FALCONBRIDGE LIMITED
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1988 INTERIM DRILLING REPORT

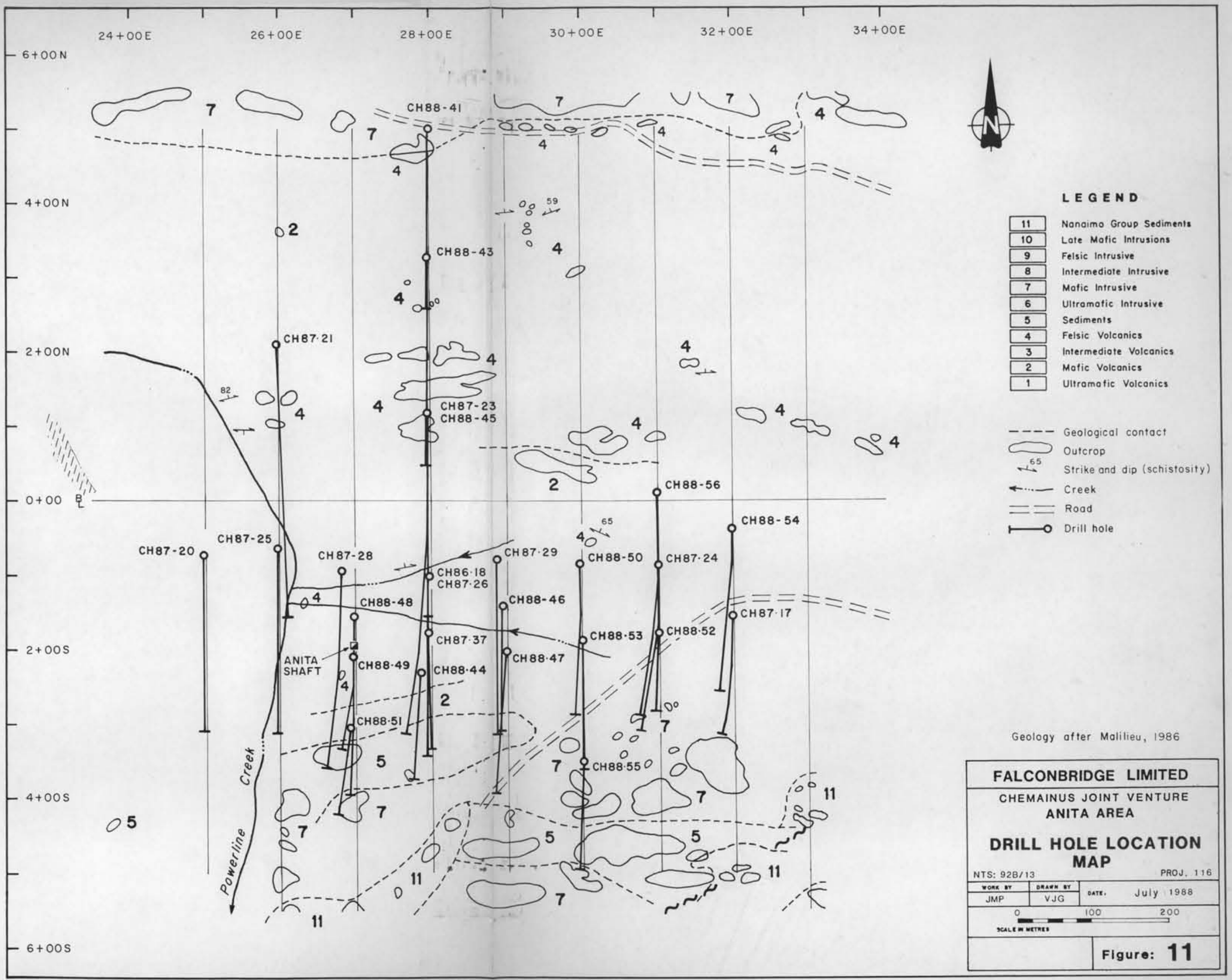
CHEMAINUS JOINT VENTURE

PROJECT 116, NTS 92B /13W

VOLUME 1 of 3

SEPTEMBER, 1988

FALCONBRIDGE LIMITED
202 - 856 Homer Street
Vancouver, B.C. V6B 2W2



Geology after Malilieu, 1986

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CHEMAINUS JOINT VENTURE
ANITA AREA

DRILL HOLE LOCATION MAP

NTS: 92B/13 PROJ. 116

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JMP	VJG	July 1988

0 100 200
SCALE IN METRES

Figure: 11

1988 INTERIM DRILLING REPORT

ON THE

CHEMAINUS JOINT VENTURE

PROJECT 116

Situated 14 km west of Chemainus, B.C.

in the Victoria Mining Division

45 53'N, 123 50'W

NTS 92B/13W

September 1988 Vancouver, B.C.

David Money

John Pattison

Stan Clemmer

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SUMMARY AND CONCLUSIONS

The first phase of diamond drilling on the Chemainus Project commenced on April 4, 1988 and was completed on June 26, 1988. A total of 10,187 metres in 35 holes was drilled. The drilling was carried out in five areas on the property as follows.

1) Anita Area
2) Anita East Area (PEM anomaly area)
3) Powerline Area
4) Holyoak Area
5) Silver Creek Area

The best results to date have been obtained in the Anita area. All significant mineralization occurs in a pyritic, hydrothermally altered, barium-rich, locally base metal enriched felsic tuff which is referred to as the Anita Active Tuff. The mineralization is always located within 10 metres of a felsic-mafic contact at the top of the Anita Active Tuff. This felsic-mafic contact is termed the Anita Horizon. The Anita Horizon has been traced by drilling for at least 2400 metres along strike from line 25E in the Anita Area, east to line 49E at the Abermin-Laramide claim boundary. Geological mapping indicates that the horizon may extend another 2500 metres to the west of line 25E. Only 15% of the lithogeochemical samples of the Anita Active Tuff between lines 27E and line 32E in the Anita Area are sodium depleted. This may suggest that the mineralization in the Anita Area is distal to the hydrothermal system which produced it. The most significant intersections on the Anita Horizon are as follows.

		Length (m)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)
CH88-49	27+00E	4.9	2.30	3.66	0.49	73.4	1.90
(includes)		2.7	2.98	5.99	0.84	101.9	2.53
CH87-37	28+00E	5.0	1.64	1.42	0.10	28.8	0.70
CH86-18	28+00E	2.0	2.89	0.06	<0.01	15.4	0.24
CH88-50	30+00E	2.0	0.44	3.94	--	29.4	2.05
CH88-56	31+00E	6.8	0.45	1.55	0.14	18.4	0.82
(includes)		1.8	0.67	3.42	0.41	43.2	2.14

Three holes totaling 1027.8 metres were drilled in the Anita East area to test a downhole pulse EM anomaly and to

test the Anita Horizon across the east half of the Chip 1 claim. The pulse EM anomaly is caused by a 0.5 to 1.0 metre thick sheet of pyrrhotite-chalcopyrite-pyrite mineralization that has been traced for 300 metres along strike and 200 metres down dip. This mineralization is hosted by a 1 to 20 metre thick felsic lapilli tuff within mafic tuffs. The host rocks are not enriched in barium or hydrothermally altered. The mineralization occurs north of the Fulford Fault Splay and is not in the same stratigraphic package of rocks that hosts the Anita Horizon. The Anita Horizon was intersected south of the Fulford Fault Splay by all three holes. The Anita Active Tuff is hydrothermally altered and locally contains anomalous base and precious metal mineralization. Of particular interest is the high gold content in all holes. Hole CH88-40 intersected 15.4 metres of 160 ppb gold. The alteration and nomalous geochemistry indicates that economic massive sulphide mineralization may be present in this area.

Two holes (562.0 m) were drilled midway between the Anita area and the Anita East area. Hole CH88-57 was drilled to test the updip extension a 40cm zone of 4.8 g/t gold intersected by hole CH87-31. The hole intersected the Anita Active Tuff but failed to intersect any significant mineralization. Hole CH88-58 was drilled to test a very strong IP anomaly 500 metres south of the baseline. The IP anomaly appears to be caused by local concentrations of 10 to 15% ilmenite in gabbro and/or a pendant of argillaceous sediments.

A single hole was drilled to test a coincident shallow and deep IP anomaly near the powerline 700 metres north of the Anita area. The IP anomaly is caused by local concentrations of 10 to 15% ilmenite in gabbro. A second IP anomaly is present just to the south of the drill tested anomaly. This second anomaly extends for 700 metres along strike from line 26E to 33E, 400 metres north of the baseline. It was intersected by stratigraphic drill hole CH88-41 on line 28E. The anomaly is caused by pyritic altered felsic tuffs that contain less than 1% Na2O over 150 metres. The felsic tuffs also contain 400 ppm zinc over 11.5 metres. This anomalous interval of stratigraphy occurs near the north edge of the felsic volcanics and may correlate with Abermin's Randy zone and warrants further work.

Five holes were drilled on the north half of the Holyoak 3 claim with a combined length of 1421.0 metres. The holes were drilled to complete a stratigraphic section and test IP chargeability anomalies in an area of altered felsic volcanics. The drilling outlined a 200 metre wide zone of sodium depletion within the felsic volcanics. Surface trenching indicates that the alteration zone extends for at least 800 metres across the Holyoak 3 claim. Within this zone of intense hydrothermal alteration there is a narrow zone of zinc mineralization that contains up to 2.04% Zn over 50cm. It

appears that this zinc mineralization is the extension of Abermin's Randy zone onto the Holyoak 3 claim. The alteration zone merits further exploration.

A total of 2495.0 metres in eight holes was drilled at Silver Creek. The objectives of the drilling were to trace zinc mineralization intersected in 1985, test IP chargeability anomalies and develop a stratigraphic section. Drilling toward the north at Silver Creek intersected a predominantly mafic sequence that grades into a mixed felsic- mafic sequence to the south. A 30 metres wide zone of sodium depletion within pyritic felsic tuffs is present on line 25W. The zone dips steeply north and is not enriched in base metals. The alteration occurs 50 to 100 metres south of the northern felsic-mafic contact and may correlate with the Randy Zone. The IP chargeability survey indicates that this zone of alteration extends for 1000 metres from line 20W to line 30W. The anomalies tested were accounted for and a stratigraphic model was put together. The zone of alteration intersected on line 25W represents a potential massive sulphide host horizon and further work is warranted along strike.

In conclusion the first half of the 1988 Chemainus program has defined two stratigraphic intervals that have massive sulphide potential. The first is the Anita Horizon and associated Anita Active Tuff, that are located along the southern limit the felsic volcanics. Drilling has traced the Anita Horizon for 2500 metres across the Chip 1 claim and geological mapping indicates that it may extend for another 2500 metres across the Chip 2 claim.

The second is a 20 to 200 metre wide zone of sodium depletion within felsic tuffs that is located near the northern limit of the felsic volcanics south of a felsic-mafic contact. The northern zone has been detected north of the Anita area on the Chip 1 claim, is probably the host rocks for Abermin's Randy zone, has been traced for 800 metres on the Holyoak 3 claim, and may extend into the Silver Creek area. If all these zones correlate then a six kilometre strike length is indicated; two kilometres of which are located on Abermin's ground.

The current structural interpretation for the Chemainus area is a east-southeast striking anticline with a predominantly felsic package of volcanics forming it's core. If this is correct then the Anita Active Tuff and the northern felsic tuff alteration zone may correlate.

RECOMMENDATIONS

1) Further drill testing of the Anita Horizon in the immediate vicinity of the Anita area is recommended for the second half of the 1988 Chemainus project. Seven holes totalling just over 1600 metres are proposed and the objectives of the holes are listed briefly below. For more details the reader is referred to the 1988 Phase II Chemainus Drill Proposal. The overall objectives of the fall 1988 drilling in the Anita area are to evaluate the possible western strike extent of mineralization intersected in hole CH88-49 and to test eastern stike extent of the minerlization intersected in holes CH88-50 In addition, the drilling will locate the Anita horizon as far west as line 22E.

a) One hole is proposed on line 30E to test the the Anita Horizon above the mineralization intersected in hole CH88-50.

b) Drill one hole on section 26E to test for the westward extension of mineralization intersected in CH88-49.

c) Drill one hole on section 25E to test Anita horizon at shallow depth 100 metres further west of the hole drilled on 26E.

d) Two holes are proposed on line 24E to locate the Anita Horizon on the west side of the Powerline Creek Fault.

e) Two holes are proposed on line 22E to test Anita Horizon 200 metres further west.

2) The Anita Active Tuff in the Anita East area near lines 45E to 48E is more strongly altered and geochemically enriched in base and precious metals than at the Anita area itself. Therefore it is recommended that 750 metres be drilled in one shallow and one deep hole on section 46E to test for economic sulfides below the Anita horizon. The holes should be drilled from the south to determine if the Anita Active Tuff has a southern dip. The holes should be collared at 4+36 S and 3+30 S, and drilled at an azimuth of 030 degrees and a dip of -50 degrees.

3) The original drill proposal for the Chemainus Project recommended that two holes be drilled at Watson Creek to test a gradient IP chargeability anomaly. It is now recommended that 3 holes totalling 800 metres be drilled on line 2E to test the deep IP chargeability anomaly and produce a stratigraphic section. It is recommended that an excavator trench be completed at Watson Creek on line 2E.

4) The PEM mineralization on line 45E to 49E in the Anita East area does not warrant any further work.

5) The 1986 drill holes, CH86-14, 15 and 16, should be relogged as the minimal available chemistry indicates that the units logged as gabbro were mainly mafic volcaniclastics and the units logged as andesitic were chloritic felsic tuffs or mafic tuffs. Sampling for alteration and additional whole rock sampling should also be done for these holes and the 1987 drill holes, CH87-34, 35 and 36.

6) The IP chargeability anomaly south of the Powerline anomaly should be drill tested in 1988 on line 30+00E and in 1989 on line 32+00E. The drill targets are the shallow IP axis at 4+30 N and the deep axis at 4+60 N on section 30+00 E and on section 32+00 E, the shallow axis at 4+60 N and the deep axis at 4+90 N. The axis indicate a moderate to steep northerly dip and therefore drilling should be south from the powerline road.

7) Further work is recommended in the Holyoak area in 1989. At least one drill hole should be drilled further to the north on section 50+00' W. This hole will determine the northern extent of the altered felsics, the mafic - felsic northern transition and possibly the Cameron River - McLaughlin Ridge Formational boundary. Additional drilling is recommended on 200 metre sections to test and trace the alteration zone and zinc mineralization for at least one kilometre across the north half of the Holyoak 3 claim. Trenching should also be carried out in conjunction with the drilling on the 200 metre sections. The grid lines should be extended to the northern claim boundary and these lines should be mapped and surveyed by VLF-Magnetometer and IP surveys.

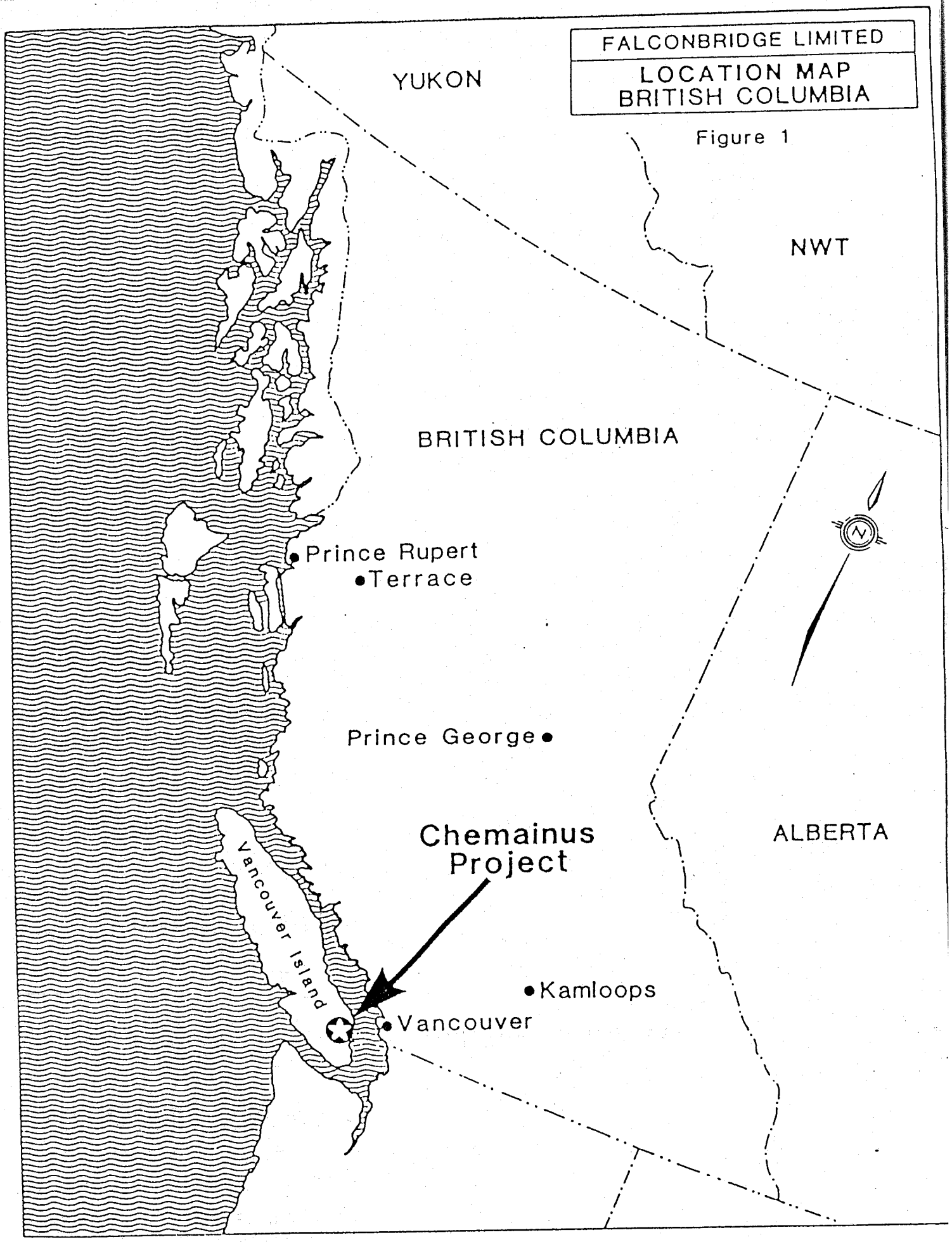
8) At present, no further work is recommended in the Silver Creek area in 1988. It is recommended that additional data compilation be carried out on the area in an effort to define drill targets. CH85-10, 11 and 12A should be relogged and sampled for alteration so that they can be fully utilized in understanding the Silver Creek Area. A drill hole on section 31+00 W should also be drilled to penetrate the Silver Creek Gabbro in search of the cut-off Zn mineralization. The alteration zone detected on line 25W should be drill tested on strike at 200 metre intervals in 1989.

INTRODUCTION

This report is intended to briefly summarize the results of the first phase of drilling at Chemainus in 1988. A more complete report will be produced after the fall program of drilling is complete by November 1988. In addition to this report the reader is referred to an interim geological report written by M. Morrice, a 1988 fall drill proprosal which is currently being written, and a trenching report that is currently being written by M. Vande-Guchte.

A revised claim map of the Chemainus project is shown in figure 2 and shows the location of the four claims Chip 14 to 17 which were acquired in 1987 and 1988.

Figures 3 and 4 are of the Chip claim block and the Holyoak-Brent claim blocks respectively. The figures show the general geology and the location of the various areas referred to in this report.


FALCONBRIDGE LIMITED
LOCATION MAP
BRITISH COLUMBIA
Figure 1
YUKON
NWT
BRITISH COLUMBIA
Prince Rupert
Terrace
Prince George
Chemainus
Project
Vancouver Island
Kamloops
Vancouver
ALBERTA

Three samples of felsic tuff from the dominantly sedimentary unit south of the mafic volcanic sequence are weakly to moderately altered. The tuffs do not have a particularly altered appearance, nor do they contain more than trace amounts of sulphide (pyrite). They are, however, anomalous in Ba (1,620 - 5,900 ppm) as are the sediments, particularly the argillites (2,000- >8,000 ppm).

Only 7 out of 38 samples from the Anita Active Tuff are sodium depleted or have alteration indexes >60 and none of these come from the richest sulphide zones. Three samples from CH88-48 on line 27+00 E are weakly to moderately altered. Two of them are sodium depleted, contain 190 - 434 ppm Zn, 166 - 1,602 ppm Cu and 60 to 96 ppb Au. None of the samples from hole CH88-49 (where the strongest mineralization occurs), 53 metres up dip from CH88-48, are altered. Several samples of Anita Active Tuff below the mineralization in CH88-50 on line 30+00 E are weakly altered as is a sample from hole CH88-56, 10 m below the mineralized zone on line 31+00 E. The lack of strong consistent sodium depletion is puzzling. It may be that the mineralization in the Anita Area is distal to the hydrothermal system that produced it.

Structural Geology

The structural geology of the Anita Area is complex. At least three major deformational events can be recognized. First the Sicker Group rocks appear to have been asymetrically folded about a west-northwest-trending, antiformal axis located about 1+50 S. The following is evidence of this fold:

1. Stratigraphy south of 1+50 S dips steeply south and tops south (based on graded bedding).

2. Stratigraphy north of 1+50 S dips north (top directions are rare and contradictory).

3. The Anita Gabbro, whose emplacement was controlled by foliation, dips steeply south on its southern flank and steeply north on its northern side indicating that it may have intruded a fold nose.

