to explore structures above the level.

EVALUATION OF THE APPLICANT'S PROPOSAL

The applicant has proposed a basically sound approach to exploring the property but inasmuch as a worthwhile target has not been demonstrated, there is no point in discussing the proposal in detail.

Attachment 1

Distribution:
- DMEA(4)
- USBM(5)
- USGS(SRO)
- Döcket
- Alvord

November 28, 1956

Memorandum

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

From: Assistant Chief, Branch of Base Metals

Subject: Review of Field Team examination report, Docket No. DMEA 4413 (mercury), Bonanza Oil and Mine Corp., North Nonpareil Mercury Mine, Douglas County, Oregon

The applicant proposed to explore for mercury mineralization by 1274 feet of drifting, crosscutting, and raising at an estimated cost of $20.00 per foot.

Examination of the property, surface and underground, and a previous Bureau of Mines drilling program indicate that an exploration project is not warranted.

I concur with the Field Team's recommendation that the application for exploration assistance 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
F i l e s

November 28, 1956

Memorandum

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From: Assistant Chief, Branch of Base Metals

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I concur with the Field Team's recommendation that the application for exploration assistance 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
F i l e s

IN REPLY REFER TO:

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

RECEIVED
DEC 4 1956
D.M.E.A.

November 30, 1956

Re: DMEA 4413
Bonanza Oil and Mine Corp.
North Hungarell Mine
Douglas County, Oregon
$27,680.00 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 applicant requested assistance in prospecting the Crag fault zone in search of mercury ore, at a horizon intermediate to those prospected by underground work and diamond drilling.

The examiners found much work had been done in the Crag fault zone and only one small pocket of ore had been located, that in the SW adit. Inasmuch as the fault cannot be considered a probable mineralized or mineralizing geologic feature, the examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

NEN:elson:jeh
11/30/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3)
J. W. Pennington 3623
Docket file
Chron. file

IN REPLY REFER TO:

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

RECEIVED DEC 4 1956 D.M.E.A.

November 30, 1956

Re: DMEA 4413
Bonanza Oil and Mine Corp.
North Hungaroil Mine
Douglas County, Oregon
$27,680.00 Mercury

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

Subject: Review of Field Team Report

The applicant requested assistance in prospecting the Crag fault zone in search of mercury ore, at a horizon intermediate to those prospected by underground work and diamond drilling.

The examiners found much work had been done in the Crag fault zone and only one small pocket of ore had been located, that in the SW adit. Inasmuch as the fault cannot be considered a probable mineralized or mineralizing geologic feature, the examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

NENelson:jeh
11/30/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3)
J. W. Pennington 3623
Docket file
Chron. file

DEC - 7 1956

Bowman Oil & Mine Corporation
Sutherlin, Oregon

Re: Docket No. [illegible]413 - Mercury
Memorail Quicksilver Mine
Douglas County, Oregon

Gentlemen:

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

Projects approved by 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 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,

S. D. McMahon

Administrator

SDMcMahon:sm 12-6-56

cc to: Docket
Code 400
Admr. Read, File
Oper. Comm.
FT. REG. I, NWDist
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

December 5, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $27,680.00
Docket No. DMEA 4413 - Mercury
Bonanza Oil and Mine Corporation
Nonpareil Quicksilver Mine
Douglas County, Oregon

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

(1) The applicant, Bonanza Oil and Mine Corporation, Sutherlin, Oregon, requested exploration assistance in the amount of $27,680.00 for crosscutting, drifting and raising at the above-cited property.

(2) The applicant controls by ownership the NW. ¼ NW. ¼ of sec. 2; N. ½ NE. ¼, SW. ¼ NE. ¼, SE. ¼ N W. ¼, W. ½ NW. ¼, and NE. ¼ SW. ¼ of sec. 3, T. 25 S., R. 5 W., W.M., Douglas County, Oregon. The applicant also controls by lease approximately 427 acres adjoining the above land to the east and southeast which is described in detail in a 99-year lease contract, dated May 25, 1956, between the receiver of the property of the Oregon Cinnabar and Silver Mining Company, a dissolved corporation and Bonanza Oil and Mine Corporation.

(3) The proposed program is to crosscut northwesterly to the Crag fault and drift on this structure for a total of 474 feet to a point vertically below the 5 North Adit portal; from here it is proposed to drift 200 feet northeasterly and 200 feet southwesterly along a possible mineralized footwall contact; at points determined during drifting 200 feet of crosscuts will explore ore possibilities NE and SW of the wide Crag fault; and at favorable locations a total of 200 feet of raise will be driven.

(4) The Nonpareil mine workings consist of a number of adits, surface pits and shallow shafts. Surface

and underground exposures were examined together with information from diamond drilling formerly done by the U. S. Bureau of Mines in 1944, and there were no indications of promising exploration targets.

(5) The Field Team concludes that no indicated or inferred reserves are present on the property. Surface and underground exposures, together with information obtained from diamond drilling formerly done by the U. S. Bureau of Mines, are sufficient to indicate that neither the Crag fault nor the shale-sandstone contact present targets of sufficient potential to warrant exploration under a DMEA program. Accordingly, they recommend that the application 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:am 12-5-56
cc to: Docket
Code 400
Admin. Read. File
Oper. Comm.
Mr. Johnson

400

IN REPLY REFER TO:

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

November 30, 1956

Re: DMEA 4413
Sunset Oil and Mine Corp.
North Hungarell Mine
Douglas County, Oregon
$27,680.00 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 applicant requested assistance in prospecting the Crag fault zone in search of mercury ore, at a horizon intermediate to those prospected by underground work and diamond drilling.

The examiners found much work had been done in the Crag fault zone and only one small pocket of ore had been located, that in the SW adit. Inasmuch as the fault cannot be considered a probable mineralized or mineralizing geologic feature, the examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

NENelson:jch
11/30/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3)
J. W. Pennington 3623
Docket file
Chron. file

400

November 28, 1956

Memorandum

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

From: Assistant Chief, Branch of Base Metals

Subject: Review of Field Team examination report, Docket No. DMEA 4413 (mercury), Bonanza Oil and Mine Corp., North Nonpareil Mercury Mine, Douglas County, Oregon

The applicant proposed to explore for mercury mineralization by 1274 feet of drifting, crosscutting, and raising at an estimated cost of $20.00 per foot.

Examination of the property, surface and underground, and a previous Bureau of Mines drilling program indicate that an exploration project is not warranted.

I concur with the Field Team's recommendation that the application for exploration assistance 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
F i l e s

400

AUG 1 2 1956

Bonanza Oil & Mine Corporation
Sutherlin, Oregon

Re: Docket No. DMEA 4413 - Mercury
Hempstead Quicksilver Mine
Douglas County, Oregon

Gentlemen:

The above docketed application for exploration assistance for mercury ore has been reviewed by the Washington Office of the Defense Minerals Exploration Administration and referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I - Northwest District, South 157 Howard Street, Spokane 4, Washington, 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

ADMcMahon/foc
8/15/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I - NWD
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

400

456

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

Re: Docket No. DMEA 4413 - Mercury
Bonanza Oil & Mine Corporation
Hoagerall Quicksilver Mine
Douglas County, Oregon

Dear Mr. Weissenborn:

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

Copies of memoranda dated August 8 and 10, 1956, by N. E. Nelson, Geological Survey, and J. W. Pennington, Bureau of Mines, respectively, relating to the project, are enclosed.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

FRANK D. LAMB

Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

ADMcMahon/fac 8/15/56

cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I - NWDist.
Messrs. J. W. Pennington, USBM
T. H. Killagaard, USGS

Enclosures:

400

Copy [illegible]

August 10, 1956

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4413 (mercury), Bonanza Oil and Mine Corp., Nonpareil mine, Douglas County, Oregon

The applicant proposes to explore the craig fault area at lower elevations than already exposed by 1274 feet of drifting, crosscutting, and raising at an estimated cost of $20.00 per foot.

According to the available information, the program appears sound and the costs seem reasonable.

Referral of the application to the Field Team for evaluation and examination is recommended. The complete application is returned herewith.

J. W. Pennington
J. W. Pennington

Attachment

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

400

IN REPLY REFER TO:

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

August 8, 1956

Re: DMEA 4413
Bonanza Oil and Mine Corp.
North Nemparell Mine
Douglas Co., Oregon
Est. $27,680.00 - Mercury

Corr related 400

Memorandum

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

From: W. . Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant now requests assistance in exploring a mercury bearing structure about 1-3/4 miles northeast of the Bonanza mine of the same company. The Bonanza mine is the scene of DMEA assisted work under contract M510, DMEA 2920. The expenditure of $94,100 is approved by the contract of which the Government share is $70,575. To Dec. 31, 1955, $15,464.90 of the then accrued royalty had been repaid. No later report is at hand. The mine is producing steadily and some new ore has been found on the lowest level the 1150, but as suggested by the subject application the Bonanza reserve position is not too good.

The geologic features at the North Nemparell mine though generally similar to those at the Bonanza mine differ in detail. See Quicksilver Deposits of the Bonanza-Nemparell District, Douglas Co., Oregon, by W. S. Brown and . . Waters, U. S. Geological Survey Bulletin 995-F, 1951 (Survey made 1942-1944).

The proposed work consists of:

No. 14 adit (New)

Stage I	Crosscutting	474 feet		
Stage II	Drifting	400 feet		
Stage III	Crosscutting	200 feet		
Stage IV	Raising	200 feet		
	Total	1,274 feet	$20.00/ft	$25,480
	Timbering 150 feet		$5.00	750
	Supervision, 3½ mos.		$300.00	1,050
	Rehabilition			200
	New Buildings			200
	Total (Estimated by writer)			$27,680
	Government share			20,760

Appraisal of the probablities of the finding of ore in the North Nonpareil area involves comparison with the results of work in the South Nonpareil mine, inasmuch as two cross faults, the Crag and the Nonpareil, are involved and not a longitudinal or strike shear as at the Bonanza mine. The South Nonpareil mine as a result of 2700 feet of underground work in the Nonpareil fault zone and mining is credited with a production of about 340 flasks of mercury.

The proposed work will prospect the Crag fault zone at a horizon about 150 feet below where it is explored by the Adit 11 N and at least 2 Bureau of Mines diamond drill holes, 1 and 2. Hole No. 4 investigates the fault zone at a horizon 60 feet below that of the proposed crosscut.

Judging by the results of work already done in the Crag fault zone and the results of work in the probably better appearing Nonpareil zone the proposed work resembles prospecting. However an up-to-date appraisal is warranted and referral to the Field Team is recommended

N. E. Nelson

N. E. Nelson

NENELSON:btr
G 8/8/56

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

402

RECEIVED

AUG - 6 1956

So. 157 Howard Street
Spokane 4, Washington

July 31, 1956

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

4413

Re: New application (Mercury)
Bonanza Oil and Mine Corporation
Nonpareil Mine
Douglas County, Oregon

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application submitted by the Bonanza Oil and Mine Corporation, Sutherlin, Oregon. One copy of the application has been retained for the files of this office.

Under contract No. Idm-8510 (Amended) the applicant is presently exploring for mercury along the Bonanza shear zone, about a mile southwest of the Nonpareil property, the site of the proposed exploration. At the Bonanza, cinnabar deposits occur in a shear zone formed directly beneath the contact between an overlying shale-siltstone unit and a tuffaceous sandstone unit. The shear, which parallels the bedding, strikes northeast and dips to the southeast. Although the Bonanza structure strikes toward the Nonpareil property it has not been positively identified on that property. The known ore at the Nonpareil is related to cross faults that strike northwest and dip southwest to cut the contact of the tuffaceous sandstone and shale. The ore shoots occur at horizons stratigraphically below the horizon of the Bonanza structure and are localized chiefly at or near the intersections of the cross faults with beds more permeable than the average country rock and at intersections or junctions with subsidiary north- to northeast-trending faults.

The geology of the Bonanza-Nonpareil district and of the Nonpareil mine is described in the following reports:

Brown, R. E., and Waters, A. C., 1947, Quicksilver deposits of the Bonanza-Nonpareil district, Douglas County, Oregon: U.S. Geol. Survey Bull. 955F.

Wells, F. G., and Waters, A. C., 1934, Quicksilver deposits of southwestern Oregon: U. S. Geol. Survey Bull. 850.

Diller, J. S., 1896, Roseburg Folio: U. S. Geol. Survey Geol. Atlas No. 49.

Past production from the Nonpareil mine has been variously estimated between 350 and 500 flasks of mercury. Brown and Waters (p. 248-49) point out that the cross faults of the Nonpareil may extend to greater depths than the present mine workings. They suggest that future exploration be concentrated along the cross fault structures, as all the ore bodies mined to date have been on or near these faults. However, they believe that any deposits found will likely not be extremely large.

The applicant proposes crosscutting to and drifting on the Crag fault, the northernmost of the Nonpareil cross faults, to search for ore deposits 150 feet below the present workings. Exploratory crosscutting and raising off the drift area are also proposed.

Reference to plate 37 of Brown and Waters and to the text, page 246, shows that only a very short strike length of the Crag fault has been explored to date; such being the case, drifting only 150 feet below the present workings constitutes exploration.

The proposed program appears to be sound in principle and the Operator's cost estimates are modest. A proper evaluation of the proposal would, however, require a field examination.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

Donald R. Maclaren, Acting Member
U. S. Geological Survey

Enclosure

cc: USBM (2)
Alvord

4413

RECEIVED
AUG 3 1956

Returned by BM

xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

July 31, 1956

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

Re: New application (Mercury)
Bonanza Oil and Mine Corporation
Nonpareil Mine
Douglas County, Oregon

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application submitted by the Bonanza Oil and Mine Corporation, Sutherlin, Oregon. One copy of the application has been retained for the files of this office.

Under contract No. Idm-E510 (Amended) the applicant is presently exploring for mercury along the Bonanza shear zone, about a mile southwest of the Nonpareil property, the site of the proposed exploration. At the Bonanza, cinnabar deposits occur in a shear zone formed directly beneath the contact between an overlying shale-siltstone unit and a tuffaceous sandstone unit. The shear, which parallels the bedding, strikes northeast and dips to the southeast. Although the Bonanza structure strikes toward the Nonpareil property it has not been positively identified on that property. The known ore at the Nonpareil is related to cross faults that strike northwest and dip southwest to cut the contact of the tuffaceous sandstone and shale. The ore shoots occur at horizons stratigraphically below the horizon of the Bonanza structure and are localized chiefly at or near the intersections of the cross faults with beds more permeable than the average country rock and at intersections or junctions with subsidiary north- to northeast-trending faults.

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Wells, F. G., and Waters, A. C., 1934, Quicksilver deposits of southwestern Oregon: U. S. Geol. Survey Bull. 850.

