

GEOLOGICAL REPORT

on the

GOWAN CREEK PROSPECT

SKOOKUM 1 Record No. 1190 (3)
SKOOKUM 2 Record No. 1191 (3)
CHUCK 1 Record No. 1192 (3)
GOWAN Record No. 1303 (10)

NEW WESTMINSTER MINING DIVISION

NTS 92G/16

LATITUDE 49° 56' LONGITUDE 122° 22'W

DATES OF WORK: July 5 - July 29, 1983

by M. S. Carr, B.Sc.
J. S. Christie, Ph.D.

JMT SERVICES CORP.
8827 Hudson Street
Vancouver, B.C.
V6P 4N1

dated January 5, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,629

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INTRODUCTION

Outcrops of Fire Lake Group rocks near Gowan Creek were examined during a reconnaissance programme in 1980. Skookum 1 & 2 and Chuck 1 claims were staked March 7, 1981. The Gowan claim was staked Sept. 17, 1981. Preliminary sampling and geological mapping was carried out during the 1981 field season by Bill Howell and Barry Price, geologists. This work has been previously reported by Price (1981). A short sampling and prospecting programme was carried out in 1982 by Bill Howell and C. Harivel, geologist. Geological mapping and minor sampling was carried out in 1983 by M. S. Carr and J. Vezina.

LOCATION AND ACCESS (Figures 1,2)

The claims cover an area between and surrounding the junctions of Gowan and Livingston Creeks with Lillooet River, 100 km northeast of Vancouver and 55 km southeast of Pemberton. Logging roads extend through the center of the property from the main access road. The area is generally snow-free from late March to late October.

MINERAL CLAIMS

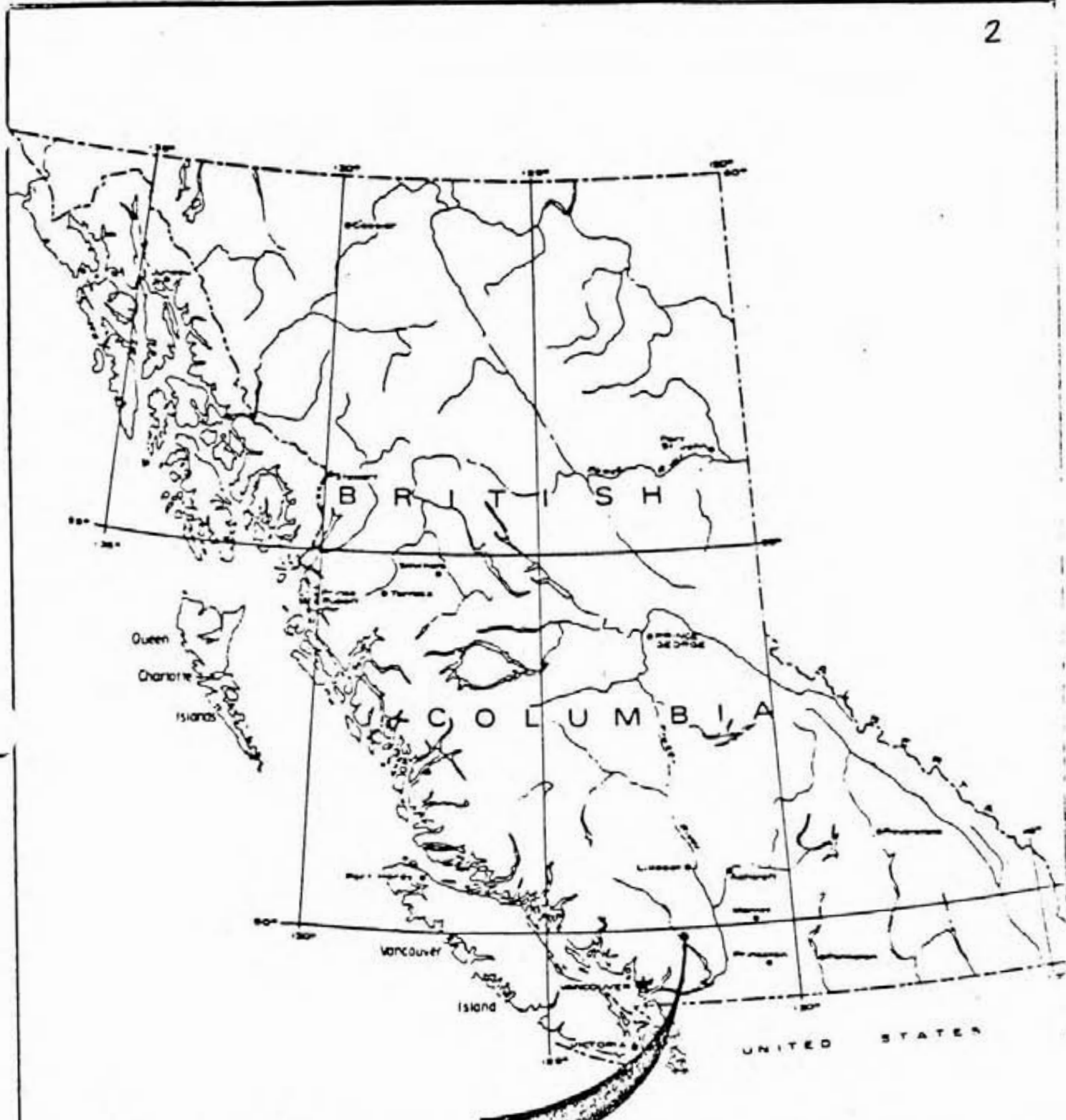
The area of interest is covered by four claims, owned by Gordon G. Richards.

