

PRELIMINARY REPORT ON THE BROWN BEAR  
LEAD AND ZINC CLAIMS

NEAR MINERS LAKE  
PRINCE WILLIAM SOUND, ALASKA  
September, 1947

By  
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Summary

The Miners Lake lead and zinc deposit, the Brown Bear claims, in the Prince William Sound area, is located near the crest of a spur to the ridge that forms the south side of Miners Lake Valley.

Though not far from Prince William Sound, access to the deposit is inconvenient except by float plane because of the steep topography and because of Miners Lake itself.

The deposit is quite well exposed. It is a vein, but unless extensions can be developed it must be considered small.

It is recommended that trenching or other work be done on the ends of the exposed parts of the vein to increase its apparent size before continuing the present drift.

Introduction

As far as is known the lead-zinc deposit southeast of Miners Lake does not have a name. There are two claims on it which are individually known as the Brown Bear No. 1 and the Brown Bear No. 2.

The property was visited September 7, 1947 with George Johnson of Anchorage and Dominik Vietti of Valdez. Chris Peterson also of Valdez is the third partner in the ownership, but was not present on this trip. The original locators were Andy Thompson of Valdez and Jack Hore, who is now living outside of Alaska.

The trip was made by plane from Anchorage. Landing was made on the upper end of Miners Lake. The trip could have been made by boat but would have been inconvenient because the lake shores are so steep as to be almost impassable unless a small boat was used there.

Miners Lake is located east of Unakwik Inlet in the Prince William Sound area. The property is south of the most southern of the three streams that empty into the eastern end of the lake. The property is at the 900 foot elevation, and near 61-03 north latitude and

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147-23 west longitude. Though somewhat less than 2 miles airline from the end of the lake the distance by trail is over three miles.

The visit was made possible through the efforts of Mr. George Johnson of Anchorage and Mr. B. D. Stewart of the Territorial Department of Mines.

### Physical Features

Miners Lake lies in a valley that has been formed by a glacier. The valley walls are very steep and contain many crags and cliffs. Three streams are in the valley. The two to the north have glaciers at their heads and carry enough glacial silt to keep Miners Lake cloudy. The southern stream is comparatively clear. Although power was not investigated on any of these streams the water supply seems sufficient, particularly in the middle stream, but it is thought that the development of the head might prove costly.

The deposit, as exposed, lies between the 800 and 900-foot elevation in the south wall of the valley. Since the elevation of the valley stream beds are between 50 and 100 feet the actual vertical distance of the climb is more than 700 feet. The trail that has been used, while of gentle grade in spots is for the most part very steep, particularly above the old headquarters cabin located at an elevation of 275. The upper part of the trail skirts the crags, but in one place a ladder is used to scale a particularly difficult section. The deposit itself occupies and was responsible for a small valley that is more or less at right angles to the main valley. It is near the top of a ridge which separates a more or less parallel hanging valley from the Miners Lake valley.

The area is well forested to some elevation above that of the deposit. Also there is much brush which is thought to be thicker at the lower elevations, but that idea might be influenced by the heavy brush covering of the gravel flood plains made by the rivers emptying into Miners Lake. These flood plains were very hard to traverse because of the brush. The forests are made up of spruce and another tree that may be hemlock. Many of the trees are of large size.

## Description of the Deposit

The deposit is a quartz vein that contains pyrite, galena and sphalerite with small amounts of gold and silver. The quartz resists weathering to a greater degree than the sulphides. However, in spite of its great resistant qualities it has been removed so as to form the locus of the small valley in which it is found. Its removal may be due to the weathering of the sulphides, to the softer contacts, or partly to the peculiar characteristic of quartz that permits it to break comparatively easily in spite of its hardness, when any but a flat face is presented. The sulphides do not make up a large proportion of the volume of the vein but in some places they are concentrated so as to make beautiful high-grade ore.

