

1968
LODE METALS

Sulphurets
45

SKEENA MINING DIVISION

888184

UNUK RIVER

By E. W. Grove

Ted, Ray

LOCATION: (56° 130' S.E.) The Sulphurets-Mitchell Creek property is on the east side of the Unuk River, 40 miles northwest of Stewart, and 20 miles north of the Granduc mine.

CLAIMS: The property presently consists of 78 claims, including the Ted, Ray, Ran, Patty, Arbee, John Bull, and Dawson-Ross claim groups.

ACCESS: Men and materials were transported by helicopter from Stewart.

OWNER: Granduc Mines, Limited, and Don Ross and Associates, of Ketchikan, Alaska.

OPERATOR: Granduc Mines, Limited, 2009, 1177 West Hastings Street, Vancouver 1.

METALS: Copper, molybdenum.

WORK DONE: A geological crew of seven men spent 3½ months preparing a topographic and geologic map of the property, which covers about 9 square miles.

A geochemical orientation programme was run on the Patty and Ran 40 to 48 mineral claims, and six BQ-size core holes totalling 3,819 feet were drilled by an eight-man crew. The project was supervised by E. Ostensoe, chief geologist, Granduc Mines, Limited.

REFERENCES: *Minister of Mines, B.C.*, Ann. Repts., 1962, p. 8; 1967, p. 31.

DESCRIPTION:

The Sulphurets-Mitchell Creek property is one of three large conspicuous gossan exposures in an area bounded to the north by the confluence of Unuk River and Treaty Creek. All three occurrences appear to be localized within altered Lower Jurassic volcanic and sediments intruded by syenitic plutons and are marked by intense mechanical deformation. Deep valley erosion has removed most of the Bowser Assemblage sediments, which once capped the mineralized complex, and recent glacial action has scoured clear large parts of the area. Since the initial discovery of the deposit in 1935, glacial ablation has exposed extensive outcrop areas below the old trim lines. Investigations at the Sulphurets-Mitchell Creek property in 1967 indicated that a detailed geological mapping programme was required before further evaluations could proceed. As a result, company geologists mapped about 9 square miles by plane-table in 1968 at a scale of 1 inch equals 200 feet.

Structurally, the mineralized zone, which includes pyrite, chalcopyrite, and molybdenite within quartz, carbonate, sericite, and talc alteration, lies near the northwest end of an elongate regional dome. The layered country rocks, which include intercalated volcanic epiclastics, volcanic flows, and marine sediments, have been intruded by a complex of syenite, monzonite, and diorite plutons. So far most of the alteration-mineralization appears to be concentrated within schists developed from certain horizons intruded by syenitic plutons. At least three prime directions of schistosity are visible and post-mineral faulting has been extensive. Thrust faults appear to dominate along the west margin of the intrusive complex, whereas north-easterly tear faults are prominent in the central and eastern sections. Even the glacial moraines in the area are disturbed by the most recent faults.

Three core holes, DDH 68-2, 68-3, 68-4, were drilled at the north edge of Patty No. 1 claim to test the extension of a mineralized zone previously drilled in 1962 near the top of the main ridge which separates the Mitchell and Sulphurets glaciers. Three other holes were drilled at other points to test mineralization and extend geological information.

A generalized geological map of the immediate area surrounding the Sulphurets-Mitchell Creek property is shown on Figure 8. This area was mapped by members of the Mineralogical Branch as part of a regional project directed by the writer in 1966-67 to revise the British Columbia section from Portland Canal to the Iskut River with special reference to mineral-deposit occurrences. The Sulphurets-Mitchell Creek zone lies within rocks forming the western margin of the Bowser Basin and is adjacent to the important Coast Crystalline Complex of intrusive igneous rock which transects the western limits of the main basin (see Fig. 7). The granitic La Brant batholith is one of several satellite plutons likely related to the main complex. The syenite-monzonite and related intrusives found in the Sulphurets-Mitchell Creek area are just a few of many such intrusives localized along the exposed basin margin forming a belt which in the Unuk area is approximately 26 miles wide. For convenience these and other plutons found within the basin area have been termed "Skeena Intrusions," and so far age, composition, and genesis are not implied. Within the regional tectonic framework the Sulphurets-Mitchell Creek deposit lies within the Bear River uplift, a major unit found to extend from Alice Arm to the Iskut and east to include the Owegee Dome-Ritchie anticline area.

Within the confines of the map-area (Fig. 8), general relationships are usually decipherable. The rock units, consisting of intercalated, lenticular members, generally dip steeply and trend north-northwest. These rocks include marine siltstones, greywackes, volcanic epiclastics, and mixed volcanics. Near the La Brant batholith the intruded country rocks have been variously hornfelsed, indurated, or sheared, depending on their composition and competency. In the Mitchell Creek-Sulphurets section, where syenite-monzonite plutons are localized, alteration has been varied and extensive with sericite, K-feldspar, and silica dominant. Sulphide mineralization has been found areally in disseminations and vein-type deposits. Pyrite, chalcopyrite, molybdenite, galena, sphalerite, tetrahedrite, and bornite along with magnetite locally form the most abundant metallic minerals.

PORTLAND CANAL

TIDE LAKE FLATS

By H. Bapty and L. Wardman

Granduc Mine

LOCATION: ($56^{\circ} 130^{\circ}$ S.E.) The Granduc mine is at the head of the Leduc River, 25 miles north-northwest of Stewart, between elevations of 2,500 and 4,000 feet.

CLAIMS: Sixty-four Crown-granted and 220 recorded mineral claims.

