August 19, 1965

Memorandum

To: Chief, Office of Minerals Exploration

From: Acting Field Officer, Region I

Subject: Application examination
OME-6438 (Gold-Silver)
The Ashland Mine, Oreg. Ltd.
The Ashland Mine
Jackson County, Oregon

The Ashland mine was visited June 12, 1965, accompanied by Ben F. Gasaway, general partner, D. E. Loughran, consulting engineer-geologist, and Charles Smith, foreman. About four hours were spent on the property inspecting accessible workings on the 250 level and the surface. During the previous evening about two hours were spent with Loughran going over the application, particularly costs, and the various points brought up in your memorandum of April 27, 1965.

A revised program with a cost breakdown and bids was received July 19, 1965, and was forwarded to you the same day. In the applicant's revised item 5, there appears to be at least one line missing in the second paragraph under (a) Description of Exploration Program. In the same paragraph at the end of the fourth line, the word "southeast" should be "northeast" if the reference is to the line of holes and "southwest" if it is to the direction of the drift. This revised program was discussed with the applicant during the examination, so his intent is understood.

A three-stage program is recommended, Stages II and III being dependent upon the results of the previous stage.

Property and accessibility

The applicant controls by lease 10 unpatented lode claims and 7 tracts. The land on or near which exploration will be done is confined to tracts A, C, and F (plate 1). Tract F is subject to a mortgage, as mentioned in item 6 of the purchase agreement and the final paragraph of your memorandum of April 27, 1965.

The property is about 3 miles northwest of Ashland and is easily accessible throughout the year by paved road. Leaving Ashland northerly on U. S. Highway 99, turn left just before reaching the railroad

See map in folder (pl. 1)

underpass. Follow the pavement until reaching a sign marked "Ashland Mine." Follow the road so indicated to the mine.

Geology

The Ashland mine is described by H. M. Parks and A. M. Swartley (1916) in Handbook of the mining industry in Oregon: Oregon Bureau of Mines and Geology, Mineral Resources of Oregon, vol. 2, no. 4. Their report is summarized in State of Oregon Department of Geology and Mineral Industries Bull. 14-C: Oregon metal mines handbook, p. 23-26 (1943). The latter is quoted in full in the application.

Rocks in the area are tonalite that has been intruded by aplitic dikes and contains inclusions of schistose and sedimentary rocks. Veins of quartz and crushed wall rock fill fissures in the tonalite. There are at least three known veins on the property, but all the production has come from one vein, the Ashland.

The Ashland vein is a fissure vein that strikes N. 15°-25° E., average N. 20° E., and dips about 40° southeasterly. Two ore shoots have been developed, and pretty well worked out, by two shafts and at least ten levels and sublevels. The only accessible workings at the time of the inspection were the 250 level, the West shaft below the 250 level, and partially caved levels therefrom (plate 1).

The 250 level consists of a 490-foot long crosscut from a surface portal through the Ashland vein, which it cuts from about 458 to 464 feet. About 215 feet from the portal, a 2- to 6-inch wide vein of crushed quartz and tonalite strikes N. 60° W. and dips 60° SW. Less than a sixteenth of an inch of clay suggests that any movement along this structure is slight.

The Ashland vein has been followed by the 250 level drift for about 40 feet to the northeast and to the southwest for more than 1,080 feet, beyond which the drift is caved. At 1,070 feet from the crosscut the West shaft is caved above the level. Between the crosscut and the West shaft there are seven raises, all but one of them inaccessible from the level. The fifth raise southwest of the crosscut was equipped with ladders, but about 50 feet above the level a mine car could be seen partly tipped into the raise. No attempt was made to pass the car, but the raise was climbed far enough to see evidence of some stoping; how much could not be determined.

Throughout the length of the drift the width of the vein ranges from a few inches to nearly 8 feet. Where exposed in crosscuts, the wall rock is not noticeably altered for more than a few inches from the footwall; the hanging wall is a definite plane, along which some movement may have taken place. The direction and amount of movement could not be determined.