CLAIM NAME	RECORD NO.	DATE OF RECORD	UNITS
SKOOKUM 1	1190 (3)	March 31, 1981	12
SKOOKUM 2	1191 (3)	March 31, 1981	16
CHUCK 1	1192 (3)	March 31, 1981	3
GOWAN	1303 (10)	October 15, 1981	9

The claims surround five reverted crown granted claims held by others:

JOE DANK	Lease No. 2591A
SUNSHINE	2590A
MAYFLOWER	2592A
YELLOW COPPER	2593A
DEEP CREEK	2594A

Claims are shown on the accompanying map (Figure 2)



GOWAN PROPERTY

JMT SERVICES CORP.			
FIG. 1			
PROPERTY LOCATION MAP			
SCALE			
0 10 20 Miles		0 10 20 Miles	
Prepared by	Date	NTS MAP AREA	DRAWING NO.
Origin by	Revised		

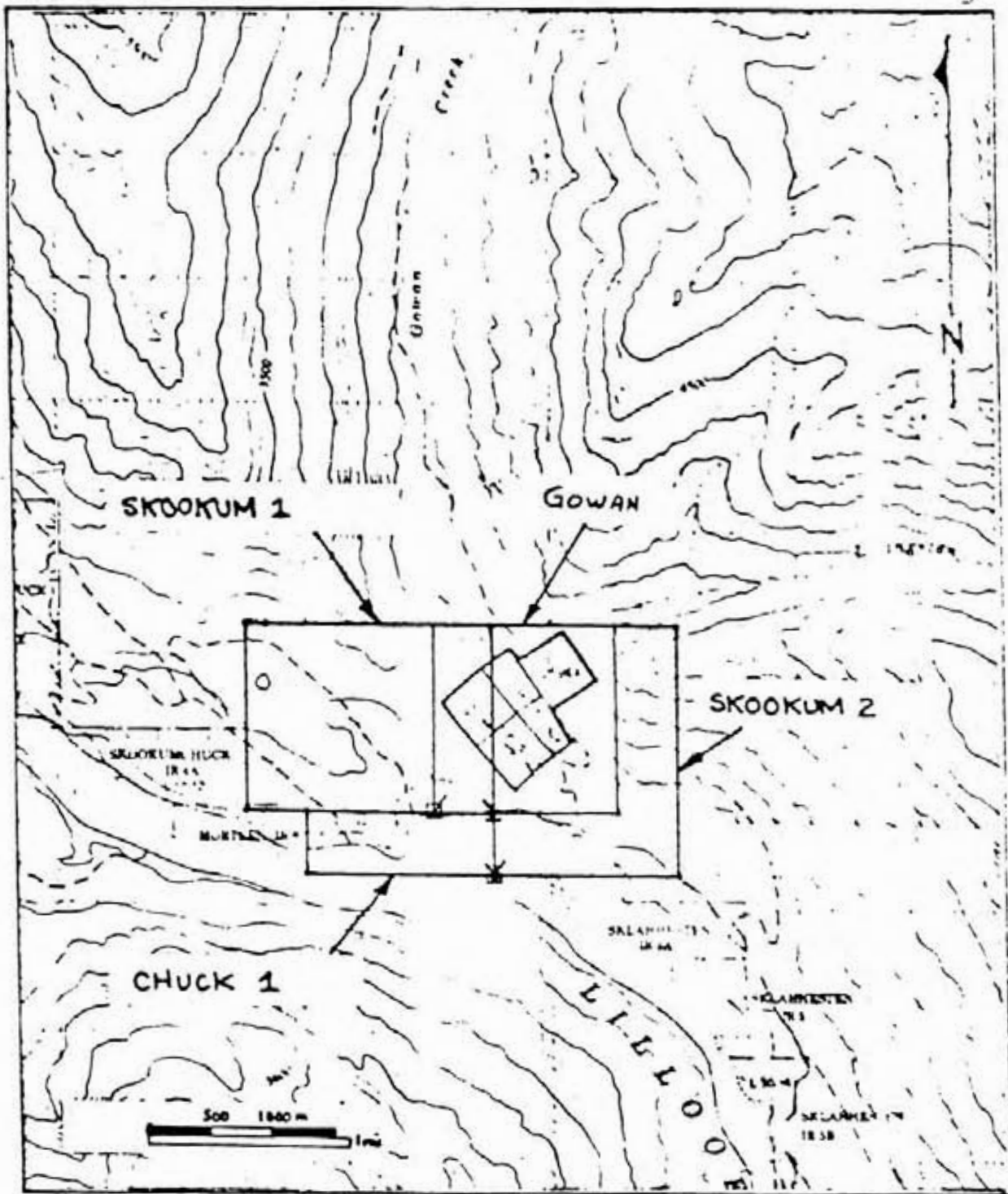


Figure 2: CLAIM MAP.

REGIONAL GEOLOGY

Gowan and Livingston Creeks cut through a northwesterly trending pendant of Fire Creek group volcanic and sedimentary rocks near Lillooet River. The pendant is fault bounded on the west side by the Main Harrison Lake-Lillooet River fault and a subsidiary splay. The pendant is bounded on the west by younger biotite quartz diorite and on the east by hornblende quartz diorite and diorite. Metamorphic grade in the Fire Creek rocks increases eastward toward the contact.

The Fire Lake Group in the vicinity of Livingston Creek is described by Roddick (1965) as follows:

"The rocks resemble parts of the middle and upper units of the Fire Lake body (shales and quartz-feldspathic tuffs lapilli and minor breccias). The lower beds outcropping near the river consist of grey to grey green argillite. In places, it is sandy (arkosic) and partly recrystallized.

