Docket DMA 89, Mount Wheeler Mines, Inc.

White Pine County, Nevada

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Mount Wheeler Mines Inc. has applied for a development loan of $400,910.00. The Lead-Zinc Division, DMA, requested that as there are no measured ore reserves, the application be considered for an exploration loan and that a field examination be made to substantiate the applicant's inferred ore reserve estimate. A field examination was made July 11-13, 1951 by R. M. Smith and D. Arnold of the Geological Survey.

The rocks in the area include quartzite, shale, and limestone of Cambrian age. These rocks have been intruded by porphyry dikes, and are cut by three sets of faults: north-striking fracture zones, east-striking shear zones, and bedding shear zones.

Galena veinlets, pods, & Xals in calcite up to 3' wide, totalling a few hundred tons
Small, discontinuous lead-silver ore bodies have been mined from a north striking fracture zone in the Lincoln limestone at the St. Lawrence Mine. These
Shipments averaged 75% Pb and 18 oz. Ag. per ton,
ore bodies are not promising, but indicate that mineralizing solutions have passed through the rocks and may indicate ore bodies at depth. It is inferred that ore bodies may be found along the fracture zones and at the intersection of fracture zones and favorable beds.

Several conditions must be met to localize an ore body in the Mt. Wheeler area. These conditions are as follows: (1) a favorable limestone bed must be present at the intersection of a north-striking fracture zone and east-striking shear zone. The fractured zone can be the locus of an orebody if, (2) mineralizing solutions pass through the zone for a sufficient time under, (3) the proper physico-chemical conditions.

It is concluded that the stratigraphic and structural conditions have been met in the Mt. Wheeler area. Whether the mineralizing solutions passed through favorable ground for a sufficient time under the proper conditions is conjectural, but it seems reasonable to assume that ore bodies are present at depth. It is further concluded that the project has a fair chance of making a significant discovery of lead-zinc-silver ore in an area that so far has yielded only a small production.

The applicant has estimated that the ore reserves total 904,000 tons of lead-zinc-silver ore assaying 6 to 9 percent lead, 1 to 15 percent zinc, and 8.5 oz. silver per ton. The examining geologists agree that the ore bodies may well be where the applicant predicts, but consider that the reserve figures may be too high. They have calculated the reserves on a more conservative basis, and estimate that the inferred ore reserves may total 225,000 tons, averaging 6 to 19 percent lead, 1 to 15 percent zinc, and 8.5 oz. silver per ton. Ore of this tonnage and grade would have a gross smelter return value of about $6,500,000 at present prices [1]. The estimated reserves

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[1] Market value: Lead $.17 per lb.; Zinc $.17-1/2 per lb.; Silver $.90-1/2 per oz.

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are adequate to return the government's share of the cost of proposed exploratory work. The applicant's proposed program is well planned and can be completed in about 18 months at a cost of $250,000. It is, therefore, recommended that the Defense Minerals Administration enter into a contract with the applicant and make available a loan of $125,000 to do the proposed exploration work.

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INTRODUCTION

Docket DMA 89, Mt. Wheeler Mines, Inc., 218 Felt Building, Salt Lake City, Utah, requested a Production loan of $400,910.00 to explore the St. Lawrence lead-silver mine near Wheeler Peak, White Pine County, Nevada. The company proposes to extend the Bonanza tunnel (fig. 2) 2,100 feet from Lincoln Canyon to cut the St. Lawrence fissure 1,600 feet below its outcrop, to drift 3,400 feet and raise a total of 800 feet along the vein and to diamond drill 5,000 feet into upper and lower limestone beds that are favorable to replacement ore bodies.

A field examination was requested by the Lead-Zinc Branch to substantiate the applicant's ore reserve estimate, and to determine the projects eligibility for an exploration loan. An examination was made July 11-13, 1951 by R. M. Smith and D. C. Arnold of the Geological Survey with James D. Williams, president, and Harry Poller, engineer, of the Mt. Wheeler Mining Company. The authors wish to acknowledge the assistance given by Mr. Earl B. Young, Chief Geologist, Combined Metals Reduction Company, Salt Lake City, Utah.