The West shaft was open below the 250 level to the 900 level. In place of ladders, narrow wooden steps served the manway; the hoist had been removed. Below the 325-foot level there was no handrail or rope; for this reason and because the steps were wet and slippery only the 325 and 400 levels were visited. Both levels had been stoped above and were badly caved on the southwest side ~~side~~ of the shaft. The 325 level was driven about 50 feet to the northeast and was accessible for about 30 feet to the southwest before it was caved tight. The 400 level was driven about 75 feet to the northeast and was said to extend 300 feet to the southwest, but in this direction was badly caved beyond about 100 feet. Stopes seen on both levels to the southwest of a 10- to 15-foot pillar at the shaft were 20 to 50 feet long with 10- to 15-foot pillars between stopes. The vein ranges from a sheeted zone with bands of quartz and crushed tonalite to a strong quartz-filled fissure and was stoped over widths ranging from 4 to 15 plus feet.

According to Charles Smith, the work done on the levels below the 400 was:

Level	Drifting (feet) NE	Drifting (feet) SW	Stoping (feet long) NE	Stoping (feet long) SW
500	200	250	200	200
600	350	180	120	75
700		300		300
800		400		300
900		700	0	0

On the 900 level the last 400 feet of drift to the southwest is said to be in ore, but the grade is not known. As these figures were given from memory, about all they can be taken to mean is that ore has been stoped from the 800 level to the 250 level and that there is an unmined shoot left on the 900 level. Minerals Yearbooks for 1934 through 1938 indicate that considerable production came from the Ashland mine, but for 1939, the last year the mine is mentioned, the implication is that production had fallen off. There is no mention of production from this mine in 1941 and 1942, as reported in the application, and it is concluded that production ceased, not because of any Government order but because the known ore was mined out. This is further suggested by the assays with Frizzell's report accompanying the application.

The sites of the West shaft, the York shaft, and the Deadman's shaft collars were visited, but the shafts were caved shut. The portal of the Mill tunnel was also caved.

In the area of the proposed work there were no exposures of the vein. The proposed site of the adit portal is covered by talus and brush, the remainder of the area by unconsolidated sandy soil, gravel, and some clay.

Conclusions

Two ore shoots on the Ashland vein have been essentially worked out and have produced ore worth between $1,300,000 and $1,500,000. Ore is said to have been mined to a depth of 800 feet and to have been found to a depth of 900 feet, but apparently the most tonnage and better grade ore was found from the surface nearly to the 250 level. Projected on dip and strike, the vein passes very near to the vein reported in the Mill tunnel, which could well be the same vein. Ore mined came from two distinct ore shoots possibly as much as 500 feet apart.

It is concluded that additional ore shoots may occur along the Ashland vein and that the chance of making a significant discovery in the area of proposed exploration is better than fair. From data in Minerals Yearbooks and from assays of samples taken by the applicant from the fringes of stoped areas, it is concluded that silver values will be relatively small compared to the gold values, and that Government participation should be no more than 50 percent of the accepted costs.

Recommendations

Because of the sketchy evidence, other than projection, that the vein occurs in the area of proposed exploration, the following 3-stage program is recommended:

Stage I

At the approximate locations shown on plate 1, bulldoze four trenches across the projected location of the Ashland vein and take channel samples across the vein where exposed in each trench.

Stage II

Only if the trenches expose the vein and assays of the samples show it to contain gold values, phases 1 and 2 may be undertaken, concurrently if desired.

Phase 1.--Prepare a suitable portal site near the southwesternmost trench and drift along the vein a distance of 500 feet. Channel samples shall be cut across the vein at intervals of not more than 10 feet.

As the drift will not be driven unless the vein is mineralized, it is doubted that composite car samples will be of much use, as dilution within the muck pile will probably cause them to run lower than a corresponding channel sample.

Phase 2.—At the approximate locations shown on plate 1, prepare five drill stations and from each station diamond drill vertical holes BX or BXWL to pass through the vein. It is estimated that the holes will average about 150 feet in depth and will cut the vein at a depth of about 200 feet, measured in the plane of the vein, or about 130 feet vertically. However, these distances will vary if the vein steepens or flattens. Core from the vein shall be split, and samples representing not more than 5 feet of core shall be taken and assayed for gold and silver. Drilling sludge from the vein shall be saved and where core recovery is less than 60 percent shall be assayed separately. The assays of core and sludge shall then be combined in accordance with standard practice to form a representative sample.

Stage III

If justified by the results of Stage II, Phase 1, extend the drift an additional 500 feet.

