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1988 EXPLORATION SUMMARY AND PROJECT UPDATE

BAR PROJECT

MINNOVA - CHEVRON JOINT VENTURE

NTS 82M 4W/5W
92P 1E/8E

KAMLOOPS MINING DIVISION

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Summary and Recommendations

An extensive program of mapping, sampling, geophysics and drilling was carried out on the Bar property between May 16 and October 30, 1988. Major mapping projects were carried out in the Alex Creek and West SC grid areas. Fill-in or detailed mapping and sampling was carried out in the Wikiup, Dixon Lake, Little Dixon, FY and Laurel Dome areas.

Work on the Alex Creek and FY grids was particularly successful in outlining anomalous areas which warrant detailed follow-up and drilling. Volcanic stratigraphy in the West SC area is very poorly exposed and consequently difficult to evaluate. This area contains several strong Max/Min conductors and a sequence of pyritic cherts which are anomalous in barium and locally in silver. The proximity of this grid to the highly prospective Laurel Dome suggests that more detailed work (trenching, drilling) will be carried out in this area.

Nine holes were drilled on the property during 1988 to test targets in the Laurel Dome, FY and Little Dixon Lake areas. Three holes were drilled on the Laurel Dome to follow up anomalous Zn mineralization encountered in Bar 14 which was drilled in 1987. Two of these holes (Bar 17, 19) intersected altered massive rhyolites and volcanic debris flows with anomalous Cu-Zn mineralization. This area is considered to be highly prospective for the discovery of massive sulphide mineralization and further work is warranted.

Four holes were drilled in the FY grid area to test geophysical and geochemical anomalies. One of these holes (Bar 23) intersected a significant interval of polymetallic mineralization grading 0.133% Cu, 5.46% Pb, 13.20% Zn, 203 g/T Ag and 0.91 g/T Au over 40 cm. This mineralization, which includes six centimetres of massive sulphide, is hosted by a sequence of andesitic crystal tuffs. Although it is probably epigenetic in origin, it is somewhat enigmatic and follow-up drilling is warranted.

Drilling in the Little Dixon Lake area (2 holes) did not encounter significant mineralization, although soda depletion suggestive of hydrothermal alteration was noted in both holes.

The 1988 program has brought the Bar Project to the point where the felsic volcanic stratigraphy has been fairly well delineated over much of the property. Grid work and the relatively small amount of drilling completed to date have outlined at least three particularly prospective areas; Alex Creek in the South Bar property, and the FY and Laurel Dome areas in the North Bar property. Felsic stratigraphy outside of these areas is also thought to have excellent exploration potential particularly the rocks of the Fennel Formation north of the Barriere River.

Further grid work is necessary to close gaps between existing grids and to better define the eastern limit of the felsic package. At the same time, detailed mapping, sampling and compilation should continue in the more prospective areas to aid in drill target definition. Contingent on budgetary constraints, specific recommendations for the 1989 field season are as follows:

1. Follow-up drilling in the Laurel Dome area. Twenty kilometers of IP surveying should be completed in this area to aid in drill target definition.

2. Linecutting (20 km), mapping and Max/Min to extend the FY grid to the north. Detailed mapping and sampling followed by drilling, should be carried out to test the area around the polymetallic intersections in Bar 23.

3. Linecutting (20 km), mapping and Max/Min to fill in gaps in our coverage of felsic stratigraphy in the SC-3 and Anna grid areas.

4. Detailed mapping and sampling to follow up anomalous areas on the Alex Creek grid: possible trenching and drilling.

5. Reconnaissance mapping and sampling on the Zone-Tylox option to outline prospective stratigraphy and to help define the eastern limit of felsic volcanics outcropping on the Wikiup and Little Dixon Lake grids. A new grid (approximately 40 km) should be established in the southwest corner of Dixie 3 to cover felsic volcanic stratigraphy and a possible rhyolite dome outcropping in this area. Mapping, sampling and Max/Min coverage should be completed on this grid.

1. Introduction

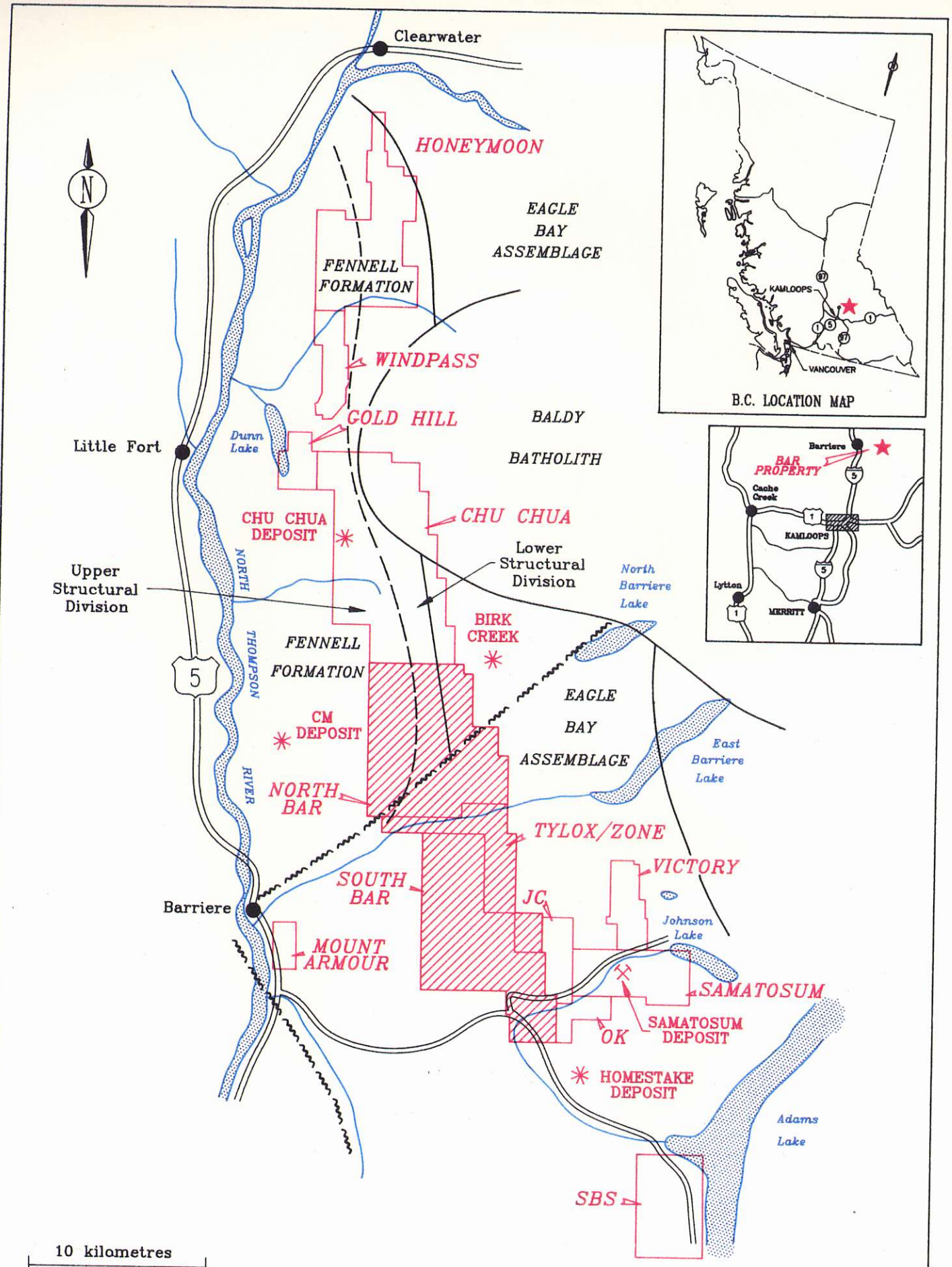
The Bar property consists of over 500 units covering felsic to mafic volcanic rocks of the Eagle Bay Assemblage and the Fennel Formation in the Barriere area. This large property covers some 23 km of volcanic stratigraphy which is highly prospective for massive sulphide deposits similar to those at Samatosum, Rea, Homestake and Chu Chua.