Location and accessibility

The St. Lawrence Mine is in T. 12 N., R. 68 E. White Pine County, Nevada at an altitude of 10,000 feet (fig. 1). The property is 45 miles southeast of Ely and can be reached from U. S. Highway 93 by a 19 mile gravelled road that leads southeast from the intersection of U. S. Highways 6 and 93. The mine is inaccessible during the winter months because of heavy snowfall. The proposed exploration, however, is to be done at an altitude that will permit year around operation after access road work and additional outside installations are completed.

History and production

The original claims at Mt. Wheeler were located in the early 1870's. Total production is not known but it is reported to total several hundred tons of hand-sorted ore containing about 75 percent lead and 18 oz. silver per ton. This ore was transported on mulesback for shipment to the U. S. Smelting Co. at Midvale, Utah. Production during 1948 was 46 tons that contained 19 percent lead and 8.5 oz. silver per ton.

Mt. Wheeler Mines, Inc. acquired the property in 1950. In all, 15 claims have been staked.

The applicant stated that Mt. Wheeler Mines, Inc. is assigning its property and its application DMA 39 to Mt. Lincoln Mines, Inc., 218 Felt Building, Salt Lake City, Utah, and that Mt. Lincoln Mines Inc. has $125,000 available to use as its share of an exploration project. Mr. J. D. Williams will manage both corporations.

The applicant also stated that he has recently submitted a separate application in the name of Mt. Wheeler Mines, Inc., for a loan of $121,326 to explore a tungsten occurrence on the property. Both projects were reviewed in the field.

GEOLOGY

The Mt. Wheeler area is underlain by sedimentary rocks of Cambrian age. The oldest formation in the mine area is the Prospect Mountain quartzite of Lower Cambrian age; it is overlain successively by the Pioche shale, the St. Lawrence limestone and the Lincoln limestone 1300 ft. 1/ of Lower and Middle Cambrian

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1/ Lemmon, D. M., U.S.G.S. open file report, 1945, Tungsten Deposits of the Minerva District, White Pine County, Nevada .....This unit correlated with the "Upper White limestone" in Minerva area.

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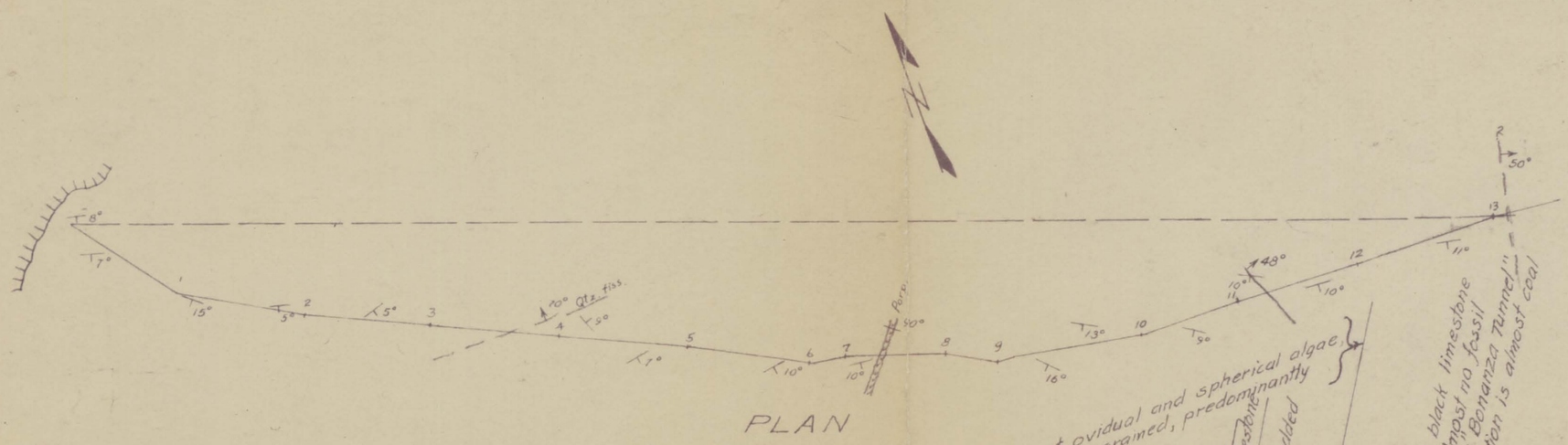