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The proposed program appears to be sound in principle and the Operator's cost estimates are modest. A proper evaluation of the proposal would, however, require a field examination.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

Donald R. MacLaren, Acting Member
U. S. Geological Survey

Enclosure

cc: USBM (2)
Alvord

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED AUG - 6 1956

RECEIVED JUL 12 1956 U. S. G. S. SPOKANE, WASH.

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. 4413
Metal or Mineral Mercury
Date Received 8-6-56
Estimated Cost $ Not given
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: Bonanza Oil & Mine Corp
Sutherlin Ore

(*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

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it

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

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

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

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

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

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

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

(*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 ..... days and be completed within ..... 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?

☐ 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 July 10, 1956

Bonanza Oil & Mine Corp
(Applicant)

By J H Beck
Pres

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

Bonanza Oil & Mine Corp
Sutherlin Ore

BOND FOR ORE RIGHTS

THIS INDENTURE WITNESSETH: that PHYLLIS MANNING THOMAS (the sole and only heir-at-law of Alice J. Manning Shefenburg, deceased) and [illegible] THOMAS, husband and wife, of Junction City, Lane County, Oregon, the Grantors, for and in consideration of the sum of TEN DOLLARS($10) to them paid do hereby bargain, sell, and convey unto JACK H. [illegible], the Grantee, the following described premises, to-wit:

> All of our right, title and interest in and to all mines and minerals and mineral deposits, together with the reserved right for prospecting for, mining, reducing and marketing the minerals in and upon the real property hereinafter described and particularly the cinnabar and other mercuric ore, together with the reserved right to use such of the surface of said real property as may be necessary or convenient for the mining, reducing and marketing of said minerals, all on the following real property situated in Douglas County, Oregon:
>
> The Northwest Quarter of the Northwest Quarter of Section 2,
> The North Half of the Northeast Quarter,
> The Southwest Quarter of the Northeast Quarter,
> The Southeast Quarter of the Northwest Quarter,
> The East Half of the Northwest Quarter, and
> The Northeast Quarter of the Southwest Quarter of Section 3,
> Township 25 South, Range 4 West, Willamette Meridian, Douglas County, Oregon, together with all royalties and rents thereby on.

The Grantee, by the acceptance of this conveyance, agrees and binds himself, his heirs and assigns to pay the Grantors, their heirs and assigns, five per cent (5%) of all minerals mined from the aforementioned real property within thirty days from the reduction thereof. In the event that the Grantee shall fail to pay to the Grantors, their heirs or assigns said five per cent (5%) of all minerals mined from said real property within thirty days from the date of the reduction thereof, such failure shall constitute a default. In the event such default shall occur and shall not have been removed after thirty days notice in writing addressed to the Grantee at 400 Dulwen Drive, Eugene, Oregon, all right, title, and interest in and to the aforementioned real property herein bargained, sold and conveyed shall revert to the Grantors.

In the event Grantee, his heirs or assigns fail to exert reasonable efforts to mine said minerals from the granted premises for a period of five years, then all right, title and interest herein granted shall revert to the Grantors

It shall be the privilege of the Grantee to return this property at any time whatsoever to the Grantors with no further obligation on the part of the Grantee.

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TO HAVE AND TO HOLD the said premises, with their appurtenances, unto the said Grantee, his heirs and assigns forever.

IN WITNESS WHEREOF, Phyllis Manning Thorns and Kenneth Edward Thorns, the Grantors, have hereunto, by Steve A. Tyler, their attorney in fact, set their hands and seals this 25 th day of July, 1956.

(SEAL)
Phyllis Manning Thorns

(SEAL)
Kenneth Edward Thorns

By (SEAL)
Attorney in fact

STATE OF OREGON }
COUNTY OF LINN } ss.

On this 25th day of July, 1956, personally appeared Steve A. Tyler who, being duly sworn, did say that he is the attorney in fact for Phyllis Manning Thorns and Kenneth Edward Thorns and that he executed the foregoing instrument by the authority of and in behalf of said principals and for the purpose therein named; and acknowledged said instrument to be the act and deed of said principals.

Before me:

My Commission Expires _____ Notary Public for Oregon

Bonanza Oil & Gas Corp
Sutherlin Ore

Banana Oil & Mine Corp
Sutherlin Ore

BARGAIN AND SALE DEED

KNOW ALL MEN BY THESE PRESENTS, That JACK H. COCK AND DATA C. COCK

RECEIVED AUG - 6 1956

, grantor s, in consideration of Ten and no/100 ..... Dollars, to them paid, do hereby grant, bargain, sell and convey unto CONTINA OIL & MINE CORP., an Oregon corporation, its heirs and assigns, all the following real property, with the tenements, hereditaments and appurtenances, situated in the County of Douglas and State of Oregon, bounded and described as follows, to-wit:

All of our right, title and interest in and to all mines and minerals and mineral deposits, together with the reserved right for prospecting for, mining, reducing and marketing the minerals in and upon the real property hereinafter described and particularly the cinnabar and other mercuric ore, together with the reserved right to use such of the surface of said real property as may be necessary or convenient for the mining, reducing and marketing of said minerals, all on the following described real property situated in Douglas County, Oregon:

The Northeast Quarter of the Northwest Quarter of Section 2;
The North half of the Northeast Quarter,
The Southwest Quarter of the Northeast Quarter,
The Southeast Quarter of the Northwest Quarter
The West half of the Northwest Quarter, and
The Northeast Quarter of the Southwest Quarter of Section 3,
Township 25 South, Range 4 West, Willamette Meridian, Douglas County, Oregon, together with all royalties and rents therefrom.

This conveyance is subject to the conditions subsequent described in that certain deed filed May 9, 1955, and recorded in Volume 243, at page 535, of Deed Records of Douglas County, Oregon.

To Have and to Hold, the above described and granted premises unto the said grantee, its heirs and assigns forever.

Witness our hand s and seal s this 31 day of May, 19 56.

/s/ Jack H. Cock
..... (Seal)

/s/ Data C. Cock
..... (Seal)

STATE OF OREGON,
County of Lane } ss.

On this 31 day of May, 19 56, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Jack H. Cock and Data C. Cock

who are known to me to be the identical individual s, described in and who executed the within instrument, and acknowledged to me that they executed the same freely and voluntarily.

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

/s/ George T. Lenhart
Notary Public for Oregon
My Commission Expires August 19, 1958

Compliments of
CASCADE TITLE COMPANY
936 Oak Street Eugene, Oregon

BARGAIN & SALE DEED

TO

STATE OF OREGON,
County of } ss.
I certify that the within instrument was received for record on the day of , 19 , at o'clock M., and recorded in book on page Record of Deeds of said County.
Witness my hand and seal of County affixed.

County Clerk—Recorder.
By ..... Deputy.

Return To:

Bonanza Oil & Mine Corp
Sutherlin Ore

THIS CONTRACT OF LEASE, made and entered into by and between MRS. ANNIE, the duly appointed Receiver of the property of the GRAND SUTHERLIN AND OREGON MINING COMPANY, a dissolved corporation, hereinafter referred to as Lessor; and D BONANZA OIL & MINE CORP., a corporation, hereinafter referred to as Lessee,

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W I T N E S S E T H :

That the Lessor does hereby lease and let unto the Lessee, and the Lessee hereby rents and takes of the Lessor, the following described as follows:

> All mines, minerals, and mineral rights and the right to mine the same, on, in, and under the following described real property:
>
> The east half of Southwest Quarter and Southeast Quarter of Southeast Quarter of Section three (3); and also
>
> Beginning at the quarter section corner between sections three (3) and ten(10), running thence south 89 degrees 45 minutes West 39 chains and 90 links to the Northwest corner of section ten(10), thence south 27 chains and 85 links to the north boundary of the Clinton Sutherlin Donation Land Claim, thence east 13 chains and 4 links to the northeast corner of said donation Land Claim, thence North 46½ degrees East 5 chains and 70 links to the south corner of Block "G" in the town of Honeyprell, thence following the southwest boundary of said town North 49 degrees 20 minutes West 3 chains and 64 links to the west corner of said block and town, thence following the northwest boundary of said town North 40 degrees 40 minutes East 12 chains and 72 links to the north corner of said town, thence South 49 degrees 20 minutes East 2 chains and 50 links to the northwest boundary of the lot of six acres belonging to the Oregon Quicksilver Mining Company, thence following said northwest boundary North 40 degrees East 9 chains and 60 links to the north corner of said lot, thence South 5 0 degrees East 6 chains and 25 links to the east corner of said lot, thence North 40 degrees 40 minutes East to the middle of channel of Calapooia Creek, thence following up said channel to a point due south of the quarter section post between Sections three(3) and ten(10), thence North to the place of beginning.
>
> And all lying and being in sections three(3), four (4), nine (9) and ten (10) in Township twenty-five (25) South, Range four(4) West of the Willamette Meridian, in Douglas County, Oregon, and containing 427 acres, more or less.

at and for a term of ninety-nine (99) years, for which the Lessee hereby promises and agrees to pay a minimum royalty of five per cent (5%) of the gross sales of quicksilver removed from said mining property, payable monthly. Provided further, that for production of six (6) pounds per ton mer cury, the lessee shall pay six percent(6%) of said gross sales revenue; for seven (7) pounds per ton, seven

Bonanza Oil + Mine Corp
Settlerlin Oil

percent (7%) of gross sales over two; for over n (7) pounds per ton, seven percent (7%) of gross sales revenue; for eight(8) pounds per ton, eight percent(8%) of gross sales revenue; for nin e(9) pounds per ton, nine percent(9%) of gross sales revenue; and for ten (10) pounds or over per ton, ten percent (10%) of gross sales revenue.

AUG - 3 1956

In the event ~~of~~ of the discovery upon the leased property of oil, gas, metals, minerals or other natural resources other than quicksilver, the Lessor agrees to pay the lessee monthly royalties based upon the following percentages: Oil, 12 ½ percent of gross sales revenue thereof; gold, silver, lead or other metals, 15% of the gross sales revenue thereof; uranium, 50% of net sales revenue thereof. All gross sales referred to above shall be f.o.b. reduction plant.

All royalties payable hereunder for each calendar month shall be paid by Lessee to Lessor on or before the last day of the month in which such quicksilver or other metals or minerals ~~#~~ are sold.

Lessee will deliver to Lessor weight and assay sheets for all ores mined from the leased premises on or before the 15th day of the month following the month in which such ores are mined and assayed. To aid the Lessor in determining the correctness of royalties paid as provided for herein, the Lessor shall have the right to inspect the books and sales records of the Lessee in the offices of the Lessee at such times as are convenient to the parties hereto.

All structures erected upon said property shall be learned to their removable value and shall be payable, in case of loss, to the Lessor, and the Lessee agrees to replace said structures at its own expense as expeditiously as possible.

The Lessee shall during the life of this contract keep the said property and all the equipment and machinery free from any and all liens for labor, supplies and operation of a continuous and a 1a mechanic's liens for the building of structures upon or within said property. All of the same thereof shall be paid r ga-ular ly at stated payroll and payment times.

Should any labor, material, or machinery liens be filed against said

Bonanza Oil & Mine Corp
Sutherlin Ore

prop ty during the life of this contract, the lessee shall have a right, by good and sufficient underwriting, satisfactory to the lessor, guaranteeing to keep the lessor, harmless from such liens, to contest the same, nonwithstanding the provisions hereof.

AUG - 6 1956

The mining and development work hereunder shall be carried on after the beginning thereof with all reasonable diligence.

The lessor during the term of this lease shall have the right to maintain at and upon said property continuously or otherwise, as it may desire, some representative, who shall at all times be entitled to ingress and egress to and fr on the property for inspection of all tunnels, shafts, stopes, and other openings, to sample all ores extracted from the property and take samples for that purpose, to have and receive duplicate assays and receipts as herein provided from the smelter or other production units, and to at all times have complete information as to the operation of said property and the proceeds of such operation.

All the work performed upon the property during the term hereof shall be performed in a workmanlike manner and merchantable manner. All tunnels or other openings that require timber shall be properly timbered. Before employing labor upon the property, the lessee shall comply with the Workman's Compensation Act.

Time is of the ess nce of this agreement and should the lessee default in any of the terms and conditions herein contained and should said default remain unremedied during a period of sixty days after the receipt from the lessor of notice in writing to cure such default, then this lease at the option of the lessor may be terminated.

The lessee covenants that it will develop and operate said property as steadily as market, weather, and labor conditions permit and it is agreed that if quicksilver is sufficient to permit a profitable operation, then the lessor shall have the right to terminate this lease upon giving the lessee ninety days' notice in writing to suspend ops ations; provided, however, if fire, flood or act of God cause cessation of mining and developing of the said property,

Bonanza Oil & Mine Corp
Sutherlin Ore

[illegible]

[illegible]

[illegible]

AUG - 6 1956

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Bonanza Oil & Mine Corp
Sutherlin Ore

[illegible]
[illegible] Bonanza Oil and Mine Corporation
[illegible] Sutherlin, Douglas Co., Oregon
[illegible] 1, 1951

ENTERED
AUG - 6 1956

1. (a) Name of Applicant: Bonanza Oil and Mine Corp.
Sutherlin, Oregon Douglas County

(b) A Corporation incorporated in the State of Oregon.

(c) Arthur L. Albee, President
Four Liberty Square
Boston 9, Mass.

Dudley L. Millikin, Vice President
Cambridge, Mass.

Jack H. Beck, Treasurer
Eugene, Oregon

Hon. Frank Kopelman, Secretary
Boston, Mass

Robert McGough, Director
31 Beacon Street
Boston, Mass.

2. General

3.(a) Applicants' property rights:

The W½ of the SW¼ and the SE¼ of the SW¼ of Section 3; the S½ of the SE¼ and the SW¼ of the SE¼ of Section 4; and the N½ (North one-half) of the NE¼ and Lots 1 and 2 of Section 9. Also beginning at the quarter section corner between section 3 and 10 running thence south 00 degrees 45' W 39 chains and 90 links to the Northwest Corner of Section 10; thence South 27 chains and 65 links to the North boundary of Clinton Sutherlin Donation Land Claim, thence East 13 chains and 4 links to the NW corner of said DLC thence North 46½ deg. E. 5 chains and 70 links to the South corner of Block "G" in the town of Hongarell, thence following the SW boundary of said town north 49 deg. 20 west 3 chains and 44links to the west corner of said Block and town, thence following the NW boundary of said town North 40 deg. 40' E. 12 chains and 72 links to the North corner of said town; thence south 49 degrees 20'- 2 chains and 5 0 links to the N W boundary of the lot 6 acres belonging previously to the Oregon Quicksilver Mining Co. thence following said NW boundary north 40 deg. east 9 chains and 60 links to the north corner of said lot; thence south 50 deg. E 6 chains and 25 links to the East corner of said lot; thence N.40 deg. 40' East to the middle of the channel of the Calapooia Creek, thence following up said channel to the point due south of the quarter section post between sections 3 and 10 thence North to the place of beginning, and all lying and being in sections 3, 4, 9 and 10 in Township 25 south of Range 4 West of the Willamette Meridian and containing 427 acres more or less.