Work commenced on the Bar property in 1984, and to date has concentrated primarily on the felsic volcanic stratigraphy. The 1988 program was designed to further delineate the felsic stratigraphy by establishing grid control in the Alex Creek and West SC areas. In addition, a number of smaller mapping projects were undertaken either to extend coverage or to gather more detailed information in some of the more prospective areas. Nine holes totalling 1364 m were drilled on the Bar property between October 1 and 30, 1988.

This report summarizes the objectives and salient results of the 1988 program. In addition, the present status of the project is reviewed and general recommendations are made for future work.

2. General Geology

The Bar property can be divided geologically and geographically into two main areas. The South Bar area, occurring south of the Barriere River, is underlain by northwest-striking, strongly foliated and deformed volcanic and sedimentary rocks of the Paleozoic age Eagle Bay Assemblage (Figures 1 and 2). Regional geological mapping by the BCGS suggests that these rocks are predominantly of Devono-Mississippian age although some are broadly grouped as lower and/or middle Paleozoic. Volcanic rocks in the South Bar area range in composition from felsic to mafic. Many of these rocks have been mapped as flows, but tuff and lapilli tuff



ADAMS/BARRIERE BAR JOINT VENTURE

PROPERTY LOCATION & REGIONAL GEOLOGY

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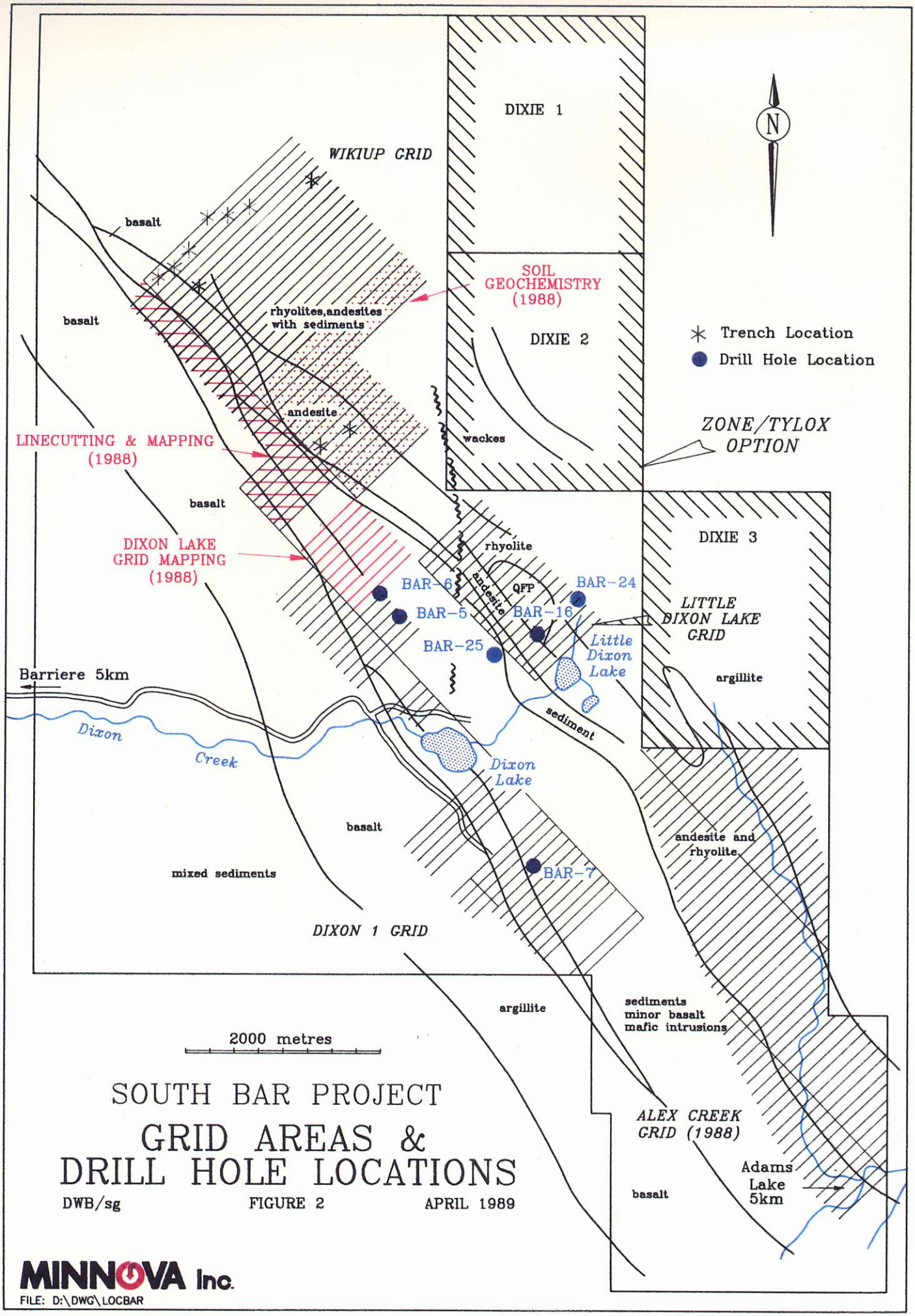

SOUTH BAR PROJECT

GRID AREAS & DRILL HOLE LOCATIONS

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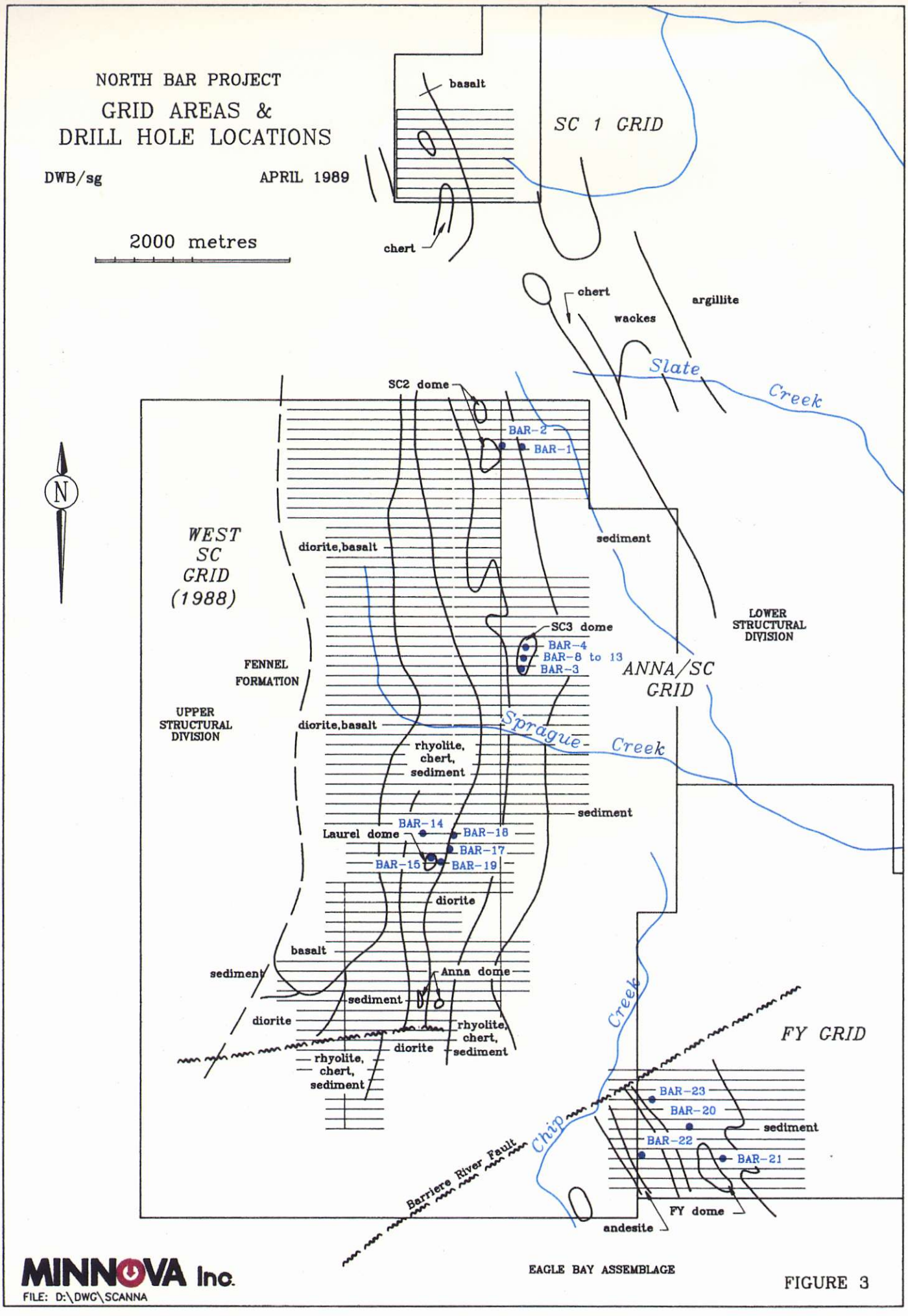
occur locally. A possible FQP dome has been mapped in the Little Dixon Lake area. Eagle Bay rocks are intruded by a number of relatively small mafic dykes, sills and plugs which are commonly gabbroic in composition and locally very strongly magnetic.