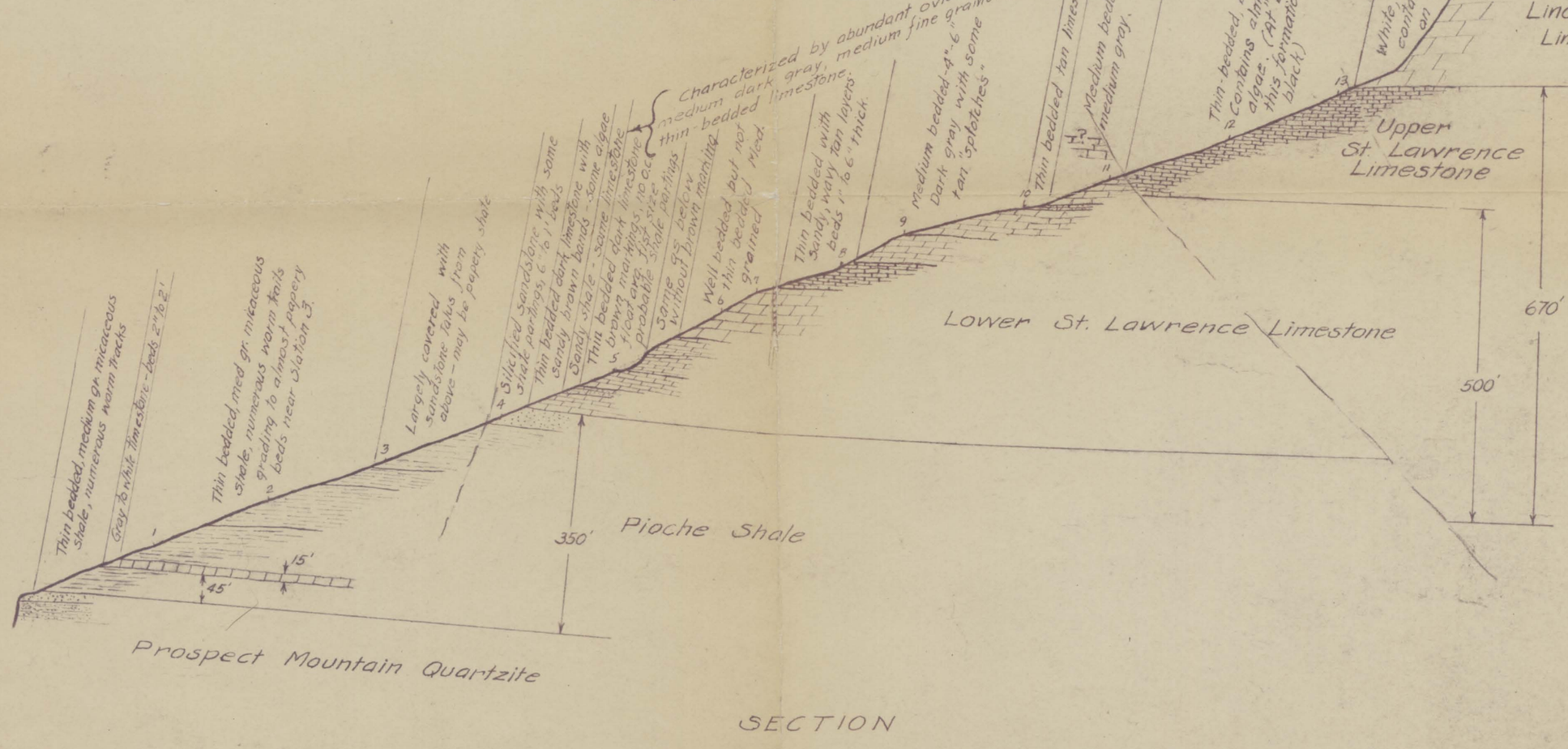

SECTION

REFERENCES	WORK: DRAWN Oct 12 By Paul Emmill; TRACED; CHECKED; APPROVED	COMBINED METALS REDUCTION CO. ST. LAWRENCE MINE WHITE PINE COUNTY, NEVADA	SECTION OF PIOCHE SHALE AND ST. LAWRENCE LIMESTONE TAKEN IN POLE CANYON	SCALE 1" = 200' B-