PRODUCT	GOLD	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA 93 L/14	REF. AU 8

NAME OF PROPERTY GLACIER GULCH (GOLD-BISMUTH LODE)

OBJECT LOCATED -showings.

UNCERTAINTY IN METRES 200. Lat. 54°49'25" Long. 127°16'20"

Mining Division	Omineca	District	Range 5 Coast
County		Township or Parish	
Lot		Concession or Range	
Sec	Tp.	R.	

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The gold-bismuth deposits occur along sheared and altered zones in massive, finely crystalline tuffs, with which some beds of argillite are interstratified. Most of the sheared zones lie parallel with bedding planes and appear to have formed as a result of relatively small movements produced when these rocks were folded. These zones have a predominant southeast strike and dip 20 to 40 degrees southwest in the lower, more westerly occurrences. The upper and more easterly zones strike south and dip 20 degrees east and some are linked together by steeply inclined shear zones. The productive zones are largely confined to the crest of an anticlinal fold, the axial plane of which is about vertical and which trends in a southwest direction. The fold has a pitch of about 25 degrees to the southwest. A short distance above the deposits the rocks are largely argillites with some interbedded greywacke and conglomerate. These beds strike southwest and dip about 50 degrees southeast. Below the deposits the tuffs pass downwards into a thick series of andesite flows. A silver-lead-zinc vein occurs along a

see Card 2 ....

Associated minerals or products of value – Silver, bismuth.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showings are located at elevations of 3,150 to 3,400 feet on the south side of Glacier Gulch, 5 miles northwest of Smithers.

The showings were discovered in 1929 by S.F. Campbell, Grover Loveless, and Wesley Banta. Exploratory work during the next few years by these men disclosed several small shoots of high-grade gold ore. During the winter of 1931-32 an adit was driven 60 feet. A small aerial tramline was installed in 1933 and 26 tons of hand-picked ore averaging 3.095 ounces gold per ton were shipped.

Wilson Mining and Investment Company Limited held an option on the property in 1934. Small scale development work was carried out in several short adits and some ore was shipped. The owners resumed work in 1935 and shipped an additional 30 tons of high-grade gold ore. During the period 1938 through 1941 a number of small ore shipments were made to the Provincial Government Sampling Plant at Prince Rupert.

The bulk of the gold ore was quarried from a relatively small area, measuring possibly 150 feet in length and rising through a height of 75 feet. The main adit, at an elevation of 3,200 feet, was driven 80 feet and a raise put up 30 feet to the surface. Adits 60 feet northwest of and 55 feet northeast of the main adit were driven 43 and 27 feet respectively. From the floor of the quarry an adit was driven 28 feet. Four other short adits were driven into the base of the cliff from the quarry.

The Glacier Gulch Nos. 3 & 4, and Coronation claims, covering showings on both sides of Glacier Gulch (93 L/14, AU 9 and AG 11), were optioned from Herbert Porter, of Manson Creek, in June 1950 by L.W. Brodie, John Borne, and associates, who incorporated Glacier Gulch Mining Co., Ltd. The company staked the Biff Nos. 1-3 claims. No work was reported on the gold-bismuth showings at that time.

The ground was subsequently acquired by American Metal Climax, Inc., as part of the Glacier Gulch molybdenum property (93 L/14, MO 1).

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Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa.

HISTORY OF PRODUCTION

Production figures for the gold-bismuth showings are incomplete. In 1933, 26 tons of ore were shipped. From this ore 82 ounces of gold, 15 ounces of silver, in addition to bismuth for which no payment was made, were recovered. Further shipments in 1934 and 1935 totalled about 70 tons. Shipments to the Prince Rupert Sampling Plant were recorded as follows:

Year	Dry tons	Gold Ounces a ton	Silver Ounces a ton	Bismuth Per cent
1938	12.06	2.8	0.4	.....
1938	5.67	3.7	0.55	.....
1939	0.146	5.085	1.10	1.9
1939	12.235	1.442	0.60	1.2
1939	6.175	1.044	0.29	0.5
1939	10.239	1.212	0.20	.....
1939	2.042	3.49	0.10	5.6
1940	0.027	28.32	7.80	15.10
1940	0.17	16.4	7.7	.....
1941	0.184	4.38	2.20	.....
1941	0.061	5.87	3.40	.....
1941	0.221	4.01	1.00	3.7

Combined production for the Glacier Gulch properties for the period 1933-39 is recorded as 183 tons of ore. From this ore 297 ounces of gold, 1,187 ounces of silver, 5,292 pounds of lead, and 13,345 pounds of zinc were recovered.