The North Bar area lies north of the Barriere River (Figure 3). This area is underlain primarily by north-striking relatively unfoliated volcanic and sedimentary rocks of the Fennel Formation (Devonian to Permian). In the southeast corner of the area on the FY grid these rocks are in contact with northwest-striking rocks of the Eagle Bay Assemblage along the Barriere River Fault.

The Fennel Formation has been divided by the BCGS into upper and lower structural divisions. The upper structural division underlies the west side of the North Bar property and consists predominantly of oceanic pillow basalt, gabbro and minor chert. Upper Fennel rocks host the Chu Chua massive sulphide deposit which contains about 1.57 million Tonnes grading 1.92% Cu, 0.48% Zn, 0.43 g/T Au and 8.05 g/T Ag. They also contain the Chinook Mountain (CM) deposit of BP Resources which appears to be similar to Chu Chua but which has not yet been delineated by drilling (Figure 1).

Work to date on the North Bar property has concentrated on the lower structural division which in this area consists predominantly of felsic volcanic flows and lesser tuff. These rhyolites occur in two well-defined belts separated by a major diorite sill. A variety of sediments and mixed volcanic and sedimentary debris flows occur within the felsic volcanic sequence. The felsic volcanics are flanked by intermediate and mafic volcanics, chert and mixed sedimentary rocks. Four QFP rhyolite domes have been identified to date in this felsic sequense. A fifth dome has been identified in Eagle Bay rocks on the FY grid (Figure 3).


NORTH BAR PROJECT
GRID AREAS &
DRILL HOLE LOCATIONS
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2000 metres
N
basalt
chert
SC 1 GRID
chert
wackes
argillite
Slate
Creek
SC2 dome
BAR-2
BAR-1
WEST
SC
GRID
(1988)
diorite,basalt
sediment
LOWER
STRUCTURAL
DIVISION
SC3 dome
BAR-4
BAR-8 to 13
BAR-3
FENNEL
FORMATION
ANNA/SC
GRID
UPPER
STRUCTURAL
DIVISION
diorite,basalt
Sprague
Creek
rhyolite,
chert,
sediment
sediment
BAR-14
Laurel dome
BAR-18
BAR-17
BAR-15
BAR-19
diorite
basalt
sediment
Anna dome
sediment
diorite
rhyolite,
chert,
sediment
diorite
rhyolite,
chert,
sediment
Creek
FY GRID
BAR-23
BAR-20
sediment
BAR-22
BAR-21
Chip
Barriere River Fault
FY dome
andesite
EAGLE BAY ASSEMBLAGE
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FILE: D:\DWG\SCANNA
FIGURE 3

3. Pre - 1988 Exploration Highlights

To the end of 1987, 16 exploration holes had been drilled on the Bar property, primarily to test targets in and around rhyolite domes. The greatest encouragement had been in the rocks of the lower Fennel Formation north of the Barriere River where the SC-2, SC-3 and Laurel Domes were tested.

In the SC-2 area, two holes were drilled to test favourable horizons on the east flank of the dome. Bar 2 intersected a thick sequence of felsic flows exhibiting strong soda depletion (<0.5% Na_2O). These rocks are locally pyritic but generally do not show elevated metal values. One narrow interval of semi-massive pyrite occurring within a strongly altered rhyodacite flow (0.04% Na_2O, 4.24 % K_2O) shows weakly anomalous Cu, Pb, Zn, Ag and Au values over 20 cm.

In the SC-3 area, eight holes were drilled to test anomalous gold values associated with quartz and quartz pyrite stringers cutting on albitized rhyolite dome. These holes intersected numerous anomalous gold values (up to 7.51 g/T) and local sphalerite and galena associated with quartz veins. Several samples show a distinctly anomalous polymetallic signature. The highest multi-element values were encountered in Bar 11 near the north flank of the dome, where a mineralized quartz vein graded 0.58% Cu, 3.82% Pb, 4.92% Zn, 109.7 g/T Ag, 85 ppb Au and 31 ppm As over 0.45 m.

In the Laurel Dome area, Bar 14 was drilled to test an altered pyritic rhyolite near a chert-sediment contact. Surface litho samples were anomalous in Cu, K and Ba. This hole intersected a sequence of quartz phyric rhyolites with interbedded chert, tuffaceous chert and argillite. The felsic volcanics exhibit strong alteration (<1% Na_2O, >5% K_2O) and contain two intervals of anomalous Cu and Zn. One of these intervals returned an average of 1700 ppm Zn over 10 m.

4. 1988 Exploration Program

The 1988 exploration program was carried out between May 16 and October 30, 1988. This program was designed to further assess the felsic volcanic stratigraphy in the North and South Bar areas. Two large grids totalling 119 km were completed in the Alex Creek (South Bar) and West SC (North Bar) areas in order to cover major gaps in our geological coverage. Mapping, sampling and Max/Min coverage was completed on both grids and extensive soil sampling was carried out on Alex Creek. A number of smaller projects were carried out on pre-existing grids in order to obtain more detailed information in prospective areas or to complete geological, geophysical or geochemical coverage. These areas include the Wikiup, Dixon Lake, Little Dixon Lake, FY and Laurel Dome (SC-3) grids (Figure 4).

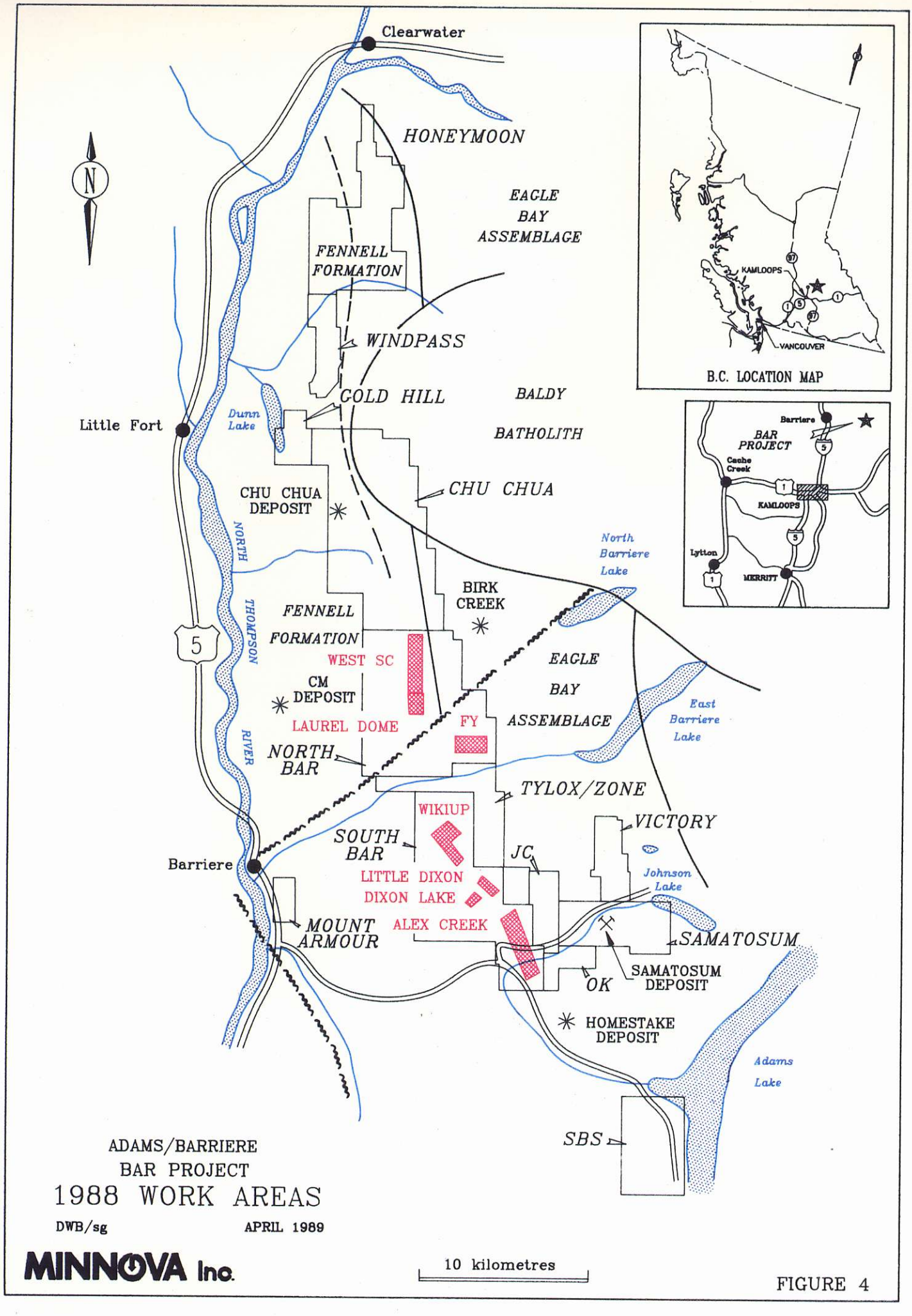
The fall drilling program consisted of nine holes (1364 M) drilled to test targets in the Laurel Dome, FY and Little Dixon Lake areas. A small backhoe trenching program was also carried out on the FY grid.