The upper part (probably more than half) of the body in the Livingston Creek area consists of partly altered feldspar porphyry of andesitic composition.... The internal structure of the Livingston Creek body is probably complicated by faulting as it is difficult to follow the beds far along strike. Where clearly defined, the beds are approximately parallel with Lillooet River Valley and dip steeply to the northeast."

HISTORY OF THE PROSPECT

References: B. C. Mines, Ann. Report: 1904, P266; 1930, PA314;
Cairnes, C.E., 1922, Observation on Lillooet Valley, B.C.;
Canadian Min. J., Vol. 47 Nos. 7 & 8
Roddick, J. A., 1965, Vancouver North, Coquitlam, Pitt
Lake map areas, B.C. and G.S.C. Mem. 335

The area was first explored in 1897 by John S. Grant, who staked a discovery claim, and in partnership with four others, prospected a group of five claims. These claims are those in central part of the JMT claims, and were known as the Sunshine, Mayflower, Yellow Copper, Deep Creek and Joe Dank crown granted claims (see claim list). The claims are reported to have quartz veins (carrying in places high values in silver, both in native and

sulphide form, and also, though less commonly, good values in gold (Cairnes, 1927).

Claims were staked adjacent to the crown grants from time to time but these received no great amount of attention.

1980 WORK PROGRAMME

During road reconnaissance in 1980, the pyritic sericitic schists and coarse dacite lapilli tuffs were noted at Gowan Creek, but the claims were not staked until March 1981.