COSTS

Stage I

Bulldozing

Overburden is loosely consolidated to unconsolidated mixed sand, gravel, and clay with some boulders near the proposed tunnel portal, and ranges from 4 to 10 feet thick. Estimated times required:

1,500 feet of access road	16 hours
4 trenches	16 hours
5 drill stations	8 hours
Total	40 hours

1. Independent contracts:

40 hr bulldozing @ $18.00/hr	$ 720.00
2. through 6.	None
7. Miscellaneous	
8 samples assayed for gold @ $3.50 ea	28.00
Total Stage I	$ 748.00

Stage II

Diamond drilling

Five holes, BX or BXWL; estimated average depth, 150 feet; total drilling, 750 feet. As the average depth is only an estimate based on a long projection, it is recommended that a total of 1,000 feet of drilling be provided, with the stipulation that no hole shall be drilled deeper than 20 feet beyond the vein footwall. The bid from South State Drilling Co. does not specify whether they intend to drill with standard or wire-line equipment, but in this ground $6.00 per foot will probably be cutting the cost pretty close, even with wire-line drilling. It is therefore recommended that simply "BX size" be specified and that either standard or wire-line drilling be accepted.

Actual cost

1. Independent contracts

Diamond drilling		
Mobilization and demobilization, including all set-ups and moves	$ 200.00	
Drilling 1,000 ft of hole @ $6.00/ft	6,000.00	
Cementing and redrilling, or reaming and casing @ $12.00/hr or $3.50/ft	875.00	$ 7,075.00
2. through 6.		None
7. Assaying 60 samples for gold and silver @ $3.50 ea		210.00

Fixed unit cost

Incidental allowance for each foot of hole drilled $0.50 1/	500.00

1/ For all other costs.

Drifting

500 feet drift, 5'x7', in rock or timbered section. Estimated rate of advance 5 ft/day, 100 days at 22 days/mon or 4.5, say 5 months. Wages in this area are higher than most other areas.

Fixed unit cost

1. Independent contracts — None

2. Labor and supervision

2 miners @ $24.00/day	$ 48.00	
1 helper @ $20.00/day	20.00	
1/2 mechanic, electrician @ $24.00/day	12.00	
1/2 engineer-geologist-supervisor @ $750/mon, say $34.00/day	17.00	
	$ 97.00	
FICA and other insurance @ 15%	14.55	
Total	$ 111.55	
At 5 ft/day		$ 22.31/ft

3. Operating materials and supplies (per 5-ft round)

8 lb 40% powder @ $32.62/cwt	$ 2.61
22 lb ammonium nitrate prills @ $5.75/cwt	1.26
13 caps @ $0.015 ea	.20
80 ft fuse @ $0.034/ft	2.72
600 ft 2" air line, owned by operator valued @ $231—1/60 for 5 mo $19.25	.16
600 ft 1" water line @ $0.17/ft (less 50%—no salvage)	.51
75 ft 1" air hose @ $0.44/ft	.33
75 ft 1/2" water hose @ $0.25/ft	.19

300 ft 8" vent pipe @ $0.45/ft (less 50%--no salvage)	$ .67
66.6 lb 20# rail @ $190/T (less 50%--no salvage)	3.16
Spikes, fishplates, bolts, etc. @ $0.30/ft	1.15
50 gal diesel fuel @ $0.15/gal	7.20
5 gal gasoline @ $0.32/gal	1.60
Oil and grease, 10% of fuel	.88
Steel, 1 replaced/300 ft @ $11.00 ea 65 ft/round	2.38
Bits, 1 replaced/300 ft @ $3.75 ea 65 ft/round	.81
Small tools and repair parts @ $0.50/ft	2.50
	$ 28.33

At 5 ft/round $ 5.67/ft

4. Operating equipment

Furnished by operator	Present fair market value	Allowed dep/mon
1 air trammer	$ 2,000.00	$ 33.33
1 B-12 mucker	3,400.00	56.67
1 jackhammer drill	350.00	5.83
1 jackleg drill	300.00	5.00
4 mine cars	200.00	3.33
1 350 cu ft compressor	10,000.00 2/	166.67
		$ 270.83/mon

At 110 ft/mon $ 2.46/ft

2/ Applicant proposes to rent this compressor at $530/mon. Estimated purchase price is $10,000.

