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Mine ventilation has been improved by driving two ventilation raises and relocating several auxiliary fans.

The severity and frequency rate of accidents at Britannia were higher in 1953. Compensable injuries occurred at the rate of 0.616 per 1,000 shifts worked, compared to 0.524 in 1952. The severity rate was 33.21 shifts per 1,000 shifts worked, as compared to 28.0 per 1,000 shifts worked in 1952. More than 16 per cent of the injuries were listed as back sprains. No fatalities occurred in the mine in 1953.

Total number of men on the mine payroll at the end of 1953 was 530. Total number of shifts worked in the mining department was 146,022.

The total production from all mines during 1953 was 839,389 tons, as compared to 829,652 tons in 1952.

SQUAMISH* macurate descriptions

hel some ref Copper-Zinc-Lead met/4 m.m. McVicar K McVicar K McVicar M.

(49° 123° N.E.) Registered office, 475 Howe Street, Vancouver. H. J. Renn, New York, president; V. Dolmage, consulting geolo-(McVicar Mining gist. Capital: 3,000,000 shares, 50 cents par value. One million Company Limited) shares are held by the parent company, Surf Inlet Consolidated Gold Mines Limited. The McVicar property consists of twelve

Crown-granted claims and fractional claims and twenty-two claims held by record. The holdings are on the southwestern slope of Raffuse (Goat) Creek 6 miles east of Squamish. This creek is a northwesterly flowing tributary of the Mamquam River, which empties into Howe Sound at Squamish. A well-established camp on the Trail No. 5 claim is reached by 6 miles of logging-road and 5 miles of excellent trail from Squamish.

Short reports on the McVicar are contained in the 1925 (under "Goat Creek Group"), 1928, 1929, and 1930 Annual Reports. The reader is referred to a detailed description of the property in the 1937 Annual Report, as the present account, resulting. from a brief examination made in September, 1953, is of a supplementary nature.

The property was obtained by the Surf Inlet company in 1946. In that year and in 1947 prospecting was carried out under the direction of Angus McLeod. In 1950 seventeen holes totalling 2,498 feet were diamond drilled by the present company on the Rainstorm claim. At the time of the present examination two drills were at work on the same claim.

The McVicar prospects are 6 miles north 60 degrees east of the Britannia mine Tunnel camp. The intervening ground is very largely underlain by metamorphosed volcanic and sedimentary rocks of the Goat Mountain formation.; The only break in continuity of these rocks consists of a narrow elongate mass of quartz diorite that trends north 17 degrees west along the western border of the McVicar group.

Much of the bedrock on the property is covered with overburden. Below an elevation of 3,500 feet, outcrops are mainly confined to the creeks, and only above 4,000 feet are good exposures plentiful. The rocks consist largely of intensely metamorphosed volcanics, to which the name "greenstone" is well suited. Tuffs are recognizable at several points, and a thick band of agglomerate has been traced for several hundred feet along the eastern edge of the quartz diorite.

The strike of the rocks ranges from north 30 degrees west to due north. Steep dips prevail. Shearing, where present, is essentially parallel to the primary trend. Pyrite is common and is especially abundant in the more highly sheared areas where the rock has been converted to a quartz-sericite schist.

Chalcopyrite is the most abundant ore mineral, and some sphalerite and a little galena are also present. The first two minerals occur in irregular masses and stringers and s disseminated grains within the shear zones; less commonly they are found in net-

^{*} By W. R. Bacon. † Geol. Surv., Canada, Mem. 158, Britannia Beach Map-area.

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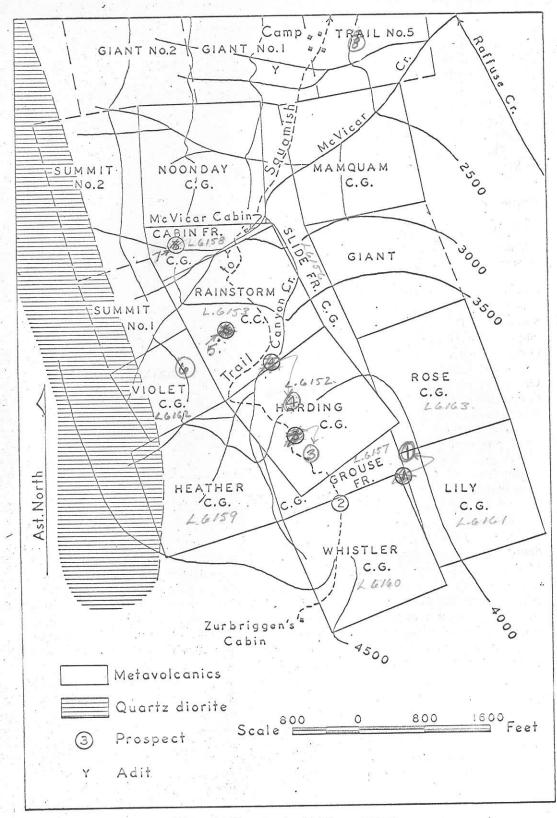


Figure 8. Plan showing McVicar prospects.