1981 WORK PROGRAMME

Subsequent to staking the claims, the road exposures and sericitic schist exposures were mapped and sampled. Later, in August 1981 several soil sampling traverses were completed on the Skookum 1 and Chuck 1 claims.

1982 WORK PROGRAMME

Budgetary restraint during 1982 allowed only a brief examination of the property by W. A. Howell and C. Harivel, geologists. Further geological and geochemical clarification and data was sought in an area of apparent transition from weakly pyritic rhyolitic breccias through strongly pyritic quartz sericite schists to sparsely mineralized to barren chloritic schists and andesites. This transition region is strongly pyritic and is locally anomalous for copper, zinc, lead.

1983 WORK PROGRAMME

Continued restraint in 1983 allowed only four days of geological mapping (1:5000) by M. S. Carr, geologist and J. Vezina, technician. The purpose of the mapping was to locate as many accessible outcrops as possible and determine where future work should be directed. Geochemical anomalies established in 1982 were also prospected.

PROPERTY GEOLOGY

i) STRATIGRAPHY

The property is underlain by a homoclinal section of Fire Lake Group metavolcanics at least 1.5 km thick (Figure 3).

Details of the stratigraphy are shown on Figure 3.

The volcanic sequence has been metamorphosed to lower greenschist facies. The tuffs are generally phyllites, with a strong lineation developed parallel to bedding. The absence of foliation precludes calling these rocks schists. In the crystal tuffs which dominate the sequence, muscovite and chlorite are the two main metamorphic minerals developed, with zones of abundant pyrite porphyroblasts.

The black slaty argillite contains abundant pyrite, forming rusty outcrops along the road cuts within the crown grants, in Gowan Ck and lower Livingston Ck. The rhyolite at the top of the sequence contains minor chlorite and muscovite, but is relatively unchanged by metamorphism.

ii) STRUCTURE

No major fault offsets are obvious from the surface geology. The geochemically anomalous muscovite/sericite phyllite horizon (Unit 3A) may be offset 300m by a right lateral fault with no obvious surface expression (see map pocket). The NW/SE trend of lower Livingston Creek is due to the creek flowing parallel to the resistant massive chlorite/muscovite phyllite schists (Unit 1).

Strike of the units is consistently between 125° and 140°. Bedding is usually vertical.

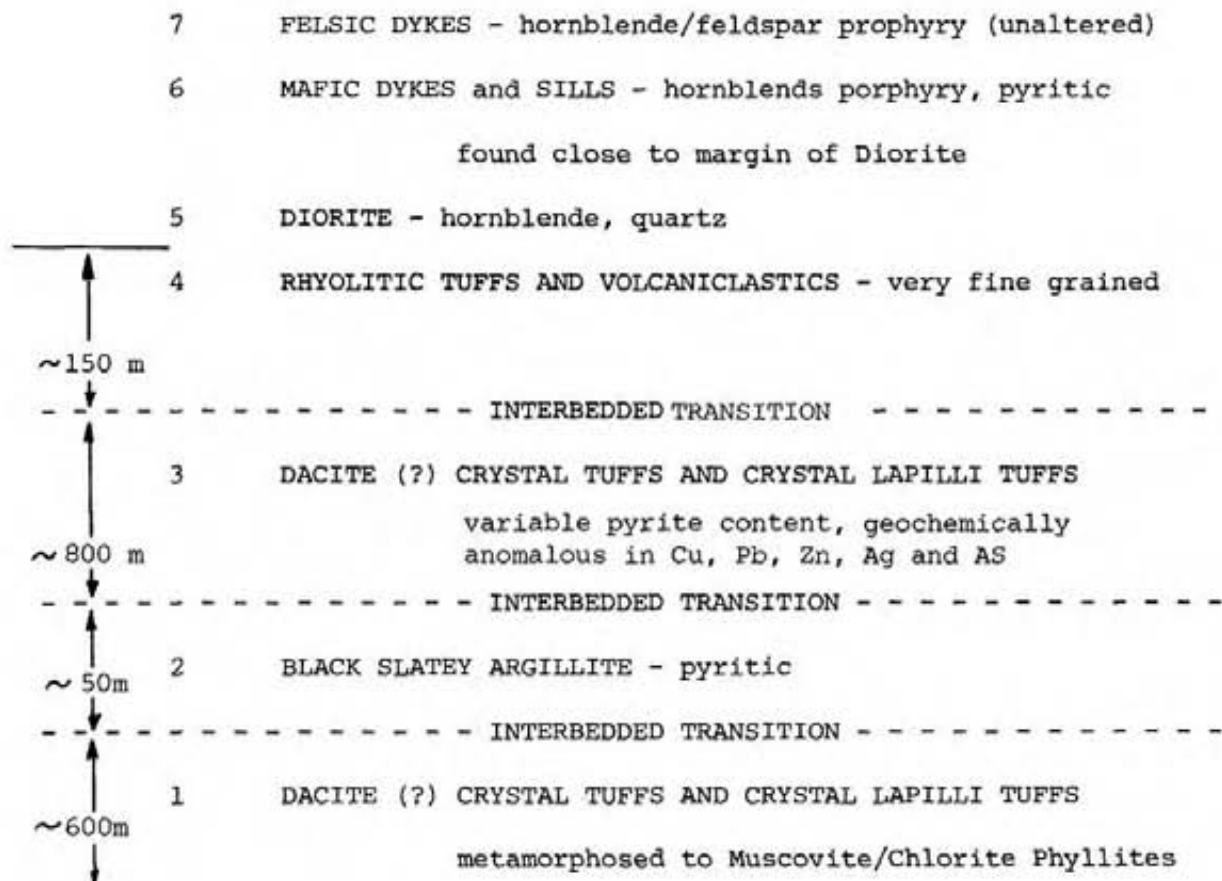
Unaltered felsic dykes (hornblende/feldspar porphyry) are oriented roughly perpendicular to bedding (063/52SE) in the showing on the main road west of Gowan Creek. These dykes have also been observed in the altered showing in the northwest corner of the property, but their attitude was not apparent due to poor exposure.