3. (b) Property Here Hongarell Quicksilver Mine.

(c) Title. Lessee.

(d) Copy of lease with this report.

(e) None.

(f) No unpatented oil lies.

4. (a) Physical Description. Description taken from USGS Bulletin 955-F in which R.L. Bowen and R.C. Moore have given an accurate and thorough description of the property after considerable research.

The Nonpareil mine was discovered at about the same time as the Bonanza mine, between 1865 and 1870, and has a similar early history. The last activity at the property took place during the period 1928 to 1932 when the mine was leased to C.H. Everett. A four deck Herreshoff multiple hearth furnace was installed in 1931. After an unsuccessful attempt to work the original South Nonpareil mine, Everett started development farther north by driving 22 short adits into the east slope of the ridge 1500 to 3500 ft. northeast of the old mine. This part of the development farther north is known as the North Nonpareil mine. Good showings of cinnabar were found in the thin ore shoot at adit 31 and this body was worked for a short time. (There has been about 40 tons mined by stoping and a short raise to the surface. Samples taken by the Bonanza mine staff show the ore body to follow a very capricious pattern with no definite assay contact to which stoping can follow.) This body of ore proved to be of too low grade and too small to continue mining economically at the then low price of mercury. Combined with the fact that the company was without available funds for further exploration and in the face of poor market conditions the company was forced to discontinue its operations at Nonpareil.

Development. Prior to 1929 developments at Nonpareil were concentrated in the NW¼ of the NW¼ sec. 10. T.25S., R5W at the southeast end of a long ridge that lies between Calapooia and Long Valley creeks. In 1942 the accessible workings comprised three levels connected by raises and stopes that explore the ore-bearing area through a vertical range of 220 ft. and for a length of about 360 ft. The upper level is near the surface and much of its length consists of an open cut. A total of approximately 2700 ft. of workings, distributed among three adits, was examined by Brown and Waters. Most of these workings can still be examined. Another adit (#1), reported to be 350 ft. long, is located five hundred feet north of adit 3 but was caved in 1942 and has not been opened since that time.

North Nonpareil. The new workings developed from 1929 to 1932 are in the southwestern part of sec.3, T.25S., R.5W., and comprise 22 adits, a small stope, an old dug well, and a shallow shaft, and several surface pits at higher elevations where the highly altered outcrop is more prominent. Most of the adits are only 10-30 ft. long, but adits 6A and adit 11 contain 290 and 280 ft. respectively of workings. A small stope and raise to the surface have been developed from adit 5A/ Most of the showings of cinnabar have been found only in the adits clustered near a fault zone, called the Crag fault, which is marked on the surface by a line of conspicuous crags weathered from siliceous veinlets and silicified tuffaceous sandstone. The relations between these workings, and their relations to the South Nonpareil mine, are shown on figure 13 and plate 37 of Bulletin 955-F from which this data has been taken.

(b) Past Production and Ore Reserves. Production from both the North and South Nonpareil mines probably does not exceed 500 flasks of mercury.

Recent sampling indicates there are nearly 50 tons of 7.0 lb/ton ore in place near the surface in the 31 adit. All other sampling of the North and South Nonpareil does not disclose mineable ore although in several places the structure is favorable for extensive exploration.

(c) Geologic Features of Property. At the South Nonpareil mine the rocks exposed in the mine workings include massive, gray to buff or white sandstone containing interbeds of shale and siltstone. This unit is overlain by shaly sandstone which at most places in the mine workings is heavily charged with limonite released by weathering of the iron bearing mine sils brought in by mineralizing solutions. Above this shaly sandstone is a lenticular bed of tuffaceous sandstone and tuff which in turn is overlain by massive dark grey sandstone. This sandstone unit is overlain by the shale unit that plays such an important part in ore control at the Bonanza mine, near the surface. The ore bodies mined at the Nonpareil mine were nearly all

Bonanza Oil & Mine Corp
Sutherlin Ore

from bonanza stratigraphically lower than at the Bonanza mine and therefore are some distance below the contact of the shale and tuffaceous sandstone. All ore bodies mined were adjacent to or within a short distance of the northeast trending cross-faults, the Crag fault at the North Hungarian mine and the Hungarian fault at the South Hungarian mine. These two faults are traceable for several hundred feet. They contain considerable sandstone fault breccia and are well mineralized with carbonates, silica, limonite, marcasite, and locally, cinnabar. Hydrothermally altered zones are prominent adjacent to these faults. Hydrothermally altered zones, the minerals encrusted on the fault surfaces, and the occurrence of the ore bodies adjacent to the faults indicate the ore bearing solutions rose along these cross-faults.

The Crag fault, at the North Hungarian mine, strikes N.45 deg. W. and dips 70-80 deg. to the southwest. The only ore shoot mined at the North Hungarian was that in adit 31. The ore shoot in adit 31 was deposited in a bedding shear zone in tuffaceous sandstone by mercury bearing solutions that rose primarily along the prominent fault which served as the main channelway for ascending solutions. The rock adjacent to it is extensively altered and has been impregnated by numerous veinlets of silica and carbonate. Leaching and redeposition of the iron-bearing minerals have stained the rock with limonite, and local hardening of the rock from the introduced silica causes the fault zone to stand out on the surface as a line of weathered crags. (Brown and Waters Bulletin 755-?)

Exploration work by the Bonanza Oil and Mine Corp. is to be centered around and adjacent to the North Hungarian or Crag fault at lower elevations than alluded to above. It is a sound thin zone will be well mineralized with values in cinnabar concentrated along the bedding of the fault with the possibility of values extending for some distance northeast and southwest along the shear zones exposed in upper workings.
All work will be done in the W½ of the SW¼ sec. 9.

The Crag fault appears to have had two series of movements. First movement to the N.E. along the present exposed fault line and later movement was affected to the S.W. The phenomenally exposed landslide lying to the N.E. of the present fault line very likely was formed from the influence of the second series of faulting, causing the less consolidated structure consisting of altered tuffaceous sandstone and the shales to separate from the harder underlying fine grain gray football structure. The evident movement in the northwesterly direction was between 60 and 80 feet, causing the area adjacent to and NE of the Crag fault to slide downward in a northwesterly direction. This series of faulting would provide for a favorable condition through and along which the mercury bearing solutions would deposit. It is likely, better depositions in cinnabar values would occur along the NE bedding of the SW dipping Crag fault.

As there is no evidence of the crag fault dying out there it could intersect with the football shearing indicated near the face of HH adit, possibilities of a continuation beyond the point of intersection with this footwall structure are good, thus forming a greater distance along the fault in which deposition of cinnabar is likely.

Bonanza Oil & Mine Corp
Sutherlin Ore

4. (d) Accessibility. The Bonanzoil mine is located 9 miles east of Sutherlin, Oregon in Douglas county and can be reached by a good county

oil surfaced road which runs within 200 feet of the south end of the mine. The Bonanza Co. having recently built a quarter of a mile of access road for the purpose of hauling supplies and machinery to the North section of the mine. Traffic is maintained at all times of the year. The main supply points are Sutherlin and Roseburg, 9 miles and 24 miles distant, respectively.

(e) Manpower, materials, supplies, etc. There will be adequately skilled labor to carry on an exploration project at the Bonanzoil. It is planned to use some of the currently employed Bonanza mine crew to do most of the work at the Bonanzoil. Since the mine is located in a well timbered area, sawed and round mine timbers are available at all times. Explosives, pipe, rail, hoses, and any necessary operating equipment are available locally, or can be procured on short notice.

California—Oregon Power Company lines are now within a few hundred feet of the property in the event this electrical power is needed.

5 (a) Mineral. It is planned to explore for mercury cinnabar principally in the form of cinnabar.

(b) Description of proposed work.

Phase 1. Crosscut in a Northwesterly direction on the 861 el. to be known as No. 14 Adit, through surface mantle and shale and drift along the Gray fault for a distance of 474 ft. to explore possibilities of mercury bearing structures. This work will be advanced from the surface on the 861 el. to a point nearly vertical with No. 8A. adit portal.

Phase 2.(a) Drift 200 ft. in a northwesterly direction along possible mineralized footwall contact on the 861 el. to determine the extent of mineralization southwest of the Gray fault.
(b) Drift 200 ft. in a northeasterly direction along possible mineralized footwall contact on the 861 el. to determine the extent of mineralization southwest of the Gray fault.

Phase 3. Cross cut 200 ft. at right angles off the 14 Adit level at points to be established during drifting. Purpose of this work is to explore ore possibilities N3 and S3 of the wide Gray fault.

Phase 4. Raise from 14 Adit level a total of 200 ft. at more favorable locations along the drift to explore structures above the 861 elevation. The location of raises to be determined during or after drifting is completed.

This work shall be performed at a cost of $20.00/ft. for all drifting, cross-cutting and raising. A provision for an added $5.00/ft. fortimbering to be limited to a total of 150 ft.

5.(c) The work will begin within 10 days and be completed within 6 months from the date of an exploration project contract.

(d) Operating experience. Bonanza Oil and Mine Corp. has been engaged in operating mercury mines in Idaho and Oregon since 1936.

6. Estimate of costs.

(a) Independent contracts. none
(b) Labor, supervision and consultants.
(c) It will require 3 miners each shift at 3 hrs. each @ $1.00 an hour to drain timbers, keep dump and surface in condition, drill, muck, and do any necessary timbering. Advance is computed on the basis of 4 ft. per shift.

Supervision and engineering shall be done by the Bonanza Mine staff $300.00 per month to be charged to the Bonanzoil operation.

Bonanza Oil & Mine Corp
Sutherlin Ore

Cost of advance 4 ft. per shift.

24 hrs. labor @ $2.00/hr.	—$48.00
Drill steel (Copco Atlas Garmont)	— 4.00
Power (Leisil compressor)	0.00
40 lbs. 16 lb. mine rail @ .07 / lb.	— 2.80
4 ft. x 2 " black air pipe @ .40/ft.	— 1.60
4 ft. x 1" black water pipe @.25/ft.	— 1.00
Explosives	
40 lbs. gelex No. 2-45% @ .215	— 8.60
18 only no. 6 blk stick caps 0.02	— .36
126 ft. black sequoia safety fuse @.02	— 2.52
1 only 36" 4"x6" douglas fir track tie @ 70.00/M.	— .42
	77.52

(d) Operating Equipment to be furnished by operator

1 only Finley-Isco Model 12 D. overhead rocker. 24 inch gauge.
1 only Jay L-37 air drill complete with feed leg.
2 only round point No. 2 mine shovels.
2 only square point No. 2 mine shovels.
2 only 3/4" x 3 ply x 50 ft. air hoses.
2 only 2" x 50 ft. 3 ply H20 hoses.
4 only 3 lb. mine drift picks.
1 only grass valley side and end dump mine car.
1 only 3 lb. single bit mine ax.
1 only mine docking saw.
6 only Model P. Edson cap lamps.
1 only 500 IR diesel compressor.
track bars, wrenches, and misc. track tools

These items are to be rented on the basis of $300.00 per month. for the Hungarian project.

(e) Rehabilitation and Repairs. Services of bulldozing surface to face up tunnel sight and to grade mon road for a distance of 400 yards to portal of No.14 Adit. Cost: $200.00

(f) New Buildings, etc. 1 only 10 ft. x 10 ft. tool shed to be constructed at a cost of $200.00

(g) Miscellaneous.

(h) Contingencies.

Bonanza Oil & Mine Corp
Sutherlin Ore

cw

400
DOCKET
SURNAME
McMahon
Martin
Lamb
Nelson
Selfridge
Fergusson

-7

Bonanza Oil & Mine Corporation
Sutherlin, Oregon

Re: Docket No. [illegible] 4413 - Mercury
Homestreil Quicksilver Mine
Douglas County, Oregon

Gentlemen:

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

Projects approved by 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 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,

G. O. Mittendorf

Administrator

ADMcMahon:am 12-6-56

cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I, NWDist
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

400
DOCKET
SURNAME
McMahon
Martin

December 5, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $27,680.00
Docket No. DMEA 4413 - Mercury
Bonanza Oil and Mine Corporation
Nonpareil Quicksilver Mine
Douglas County, Oregon

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

(1) The applicant, Bonanza Oil and Mine Corporation, Sutherlin, Oregon, requested exploration assistance in the amount of $27,680.00 for crosscutting, drifting and raising at the above-cited property.

(2) The applicant controls by ownership the NW. ¼ NW. ¼ of sec. 2; N. ½ NE. ¼, SW. ¼ NE. ¼, SE. ¼ NW. ¼, W. ½ NW. ¼, and NE. ¼ SW. ¼ of sec. 3, T. 25 S., R. 5 W., W.M., Douglas County, Oregon. The applicant also controls by lease approximately 427 acres adjoining the above land to the east and southeast which is described in detail in a 99-year lease contract, dated May 25, 1956, between the receiver of the property of the Oregon Cinnabar and Silver Mining Company, a dissolved corporation and Bonanza Oil and Mine Corporation.

(3) The proposed program is to crosscut northwesterly to the Crag fault and drift on this structure for a total of 474 feet to a point vertically below the 5 North Adit portal; from here it is proposed to drift 200 feet northeasterly and 200 feet southwesterly along a possible mineralized footwall contact; at points determined during drifting 200 feet of crosscuts will explore ore possibilities NE and SW of the wide Crag fault; and at favorable locations a total of 200 feet of raise will be driven.

(4) The Nonpareil mine workings consist of a number of adits, surface pits and shallow shafts. Surface

and underground exposures were examined together with information from diamond drilling formerly done by the U. S. Bureau of Mines in 1944, and there were no indications of promising exploration targets.

(5) The Field Team concludes that no indicated or inferred reserves are present on the property. Surface and underground exposures, together with information obtained from diamond drilling formerly done by the U. S. Bureau of Mines, are sufficient to indicate that neither the Crag fault nor the shale-sandstone contact present targets of sufficient potential to warrant exploration under a DMEA program. Accordingly, they recommend that the application 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:am 12-5-56
cc to: Docket
Code 400
Admin. Read. File
Oper. Comm.
Mr. Johnson

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

December 5, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $27,680.00
Docket No. DMEA 4413 - Mercury
Bonanza Oil and Mine Corporation
Nonpareil Quicksilver Mine
Douglas County, Oregon

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

(1) The applicant, Bonanza Oil and Mine Corporation, Sutherlin, Oregon, requested exploration assistance in the amount of $27,680.00 for crosscutting, drifting and raising at the above-cited property.

