

MAPLE BAY COPPER MINES (No. , Fig. ) By E. W. Grove

LOCATION: Lat. 55° 25' Long. 130° 00' (103P/5W, 103O/8E)

At approximately 2,000 feet elevation in the Portland Canal area, 35 miles south of Stewart.

CLAIMS: Eagle-May Queen group comprising 15 Crown-granted claims and 10 <sup>located claims</sup> held by option.

ACCESS: By <sup>c</sup>airfract or boat from <sup>Stewart</sup> ~~Smithers~~, <sup>South</sup> 35 miles.

OPERATOR: GREAT SLAVE MINES LTD., 100-890 West Pender Street, Vancouver 1.

METAL: Copper.

DESCRIPTION: The Maple Bay property lies on the steep, west facing slope of the Burniston Range overlooking Maple Bay and the Portland Canal. The old smelter town of Anyox lies only <sup>7</sup> seven miles due east on the opposite side of this narrow peninsula. Stewart, the main center for the district lies 35 miles north of the property, which can be reached by aircraft or boat.

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The ~~current developer~~, Great Slave Mines Ltd. <sup>CURRENTLY</sup> holds the Eagle-May Queen group of 15 Crown-granted claims under option from Maple Bay Copper Mines Ltd. plus the O/S, ~~number~~ <sup>OPERATING COMPANY</sup> 1-18 located claims and fractions. During late 1969 the developer drifted and tested the Princess Vein for 435 feet <sup>from the</sup> ~~at elevation~~ <sup>foot elevation adit.</sup> 2,400 feet. In 1970 the depth continuity of the vein system was tested by driving a 1,515 foot-long cross-cut from elevation 1,875 feet to intersect both the Anaconda and Princess veins. Oscar Nukka managed the project.

The Princess vein is one of at least 15 quartz-chalcopyrite-pyrrhotite-pyrite veins that have been developed in the immediate Maple Bay area. Mineralization was first located there in 1902 by Messrs. Noble, Collinson and Flewin and development was initiated in 1904. In 1905 the property was bonded to the Brown-Alaska Company of Hadley, Alaska, and then to the Sir Donald Mann interests in 1906. Work on the adjacent Outsider Group led to production from the successful Outsider mine, which shut down in 1927. Development on the Eagle, Anaconda, Princess, and other veins on the Maple Bay property since 1906 has been sporadic and has been limited to surface trenching, minor drifting, and some diamond drilling. The most intensive program of drilling and testing was on the Eagle vein in 1923 by <sup>the</sup> Granby Consolidated Mining, Smelting and Power Co. <sup>limited.</sup> The results on the Eagle Vein based on surface exposures and four drill holes indicated a probable tonnage of 522,000 tons at 1.71% <sup>percent</sup> copper and an inferred tonnage of 590,000 tons at 1.4 percent copper. Economic conditions at the time forced abandonment in 1924 and the property has been essentially inactive up to 1969.

The general geology of the Maple Bay - Anyox area as well as the detailed geology of the numerous mineral deposits have been revised by the writer. <sup>(SBC)</sup> The old geological maps and reports <sup>ARE OF CONSIDERABLE HISTORIC INTEREST</sup> concerning the area still stand, however, as a record of the area's progress. Country rocks in the Maple Bay area include pillow volcanics, limestones (marble), siltstones, layered and <sup>is</sup>itic volcanics, and sill-like hornblendites.

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These rocks form an easterly dipping sequence which is dominantly volcanic and which is overlain in the Anyox section by Marine <sup>le</sup> "Bowser" siltstones. Lithologic and structural continuity <sup>within the general area</sup> suggest a Lower Jurassic age for the Maple Bay sequence and a Middle or Upper Jurassic age for the Anyox siltstones. This volcanic-sedimentary succession has been extensively intruded by <sup>Tertiary</sup> granitic rocks and now exists as large pendant located near the eastern edge of the Coast Plutonic Belt. The Anyox Pendant <sup>le</sup> is separated from the main bulk of the Bowser Basin by a narrow screen of granite. The volcanic-sedimentary succession of the Anyox Pendant <sup>le</sup> included <sup>s</sup> many gabbroic sill-like members and is traversed by extensive dyke swarms.

At Maple Bay located on the extreme west edge of the Anyox pendant the Lower (?) Jurassic succession included <sup>s</sup> a wide zone of cataclasites, mylonites, and chloritic schists which trend north-northeasterly across the easterly dipping country rocks. Both the country rocks and the deformed zone have been intruded by the Tertiary plutons which surround and underlie the Anyox pendant.