ACCESS: By 28 miles of road from Stewart to Tide Lake and thence by an 11.6-mile tunnel to the mine.

OWNER: Granduc Mines, Limited.

OPERATOR: Granduc Operating Company, 520, 890 West Pender Street, Vancouver 1; N. Gritzuk, general manager; mine address, P.O. Box 69, Stewart; D. E. Howard, resident manager.

METAL: Copper, silver.

WORK DONE:

Leduc Camp

The camp was opened on February 26, 1968, and was closed on December 19, 1968.

On the 2475 level, excavation of the crusher-room was started, the top crusher-room was slashed out and the back rock-bolted using Roc-Loc bolts, and longhole drilling and blasting of the ore bin above the crusher-room was completed.

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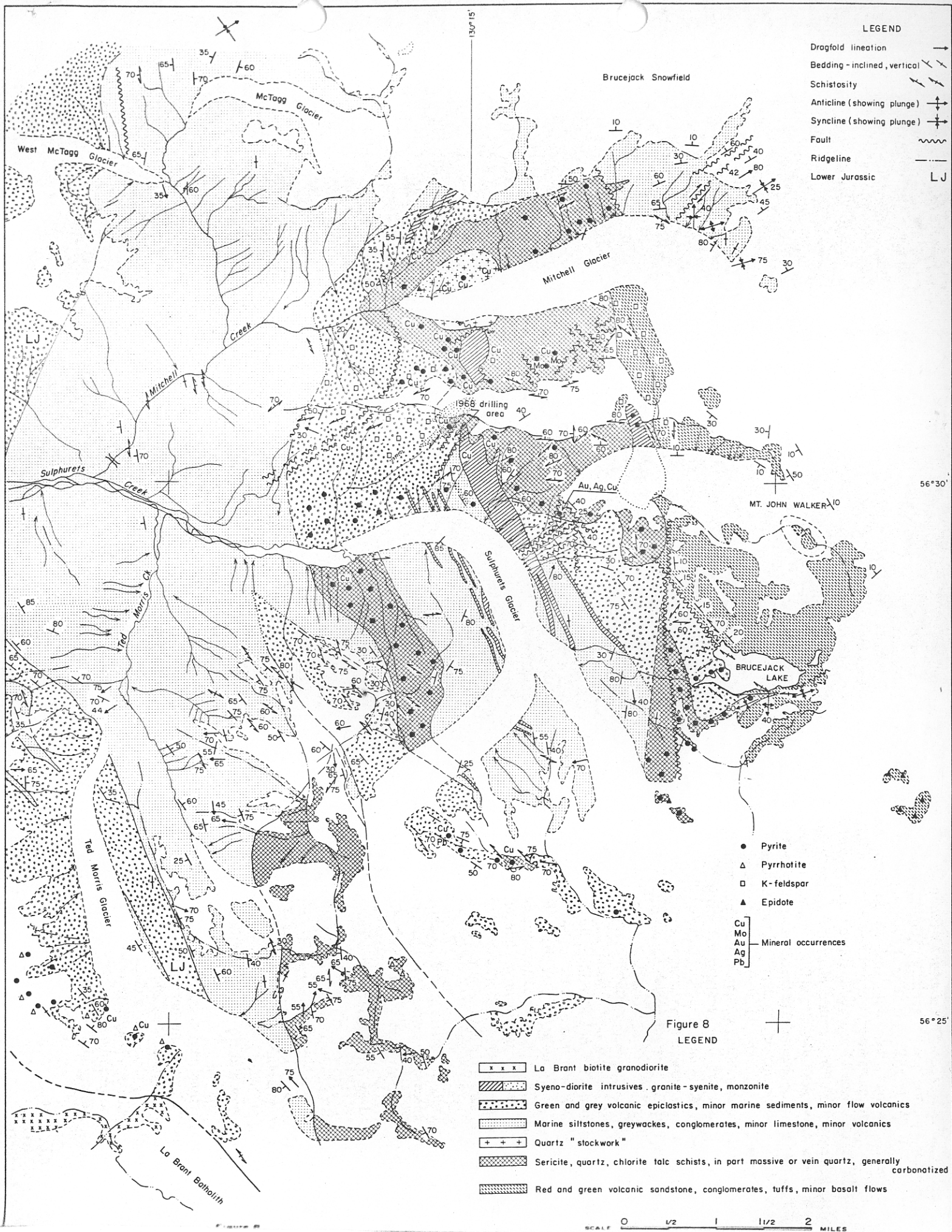
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LEGEND

- Dragfold lineation →
- Bedding - inclined, vertical ↗ ↘
- Schistosity ↗ ↘
- Anticline (showing plunge) ↗ ↘
- Syncline (showing plunge) ↗ ↘
- Fault ~~~~~
- Ridgeline - - - - -
- Lower Jurassic L J

- Pyrite
- △ Pyrrhotite
- K-feldspar
- ▲ Epidote
- Cu
Mo
Au
Ag
Pb — Mineral occurrences

Figure 8
LEGEND

- xxxx La Brant biotite granodiorite
- ▨ Syeno-diorite intrusives, granite-syenite, monzonite
- Green and grey volcanic epiclastics, minor marine sediments, minor flow volcanics
- ▨ Marine siltstones, greywackes, conglomerates, minor limestone, minor volcanics
- + + + Quartz "stockwork"
- ▨ Sericite, quartz, chlorite talc schists, in part massive or vein quartz, generally carbonatized
- ▨ Red and green volcanic sandstone, conglomerates, tuffs, minor basalt flows

SCALE 0 1/2 1 1 1/2 2 MILES