(2) The applicant controls by ownership the NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ of sec. 2; N. $\frac{1}{2}$ NE. $\frac{1}{4}$, SW. $\frac{1}{4}$ NE. $\frac{1}{4}$, SE. $\frac{1}{4}$ N W. $\frac{1}{4}$, W. $\frac{1}{2}$ NW. $\frac{1}{4}$, and NE. $\frac{1}{4}$ SW. $\frac{1}{4}$ of sec. 3, T. 25 S., R. 5 W., W.M., Douglas County, Oregon. The applicant also controls by lease approximately 427 acres adjoining the above land to the east and southeast which is described in detail in a 99-year lease contract, dated May 25, 1956, between the receiver of the property of the Oregon Cinnabar and Silver Mining Company, a dissolved corporation and Bonanza Oil and Mine Corporation.

(3) The proposed program is to crosscut northwesterly to the Crag fault and drift on this structure for a total of 474 feet to a point vertically below the 5 North Adit portal; from here it is proposed to drift 200 feet northeasterly and 200 feet southwesterly along a possible mineralized footwall contact; at points determined during drifting 200 feet of crosscuts will explore ore possibilities NE and SW of the wide Crag fault; and at favorable locations a total of 200 feet of raise will be driven.

(4) The Nonpareil mine workings consist of a number of adits, surface pits and shallow shafts. Surface

and underground exposures were examined together with information from diamond drilling formerly done by the U. S. Bureau of Mines in 1944, and there were no indications of promising exploration targets.

(5) The Field Team concludes that no indicated or inferred reserves are present on the property. Surface and underground exposures, together with information obtained from diamond drilling formerly done by the U. S. Bureau of Mines, are sufficient to indicate that neither the Crag fault nor the shale-sanstone contact present targets of sufficient potential to warrant exploration under a DMEA program. Accordingly, they recommend that the application be denied. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

W S Martin

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

Docket

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

IN REPLY REFER TO:

RECEIVED
DEC 4 1956
D.M.E.A.

November 30, 1956

Re: DMEA 4413
Bonanza Oil and Mine Corp.
North Nonpareil Mine
Douglas County, Oregon
$27,680.00 Mercury

WSM

Memorandum

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

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

Subject: Review of Field Team Report

The applicant requested assistance in prospecting the Crag fault zone in search of mercury ore, at a horizon intermediate to those prospected by underground work and diamond drilling.

The examiners found much work had been done in the Crag fault zone and only one small pocket of ore had been located, that in the 5N adit. Inasmuch as the fault cannot be considered a probable mineralized or mineralizing geologic feature, the examiners and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

Docket

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

November 28, 1956

Memorandum

W S M

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

From: Assistant Chief, Branch of Base Metals

Subject: Review of Field Team examination report, Docket No. DMEA 4413 (mercury), Bonanza Oil and Mine Corp., North Nonpareil Mercury Mine, Douglas County, Oregon

The applicant proposed to explore for mercury mineralization by 1274 feet of drifting, crosscutting, and raising at an estimated cost of $20.00 per foot.

Examination of the property, surface and underground, and a previous Bureau of Mines drilling program indicate that an exploration project is not warranted.

I concur with the Field Team's recommendation that the application for exploration assistance 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
F i l e s

Copy retained 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

Docket

RECEIVED NOV 23 1956 D.M.E.A.

November 20, 1956

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

WJM

Re: Docket No. DMEA-4413 (Mercury)
Bonanza Oil and Mine Corp.
North Nonpareil Mercury Mine
Douglas County, Oregon

Dear Mr. Selfridge:

Enclosed are four copies of a field examination report on the referenced property by John D. Bardill, Engineer, U. S. Bureau of Mines, and D. C. Alvord, Geologist, U. S. Geological Survey.

The examiners conclude that no target for exploration could be shown to exist on this property, and that the chance of making a significant discovery is poor. Therefore, they recommend that the application be denied.

The Field Team concurs with the recommendation of the examiners.

By Field Team Region I, NW Dist.

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

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

Enclosures
cc: USBM (2)
Alvord

Reviewed by
DMEA OPERATING COMMITTEE
11-28-56
(date)

Dmea

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

RECEIVED NOV 23 1956 D.M.E.A.

November 6, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: John D. Bardill, Engineer, U. S. Bureau of Mines and Donald C. Alvord, Geologist, U. S. Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4413 (Mercury), Bonanza Oil and Mine Corp., North Nonpareil Mercury Mine, Douglas County, Oregon

INTRODUCTION AND SUMMARY

An application for government aid to explore for mercury was received from the Bonanza Oil and Mine Corp. on July 12, 1956. Mr. Bardill examined the Nonpareil mine on September 15, 1956 in company with Mr. Burt Avery, superintendent for the applicant. Mr. Alvord in company with R. D. Sample, Geologist, U. S. Geological Survey, examined the mine on September 28, 1956. A company representative was not present during the examination on the 28th.

The examination consisted of a surface traverse along the outcrop of the principal structure, a careful look at all the workings shown on Plate 1 of this report, and mapping the Bonanza Adit.

No indicated or inferred reserves are present on the property. Surface and underground exposures, together with information obtained from diamond drilling formerly done by the U. S. Bureau of Mines, are sufficient to indicate that promising targets for exploration are lacking.

Further exploration would be extremely wildcat in nature and does not justify Government participation.

RECOMMENDATION

It is recommended that the application be denied.

Reviewed by
DMEA OPERATING COMMITTEE
11-28-56
(date)

APPLICANT

Bonanza Oil & Mine Corporation
(an Oregon corporation)
Sutherlin, Douglas County, Oregon

Arthur L. Albee, President
4 Liberty Square
Boston 9, Mass.

Dudley L. Milliken, Vice-Pres.
Cambridge, Mass.

Jack H. Beck, Treasurer
Eugene, Oregon

Hon. Frank Kopelman, Secretary
Boston, Mass.

Robert McGeogh, Director
81 Beacon Street
Boston, Mass.

The applicant operates the nearby Bonanza mine in a very efficient manner and presumably is able to finance its share of the proposed exploration program.

LOCATION

The North Nonpariel mine is in the southwestern part of sec. 3, T. 25 S., R. 5 W., Bonanza Nonpareil Mining District, Douglas County, Oregon. The mine is situated on the north side of Calapooza Creek Valley about 9 miles east of Sutherlin. It is reached by a paved road that connects Sutherlin with the town of Nonpariel.

The climate is mild with hot, dry weather during the summer and heavy rainfalls in fall, winter and spring. Freezing weather is not uncommon during the winter but heavy snowfalls are rare.

PROPERTY RIGHTS

The North Nonpariel mine property consists of the following: NW$\frac{1}{4}$NW$\frac{1}{4}$ of sec. 2; N$\frac{1}{2}$NE$\frac{1}{4}$, SW$\frac{1}{4}$NE$\frac{1}{4}$, SE$\frac{1}{4}$NW$\frac{1}{4}$, W$\frac{1}{2}$NW$\frac{1}{4}$, and NE$\frac{1}{4}$SW$\frac{1}{4}$ of sec. 3, T. 25 S., R. 4 W. Willamette Meridian, Douglas County, Oregon.

The Grantors, Phyllis Morning Thomas and Kenneth Edward Thomas, husband and wife, of Junction City, Lane County, Oregon, conveyed by a Bargain and Sale Deed, dated July 25, 1955, to Jack H. Beck, the above described premises in consideration of $10.00 and 5 percent royalty of all minerals mined from the property.

Jack H. Beck and Mata B. Beck, by a Bargain and Sale Deed dated May 31, 1956, conveyed unto Bonanza Oil & Mine Corp. the above property in consideration of $10.00 and certain other conditions described in that certain deed filed May 9, 1955 and recorded in Volume 243, at page 939, of Deed Records of Douglas County, Oregon.

Also, another parcel of fractions of land known as the South Nonpariel adjoining and lying partially in secs. 3, 4, 9 and 10 in T. 25 S., R. 4 W. Willamette Meridian, is described in detail in a 99-year lease contract, dated May 25, 1956, between the receiver of the property of the Oregon Cinnabar and Silver Mining Company, a dissolved corporation, and Bonanza Oil and Mine Corp. The lease provides royalty payments on a sliding scale for cinnabar ore mined, royalty of 12½ percent on oil, 10 percent on gold, silver, lead or other minerals, and 50 percent of net sales revenue of uranium.

DESCRIPTION OF THE PROPERTY

The Nonpareil mine workings are on the steep east slope of a northeast-trending ridge and consist of a number of adits, surface pits and shallow shafts strung out northeastward along the hillside over a distance of 3500 feet. Most of the workings, consisting of three adit levels connected by raises and stopes, are located at the south end of the mine area and are known collectively as the South Nonpareil mine. Another somewhat scattered and unconnected group of workings, comprising 13 adits, a very small stope, a shallow shaft and several surface pits, are concentrated at the north end of the mine area and are known collectively as the North Nonpareil mine. Most of the North Nonpareil adits are only a few tens of feet long but adits 6N, 11N, and the Bonanza adit contain 290, 280, and 200 feet, respectively, of workings (see pl. 1, showing principal workings only).

The ground stands well and all of the North Nonpareil adit workings are open.

HISTORY AND PAST PRODUCTION

The Nonpareil Mine was discovered sometime during the period 1865-1870 with most of the work being done at the South Nonpareil during the 1880's. With the exception of the Bonanza adit, which was driven during the summer of 1956, activity at the North Nonpareil mine was confined to the period 1929-1932.

Reliable figures for the total production of the Nonpareil mine are not available but R. E. Brown and A. C. Waters (Quicksilver deposits of the Bonanza-Nonpareil district, Douglas County, Oregon: U. S. Geol. Survey, Bull. 955-F, p. 243-249, 1951) have estimated from maps and incomplete production figures, the total production at 340 flasks of mercury from 3,700 tons of ore (7 lbs. Hg/ton).

Apparently, almost all of the production was from the South Nonpareil workings. The only stope on the North Nonpareil is in the 5N adit (pl. 1) where a small stope and raise to the surface may have yielded 75 to 100 tons of ore containing 7 lbs. mercury per ton.

GEOLOGY

The geology of the Bonanza-Nonpareil mining district and detailed descriptions of the geology and history of the Nonpareil mine are further discussed in the following reports:

Wells, F. G., and Waters, A. C., 1934, Quicksilver deposits of southwestern Oregon: U. S. Geol. Survey Bull. 850, p. 36-40.

Diller, J. S., 1898, Roseburg Folio: U. S. Geol. Survey Geol. Atlas No. 49.

The Bonanza-Nonpareil mining district is chiefly underlain by beds of the Umpqua formation of Eocene age. In this area the Umpqua formation is made up of several thousand feet of interbedded, locally tuffaceous, sandstones and shales overlain by flows of pillow basalt interstratified with palagonite tuffs and irregular lenses of conglomerate. As part of the southeastern limb of a broad anticline, the strata strike northeasterly and dip 20°-65° SE.

The mines and prospects of the district are located along or near a mineralized shear zone that occurs at a definite stratigraphic horizon--directly beneath the contact between an overlying incompetent shale-siltstone unit and a tuffaceous sandstone unit. The shear, which generally parallels the bedding, strikes northeast and dips to the southeast. Locally steep cross faults, trending from north to northwest, cut and displace the sandstone-shale contact. At the Bonanza mine, about a mile southwest of the Nonpareil mine, ore occurs within the sheared tuffaceous sandstone immediately beneath the sandstone-shale contact, but at the Nonpareil mine the ore occurs adjacent to or within a short distance of cross faults and generally some distance below the sheared contact zone.

At the North Nonpareil mine most exploration has been concentrated on the Crag fault, a broken and sheared zone a few feet wide that strikes northwest and dips steeply southwest to vertical (pl. 1). The Crag fault is characterized by intensively altered and brecciated rock laced with siliceous siderite veinlets.

The only ore mined at the North Nonpareil was taken from a small stope in adit 5N; although the applicant was able to obtain samples of 7-pound rock from this stope and infer a 50-ton reserve, we were unable to obtain more than 1-pound rock and could infer no likely reserve (pl. 1). Adits 11N and 4N disclosed fine veinlets and disseminated cinnabar related to the Crag fault and a trace of cinnabar is present in a shaft at the north end of adit 6N. No other cinnabar was seen during the examination. The shale-sandstone contact zone, prolific producer at the Bonanza mine, has been cut by the Bonanza adit and by two diamond drill holes but it is barren (see next section of this report and pl. 1).

BUREAU OF MINES EXPLORATION AND ORE RESERVES

Between February and April 1944, the Bureau of Mines conducted a diamond drilling project to test the possible occurrence of mineralized shear zones at or near the shale-sandstone contact at both the North and South Nonpariel mines. Drilling explored the areas at the intersection of the Nonpariel and Crag faults with the shale-sandstone contact. Four holes were drilled at North Nonpariel, aggregating 521.6 feet (pl. 1). Vertical hole 3 was drilled within the acute angle formed by the intersection of the Crag fault and the shale-sandstone contact which strikes about N. 36° E. and dips 40°-45° SE. at this point. The hole passed through 51 feet of landslide material, intersected the shale-sandstone contact at 61 feet, but cut no shear zones and found no ore. The second hole drilled, hole 4, was located 75 feet S. 30° E. of hole 3 and was inclined 45° in a N. 70° W. direction. The hole passed through 61 feet of landslide material, intersected the shale-sandstone contact at a depth of 84 feet and the Crag fault between 110 and 126 feet, and bottomed in sandstone at a depth of 219 feet. No shear zones were cut either at the contact or at greater depth. The Crag fault, as revealed in the drill cores, consists of 16 feet of intensely brecciated, fine-grained sandstone, cemented and mineralized with carbonates, silica, marcasite, and some realgar. No cinnabar was seen.

Two holes (Nos. 1 and 2) were drilled from a point 12 feet in front of 5 North Adit to determine the possible downward extension of the N. 26° W. trending and 42° SE. pitching ore shoot. The ore shoot was localized along the intersection of the Crag fault and a bedding shear. Hole 1 was drilled to a depth of 80 feet and hole 2 to a depth of 101 feet. No ore was encountered in either hole.

The ore body in 5 North Adit is apparently an isolated pocket of ore, not connected with any ore at depth.

Some of the above information was taken almost verbatim from U. S. Geol. Survey Bull. 955-F by Brown and Waters. Other information was taken from an unpublished Bureau of Mines report on the project.

There are no reserves at the North Nonpariel mine.

MERIT OF THE PROPERTY

No indicated or inferred reserves are present on the North Nonpareil property. Exposures on the surface and underground, together with information obtained from U. S. Bureau of Mines drilling, are sufficient to indicate that neither the Crag fault nor the shale-sandstone contact present targets of sufficient potential to warrant exploration under a DMEA program.

APPLICANT'S PROPOSAL

The applicant has proposed to crosscut, in a northwest direction, to the Crag fault and drift along the fault for a total distance of 474 feet to a point vertically below the 5 North Adit portal. From here the applicant proposes to drift along the mineralized footwall contact 200 feet southwesterly and 200 feet northeasterly. The applicant also proposes to crosscut 200 feet at right angles from the main drift to explore ore possibilities northeast and southwest of the Crag fault and to raise 200 feet at favorable locations from the main crosscut level to explore structures above the level.

