



SOUTHERN AND SOUTHEASTERN BRITISH COLUMBIA

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Fifteen mineral properties, funded in part by the Prospectors' Assistance Program or the Mineral Exploration Incentive Program, were investigated by the writer. Reports on three of these properties follow; the remainder are listed below and are available on open file in Victoria.

THREE JACKS	82E/1E
BAS	82E/15E
SPRUCE	82F/14W
ROCKLAND	82F/14W
KALISPELL	82F/14W
VERNA	82F/15W
MOLY	82K/3W
MONEY MAKER	92G/16W
JUNE, SKYE	92H/16W
CUMOLY	92J/1W
CHU CHUA	92P/8E
E AND R	93A/11W

KASLO CLAIM (82K/3E)

The Kaslo claim is located at Retallack, 29 kilometres west of Kaslo and 21 kilometres east of New Denver. The claim is currently leased by Peter Leontowicz.

Lead-zinc mineralization occurs in Slocan Group sedimentary rocks of Upper Triassic to Lower Jurassic age, here consisting primarily of black fissile phyllites with interbedded limestone, calcareous phyllites, and brown gritty quartzites. The rocks trend 310 degrees and generally dip southwesterly, but vary due to folding. Greenstones and ultramafic rocks of the Kaslo Group unconformably underlie the sedimentary rocks to the east. Intruding all rocks are Nelson granites, granite dykes, and late-stage lamprophyre dykes.

The dominant structures on the Kaslo claim are folds with axes trending easterly to northeasterly and plunging 15 to 20 degrees easterly. Unravelling these structures was possible due to marker horizons consisting of quartzite and limestone within the phyllites. Whereas the phyllites exhibited intense folding destroying primary textures, the limestones and quartzites were more competent and bedding attitudes could be recorded. Boudinage structures developed within the limestone, suggests it behaved in a plastic manner under stress. Four faults are interpreted in the vicinity of the Kaslo claim. Two nearly parallel faults striking northwesterly and dipping southerly are believed to be associated with mineralization observed on the property. Two barren faults cut the stratigraphy and offset pre-existing faults.

Mineralized faults were encountered within the Hazel adit, which is 120 metres west of the northwest corner of the Kaslo claim. A fault within phyllites, 30.5 metres from the portal, was noted to be on strike with a mineralized showing on surface. The showing on surface consisted of vuggy, galena-rich fragments in the overburden. Outcrops nearby were sheared and rusty, with disseminated galena.

A second fault, 48.8 metres from the portal, forms a fault contact between phyllite and limestone. Disseminated galena and minor chalcopyrite were noted over 2.5 metres. Projected to the surface, the fault occurs within sheared limestone with associated galena-rich fragments within overburden.

Exploration on the Kaslo claim during 1978 consisted of numerous roads and trenches along the south-facing slope. The purpose of these roads has been to allow access, expose outcrops and mineralization. To date, Peter Leontowicz, under the *Prospectors Assistance Act*, has exposed numerous showings of galena and possibly sphalerite. Mineralization appears to be associated with two faults. Further exploration is required to expose mineralization 'in place.'

REFERENCES

- Cairnes, C. E. (1934): Slocan Mining Camp, British Columbia, *Geol. Surv., Canada*, Mem. 173.
Hedley, M. S. (1945): Geology of the Whitewater and Lucky Jim Mines Areas, Slocan District, British Columbia, *B.C. Ministry of Mines & Pet. Res.*, Bull. 22.

GOTCHA (82M/13W)

The Gotcha claim group is situated in the Kamloops Mining Division, approximately 27 kilometres west of Avola. The claim is 4.8 kilometres northwest of the confluence of the Raft River and Maxwell Creek, at an elevation of 1 220 metres. Year round access is afforded by 35 kilometres of logging road up the Raft River Road from Highway 5, then 4.8 kilometres of logging road up Maxwell Creek from the Raft River. The claims are owned by United Mineral Services Limited.

The Gotcha property is underlain by metamorphic rocks consisting of gneiss, schist, quartzite, marble, and minor amphibolite. These rocks have been intruded by granitic stocks, dykes, and sills, believed to be of Mesozoic age with attendant localized skarnification.

Skarn mineralization developed within the marble can be divided into three zones including: (1) calcite and coarse-grained wollastonite; (2) coarse-grained garnet (crystals range from 1 to 50 millimetres in diameter) and diopside scheelite (up to 30 millimetres); and (3) finely banded diopside, containing scheelite. The skarn attains a thickness of 10 metres, and outcrop exposures coupled with diamond drilling indicates the zone continuous over a length of 50 metres.

Currently, United Mineral Services has developed a small open-pit operation to mine the scheelite. Scheelite is reported to grade 1 per cent, and occurs mainly within skarn zones 2 and 3, as noted above.

Folding and faulting have occurred within the metasedimentary rocks and the intrusive rocks. Granitic rocks typically occur along fold hinges, suggesting a structural control of their emplacement.