Neither the amplitude nor the plunge of the fold is known.

In the second event a major north-northwesterly-trending, oversteepened, north-dipping reverse fault was formed just north of the fold axis. East of 28+00 E, the fault thrust McLaughlin Ridge Formation volcanics on top of Nanaimo Group Sediments, which in turn rest unconformably on Sicker Group volcanics and Karmutsen Formation gabbro dykes. Displacement along the fault plane is unknown. This fault is

Table 2: SUMMARY OF ALTERED SAMPLES FROM THE ANITA AREA

HOLE #	SECTION #	SAMPLE #	FROM (m)	TO (m)	WIDTH (m)	Na2O (%)	AI	Zn (%)	Ba (%)	DESCRIPTION	
CH88-41	28+00 E	VA02770	101.8	131.0	29.2	0.33	45	81	1460	Strongly sericitized, weakly chloritic felsic tuff with occasional spot of mariposite. Trace to 3% disseminated pyrite. Includes a 2.8 m section with 590 ppm Zn and 42 ppb Au.	
		VA02771	131.0	165.0	34.0	0.56	46	38	1180	As above. No anomalous Zn, 15-40 ppb Au.	
		VA02772	165.0	188.0	23.0	0.81	50	54	1200	Moderately to strongly sericitized felsic lapilli tuff. Trace to 2% pyrite. Includes a 0.5 m interval with 2,213 ppm Zn, 879 ppm Cu and 140 ppb Au.	
		VA02773	188.0	210.5	22.5	0.81	51	177	1310	As above. Includes a 3 m section with 1,215 ppm Zn, 349 ppm Cu and 41 ppb Au.	FELSIC TUFFS JUST SOUTH OF THE POWERLINE
		VA02774	210.5	226.2		0.61	49	48	1190	Weakly chloritic, moderately to strongly sericitized felsic quartz eye tuff. Locally, very weak brown carbonate alteration. Nil to trace disseminated pyrite. No significant Zn or Cu mineralization.	
		VA02775	226.2	257.8		0.61	51	40	1020	Weakly chloritic, moderately sericitized felsic lapilli tuff. Locally a beige carbonate occurs along foliation planes. Nil-1% pyrite.	

Table 2 : continued.

HOLE #	SECTION #	SAMPLE #	FROM (m)	TO (m)	WIDTH (m)	Na2O (%)	AI	Zn (%)	Ba (%)	DESCRIPTION	
CH88-47	29+00 E	VA02821	247.1	260.0	12.9	1.27	62	99	2510	Cherty felsic tuff with occasional bed of siltstone and argillaceous clasts. Weak pervasive sericitization.	
CH88-51	27+00 E	VA01088	105.0	115.0	10.0	0.61	69	49	1620	Felsic tuff, unaltered looking except, for weak fracture controlled carbonatization.	FELSIC TUFFS/TUFFITES SOUTH OF ACTIVE TUFF
CH88-52	31+00 E	VA01091	10.0	30.0	20.0	0.91	55	17	5900	Felsic tuff/tuffite with minor cherty sediments. Weak biotization.	

Table 2 : continued.

HOLE #	SECTION #	SAMPLE #	FROM (m)	TO (m)	WIDTH (m)	Na2O (%)	AI	Zn (%)	Ba (%)	DESCRIPTION	
CH88-45	28+00 E	VA01059	370.0	382.0	12.0	1.14	62	507	2900	Moderately sericitic felsic quartz eye lapilli tuff with 1% pyrite. A 2 m interval contains 2,967 ppm Zn.	
CH88-48	27+00 E	VA01062	70.0	80.0	10.0	1.36	64	42	1850	Felsic quartz-feldspar crystal tuff with trace to 15% pyrite. Moderate pervasive sericitization and weak fracture controlled carbonatization.	
		VA01063	80.0	89.0	9.0	0.64	60	190	3700	As above. Locally semi-massive pyrite with trace chalcopyrite. Locally strong fracture controlled carbonatization. Average of 60 ppb Au throughout.	
		VA01064	103.0	109.0	6.0	0.72	72	134	3510	As above but no carbonate alteration. Up to 15% pyrrhotite, 5% pyrite, 1% chalcopyrite and trace sphalerite. Zone assayed 1,102 ppm Cu, 434 ppm Zn and 96 ppb Au.	ACTIVE TUFF
CH88-50	30+00 E	VA02828	104.0	129.0	25.0	1.29	69	16	1610	Felsic lapilli tuff; 5-20% dark green chloritic fragments up to 1 X 8 cm in a sericitic felsic matrix. Locally moderate pervasive silicification. Nil to 4% pyrite.	
		VA02831	147.0	177.0	30.0	1.16	61	<10	2460	Felsic lapilli tuff; moderate pervasive sericitization and locally weak chloritization. 1-10% pyrite.	
		VA02832	177.0	194.0	17.0	0.66	81	629	3720	As above. 3-25% pyrite in the matrix of the tuff.	

Table 2 : continued.

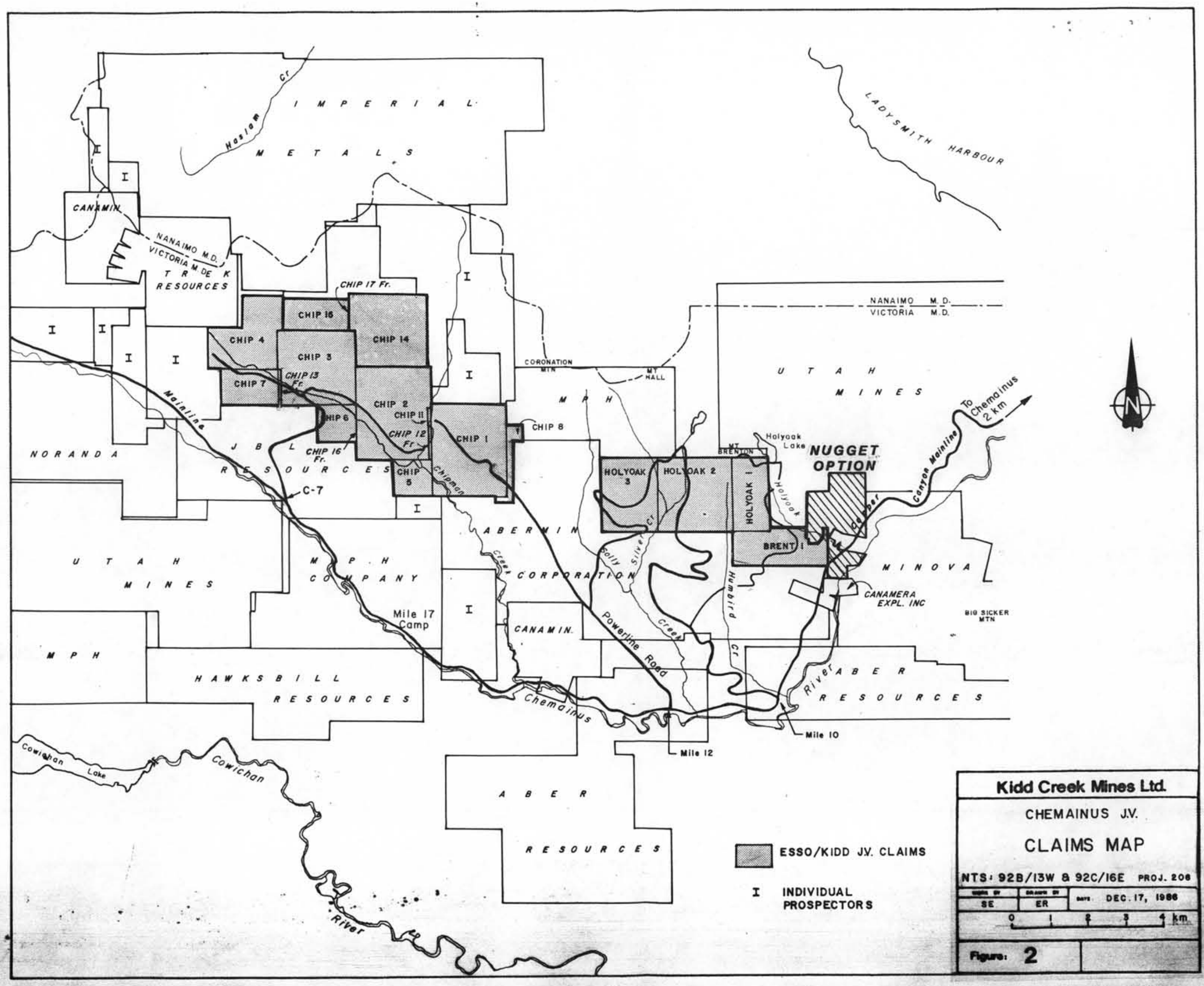
HOLE #	SECTION #	SAMPLE #	FROM (m)	TO (m)	WIDTH (m)	Na2O (%)	AI	Zn (%)	Ba (%)	DESCRIPTION	
CH88-56	31+00 E	VA01134	375.0	400.0	25.0	0.87		134	3570	Felsic quartz-feldspar crystal tuff; moderately sericitic and local fracture controlled carbonatization. 1-4% pyrite.	
CH88-43	28+00 E	VA02781	45.3	65.0						Mafic tuffs with < 4 mm bands of argillaceous sediments and mud clasts are common. Moderate to strong fracture controlled carbonatization.	MAFIC TUFFS
CH88-44	28+00 E	VA02798	98.2	110.1		0.94	25			Mafic tuffs and tuffaceous sediments. Tuffaceous sediments are weakly to moderately biotized.	
CH88-52	31+00 E	VA01096	171.3	177.3	6.0	0.41	60			Mafic porphyritic flow; weak fracture controlled carbonatization and chloritization. Low Na2O may be a primary may be a primary feature of the rock.	

likely a splay off the Fulford Fault which is thought to run south of the Anita Area and has been named the Fulford Fault Splay. The Fulford Fault is a north-dipping, high angle reverse fault with a west-northwest strike extending from Fulford Harbour, on Saltspring Island, along the entire Cowichan-Horne Lake Uplift. The age of the thrusting is believed to be Campanian (Massey et al, 1987).

The third event consisted of subvertical cross-faulting which divided the area into blocks which have been rotated and downdropped relative to each other. None of these faults have been seen in core or outcrop but have been postulated to explain the sudden disappearance of the Anita Gabbro between lines 29+00 E and 30+00 E (Figures 15 and 16) and the abrupt change in dips between lines 31+00 E and 32+00 E (Figures 17 and 18). The change in dip could be due to a north-northeasterly trending fault between lines 31+00 E and 32+00 E. The block on the western side of the fault would have to have been rotated 20 degrees relative to the eastern side of the fault. The only evidence for this is that stratigraphy dips 68 degrees south on the west side of the fault and less than 60 degrees south on the east side. The observed dips could also be the result of folding.

An east-west oriented V.L.F. survey, aimed at locating crosscutting features, failed to detect any structures between 31+00 and 32+00 E. Two other crosscutting features were detected, however. The first is an east-northeasterly stiking, steeply south dipping fault known as the Anita Fault which truncates the Anita Gabbro between lines 29+00 E and 30+00 E (Figures 15 and 16). This fault was orginally proposed by Hendrickson (1986). The direction and amount of offset along the fault is not known. However, the truncation of the Anita Gabbro could be explained if the stratigraphy on the south-east side of the fault was dropped down about 100 m. The V.L.F. survey also outlined a structure trending along line 25+00 E which has been named the Powerline Creek Fault because of its proximity to that creek. The type and amount of offset along Powerline Creek Fault will only be known when more drilling is done to the west of it. It may have important implications in the search for the western extension of the mineralization on lines 28+00 E and 27+00 E.

FIG 2
CLAIMS
MAP



ANDERSON CREEK

WATSON CREEK

ANITA WEST

POWERLINE SOUTH

ANITA AREA

ANITA EAST

N

LEGEND

Nanaimo Sediments

Gabbro

SICKER GROUP

Sediments

Felsic Volcanics

Mafic Volcanics

Diamond Drill Hole

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

CHIP CLAIMS

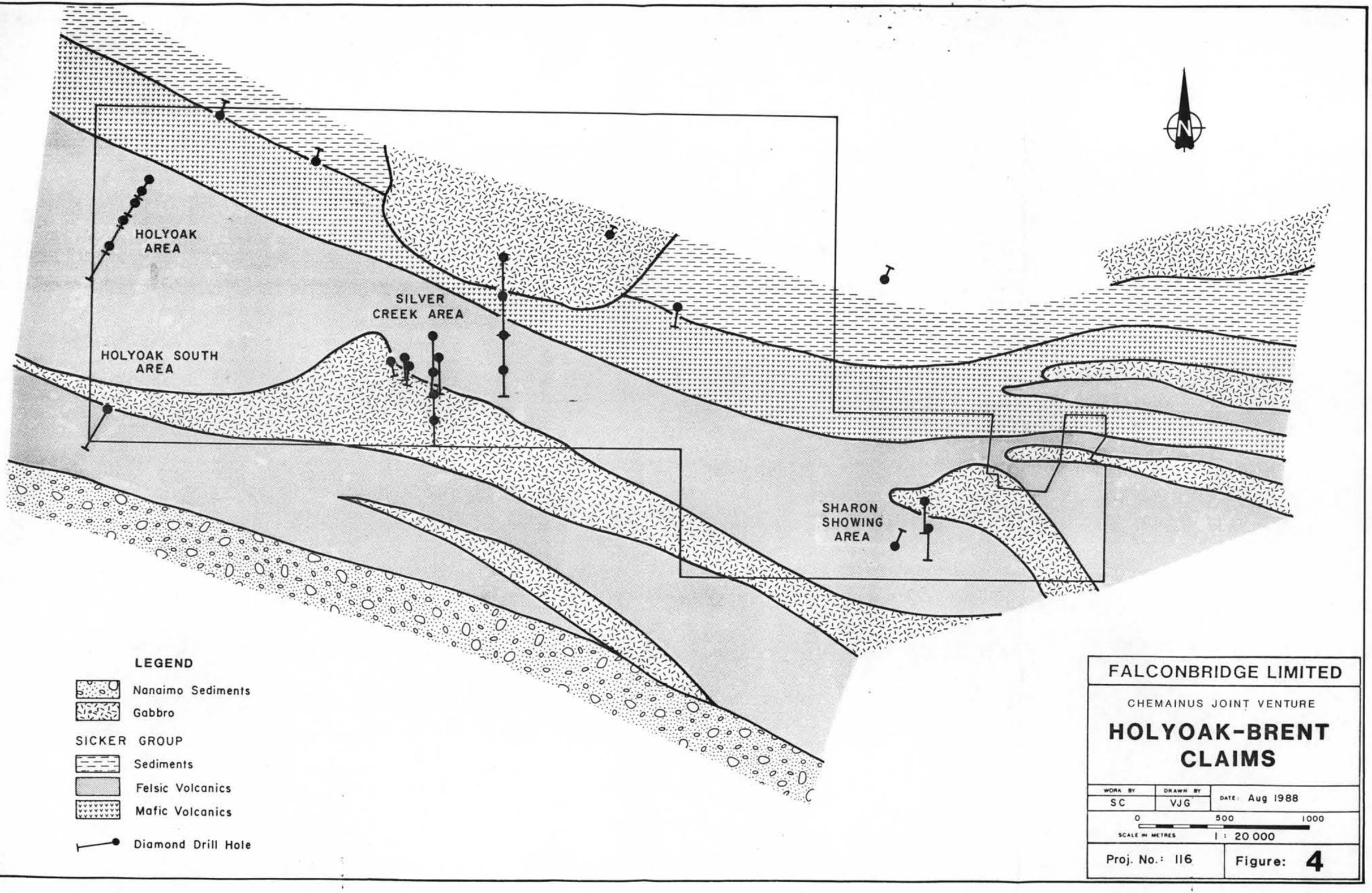
WORK BY	DRAWN BY	DATE: Aug 1988
SC	VJG	

0 500 1000

SCALE IN METRES

Proj. No.: 116

Figure: 3



FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

HOLYOAK-BRENT CLAIMS

WORK BY	DRAWN BY	DATE: Aug 1988
SC	VJG	

0 500 1000

SCALE IN METRES 1 : 20 000

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ANITA AREA DRILLING

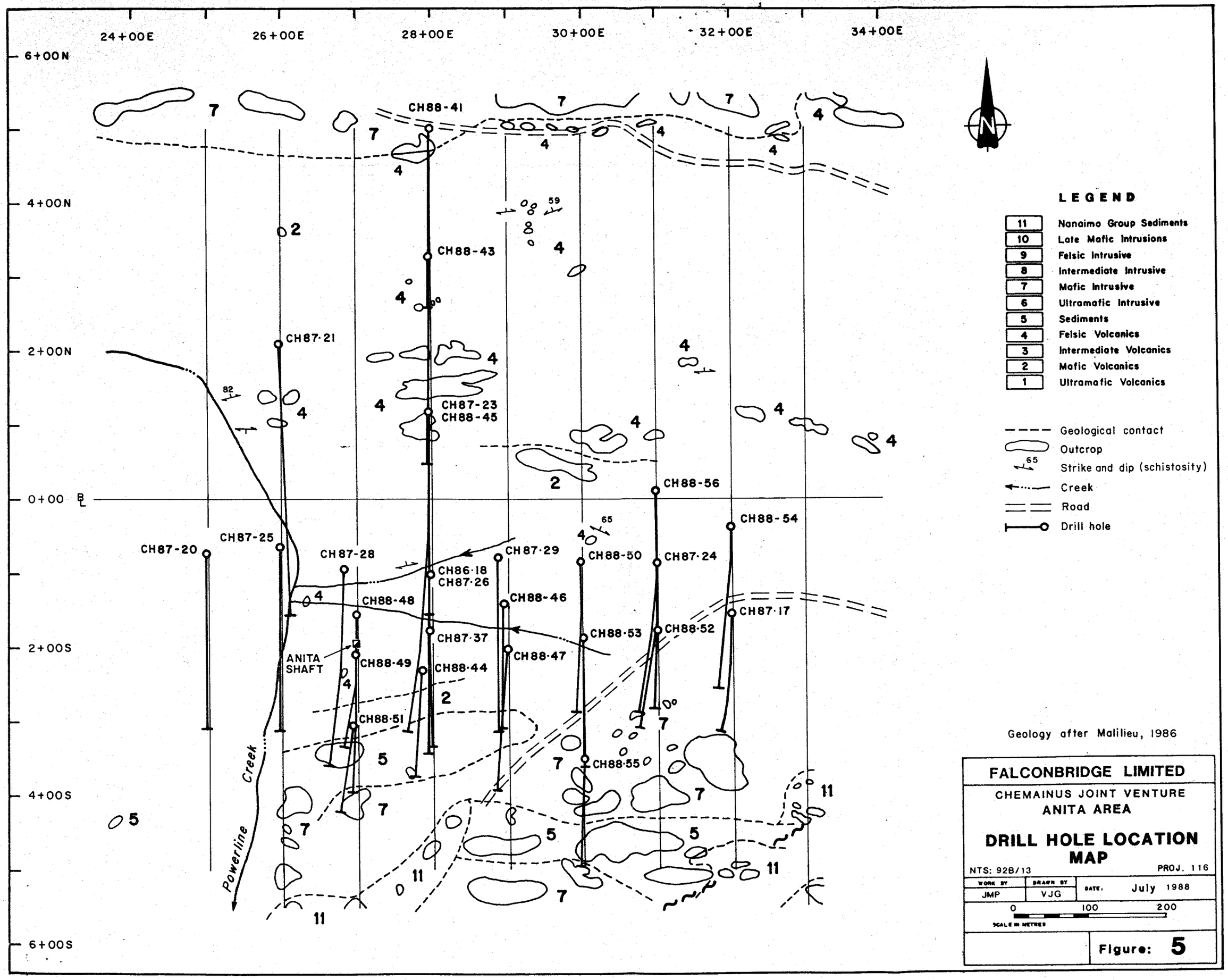
Introduction

Drilling and trenching on the Chip 1 claim in 1986 and 1987 identified a Ba-enriched, hydrothermally altered, sulphide-bearing felsic tuff sequence known as the Anita Active Tuff. The Anita Active Tuff occurs along the southern edge of a 1 km wide belt of steeply dipping, west-north-west trending felsic tuffs with lesser amounts of intercalated mafic tuffs and tuffaceous sediments. Its northern boundary is gradational and is at, or near, a major east- striking, steeply north dipping fault known as the Fulford Fault Splay which truncates the stratigraphy. The Anita Active Tuff is bounded to the south by a sequence of mafic volcanics. The mafic-felsic contact is termed the Anita Horizon. The Anita Active Tuff is poorly exposed, but was traced across the southern half of the claim by drilling in 1987. Significant base and precious metal mineralization (eg. 2.37 % Cu, 0.73 % Pb, 2.74 % Zn, 41.8 g/t Ag and 0.7 g/t Au over 2.5 m) was intersected within the Anita Active Tuff in two drill holes on line 28+00 E (Enns, 1986 and Enns et al, 1987) and small lenses of massive sulphide were exposed in trenches on lines 27+00E (old Anita Showing) and 28+00E (Enns, 1987). Drilling in 1988 has traced the Anita Horizon for ~~2500~~ metres across the Chip 1 claim. The Anita Active Tuff, although it is often truncated by the Fulford Fault Splay, varies from less than 10 to over 100 metres in thickness.