Production work on the 1988 program is summarized in Table 1. Grid mapping, trenching and drilling projects are discussed separately on the following pages.

Table 1

Bar Project: 1988 Production Summary

Linecutting:	128 line km (3 grids)
Geology:	145 line km on 5 grids, mapped @ 1:2500 19.5 line km on 2 grids, mapped @ 1:1000
Geochemistry:	553 lithos, 138 traces, 2868 soils
Geophysics:	85 line km Max/Min
Trenching:	2 trenches totalling 210 m
Drilling:	9 holes totalling 1364 m (NQ)


Clearwater
HONEYMOON
EAGLE BAY ASSEMBLAGE
FENNELL FORMATION
WINDPASS
COLD HILL
BALDY BATHOLITH
Little Fort
Dunn Lake
CHU CHUA DEPOSIT
CHU CHUA
NORTH THOMPSON RIVER
North Barriere Lake
BIRK CREEK
FENNELL FORMATION
WEST SC
CM DEPOSIT
LAUREL DOME
FY
NORTH BAR
EAGLE BAY ASSEMBLAGE
East Barriere Lake
TYLOX/ZONE
WIKIUP
SOUTH BAR
VICTORY
JC
Barriere
LITTLE DIXON
DIXON LAKE
Johnson Lake
MOUNT ARMOUR
ALEX CREEK
SAMATOSUM
SAMATOSUM DEPOSIT
OK
HOMESTAKE DEPOSIT
Adams Lake
SBS
5
N
B.C. LOCATION MAP
KAMLOOPS
VANCOUVER
BAR PROJECT
Barriere
Cache Creek
KAMLOOPS
Lytton
MERRITT
ADAMS/BARRIERE
BAR PROJECT
1988 WORK AREAS
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10 kilometres

FIGURE 4

4.1 Major Mapping Projects

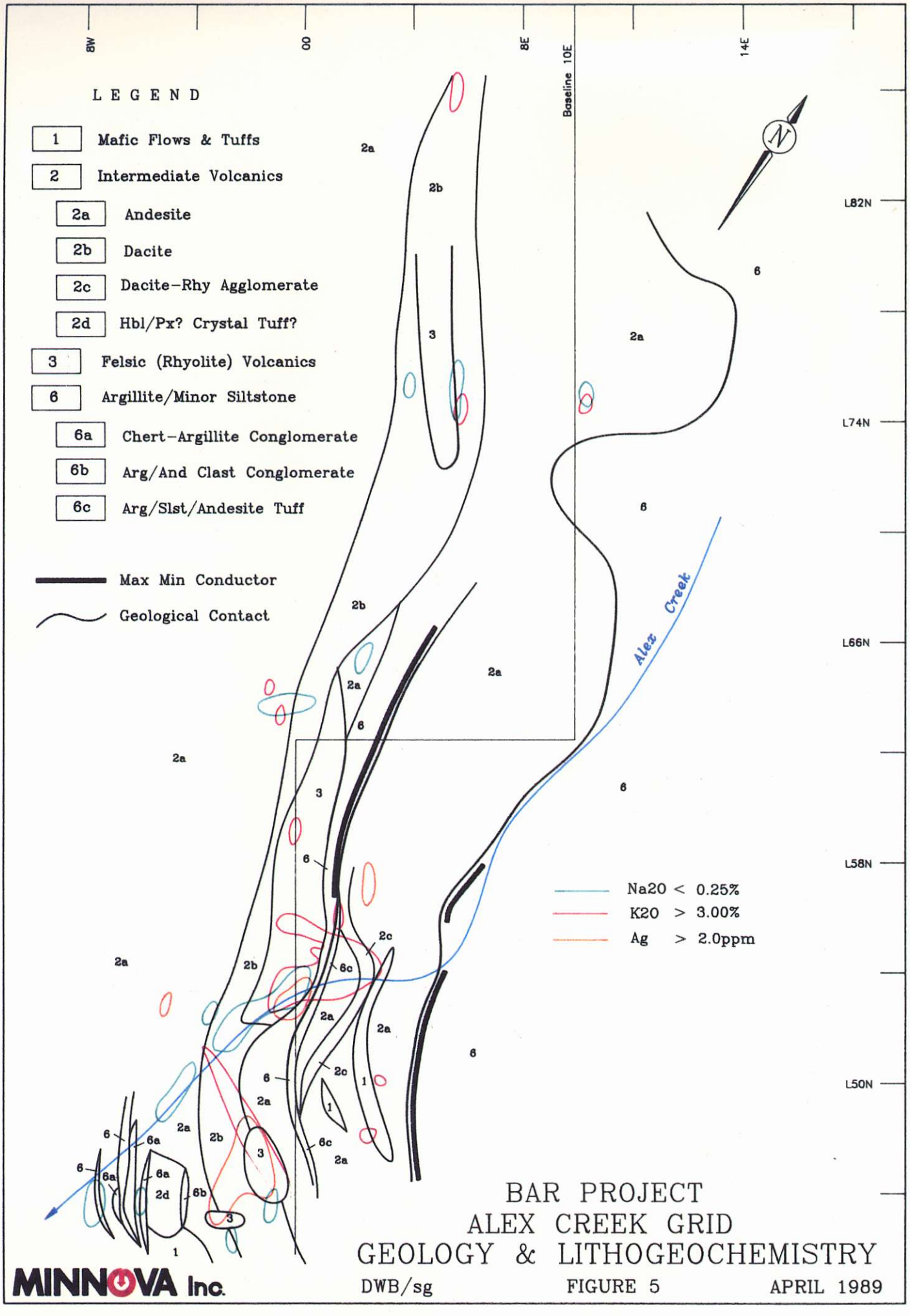
4.1.1 Alex Creek Grid

The Alex Creek Grid, totalling 63 line km, was established to cover the northwest extensions of felsic stratigraphy (Homestake package) on the OK 1 claim to the southeast. This grid covers much of the gap between the OK 1 and Little Dixon Lake grids. The Alex Creek grid was mapped at 1:2500; lithogeochemical and Max/Min coverage were also completed. Soil geochemical sampling was completed over much of the grid on at least 50 m station intervals, with 25 m intervals over geological contacts.

The Alex Creek grid is underlain by a folded sequence of sedimentary and intermediate to felsic volcanic rocks. Outcrop exposure is good in the southern third of the grid because of numerous road cuts and steep topography along Alex Creek. The northern and eastern grid areas are relatively flat lying with minimal outcrop exposure.