LODE METALS

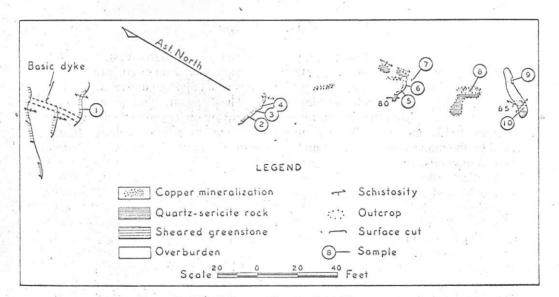
works of quartz-filled fractures. In contrast, the galena is rather restricted in its distribution, occurring mainly in massive form with sphalerite in regular bands, as much as 1.2 feet wide.

The more interesting of the numerous showings are indicated on Figure 8. Prospects No. 1, No. 2, and No. 3 are described in detail in the 1937 Annual Report under "Lily Claim," "Whistler Claim," and "Harding Claim," respectively. Both sphalerite and galena are relatively abundant in Prospects No. 1 and No. 2. Small amounts of red jasper occur in the siliceous gangue of Prospects No. 1 and No. 3. Britannia Mining and Smelting Co. Limited diamond drilled three holes under Prospect No. 2 and, after a geophysical (radiore) survey, three diamond-drill holes under Prospect No. 3.

Prospect No. 4 is known as the "iron showing." Exposures on both sides of Canyon Creek partly disclose a northerly trending shear zone which appears to be at least 100 feet wide. This zone consists of quartz, sericite, abundant pyrite, and sparsely disseminated chalcopyrite. There are three surface cuts on the east side of the canyon and one on the west. The sample mentioned in the 1937 Annual Report that assayed 1.6 per cent copper and 0.6 ounce silver across 9 feet is from one of the easterly cuts. Britannia tested this shear zone with four diamond-drill holes.

<u>Prospect No. 5</u> is a strong shear zone, 200 feet wide, striking northwestward and dipping 45 degrees southwestward. It is composed of quartz, sericite, and abundant pyrite. Minor amounts of chalcopyrite and sphalerite are erratically distributed within this zone. In 1953 two holes totalling 990 feet were drilled westward into the zone, and it is understood that neither hole intersected mineralization of commercial interest.

Prospect No. 6 is known as the "copper showing." Here surface work has revealed the best mineralization found to date on the property. Britannia drilled three holes at this locality, and in 1950 the present company drilled nine shallow holes to test this zone and its possible lateral extensions. Four of these holes cut copper mineralization of interest, although of a grade not comparable to that found at the surface. In September, 1953, two drills were testing the same ground at somewhat greater depths.





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Figure 9 is a plan of the exposures on the "copper showing." Results of surface sampling by the writer are as follows:—

Sample No.	Width	Copper	Silver	Zinc
	Ft.	Per Cent	Oz. per Ton	Per Cent
	. 5.0	3.0	0.8	0.7
	5.0	6.0	1.4	0.3
	5.0	9.1	1.6	0.8
	3.5	6.7	0.4	0.5
	3.0	1.6	0.9	
· · · · · · · · · · · · · · · · · · ·	4.1	5.4	0.2	0.7
	2.0	11.6	2.6	1.7
	3.0	8.2	1.8	0.2
	2.5	2.2	0.5	
0	3.0	9.7	0.9	0.5

Although exploration on the McVicar property has not disclosed a mineralized body of sufficient size and grade to warrant underground development, certain features are considered encouraging. In spite of the fact that much of the property is covered with overburden, numerous showings have been found, and the existence of wide strong shear zones, striking northward and northwestward, has been demonstrated. The accessibility of the property would permit development of a relatively low-grade orebody, should such be found.

PENDER HARBOUR*

Copper

(49° 123° N.W.) The Cambrian Chieftain, 6 miles by road Cambrian Chieftain northeast of Pender Harbour, was optioned by the Sileurian Chief-

tain Mining Company Limited. S. Gilmour, consulting engineer; Clayton Dunnington, mine manager. During the year about 275 feet of tunnel was driven from the lower Sheep Creek adit to intersect the downward extension of the ore previously mined in an open pit. Seven diamond-drill holes totalling 280 feet were drilled. Surface work was done on a zinc showing on the road to the property. Five men were employed.

TEXADA ISLAND*

Iron

Prescott, Paxton, Lake (Texada Mines Ltd.)

(49° 124° N.E.) Registered office, 626 West Pender Street, Vancouver. A. D. Christensen, San Francisco, president; B. L. Alexander, general manager and chief engineer; J. Yuill and E. Fox, mill superintendents. The Prescott, Paxton, and Lake mines and the concentrator at Gillies Bay on Texada Island were operated

throughout 1953, and the following summary of the operations includes information supplied by the management. Ore is mined from open pits in which levels are established at 20-foot intervals. Limestone waste is stripped where necessary and hauled to stock-piles. Vertical holes are drilled by Joy rotary drills and wagon drills, loaded with explosives, and blasted electrically. The broken ore and waste is loaded by 2½-cubic-yard diesel-driven shovels into 15-ton trucks and transported to stockpiles or the concentrator.

Exploratory diamond drilling to outline ore in the present pits and in two other deposits, the Cameron and Yellow Kid, totalled 8,257 feet. About 25 per cent of this drilling was done underground at the Prescott mine, 18 per cent was done on surface at the Prescott, 46 per cent at the Paxton, and the remainder on the Lake, Cameron, and Yellow Kid bodies.

During the summer a magnetometer survey was made of the favourable area.

Stripping and preparation for mining required the removal of 358,295 cubic yards of waste material.

* By R. B. King.

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