NIFTY (93D/9W)

The Nifty property is located on the east side of the Noosgulch River, approximately 35 kilometres northeast of Bella Coola (Fig. 26). Access to the property is by a 15-minute helicopter flight from Firvale, situated on the Bella Coola River. The property, owned by United Mineral Services Limited, is under option to Pan Ocean Oil Limited.

The Nifty deposit includes barite and sulphide horizons within a volcano-sedimentary pile of interbedded fine-grained to lapilli tuff and tuffaceous siltstones. Five diamond-drill holes on the east side of Noosgulch River failed to intersect economic sulphide occurrences.

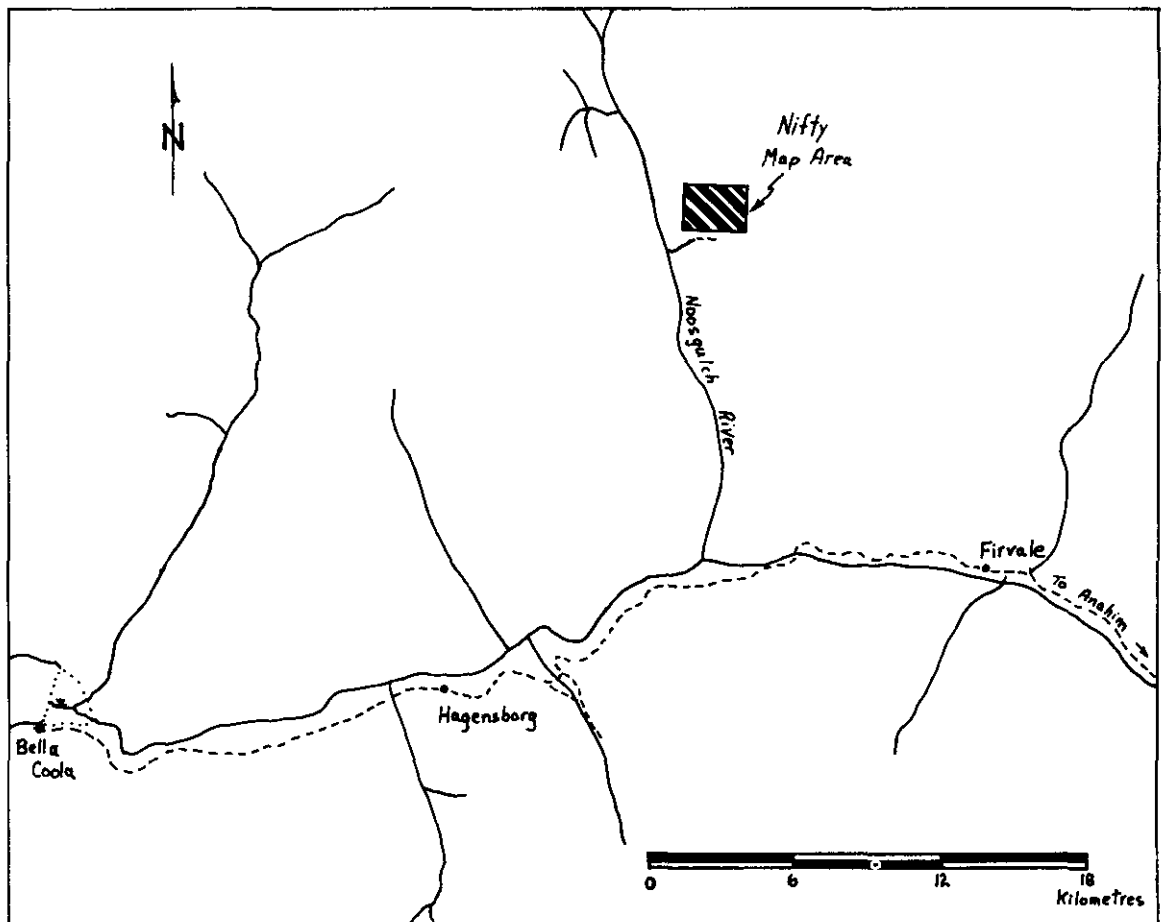


Figure 26. Location map, Nifty map-area.

Galena-sphalerite pods occur within felsic tuffs. In 1977, the property was mapped on a scale of 1:1000 by J. R. Woodcock, and further exploration was warranted to explore the extent of the sulphide mineralization.

Drilling was completed during the first week of July. Information presented in this report was largely supplied by Pan Ocean geologists and on information gathered from core logged in diamond-drill hole 78-2 and outcrop examination. The volcano-sedimentary pile which hosts the Nifty deposit is of Middle Jurassic age or older. Subsequent to deposition, the area was tilted eastward at 55 degrees and the rocks strike 115 degrees. Intruding all rock types are late-stage porphyritic mafic dykes (Fig. 27).