The geology of Alex Creek is shown schematically in Figure 5. The area is dominated by a sequence of intermediate ash tuffs and flows flanked to the northeast by a sedimentary package consisting predominantly of argillite. A sequence of felsic volcanics from 100 to 300 meters wide occurs within the andesite package and extends the entire length of the grid. This unit is predominantly dacitic in composition but three discontinuous rhyolite exposures occur within the sequence. These rhyolites are moderately to strongly sericitized and contain 5-10% quartz eyes ranging from 1-2 mm in size. A number of lenses of argillite, siltstone and epiclastic sediment occur within the volcanic package.

Volcanic rocks on the Alex Creek grid commonly contain trace to 2% pyrite and occasionally up to 10% pyrite. The



BAR PROJECT
ALEX CREEK GRID
GEOLOGY & LITHOGEOCHEMISTRY

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strongest mineralization in the area occurs in Alex Creek near the south end of the grid where intermediate volcanics contain up to 20% stratiform pyrite over a width of about one metre. Significant base metal sulphide mineralization was not detected, although minor amounts of malachite occur locally with pyritic intermediate volcanics. A quartz vein containing 1% chalcopyrite and 2-4% malachite occurs in an altered andesite just off the grid at about L65N.

Although significant base metal sulphide mineralization was not encountered in mapping, compilation work suggests that the Alex Creek grid area is highly prospective for the discovery of polymetallic massive sulphides. Several areas of coincident sodium depletion, potassium enrichment and weakly anomalous Ag in rock samples have been outlined in the felsic volcanic stratigraphy (Figure 5). Sodium in these areas is very strongly depleted (<0.25% Na_2O). In addition, a number of Max/Min conductors, locally with coincident soil and lithogeochemical anomalies occur on this grid.

4.1.2 West SC Grid

The West SC grid, totalling 53 line kilometres was established west of the existing SC-3 grid in order to cover the northern strike extension of the felsic volcanic belt containing the Anna and Laurel Domes. This area was of particular interest because of the presence of zinc mineralization in the Laurel Dome area (Bar 14) immediately to the south. The West SC grid was mapped at a scale of 1:2500 and lithogeochemical sampling was completed. Max/Min coverage was completed over areas of volcanic stratigraphy but was not undertaken in areas of massive diorite which underlie much of the grid.

The West SC grid is dominated by a major diorite complex which occupies the entire west side of the grid and much of the northeast side. The diorite is generally medium to coarse grained

and forms prominent cliffs and ridges with good outcrop exposure.

The central part of the grid is occupied by a poorly exposed sequence of chert, siltstone, and rhyolite flows. The sequence is up to about a kilometre wide at the south end of the grid and narrows to about 300 m at the north end. Because of minimal exposure, the definition of lithologic units and the relationship between these units is difficult to determine. Much of the outcrop in the area is of green chert which is locally interbedded with green siltstone. These cherts, which are primarily exposed along the central axis of the volcanic-sedimentary sequence, commonly contain trace to 3% pyrite and show anomalously high barium (1021 to 4315 ppm Ba). Weakly elevated Ag values (> 2 ppm Ag) also occur in several samples.

Rhyolite exposure on the West SC grid is minimal and lithogeochemical analyses suggest that many of these rocks are very siliceous and may at least in part be cherty tuffs. No strongly developed alteration trends or anomalous base metal values are evident from chemical analyses.

Three well-defined Max/Min conductors occur on the West SC grid. The strongest conductor occurs in the south part of the grid on strike with the Laurel Dome. The other two conductors occur in the central part of the grid on the east and west flanks of a well-defined chert sequence extending from L98N to L108N.

Although minimal outcrop exposure makes assessment of the West SC grid difficult, this area is thought to hold good exploration potential, particularly in the area adjoining the Laurel Dome.

4.2 Fill-in and Detailed Work

4.2.1 Wikiup Grid

Prior to 1988, work completed on the Wikiup grid consisted of geological mapping, Max/Min surveying, soil geochemistry and backhoe trenching to test Max/Min and soil geochemical anomalies. The 1988 program was designed to further develop this property by completing soil geochem coverage over the existing grid and by extending grid coverage and mapping to the southwest to cover the strike extensions of previously defined anomalies (Figure 2). A total of 12 km of new grid were established, mapped at 1:2500 and litho sampled during 1988. This new grid has minimal outcrop exposure consisting predominantly of mafic lapilli tuff, black argillite and siltstone. volcanic rocks commonly show anomalously low K_2O (< 0.2% K_2O) and local weak to moderate soda depletion (<2% Na_2O). Base and precious metal values are low.

A total of 628 soil samples were collected on the Wikiup grid at 25 m station intervals, and analyzed fer Cu, Pb, Zn, Ag, Au, As and Ba. In general, soil geochem values are only weakly anomalous. With exception of Zn, anomalies are generally sporadic and do not show a clear correlation with geology. Anomalous Zn values are more widespread than other anomalies and show good line to line correlation. These anomalies are thought to primarily reflect changes in the composition of the underlying bedrock as most high Zn values are associated with intermediate volcanics.

From an exploration viewpoint, it is of particular interest that most of the more strongly anomalous Zn values occur at or close to the contacts between intermediate and felsic volcanics. This may be related to surface dispersion and "dumping" of metals at pH barriers occurring at geologic contacts. More significantly, it may reflect Zn enrichment at a depositional

interface and hence pose a target for further exploration. The association of one of the strongest Zn anomalies with a Max/Min conductor is of particular interest and detailed follow-up is warranted in this area.

4.2.2 Dixon Lake Grid

A short program of 1:2500 scale geological mapping (11 km) was carried out on the Little Dixon Lake grid which was initially mapped in 1984. The 1988 program was undertaken to fill-in geological control in a part of the grid where work was not completed during the initial program.

The map area (Figure 2) is underlain by an easterly dipping sequence of mafic volcanics and sediments which is intruded by gabbro. These rocks are un-mineralized except for minor pyrite. Two areas of soda depletion with associated carbonate alteration occur in a mafic flow package near a major sediment-volcanic contact. Although this is of some interest as a massive sulphide target, the general lack of mineralization and strong alteration makes this a low priority area.

4.2.3 Little Dixon Lake Grid

A brief program of geologic mapping and sampling was carried out over the felsic dome in the Little Dixon Lake area in order to obtain better control for drill target definition.

Detailed mapping suggests that the Little Dixon Lake dome is a fine grained, felsic flow with possible local intrusive phases. Based on TiO_2 content, most of these rocks are in the dacite range. The dacite flows are flanked by a package of felsie tuff and tuff breccia. Limited lithogeochemical sampling in the pyroclastics suggests that they are rhyolitic in composition. one of these is close to the contact with the pyroclastic rocks.

Two areas of soda depletion (<1% Na_2O) occur within the dacite flow; one of these is close to a pyritic zone.

The Little Dixon Lake grid contains a package of felsic volcanics with a recognizable interface between dacitic and rhyolitic rocks. Zones of pyrite with associated alteration occur at or near this contact and may be significant in terms of syngenetic mineralizing processes. Further work is warranted in this area.

4.2.4 FY Grid

The FY grid was initially mapped in 1987 as a series of felsic ash and lapilli tuffs. The results of this preliminary program outlined three areas of anomalous lithogeochemistry corresponding to either soda depletion (< 2% Na_2O), high Ag (> 1 ppm) or high Au (25 ppb and 450 ppb). These areas were mapped and sampled in detail during the 1988 season. In addition, Max/Min surveying which was not completed in 1987 on the southern part of the grid was completed in 1988. Extensive soil coverage (477 samples) was also completed.

The 1988 program resulted in a re-interpretation of the geology of the FY grid (Figure 6). The grid is underlain by a northwest-striking, easterly dipping sequence of rhyolitic to andesitic volcanics flanked to the east by a major package of sedimentary rock. The volcanic sequence consists predominantly of dacitic ash tuff. Two narrow units of andesitic tuff and a narrow rhyolite tuff unit occur within this sequence. All of these units locally contain lapilli size fragments. Trace to 2% pyrite is common throughout the grid.

An FQP rhyolite dome was defined in the southeast corner of the grid. This unit contains 15-25% feldspar crystals and 3-10% quartz eyes from 0.5 to 2 mm in size.