The first phase of the 1988 drill program was aimed at testing the Anita Active Tuff at 100 m intervals between lines 27+00 E and 32+00 E and at clarifing the structural geology of the area. To accomplish this fences of 2 to 8 holes were drilled on each line. The fence on line 28+00 E was extended north to the powerline (5+00 N) to provide a complete section through the McLauglin Ridge Formation volcanics on the southern half of the Chip 1 claim. The fence on line 30+00 E was extended south to cover a 44 msec IP chargeability anomaly south of the Anita Active Tuff.

This phase of drilling has revealed important features regarding the structure and stratigraphy of the Anita Area and has identified two areas of significant economic sulphide mineralization which warrant further drilling. Appendix 2 summarizes the location, target and result of each hole. Drill logs are included as Appendix 3 and the geology is discussed on a section by section basis in Appendix 1. The main observations are discussed under the appropriate headings below.

A total of 4,490.5 m of drilling in ~~16~~ 27 holes was completed between April 11 and May 20, 1988. Figure 5 is a



Geology after Malilieu, 1986

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

ANITA AREA

DRILL HOLE LOCATION MAP

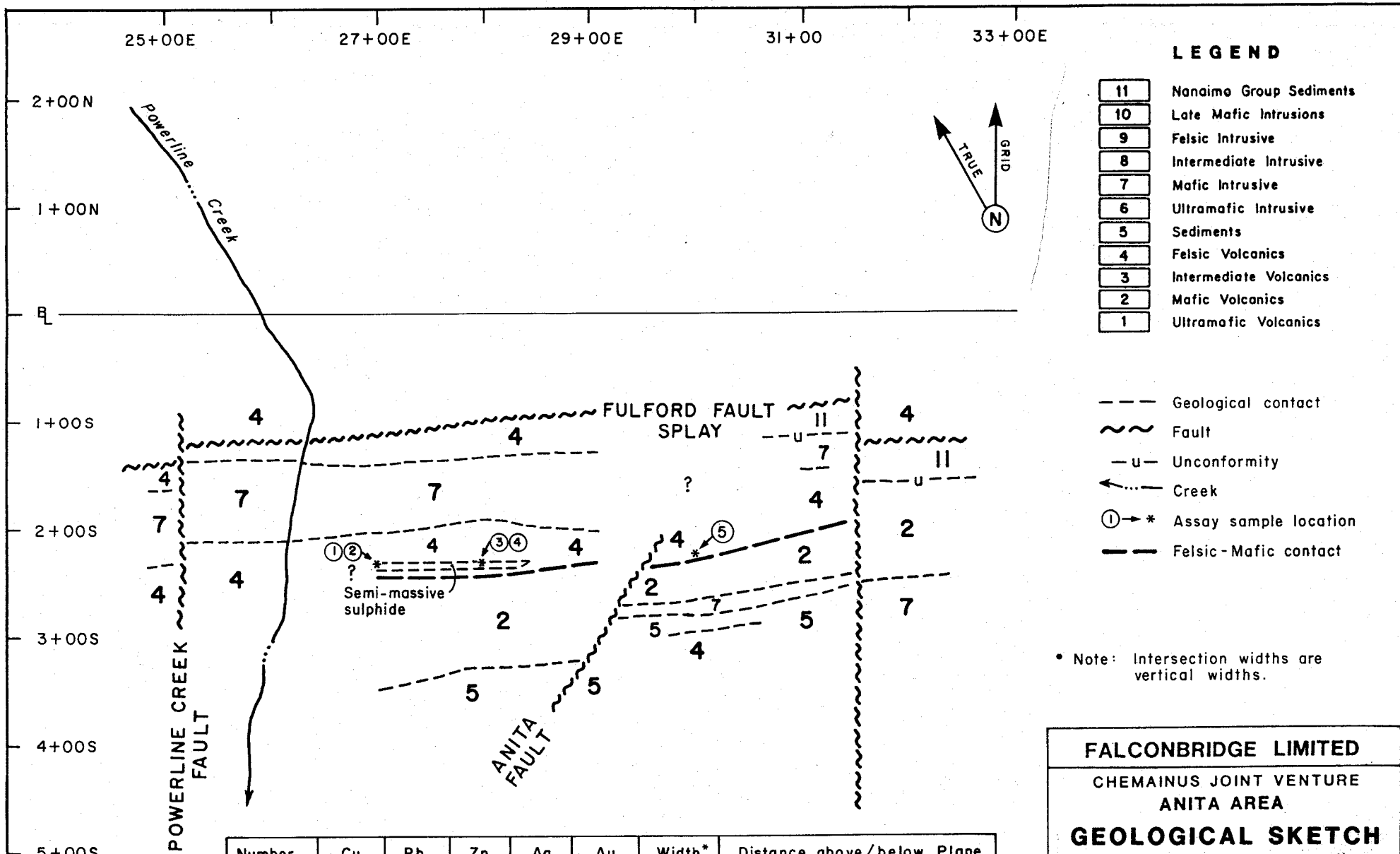
NTS: 92B/13 PROJ. 116

WORK BY	DRAWN BY	DATE.
JMP	VJG	July 1988

0 100 200

SCALE IN METRES

Figure: 5



Number	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)	Width* (m)	Distance above/below Plane (m)
①	2.30	0.42	3.66	67.5	1.64	3.5	41.5
②	0.39	<0.01	<0.01	2.9	0.12	1.5	-5.0
③	1.64	0.51	1.42	28.8	0.30	3.5	31.5
④	1.59	<0.01	0.04	8.9	0.20	3.5	-4.0
⑤	0.44	0.06	3.94	29.4	2.04	1.4	-41.8

* Note: Intersection widths are vertical widths.

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

ANITA AREA

GEOLOGICAL SKETCH
400m ELEVATION

NTS: 92B/13 PROJ. 116

WORK BY	DRAWN BY	DATE:
JMP	VJG	Sept 1988

0 50 100

SCALE IN METRES 1 : 2500

Figure: 6

map showing drill hole locations and surface geology. A total of 8,605.1 m of core in 27 holes has now been drilled in the Anita Area. The following section discusses the results of this work.

General Geology

The Anita Area is underlain by the McLaughlin Ridge Formation, part of the Paleozoic Sicker Group composed of volcanics and sediments which are intruded by Late Triassic mafic dykes and locally, unconformably overlain by Late Cretaceous Nanaimo Group sediments. Stratigraphy strikes grid east (105 degrees) and dips steeply north to less than 55 degrees south.

Figure 6 is a geological sketch map of the Anita Area at 400 m elevation. Level plans of the Anita Area are included in the back pocket as figures 7 to 10. Figure 12 is geological section of line 28E. Sections across the Anita Area at 100 m intervals are included in the back pocket as figures 12 to 18.

McLaughlin Ridge Formation

From north to south the McLaughlin Ridge Formation rocks in the Anita Area consist of felsic crystal tuffs, mafic volcanics/volcaniclastics +/- chloritized pyroxene phenocrysts, volcanic wackes, argillites, siltstones, greywackes and felsic lithic tuffs. Refer to figure 11.

A sequence of felsic crystal tuffs extends from 4+50 N, where it is truncated by a large east-striking gabbro dyke, to approximately 2+50 S where it is capped by mafic volcanics. A major, steeply north dipping, grid-east striking, reverse fault known as the Fulford Fault Splay occurs at approximately 1+00 S (see Stuctural Geology). The felsic tuffs north of this fault are generally light green, due to trace amounts of pervasive chlorite, and contain nil to trace disseminated pyrite. They are dominantly weakly to moderately sericitic ash tuffs with up to 20 % plagioclase crystals less than 3 mm long and up to 10 % clear quartz eyes up to 6 mm in diameter (most less than 4 mm). Two lapilli tuff horizons 25 and 35 m thick with 10 % light grey, fine-grained, felsic fragments up to 4 cm long occur between 3+10 N and 3+80 N. The felsic tuffs are interupted by several mafic tuffaceous horizons 30 to 50 m thick. The mafic tuffs and tuffaceous sediments are moderately to intensely carbonatized (pervasive and fracture controlled), are usually intercalated with argillaceous sediments and locally contain up to 3 % finely disseminated magnetite.

The felsic tuffs south of the Fulford Fault Splay,

dip steeply to the south, are moderately to strongly sericitic, Baenriched (>2,000 ppm), contain 1 to 3 % pyrite and are termed the Anita Active Tuff. Lapilli tuffs are more prevalent (~70 % by volume) in the Anita Active Tuff than in the felsic tuff sequence north of the Fulford Fault Splay (~30 % by volume). The lapilli tuffs consist of 10-70 % fine-grained, sericitic felsic fragments up to 5 cm long, usually stretched parallel to foliation, in a light grey sericitic felsic matrix. Due to the intense deformation and pervasive sericite alteration it is often difficult to distinguish the lapilli from the matrix of the tuff. Most tuffs contain some ash-sized feldspar crystals and trace-10 %, 3-5 mm quartz eyes. All significant sulphide mineralization in the Anita Area is hosted by the Anita Active Tuff and all economic mineralization discovered by drilling occurs within 10 m of the top of the Anita Active Tuff (i.e. within 10 m of the felsic-mafic contact). This contact is referred to as the Anita Horizon.

The Anita Horizon represents a major change in the volcanism and is an important stratigraphic marker. Minor faults often occur along the contact as do gabbro dykes up to 20 m thick.

The mafic volcanic sequence south of the Anita horizon consists of mafic tuffs, tuffaceous sediments, flows and sills which are often mafic porphyritic (up to 10%, 2-4 mm chloritized clinopyroxene phenocrysts). It is difficult to distinguish between sills and flows because both are massive and fine-grained, however, distinct chill margins and sharp intrusive contacts are recognizable in some sills. Moving south, the mafic volcanics become intercalated with argillite, siltstone, greywacke and barren, often reworked, felsic lithic tuffs. It is not known how far south this dominantly sedimentary package extends. The sediments are invariably anomalous in Ba (>2,000 ppm) but contain no base or precious metals.

Mafic Intrusives or Gabbro

The Sicker Group volcanics and sediments are intruded by numerous gabbroic dykes <1 to >100 m wide. In most cases they are conformable to foliation. The dykes are usually fine-grained and feldspar porphyritic with 1 to 5 % interstitial ilmenite which is often partially or completely altered to leucoxene. The centres of the larger intrusions become medium to coarse-grained and locally develop granophyric or leucocratic phases with up to 15 % coarsegrained ilmenite. The chemistry of the gabbro dykes is very similiar to that of the Late Triassic Karmutsen Formation basalts (eg titanium-rich) suggesting that they were feeders to those basalts. (71.5&72.)

The Anita Gabbro is one of the largest mafic in-

trusions in the Anita Area. It is centred at 1+70 S, strikes grid- east and extends to the west beyond line 25+00 E and as far east as 29+50 E where it is truncated by the Anita Fault. Its northern contact dips steeply north while its southern contact dips steeply south, suggesting that it has been intruded along the axis of a tight antiformal fold (see Structural Geology). The observed dips could also be the result of the intrusion of such a large gabbro body.

Nanaimo Group Sediments

On sections east of 28+00 E the Fulford Fault Splay has thrust Paleozoic Sicker Group felsic tuffs onto Late Cretaceous Nanaimo Group sediments which in turn rest unconformably on Sicker Group volcanics and mafic intrusive rocks further to the south (see fig. 18).

The Nanaimo sediments consist of loosely consolidated brown to black argillites, pebble to cobble conglomerates and minor amounts of greywacke. In most cases the conglomerates occur at the base of the sequence and are of local provenance. In some places there has been shearing along the unconformity.

Mineralization

All significnt sulphide mineralization is hosted by the Anita Active Tuff. With the exception of two small lenses of massive sulphide in trenches on 27+00 E and 28+00 E, all important base and precious metal mineralization occurs within 10 m of the top of the Anita Active Tuff, which is marked by a mafic-felsic contact. Figures 19 and 20 are vertical longitudinal sections along the Anita horizon showing drill hole pierce points and significant intersections. Figure 20 lists the average base and precious metal contents of the Anita Active Tuff for 10 m from the felsic-mafic contact.

The present drilling has outlined two zones of potentially economic polymetallic mineralization just below the Anita Horizon in the Anita Active Tuff. Both zones are still open and should be explored further. Table 1 lists the significant intersections below the Anita Horizon.

The first zone has been intersected in three holes, two on line 28+00 E (CH86-18, CH87-37) and one on line 27+00 E (CH88-49). The zone consists of 10 to 25 % sulphides hosted by a weakly to moderately pervasively silicified and locally, epidotized felsic tuff with up to 30 % felsic lapilli. The thickness of the sulphide-bearing horizon is 5 m (true thickness) in all three holes and grades 2.30 - 1.60% Cu, <0.01 - 0.49% Pb, 0.04 - 3.66% Zn, 8.9 - 73.9 g/t Ag and 0.2 - 1.9 g/t Au. The sulphide composition varies considerably from hole to

TABLE 1 : Summary of Significant Intersections in the Anita Area

HOLE	SECTION	INTERSECTION					
		Length (m)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)
ZONE 1							
CH88-49	27+00E	4.9	2.30	3.66	0.49	73.9	1.95
(includes)		2.7	2.98	5.99	1.00	117.5	2.78
CH87-37	28+00E	5.0	1.64	1.42	0.10	28.8	0.70
CH86-18	28+00E	2.0	2.89	0.06	<0.01	15.4	0.24
CH88-50	30+00E	2.0	0.44	3.94	--	29.4	2.05
CH88-56	31+00E	6.8	0.45	1.55	0.14	18.4	0.82
(includes)		1.8	0.67	3.42	0.41	43.2	2.14

NOTE : All intersections are on the same stratigraphic interval defined by a felsic mafic contact.

25+00E 26+00E 27+00E 28+00E 29+00E 30+00E 31+00E 32+00E

600 500 400 300 200 100

ELEVATION, metres

Powerline Creek

POWERLINE CREEK FAULT

ANITA FAULT

49
2.30% Cu, 3.66% Zn, 0.49% Pb, 73.4 g/t Ag, 1.90 g/t Au
3.5m (4.9m)
py-sp-cp

50° N in flexure. ZONE 1

48
0.70% Cu, 5.4 g/t Ag, 0.1 g/t Au
1.3m (1.8m)

37
1.64 % Cu, 1.42 % Zn, 28.8 g/t Ag
3.5m (5.0m)
po, cp, py

46
No flexure only weak sp.
0.66 % Zn
3.2m (4.5m)

18
py-cp-po
2.8 % Cu
1.41m (2.0m)

50
0.44 % Cu, 3.94 % Zn, 29.42 g/t Ag, 2.05 g/t Au
1.4m (2.0m)
py-sp±cp±gn

24
0.32 % Zn, 0.5 g/t Au
2.4m (3.4m)
sp, no cp
↓ better downdip?

27

28
0.21 % Cu
0.7m (1.0m)
py±cp

20

25
1273 ppm Cu
0.35m (0.5m)

23
py±cp

Improving downdip?

56
0.45% Cu, 1.55% Zn, 0.14% Pb, 18.4 g/t Ag, 0.82 g/t Au
4.8m (6.8m)
py-sp±cp±gn

LEGEND

Cu Copper
Zn Zinc
Pb Lead
Ag Silver
Au Gold
Ba Barite

⊙ Drill hole pierce point

~ Fault

NOTES

1. Thicknesses are horizontal widths (into page).
2. Thicknesses in brackets are intersection lengths.

FALCONBRIDGE LIMITED

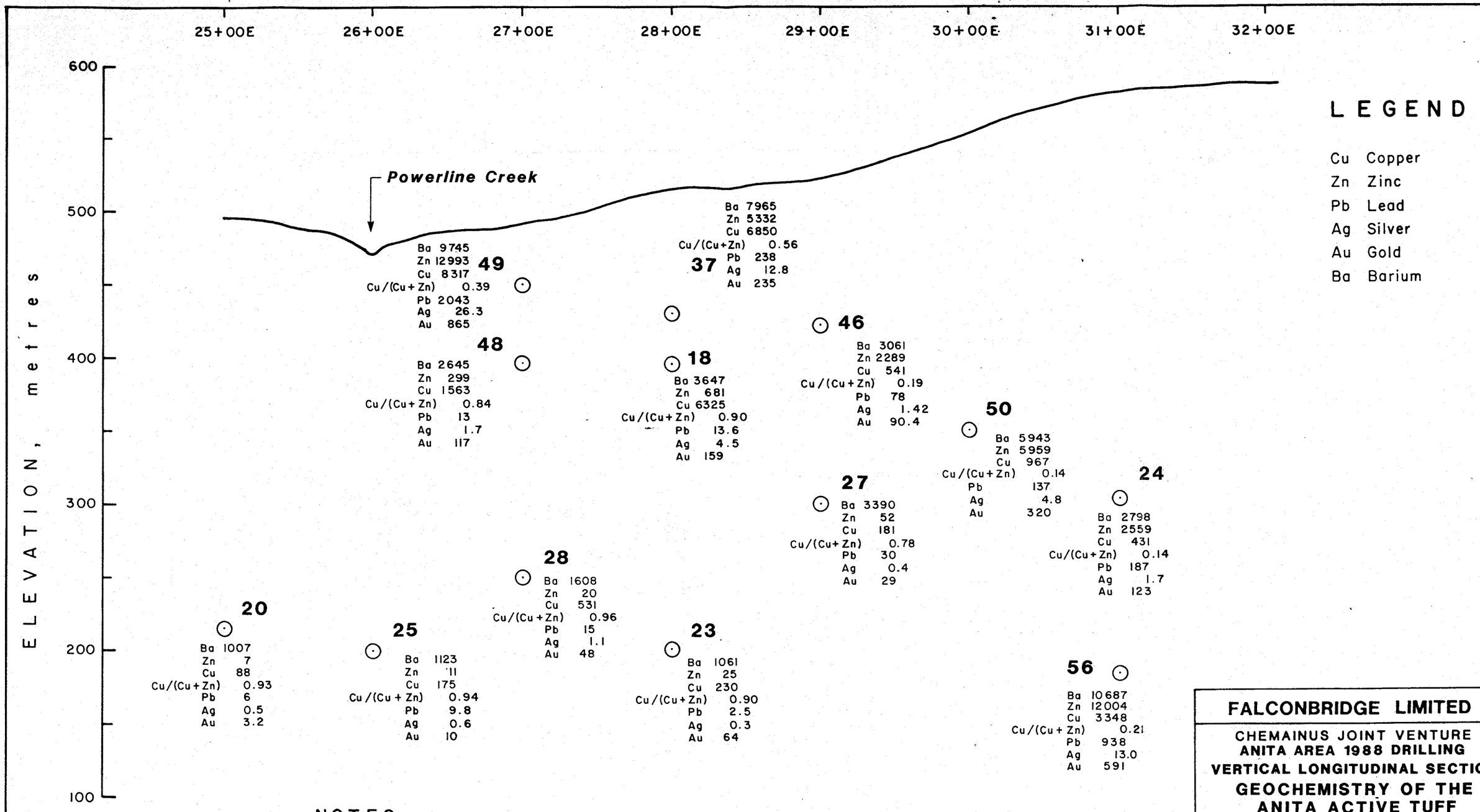
CHEMAINUS JOINT VENTURE
ANITA AREA 1988 DRILLING
VERTICAL LONGITUDINAL SECTION ALONG THE FELSIC-MAFIC CONTACT
(LOOKING NORTH)

NTS: 92B/13 PROJ. 116

WORK BY	DRAWN BY	DATE:
JMP	VJG	July 1988

SCALE IN METRES 0 50 100 — 1 : 2500

Figure: 19



NOTES

1. All values except Au are in ppm. Au in ppb.
2. Analysis are for the "Active Tuff" 0 - 10m below the felsic - mafic contact.

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE
ANITA AREA 1988 DRILLING
VERTICAL LONGITUDINAL SECTION
GEOCHEMISTRY OF THE
ANITA ACTIVE TUFF
(LOOKING NORTH)

NTS: 92B/13 PROJ. 116

WORK BY	DRAWN BY	DATE.
JMP	VJG	May 1988

SCALE IN METRES 0 50 100
1 : 2500

Figure: 20

hole. The dominant sulphides in CH88-49 are pyrite, sphalerite and chalcopyrite while 100 m to the east in hole CH87-37 the dominant sulphides are pyrrhotite, chalcopyrite and sphalerite. Hole CH86-18 intersected mainly pyrite and chalcopyrite with almost no sphalerite and little pyrrhotite 43 m downdip of CH87-37. In all holes the sulphides are hosted by felsic lapilli tuff. The sulphides often envellop the cherty felsic fragments forming a "net texture". In most cases pyrrhotite and chalcopyrite have a remobilized, fracture controlled appearance. The strong mineralization appears to be restricted to a flexure in the stratigraphy which gives it a dip of 50 degress N (figures 12 and 13). Holes CH87-23, on line 28E, and CH8728, on line 27E, intersected only weakly disseminated pyrite +/- chalcopyrite 200 and 150 m downdip of the flexure. Therefore, the zone has a dip extent of between 43 and 200 m on line 28+00 E and less than 50 m on line 27+00 E. The zone has a strike length of at least 100 m and is still open to the west. On line 29+00 E, however, the flexure does not occur and only weak sphalerite mineralization was intersected at the top of the Anita Active Tuff.