Deposition of the volcanic debris occurred within a subaqueous environment. Rapid facies changes within the stratigraphic section suggests a distal, pulsating volcanic source. Textural and compositional changes within the section suggest three main stages of deposition:

Upper Unit – dominantly interbedded fine andesitic tuffs and bedded siltstones. Thickness of this 15 units is estimated at 50 to 60 metres.

Ore-bearing Unit – dominantly felsic lapilli tuff with thin, interbedded andesite lapilli tuff and siltstone. In addition, jasper breccias and barite horizons occur in this unit. Coarser fragments and an increase in felsic fragments are characteristic of this unit. Approximately thickness is estimated at 40 to 50 metres.

Lower Unit – dominantly altered, fine tuffs in a matrix of bleached grit, with ellipsoidal chlorite and epidote spots. The thickness is unknown.

Two main types of sulphide mineralization were noted on the Nifty property. Firstly, massive pods of dominantly galena, sphalerite, and minor pyrite occur within a felsic lapilli tuff. Felsic fragments are incorporated within the pod, and stratification of the sulphides is evident. Secondly, disseminated pyrite forms part of the matrix for the felsic tuff.

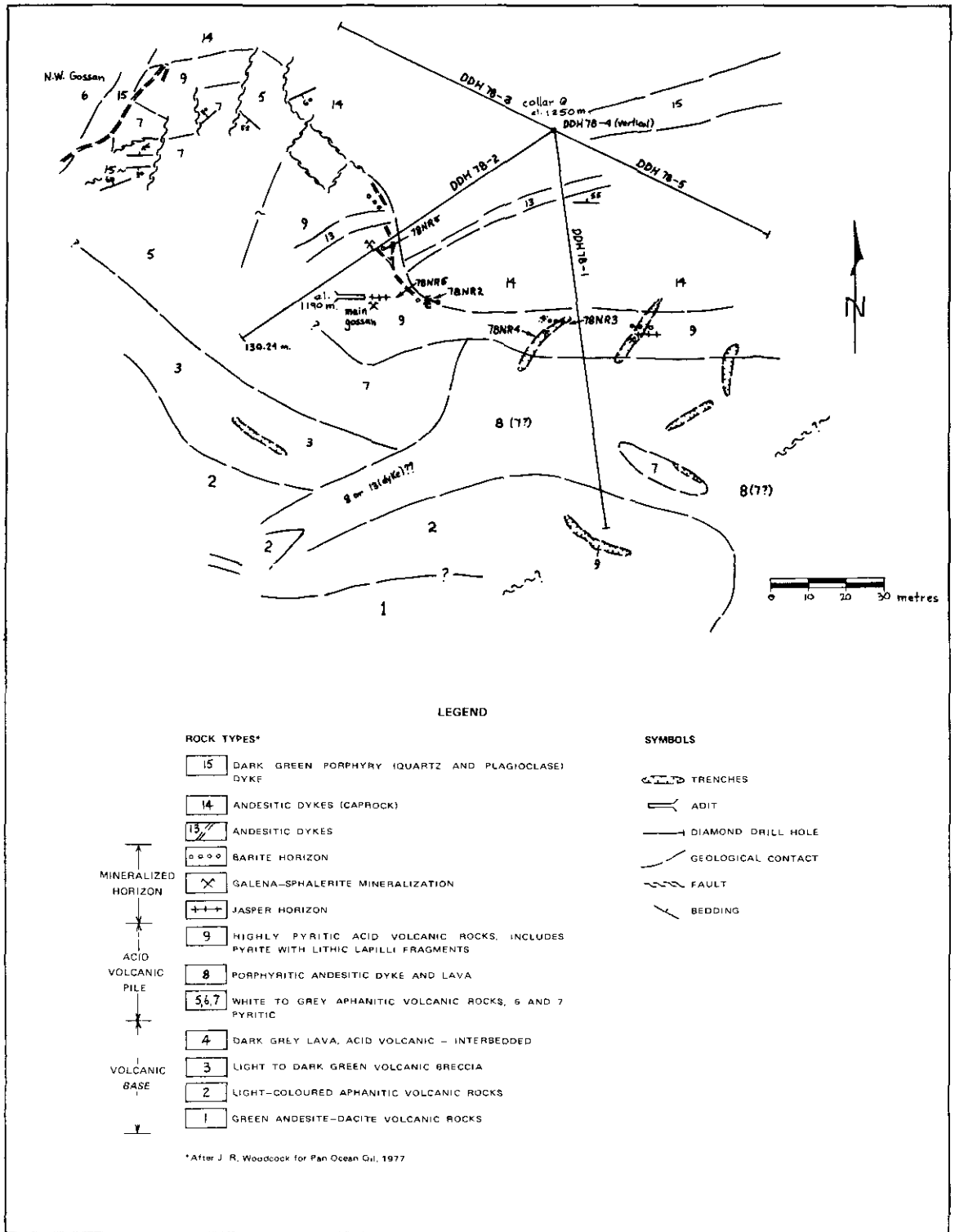


Figure 27. Geological map, Nifty property.