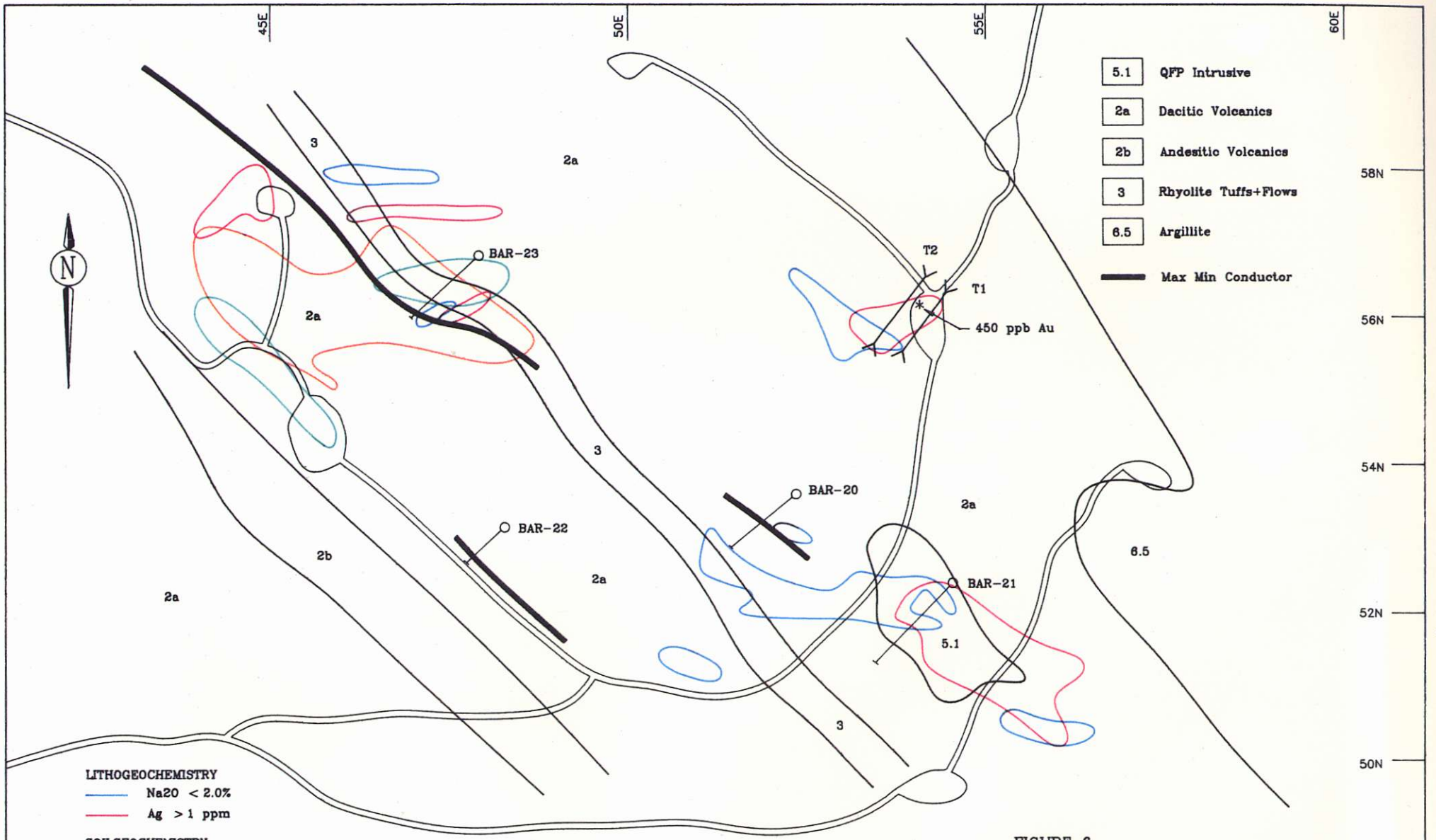

FIGURE 6

FY GRID

GEOLOGY & LITHOGEOCHEMISTRY WITH TRENCH & DRILL HOLE LOCATIONS

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Lithogeochemical and soil geochemical surveys have outlined a number of anomalous areas summarized on Figure 6. These anomalies are locally coincident with Max/Min conductors.

4.2.5 Laurel Dome

A program of detailed mapping (1:1000) and lithogeochemical sampling was carried out in the Laurel Doms area between lines 75N and 86N. In order to facilitate this mapping, 12 km of new line was flagged in to establish 50 m line spacing overall and 25 m spacing in areas of abundant outcrop. Four hundred and eighty three soil samples were also taken in this area. This work is currently being assessed.

4.3 Trenching (Figure 6)

A brief program of backhoe trenching was carried out in the FY grid area on L54E at 56N. Two trenches totalling 230 m were excavated to test an area of felsic volcanics and interbedded sediments where anomalous Au (450 ppb), Ag (>1 ppm) and soda depletion (<2% Na_2O) anomalies were outlined during 1987 and 1988. These trenches intersected a sequence of interbedded argillite and rhyolitic to dacitic volcanics containing small quartz eyes. Felsic volcanics in these trenches show weak to moderate soda depletion (1-2% Na_2O) and local weakly anomalous Zn, Ag and Ba values. A narrow heterolithic debris flow with argillite and volcanic clasts near the south end of Trench 1 exhibits a weakly anomalous polymetallic signature (Ag, As, Ba, Cu, Pb, Zn).

TABLE 2

LAUREL DOME 1988 DRILL HOLE SUMMARY

DDH	DATE		LOCATION			ELEVATION approx. (m)	AZIMUTH	INCLIN	TOTAL DEPTH (m)	CORE DIAM.	ACID DIP TESTS		OBJECTIVE	RESULTS
	Start	Finish	CLAIM	GRID	STATION						DEPTH (m)	INCL.		
Bar 17	Oct 2	Oct 5	SC-3	WEST SC	L88+00n, 91+15E	1460	270	-45	197.2	NQ	32.6	-45	To test the strike extension of Zn mineralization encountered in Bar 14-300 m stepout to North. Also test a Max/Min conductor.	Intersected an upper sequence dominated by argillite (possible conductor) and a lower sequence of massive rhyolite. The rhyolite is anomalous in Cu (1310 ppm and Zn 2300 ppm/2.7 m). Moderate sodium depletion becoming more depleted with depth.
											70.1	-44		
											109.1	-44		
											134.1	-44		
											166.7	-43		
											195.1	-40		
Bar 18	Oct 5	Oct 9	SC-3	WEST SC	L86+00N, 91+75E	1440	270	-45	150.0	NQ	38.7	-50	as above, 100 m stepout north of Bar 14	Intersected an interbedded sequence of argillite and sedimentary debris flows containing chert, argillite and sandstone clasts.
											53.6	-50		
											78.3	-50		
											104.8	-50		
											145.4	-50		
Bar 19	Oct 9	Oct 11	SC-3	SC-3/ANNA	L85+00N, 91+60E	1430	270	-50	120.0	NQ	44.2	-50	To test down dip extension of Zn mineralization encountered in Bar 14	Intersected massive rhyolite and heterolithic debris flows containing chert, rhyolite and argillite clasts. Minor disseminated pyrite, pyrrhotite and chalcopyrite occur throughout the hole. Tr sp and rhyolite clasts w/ stringer pyr-po-cp occur in a debris near the bottom of the hole.
											71.3	-49		
											94.8	-49		