The second zone was intersected below 400 metre elevation on lines 30+00 E and 31+00 E. It is weaker and not as well defined as the first zone but appears to improve with depth. Mineralization consists of 10-15 % disseminated sulphides (pyrite + sphalerite +/- chalcopyrite +/- galena). The best intersection occurs in CH88-56 which pierced the zone at an elevation of 190 m on line 31 E. The intersection is 2 m thick (true) and grades 0.45% Cu, 0.14% Pb, 1.55% Zn, 18.4 g/t Ag and 0.8 g/t Au. Weakly disseminated sphalerite (no chalcopyrite) occurs over a thickness of 1 m (true) in CH87-24, 100 m updip of CH88-56 indicating that the overall grade and thickness of the mineralization increases downdip. Hole CH88-50 pierced the zinc-rich zone at an elevation of 350 m on line 30E. The zone is thinner (about 1 m true thickness) than in hole CH88-56 but its grade is as good as the richest part of the zone in CH88-56.

This second zone is still open below 350 m elevation on line 30E and below 180 m elevation on line 31E. The present density of drilling does not preclude the possibility that the two above zones may be contiguous.

Alteration

Pervasive sericitization is the most common type of alteration associated with sulphide mineralization. Unfortunately, sericite alteration is ubiquitous in the felsic tuffs north of the felsic-mafic contact, although it is most intense in the Anita Active Tuff. Therefore, sericite alteration is useful in identifying potential sulphide bearing horizons but not necessarily in locating deposits along them.

Alteration within the most heavily mineralized zones on sections 27+00 E and 28+00 E consists of moderate to strong pervasive and fracture controlled silicification, patchy, wispy epidote alteration and weak to strong sericitization.

No occurrences of hydrothermal chlorite have been observered. All the mafic volcanics are weakly to moderately chloritic due to greenschist metamorphism. Most of the felsic tuffs between the powerline and the Fulford Fault Splay are weakly chloritic but this likely reflects their primary composition.

The mafic tuffs north of the Fulford Fault Splay are strongly carbonatized. The alteration is both fracture controlled and pervasive.

Finely disseminated biotite often occurs in the volcaniclastic rocks near gabbro dykes. Biotization tends to be more intense in rocks with higher sedimentary component.

Weak fracture controlled hematite alteration is common in the larger gabbro dykes and occasionally in the mafic volcanics.

In order to detect and quantify the degree of hydrothermal alteration, samples were taken throughout most volcanic rock units over intervals of up to 30 m. The rock was not continuously sampled. Instead, grab samples, less than 0.1 cm long, were taken every 1 to 2 m over the sample interval. The samples were composited and analyzed for 8 major oxides plus Ba, Ni, Cu and Zn. The results are listed in Appendix 3. The following alteration index, proposed by Ishikawa et al (1976), was calculated for each sample.

$$AI = \frac{100 * (MgO+K2O)}{(MgO+K2O+Na2O+CaO)}$$

Samples with alteration indexes >60 and/or less than 1.00 % Na2O are considered to be altered and are listed in Table 2.

The strongest most consistent sodium depletion occurs in a 156 m long section of weakly chloritic, moderately to strongly sericitic felsic tuffs and lapilli tuffs between 3+35 N and 4+35 N in CH88-41 (figure 14). The tuffs contain trace to 3% disseminated pyrite and intervals up to 5 m long are anomalous in Zn (1,215 ppm), Cu (349 ppm) and Au (42 ppb). In addition, gold is weakly elevated (>10 to 100 ppb) in all samples from this interval. The alteration is located just south of the northern mafic unit near the top of the McLaughlin Ridge Formation. L28E

ANITA EAST AREA

Introduction

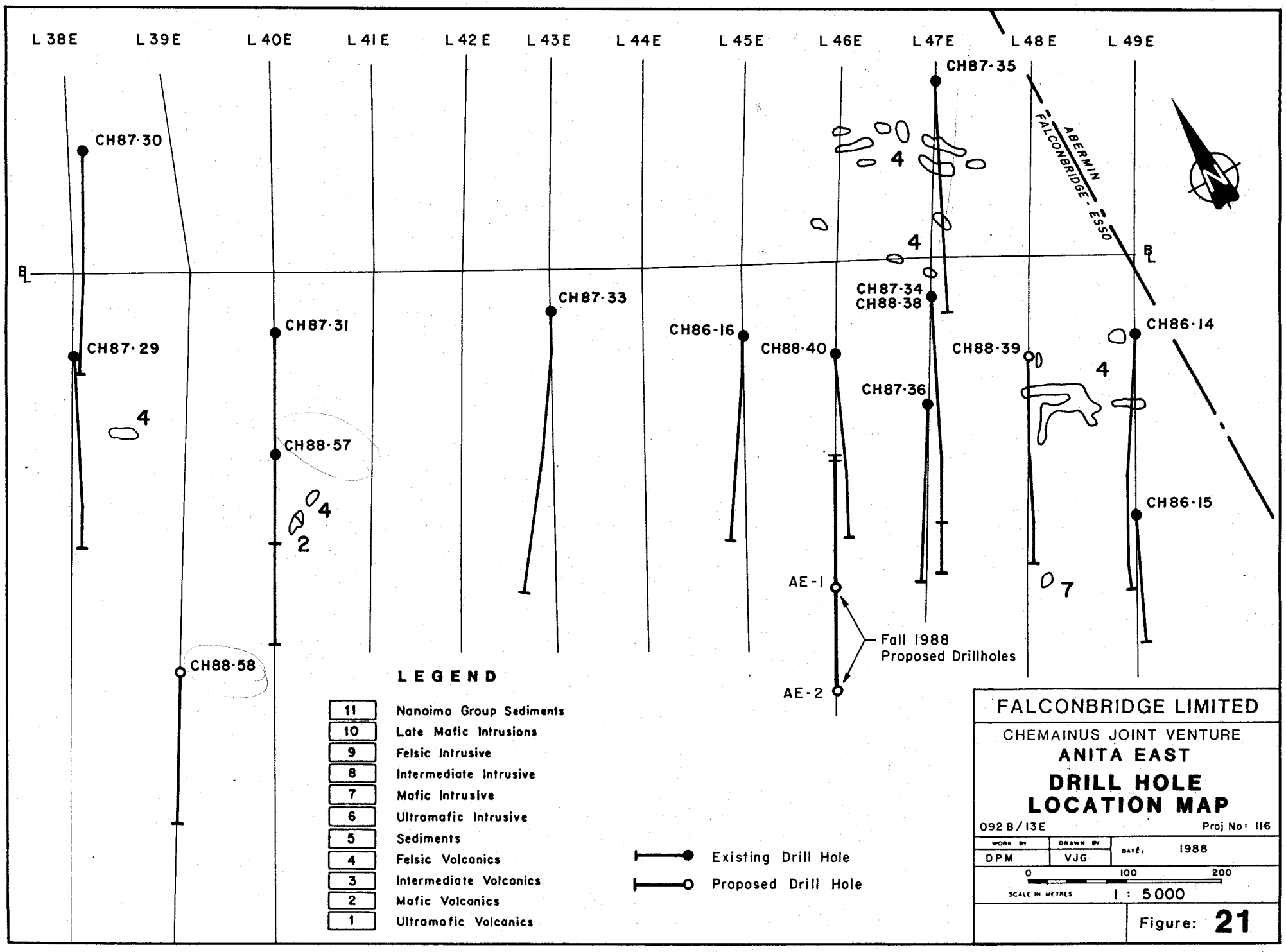
Three holes, CH88-38,39 and 40 totalling 1027.8 metres were drilled in this area (see Figure 21) in 1988 to test the Crone PEM anomaly, detected in drill holes CH86-16 and CH87-34 and 36. The three 1988 holes were also extended to intersect altered pyritic felsic volcanics that were intersected in drill holes CH87-34 and CH87-36. The stratigraphy present in these two 1987 holes indicated that the altered felsics may correlate with the Anita Active Tuff which occurs 1500 metres to the west.

Geology

The volcanic rocks intersected in this area are divided by the Fulford Fault Splay into a north sequence, which hosts the PEM anomaly, and a southern sequence which contains the Anita stratigraphy; including the Anita Active Tuff.

The northern sequence is composed of barren felsic volcanics and volcaniclastics and intercalated felsic crystal tuffs and mafic tuffs. The intercalated tuffs contain more felsic tuffs in the north and dominantly mafic tuffs were intersected towards the south. Towards the south this tuffaceous assemblage contains a thin felsic tuffaceous layer with pyrrhotite - chalcopyrite +/- pyrite - (sphalerite) mineralization which is discussed in detail below. The tuffs are intruded by numerous gabbro bodies of variable thickness and orientation. About 50 metres south of the sulphide bearing horizon, the Fulford Fault Splay, truncates the intercalated tuffs from the southern sequence.

The southern sequence is composed of felsic tuffs that are visually identical to the Anita Active Tuff with strong sericitization, disseminated pyrite, sodium depletion and anomalous metal contents. To the south of the Anita Active Tuff drilling intersected mafic tuffs and tuffaceous sediments. These mafic tuffs are commonly crosscut by gabbro dykes and rarely ultramafic dykes. Interbedded with the mafic tuffs and south of them are cherty argillites, greywackes and cherts, which are locally barium enriched. The stratigraphy intersected is identical to that at the Anita area, and it can be concluded that it is the same stratigraphic package. It also indicates that the Anita Active Tuff extends for 2500 metres across the Chip 1 claim.



FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

ANITA EAST

DRILL HOLE LOCATION MAP

092 B/13E Proj No: 116

WORK BY	DRAWN BY	DATE:
DPM	VJG	1988

0 100 200

SCALE IN METRES 1 : 5000

Figure: 21

Mineralization and Lithogeochemistry

The PEM anomaly is caused by a sheet-like body of 5 to 45 % pyrite-pyrrhotite-chalcopyrite mineralization that has a dip of about 65 degrees to the ~~south~~ north and strikes at 115 to 120 degrees. It has a minimum strike extent of 300 m from section 46+00 E to section 49+00 E. It has a dip extent of 150 metres on section 47+00E. The intersections of mineralization within the sheet are as follows :

DDH	Section	From	To	Thickness	% Cu	% Zn	Ag g/t	Au ppb
CH88-40	46+00 E	172.6	173.1	0.5 m	0.97	0.02	4.0	35
CH87-34	47+00 E	224.0	225.0	1.0 m	0.69	0.02	2.1	35
CH87-36	47+00 E	107.0	107.8	0.8 m	0.89	0.06	5.0	55
CH88-38	47+00 E	264.4	264.9	0.5 m	0.24	0.03	1.3	30
CH88-39	48+00 E	161.5	162.5	1.0 m	4.68	0.35	18.7	195
CH86-14	49+00 E	220.7	221.7	1.0 m	2.77	0.07	11.3	90

There is weak pyrrhotite - chalcopyrite mineralization in Chem86-16 on section 45+00 E from 182.2 to 182.4, but it visually does not appear to be the same as it is associated with chlorite and carbonate alteration. Therefore, the sheet does not appear to extend west along strike. The derivation of the mineralization is uncertain. It is hosted by felsic tuffs, but they are not hydrothermally altered or barium enriched; however, the zone does not appear to be a cross-cutting vein system either.

~~The~~ Anita Active Tuff was intersected in all holes except CH86-15, which was drilled too far to the south and CH87-35,which was drilled to the north. It strikes from the property boundary in the east to at least 45+00 E and appears to be continuous with the Anita area. The Anita Active Tuff is moderately to strongly sericitic with 1 to 15 % disseminated and banded pyrite. It is strongly sodium depleted, but not as barium enriched as in the immediate Anita area. The dip is uncertain and may be steep to the south. On section 47+00 E, the Anita Active Tuff lies immediately below the Fulford fault Splay and has been shortened considerably in CH87-36 and faulted into several slices in CH88-38. In the Anita East Area it is elevated in Au and locally elevated in Zn and Pb. The Anita Active Tuff intersections are as follows:

DDH	Section	From	To	Thickness	Cu	Pb	Zn	Au	Ag	Ba
CH86-16	45+00 E	236.0	271.8	35.8 m	184	125	564	31	0.5	1584
CH88-40	46+00 E	210.4	247.4	37.0 m*	225	138	596	92	2.2	1365
CH87-34	47+00 E	271.0	324.8	53.8 m*	180	40	382	29	0.5	989
CH87-36	47+00 E	150.7	156.8	6.1 m	166	73	1126	52	1.6	2318
CH88-38	47+00 E	346.4	358.8	12.4 m	49	118	205	46	0.5	1580
		391.4	394.3	2.9 m	110	158	646	77	1.0	2249

CH88-39	48+00 E	223.4	255.3	31.9 m	44	38	450	106	0.7	1882
CH86-14	49+00 E	294.0	328.0	34.0 m	130	55	517	39	1.1	1401

(all units except Au (ppb) in ppm, * = complete interval not sampled and zero metals assumed for unsampled interval)

The Anita Active Tuff metal contents are variable and there were several significant geochemically anomalous intersections, which are as follows:

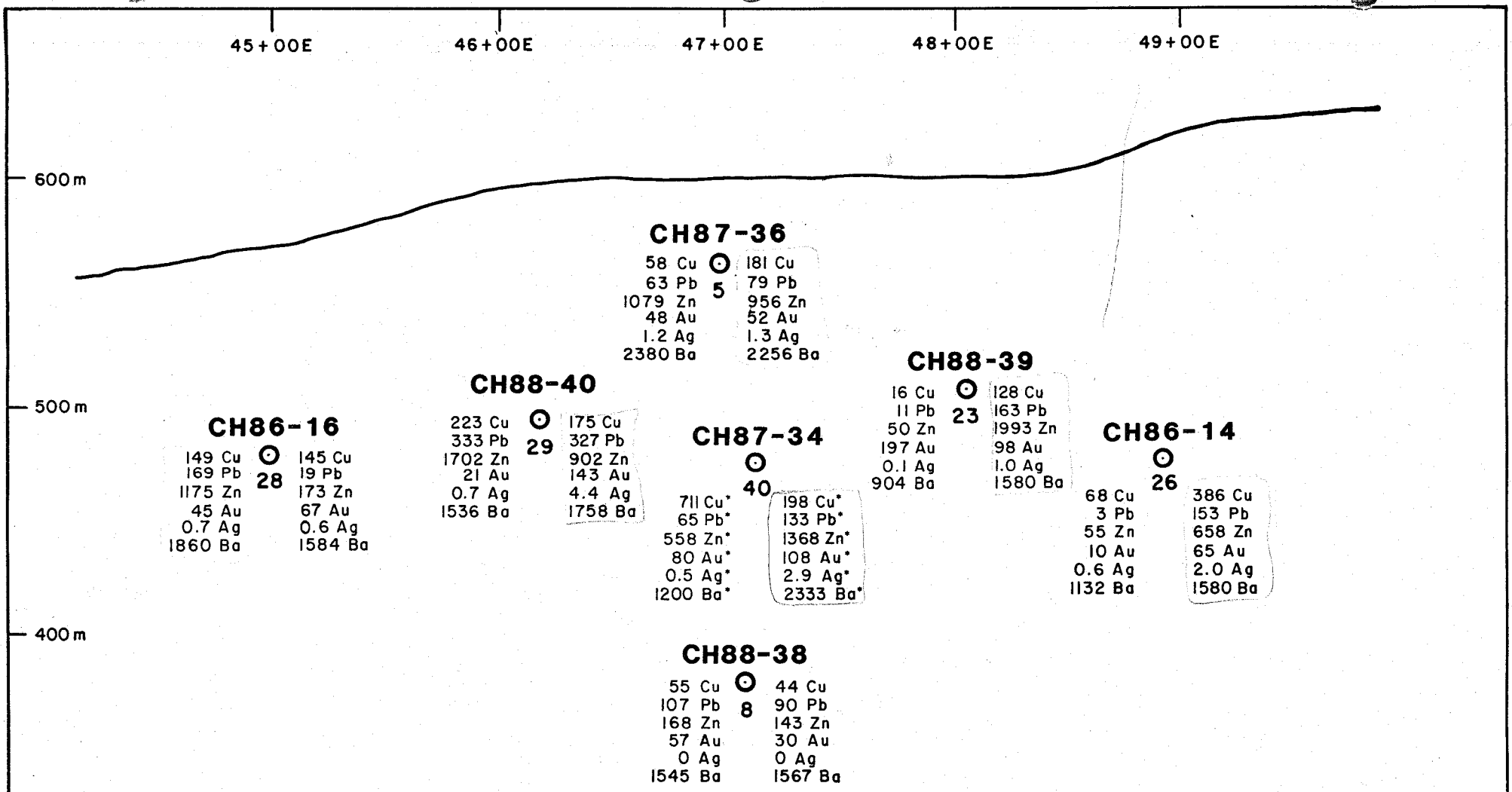
DDH	From	To	Thickness	Cu	Pb	Zn	Au	Ag	Ba
CH86-16	241.0	244.0	3.0 m	405	570	2411	32	1	1700
CH88-40	206.9	211.5	4.6 m	232	349	1807	21	1	1405
	244.4	247.4	3.0 m	238	375	1286	131	4	1573
	232.0	247.4	15.4 m	215	190	615	160	4	1692
CH87-34	280.0	282.0	2.0 m	753	362	3394	48	0	1650
CH87-36	150.7	156.8	6.1 m	166	73	1126	52	2	2318
CH88-38	391.4	392.4	1.0 m	98	34	1014	75	1	2080
CH88-39	252.0	255.3	3.3 m	159	137	2637	86	1	2418
	224.4	225.4	1.0 m	27	<5	23	760	<1	710
CH86-14	317.0	322.0	5.0 m	309	142	2047	80	2	1700

All values in ppm except gold in ppb.

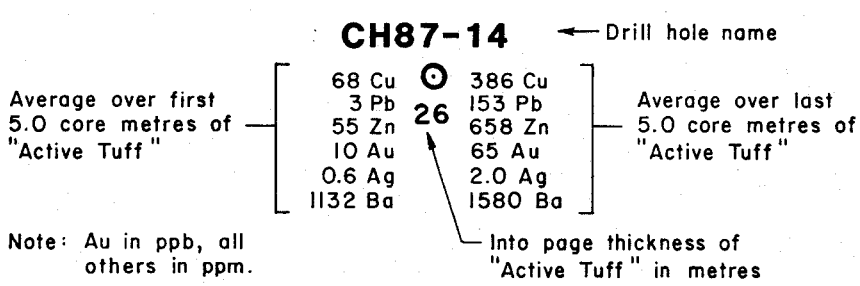
The metal zoning within the Anita Active Tuff in the Anita East Area is shown on figure 22. Towards the west, zinc is elevated near the contact of the Anita Active Tuff with the Fulford Fault Splay and towards the east, zinc is elevated at just below the Anita Horizon. On sections 46+00 E and 47+00 E it is elevated at both contacts. The change may be due to faulting as the felsic fault gouge within the Fulford is often elevated in Zn (i.e. 1003 ppm over 4.6 m from 202.3 to 209.6 m in CH88-40). Gold tends to be elevated towards the top of the Anita Active Tuff just below the Anita Horizon.

The metal enrichment in conjunction with the strong sodium depletion indicate that the Anita Active Tuff in the Anita East Area merits further testing. All whole rock and alteration samples taken from these Anita Active Tuff intersections were sodium depleted with as little as 0.10 % Na2O. The tuffs are enriched in Pb (up to 570 ppm over 3.0 m in CH86-16), Zn (up to 0.34 % over 2.0 m in CH87-34 and similar intersections in all holes) and Au (up to 160 ppb over 15.4 m in CH88-40). This is in contrast to the Anita area where the sodium depletion is not as pervasive. The pervasive sodium depletion and anomalous lead geochemistry may indicate that the Anita East Area is more proximal to a hydrothermal system. The Au enrichment is very significant as it indicates the possibility of finding precious metal enriched polymetallic sulphides.

Two holes were drilled mid-way between the Anita Area



LEGEND



Note: Au in ppb, all others in ppm.

*= Estimated grade (complete interval not sampled)

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

ANITA EAST AREA

VERTICAL LONGITUDINAL SECTION (looking north)

WORK BY	DRAWN BY	DATE: July 1988
DPM	VJG	

0 50 100

SCALE IN METRES 1 : 2500

Figure: **22**

and the Anita East Area and are included in this section. Holes CH88-57 and CH88-58 totalled of 562.0 metres (see Figure 21). Both holes were planned to be on section 40+00 E, but due to logistical reasons, ie. Bowman Creek, hole 58 was shifted onto line 39+00 E. Hole 57 tested shallow and deep IP chargeability anomalies and the updip extent of the Anita Active Tuff and sulphide mineralization intersected in CH87-31. CH88-58 tested high magnitude (> 40 msec) coincident deep and shallow IP chargeability anomalies.

