•	NAME OF PROPERTY	EXTENUATE,	COBALT,	BUSH (SLATE MTN.)	
	OBJECT LOCATED				
	UNCERTAINTY IN METERS	Lat.	56°05'	Long. 130 °00 °	0 •
	Mining Division Skeens	a .	District	Cassiar	
	County	Towns	ship or Parish		
	Lot	Concess	ion or Range		
	Sec	Тр.	R.		

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The formation consists of volcanic rocks altered to greenstone, argillites, and slates, all of the Jurassic Hazelton group. A number of siliceous zones strike about N25°W and dip westerly at fairly steep angles. These are crossed by a series of east-west zones of similar type. Where sulphides are present pyrite is the only ore conspicuous. At some of the narrower points, where the siliceous zones are more like quartz veins, galena can be found. The Sunshine crosscut intersects a 3 foot width of quartz-calcite veins followed by several feet of slightly pyritized greenstone. The drift from the adit is in a highly sheared zone of purple and green volcanics which is at least 20 feet wide. Small amounts of sulphides were seen along the drift at 2 or 3 points.

The only well defined vein seen on the Extenuate group was striking N75°W. About 2 feet of the footwall side of the vein see Card 2

Associated minerals or products of value - Zinc

HISTORY OF EXPLORATION AND DEVELOPMENT

This property covers a number of showings in an area lying between the Cascade River and Cooper Creek, and extending from Long Lake south-southwesterly over Slate Mountain to the old Northern Light and Bush Mines, Limited, properties, which later became part of the Silbak Premier property. The Start and Bush claim groups cover the north end of Slate Mountain and the Long Lake valley south of Long Lake. Extending south from here are the Sunshine, Maple Leaf, Monitor, Extenuate, Exchange, and Cobalt groups.

N. I.S. AREA 104 A/4

The Cobalt group was owned by J. Hovland, of Hyder, Alaska, and prior to 1919 was bonded to W.A. Meloche. In 1923 the Cobalt claim (Lot 4053) and Cobalt No. 2 claim (Lot 4054) were Crown-granted to J.B. Saunderland. At a later date the claims were owned by the Cobalt Syndicate.

The Start claim Nos. 1-4 were acquired from Dan Anderson by the Chief Metals Company, of Seattle, in 1924. During 1925-26 about 190 feet of underground work was done in one adit.

The Sunshine claim and Sunshine claim Nos. 1, 2, & 4, Lots 4499, 4500, 4504, 4505, respectively, were Crowngranted to A.E. Young and J.P. Hawkinson in 1926.

The Extenuate group, consisting of the Extenuate Nos. 1-6, Three, and Extra claims, was held by the Portland Canal Gold Fields Syndicate, Limited, which was formed in March 1924. The Syndicate name was changed in 1926 to Extenuate Gold Mines, Limited. Work by the company included about 268 feet of crosscut in one adit.

Bush Consolidated Gold Mines, Inc., a Delaware company registered in British Columbia in October 1927, consolidated the Start, Sunshine, Exchange, Extenuate, Monitor, and Maple Leaf groups, and acquired a 1/6 interest in the Cobalt group. A number of new claims, the Bush claim Nos. 1-4 (Lots 5196-5199) were located at the south end of Long Lake in 1927; this group was Crown-granted in 1930. The company put down three diamond drill holes on a siliceous zone on the Bush group. On the Sunshine group an adit was driven as a crosscut for 470 feet, and from the face 100 feet of drift was run on the vein, at the end of which further crosscutting was done. No further work was reported by the company. The

Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa.

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HISTORY OF PRODUCTION

MAP REFERENCES
Map 307 A, Portland Canal Area, (Geol.), Sc. 1":4 miles accomp. Memoir 175.

Map 217 A, Bear River (West Half), (Topo.), Sc. 1:50,000.

Map 104 B, Iskut River, (Topo.), Sc. 1:250,000.

