Gloucester AsR 6228 - T.E Lisle PEng
Lat 49°34' 118°22'
82E 9W
1976

GEOLOGY:

C.W. Drysdale mapped the geology of the Franklin Camp in the period 1912-1913 and reported on it in 1915 in Memoir 56. Briefly, a large number of mineral showings are scattered around pendant like masses of greenstone previously mapped as Paleozoic. These pendants may be comprised of rocks from both the Paleozoic and Mesozoic,(Triassic)? comparable to those found in the Boundary district to the south.

The pendants are partially ' Strung out ' in the vicinity of the Burrel Creek Fault (Granby River Fault) some 40 miles north of Grand Forks . This fault is part of a complex northeasterly graben structure stretching from a considerable distance south of the International Border. At Franklin Camp the pendants are engulfed by a series of intrusive rocks ranging from Cretaceous to early Tertiary in age. They are partially overlain by Tertiary sedimentary and volcanic rocks, the latter also occuring as dikes or feeders to the overlying flows.

The most signifigant contribution from the camp has been slightly less than 200,000 tons of gold - silver ore from a fissure type deposit on the Union claim. In occurrences in non intrusive rocks, the mineralization commonly includes galena, sphalerite, and chalcopyrite. Chalcopyrite and locally, minor molybdenite occur irregularly scattered in intrusive rocks.

PROSPECTING:

Some prospecting was carried out on the Gloucester claim particularly in the area of the old adits and shaft. Outcroppings are generally plentiful on the upper slopes where free of snow, and traverses were made into areas indicated on the accompanying sketch. Examinations were also made of rock outcroppings in the vicinity of the lower Maple Leaf workings and on the eastern facing slope of the Union claim.

PROSPECTING RESULTS:

The airbourne magnetic survey, map8489G indicates that the Gloucester and other nearby mineral showings occur on or in the vicinity of a northeasterly trending lineament. Whether this feature has influenced the distribution of mineral deposits is not known. The Gloucester deposit is an irregular lens of magnetite and chalcopyrite occuring at the contact of the Nelson granodiorite and Franklin Group rocks. The mineralization is mainly distributed in the latter.

Examination of Franklin Group rocks in the vicinity of the Gloucester deposit revealed that they are mainly andesitic and that they contain either dikes or interbeds of dark fine - grained volcanic material.

Two types of fragmental rocks were noted. The first occurs along the prominent valley south of the main workings and appear to have resulted from faulting, perhaps related to the northeasterly lineament noted above. Sheared and altered intrusive rocks on the southeast side of that structure were not previously recognized. The other fragmental occurs uphill and southwest of the showings along the contact. It is a peculiar rock with fragments of quartz, commonly rounded and up to a half inch in diameter, in a matrix of greenish chloritic intrusive. Although snow covered part of the exposure , The impression was that the ' breccia ' was in a zone of restricted size.

Examination of Franklin Group rocks at the adit on the Lower Maple Leaf claim revealed somewhat similar rocks differing mainly in the amount of contained hematite, more particularly in the fragmentals. These rocks may be in part pyroclastic.

Around the upper Union workings a fragmental rock of a much different nature was noted. It is a grey conglomerate with pebbles and subangular fragments of quartz, chert, and limestone crowded in a matrixof much the same composition with chlorite. Similar units have been described in the Boundary district to the south,(Seraphim, C.I.M.M. Bull 3, Vol. 49, 1956.),and it is likely that this rock type along with the Gloucester Limestone are correl-

ative with the sharpstone conglomerate and Brooklin limestone found in that area.

CONCLUSIONS:

The prospecting carried out on the Gloucester and nearby claims in May, 1976 did not result in the discovery of any new mineral deposits. In spite of this , the author is of the opinion that further efforts are warranted. Much of the geological work completed has largely confirmed the surface configuration of the various formations as defined by Drysdale. Although many of the mineral deposits in the camp occur in or adjacent to the Franklin group of rocks, there has not, perhaps because of its complexity,been any attempt to unravel the lithology or structure of this particular unit. If deposits of economic signifigance remain , their detection may require a fresh look at the geology of the entire camp.

North Vancouver, B.C.
March 24,1977.

T.E. LISLE. P. ENG.

REFERENCES.

1 Miscellaneous B.C. Minister of Mines Annual Reports.

2 G.S.C. Map 8489 G Burrel Creek Airbourne Magnetics.

3 G.S.C. Map 6 1957 Kettle River (East half) H.W Little.

4 G.S.C. Paper 67 42 Tertiary Early Stratified Rocks , Greenwood Map Area 82 E/2 Monger, J.W.H.

5 Geology and Copper Deposits of the Boundary District British Columbia, by R.H. Seraphim. C.I.M.M. Bull. Volume LIX 1956 pp 384-394.