EVALUATION OF THE APPLICANT'S PROPOSAL

The applicant has proposed a basically sound approach to exploring the property but inasmuch as a worthwhile target has not been demonstrated, there is no point in discussing the proposal in detail.

Attachment 1

Distribution:
DMEA(4)
USBM(5)
USGS(SRO)
Docket
Alvord

DOCKET
SURNAME
400 McMahon
Martin
Nelson
Lamb
Selfridge
Johnson

AUG 16 1956

Bonanza Oil & Mine Corporation
Sutherlin, Oregon

Re: Docket No. DMEA 4413 - Mercury
Rempusil Quicksilver Mine
Douglas County, Oregon

Gentlemen:

The above docketed application for exploration assistance for mercury ore has been reviewed by the Washington Office of the Defense Minerals Exploration Administration and referred to Mr. A. E. Weinzaepfen, Executive Officer, DMEA Field Team, Region I - Northwest District, South 157 Howard Street, Spokane 4, Washington, 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

ADMcMahon/foc
8/15/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I - NWD
Messrs. J. W. Pennington, USBM
T. H. Kilsgaard, USGS

DOCKET
SURNAME

400 McMahon
Martin
Selfridge
Gilmson

AUG 16 1956

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

Re: Docket No. DMEA 4413 - Mercury
Bonanza Oil & Mine Corporation
Mongarrail Quicksilver Mine
Douglas County, Oregon

Dear Mr. Weissenborn:

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

Copies of memoranda dated August 8 and 10, 1956, by N. E. Nelson, Geological Survey, and J. W. Pennington, Bureau of Mines, respectively, relating to the project, are enclosed.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (HB)

APPROVED:

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

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

ADMcMahon/fec 8/15/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I - NWDist.
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

Enclosures

Docket

RECEIVED

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

August 10, 1956

WSM

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4413 (mercury), Bonanza Oil and Mine Corp., Nonpareil mine, Douglas County, Oregon

The applicant proposes to explore the craig fault area at lower elevations than already exposed by 1274 feet of drifting, crosscutting, and raising at an estimated cost of $20.00 per foot.

According to the available information, the program appears sound and the costs seem reasonable.

Referral of the application to the Field Team for evaluation and examination is recommended. The complete application is returned herewith.

J. W. Pennington

J. W. Pennington

Attachment

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

Docket IN REPLY REFER TO:

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

August 8, 1956

Re: DMEA 4413
Bonanza Oil and Mine Corp.
North Nonpareil Mine
Douglas Co., Oregon
Est. $27,680.00 - Mercury

WSM

Memorandum

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

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

Subject: Review of application.

The applicant now requests assistance in exploring a mercury bearing structure about 1-3/4 miles northeast of the Bonanza mine of the same company. The Bonanza mine is the scene of DMEA assisted work under contract E510, DMEA 2920. The expenditure of $94,100 is approved by the contract of which the Government share is $70,575. To Dec. 31, 1955, $15,464.90 of the then accrued royalty had been repaid. No later report is at hand. The mine is producing steadily and some new ore has been found on the lowest level the 1150, but as suggested by the subject application the Bonanza reserve position is not too good.

The geologic features at the North Nonpareil mine though generally similar to those at the Bonanza mine differ in detail. See Quicksilver Deposits of the Bonanza-Nonpareil District, Douglas Co., Oregon, by R. E. Brown and A. C. Waters, U. S. Geological Survey Bulletin 995-F, 1951 (Survey made 1942-1944).

The proposed work consists of:

No. 14 adit (New)

Stage I	Crosscutting	474 feet	
Stage II	Drifting	400 feet	
Stage III	Crosscutting	200 feet	
Stage IV	Raising	200 feet	
	Total	1,274 feet @ $20.00/ft	$25,480
	Timbering 150 feet @ $5.00		750
	Supervision, 3½ mos. @ $300.00		1,050
	Rehabilition		200
	New Buildings		200
	Total (Estimated by writer)		$27,680
	Government share		20,760

Appraisal of the probablities of the finding of ore in the North Nonpareil area involves comparison with the results of work in the South Nonpareil mine, inasmuch as two cross faults, the Crag and the Nonpareil, are involved and not a longitudinal or strike shear as at the Bonanza mine. The South Nonpareil mine as a result of 2700 feet of underground work in the Nonpareil fault zone and mining is credited with a production of about 340 flasks of mercury. 8' per flask

The proposed work will prospect the Crag fault zone at a horizon about 150 feet below where it is explored by the Adit 11 N and at least 2 Bureau of Mines diamond drill holes, 1 and 2. Hole No. 4 investigates the fault zone at a horizon 60 feet below that of the proposed crosscut.

Judging by the results of work already done in the Crag fault zone and the results of work in the probably better appearing Nonpareil zone the proposed work resembles prospecting. However an up-to-date appraisal is warranted and referral to the Field Team is recommended

N. E. Nelson

N. E. Nelson

August 7, 1956

Bonanza Oil and Mine
Copporation
Sutherlin, Oregon

Subject: DMEA-4413
Re: Exploration Assistance
Nonpareil Mine

Dentlemen

The receipt of your application dated July 10, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4413 and referred to the Iron & Ferro-Alloy 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

August 8, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region I,NW

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 I,NW.

DMEA
- 4413 Bonanza Oil and Mine Corporation
Nonpareil Mine

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
AUG - 6 1956

July 31, 1956

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

Re: New application (Mercury)
Bonanza Oil and Mine Corporation
Nonpareil Mine
Douglas County, Oregon

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application submitted by the Bonanza Oil and Mine Corporation, Sutherlin, Oregon. One copy of the application has been retained for the files of this office.

Under contract No. Idm-E510 (Amended) the applicant is presently exploring for mercury along the Bonanza shear zone, about a mile southwest of the Nonpareil property, the site of the proposed exploration. At the Bonanza, cinnabar deposits occur in a shear zone formed directly beneath the contact between an overlying shale-siltstone unit and a tuffaceous sandstone unit. The shear, which parallels the bedding, strikes northeast and dips to the southeast. Although the Bonanza structure strikes toward the Nonpareil property it has not been positively identified on that property. The known ore at the Nonpareil is related to cross faults that strike northwest and dip southwest to cut the contact of the tuffaceous sandstone and shale. The ore shoots occur at horizons stratigraphically below the horizon of the Bonanza structure and are localized chiefly at or near the intersections of the cross faults with beds more permeable than the average country rock and at intersections or junctions with subsidiary north- to northeast-trending faults.

The geology of the Bonanza-Nonpareil district and of the Nonpareil mine is described in the following reports:

Brown, R. E., and Waters, A. C., 1947, Quicksilver deposits of the Bonanza-Nonpareil district, Douglas County, Oregon: U.S. Geol. Survey Bull. 955F.

Wells, F. G., and Waters, A. C., 1934, Quicksilver deposits of southwestern Oregon: U. S. Geol. Survey Bull. 850.

Diller, J. S., 1898, Roseburg Folio: U. S. Geol. Survey Geol. Atlas No. 49.

Past production from the Nonpareil mine has been variously estimated between 350 and 500 flasks of mercury. Brown and Waters (p. 248-49) point out that the cross faults of the Nonpareil may extend to greater depths than the present mine workings. They suggest that future exploration be concentrated along the cross fault structures, as all the ore bodies mined to date have been on or near these faults. However, they believe that any deposits found will likely not be extremely large.

The applicant proposes crosscutting to and drifting on the Crag fault, the northernmost of the Nonpareil cross faults, to search for ore deposits 150 feet below the present workings. Exploratory crosscutting and raising off the drift area are also proposed.

Reference to plate 37 of Brown and Waters and to the text, page 246, shows that only a very short strike length of the Crag fault has been explored to date; such being the case, drifting only 150 feet below the present workings constitutes exploration.

The proposed program appears to be sound in principle and the Operator's cost estimates are modest. A proper evaluation of the proposal would, however, require a field examination.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

Donald R. MacLaren, Acting Member
U. S. Geological Survey

Enclosure

cc: USBM (2)
Alvord

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
AUG 6 1956

RECEIVED
JUL 12 1956
U. S. G. S.
SPOKANE, WASH.

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. 4413
Metal or Mineral Mercury
Date Received 8-6-56
Estimated Cost Not given
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: Bonanza Oil & Mine Corp
Sutherlin Ore

(*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

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it

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

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

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

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

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

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

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

(*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 ..... days and be completed within ..... 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?

☐ 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 July 10, 1956

Bonanza Oil & Mine Corp
(Applicant)

By J. H. Beck
Pres.

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

APPLICATION FOR AID IN AN EXPLORATION
PROGRAM FOR NONPAREIL MERCURY MINE DOUGLAS CO., OREGON
JULY 1, 1956

RECEIVED
AUG - 6 1956

1. (a) Name of Applicant: Bonanza Oil and Mine Corp.
Sutherlin, Oregon Douglas County

(b) A Corporation incorporated in the State of Oregon.

(c) Arthur L. Albee, President
Four Liberty Square
Boston 9, Mass.

Dudley L. Millikin, Vice President
Cambridge, Mass.

Jack H. Beck, Treasurer
Eugene, Oregon

Hon. Frank Kopelman, Secretary
Boston, Mass

Robert McGeagh, Director
81 Beacon Street
Boston, Mass.

2. General

3. (a) Applicants' property rights:

The W½ of the SW¼ and the SE¼ of the SW¼ of Section 3; The E½ of the SE¼ and the SW¼ of the SE¼ of Section 4; and the N½ (North one-half) of the NE¼ and Lots 1 and 2 of Section 9. Also beginning at the quarter section corner between sections 3 and 10 running thence south 89 degrees 45' W 39 chains and 90 links to the Northwest Corner of Section 10; thence South 27 chains and 85 links to the North boundary of Clinton Sutherlin Donation Land Claim, thence East 13 chains and 4 links to the NE corner of said DLC thence North 46¼ deg. E. 5 chains and 70 links to the South corner of Block "C" in the town of Nonpareil, thence following the SW boundary of said town north 49 deg. 20 west 3 chains and 64 links to the west corner of said block and town, thence following the NW boundary of said town North 40 deg. 40' E. 12 chains and 72 links to the North corner of said town; thence south 49 degrees 20' - 2 chains and 5 0 links to the N W boundary of the lot 6 acres belonging previously to the Oregon Quicksilver Mining Co. thence following said NW boundary north 40 deg. east 9 chains and 60 links to the north corner of said lot; thence south 50 deg. E 6 chains and 25 links to the East corner of said lot; thence N.40 deg. 40' East to the middle of the channel of the Calapooia Creek, thence following up said channel to the point due south of the quarter section post between sections 3 and 10 thence North to the place of beginning, and all lying and being in sections 3, 4, 9 and 10 in Township 25 south of Range 4 West of the Willamette Meridian and containing 427 acres more or less.

3. (b) Property Name Nonpareil Quicksilver Mine. ✓

(c) Title. Lessee.

(d) Copy of lease with this report.

(e) None.

(f) No unpatented cla ims.

Bonanza Oil & Mine Corp
Sutherlin Ore

4. (a) Physical Description. Description taken from US Bulletin 955-F in which R.E. Brown and A.C. Waters have given an accurate and thorough description of the property after considerable research.

The Nonpareil mine was discovered at about the same time as the Bonanza mine, between 1865 and 1870, and has a similar early history. The last activity at the property took place during the period 1928 to 1932 when the mine was leased to C.M. Everett. A four deck Herreshoff multiple hearth furnace was installed in 1931. After an unsucessful attempt to work the original South Nonpareil mine, Everett started development farther north by driving 12 short adits into the east slope of the ridge 1800 to 3500 ft. northeast of the old mine. This part of the development farther north is known as the North Nonpareil mine. Good showings of cinnabar were found in the thin ore shoot at adit 5N and this body was worked for a short time, (There has been about 40 tons mined by stoping and a short raise to the surface. Samples taken by the Bonanza mine staff show the ore body to follow a very capricious pattern with no definite assay contact to which stoping can follow.) This body of ore proved to be of too low grade and too small to continue mining economically at the then low price of mercury. Combined with the fact that the company was without available funds for further exploration and in the face of poor market conditions the company was forced to discontinue its operations at Nonpareil.

Development. Prior to 1929 developments at Nonpareil were concentrated in the NW¼ of the NW¼ sec. 10. T.25S., R5W at the southeast end of a long ridge that lies between Calapooia and Long Valley creeks. In 1942 the accessible workings comprised three levels connected by raises and stopes that explore the ore-bearing area through a vertical range of 220 ft. and for a length of about 360 ft. The upper level is near thesurface and much of its length consists of an open cut. A total of approximately 2700 ft. of workings, distributed among three adits, was examined by Brown and Waters, Most of these workings can still be examined. Another adit (2½), reported to be 350 ft. long, is located five hundered feet north of adit 3 but was caved in 1942 and has not been opened since that time.

North Nonpareil . The new workings developed from 1929 to 1932 are in the southwestern part of sec.3, T.25S.,R.5W., and comprise 12 adits, a small stope, an old dug well, and a shallow shaft, and several surface pits at higher elevations where the highly altered outcrop is more prominant. Most of the adits are only 10-30 ft. long, but adit 6N and adit11N contain 290 and 280 ft. respectively of workings. A small stope and raise to the surface have been developed from adit 5N. Most of the showings of cinnabar have been found only in the a dits clustered near a fault zone, called the Crag fault, which is marked on the sufface by a line of conspicuous crags weathered from siliceous veinlets and silisified tuffaceous sandstone. The relations between these workings, and their relations to the South Nonpareil mine, are shown on figure 13 and plate 37 of Bulletin 955-F from which this data has been taken.

(b) Past Production and Ore Reserves. Production from both the North and South Nonpareil mines probably does not exceed 500 flasks of mercury.

Recent sampling indicates there are nearly 50 tons of 7.0 lb/ton ore in place near the surface in the 5N adit. All other sampling of the North and South Nonpareil does not disclose mineable ore although in several places the structure is favorable for extensive exploration.

(c) Geologic Features of Property. At the South Nonpareil mine the rocks exposed in the mine workings include massive, grey to buff or white sandstone containing interbeds of shale and siltstone. This unit is overlain by shaly sandstone which at most places in the mine workings is heavily charged with limomite released by weathering of the iron bearing minerals brought in by mineralizing solutions. Above this shaly sandstone is a lenticular bed of tuffaceous sandstone and tuff which in turn is overlain by massive dark grey sandstone. This sandstone unit is overlain by the shale unit that playssuch an important part in ore control at the Bonanza mine, near the surface. The ore bodies mined at the Nonpareil mine were nearly all

Bonanza Oil & Mine Corp
Sutherlin Ore

Bonanza Oil & Mine Corp
Sutherlin Oil

4. (d) Accessibility. The Nonpareil mine is located 9 miles east of Sutherlin, Oregon in Douglas county and can be reached byza good county

oil surfaced road which runs within 100 feet of the south end of the mine. The Bona nza Co. having recently built a quarter of a mile of access road for the purpose of hauling supplies and machinery to the North section of the mine. Traffic is maintained at all times of the year. The main supply points are Sutherlin and Rossburg, 9 miles and 24 miles distant, respectively.