Hole CH88-57 intersected two zones of Anita Active Tuff, which were moderately altered with Ishikawa indices of 73 and 76. Locally, anomalous metal values were encountered with 1.0 m of 525 ppb Au from 45.0 to 46.0 in the first zone from 40.0 to 50.0 m, and 1401 ppm Cu from 57.0 to 58.0 m in the second zone of Anita Active Tuff from 53.0 to 61.6 m. The two blocks were separated by a fault bound slice of Nanaimo sediments indicating that the Fulford may have two or more major splays. The mineralization encountered from 249.6 to 250.0 m in CH87-31 appears to be a small pendant and was not intersected in CH88-57. Section 40+00 E displays the standard north to south stratigraphic sequence of choritic felsic tuffs, mafic tuffs, intercalated mafic and variably chloritic felsic tuffs, Anita Active Tuff, mafic tuffs and flows, argillites and cherty tuffites, with faulted in Nanaimo sediments and numerous gabbro intrusions. The shallow IP anomaly was caused by the Anita Active Tuff and the more southern deep IP anomaly was probably caused by the thick ilmente bearing gabbro body from 83.8 to 202.2 m.

CH88-58 collared in gabbro and except for a short interval of cherty tuffites from 11.2 to 18.5 m remained in gabbro. The IP anomalies were caused by 1 to 20 metre wide intervals of up to 10 to 15 % ilmenite, with possible minor contributions from the overlying pendant of argillaceous, variably graphitic and pyritic, sediments. The gabbro locally contained disseminated chalcopyrite with 1942 ppm Cu from 188.2 to 189.0 m. No anomalous values in Ni, Au, Pt or Pd were obtained. The IP anomaly tested trends from line 29+00E to 42+00E between 4+00 and 5+00 S.

POWERLINE ANOMALY

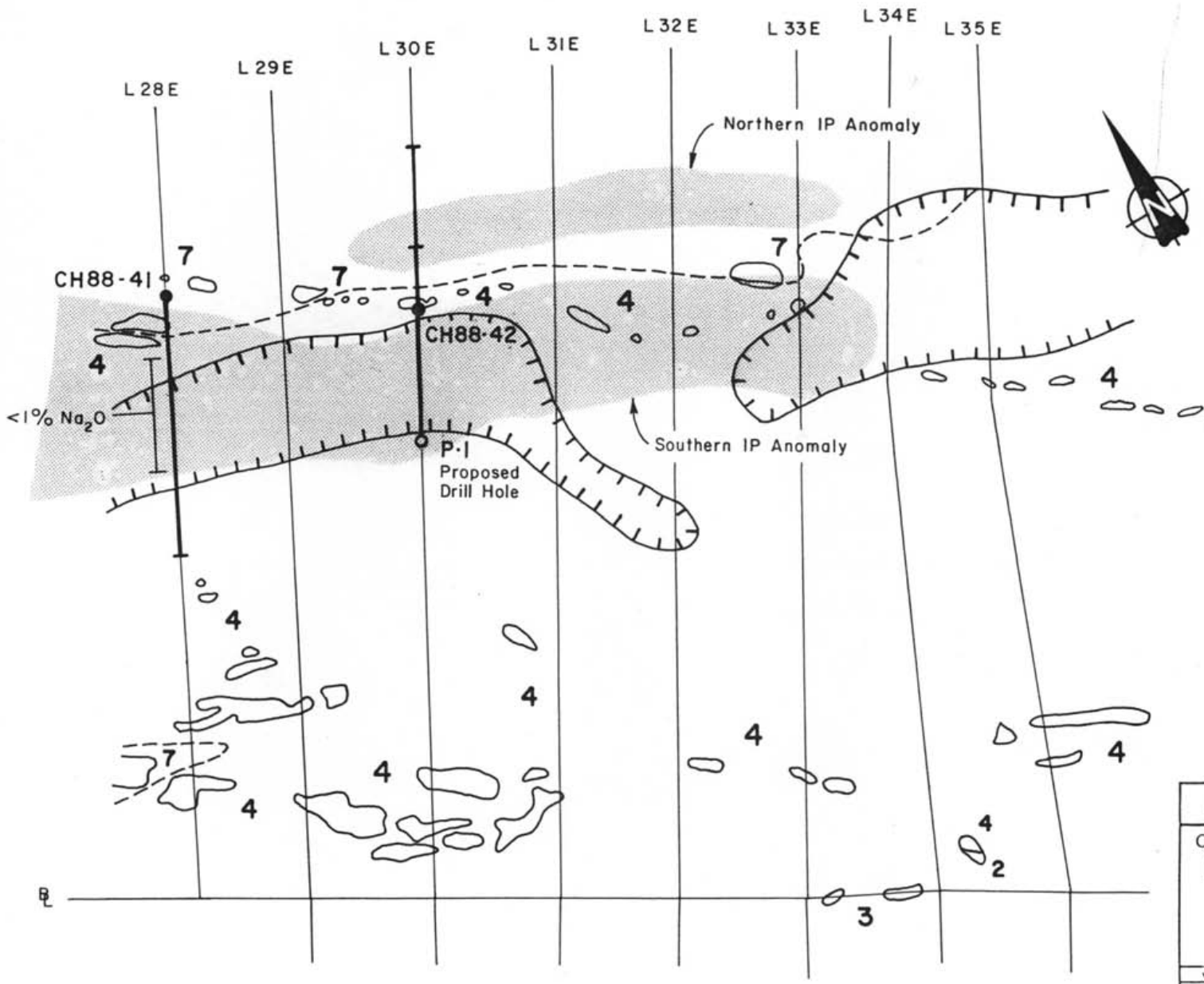
The powerline anomaly consists of coincident deep and shallow IP chargeability anomaly roughly coincident with a downslope Cu and Zn soil anomalies. The IP anomaly lies just to the north of the gabbro - felsic tuff contact. The felsic tuffs are locally strongly silicified and variably sericitic and chloritic.

The drilling was designed to test the IP chargeability anomaly and the soil anomalies. The drilling consisted of one 196.9 m hole, CH88-42 (see Figure 30). The probable cause of the IP anomalies is a 60 cm wide zone of 15 to 20 % ilmenite in the gabbro. The ilmenite, which has a background level of 1 to 3 % in the gabbro, was the only possible IP source observed in the drill hole. The IP chargeabilty anomaly is located directly over the thin ilmenite rich zone. The Cu soil anomaly is probably derived from weathering of the gabbro, which hosts short intervals of 1 to 2 % chalcopyrite. The zinc soil anomaly is unexplained, but may be derived from zinc-enriched felsic tuffs, which were intersected 200 metres along strike to the west in hole CH88-41.

There were no significant zones of mineralization encountered in the drill hole. The only sulphide mineralization intersected was trace disseminated pyrite in the felsic tuffs and local chalcopyrite rich zones (up to 2 % over 20 cm) in the gabbro. The felsics are locally Ba rich with 2880 ppm Ba in one 10 cm whole rock sample at 32.4 m. There were no altered samples, however, further detailed geochemical sampling will be carried out on the felsic tuffs.

The powerline anomaly - North does not merit further work. However, to the south of the powerline IP anomaly tested above, there is a roughly coincident deep and shallow IP anomaly that is located over an area of felsic tuffs. The anomaly extends along strike for at least 700 metres from line 26E to line 33E and is referred to as the Southern Powerline Anomaly. A zinc soil anomaly defined by 100 ppm zinc (locally up to 675 ppm zinc) extends from line 26E to line 38E and is 20 to 140 metres wide. The western part of the zinc soil is roughly coincident with the IP anomaly. The Southern Powerline anomaly was tested by hole CH88-41 on line 28E. Hole CH88-41 intersected 156 metres of felsic pyritic tuffs that contain less than 1% Na_2O, and locally up to 0.29% zinc over 1.0 metre. The above data indicates that further work is required to evaluate the massive sulphide potential of this area.

Recommendations



LEGEND

11	Nanaimo Group Sediments
10	Late Mafic Intrusions
9	Felsic Intrusive
8	Intermediate Intrusive
7	Mafic Intrusive
6	Ultramafic Intrusive
5	Sediments
4	Felsic Volcanics
3	Intermediate Volcanics
2	Mafic Volcanics
1	Ultramafic Volcanics

- Geological contact
- Fault
- Reworked felsic tuff
- Bedding tops
- u Unconformity
- Felsic-mafic contact
- IP chargeability anomaly
- Zinc soil anomaly > 100 ppm max. 675 ppm

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

POWERLINE SOUTH AREA

DRILL HOLE LOCATION MAP

WORK BY	DRAWN BY	DATE: Sept 1988
DPM	VJG	

0 100 200

SCALE IN METRES 1 : 5000

Figure: **30**

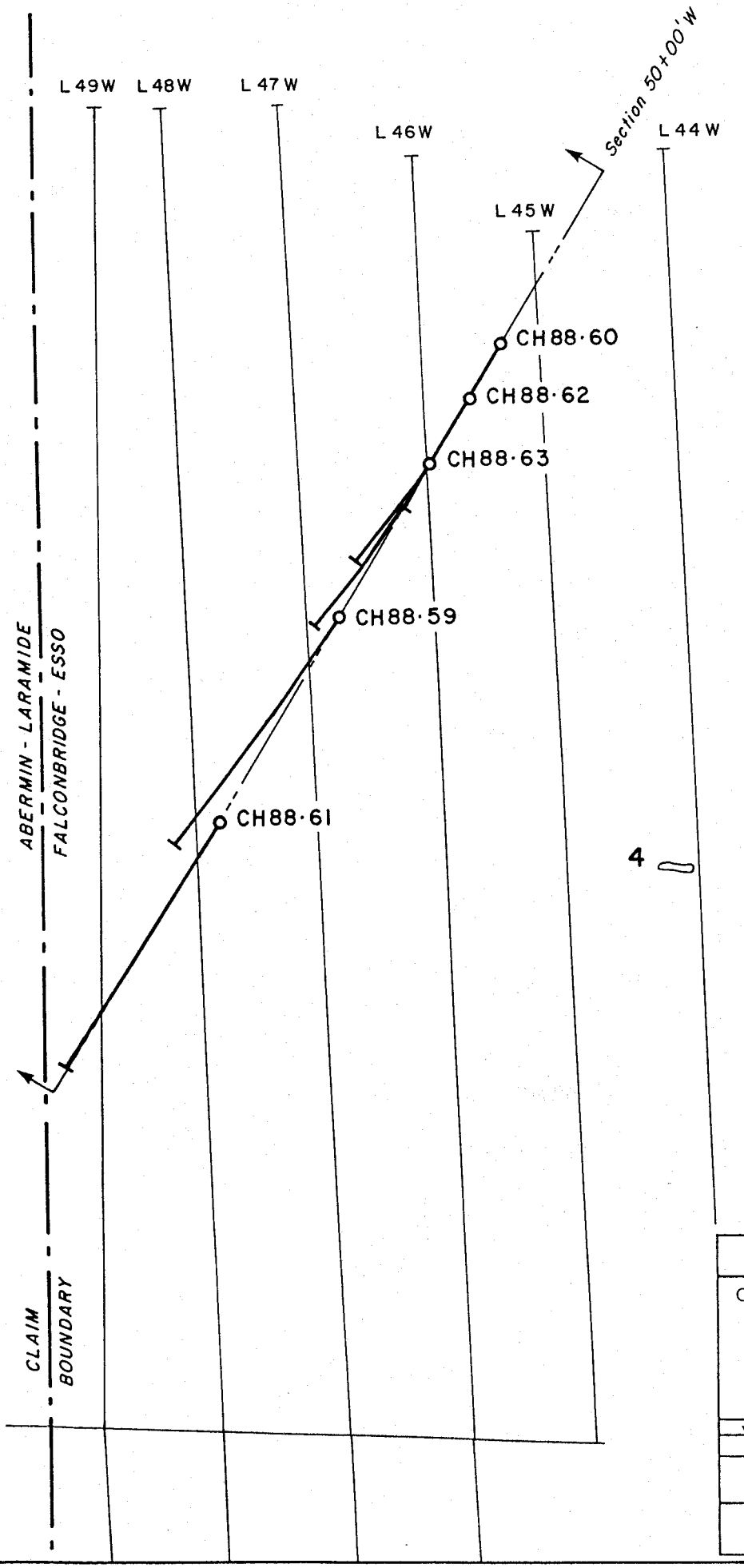
HOLYOAK AREA

Five holes were drilled in this area (see Figure 32) with a combined objective of testing deep and shallow IP chargeability anomalies and developing a stratigraphic section. The section was drilled to the north of a Abermin-Laramide section and when combined they produce a 2 kilometre long strtigraphic section. The northernmost three drill holes, CH88-60, 62 and 63, tested the subtle IP anomalies, (> 15 msec versus background of aprox. 10 msec), which appeared to correspond with the trace of Abermin-Laramide's Randy Zone. Holes CH88-59 and 61 filled in the stratigraphic section from the northern drill holes to the claim boundary. The drilling for this area totalled 1421 metres. The drilling was supplemented by a trenching program.

Along the south half of the section drilling intersected approximately 100 metres of unaltered felsic tuffs with minor mafic and intermediate tuffs (see figure 34). This sequence was followed to the south by a 250 metre sucession of dominantly mafic tuffs with minor felsic and intermediate tuff beds. The southern drill hole (CH88-61) ended in a sucession of variably chloritic felsic tuffs and tuffites with minor intermediate to mafic tuffs. Drilling by Abermin-Laramide indicates that this dominantly felsic sucession is 400 metres thick. To the south of these felsics lies 80 to 100 metre thick gabbro or possibly diorite stock. To the south of the gabbro Abermin-Laramide intersected 700 metres of felsic to mafic tuffs and then the Coronation Extension Zone.

At the northernmost end of the stratigraphic section (see Figure 33), drilling intersected approximately 200 m of strongly sodium depleted felsic tuffs with weak chlorite and on average 1 to 2 % disseminated pyrite. The felsic tuffs are quartz phyric and locally contain lapilli. Within these felsics are minor argillite beds and mafic clinopyroxene phyric dykes. Unlike the felsic tuffites that are interbedded with argillites south of the Anita Active Tuff these felsic tuffs do not contain highly elevated levels of barium. The mafic dykes appear similar to the Nitinat Formation, but have been strongly chemically altered and do not match the chemistry of the few Nitinat samples within the database.

The 200 metre wide altered-pyritic felsic zone contains a narrow (1 to 3 metres) zinc-rich zone, that was intersected by drill holes CH88-60, 62, and 63. There is strong sodium depletion from 78.2 to 233.5 m in CH88-60, from 6.4 to 221.2 m in CH88-62 and from 3.0 to 171.6 m in CH88-63, with less than 1.00 % Na_2O in samples of felsic tuffs over those intervals. Ishikawa alteration indices ranged from 43 to 87 and averaged about 60. The alteration within these felsics appears to be characterized by K_2O enrichment and Na_2O



LEGEND

11	Nanaimo Group Sediments
10	Late Mafic Intrusions
9	Felsic Intrusive
8	Intermediate Intrusive
7	Mafic Intrusive
6	Ultramafic Intrusive
5	Sediments
4	Felsic Volcanics
3	Intermediate Volcanics
2	Mafic Volcanics
1	Ultramafic Volcanics

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

HOLYOAK AREA

DRILL HOLE LOCATION MAP

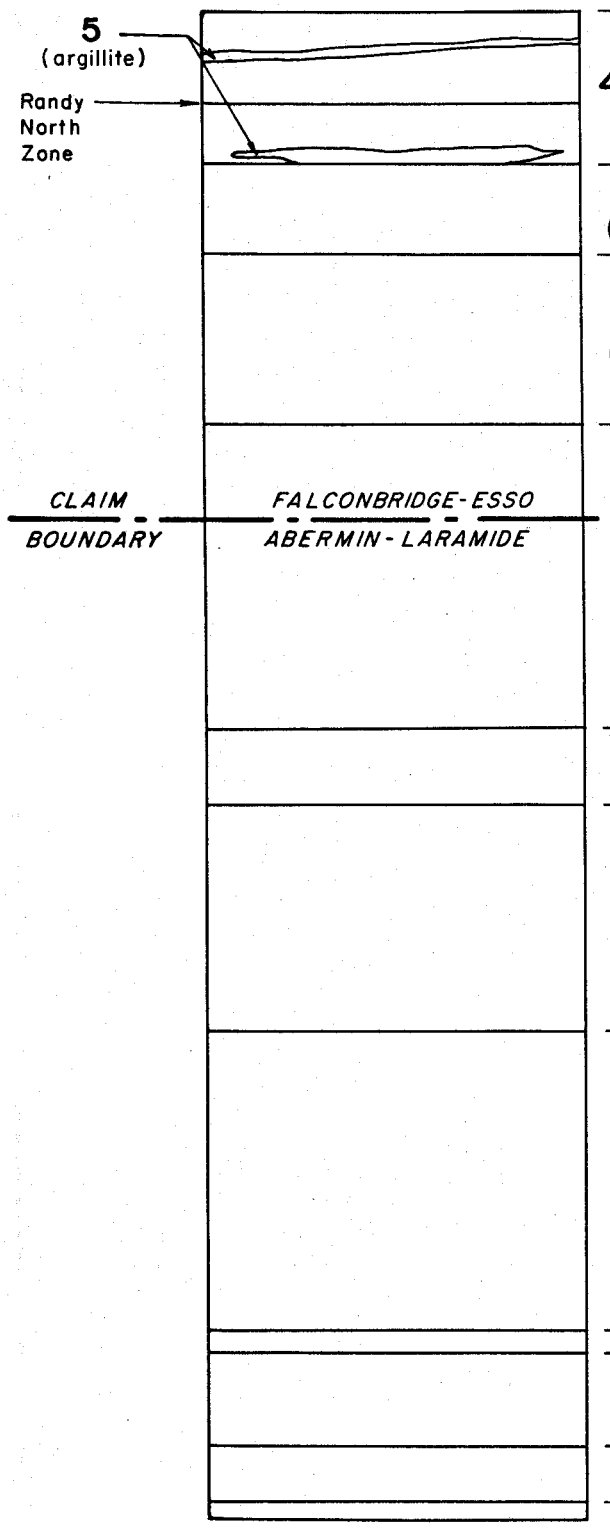
WORK BY	DRAWN BY	DATE:
DPM	VJG	Aug 1988

0 100 200

SCALE IN METRES 1 : 5 000

Figure: 32

NORTH



Sodium depleted pyritic felsic tuffs with minor mafic tuffs and argillites

Felsic tuffs with minor mafic and intermediate tuffs

Mafic tuffs with minor felsic, intermediate tuffs and sediments

Felsic tuffs and reworked felsic tuffs to volcanic wackes with minor mafic tuffs and sediments

Gabbro
(Abermin's Break 3)

Dominantly felsic tuffs

Abermin's Green Volcaniclastic Sequence

Coronation Extension Zone

Abermin's Rhyolite Sequence

Nanaimo sediments

Cameron River Formation

SOUTH

LEGEND

11	Nanaimo Group Sediments
10	Late Mafic Intrusions
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7	Mafic Intrusive
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1	Ultramafic Volcanics

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

HOLYOAK AREA

SECTION 50+00'W

STRATIGRAPHIC DIAGRAM

WORK BY	DRAWN BY	DATE: Aug 1988
DPM	VJG	

0 100 200 300 400

SCALE IN METRES 1 : 10 000

Figure: **33**

depletion. The zinc-rich zone occurs along strike from Abermin-Laramide's Randy zone and is thought to be the eastern strike extension of the Randy Zone. The Randy Zone intersections are as follows:

DDH	From	To	Length (m)	Cu ppm	Zn %	Pb ppm	Au ppb	Ag ppm	Ba ppm	As ppm
CH88-60	197.4	197.9	0.5	260	2.04	6	103	1.3	1200	120
CH88-62	116.0	119.0	3.0	63	0.19	123	37	0.6	583	30
	117.0	118.0	1.0	150	0.33	129	45	0.9	460	55
CH88-63	50.0	51.5	1.5	3100	0.36	860	49	7.2	950	33

Of interest in these intersections is the weak polymetallic signature, i.e. Pb, Cu, Au, Ag and As elevated against the low background, and the low Ba. The mineralization in holes 60 and 62 consists of disseminated sphalerite with 5 to 10 % disseminated pyrite in felsic tuffs. In hole 63 the mineralization is associated with quartz - carbonate veining. From 98.0 to 98.65 m in hole Ch88-63 there is 1517 ppm Zn associated with sphalerite adjacent to a quartz vein in felsic tuffs.

The only other intersections of interest were in CH88-59, which consists of 2.80 % Cu and 0.62 g/t Au over 50 cm from 270.4 to 270.9 m, and in CH88-61, which consists of 0.40 % Zn over 1.5 m from 67.1 to 68.6 m. The first intersection was of chalcopyrite in a quartz vein in a mafic tuff. The second intersection was of pyrite associated with strong fracture controlled carbonatization within felsic quartz phyric tuffs. In CH88-62 there are three zones with weakly elevated gold and arsenic, the first is also elevated in zinc, they are as follows:

From	To	Length	Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppm	As ppm	Ba ppm
34.0	40.0	6.0 m	39	36	667	71	<0.5	137	897
74.0	85.0	11.0 m	22	<5	59	55	0.5	16	1018
196.0	202.0	6.0 m	21	9	110	63	1.6	85	838

The thick intersection (approximately 200 metres) of sodium depleted and pyritic felsic tuffs and zinc rich zone clearly merits further work. The Randy Zone has been traced on the adjacent Abermin-Laramide property for at least 1000 metres across the TL claim. It continues onto the Holyoak 3 claim and the 1988 trenching and drilling program have traced it for 800 metres. The thicker zones of anomalous Au associated with weak elevations in base metals are interesting and may be indicative of precious metal rich massive sulphides within this sucession of altered felsic tuffs.