Geological Map of the Stewart Area, Sc. 1": mile, Fig. 3, Sheet B - accomp. Bulletin No. 58.

Stewart Area, Crown-grant claim map, Fig. 15 B - accomp. Bulletin No. 58.

REMARKS

Junes, Ottawa.

Comp./Rev. By	DMacR			
Date	10-74			

REFERENCES

Annual Reports, Department of Mines, British Columbia: 1919, p. 77; 1923, p. 386; 1925, p. 102; 1926, p. 98; 1927, p. 97; 1928, p. 113; 1930, p. 442; 1936, p. B-10.

Mineral Policy Sector; Corporation Files: "Chief
Metals Company"; "Extenuate Gold Mines, Limited"; "Bush
Consolidated Gold Mines, Inc."; "Bush-Cobalt Mines,
Limited".

Hanson, George; Portland Canal Area, British Columbia; Memoir 175, p. 156, Geol. Surv. of Canada, 1935.

Grove, Edward W.; Geology and Mineral Deposits of the Stewart Area; Bulletin No. 58, p. 135, British Columbia Dept. of Mines, 1971.

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Card 2

REF.PB 1

EXTENUATE, COBALT, BUSH (SLATE MTN.)

PRUVINCE UR

TERRITORY

DESCRIPTION OF DEPOSIT (continued)

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NAME OF PROPERTY

was exposed in the surface showing. This consisted of silicified material containing occasional specks of chalcopyrite. The tunnel, driven S80°E, is in greenstone and is quite barren.

mineralized with galena and sphalerite.

Grove, 1971, describes the showings, as follows:

"Two intersecting fissure veins are readily visible on the claims only a few hundred feet south of Monitor Lake. One is localized along a northwest-trending, west-dipping, irregular fissure zone in dark mylonite (pseudoporphyry) and is typical of the quartz-breccia fissure veins of the area. The main sulphide is coarse-grained pyrite, and scattered galena and sphalerite are also visible, but no significant gold-silver values were found. more extensive vein trends northerly and is along one of a number of subparallel conjugate faults of the Long Lake fault zone which appears to postdate the northwesterly trending vein. Mineralization is likewise spotty, but was traced for about 1,000 feet south along the fault into overburden. A number of smaller quartz veins were located west of Monitor Lake at about 3.600 feet elevation on Slate Mountain, localized as flat, irregular lenses in phyllitic mylonite subparallel to the Bowser siltstone contact. These small veins have been explored by two short adits and scattered pyrite is the only sulphide. Other quartz veins are present in the phyllitic siltstones on Slate Mountain, but no significant sulphide mineralization was found."

HISTORY OF EXPLORATION AND DEVELOPMENT (continued) company also held a block of claims in Alaska, adjacent to the border, with a corner of the property extending across the border just east of Cascade Creek. This portion jutting into B.C. was known as the Border claim.

In January 1929 Bush-Cobalt Mines, Limited, was formed The adit on the Start group was run on a vein 4 to 6 feet wide to acquire the Cobalt and Exchange groups from the Cobalt Syndicate and Bush Consolidated Gold Mines, Inc., respectively. This property included the Exchange claim Nos. 1-5 (Lots 1843-1847), the Winner claim (Lot 4116), and the Cobalt claims. In November 1935 The Cardinal Mining and Development Co., Ltd., optioned a 55% interest in the property, the agreement calling for expenditure of \$75,000 on development work within 3 years. The only development work reported on the Cobalt-Exchange groups consists of over 150 feet of underground workings in 3 adits between elevations of 1,540-1,650 feet.

The Lake Shore Crown-grant (Lot 4176) and the Monitor located claims, lying south of Monitor Lake (southern extension of Long Lake) on the divide separating Cooper Creek and Long Lake, were acquired by New Indian Mines Ltd. in 1957. In 1963 the company carried out surface sampling and 1,300 feet of diamond drilling in 5 holes on the main vein on the Lake Shore claim; results did not warrant further work.