(e) Manpower, materials, supplies, etc. Thdre will be adequately skilled labor to carry on an exploration project at the Nonpareil. It is planned to use some of the currently employed Bonanza mine crew to do most of the work at the Nonpareil. Since the mine is located in a well timbered area, sawed and round mine timbers are available at all times. Explosives, pipe, rail, hoses, and any necessary operating equipment are available
1 locally, or ca n be procured on short notice.

California—Oregon Power Company lines are now within a few hundered feet of the property in the event this eledtrical power is needed.

5 (a) Mineral. It is planned to explore for mercury minerals principally in the form of cinnabar.

(b) D scription of proposed work.

Phase 1. Crosscut in a Northwesterly direction on the 861 el. to be known as No. 14 Adit, through surface mantle and shale and drift along the Crag fault for a distace of 474 ft. to explore possibilities of mercury bearing structures. This work will be advanced from the surface on the 861 el. to ~~the point~~ nearly vertical with No. 5N. adit portal.

Pha se 2. (a) Drift 200 ft. in a southwesterly direction along possible mineralized footwall contact on the 861 el. to determine the extent of mineralization southwest of the Crag fault.
(b) Drift 200 ft. in a northeasterly direction along possible mineralized footwall contact on the 861 el. to determine the extent of mineralization southwest NE(?) of the Crag fault.

Phase 3. Cross cut 200 ft. at right angles off the 14 Adit level at points to be established during drifting. Purpose of this work is to explore ore possibilities NE and SW of the wide Crag fault.

Phase 4. Raise from 14 Adit level a total of 200 ft. at more favorable locations along the drift to explore structures above the 861 elevation. The location of raises to be determined during or after drifting is completed.

This work shall be performed at a cost of $20.00/ft. for all drifting, cross-cutting and raising. A provision for an added $5.00/ft. fortimbering to be limited to a total of 150 ft.

5.(c) The work will begin within 10 days and be completed within 6 months from the date of an exploration project contract.

(d) Operating experience. Bonanza Oil and Mine Corp. has been engaged in operating mercury mines in Idaho and Oregon since 1936.

6. Estimate of costs.

(a) Independent contracts. none
(b) Labor, supervision and consultants.
(c) It will require 3 miners each shift @ 8 hrs. each @ $2.00 an hour to frame timbers, keep dump and surface in condition, drill, muck, and do any necessary timbering, Advance is computed on the basis of 4 ft. per shift.

Supervision and engineering shall be done by the Bonanza Mine staff $300.00 per month to be charged to the Nonpareil operation.

from horizons stratigraphically lower than at the Bonanza mine and therefore some distance below the contact of the shale and tuffaceous sandstone. All ore bodies mined were adjacent to or within a short distance of the nothwest trending cross-faults, the Crag fault at the North Nonpareil mine and the Nonpareil fault at the South Nonpareil mine. These two faults are traceable for several hundered feet. They contain considerable sandstone fault breccia and are well mineralized with carbonates, silica, limonite, marcasite, and locally, cinnabar. Hydrothermally altered zones are prominent adjacent to these faults. Hydrothermally altered zones, the minerals encrusted on the fault surfaces, and the occurrence of the ore bodies adjacent to the faults indicate the ore bearing solutions rose along these cross-faults.

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The Crag fault, at the North Nonpareil mine, strikes N.45 deg. W. and dips 70-80 deg. to the southwest. The only ore shoot mined at the North Nonpareil was that in Adit 5N. The ore shoot in Adit 5N was deposited in a bedding shear zone in tuffaceous sandstone by mercury bearing solutions that rose primarily along the premineral fault which served as the main channelway for ascending solutions. The rock adjacent to it is extensively altered and has been impregnated by numerous veinlets of silica and carbonate. Leaching and redeposition of the iron-bearing minerals have stained the rock with limonite, and local hardening of the rock from the introduced silica causes the fault zone to stand out on the surface as a line of weathered crags. (Brown and Waters Bulletin 955-F)

Exploration work by the Bonanza Oil and Mine Corp. is to be centered around and adjacent to the North Nonpareil or Crag fault at lower elevations than already exposed. It is assumed this zone will be well mineralized with values in cinnabar concentrated along the bedding of the fault with the possibility of values extending for some distance northeast and southwest along the shear zones exposed in upper workings.
All work will be done in the W½ of the SW¼ sec. 3.

The Crag fault appears to have had two series of movements. First movement to the S.E. along the present exposed fault line and later movement was affected to the N.W. The prominently exposed landslide lying to the N.E. of the present fault line very likely was formed from the influence of the second series of faulting, causing the less consolidated structure consisting of altered tuffaceous sandstone and the shales to separate from the harder underlying fine grain grey footwall structure. Its evident movement in the northwesterly direction was between 60 and 80 feet, causing the area adjacent to and NE of the Crag fault to slide downward in a southeasterly direction. This series of faulting would provide for a favorable condition through and along which the mercury bearing solutions would deposit. It is likely, better depositions in cinnabar values would occur along the NE bedding of the SW dipping Crag fault.

As there is no evidence of the crag fault dying out where it would intersect with the footwall shearing indicated near the face of 11N adit, possibilities of a continuation beyond the point of intersection with this footwall structure are good, thus forming a greater distance along the fault in which deposition of cinnabar is likely.

Bonanza Oil & Mine Corp
Sutherlin Ore

Cost of advance 4 ft. per shift

24 hrs. labor @ $2.00/hr.	—$48.00
Drill Steel (Copco Atlas Caramont)	— 4.00
Power (Deisil compresser)	8.00
40 lbs. 16 lb. mine rail @ .07 / lb.	— 2.80
4 ft. x 2 " black air pipe @ .48/ft.	— 1.92
4 ft. x 1" black water pipe @.25/ft.	— 1.00
Explosives	
40 lbs. gelex No. 2-45% @ .215	— 8.60
18 only no. 6 bla sting caps @.02	— .36
126 ft. black sequoia safety fuse @.02m	— 2.52
1 only 36" 4"x6" douglas fir track tie @ 70.00/M.	— .42
	77.62

(d) Operating Equipment to be furnished by operator

1 only Finley-Eimco Model 12 B. overhead mucker. 24 inch gauge.
1 only Joy L-37 air drill complete with feed leg.
2 only round point No. 2 mine shovels.
2 only square point No. 2 mine shovels.
2 only 3/4" x 3 ply x 50 ft. air hoses.
2 only ½" x 50 ft. 3 ply H20 hoses.
4 only 3 lb. mine drift picks.
1 only grass valley side and end dump, mine car.
1 only 3 lb. single bit mine ax.
1 only mine docking saw.
6 only Model P. Edson cap lamps.
1 only 500 IR deisel compressor.
track bars, wrenches, and misc. track tools

These items are to be rented on the basis of $300.00 per month. for the Nonpareil project.

(e) Rehabilitation and Repairs. Services of bulldozing surface to face up tunnel sight and to grade new road for a distance of 400 yards to portal of No.14 Adit. Cost: $200.00

(f) New Buildings, etc. 1 only 10 ft. x 10 ft. tool shed to be constructed at a cost of $200.00

(g) Miscellaneous.

(h) Contingencies.

Bonanza Oil & Mine Corp
Antimony Ore

Bonanza Oil & Mine Corp.
Sutherlin Oil

THIS CONTRACT OF LEASE, made and entered into by and between PAUL AMORT, the duly appointed Receiver of the property of the OREGON CINNABAR AND SILVER MINING COMPANY, a dissolved corporation, hereinafter referred to as Lessor; and BONANZA OIL & MINE CORP., a corporation, hereinafter referred to as Lessee,

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W I T N E S S E T H :

That the Lessor does hereby lease and let unto the Lessee, and the Lessee hereby rents and takes of the Lessor, the following described as follows:

> All mines, minerals, and mineral rights and the right to mine the same, on, in, and under the following described real property:
>
> West Half of Southwest Quarter and Southeast Quarter of Southwest Quarter of Section three (3); and also
>
> Beginning at the quarter section corner between sections three (3) and ten(10), running thence south 89 degrees 45 minutes West 39 chains and 90 links to the Northwest corner of section ten(10), thence south 27 chains and 85 links to the northwest boundary of the Clinton Sutherlin Donation Land Claim, thence east 13 chains and 4 links to the northeast corner of said donation Land Claim, thence North 46¼ degrees East 5 chains and 70 links to the south corner of Block "C" in the town of Nonpareil, thence following the southwest boundary of said town North 49 degrees 20 minutes West 3 chains and 64 links to the west corner of said block and town, thence following the northwest boundary of said town North 40 degrees 40 minutes East 12 chains and 72 links to the north corner of said town, thence South 49 degrees 20 minutes East 2 chains and 50 links to the northwest boundary of the lot of six acres belonging to the Oregon Quicksilver Mining Company, thence following said northwest boundary North 40 degrees East 9 chains and 60 links to the north corner of said lot, thence South 50 degrees East 6 chains and 25 links to the east corner of said lot, thence North 40 degrees 40 minutes East to the middle of channel of Calapooia Creek, thence following up said channel to a point due south of the quarter section post between Sections three(3) and ten(10), thence North to the place of beginning.
>
> And all lying and being in sections three(3), four (4), nine (9) and ten (10) in Township twenty-five (25) South, Range four(4) West of the Willamette Meridian, in Douglas County, Oregon, and containing 427 acres, more or less.

at and for a term of ninety-nine (99) years, for which the Lessee hereby promises and aggrees to pay a minimum royalty of five per cent (5%) of the gross sales of quicksilver removed from said mining property, payable monthly. Provided further, that for production of six (6) pounds per ton mercury, the Lessee shall pay six percent(6%) of said gross sales revenue; for seven (7) pounds per ton, seven

Bonanza Oil & Mine Corp
Sulphur Ore

percent (7%) of gross sales revenue; for seven (7) pounds per ton, seven percent (7%) of gross sales revenue; for eight(8) pounds per ton, eight percent(8%) of gross sales revenue; for nine(9) pounds per ton, nine percent(9%) of gross sales revenue; and for ten (10) pounds or over per ton, ten percent (10%) of gross sales revenue.

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In the event ~~%%%~~ of the discovery upon the leased property of oil, ore, metals, minerals or other natural resources other than quicksilver, the Lessor agrees to pay the Lessee monthly royalties based upon the following percentages: Oil, 12½ percent pf gross sales revenue thereof; gold, silver, lead or other metals, 10% of the gross sales revenue thereof; uranium, 50% of net sales revenue thereof. All gross sales referred to above shall be f.o.b. reduction plant.

All royalties payable hereunder for each calendar month shall be paid by Lessee to Lessor on or before the last day of the month in which such quicksilver or other metals or minerals ~~a~~ are sold.

Lessee will deliver to Lessor weight and assay sheets for all ores mined from the leased premises on or before the 15th day of the month following the month in which such ores are measured and assayed. To aid the Lessor in determining the correctness of royalties paid as provided for herein, the Lessor shall have the right to inspect the books and sales records of the Lessee in the offices of the Lessee at such times as are convenient to the parties hereto.

All structures erected upon said property shall be insured to their insurable value and shall be payable, in case of loss, to the Lessor, and the Lessor agrees to replace said structures at its own expense as expeditiously as possible.

The Lessee shall during the life of this contract keep the said property and all its equipment and machinery free from any and all liens for labor, supplies and operation of a cookhouse and all mechanic's liens for the building of structures upon or within said property. All of the cost thereof shall be paid regularly at stated payroll and payment times.

Should any labor, material, or machinery liens be filed against said

Bonanza Oil & Mine Corp
Sutherlin Ore

property during the life of this contract, the Lessees shall have a right, by good and sufficient undertaking, satisfactory to the Lessor, guaranteeing to keep the Lessor, harmless from such liens, to contest the same, nonwithstanding the provisions hereof.

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The mining and development work hereunder shall be carried on after the beginning thereof with all resonable didigence.

The Lessor during the term of this lease shall have the right to maintain at and upon said property continuously or otherwise, asmit may desire, some representative, who shall at all times be entitled to ingress and egress to and fr om the property for inspection of all tunnels, shafts, stopes, and other openings, to sample all ores extracted from the property and take samples for that purpose, to have and receive duplicate assays and receipts as herein provided from the smelter or other production works, and to at all times have complete information as to the operation of said property and the proceeds of such operation.

All the work performed upon the property during the term hereof shall be performed in a minerlike manner and workmanlike manner. All tunnels or other openings that require timber shall be properly timbered. Before employing labor upon the property, the Lessee shall comply with the Workmen's Compensation Act.

Time is of the esse nce of this agreement and should the Lessee default in any of the terms and conditions herein contained and should said default remain unremedied during a period of sixty days after the receipt from the Lessor of notice in writing to cure such default, then this lease at the option of the Lessor may be terminated.

The Lessee covenants that it will develop and operat e said property as steadily as market, weather, and labor conditions permit and it is agreed that if quicksilver is sufficient to permit a profitable operation, then the Lessor shall ha ve the right to terminate this lease upon giving the Lessee ninety days' notice in writing to suspend ope ations; provided, however, if fire, flood or Acts of God cause cessation of mining and developing of the said property,

Bonanza Oil & Mine Corp.
Stibnite Ore

the Lessee shall have an additional eighteen (18) months within which to resume the mining and developing required by this agreement.

It is further agreed by and between the parties hereto that the Lessee shall have six months' time from the signing of this lease within which to complete a DMEA contract with the United States Government before commencing a development program, but in no event shall the commencement of such development program be later than the termination of said six months period.

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It is agreed that the Lessee may terminate this lease at any time by giving the Lessor at least ten (10) days notice in writing.

In the event of the termination of this lease for any cause, the Lessee shall have the period of thirty days (30) within which to remove personal property from the leased premises, and if the said personal property of the Lessee be not removed from the premises before the expiration of the thirty days after the termination of the lease, the said personal property shall be and become the property of the Lessor.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their respective officers thereunto duly authorized this 25th day of May, 1956.

Receiver of the Property of the
OREGON CINNABAR AND SILVER MINING
COMPANY, a dissolved corporation.