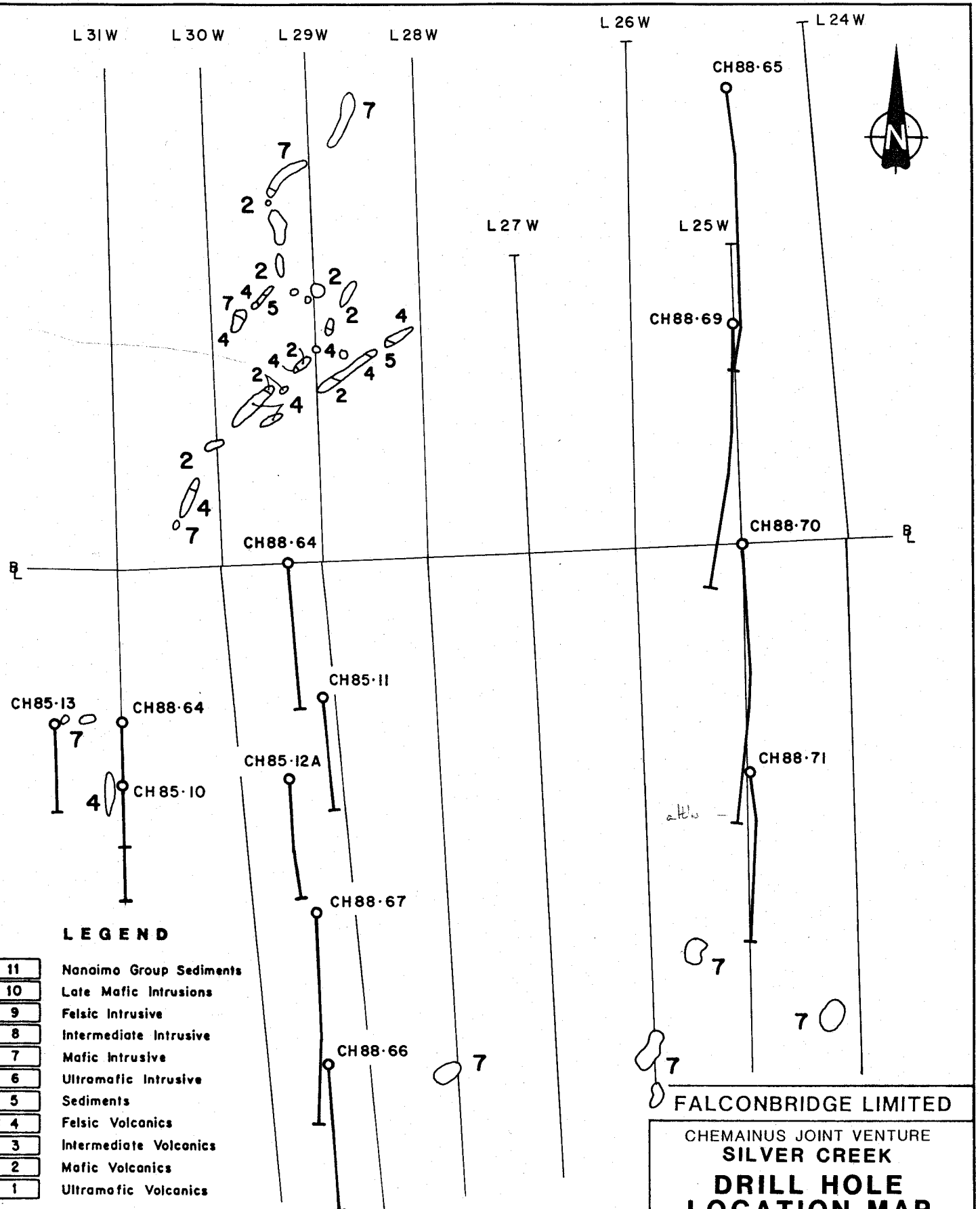
SILVER CREEK AREA

Eight holes, CH88-64 to 71 inclusive, totalling 2495 metres of drilling, were drilled in 1988 (see Figure 35). Four holes, CH85-10, 11, 12A and 13 with an aggregate length of 641.8 m, were drilled in 1985. The drilling in 1985 tested IP chargeability anomalies and the downdip extent of mineralization uncovered in a trench on line 31+00 W. Drill hole CH85-10 intersected 7.5 metres of 1% zinc within chloritic felsic tuffs. The 1988 drilling tested deep IP chargeability anomalies, downdip extension of mineralization intersected in 1985, and developed two stratigraphic sections.

The northernmost drilling (CH88-65, see figure 40) intersected 25 metres of wacke, siltstone and minor argillite and then entered 100 metres of mafic tuff. The contact between the sediments and mafic tuffs may be the contact between the McLaughlin Ridge Formation and the Cameron River Formation. To the south of the mafic unit the drilling intersected over 800 metres of intercalated felsic, intermediate and mafic tuffs with minor (<1m) local argillaceous sediments. There are relatively more felsic volcanics on section 29+50W than on section 25+00W (see figure 36).

Drilling on Section 31+00 W consisted of one 195.1 m hole, CH88-64 , which tested a deep IP anomaly beneath the 7.5 m intersection of 1.01 % Zn from 43.3 to 50.8 m in CH85-10. No significant mineralization or alteration was intersected. An ilmenite rich gabbro, the Silver Creek Gabbro (see Figures 36 and 38), was intersected under the sulphide mineralization. The IP anomaly appears to be caused by a combination of the overlying sulphides and the ilmenite within the gabbro.

Drilling on Section 29+50 W (see Figure 39) consisted of three holes in 1988, CH88-66 to 68, and two holes in 1985, CH85-11 and 12A, with a total length of 1107.9 m, of which 759.9 metres were drilled in 1988. The purpose of the 1988 drilling was to form a stratigraphic section using the two 1985 holes, which tested IP chargeability anomalies. The 1985 hole intersected pyritic and geochemically anomalous felsic tuffs (see Enns and Hendrickson, 1986). Drill holes CH85-11, 12A, and CH88-68 were all shut-down in a shallow dipping gabbro body, termed the Silver Creek Gabbro, of unknown thickness. Surface outcrops indicate that the Silver Creek Gabbro may be about 150 metres thick. Hole CH88-68 intersected dominantly mafic tuffs with no significant alteration or mineralization within the mafic, felsic or intermediate tuffs. Hole CH88-67 intersected intercalated mafic, intermediate and felsic tuffs with several major faults, one of which terminates the Silver Creek Gabbro (see Figures 36 and 39). CH88-66 was drilled to the south and collared in a steeply dipping gabbro body of a different variety than the Silver Creek



FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

SILVER CREEK

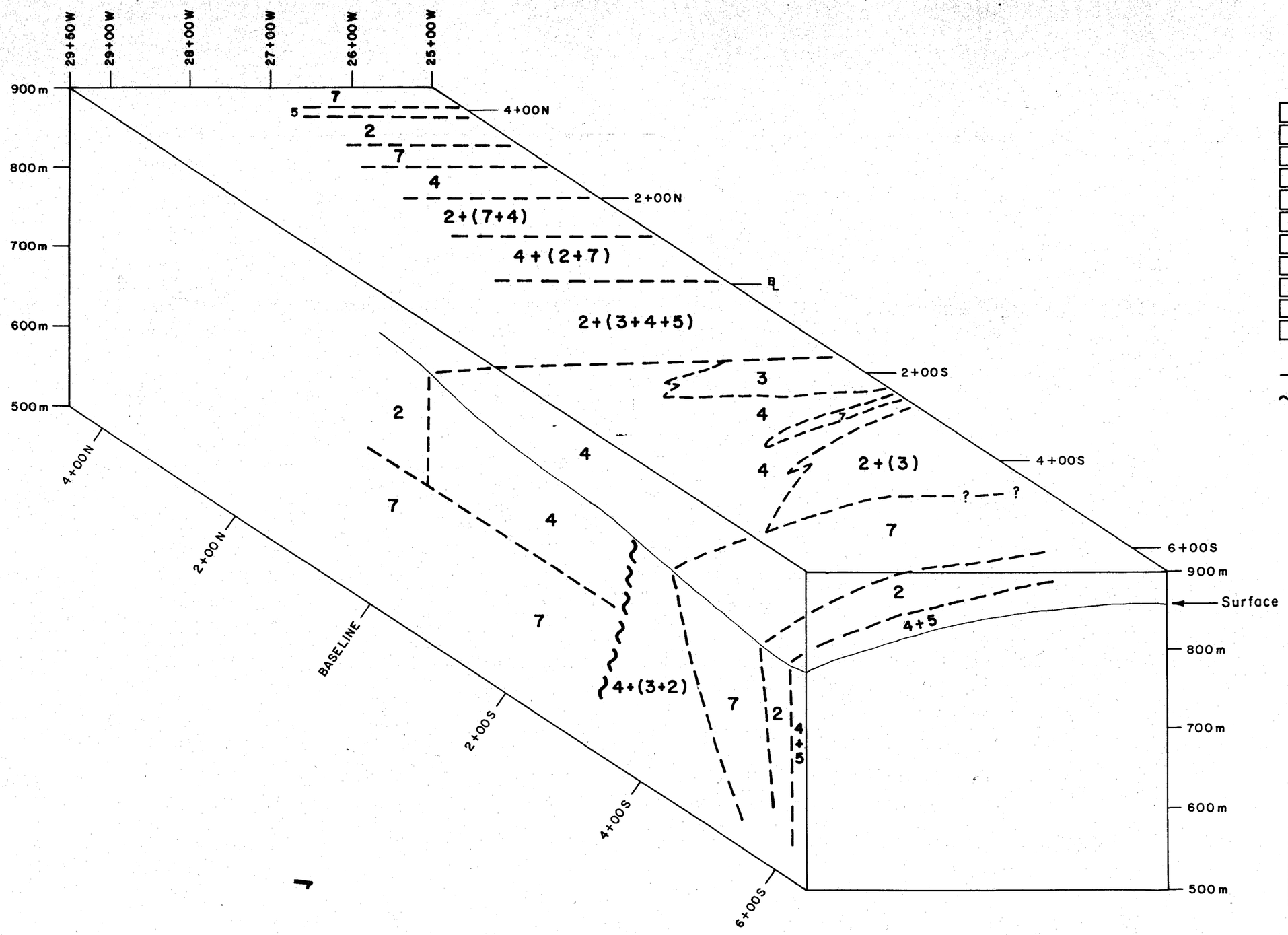
DRILL HOLE LOCATION MAP

WORK BY	DRAWN BY	DATE:
DPM	VJG	Aug 1988

0 100 200

SCALE IN METRES 1 : 5 000

Figure: 35



LEGEND

11	Nanaimo Group Sediments
10	Late Mafic Intrusions
9	Felsic Intrusive
8	Intermediate Intrusive
7	Mafic Intrusive
6	Ultramafic Intrusive
5	Sediments
4	Felsic Volcanics
3	Intermediate Volcanics
2	Mafic Volcanics
1	Ultramafic Volcanics

Geological contact

Fault

FALCONBRIDGE LIMITED

CHEMAINUS JOINT VENTURE

SILVER CREEK

STRATIGRAPHIC DIAGRAM

PROJ. 116

WORK BY	DRAWN BY	DATE:
DPM	VJG	Feb 1988

0 100 200

SCALE IN METRES

Figure: **36**

Gabbro.

Drilling on section 25+00 W consists of four holes, CH88-65, 69, 70 and 71 (see Figure 40), with a aggregate length of 1540.0 m. CH88-65 was drilled to the north and passed from a mafic intrusive into sediments and then into dominantly mafic McLaughlin Ridge volcaniclastics with minor gabbro and the latter half of the hole cut felsic tuffs. CH88-69 tested a deep IP chargeability anomaly which was caused by pyritic felsic tuffs from 148.9 to 193.0 m. Holes CH88-70 and 71 intersected felsic, intermediate and mafic tuffs. CH88-71 was drilled to test a IP chargeability and intersected mafic tuffs with on average 3 % pyrite over its entire length. Extensive sampling of hole 71 did not reveal any anomalous metal contents or alteration.

A 30 metre wide zone of sodium depletion within a felsic tuff was intersected by hole CH88-69 (148.9 to 193.0m) and hole CH88-65 (430.7 to 458.7m). It is possible that hole CH88-65 was shut-down while still in the alteration. The zone is also present on surface where the trench on line 25+00E uncovered a 60 metre wide zone of sodium depletion. Minor, less than 1 metre thick argillaceous chert layers occur within the altered felsic tuff. The altered zone is not enriched in base metals. The altered zone occurs just south of a felsic-mafic contact near the northern limit of the McLauglin Ridge Formation. This suggests that the altered zone may correlate with the Randy Zone.

Hole CH88-70 intersected several short intervals of felsic tuffs with weak metal enrichment and sodium depletion (see Appendix 3). Most notable were the intervals from 272.0 to 275.7 and from 395.7 to 403.1. From 272.0 to 275.7 the tuff contained 1396 ppm Zn, and 119 ppb Au. The mineralization consisted of pyrrhotite, pyrite, sphalerite and chalcopyrite. It appears to be a similar style to that on section 31+00 W and thus indicates a strike of 090; whereas, surface mapping indicates a strike of approximately 120 (Morrice, personal communication). The hole was shut-down in an altered zone from 395.7 to 403.1 of a silica-rich cherty tuffite that is very strongly sodium depleted. The tuff is elevated in Ba (2400 ppm) and contains 0.30 % Zn from 401.4 to 402.4 m. The IP chargeability survey indicates that this zone of alteration extends for 1000 metres from line 20W to line 30W.

The anomalies tested were accounted for and a stratigraphic model was put together (see Figure 36). The zone of alteration intersected on line 25W represents a potential massive sulphide host horizon and further work is warranted along strike. A drill hole on section 31+00 W should also be drilled to penetrate the Silver Creek Gabbro in search of the cut-off Zn mineralization.

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APPENDIX 1

SECTION BY SECTION SUMMARY

PHASE 1 OF 1988 DRILLING

CHEMAINUS PROJECT

SECTION 27+00 E (Figure 12):

Objectives/Targets:

1. The active tuff at 50-70 m intervals up dip of CHEM87-28.

2. Shallow I.P. chargeability anomaly centred at 2+80 S

3. Double peaked shallow I.P. chargeability anomaly (32 msec) in the sediments south of the active tuff.

4. V.L.F. conductor at 3+60 S.

Holes drilled:

Hole #	Location	Azimuth	Dip	Length (m)	Objective
CH88-48	1+63 S	210	-45	256.3	1
CH88-49	2+18 S	210	-45	252.1	1
CH88-51	3+10 S	210	-45	159.7	3,4
CHEM87-28	1+00 S	210	-50	382.8	

Results:

Holes CH88-48 and 49 intersected the active tuff 140 and 190 m's updip of CHEM87-28. Correlations between the holes and outcrop show that contacts are wavey but that stratigraphy has an overall steep (60-90o) dip to the south. A flexure in the vicinity of CH88-48 and 49, however, creates an apparent dip of 60o N. The strongest mineralization (2.30 % Cu, 0.49 % Pb, 3.66 % Zn, 73.9 g/t Ag and 1.9 g/t Au over 4.9 m) encountered so far occurs in CH88-49 within the flexure. This mineralization occurs 1.8 m from the felsic-mafic contact. A 5 m gabbro dyke has intruded along this contact.

A mafic porphyritic sill, typical of those in the mafic volcanic sequence south of the active tuff, intrudes the active tuff, 10 m north of the mineralization in CH88-49. This is strong evidence that the mafic volcanics are younger than the active tuff.

At the bottom of CH88-49 the mafic tuffs, fows and sills south of the active tuff become intercalated with cherty, black argillite with 3,011 ppm Ba. The hole ended in a tuffaceous conglomerate.

CH88-51 collared in a gabbro dyke and then passed

through the argillite and tuffaceous conglomerate similiar to that at the bottom of CH88-49. A 30 m thick sequence of barren felsic tuffs occurs south of the tuffaceous conglomerate. The felsic tuffs are occasionally intercalated with thin (< 4 m) beds of pyritic argillite which are partly responsible for the I.P. anomaly. The I.P. anomaly is also partly due to strongly carbonatized mafic lapilli tuff with 2 % pyrite which occurs immediately south of the barren felsic crystal tuffs.

Summary:

Fulford Fault Splay (400 m elev.)	1+00 S
Dip of Fulford Fault Splay	~70o N
Dip of stratigraphy north of the Anita Gabbro	?
North contact of the Anita Gabbro (400 m elev.)	1+50 S
Dip of north contact of the Anita Gabbro	?
South contact of the Anita Gabbro (400 m elev.)	2+50 S
Dip of south contact of the Anita Gabbro	70 - 84o S
Felsic-mafic contact (400 m elev)	2+40 S
Dip of felsic-mafic contact	60o N - 67o S

Significant Intersections

CH88-48 0.49% Cu, <0.01% Pb, <0.01% Zn, 3.6 g/t Ag, 0.18g/t Au
0.8 m

CH88-48 0.39% Cu, <0.01% Pb, <0.01% Zn, 2.9 g/t Ag, 0.12g/t Au
2.9 m

Ch88-49 0.14% CU <0.01% Pb, 1.00% Zn, 4.9 g/t Ag, 0.44 g/t Au
1.0 m

CH88-49 2.30% Cu, 0.49% Pb, 3.66% Zn, 73.9 g/t Ag, 1.90 g/t Au
4.9 m

SECTION 28+00 E (Figures: 13 and 14):

Objectives/targets:

1. Extend the stratigraphic section north to 5+00 N.

2. Deepen hole CHEM87-23 to find the northern contact of the Anita Gabbro.

3. Active tuff along the northern flank of the Anita Gabbro below hole CHEM87-23.

4. Resolve the discrepencies between the surface exposures and drill holes.

Holes drilled:

Hole #	Location	Azimuth	Dip	Length (m)	Objective
CH88-41	4+97 N	210	-50	346.3	1
CH88-43	3+30 N	210	-50	391.4	1
CH88-23	1+10 N	210	-50	568.8	2
CH88-45	1+10 N	210	-58	439.5	3
CH88-44	2+40 S	210	-45	203.3	4

Results:

Holes CHEM87-23, Ch88-41, 43 and 45 show that the stratigraphy north of the Anita Gabbro is comprised dominantly of weakly chloritic felsic crystal tuffs which dip 80-85o N. The felsic tuffs between 3+90 N and 4+30 N are sodium depleted (<0.81% Na2O) and contain 1-2 % disseminated pyrite. Several 20-40 m thick units of mafic tuffaceous sediments occur between 1+50 N and 3+00 N and may be important marker horizons. Several other beds of mafic to intermediate tuffs < 1 to 20 m thick occur south of the baseline.

The Fulford Fault Splay occurs in holes CHEM87-23 and Ch88-45 between 0+50 and 1+00 S and dips 75o N. Ch88-45 intersected only 1-5 % pyrite in the active tuff north of the Anita Gabbro over a 23.5 m interval between 1+10 and 1+26 S.

The north side of the Anita Gabbro dips 84o N and the extension of CHEM87-23 shows that the south side dips 72o S. This suggests that the Anita Gabbro may have been intruded

along the axis of an anticlinal fold.

The active tuff is dyked out in CH88-44. The hole collared in gabbro and intersects mafic tuffs and flows which become intercalated with cherty argillite, felsic tuffite/tuff, siltstones and greywackes. The argillites and siltstones are consistently Ba-rich (>2,000 and up to 9,100 ppm). Two thin (< 5.0 cm) beds of mafic tuffaceous sediment fine downhole (i.e. south).

Summary:

Fulford Fault Splay (400 m elev.)	1+00 S
Dip of Fulford Fault Splay	75o N
Dip of stratigraphy north of the Anita Gabbro	78-85o N
North contact of the Anita Gabbro (400 m elev.)	1+35 S
Dip of north contact of the Anita Gabbro	85o N
South contact of the Anita Gabbro	1+95 S
Dip of south contact of the Anita Gabbro	72o S
Felsic-mafic contact (400 m elev.)	2+37 S
Dip of felsic-mafic contact	72o S - 52o N

Significant intersections:

CHEM86-18 1.60% Cu, <0.01% Pb, 0.04% Zn, 8.9 g/t Ag, 0.2g/t Au
5.0 m

CHEM87-37 1.64% Cu, 0.06% Pb, 1.42% Zn, 28.8 g/t Ag, 0.7g/t Au
5.0 m

SECTION 29+00 E (Figure 15)

Objectives/targets:

1. Active tuff at 50-70 m intervals updip from CHEM87-27.

2. Extend stratigraphic section into the sediments south of the mafic volcanic package.

Holes:

Hole #	Location	Azimuth	Dip	Length	Objective
CH88-46	1+48 S	210	-58	257.9	1
CH88-47	2+10 S	210	-50	294.4	2
CHEM87-27	0+85 S	210	-50	357.5	

Results:

Hole CH88-46 collared in Nanaimo Group sediments and, after piercing the unconformity at a depth of 33.2 m, intersected 89.3 m of active tuff before reaching the mafic-felsic contact. Correlation with CHEM87-27 shows that the active tuff dips 72o S. A distinctive lapilli tuff, composed of dark green chloritic lapilli in a light grey, moderately sericitic felsic matrix occurs immediately below the unconformity. The active tuff hosts 3 beds of massive pyrite up to 6 cm thick. Weak disseminated pyrite (3-7%), sphalerite (trace-2%), chalcopyrite (trace-0.5%) grading 0.15% Cu, 0.89% Zn and 198 ppb Au occurs over a 3.7 m interval of felsic lapilli tuff, 4.5 m from the felsic-mafic contact. The active tuff is enriched in Ba (4,211 ppm) for 8.3 m from the felsic-mafic contact. Several graded beds of mafic tuffaceous sediments fine downhole (i.e. south) near the bottom of hole CH88-46.