MAP REFERENCES

#Geology in the vicinity of Glacier Gulch, Hudson Bay Mountain, Sc. 1":½ mile, Fig. 11, accomp. Report of Minister of Mines, British Columbia, 1966.

Map 69-1, Smithers, Hazelton, and Terrace Areas, (Geological compilation), Sc. 1":4 miles, British Columbia Dept. of Mines.

Preliminary Map 44-23, Smithers, (Geol.), Sc. 1":2 miles, Paper 44-23, Geol. Surv. of Canada.

Sketch Map of Hudson Bay Mountain, (Geol. and Mineral Prospects), Sc. 1":1 mile, Fig. 1, accomp. Paper 36-20.

Map 5319 G, Smithers, (Aeromag.), Sc. 1":1 mile.

*Map 93 L/14 W, Smithers, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DMacR						
Date	1-76						

REFERENCES

Kindle, E.D.; Mineral Resources, Hazelton and Smithers Areas, Cassiar and Coast Districts, British Columbia; Memoir 223 (Revised Edition), p. 98, Geol. Surv. of Canada, 1954.

Reports of Minister of Mines, British Columbia: 1929, p. 164; 1930, p. 140; 1933, p. 97; 1934, p. C 6; 1935, p. C 35; 1937, pp. C 20, C 33; 1938, pp. B 36-B 38; 1939, pp. 55, 70; 1940, pp. 41, 43; 1941, p. 41.

Kerr, F.A.; Mineral Resources along the Canadian National Railway, between Prince Rupert and Prince George, British Columbia; Paper 36-20, pp. 91, 93-96, Geol. Surv. of Canada.

Lode-Gold Deposits of British Columbia, compiled by John D. Galloway; Bulletin No. 1, 1932, p. 54, British Columbia Dept. of Mines.

PRODUCT	GOLD	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA	93 L/14	Card 2 - REF. AU 8

NAME OF PROPERTY GLACIER GULCH (GOLD-BISMUTH LODE)

DESCRIPTION OF DEPOSIT (continued)

fault fissure in these andesitic rocks about 700 feet northeast of the gold-bismuth deposits (93 L/14, AG). About 400 feet farther northeast the andesites are in faulted contact with younger sediments. These sediments are slate, quartzite, argillite, and conglomerate,and contain numerous narrow coal seams near the base of the formation.

The sheared and altered zones commonly exceed 100 feet in length and have an average width of from 1 foot to 2 feet. There are five or six of these zones roughly parallel with one another in the productive area. The ore shoots range from a few inches up to several feet in width and from a few feet up to 50 feet in length. The ore occurs in the most altered parts of the sheared zones, where the tuff is bleached to a dull white colour. This type of rock grades along the sheared zones into less altered, dull yellowish brown rock. Several samples of the less altered rock were assayed for gold with negative results. In some cases the altered rock is replaced by considerable quartz. The limited number of samples collected seems to indicate that the vein quartz carries gold in economic amount only where tetradymite is present.

The high-grade ore is a white, silicified tuff holding the bismuth telluride, tetradymite. This mineral occurs as very thin seams along the planes of shearing and as irregular replacements, and is always accompanied by fine native gold. Some ore contains only 2 or 3 per cent of the tetradymite, but in the richest ore the bismuth mineral constitutes up to 50 per cent of the mass. The tetradymite occurs both as compact, steel-grey crystals ranging from a small fraction of an inch up to 3 inches in length and as a mass of crystals in the altered rock. The platy crystals are commonly dark due to a thin film of iridescent tarnish. The altered rock consists of albite and quartz with calcium carbonate, talc, and sericite. Rock alteration was followed or accompanied in many places by introduction of vein quartz. The quartz is present both as veins along the centre of the sheared zones and as fine veinlets or irregular pockets in the altered rock.