TERRITORY OF ALASKA
D E P A R T M E N T O F M I N E S
B. D. Stewart,
Commissioner of Mines

REPORT ON THE LIME POINT BARITE OCCURRENCE

PRINCE OF WALES ISLAND, ALASKA

By

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INTRODUCTION

The examination of the Lime Point Barite deposit was made at the requests of B. D. Stewart, Commissioner of Mines for the Territory of Alaska, and Mr. Joslin of Seattle, Washington. It was undertaken primarily for the purpose of determining the size of the deposit and to obtain a sample for Mr. Joslin. The field study was made on July 28, 1948.

LOCATION

The Lime Point Barite deposit is located on the extreme south end of the peninsula between Hetta and Nutkwa Inlets, Prince of Wales Island, Southeastern Alaska.

OWNERSHIP

The property consists of one patented claim, known as the Barium Lode, and is a part of the Gertrude H. Sulzer estate. The claim was patented under Mineral Land Survey No. 1430. Present ownership has not been determined.

PHYSICAL FEATURES

The topography of the peninsula adjacent to the Lime Point Barite deposit is low in relief. Consequently, there is almost no fresh water in the immediate area during dry periods in the summer. There is sufficient suitable timber for camp and operational needs.

The deposit is at sea level and is exposed to the frequent and severe southeast winds prevalent to the area. Harbor facilities are poor.

GEOLOGY

The Lime Point Barite deposit is apparently a replacement deposit in a semi-crystalline, blue-weathering, white limestone. The limestone has a strike of N 03° E and a dip of 82° W. In

the immediate area are several diabase dikes from one foot to eight feet wide. Their relationship to the barite deposit was undetermined. A small fault was observed near by but apparently had no bearing on the deposit.

The barite is a white crystalline rock containing no visible impurities. It appears to be a nearly vertical tabular deposit with a generally northerly strike. The deposit is exposed for a width of about 30 feet and a length of about 100 feet and ranges from about 10 feet above high tide level on the south end to about 30 feet on the north end. It extends out under the water on the south end and the depth of the deposit has not been determined.

A whitish appearing reef several hundred yards to the southeast of the deposit was investigated but proved to be limestone.

DEVELOPMENT

Development work at the property consists of 35 feet of tunnel and about 30 feet of open cuts. There are no machinery, docks, or housing at the property.

TONNAGE ESTIMATES

On the basis of the barite now exposed, the following estimates of ore reserve tonnages were made.

Block above high tide: Twenty five percent of the block was estimated to have been removed by erosion.

$$0.75 \left\{ \frac{100 \times 30 \times 10}{1} + \frac{100 \times 30 \times 20}{2} \right\} = 45{,}000 \text{ cu. ft.}$$

Using a tonnage factor of 7 we have: $\frac{45{,}000}{7} = 6{,}429$ tons barite above high tide.

Block above low tide: Ten percent estimated removed by erosion. This block below high tide but above low tide.

$$0.90 \left(100 \times 30 \times 20 \right) = 54{,}000 \text{ cu. ft. barite}$$

$$\frac{54{,}000}{7} = 7{,}857 \text{ tons barite above low tide.}$$

Total estimated available tonnage; 14,286 tons.

No estimate has been made of the tonnage below low tide.

SUMMARY AND CONCLUSIONS

The deposit of barite located at Lime Point, Prince of Wales Island, Alaska is apparently a small replacement deposit in limestone. The minable ore reserves approximate 14,000 tons of barite above low tide. The portion of the deposit below low tide can be disregarded because of the difficulties of mining. That part of the deposit above low tide can be easily mined and loaded on barges. However, the area is subjected to frequent and severe southeastern winds and there are no good harbors in the immediate area. Fresh water will have to be brought in for camp use.

At present there is no market for barite in Alaska. Costs of mining and marketing make present exploitation of the deposit questionable.

Respectfully submitted,

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