								Total	467.2					

TABLE 3

FY GRID 1988 DRILL HOLE SUMMARY

DDH	DATE		LOCATION			ELEVATION approx. (m)	AZIMUTH	INCLIN	TOTAL DEPTH (m)	CORE DIAM.	ACID DIP TESTS		OBJECTIVE	RESULTS
	Start	Finish	CLAIM	GRID	STATION						DEPTH (m)	INCL.		
Bar 20	Oct 12	Oct 13	FY 2	FY	L52+50E, 53+50N	935	235	-45	154.5	NQ	32.6 77.7 152.4	-50 -48 -46	1. Test a coincident Max/Min conductor + Na2O depletion zone occuring within a package of dacitic volcanics approx. 50 m structurally above a rhyolite - dacite contact. 2. Test the rhyolite-dacite contact @ depth.	Intersected a uniform sequence of dacite tuffs with a relatively narrow rhyolite interval. Conductor is associated with graphitic argillites.
Bar 21	Oct 14	Oct 15	FY 2	FY	L54+25E, 52+35N	830	235	-45	151.5	NQ			Drill through a QFP rhyolite-dacite dome in an area of overlapping Na2O depletion and Ag enrichment.	Intersected QFP rhyolite flow and dacite tuff. No anomalous trace metals
Bar 22	Oct 16	Oct 18	FY 2	FY	L48+35E, 53+08N	860	235	-45	120.7	NQ	31.1 84.1 114.6	-48 -48 -48	Test a Max/Min conductor with a weak coincident Cu soil anomaly.	Intersected dacitic tuffs with local trace pyrite and pyrrhotite. Conductor is associated with graphitic argillite
Bar 23	Oct 18	Oct 19	FY 2	FY	L48+00E, 56+73N	980	235	-45	174.2	NQ	85	-48	Test a strong coincident Cu and Zn soil anomaly.	Intersected a narrow interval of epigenetic (?), massive sulphide mineralization grading 0.113% Cu, 5.46% Pb, 13.20% Zn, 203 g/T Ag, and 0.91 g/T Au over 0.40 m. Conductor is associated with graphitic argillite
								Total	600.9					

TABLE 4

LITTLE DIXON LAKE 1988 DRILL HOLE SUMMARY

DDH	DATE		LOCATION			ELEVATION approx. (m)	AZIMUTH	INCLIN	TOTAL DEPTH (m)	CORE DIAM.	ACID DIP TESTS		OBJECTIVE	RESULTS
	Start	Finish	CLAIM	GRID	STATION						DEPTH (m)	INCL.		
Bar 24	Oct 26	Oct 28	Bar 5	Little Dixon Lk.	L101N,16+25E	1130	225	-50	150.6	NQ	6 90.5 145.4	-50 -50 -50	To test the eastern margin of a QFP Dome near a felsic volcanic-sediment transition. Coincident high Zn soil anomaly (358 ppm)	Intersected dacitic to rhyolitic ash + lapilli tuffs. Rhyolites are locally pyritic with trace cp and locally show strong alteration (Na2 depletion). Base and precious metal values are low.
Bar 25	Oct 29	Oct 30	Bar 5	Little Dixon Lk.	L102+85N,9+15E	1220	225	-50	145.4	NQ	63	-50	Coincident Cu, Pb, Zn soil anomaly and Max/Min conductor in a mixed volcanic (intermediate and felsic) and sedimentary package	Intersected a package of sediments + tuffaceous sediments bounded above and below by mafic volcanics. The sedimentary package contains 5-10% qtz veins and 1-2% pyrite and exhibits patchy silicification and seritization. Base and precious metal values are low.
								TOTAL	296					

4.4 Drilling

Nine holes totalling 1364 m were drilled on the Bar property in 1988. Three holes were drilled in the Laurel Dome area, four holes on the FY grid and two holes in the Little Dixon Lake area. The objectives and results of this program, are summarized in Tables 2, 3 and 4.

4.4.1 Laurel Dome (Bar 17, 18, 19) (Figure 3)

Three holes totalling 467 m were drilled in the Laurel Dome area to test the extensions of the Zn mineralization encountered in Bar 14. Bar 17 and 18 were drilled to test the strike extensions of this mineralization 300 m and 100 m N respectively of Bar 14. These holes were also collared to test a Max/Min conductor thought to be dipping easterly at an intermediato angle. Bar 19 was collared behind Bar 14 to test the down dip extension of the zinc mineralization.

Bar 17 intersected a sequence of interbedded argillite, siltstones and fine grained, massive rhyolites. A heterolithic debris flow containing chert, argillite and rhyolite clasts occurs at the top of the hole. Two intervals of massive rhyolite are present. A narrow upper interval extending from 36.9 to 47.1 m contains 1% pyrite and trace chalcopyrite and is anomalous in Zn (up to 610 ppm). The lower interval extends from 123.4 m to the end of the hole. This interval contains trace to 1% pyrite and trace amounts of chalcopyrite, sphalerite, galena and pyrrhotite. A number of quartz veins cutting the interval contain trace amounts of galena and chalcopyrite.

Although the rhyolite is not strongly mineralized, Cu and Zn are distinctly anomalous (up to 1490 ppm Zn, 1590 ppm Cu) and show a well-defined zonation with Cu enriched downhole.

Furthermore, the rhyolite shows local potassium enrichment and soda depletion with Na_2O decreasing downhole to 0.74%.

Bar 18 intersected a sequence of interbedded argillite and sedimentary debris flows containing argillite, chert and sandstone clasts.

Bar 19 intersected argillite and massive rhyolite in the upper half of the hole and a heterolithic debris flow in the lower half. This debris flow contains rhyolite, argillite and chert clasts. Trace amounts of pyrrhotite, pyrite and chalcopyrite occur throughout both the massive rhyolite and the debris flow. Towards the base of the hole, the debris flow contains a number of small rhyolite clasts with pyrrhotite-chalcopyrite stringers. A narrow rhyolite flow or possible large fragment also occurring near the bottom of the hole contains 4-5% pyrrhotite, 1-2% pyrite and trace sphalerite and exhibits moderate to strong soda depletion (0.5% Na_2O).

4.4.2 FY Grid (Bar 20, 21, 22, 23) (Figure 3)

Four holes totalling 601 m were drilled on the FY grid to test geological, geophysical and geochemical targets outlined during 1988 (Figure 6).

Bar 20 was drilled in the dacite tuff sequence just northwest of and along strike from the QFP dome. The hole was collared to test a short strike length Max/Min conductor with associated Na_2O depletion identified in bedrock samples. Bar 20 intersected a fairly uniform sequence of dacite tuff with a relatively narrow rhyolite interval in the upper half of the hole. These volcanics generally contain only trace amounts of pyrite. Weak Na_2O depletion occurs in a rhyolitic to dacitic sequence between 40.80 and 59.0 m. Narrow intervals of argillite debris flow and graphitic argillite within the volcanic sequence are thought to be the source of the Max/Min conductor. Weakly

anomalous base and precious metal values are associated with the rhyolite and argillite interbeds.

Bar 21 was drilled to test the QFP dome in an area of overlapping Na_2O depletion and Ag enrichment in bedrock samples. The upper half of the hole is a fine to medium grained QFP flow which is rhyolitic in composition (<0.3% TiO_2). This unit contains trace to 1% pyrite and shows local moderate Na_2O depletion. The lower half of the hole is a relatively uniform dacite tuff sequence. Trace element analyses from this hole are not anomalous.

Bar 22 was drilled in the western part of the grid to test a short strike length Max/Min conductor with a coincident weak soil geochemical anomaly in an area of dacitic volcanics. This hole intersected a monotonous sequence of dacitic tuffs with local trace pyrite and pyrrhotite. A narrow graphitic argillite unit occurring at a downhole depth of about 50 m is thought to be the source of the Max/Min conductor. Trace element analyses from this hole are not anomalous. However, it may be significant that the dacitic volcanics immediately above and below the argillite unit exhibit weak Na_2O depletion.

Bar 23 was drilled in the northwest part of the grid in an area of rhyolitic and dacitic volcanics with argillite interbeds. The hole was drilled to test a strong Cu-Zn soil anomaly with adjacent Na_2O depletion and Ag enrichment in bedrock samples. The hole also tested a coincident long strike length Max/Min conductor. The upper part of the hole intersected a relatively monotonous sequence of dacite tuffs with trace amounts of pyrite. A sequence of sericite-altered tuffs occurring between 72.80 and 94.10 m contains 5% disseminated pyrite. A well developed dacite QFP flow flanked by sericitic and graphitic argillite units (Max/Min conductor) extends from 94.10 m to 139.5 m. This unit is massive and strongly quartz porphyritic and contains trace amounts of pyrite. The bottom 35 m of the hole encountered medium to coarse grained andesite feldspar crystal

tuff. Potentially significant Pb-Zn mineralization consisting of minor medium brown sphalerite and galena occurs in the bottom 20 m of the hole. This mineralization generally occurs in trace amounts associated with narrow quartz veins. At the top of this interval is a 4-6 cm zone of massive, banded, coarse grained sphalerite and galena. This mineralization is not clearly associated with quartz veins, although its coarse grain size is consistent with vein type mineralization. An assay sample taken over a 40 cm width across this zone shows a distinctly polymetallic signature, grading 0.133% Cu, 5.46% Pb, 13.20% Zn, 203 g/T Ag and 0.91 g/T Au. While this mineralization is probably epigenetic in origin it is somewhat enigmatic and the possibility that it represents re-crystallized syngenetic mineralization must be considered. This possibility is suggested by the banded texture of the mineralization, by its occurrence at a possible transition from relatively fine to relatively coarse grained tuff and by a core to "bedding" angle which parallels stratigraphy.