Total drifting cost $30.44/ft

5. None

6. New buildings

Construct powder magazine, 1 T capacity $ 200.00

7. Miscellaneous

Assay 100 samples for gold and silver @ $3.50 ea 350.00

Timbering

It is estimated that about 20%, or 100 feet, of drift may require timber and that 1 shift will stand, block, and lag 3 sets or 15 feet/shift; 100 feet of timbering will require 7 shifts.

1. Independent contracts None

2. Labor and supervision

2 miners @ $24.00/shift	$ 48.00	
1 helper-trammer-framer @ $20.00/shift	20.00	
	$ 68.00	
FICA and other insurance @ 15%	10.20	
	$ 78.20	
At 15 ft/shift		$ 5.21/ft

3. Operating materials and supplies

52 posts, 8"x8"x7',	1,941 bf	
26 caps, 8"x8"x6'6",	901 bf	
52 collar braces, 4"x6"x4'2",	433 bf	
500 lagging, 2"x12"x5',	5,000 bf	
	8,275 bf	
At $82.00/M	$ 678.55	
Plus 10%, blocks, wedges, etc.	67.85	
	$ 746.40	
At 100 ft of timber		$ 7.46/ft

4. through 7. None

Total timbering cost, $12.67/ft

Stage III

If work under this stage is justified by Stage II results, it is recommended that the drifting costs be increased $0.05 per foot to allow for longer tramming. Time required, 5 months.

Recapitulation

Stage I

Actual cost		
Bulldozing, 40 hr @ $18.00/hr	$ 720.00	
Assaying, 8 samples @ $3.50 ea	28.00	
Total cost Stage I		$ 748.00
Government's share @ 50 percent		374.00

Stage II

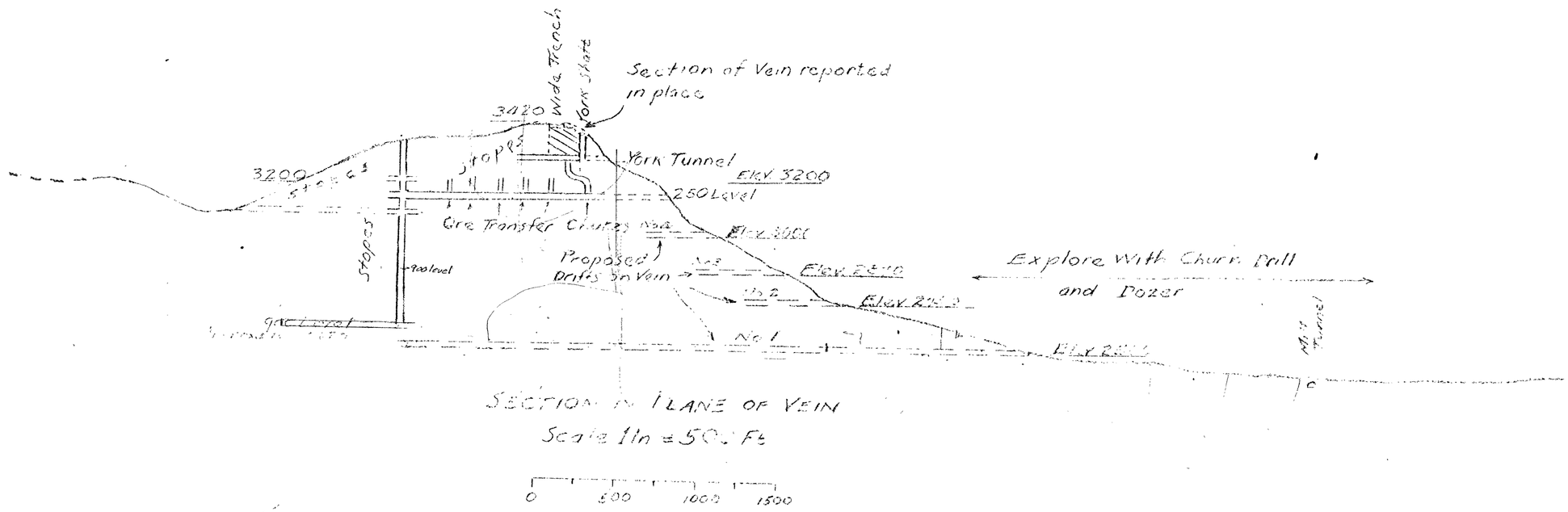
Actual cost		
Mobilization and demobilization	$ 200.00	
Drilling, 1,000 ft @ $6.00/ft	6,000.00	
Cementing or casing @ $12.00/hr or $3.50/ft	875.00	
Assaying, 160 samples @ $3.50 ea	560.00	
Total actual cost		$ 7,635.00
Fixed unit costs		
Incidental allowance, 1,000 ft @ $0.50/ft	$ 500.00	
Drifting, 500 ft @ $30.44/ft	15,220.00	
Timbering, 100 ft @ $12.67/ft	1,267.00	
Powder magazine	200.00	
Total fixed unit costs		$17,187.00
Total cost, Stage II		$24,822.00
Government's share at 50 percent		$12,411.00