BONANZA OIL & MINE CORP.,
a corporation

By _____

Title: _____

By _____

Title: _____

Bonanza Oil & Mine Corp
Sutherlin Ore

BARGAIN AND SALE DEED

THIS INDENTURE WITNESSETH: that PHYLLIS MANNING THOMAS (the sole and only heir-at-law of Alice F. Manning Throonburg, deceased) and KENNETH EDWARD THOMAS, husband and wife, of Junction City, Lane County, Oregon, the Grantors, for and in consideration of the sum of TEN DOLLARS($10) to them paid do hereby bargain, sell, and convey unto JACK H. BECK, the Grantee, the following described premises, to-wit:

> All of our right, title and interest in and to all mines and minerals and mineral deposits, together with the reserved right for prospecting for, mining, reducing and marketing the minerals in and upon the real property hereinafter described and particularly the cinnabar and other mercuric ore, together with the reserved right to use such of the surface of said real property as may be necessary or convenient for the mining, reducing and marketing of said minerals, all on the following real property situated in Douglas County, Oregon:
>
> The Northwest Quarter of the Northwest Quarter of Section 2,
> The North Half of the Northeast Quarter,
> The Southwest Quarter of the Northeast Quarter,
> The Southeast Quarter of the Northwest Quarter,
> The West Half of the Northwest Quarter, and
> The Northeast Quarter of the Southwest Quarter of Section 3,
> Township 25 South, Range 4 West, Willamette Meridian, Douglas County, Oregon, together with all royalties and rents therefr om.

The grantee, by the acceptance of this conveyance, agrees and binds himself, his heirs and assigns to pay the grantors, their heirs and assigns, five per cent (5%) of all minerals mined from the aforementioned real property within thirty days from the reduction thereof. In the event that the grantee shall fail to pay to the grantors, their heirs or assigns said five per cent (5%) of all minerals mined from said real property within thirty days from the date of the reduction thereof, such failure shall constitute a default. In the event such default shall occur and shall not have been removed after thirty days notice in writing addressed to the grantee at 400 FulVue Drive, Eugene, Oregon, all right, title, and interest in and to the aforementioned real property herein bargained, sold and conveyed shall revert to the grantors.

In the event Grante e, his heirs or assigns fail to exert resonable efforts to mine said minerals from the granted premises for a period of five years, then all right, title and interest herein granted shall revert to the Grantors

Bonanza Oil & Mine Corp
Sutherlin Ore

It shall be the privilege of the Grantee to return this property at any time whatsoever to the Grantors with no further obligation on the part of the Grantee.

TO HAVE AND TO HOLD the said premises, with their appurtenances, unto the said Grantee, his heirs and assigns forever.

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IN WITNESS WHEREOF, Phyllis Manning Thomas and Kenneth Edward Thomas, the Grantors, have hereunto, by Steve A. Tyler, their attorney in fact, set their hands and seals this 25 th day of July, 1955.

_____ (SEAL)
Phyllis Manning Thomas

_____ (SEAL)
Kenneth Edward Thomas

By _____ (SEAL)
Attorney in fact

STATE OF OREGON)
) ss.
COUNTY OF LANE)

On this 25th day of July, 195 5, personally appeared Steve A. Tyler who, being duly sworn, did say that he is the attorney in fact for Phyllis Manning Thomas and Kenneth Edward Thomas and that he executed the foregoing instrument by the authority of and in behalf of said principals and for the purpose therein named; and acknowledged said instrument to be the act and deed of said principals.

Before me:

My Commission Expires_____ _____
Notary Public for Oregon

Bonanza Oil & Mine Corp
Sutherlin Ore

BARGAIN AND SALE DEED

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KNOW ALL MEN BY THESE PRESENTS, That JACK H. BECK AND MATA B. BECK, grantors, in consideration of Ten and no/100 ---------- Dollars, to them paid, do hereby grant, bargain, sell and convey unto BONANZA OIL & MINE CORP., an Oregon corporation, its heirs and assigns, all the following real property, with the tenements, hereditaments and appurtenances, situated in the County of Douglas and State of Oregon, bounded and described as follows, to-wit:

All of our right, title and interest in and to all mines and minerals and mineral deposits, together with the reserved right for prospecting for, mining, reducing and marketing the minerals in and upon the real property hereinafter described and particularly the cinnabar and other mecuric ore, together with the reserved right to use such of the surface of said real property as may be necessary or convenient for the mining, reducing and marketing of said minerals, all on the following described real property situated in Douglas County, Oregon:

The Northwest Quarter of the Northwest Quarter of Section 2;
The North Half of the Northeast Quarter,
The Southwest Quarter of the Northeast Quarter,
The Southeast Quarter of the Northwest Quarter
The West Half of the Northwest Quarter, and
The Northeast Quarter of the Southwest Quarter of Section 3;
Township 25 South, Range 4 West, Willamette Meridian, Douglas County, Oregon, together with all royalties and rents therefrom.

This conveyance is subject to the conditions subsequent described in that certain deed filed May 9, 1955, and recorded in Volume 243, at page 939, of Deed Records of Douglas County, Oregon.

To Have and to Hold, the above described and granted premises unto the said grantee, its heirs and assigns forever.

Witness our hands and seals this 31 day of May, 19 56.

/s/ Jack H. Beck (Seal)

/s/ Mata B. Beck (Seal)

STATE OF OREGON, County of Lane } ss. On this 31 day of May, 19 56, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Jack H. Beck and Mata B. Beck

who are known to me to be the identical individuals, described in and who executed the within instrument, and acknowledged to me that they executed the same freely and voluntarily.

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

/s/ George T. Langford
Notary Public for Oregon.
My Commission Expires November 14, 1958

Compliments of
CASCADE TITLE COMPANY
936 Oak Street Eugene, Oregon

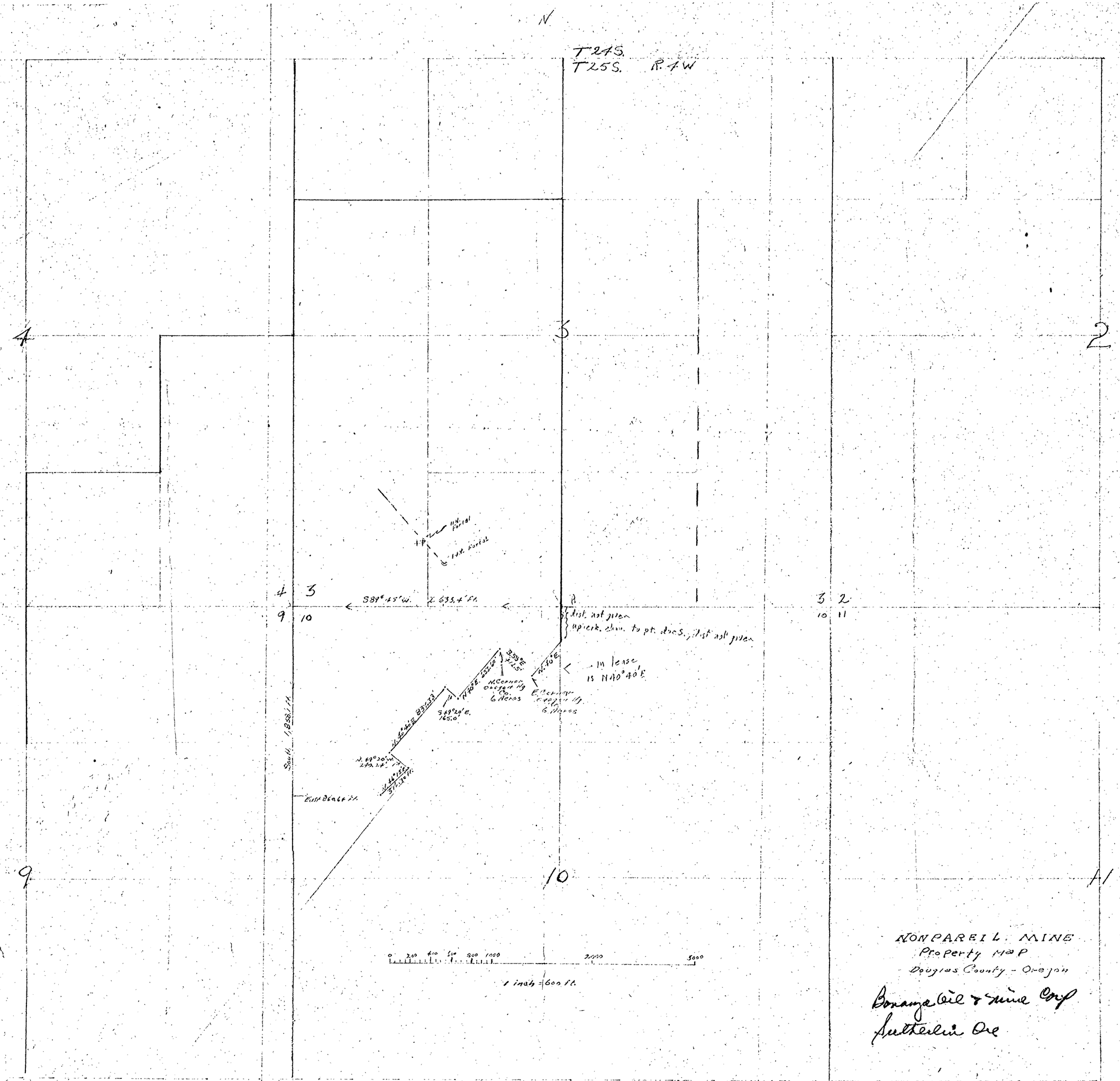
BARGAIN & SALE DEED

TO

STATE OF OREGON, County of } ss.
I certify that the within instrument was received for record on the day of 19 , at o'clock M., and recorded in book on page Record of Deeds of said County.
Witness my hand and seal of County affixed.

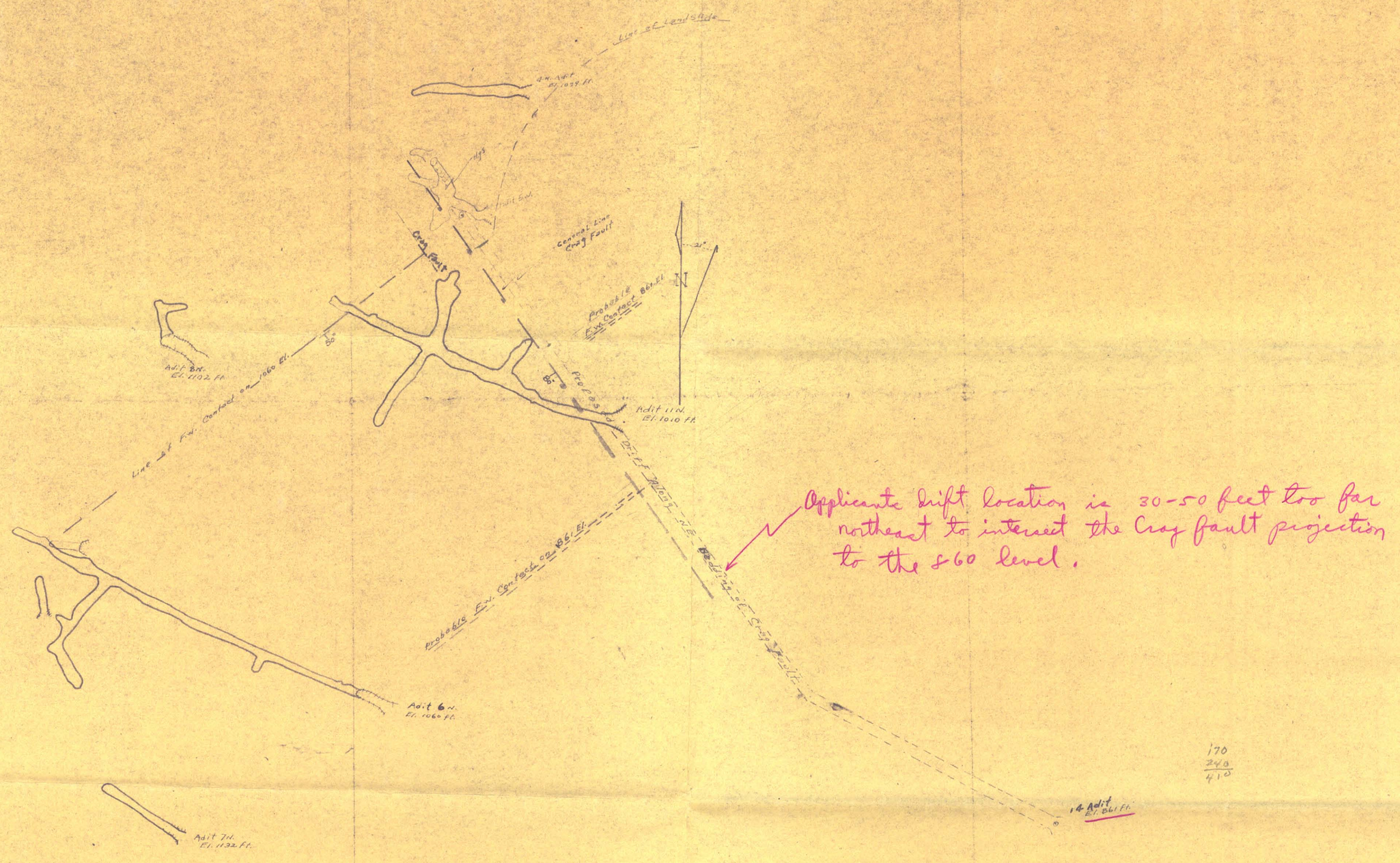
County Clerk—Recorder.
By ..... Deputy.

