

ABSTRACTS BY C. C. STARR

from REPORT OF C. H. PALMER, Jr. MINING ENGINEER

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(Probably written in April 1914)

THE HARTNEY GROUP

New Denver, B. C.

The ore in the Hartney property occurs in shear-zones in a country rock of dark carbonaceous argillites and dark impure limestones.

In general the ore occurs in very irregular lenses and shoots. However some lenses are fairly uniform in width (7 to 9 inches) throughout a length of 50 feet or more and 15 to 20 feet in vertical height. Often the vein is pinched (1 to 2 inches wide). These stringers frequently open up into shoots 3/4 feet or more in width and of considerable height.

Owing to surface soil the vein does not outcrop.

The course of the vein is about S 76° E and the dip from 45° south to vertical. The ore is not frozen to either wall. The ground is solid and requires little timber.

The ore consists of argentiferous galena and argentiferous sphalerite in a gangue of quartz and a little calcite. The ore may be mostly lead, mostly zinc, or well mixed.

The ore now exposed throughout the entire workings contains principally zinc values. The assays by levels and intermediates are as follows--

Description	Av.			
	Width	Oz. Silver	% Lead	% Zinc
Tunnel #3	7"	16.1	5.9	16.9
Stored in house, about 75 tons		24.6	8.5	23.2
Intermediate above tunnel #3	3"	10.6	1.2	23.5
Tunnel #4	5"	20.8	6.1	21.8
Stored above Tun. 4 75 tons		12.0	2.4	17.8
Tunnel #5	5"	20.4	7.6	21.2

Over 90% of the silver values are associated with the lead. For detailed location of assays see map and table. (These are not at hand -- C.C.S.)

The Hartney property is opened up by four tunnels having a total footage of approximately 2285 feet. There are about 485 feet in the intermediate levels between Nos. 3, 4, and 5, and 480 feet of raises.

At irregular intervals in the past small shipments of ore (hand sorted) have been made to the lead smelters, but owing to the impossibility of mining either a clean lead or zinc product the smelter charges were heavy. The ore is clearly of the concentrating type and should

present no milling difficulties.

**CONCLUSIONS:** It is impossible to figure the quantity of ore blocked out with any degree of accuracy. The total ore now exposed ranges from 1" to 24" in width and averages about 6", with a value of 5.4% lead, 19.7% zinc, and 18.5 Oz. silver per ton. Assuming the width and character remains unchanged there would be over 1500 tons of ore available between tunnels Nos 3 and 5 without doing further development work.

The floor of tunnel No. 3 shows ore almost continuously throughout its length, and I understand the winze has ore in its bottom running high in lead. Water prevented an inspection of this. The vein has everywhere a remarkable persistency and the possibilities of its opening into large bodies of commercial ore are excellent.

The crosscut of tunnel No. 2 was not driven far enough to intersect the vein, but turned off parallel to it so no ore is exposed on this level. I believe large bodies of ore will be found in depth.

CCS