Stage III

Actual cost		
Assaying, 100 samples @ $3.50 ea	$ 350.00	
Total actual costs		$ 350.00
Fixed unit cost		
Drifting, 500 ft @ $30.49/ft	$15,245.00	
Timbering, 100 ft @ $12.67/ft	1,267.00	
Total fixed unit costs		$16,512.00
Total cost, Stage III		$16,862.00
Government's share at 50 percent		$ 8,431.00

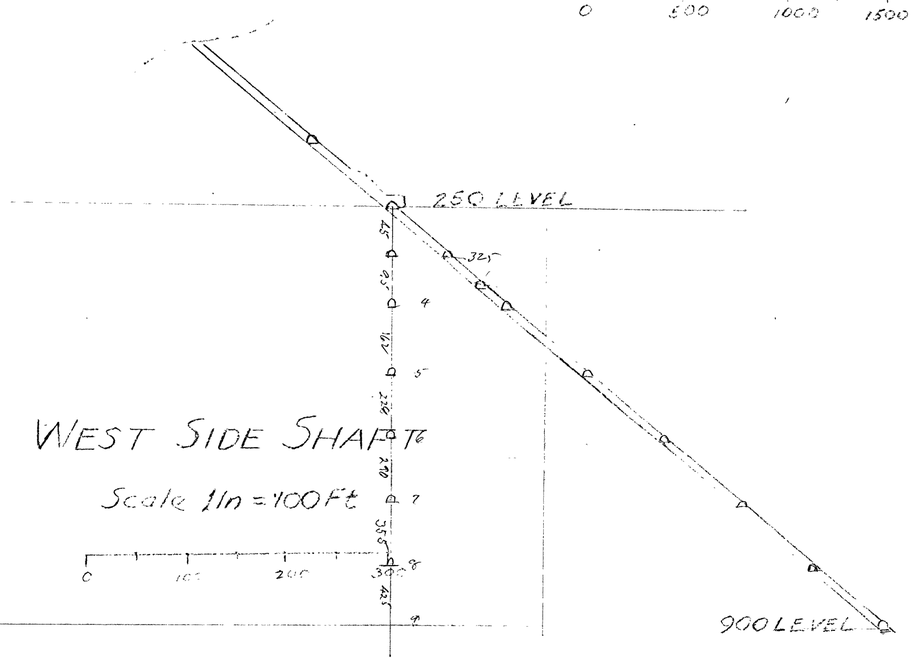
Distribution:
OME(2); Docket; SMO

D. R. MacLaren



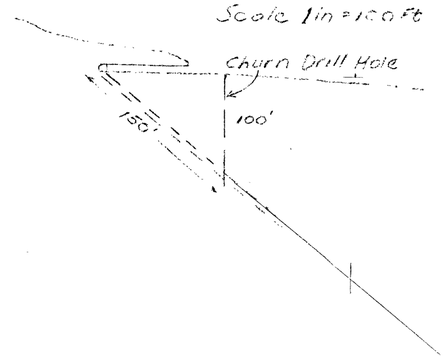
SECTION ON PLANE OF VEIN
Scale 1in = 50 Ft