iii) ALTERATION/MINERALIZATION

The two previously discovered zones of anomalous geochem (in the northwest corner of the property and in the road cut at the mouth

FIGURE 3

GOWAN CREEK PROSPECT STRATIGRAPHY



of Gowan Creek) are still the most promising targets on the property. These zones are composed of sheared, pyritic chlorite/muscovite schist which is anomalous in Cu, Pb, Zn and Ag. (Howell, 1982).

The intensely altered pyritic showing on the main road is not continuous along strike. It may be a faulted extension of the larger, more continuous zone in the northwest corner of the property. Faulting is probably subparallel to the trend of felsic dykes exposed in the road cut (070°). Felsic dykes also intrude the showings in the northwest, but their orientation was not apparent due to poor exposure.

Minor propylitic alteration is associated with manganiferous quartz veins immediately below the crystal tuff/rhyolite contact, at the extreme western edge of the property and in Gowan Creek. Samples of these veins have not yet been analysed due to budgetary restraints.

East of Gowan Creek, there are few signs of mineralization outside of the crown grants. Rusty outcrops of black slaty argillite and massive pyritic phyllite (crystal tuff) are weakly anomalous in Cu, Zn, Ag and Pb within the crown grants (Howell, 1982). Prospecting and mapping throughout the area failed to turn up new showings. Further soil and rock sampling is needed to determine whether these rocks constitute a viable target.

GEOCHEMISTRY

During the course of the present study, 18 rock, 2 soil, and 5 silt samples were taken. None of these samples have been analysed due to a limited budget. Previous studies (Howell, 1982; Price, 1981) located the geochemical anomalies which were pursued by the authors. In general, soils, silts and rocks have been found to be anomalous in Cu, Pb, Zn, Ag and As; primarily in the northwest corner of the property.

CONCLUSIONS

Geological mapping and geochemical sampling on the Gowan Creek prospect has delineated the probable extent of a horizon which has high potential for hosting massive sulphide mineralization (see map in pocket). The favourable horizon is a pyritic muscovite/chlorite phyllite which carries anomalous Cu, Pb, Zn, Ag and As values. Exposures are

poor due to deep glacial overburden and low relief. The horizon trends parallel to the strike of the major rock units on the property. It may be offset approximately 300 m to the southwest by a right lateral fault trending approximately 070°. This would account for the apparently discontinuous nature of the showing above the road cut west of Gowan Creek.