4.4.3 Little Dixon Lake Grid (Bar 24, 25) (Figure 2)

Two holes totalling 296 m were drilled on the Little Dixon Lake grid to test targets outlined during 1987.

Bar 24 was drilled in the eastern felsic volcanic package to test the eastern margin of the dacite dome. The hole was collared near a felsic volcanic-sediment contact and tested the highest point of a broad Zn soil anomaly (358 ppm Zn). The hole intersected several metres of intermediate to mafic volcanic flows before entering a package of dacitic to rhyolitic ash and lapilli tuffs extending from 15.5 m to 150.60 m (TD). These rocks are dacitic in appearance, but lithogeochemistry suggests that a central zone extending from about 46 m to 139 m is rhyolite; averaging about 69% SiO_2 and < 0.16% TiO_2. This rhyolite package includes several narrow intervals up to 2.5 metres, of stringer

pyrite and locally trace chalcopyrite, but trace element analyses of base and precious metals are uniformly low. Samples from the top of the felsic package show strong soda depletion and locally, potassium enrichment consistent with hydrothermal alteration. Patchy silicification and sericite alteration have been noted in drill core.

Bar 25 was drilled in the western mafic volcanic-sediment package to test a coincident Max/Min conductor and Cu-Pb-Zn soil anomaly. The hole was collared in basalt but entered a sequence of argillite, argillite debris flows and tuffaceous sediments between 6.1 and 125.3 m. Patchy sericitization and silicification occur throughout this sequence. This interval also contains 5-10% quartz veins and 1-2% pyrite. Strong soda depletion was noted in one sample (0.28% Na_2O) but base and precious metal values are generally low. Weakly elevated Cu, Pb and Zn values occur towards the top of this sedimentary package. The Max/Min conductor is thought to reflect the locally graphitic nature of argillite in this sequence.

An interbedded basaltic unit occurs toward the base of the section between 106.9 m and 120.0 m. This basalt represents a gradation into the basaltic sequence intersected at the end of the hole between 125.30 and 145.4 m.

5. Summary and Conclusions

Work carried out to date on the Bar property has concentrated primarily on felsic volcanic stratigraphy in both the South and North Bar areas. The 1988 mapping program has brought the project to the point where these rocks have been fairly well defined over the entire length of the property. A review of data from mapping projects carried out in the area over the past several years suggests very clearly that these rocks hold excellent

potential for the discovery of polymetallic massive sulphide mineralization.

In many respects, this project is in a relatively early stage of exploration. To date, only 25 holes have been drilled in a complex package of volcanic rocks which extends over a strike length of some 22 kilometres. Fifteen of these holes have been drilled around felsic volcanic centres in lower Fennel Formation rocks of the north Bar area. Six holes have been drilled in predominantly felsic volcanic rocks of the Eagle Bay Assemblage on the Little Dixon and FY grids. The final four holes were drilled in a sequence of Eagle Bay sediments and mafic volcanics in the Dixon-Little Dixon Lake area.

The greatest encouragement so far has been in the felsic volcanic rocks of the Lower Fennel Formation. While this may to some extent reflect a greater concentration of drilling, results obtained in this area must be considered very encouraging, particularly when viewed in the context of a long term exploration commitment. This highly prospective felsic stratigraphy containing at least four volcanic centres has been reasonably well defined over a strike length of 6.5 kilometres. Three of the four domes have been drill tested with varying success, but all have shown the presence of moderate or strong hydrothermal alteration and a distinct polymetallic signature in (weakly) mineralized areas. Extremely well deveioped, coarse grained quartz porphyritic rhyolites, which have a clear spatial and genetic relationship to mineralization in a number of massive sulphide camps, are also present in this area.

The potential of these volcanics is best exemplified in the Laurel Dome area where three out of four holes have encountered disseminated sulphides including pyrite, sphalerite, chalcopyrite, galena and pyrrhotite. Lithogeochemical analyses of these rocks

commonly show anomalous Cu and Zn values, and locally high Au and Ag values. Zones of moderate to strong soda depletion are also evident in these holes.

Base metal sulphide mineralization in the Laurel Dome area has been outlined over a strike length of 300 m and across a substantial thickness, which suggests that mineralizing processes were very active. Much of this mineralization is hosted in massive rhyolites which may represent either flows or intrusives. The abundance of pyrrhotite-chalcopyrite, including its presence as stringers is consistent with proximal high temperature mineralizing processes within a flow-dome complex. Further work is required to define basinal areas appropriate for the accumulation of base metal sulphides. That such basins exist is suggested by the abundance of sedimentary and volcanic debris flows in the area and by very rapid facies changes indicated by drilling.

Exploration in the Eagle Bay stratigraphy has thus far been less successful overall than that in the Fennel Formation. Nevertheless, the potential of these rocks should not be downplayed, particularly in view of the very limited drilling which has taken place. A number of excellent targets exist in the South Bar area and on the FY claim. Indeed, the best intersection to date on the Bar property has been in Eagle Bay rocks on the FY grid (Bar 23). Other areas of particular interest include the Dixon Lake area and the south part of the Alex Creek grid where felsic volcanic rocks show extremely strong soda depletion.

6. Recommendations

The Bar property has reached the stage where a number of excellent drill targets and prospective areas have been outlined both north and south of the Barriere River. At the same time, there are significant gaps in both our coverage and our

understanding of these rocks, particularly in the South Bar area. Continued development of the Bar property must achieve a balance between detailed work and drilling in known areas and continued grid and reconnaissance mapping to define prospective stratigraphy.

Some of the more significant tasks which should be addressed in the longer term are as follows:

1. Define the eastern limit of felsic volcanic stratigraphy in both the South and North Bar areas.

2. Establish fill-in coverage in prospective areas including the Wikiup-Little Dixon and FY-Anna areas.

3. Explore the northwest strike extension of felsic stratigraphy outlined on the Alex Creek grid. It appears that these rocks may strike into the area between the Dixon Lake and Little Dixon Lake grids where no control has been established.

4. Reconnaissance mapping and sampling to assess the potential of Upper Fennel rocks in the North Bar area for Chu Chua-type mineralization.

Recommendations for short term work on the property are as follows:

1. Detailed compilation work and follow-up drilling should be carried out in the Laurel dome area. Drill target selection should be preceded by an IP survey to define more subtle pyritic conductors occurring either at major stratigraphic contacts or at less well-defined breaks within the felsic volcanic sequence. This survey should extend between about L71N and L90N (approx, 20 line km).

Holes Bar 17 and 19 should be extended to intersect mappable stratigraphic contacts. Both holes terminated in felsic rocks which were becoming increasingly anomalous with depth.

2. Polymetallic mineralization encountered in Bar 23 on the FY grid should be followed up with more mapping, sampling and drilling. The FY grid should be extended to the northwest to increase our coverage over volcanic stratigraphy (20 line kilometres).

3. Grid coverage in the Fennel Formation rocks (N. Bar) should be extended to cover gaps in the eastern felsic volcanic belt (20 line kilometres).

4. Detailed mapping and sampling should be carried out to follow up anomalous areas of the Alex Creek grid, prior to drill target definition. In addition, new roads and clear cuts established in the area during the past year should be mapped and prospected.

5. Reconnaissance mapping and sampling should be carried out in the South Bar area to define the eastern limit of the felsic stratigraphy in the Wikiup and Little Dixon Lake areas. To some extent, this will be achieved through our work on the new Zone-Tylox option, especially the Dixie 2 claim. A grid should be established on the SW corner of Dixie 2 to cover felsic volcanic stratigraphy and a possible rhyolite dome noted during earlier reconnaissance mapping. Grid coverage will be contingent on the results of reconnaissance work (say 40 km).