The quartz veins at Maple Bay are generally steep, northeasterly to north trending <sup>bodies</sup> units, largely confined to the cataclastic zone. On surface the vein system has been traced <sup>about</sup> from about <sup>1</sup> one mile south of Maple Bay, near the pendant edge, to about three miles north of Maple Bay. The largest known vein in the system, the north trending Outsider, has been traced

*4 miles northerly*

for about 3,000 feet on surface and was mined over a vertical depth of 500 feet. Production from the Outsider vein, limited to one main oreshoot, was 138,854 tons, from which 66 ounces gold, 4,882 ounces silver, and 5,266,430 pounds of copper were produced. The oreshoot which averaged 14 feet in width was mined from 900 feet elevation to the surface.

The northeast trending Eagle and Princess veins located on the Maple Bay Copper Mines Ltd. holdings are estimated to have surface lengths of about 3,300 feet and 3,000 feet respectively. The Anaconda vein has an apparent length of about 1,000 feet. Where exposed by surface cuts the veins exhibit a sinuous, lenticular nature. The Eagle vein has been investigated by a short adit at elevation 2,310 feet, and the Princess vein has been explored by a 435-foot drift at elevation 2,400 feet driven by Oscar Nukka in 1969. In 1970 the cross-cut from elevation 1,875 feet was driven to intersect the downward extension of the Anaconda and Princess veins. Both veins are nearly vertical and were intersected in the projected area. Where cut by the cross-cut the Princess vein was 8 feet wide and reportedly assayed 2.49 percent copper. A 28.5-foot south drift on the vein showed the vein narrowing to <sup>2</sup>two feet with a reported assay of 3.44 per cent copper.

In the <sup>elevation</sup>2400-foot drift and <sup>elevation</sup>1875-foot cross-cut the country rocks include intercalated, banded, ultra mylonites, chloritic biotite schist, and brecciated hornblendite. The ultra <sup>finely pulverized rocks</sup>mylonites are marked by grey-black laminations, a <sup>hard, coherent, flinty</sup>dense quartzitic

nature and by a blocky joint pattern. The joint surfaces are commonly coated with fine-grained sugary pyrite. In thin-section the ultra mylonites are fresh with only minor incipient chlorite which occasionally imparts a poor foliation to the rock. Angular unstrained quartz commonly forms about 20 per cent of the rock with the remainder uniform angular andesitic plagioclase. Secondary quartz is present as irregular beads. Fine-grained pyrite which forms up to five per cent of the total is disseminated through the rock. In surface outcrop the ultra mylonite weathers silvery-gray-green, exhibits weak foliation and crude banding, and retains its dense, hard character. The deformed hornblendite weathers dark green, lacks any directional texture and is coarse grained. In fresh specimens the hornblende which comprises 60 per cent of the rock has a gray-green color which shows against the dark gray plagioclase matrix. In thin-section the texture is sub-ophitic and quartz is present as interstitial grains. Augite is found in most of the hornblendite as scattered phenocrysts. The mineral alteration is irregular and includes epidote, biotite, chlorite, iron oxide, and rare carbonate. The fractured, cataclastic texture of these rocks is well exhibited in thin-section.

The quartz veins consist primarily of milky white, sugary quartz with pods, streaks and specks of fine-grained sulphides as well as scattered chlorite lenticles. The veins are commonly crudely banded and usually vuggy. The sulphide minerals include chalcopyrite and pyrrhotite which form spongy masses in the vein. The pyrrhotite distribution in the veins is erratic but where found it usually borders and replaces the chalcopyrite. In the Princess vein the anastomosing reticulate pattern of quartz-sulphide appears to be

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related to the frequency of micro fractures in the quartz vein. In the larger scale the sulphide concentrations and copper concentrations appear to be related to bulges or dilatant zones in the veins.

WORK DONE:

underground work,  
1,603 feet on Thistle (Lot 576), Comstock (Lot 2877), and Anaconda (Lot 2878) claims.

REFERENCES:

Minister of Mines, B. C., Ann. Repts., 1921, pp. G 51-52; 1923, p. A 67; 1952, p. 76; 1955, p. 18; 1956, pp. 18-19; 1957, p. 7; Dept. of Mines and Pet. Res., G.E.M., 1969, p. 59.

*Maps to be included - Elf.*