Four samples were taken from the vein at the positions noted on the map that may be found in the appendix of this report. The results of the samples are shown on the assay sheet, which is also in the appendix. Although care was exercised while taking the samples the hardness and prominence of the quartz, compared to the sulphides should be born in mind when considering the results. Probably the actual metallic content would be greater than that shown by an average of any samples taken. Analysis of the samples, with the above considerations in mind, would lead to the conclusion that the metallic content of the vein was higher than that shown by the samples for their respective areas of influence. However, if the sample values were adjusted upwards, No. 1 and No. 2 should have a larger adjustment than No. 3 which was taken from a fresh face, but they should not approach No. 4 which was from what was considered the best looking exposure of the vein, and also a fresh face.

Both the hanging wall and the foot wall are graywacke. That on the footwall appears lighter in color and also coarser grained than that of the hanging wall. Down the mountain from the deposit, outcrops of conglomerate were noted. Although the fact was not established, it is believed that the conglomerate is below the graywacke stratigraphically. Study of U.S. Geological Survey Bulletin 443, Reconnaissance of the Geology and Mineral Resources of the Prince William Sound, Alaska, page 25 et al., indicates that these sediments possibly belong to the Orca series. Attention is drawn to the statement on page 8 of the previously mentioned Bulletin 443 which is quoted as follows:

"The important fact bearing on the distribution of the orebodies is that they appear to be found only in the rocks of the Orca group and, indeed, for the most part in close association with the greenstone member."

The thought is not clear as to whether all minerals in this area are included or whether the statement refers to copper only. Regardless, the question is provocative.

#### Mine Workings and Present Plant Installations

The installation of prominence is the portal of a drift that has been started. This drift is about six feet long from the portal as covered by the timbering, but the floor of the drift has been cut through 15 feet of vein. In spite of the small amount of development work the vein is remarkably well exposed, because the water of a small stream courses down along the vein outcrop, which is a small valley, keeping it clean except for the larger stuff from the walls.

Besides the drift portal the only other installation is the cabin that was used for living and headquarters when work was being done on the orebody. The cabin was quite distant from the workings, being located at the upper end of the more gentle section of the trail. Though it was a nice cabin at one time, some of the main log framing and supports have rotted away and it has now fallen down so that it is not useable.

#### Possible Reserves

With the three assumptions that follow, reserves may be estimated at less than 400 tons.

- Assumptions:
1. A horizontal length of 50 feet for the orebody, which is a little more than the distance between the samples that were farthest apart and between which the vein was continuously exposed.
  2. An average depth along the vein of 25 feet.
  3. A thickness of 4 feet, which is less than the sampled width of the vein in one place but more than that width in two others.

Also, a tonnage factor of 13 cubic feet per ton was used.

#### Conclusion

The reserves may be increased roughly 25 percent if the full distance between the farthest presently evident points of mineralization were considered but obviously, almost regardless of grade, the amount would not be of commercial interest at the present time. Therefore more development is necessary. If future development is considered, the maximum possible size of orebody as well as the possible grade should be born in mind. When further development is contemplated, work such as trenching on the covered ends of the deposit in

order to increase the apparent quantity of ore is to be recommended over the continuance of the drift. Finally, of course, drifting and other underground development is desirable if the deposit appears favorable.

A note for comparison, when thinking of size and grade of this type deposit is that it would probably be necessary that a deposit yield above 500 tons per day with a small crew if it were to be mined for lead and zinc content totaling near six percent combined metals.

TERRITORY OF ALASKA  
DEPARTMENT OF MINES  
ASSAY OFFICE

Anchorage, Alaska, November 20, 1917.

REPORT OF ASSAY

On-samples received from Brown Bear Claims--Owners George L. Johnson--  
Anchorage, Dominik Vietti-Valdez, Chris Petersen-Valdez  
Address.....

ASSAY NO.	MARK ON SAMPLE OWNER'S DESCRIPTION	OUNCES PER TON		VALUE PER TON	PERCENTAGE OF	
		GOLD	SILVER		Lead	Zinc
	Samples taken by L. A. Dahners, Territorial Department of Mines					
15	1, 33" 885 N	.02	Trace		0.4	0.5
16	2, 40" 885 S	Trace	1.0		1.1	1.5
17	3, 200 Sample 20'	.03	Trace		2.4	1.1
18	4, 31 above Trace 24'	.04	2.0		2.8	4.7
	This last sample was high graded to the extent that it was taken from the best looking exposure of the vein.					

*L. A. Dahners*  
ASSAYER.