Neither the flexure nor the strong mineralization encountered on sections 27+00 E and 28+00 E occur on this section.

CH88-47 collared in a gabbro dyke just south of the active tuff. The first half of the hole intersected mafic tuffs, flows/sills intruded by several gabbro dykes. The mafic volcanics become intercalated with cherty black argillite and felsic tuffite, all of which are enriched in Ba (>2,000 ppm). A barren felsic lithic tuff (up to 30 % 1-3 mm cherty lithic fragments and epidotized feldspar crystals) occurs in the last 27.6 m of the hole. The tuff contains an average of 2,308 ppm Ba.

SUMMARY:

Fulford Fault Splay (400 m elev.)	0+98 S
Dip of Fulford Fault Splay	~50o N
Unconformity (400 m elev.)	0+95 S
Dip of unconformity	50o N
Dip of stratigraphy north of the Anita Gabbro	? N
South contact of the Anita Gabbro (400 m elev.)	~2+05 S
Dip of south contact of the Anita Gabbro	<68o S
Felsic-mafic contact (400 m elev.)	2+33 S
Dip of felsic-mafic contact	73o S

Significant intersections:

CHEM87-27	0.14% Cu, <0.01% Pb, 0.40% Zn, 1 g/t Ag, 0.04 g/t Au	1.0 m
CH88-46	0.26% Cu, <0.01% Pb, 0.04% Zn, 2 g/t Ag, 0.09 g/t Au	1.0 m
CH88-46	0.15% Cu, <0.03% Pb,).89% Zn, 4.6 g/t Ag, 0.2g/t Au	3.7 m

SECTION 30+00 E (Figure 16):

Objectives/targets:

1. Active tuff at 400 m elevation.

2. Deep I.P. anomaly (18 msec), possibly within the active tuff, between 2+40 S and 2+80 S.

3. Coincident shallow and deep I.P. chargeability anomalies (up to 43 msec) between 4+20 S and 4+40 S.

Holes:

Hole #	Location	Azimuth	Dip	Length (m)	Objective
CH88-50	0+95 S	210	-50	300.5	1
CH88-53	1+95 S	210	-50	272.5	1,2
CH88-55	3+60 S	210	-45	215.5	3

Results:

CH88-50 collared just north of the Fulford Fault Splay. The fault is extremely sharp. Fifty-three metres of Nanaimo Group sediments were intersected below the fault. The sediments rest unconformably on felsic tuffs further to the south. A 6.1 m wedge of weakly chloritic felsic tuff has been faulted into the Nanaimo sediments, possibly by the Anita Fault. There is minor shearing along the unconformity. A distinctive lapilli tuff composed of dark green lapilli in a light grey, sericitic, felsic matrix occurs 8.6 m below the unconformity and is identical to the lapilli tuff just below the unconformity in CH88-46, 100 m to the west.

The active tuff consists of felsic tuff, lapilli tuff and quartz-eye tufff. The matrix of a 1.5 m interval of lapilli tuff contains 25 % pyrite, approximately 115 m downdip of similiar mineralization intersected by CH8-46 on section 29+00 E.

A 20 m wide gabbro dyke occurs along the felsic-mafic contact. A 2.4 m interval of quartz-grain rich felsic lapilli tuff, 7.1 m above the dyke, contains up to 7 % disseminated red-brown sphalerite, 5 % pyrite and 1.5 % chalcopyrite. The interval assayed 0.48 % CU, 3.51 % Zn, 27.8 g/t Ag and 1.81 g/t Au. A 0.3 m wide mafic dyke intrudes the mineralized zone and was not included in the assays. The hole ended in the mafic volcanic package south

of the active tuff.

CH88-53 collared just south of the active tuff in mafic volcanics which continued to a depth of 80 m. Below 80 m the hole intersected 45.2 m of cherty argillite, followed by 139.5 m of cherty siltstone, intercalated with argillite and mafic tuff near the bottom of the hole. The argillites contain an average of 3,400 ppm Ba.

CH88-55 intersected gabbro over its entire length. The I.P. anomaly corresponds to a medium to coarse-grained granophyric phase of the large gabbro intrusion that occurs just south of the Lower Anita Road. It contains 10-15 % coarse interstitial ilmenite and trace to 4 % chalcopyrite. A 6.7 m interval contains 2,535 ppm Cu but no appreciable amounts of Au, Pt or Pd.

Summary:

Fulford Fault Splay (400 m elev.)	0+85 S
Dip of Fulford Fault Splay	~65o N
Unconformity (400 m elev.)	1+28 S
Dip of unconformity	~65o N

Anita Gabbro has not been intersected on this section

Felsic-mafic contact (400 m elev.)	~2+25 S
Dip of felsic-mafic contact	< 75o S

Significant intersections:

CH88-50 0.44% Cu, 0.05% Pb, 3.94% Zn, 29.4 g/t Ag, 2.1 g/t Au
2.0 m

SECTION 30+00 E (North) (Figure 31) :

Objectives/Targets:

Drilling on this section consisted of one 196.9 m hole, CH88-42 (see Figure p2). The drilling was to test coincident deep and shallow IP chargeability anomalies and coincident to downslope Cu and Zn soil anomalies.

Results :

The hole was collared in felsic tuffs, which are locally sericitic to chloritic. The felsic tuffs were intersected to a depth of 40.9 m and are interbedded with mafic ash tuffs, which occur from 8.3 to 10.4 m and 10.6 to 12.7 m. The felsic tuffs are not sodium depleted (range 2.17 to 5.00 %), but are weakly barium enriched locally (range 1380 to 2880 ppm). The felsic tuffs are quartz phyric and locally contain epidotized feldspar crystals and lapilli. The gabbro was intersected at 40.9 m and the hole terminated in the gabbro body at 196.9 m. The gabbro - felsic contact dips steeply to the south at 80 degrees. Two very small pendants were logged within the gabbro. The first, logged as an argillite, appears to be a very strongly sheared and carbonatized gabbro, as it contains 1.51 % TiO_2. The second pendant occurs from 99.5 to 100.1 m and it is a Ba poor, Na rich dacitic to rhyodacitic tuff. The gabbro contains 2 to 3 % ilmenite on average, with 15 to 20 % ilmenite over 60 cm from 100.4 to 101.0 m. This ilmenite rich zone is located beneath the IP chargeability anomalies and is the source of the anomalies. The gabbro hosts chalcopyrite, mainly in trace quantities, but locally there is up to 2 % over short intervals (2 % from 41.9 to 42.1, 1 % from 71.5 to 72.2). The chalcopyrite released by weathering of the gabbro is the source of the Cu soil anomaly. The zinc soil anomaly is unexplained and may be either due to zinc in the felsic tuffs to the south of the gabbro or is a cultural anomaly, caused by galvanized metal used in the powerline towers.

Summary :

The powerline IP anomaly has been explained, ilmenite and chalcopyrite within a large gabbroic body, and merits no further work. The felsic tuffs to the south of the gabbro merit further work. They are barium enriched and may be the source of a zinc soil anomaly. At about 4+50 N on line 30+00 E there are subtle deep and shallow IP chargeability anomalies (approx. 15 to 20 msec) which are probably associated with disseminated sulphide mineralization within the felsic tuffs. The IP axis should be tested on line 30+00 E and if promising results are received a second hole should be drilled on line 32+00 E.

SECTION 31+00 E (Figure: 31):

Objectives/Targets:

1. Active tuff 100 m updip of CHEM87-24.

2. Active tuff 100 m downdip of CHEM87-24.

Holes drilled:

Hole #	Location	Azimuth	Dip	Length	Objective
CH88-52	1+90 S	210	-60	203.3	1
CH88-56	0+01 N	210	-55	486.8	2
CHEM87-24	0+95 S	210	-60	364.2	

RESULTS:

Hole CH88-56 intersected the active tuff 100 m downdip of CHEM87-24. The Fulford Fault Splay dips 68o N and the unconformity dips 64o N. The Nanaimo sediments are approximately 30 m thick (true), consist of argillite, greywacke and conglomerate and rest unconformably on a gabbro dyke. A long sequence (>70 m true thickness) of felsic tuffs, crystal tuffs and lapilli tuffs occur beneath the gabbro dyke. They are moderately to strongly sericitic and contain 1-2 % disseminated pyrite, typical of the active tuff. The active tuff is more massive through most of hole CHEM87-24 and was originally logged as a flow but is now interpreted to be a tuff.

The mafic-felsic contact dips 65o S and was intersected by CH88-56 at 220 m elevation and by CHEM87-24 at 304 m elevation. Heavily disseminated sphalerite (1-20 %), pyrite (1-5 %), chalcopyrite (trace-2%) and galena (trace-3 %) occur over a 6.8 m (approximately 2 m true thickness) at the felsic-mafic contact and grade 0.45 % Cu, 0.14% Pb, 1.55 % Zn, 18.4 g/t Ag and 0.8 g/t Au. Two zones of weak disseminated sphalerite mineralization occur within 5 m of the felsic-mafic contact in CHEM87-24. The first is 4.5 m (1.5 m true thickness) grading 0.59 % Zn and the second is 3.4 m (1.0 m true thickness) grading 0.32 % Zn and 0.5 g/t Au.

Holes CH88-56 and CHEM87-24 ended in the mafic volcanic package south of the active tuff. CH88-52 collared in barren felsic tuff, typical of that which occurs within the dominantly sedimentary package. It is enriched in Ba (<5,900 ppm) and sodium depleted (0.91% Na2O). The

foliation is nearly parallel to the core axis so its thickness is unknown but it was intersected to a depth of 30 m. Below this, the hole intersected brown, green and red cherts and black argillites intercalated with mafic tuffaceous sediments and intruded by mafic porphyritic sills. The cherts contain an average of 13,384 ppm Ba and the argillites 3,808 ppm Ba.

Summary:

Fulford Fault Splay (400 m elev.)	0+83 S
Dip of Fulford Fault Splay	68o N
Unconformity (400 m elev.)	1+17 S
Dip of unconformity	65o N

Anita gabbro was not intersected on this section

Felsic-mafic contact (400 m elev.)	2+02 S
Dip of felsic-mafic contact	< 67o S

Significant intersections:

CHEM87-24 <0.01% Cu, <0.01% Pb, 0.59% Zn, 1 g/t Ag, 0.04g/t Au
4.5 m

CHEM87-24 0.05% Cu, 0.05% Pb, 0.32% Zn, 5.9 g/t Ag, 0.5 g/t Au
3.4 m

CH88-56 0.45% Cu, 0.14% Pb, 1.55% Zn, 18.4 g/t Ag, 0.8g/t Au
6.8 m

SECTION 32+00 E (Figure 18):

Objective/Targets:

1. Test stratigraphy north of cherty Ba-rich argillites in CHEM86-17.

Holes Drilled:

Hole #	Location	Azimuth	Dip	Length	Objective
CH88-54	0+49 S	210	-45	291.7	1
CHEM86-17	1+62 S	210	-50	249.0	

Results:

CH88-54 collared about 70 m north of the Fulford Fault Splay. Mafic tuffs, weakly chloritic felsic tuffs and possibly a felsic flow intruded by a 22 m wide gabbro dyke occur north of the Fulford Fault Splay. Foliation appears to dip steeply south to vertical.

The Fulford Fault Splay dips 65o N and separates Sicker Group volcanics to the north from 40 m of Nanaimo Group sediments below. The Nanaimo Group sediments consist of conglomerates and argillite which rest unconformably on mafic volcanics. A minor fault gouge occurs along the unconformity.

Hole CH88-54 intersected mafic volcanics and CHEM86-17 intersected gabbro dykes and cherty argillites, siltstones and greywackes immediately below the unconformity. Therefore, stratigraphy south of the unconformity dips less than 55o S and the active tuff must be located below 400 m elevation on this section.

Summary:

Fulford Fault Splay (400 m elev.)	0+90 S
Dip of Fulford Fault Splay	~65o N
Unconformity (400 m elev.)	? S
Dip of unconformity	85o N
Anita Gabbro was not intersected	
Dip of stratigraphy south of unconformity	< 55o S

SECTION 39+00 E (Figure 28) :

Objective/Targets:

The drilling on this section consisted of one 248.7 m hole, CH88-58 (see Figure c3). The purpose of the drill hole was to test strong (> 40 msec) coincident deep and shallow IP chargeability anomalies, which were centred at 5+00 S.

Results:

The hole collared in gabbro and with the exception of from 11.2 to 18.5 m remained in gabbro. From 11.2 to 18.5 m reworked felsic tuffs to tuffites were intersected. The tuffs displayed typical chemistry for the felsic tuffs with negligible sodium depletion (sample from 11.2 to 18.5: 68.5 % SiO_2, 0.25 % TiO_2, 1.80 % Na_2O, 1300 ppm Ba). The felsic tuff is not enriched in Ba as on section 40+00 E. The gabbro was variably coarse to fine grained with a background level of 5 % ilmenite and numerous zones of up to 15 % ilmenite over 1 to 21 metres between 59.7 and 238.6 m. There are minor disseminations of chalcopyrite locally as well as chalcopyrite clots within quartz veins. The disseminated sulphide was thought to be magmatic and was analysed for base and precious metals. One 0.8 m sample (188.2 - 189.0 m) analysed 1942 ppm Cu. All other samples contain less than 1000 ppm Cu and contained 9 to 68 ppm Ni, <5 to 25 ppb Au, 6 to 50 ppb Pd and 20 to 40 ppb Pt. Whole rock samples from the gabbro contain 1.65 to 4.16 % TiO_2. The cherty argillite outcrop that overlies the drill hole is interpreted to be a pendant.

Summary:

The IP anomalies are interpreted to be caused by disseminations of ilmenite within the gabbro. The deep IP anomaly was probably due to the 21.1 m zone of 8 to 10 % ilmenite that was intersected from 153.9 to 175.0 m. This and other ilmenite zones and possibly pyrite and/or graphite within the argillite pendant were the source of the shallow IP anomaly. This anomaly, which has a strike extent from 29+00 E to 42+00 E and occurs between 4+00 to 5+00 S, clearly does not merit further work.

No further work recommended

SECTION 40+00 E (Figure 29) :

Objective/Targets:

Drilling in 1988 on this section consisted of one 313.3 m hole, CH88-57, to supplement drill hole Chem87-31 (see Figure c2). The purpose of the drill hole was to test a shallow IP chargeability anomaly (> 20 msec, @ 2+60 S), a deep IP chargeability (> 20 msec from 2+80 to 3+20 S) and the updip extent of mineralization intersected in Chem87-31 (0.4 m of 1.36% Pb, 0.59% Cu, 134g/t Ag and 4.8 g/t Au from 249.6 to 250.0 m).

Results:

Hole Chem87-31 collared in chloritic felsic tuffs and then enters a 92.3 m section of variably epidote spotted mafic tuffs and flows to 118.4 m. From 118.4 to 192.1 m is a series of alternating variably chloritic felsic and mafic tuffs with numerous gabbro intrusions. There is gabbro bounded between two faults from 192.1 to 221.6 m. The lower fault is probably the Fulford fault. The "active tuff" occurs from 221.6 to 239.7 m with a minor mafic flow from 229.1 to 230.5 m. The "active tuff" has a vertical to northern sub-vertical dip. The portion above the mafic flow is metal enriched and the portion below is barren. From 221.6 to 229.1 m the "active tuff" averages 949 ppm Cu, 438 ppm Zn, 30 ppm Pb, < 1 ppm Ag, 89 ppb Au and 1097 ppm Ba over 7.5 m. From 239.7 to 259.1 m there is gabbro with a 70 cm felsic tuff inclusion that hosts 1.36 % Pb, 0.59 % Cu, 134 g/t Ag and 4.8 g/t Au over 40 cm from 249.6 to 250.0 m. From 259.1 to the end of the hole there are mafic tuffs and flows. The "active tuff" with its up to 10 % pyrite was responsible for the deep IP anomaly at 2+20 S.

Hole CH88-57 collared in gabbro, which occurred above the "active tuff" in hole 31. From 21.0 to 40.0 m chloritic felsic and mafic tuffs were intersected. A 2.0 m zone of 4225 ppm Ba occurs in chloritic felsic tuffs from 31.5 to 33.5 m and was associated with approximately 5 % disseminated pyrite. The "active tuff" was intersected from 40.0 to 50.0 m. The intersection was not very metal enriched except for one sample with 525 ppb Au from 45.0 to 46.0 m. Metals contents range between 550 to 1900 ppm Ba, 30 to 90 ppm Zn, 5 to 525 ppb Au, 14 to 354 ppm Cu, <0.5 to 0.7 ppm Ag and <5 to 56 ppm Pb. A whole rock sample taken from 40.5 to 40.8 m contains 77.5 % SiO_2, 1.09 % Na_2O and 1250 ppm Ba, it has an Ishikawa index of 73. The "active tuff" had the typical appearance with strong sericitization and 3 to 5 % disseminated pyrite and trace chalcopyrite and sphalerite. A gabbro dyke occurs from 50.0 to 51.0 m. A faulted in sucession of Nanaimo sediments occurs from 51.0 to 53.0 m. A

second occurence of "active tuff" was intersected between 53.0 and 61.6 m. A alteration sample taken across this intersection contains 68.7 % SiO2, 0.57 % Na2O, 0.35 % TiO2 and 1740 ppm Ba and has a Ishikawa index of 76. One sample contains 1401 ppm Cu over 1.0 m from 57.0 to 58.0 m. The metal levels were more elevated that the uphole intersection with 13 to 74 ppb Au, <0.5 to 0.5 ppm Ag, 70 to 1401 ppm Cu, 9 to 108 ppm Pb, 40 to 755 ppm Zn and 980 to 2600 ppm Ba. From 61.6 to 68.5 m mafic tuffaceous sediments with intercalated sedimentary beds were intersected. The Fulford Fault was intersected at 68.5 m and to 83.8 m the hole intersected Nanaimo conglomerate, with 80 % gabbro pebbles to boulders. From 83.8 to 202.2 m the hole intersected gabbro with rare coarse grained phases and on average 2 to 3 % ilmenite. From 202.2 to 236.1 m the hole intersected a cherty felsic tuffite. A alteration sample across the tuffite contains 74.2 % SiO2 and 5260 ppm Ba, whole rock samples contained between 72.2 and 84.6 % SiO2 and 562 and 4880 ppm Ba. A gabbro with 1 to 3 % fine grained ilmenite was intersected from 236.1 to 262.0 m. The remaining portion of the hole consisted of argillites with felsic tuffites and minor greywackes. They are enriched in barium with 1.8 % Ba from 263.0 to 263.3 and most samples host 3000 to 7000 ppm Ba. From 262.0 to 270.0 the tuffites contain greater than 0.50 % Ba. Dips north of the Fulford appear vertical and to the south of the gabbro and Fulford are at about 60 degrees to the south.

The shallow IP anomaly at 2+60 S is the surface expression of the ~~"active tuff"~~ Layer found in the Nanaimo Group. The deep IP anomaly from 2+80 to 3+20 S is most likely due to the ~~disseminated~~ ilmenite within the gabbro. The stong mineralization intersected at 249.6 in Chem87-31 was not intersected in CH88-57 and appears to be a small pendant.

South dipping weakly graphitic black argillite interbedded with tuff at the bottom of hole CH88-57

A hole should be drilled to test the downdip extent of the sulphide pendant and the "active tuff" intersected in Chem87-31.

SECTION 45+00 E (Figure 23) :

One hole was drilled on this section in 1986, Chem86-16 (see Figure 23). The target was a deep IP chargeability anomaly (20 msec), which was also tested 400 m along strike by Chem86-14 and by several 1987 and 1988 holes. Downslope from the IP anomaly are soils anomalous in Zn.

The hole was collared in sodium rich felsic tuffs, which are chloritic and dominate to about 120 m. From 120 to 236.0 m there are mainly mafic volcanics and volcaniclastics, originally logged as gabbro, with minor felsic to intermediate interbeds. From 236.0 to 271.8 pyritic felsic tuffs, "active tuff", were intersected. The location of the Fulford Fault Splay was not logged and its location is uncertain. The tuffs are strongly sericitized, moderately altered (6 whole rock samples with Ishikawa indices (AI) from 52 to 76) and host 5 to 17 % disseminated and stringer pyrite with local minor occurences of chalcopyrite, sphalerite, galena and mariposite. Barium within the active tuff intersection is weakly elevated (1584 ppm Ba over 35.8 m, maximum value : 2400 ppm, minimum: 780 ppm). Zinc and gold are elevated locally within the intersection. Zinc tended to be elevated uphole, with 2400 ppm over 3 m from 241.0 to 244.0 m, and gold was elevated downhole with 145 ppb over 2 m from 267.0 to 269.0 m. The hole terminated in cherty argillites, originally interpreted to be Cameron River Formation, but more likely part of the McLaughlin Ridge Formation.