0 500 1000 1500



WEST SIDE SHAFT
Scale 1in = 100 Ft

0 100 200



SECTION THRU MILL TUNNEL
Scale 1in = 100 Ft

3420
2560
860

THE ASHLAND MINE INCORPORATED

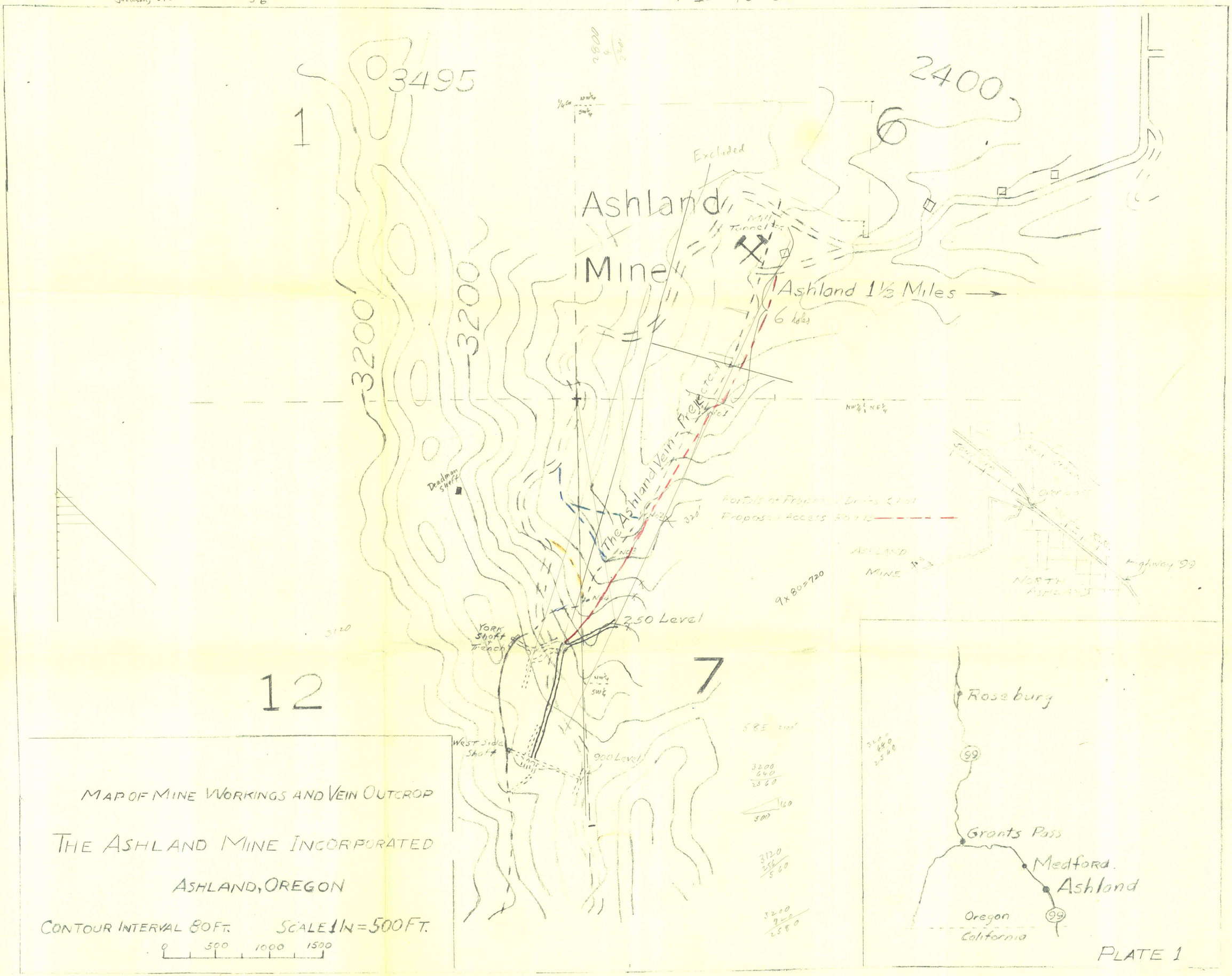
ASHLAND, OREGON

Proposed Exploration and Sections

PLATE 2

FC3-D2 OME6430 T39S
Jackson, OR R1E S6

T 1E 39S Sec



MAP OF MINE WORKINGS AND VEIN OUTCROP

THE ASHLAND MINE INCORPORATED

ASHLAND, OREGON

CONTOUR INTERVAL 80 FT. SCALE 1 IN = 500 FT.

0 500 1000 1500

PLATE 1