Further vein type mineralization may exist at the western edge of the claim group where manganese rich quartz veins cut rhyolites and phyllites, and in Gowan Creek.

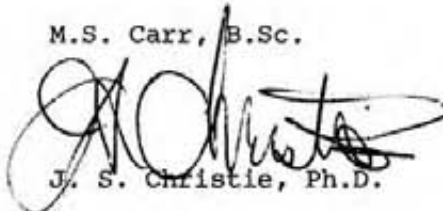
In the area east of Gowan Creek and south of the main road, the favourable pyritic horizon does not outcrop. It may be present under deep glacial till south of the main road and east of Gowan Creek. Pyritic zones in the argillite and phyllites adjacent to the crown grants appear to be lensoidal and interbedded complexly.

RECOMMENDATIONS

1. Overgrown logging roads in the northwest corner of the property should be opened up to expose outcrop and provide access
2. A geochemical grid should be completed in the vicinity of showings in the northwest corner of the property.
3. Samples collected in 1983 should be sent for geochemical analyses.
4. Geophysical surveys (EM, Mag) should be used to delineate possible mineralized targets.
5. Bulldozer trenching should be used to follow up on anomalies discovered by geochemistry and geophysics.

Respectfully submitted

M.S. Carr, B.Sc.

A handwritten signature in black ink, appearing to read 'J. S. Christie', is written over the typed name below.

J. S. Christie, Ph.D.

STATEMENT OF COSTS

1983 GOWAN REPORT

Mike Carr, geologist	July 1/2(5,6) 7-11, 1/229	6 1/2 days @ \$250	\$1,625.00
Jeff Vezina, technician	July 1/2(5,6) 7-11	6 days @ \$150	900.00
Truck rental - 4 x 4	July 6 - 11	6 days @ \$70	420.00
	(including gas & insurance)		
Meals and camp costs		12 days @ \$30	360.00
Richmond Reproductions			25.58
Supplies - technical (Hudson Building Supplies)			121.80
Report - map and duplication			<u>1,000.00</u>
			<u>\$4,452.38</u>

STATEMENT OF QUALIFICATIONS

I, Michael S. Carr do hereby certify that:

1. I am a professional geologist working in British Columbia and residing at 948 Kings Avenue, West Vancouver, B.C. V7T 2B7
2. I am a graduate of McMaster Universtiy, Bachelor of Science (Geology) 1980.
3. I have been employed in the mineral exploration industry since 1976 and have practiced my profession as a geologist since 1980.
4. I am a member of the Geological Association of Canada.
5. This report is based on my personal knowledge of the district and the mapping and sampling done on the property.

Michael S. Carr, B.Sc.

STATEMENT OF QUALIFICATIONS

I, James S. Christie of Vancouver, British Columbia do hereby certify that:

1. I am a Professional Geologist residing at 3921 West 31st Avenue, Vancouver, B.C., V6S 1Y4
2. I am a graduate of the University of British Columbia, B.Sc., Honours Geology - 1965; Ph.D. Geology - 1973.
3. I have practised my profession as a mining exploration geologist continuously since 1965.
4. I am a Fellow of the Geological Association of Canada.
5. I am a Member of the Geological Society of America.
6. This report is based on my personal knowledge of the district, and mapping of the geology at the property.



James S. Christie, Ph.D.