Return To:



NONPAREIL MINE
Property Map
Douglas County - Oregon

Bonanza Oil & Mine Corp
Sutherlin Ore



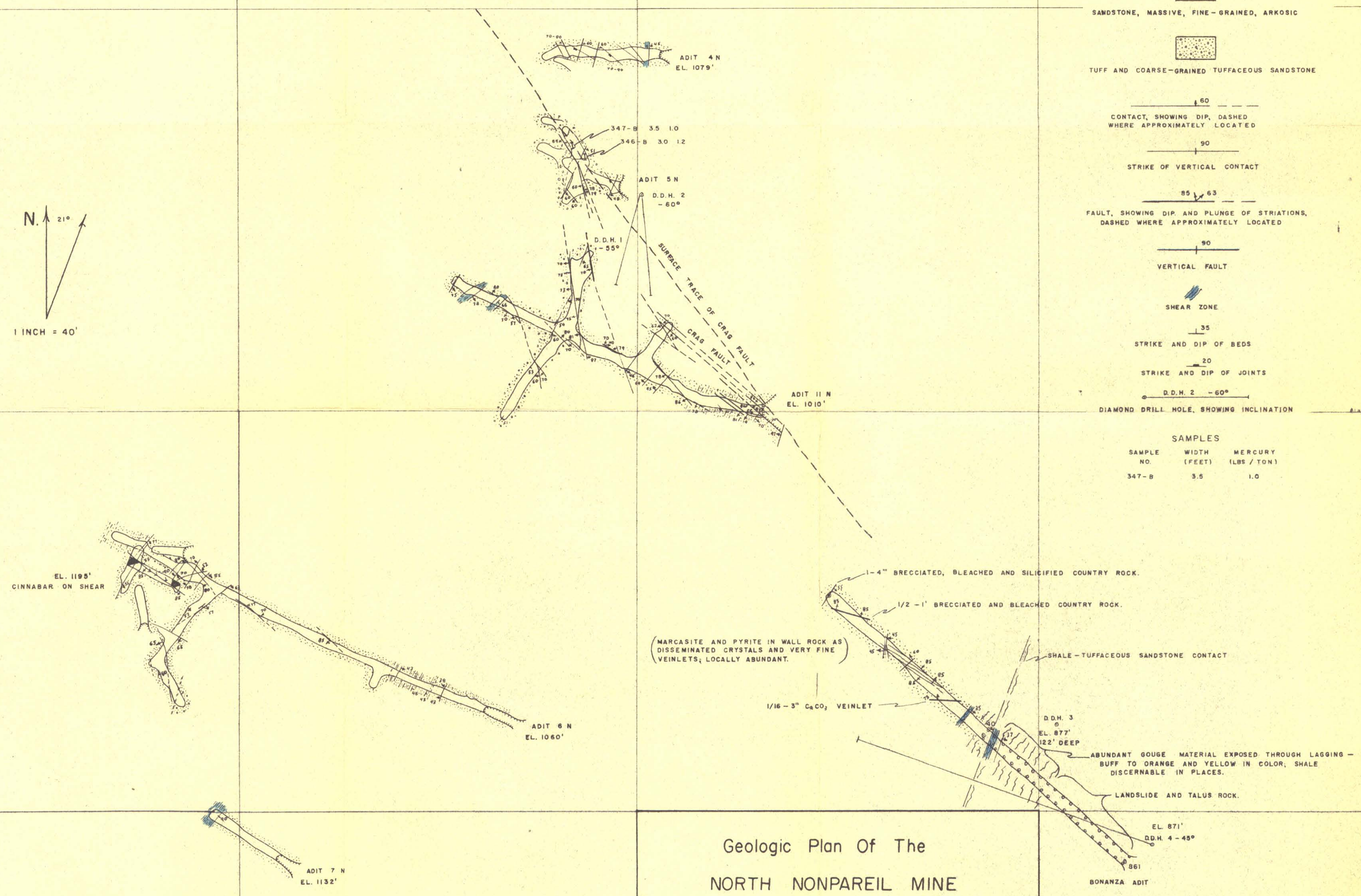
Applicants drift location is 30-50 feet too far northeast to intersect the Crag fault projection to the 860 level.

170
240
410

NORTH NONPAREIL MINE
SUTHERLIN - DOUGLAS COUNTY - OREGON
Plan of Old & Proposed Workings

Scale: 1 inch = 40 ft.

Bonanza Oil & Mine Corp
Sutherlin Ore



EXPLANATION

BLACK SHALE, LOCAL SANDSTONE LENSES.

SILTSTONE, INTERBEDDED WITH SANDSTONE AND SHALE.

SANDSTONE, MASSIVE, FINE-GRAINED, ARKOSIC

TUFF AND COARSE-GRAINED TUFFACEOUS SANDSTONE

60 — CONTACT, SHOWING DIP, DASHED WHERE APPROXIMATELY LOCATED

90 — STRIKE OF VERTICAL CONTACT

85 63 — FAULT, SHOWING DIP AND PLUNGE OF STRIATIONS, DASHED WHERE APPROXIMATELY LOCATED

90 — VERTICAL FAULT

SHEAR ZONE

35 — STRIKE AND DIP OF BEDS

20 — STRIKE AND DIP OF JOINTS

D.D.H. 2 -60° — DIAMOND DRILL HOLE, SHOWING INCLINATION

SAMPLES

SAMPLE NO.	WIDTH (FEET)	MERCURY (LBS / TON)
347-B	3.5	1.0

Geologic Plan Of The NORTH NONPAREIL MINE

Sec. 3; T25S.; R. 5W.

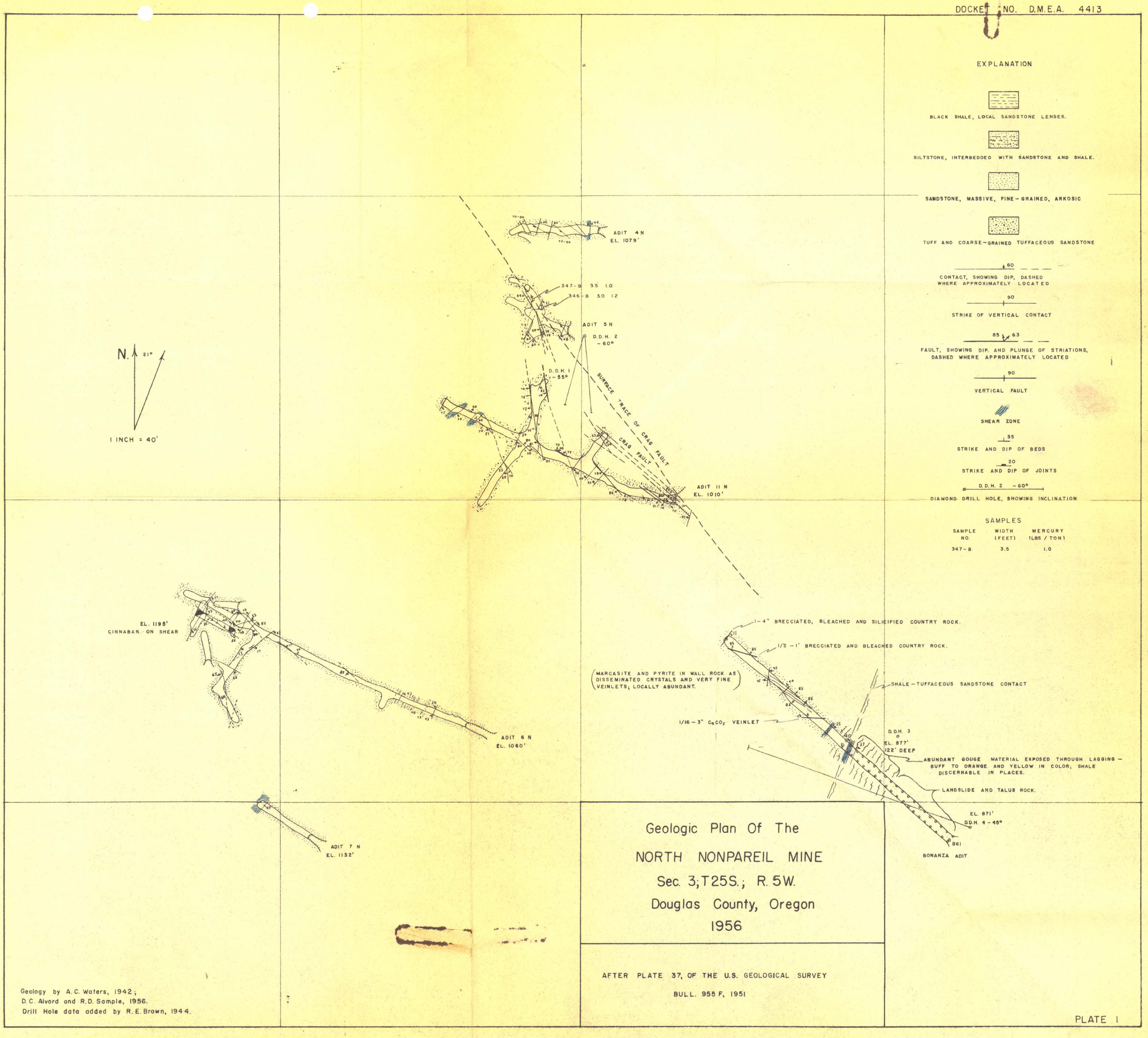
Douglas County, Oregon

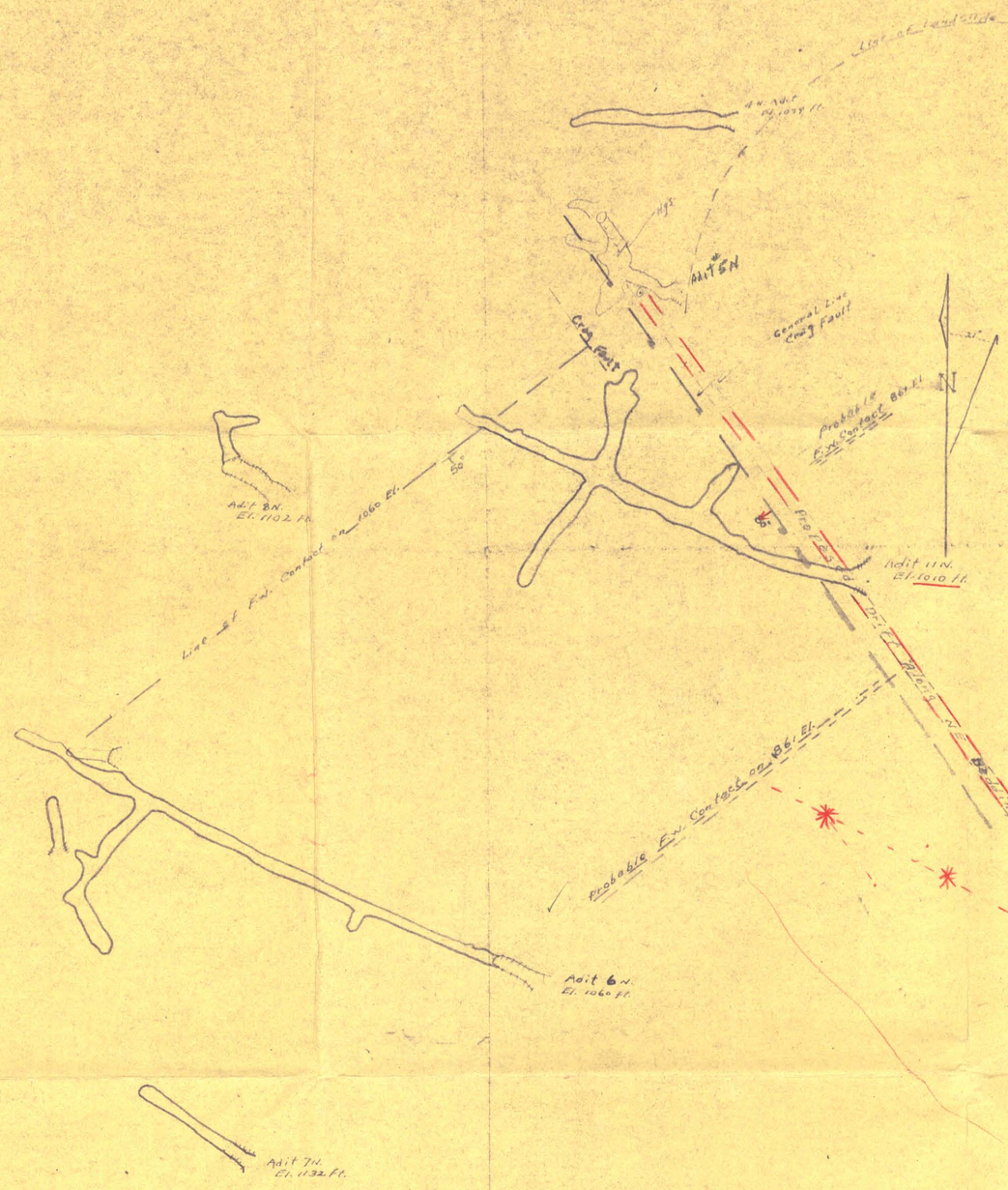
1956

AFTER PLATE 37, OF THE U.S. GEOLOGICAL SURVEY

BULL. 955 F, 1951

Geology by A.C. Waters, 1942;
D.C. Alvord and R.D. Sample, 1956.
Drill Hole data added by R.E. Brown, 1944.


N.
21°
1 INCH = 40'
ADIT 4 N
EL. 1079'
347-B 3.5 1.0
346-B 3.0 1.2
ADIT 5 N
D.D.H. 2
-60°
D.D.H. 1
-55°
SURFACE TRACE OF CRAG FAULT
CRAG FAULT
ADIT 11 N
EL. 1010'
EL. 1195'
CINNABAR ON SHEAR
ADIT 6 N
EL. 1060'
ADIT 7 N
EL. 1132'
1-4" BRECCIATED, BLEACHED AND SILICIFIED COUNTRY ROCK.
1/2 - 1' BRECCIATED AND BLEACHED COUNTRY ROCK.
(MARCASITE AND PYRITE IN WALL ROCK AS DISSEMINATED CRYSTALS AND VERY FINE VEINLETS; LOCALLY ABUNDANT.)
SHALE - TUFFACEOUS SANDSTONE CONTACT
1/16 - 3" CaCO3 VEINLET
D.D.H. 3
EL. 877'
122' DEEP
ABUNDANT GOUGE MATERIAL EXPOSED THROUGH LAGGING - BUFF TO ORANGE AND YELLOW IN COLOR; SHALE DISCERNABLE IN PLACES.
LANDSLIDE AND TALUS ROCK.
EL. 871'
D.D.H. 4 - 45°
861
BONANZA ADIT
EXPLANATION
BLACK SHALE, LOCAL SANDSTONE LENSES.
SILTSTONE, INTERBEDDED WITH SANDSTONE AND SHALE.
SANDSTONE, MASSIVE, FINE-GRAINED, ARKOSIC
TUFF AND COARSE-GRAINED TUFFACEOUS SANDSTONE
60
CONTACT, SHOWING DIP, DASHED WHERE APPROXIMATELY LOCATED
90
STRIKE OF VERTICAL CONTACT
85 63
FAULT, SHOWING DIP. AND PLUNGE OF STRIATIONS, DASHED WHERE APPROXIMATELY LOCATED
90
VERTICAL FAULT
SHEAR ZONE
35
STRIKE AND DIP OF BEDS
20
STRIKE AND DIP OF JOINTS
D.D.H. 2 -60°
DIAMOND DRILL HOLE, SHOWING INCLINATION
SAMPLES
SAMPLE NO. WIDTH (FEET) MERCURY (LBS / TON)
347-B 3.5 1.0
Geologic Plan Of The
NORTH NONPAREIL MINE
Sec. 3; T25S.; R. 5W.
Douglas County, Oregon
1956
AFTER PLATE 37, OF THE U.S. GEOLOGICAL SURVEY
BULL. 955 F, 1951
Geology by A.C. Waters, 1942;
D.C. Alvord and R.D. Sample, 1956.
Drill Hole data added by R.E. Brown, 1944.
PLATE 1



Applicants drift location about 30-50 feet too far northeast to intersect the Cray fault projection to the 860 level.

NORTH NONPAREIL MINE
SUTHERLIN - DOUGLAS COUNTY - OREGON
Plan of Old & Proposed Workings

Scale: 1 inch = 40 ft

Bonanza Oil & Mine Corp
Sutherlin Ore