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The Consolidated Mining and Smelting Company of Canada Limited

GEOLOGICAL REPORT ON THE ERICKSON ASHBY CLAIMS

ATLIN MINING DIVISION

N.E. Quadrant Long. 133°W, Lat. 58°N.

ERICKSON ASHBY CLAIMS

	Claim Number
Badger No. 2	A31992
Badger No. 3	A31993
Badger No. 4	A31994
Badger No. 5	A31995
Apex No. 1	129505
Apex No. 2	129506
Apex No. 3	129507
Apex No. 4	129508
Apex No. 5	129509
Apex No. 6	129510
Apex No. 7	129511
Badger No. 1	A32150
Badger No. 1 Extension	A31812
Badger No. 2 Extension	A31813
Badger No. 3 Extension	A31814
Badger No. 4 Extension	A31815
Badger No. 5 Extension	A31816

by

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PROFESSIONAL ENGINEER

THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED

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GEOLOGICAL REPORT ON THE ERICKSON ASHBY CLAIMS

INTRODUCTION

Geological Mapping of 17 mining claims comprising the Erickson Ashby property was done in September 1951 by J.K. Webb, M.A. W.T. Irvine acted as consultant for this work, and personally covered the ground while it was being mapped.

LOCATION of CLAIMS

The claims mapped are at Lat. N58°36', Long. W133°30'. This is on the south wall of the valley of the Taku river, 3 miles upstream from its junction with the Tulsequah river, and 2½ miles east of the Big Bull mine. The claims cover parts of the north and west slopes of Erickson Mountain and are reached by a steep trail which leads up from a landing on the south bank of the Taku river. The landing is several hours by small boat from Tulsequah village.

TOPOGRAPHY

The uplands of the Tulsequah area display the serrate skyline and angular shapes of mature alpine glaciation. A history of intense glaciation is further revealed in the numerous hanging valleys tributary to the main deep valleys, which are now occupied by mature braided streams. Active glaciers are still abundant in the area, and represent in diminished form the valley glaciers which deeply incised the old land surface to form the present main river valleys. Even now, with considerable evidence of aggradation of the river beds, the valley bottoms are only slightly above sea level. Thus, although mountain peaks are at comparatively modest heights, the relief is quite large, averaging around 5000 feet.

The stream pattern has been influenced both by the north westerly trend of the mountain chains and by strong regional faults. The junction of the Taku and Tulsequah valleys is at the intersection of two sets of major faults, with the Tulsequah river following a north west trending set, and the Taku river being essentially parallel to a north easterly trending set. It is inferred that pre-glacial streams may have sought out these zones of weakness and thus pre-determined a pattern which was emphasized by glaciers and the present streams.

Many of the regional faults show up on the valley walls as well marked trenches paralleling the rivers. These are generally dry, but may divert the course of small tributary streams which descend the steep walls of the main valleys.

Erickson ridge is typical of the serrated ridges of the area. It is north trending, and is bounded by the deep valley of the Stuhini river to the west, and drops by steep cliffs into the hanging valley of Erickson creek to the east. It is truncated on the north by the steep wall of the Taku valley. Outcrops on the ridge are generally abundant. Above timberline, which is at 2500 feet elevation, the only covering on the rock slopes is the occasional patch of talus. The knife edge crest and steep walls of the ridge make for rapid run-off of melting snow, and there is a noticeable lack of small streams on the slopes.

GENERAL GEOLOGY

The Tulsequah area is situated on the eastern flank of the Coast Range composite batholith, and is underlain by a succession of Palaeozoic and Mesozoic volcanics and sedimentary rocks. These are

GEOLOGY on the CLAIMS - continued

The limestone band strikes slightly west of north along the crest of Erickson ridge, then changes direction as it enters a zone of south plunging folds in the north east corner of Badger No.2 claim. From here the band strikes in a north westerly direction as it extends down the west slope of the ridge. Dips on limestone beds and contacts are generally near vertical, except in the folded area on Badger No. 2 claim where intermediate south and south west dips were observed.

Kerr's mapping shows that the pre-Permian and Permian rocks occur as a narrow strip, bounded on both side by the younger Stuhini volcanics. This indicates that the pre-Permian rocks form the older core of a steep, isoclinally folded anticlinal area, with the Permian limestone occurring on the west limb of the anticline. The limestone should repeat on the east limb of the structure, but as it apparently does not, it is necessary to infer that it has either thinned out or has been squeezed out by folding.

MINERALIZED SHOWINGS

Sulphide replacement bodies occur along bedding planes within the Permian limestone. Mineralization is dominantly pyrite, with varying amounts of sphalerite and galena. Associated gangue consists of altered limestone containing recognizable tremolite and rhodonite. The sulphide bodies are covered by thin oxidized film which shows up prominently as reddish-brown limonite and purplish manganese staining.

There are a number of sulphide occurrences along the limestone band, but only in two areas are these important. One of these is on the west face of the ridge, at elevation 3600 feet, where two elongated patches of sulphide occur along the lower contact of the limestone. One patch, slightly lower than the other, is exposed for a length of 50 feet and averages 15 feet in width. The other is the same length but is 8 feet wide. The bodies feather out along the strike and appear local in extent. Sampling indicated good values in lead and zinc with appreciable silver content.

A larger lower grade deposit occurs near the top of the ridge at elevation 4000 feet. A disseminated pyrite deposit with weak galena and sphalerite follows bedding near the upper contact of the limestone band. The body extends along strike for a length of 800 feet, and has an average width of 25 feet. A section exposed on a cliff face shows the mineralization to have a vertical extent of at least several hundred feet. Only the north 200 feet of the showing was accessible, the remainder being cut off by steep cliffs. Sampling of the accessible portion showed quite low but persistent values in lead and zinc, with considerable silver content. Here, as at the lower showing, the silver values are suspect, since the oxidized nature of the surface may favor enrichment by secondary silver minerals.

Other than bedding, and possibly limestone volcanic contacts, structural controls for ore deposition are not directly evident. At the Tulsequah Chief and Big Bull mines, deep seated N-W striking regional faults appear to be important controls for ore deposition. No faults of this set appear on the Erickson Ashby claims, but one of the "Taku Valley type" N-E striking faults intersects the claims within a thousand feet of the principal showings. Others may occur to the south, on the opposite side of the showings, but have not been identified with certainty. It may be that deep seated breaks of this nature have acted as primary structural controls, with secondary controls being provided by limestone beds and contacts.

CONCLUSIONS

The relatively heavy capital expenditure necessary to exploit ore bodies high on a steep mountain requires a large tonnage of ore. The lower showings seem unlikely to develop into large ore bodies

CONCLUSIONS - continued

because of their small size and apparent lack of continuity. However, the upper showing, despite its low grade, invites further interest because of its large size. The grade was determined by sampling a portion of the exposed length, but more comprehensive sampling, such as could be obtained by a number of drill-hole intersections, may possibly indicate that the overall grade is higher. There is therefore a chance to prove up a large tonnage at a commercial grade by undertaking a drilling program.

It is recommended that the downward projection of the large deposit at the crest of the ridge be tested by a series of drill holes. These would be best located in Erickson creek valley, at the foot of the steep cliffs which form the east face of the ridge.

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Geological Division
March 22, 1952.

Distribution:

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Previous report

Report on Erickson Ashby Property by J.K. Webb, November 10, 1951.

Attachments:
Geological maps of the claims