DIORITE OCCURS APPROXIMATELY 500 M. NORTH OF CLAIM BOUNDARY

GOWAN CREEK PROSPECT

GEOLOGY

SKOOKUM 1, SKOOKUM 2,
CHUCK 1 AND GOWAN CLAIMS

NEW WESTMINSTER MINING DIVISION

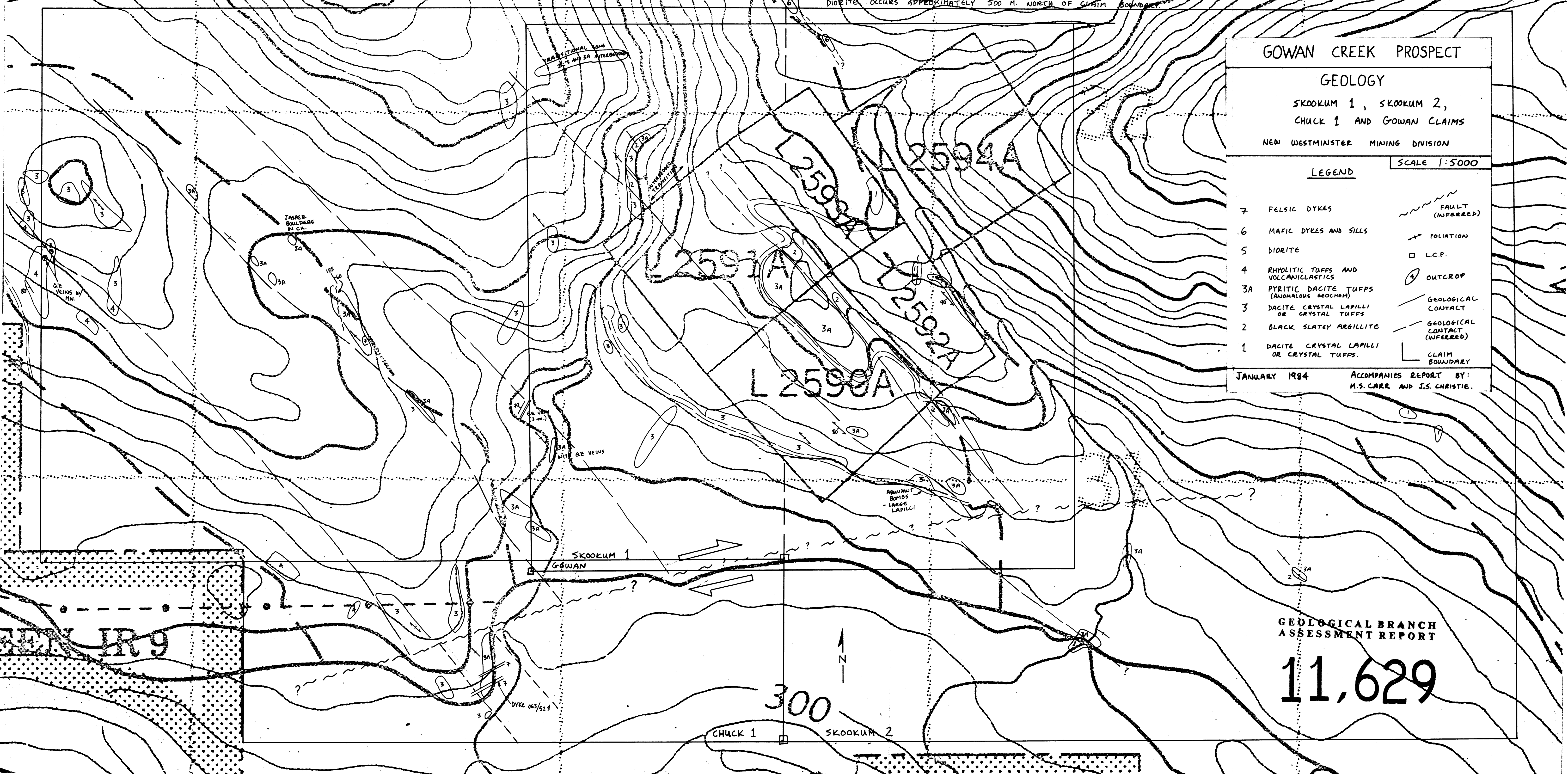
SCALE 1:5000

LEGEND

- 7 FELSIC DYKES
 - 6 MAFIC DYKES AND SILLS
 - 5 DIORITE
 - 4 RHYOLITIC TUFFS AND VOLCANICLASTICS
 - 3A PYRITIC DACITE TUFFS (ANOMALOUS GEOCHEM)
 - 3 DACITE CRYSTAL LAPILLI OR CRYSTAL TUFFS
 - 2 BLACK SLATEY ARGILLITE
 - 1 DACITE CRYSTAL LAPILLI OR CRYSTAL TUFFS.
- FAULT (INFERRED)
 - FOLIATION
 - L.C.P.
 - OUTCROP
 - GEOLOGICAL CONTACT
 - GEOLOGICAL CONTACT (INFERRED)
 - CLAIM BOUNDARY

JANUARY 1984

ACCOMPANIES REPORT BY:
M.S. CARR AND J.S. CHRISTIE.



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