The IP anomalies were interpreted as a response to the "active tuff"; however, this requires a southerly dip. The zinc soil anomalies (300 and 320 ppm) occur at 3+00 S and 3+20 S. The soil anomalies clearly correspond to the "active tuff", which is elevated in zinc. For the IP to have been caused by the "active tuff", there must be a substantial change in dip than that indicated by the three intersections on section 47+00 E. Further drilling appears to be merited, but the orientation of the holes, their location and their quantitity are dependant on the results of the two holes proposed for section 46+00 E, which is more geochemically anomalous.

SECTION 46+00 E (Figure 24) :

Drilling on this section consisted of one 281.0 m hole, CH88-40 (see Figure 24). The primary purpose of the drill hole was to test the Crone pulse EM anomaly detected in holes Chem86-16, Chem87-34 and 36. The hole was also planned so that it would intersect the "active tuff" as on sections 45+00 E and 47+00 E. As on sections 45+00 E and 47+00 E there is anomalous Zn in the soils,which is associated with the "active tuff" drill intersections.

The hole collared in weakly chloritic felsic tuffs which were interbedded with very minor thin mafic tuff beds. A gabbro dyke was intersected from 56.4 to 69.2 m. From 69.2 to 111.6 m, a possible felsic flow was intersected. The flow was rhyo-dacitic in composition and feldspar phyric with 10 to 15 %, 2 to 4 mm, feldspars and locally is weakly quartz phyric. The flow was capped by a felsic lapilli tuff from 111.6 to 126.3 m, which has weakly elevated Ba, 1630 ppm over 14.0 m. From 126.3 to 134.5 m is a alternating sequence of thin mafic and felsic tuffs. A mafic and feldspar phyric tuff occurs from 134.5 to 156.4 and its chemistry indicates a basaltic andesitic composition. The PEM conductor occurs from 171.0 to 173.6 within a sequence logged as felsic tuffs, but which had a basaltic andesite chemical signature. The immediate host rocks to the mineralization, are as in Chem87-34 and 36, felsic, but barium poor. The sulphides consist of up to 15 % pyrrhotite, 3 % chalcopyrite and 25 % pyrite. The sulphides occur mainly as bands, which may be stringers, veins or less likely beds. The best intersection is 0.5 m (172.6 to 173.1 m) of 0.97 % Cu, 4 g/t Ag, 35 ppb Au, 248 ppm Zn, 18 ppm Pb and 850 ppm Ba. The intersection terminates against a gabbro dyke, which contains 2 to 3 % pyrrhotite and up to 0.5 % chalcopyrite in the first 30 cm, which were probably remobilized from the PEM zone. Between 177.5 and 202.3 m there are felsic and mafic crystal tuffs. The chemistry of the felsic tuffs, which are variably chloritic, varies from dacitic (62.3 % SiO_2, 0.48 % TiO_2) to rhyolitic and the mafics vary within the basaltic andesitic range. The Fulford fault occurred as 4.6 m of gouge from 202.3 to 206.9 m. The fault gouge was dominantly felsic with minor pyrite and is elevated in Zn (1003 ppm), Ba (2541 ppm), Au (53 ppb) and Pb (108 ppm). The "active tuff" was intersected from 206.9 to 247.4 m. On average the tuff contains 3 to 5 % disseminated pyrite with minor chalcopyrite and mariposite. There are very short (20 cm to 1.0 m) pyrite rich sections. There is a general increase in alteration and Au content downhole and there is anomalous Zn and Pb near the upper and lower contacts. The first 4.6 m of "active tuff" averages 1807 ppm Zn, 349 ppm Pb, 21 ppb Au, 1 g/t Ag, 232 ppm Cu and 1405 ppm Ba. The last 3.0 m averages 1286 ppm Zn, 375 ppm

Pb, 131 ppb Au, 4 g/t Ag, 238 ppm Cu and 1573 ppm Ba. Over the last 15.4 m there is significantly anomalous enrichment in precious metals with 160.4 ppb Au and 4.3 g/t Ag from 232.0 to 247.4 m. From 247.5 to 249.5 is a ultramafic dyke, which may correlate with the peridotite dyke intersected in Chem87-34. From 249.5 to 252.0 is a thin dyked out portion of the "active tuff" with 2.5 m of 1503 ppm Zn, 2640 ppm Ba, and 66 ppb Au. From 252.0 to 263.0 is a fine grained gabbro dyke. The hole terminated after intersecting 18 m of mafic tuffs and intercalated cherty sediments at 281.0 m.

The PEM anomaly was intersected and it is a thin conductive layer of pyrrhotite and chalcopyrite. The active tuff was intersected were predicted and as with previous intersections was anomalous in Zn and Au, but this intersection was even more so. The "active tuff" intersection should be tested up and down dip. The active tuff may be dipping to the south and thus should be tested with two holes drilling from the south. The following two holes should be drilled in the fall 1988 drill program to determine the dip of the "active tuff" and its up and down dip potential :

1) DDH @ 4+36 S, Az: 030, Dip: -50, Length: approx. 350 m
2) DDH @ 3+30 S, Az: 030, Dip: -50, Length: approx. 200 m

This drilling should be done in 1988 as it would greatly facilitate planning for the 1989 drill program.

SECTION 47+00 E (Figure 25) :

Drilling on this section consisted of one 438.0 m hole, CH88-38, which supplemented the three 1987 drill holes, Chem87- 34, 35 and 36 (see Figure 25). The purpose of the hole was to test the Crone pulse EM conductor and the "active tuff" downdip from Chem87-34.

The hole was collared in chloritic to sericitic felsic tuffs with minor interbedded mafic tuffs. From 102.0 to 139.7 m, there is a probable felsic flow, which is zoned with high SiO_2 and low TiO_2 edges and a dacitic core. From 139.7 to 161.4 m there is a gabbro dyke. From 161.4 to 201.8 m there is a feldspar phyric basaltic andesitic flow with local mafic crystals. From 201.8 to 251.3 m there are thin intercalated mafic and felsic volcanics and volcaniclastics. The pulse EM conductor occurs as two thin zones between 251.3 and 264.9 m. From 252.2 to 252.4 m there is 18 cm of 7 % pyrrhotite and trace chalcopyrite and from 264.6 to 264.9 m there is 30 cm of 1 to 2 % chalcopyrite and trace pyrrhotite, which contains 2428 pm Cu over 50 cm (264.4 to 264.9 m). The interval was logged as felsic, but as in Chem87-34, it appears only the matrix to the sulphides is felsic and the rest of the interval is basaltic andesite crystal tuffs. The PEM horizon terminated against a gabbro dyke. From 281.4 to 314.5 m there are intercalated mafic and felsic ash and crystal tuffs. From 314.5 to 317.9 m there is fault gouge, which probably represents the Fulford Fault Splay. From 317.9 to 319.1 m, a thin slice of "active tuff" with 4 to 5 % pyrite and 2374 ppm Ba occurs. From 319.1 to 332.5 m a dirty mafic tuff was intersected. The mafic tuff is quartz phyric with on average 2 % quartz, but was not andesitic as logged (44.8 % SiO_2, 1.04 % TiO_2). From 332.5 to 346.2 m there are weakly altered (AI = 50 to 56) quartz phyric felsic tuffs with weakly anomalous barium and trace pyrite. A fault bounded block of "active tuff" occurs from 346.6 to 358.8 m. The tuff is stongly altered (A.I. = 81 over 11.0 m) with 1 to 2 % pyrite and weakly anomalous Au and Pb. A gabbro dyke occurs from 358.8 to 373.0 m. From 373.0 to 436.0 m there are mafic tuffs with minor cherty sediments and two thin wedges or faulted slices of "active tuff" between 382.5 and 384.3 m, and from 391.4 to 394.3 m. The second wedge of "active tuff" was weakly anomalous in Zn, Pb, Au and Ba. The hole terminated at 438.0 m, 2 m into a gabbro dyke. There was good correlation with hole Chem87-34, except over the first 100 to 150 metres, which is due to gabbro dyking and reconnaissance scale logging, when looked at in more detail the thin mafic tuffs within the felsics correlate reasonably well.

The "active tuff" was intersected in Chem87-34 and 36 as well as CH88-38 and is weakly enriched in Zn and Au,

with up to 0.52 % Zn over 1.0 m in Chem87-34 and up to 0.19 % Zn in Chem87-36. The "active tuff" is shortened substanially by the Fulford fault in hole 36 and may not outcrop. The PEM conductor was intersected in 34, 36 and 38 with 0.89 % Cu over 0.8 m in hole 36 and 0.69 % Cu over 1.0 m in hole 34. The PEM dips at 65 degrees to the north. Further information on holes 34, 35 and 36 is available in the 1987 drill report.

The drilling objectives were met and no further drilling is recommended for this drill section at this time. Further deep drilling may be warranted in the future if results on section 46+00 E in the fall indicate further work is merited.

SECTION 48+00 E (Figure 26) :

Drilling on this section consisted of one 308.8 m drill hole, CH88-39 (see Figure 26). The main purpose of this drill hole was to test the PEM anomaly detected in holes Chem87-34 and 36 on section 47+00 E. The hole was also supposed to test the "active tuff", which had been intersected on section 49+00 E in 1986 and on section 47+00 E in 1987. The hole was also drilled through a IP chargeability anomaly zone and under soils anomalous in Zn. The surface above the drill hole had been trenched, but there were poor exposures due to glacial hardpan. The exposed bedrock consisted of hydrothermally unaltered felsic volcaniclastics with gabbro to the south.

The hole was collared in felsic tuffs, which are variably chloritic to sericitic and quartz and feldspar phyric. The tuffs contain high levels of sodium (> 3.0 %), except for one sample, but that sample lies within an interval of high Na2O. These felsic tuffs are intruded by several gabbro dykes or sills, which occur from 34.6 to 46.9 m, 52.7 to 78.1 m, 79.2 to 80.8 m and from 102.0 to 177.1 m. From 117.1 to 160.6 there are intercalated felsic and mafic (basaltic - andesite) ash tuffs with local lapilli beds. The conductive sulphides which caused the PEM anomaly occur in a felsic lapilli tuff from 160.6 to 163.1 m. From 161.5 to 163.1 m there is 10 to 30 % wispy pyrrhotite - chalcopyrite bands, which encapsulate ash and lapilli. A 1.0 m interval from 161.5 to 162.5 contains 4.68 % Cu, 0.35 % Zn, 18.7 g/t Ag and 195 ppb Au. As in previous intersections there was no barium enrichment or sodium depletion. From 163.1 to 210.0 m another sequence of interlayed felsic and mafic tuffs was intersected. From 210.0 to 223.4 m a gabbro was intersected, it contains two minor faults, but these are not likely the Fulford Fault Splay. The "active tuff" was intersected from 223.4 to 255.3 m. The Fulford Fault splay is likely the fault that occurs from 225.0 to 226.0 m. The tuff was moderately to strongly sericitic with strong sodium depletion (0.10 % Na2O) in a sample across the whole intersection and had an A.I. of 85. The average pyrite content was about 5 %. The whole intersection is enriched in Au with up to 760 ppb (1.0 m from 224.4 to 225.4 m). The 31.9 m intersection averages 106 ppb Au, 450 ppm Zn, 44 ppm Cu, 38 ppm Pb and 1882 ppm Ba. There is a downhole increase in Zn, Cu and Ba with 2637 ppm Zn, 159 ppm Cu, and 2418 ppm Ba over 3.3 m from 252.0 to 255.3 m. From 255.3 to 300.7 there are mafic tuffs with fine interbedded cherty sediments. The hole was terminated in a gabbro body, which had been intersected from 300.7 to 308.8 m.

The PEM and "active tuff" were intersected and the objectives of the hole were met. The Zn soil geochemistry appears to be related to the active tuff. The VLF conductor at 2+40 S is probably the pyrrhotite - chalcopyrite horizon. The IP is not clearly explained and may be caused by ilmenite-bearing gabbros or the PEM anomaly. No further work is proposed for this section. However if encouraging results are encountered in the two holes planned for section 46+00 E further work might be proposed; however, one must remember the proximity of this section to the claim boundary.

SECTION 49+00 E (Figure 27) :

Two holes were drilled on this section in 1986, Chem86-14 and 15 (see Figure 27). The target of the drill holes was coincident deep and shallow IP chargeability anomaly with a weak Zn soil anomaly.

These drill holes should be relogged and alteration and additional whole rock samples should be taken. Units logged as andesitic are basaltic or chloritic felsic tuffs. The units logged as gabbro with a few exceptions are not gabbro. The geology is generally the same as sections 45+00 to 48+00 E. There are chloritic felsic tuffs with minor mafic tuffs intruded with gabbro dykes to the north, followed by the "active tuff", which occurs above mafic tuffs and cherty sediments. The PEM horizon was intersected in Chem86-14 from 220.7 to 221.1 m and it contains 2.77 % Cu, 688 ppm Zn, 11.3 g/t Ag and 90 g/t Au over 1.0 m from 220.7 to 221.7 m. The appearance was the same as in CH88-39. Chem86-14 also intersected 34.1 m of "active tuff" from 293.7 to 327.8. The tuff hosts 5 to 15 % pyrite with an increase downhole. Whole rock samples taken from the "active tuff" contains 0.16 % to 0.52 % Na2O with a gradual decrease downhole and Ishikawa indices varied from 77 to 87. Over the 34 metres from 294.0 to 328.0 the active tuff contains 130 ppm Cu, 55 ppm Pb, 517 ppm Zn, 39 ppb Au and 1401 ppm Ba. Towards the end of the intersection there was 5.0 m (317.0 to 322.0) of 2047 ppm Zn, 80 ppb Au and 1700 ppm Ba. Hole Chem86-15 was collared too far south to intersect the PEM anomaly or the "active tuff".

The IP anomaly is not totally explained, but is probably partially due to the "active tuff", which appears to have a steep southern dip. The Zn soil anomaly at 1+80 S may be due to the PEM, but that would require a substantial change in dip from section 47+00 E. No more holes should be drilled on this section as it is at our property boundary and Chem86-14 may be collared outside of the boundary. This section should be relogged and sampled.

SECTION 25+00 W (Figure 40) :

Drilling on section 25+00 W consisted of four diamond drill holes, CH88-65, 69, 70 and 71, with an aggregate length of 1540.0 m (see Figure 40). The drill holes tested two deep IP chargeability anomalies and formed a more northern stratigraphic section than on 29+50 W. The IP anomalies were tested by CH88-69 and 71. CH88-65 formed the northern end of the drill section and CH88-70 filled in the gap between CH88-69 and 71. The drill holes are roughly 200 m apart.

CH88-65 was drilled to the north and was supposed to pass from the Cameron River Formation into the McLaughlin Ridge Formation. The drill hole collared in a mafic intrusive at 18.9 m and intersected the unit til 64.7 m. The intrusive appeared dioritic, but was a carbonatized mafic intrusive. The TiO2 content varies from 0.79 to 0.88 %, indicating that it is of a different parentage or magmatic phase than the Silver Creek and Anita Gabbros, or might not be a intrusive rock as the chemistry is very similar to mafic volcaniclastics intersected further down the hole. A weakly pyritic zone (0.5 % pyrite) contains 206 ppb Au from 38.5 to 39.5 m. From 64.7 to 92.6 m the drill hole intersected cherty and argillaceous sediments with some possible hornfels alteration and assimilated intrusive from 64.7 to 85.5 m. From 92.6 to 141.7 m the hole intersected moderately carbonatized mafic tuffs with minor felsic tuff beds. A MgO rich mafic phyric carbonatized mafic tuff with 8.11 to 10.0 % MgO was intersected from 141.7 to 177.0 m. Mafic carbonatized tuffs were intersected from 177.0 to 207.9 m. From 207.9 to 277.6 m the drill hole intersected gabbro with 2400 ppm Cu from 259.4 to 259.8 m in a quartz vein. Dacitic tuffs, logged as chloritic felsic tuffs, with minor mafic tuffs were intersected from 277.6 to 318.0 m. From 318.0 to 430.7 m, variably chloritic felsic tuffs local weak pyrite mineralization and 3 to 5 % Na2O were intersected with a mafic tuff bed from 405.8 to 408.9 m. From 430.7 to 453.4 m the hole intersected sodium depleted pyritic felsic tuffs with an argillite bed from 436.9 to 437.7 m. From 434.0 to 436.9 m the tuff is weakly elevated in Au, Ag and As with 93 ppb Au, 1.6 ppm Ag and 148 ppm As. The Na2O content from 430.7 to 441.1 m is 0.96 % and from 441.1 to 453.4 m is 0.32 % and both intervals contain 1220 ppm Ba. The hole terminated in finely interbedded mafic and felsic tuffs at 458.7 m.

CH88-69 was drilled to test a two station wide deep IP chargeability anomaly (> 30 msec) from 1+20 to 1+00 N. The drill hole collared in carbonatized mafic tuffs, which were intersected from 7.3 to 53.6 m. From 53.6 to 88.6 m the hole intersected interbedded carbonatized mafic tuffs and

chloritic felsic tuffs. From 88.6 to 97.6 m a gabbro dyke was intersected. A sodium depleted chloritic felsic tuff with 0.54 % Na2O was intersected from 97.6 to 102.7 m. The tuff contained minor pyrite - sphalerite carbonate hosted mineralization which contains 2600 ppm Zn from 99.0 to 99.5 m. Strongly carbonatized mafic tuffs were intersected from 102.7 to 148.9 m. From 148.9 to 153.7 m a quartz - sericite - chlorite schist was intersected. From 153.7 to 173.8 m strongly sodium depleted pyritic felsic tuffs were intersected with a mafic dyke from 162.4 to 164.3 m. A sample from 153.7 to 173.8 m contained 0.07 % Na2O, 2.82 % K2O and 2070 Ba, and had an AI of 74. The tuff averages about 3 % pyrite and is anomalous in Ba from 164.3 to 168.0 m with 2554 ppm Ba. A weakly anomalous Au and As zone occurs from 153.7 to 154.7 m with 54 ppb Au and 96 ppm As. A mafic volcanic was intersected from 173.8 to 179.9 m. From 179.9 to 193.0 m a sodium depleted pyritic (2 % py) felsic tuff with 0.23 % Na2O and an AI of 48 was intersected. A succession of intercalated mafic tuffs, mafic tuffaceous sediments and chloritic felsic tuffs was intersected from 193.0 to 273.4 m. From 273.4 to 278.9 m a gabbro, logged as a mafic flow, was intersected. A chloritic quartz phyric felsic tuff was intersected from 278.9 to 286.7 m. From 286.7 to 315.2 m a quartz - feldspar phyric felsic flow with a mafic flow or intrusive from 291.3 to 293.6 m was intersected. A succession of intercalated chloritic felsic tuffs and mafic tuffs and flows were intersected from 293.6 to 371.9 m. The tuffaceous sequence contained a argillite unit from 337.5 to 340.7 m. A mafic phyric andesitic to dacitic tuff was intersected from 371.9 to 419.5 m. The hole terminated in chloritic felsic quartz phyric tuffs at 423.4 m.

CH88-70 was planned to fill in the stratigraphic gap between CH88-69 and 71 which tested the deep IP anomalies. The drill hole collared in mafic tuffs at 4.1 m. From 4.1 to 82.7 m mafic crystal to lapilli tuffs and tuffaceous sediments were intersected. From 82.7 to 90.2 m a weakly pyritic felsic tuff with 0.92 % Na2O was intersected. Intercalated mafic tuffs and tuffaceous sediments and dacitic to andesitic tuffs with minor rare felsic tuffs occur from 90.2 to 125.0 m. A gabbro dyke was intersected from 125.0 to 127.9 m. From 127.9 to 176.3 m the hole intersected mafic ash to lapilli tuffs with negligible cherty sediments. Chloritic felsic crystal tuffs were intersected from 176.3 to 180.4 m. From 180.4 to 192.6 m the hole intersected intermediate tuffaceous sediments. A major fault zone ocurs from 192.6 to 199.4 and it contains 242 ppb Au from 194.9 to 196.0 m in fault gouge. An andesitic flow was intersected from 199.4 to 210.1 m. A quartz phyric felsic tuff with weakly anomalous Au (30 ppb) and As (118 ppm) was intersected from 210.1 to 213.0 m. Mafic tuffs were intersected from 213.0 to 238.0 m and they were locally

andesitic and variably carbonatized. From 224.0 to 225.0 the tuffs contained 233 ppb Au, in a zone with 3 to 5 % pyrite. There was very strong carbonatization from 218.5 to 230.3 m and a sample from 221.0 to 221.4 contained 30.7 % SiO2, 24.3 % CaO and had a loss on ignition of 21.2 %. From 238.0 to 272.0 m andesitic tuffs, which were logged as mafic and chloritic felsic tuffs, were intersected. A weakly metal enriched felsic tuff with elevated Au, Zn and Mn was itersected from 272.0 to 275.7 m. The 3.7 m intersection averages 113 ppm Cu, 12 ppm Pb, 1396 ppm Zn, < 0.5 ppm Ag, 119 ppb Au, 1288 ppm Ba and 1498 ppm Mn and includes 1.3 m of 334 ppb Au from 272.0 to 273.3 m and 1.0 m of 0.40 % Zn from 274.0 to 275.0 m. The mineralization consisted of 3 to 5 % fracture filling pyrrhotite, pyrite, sphalerite and chalcopyrite. A mafic tuff was intersected from 275.7 to 276.3 m. From 276.3 to 279.8 m a felsic tuff was intersected. Andesitic crystal and lapilli tuffs were intersected from 279.8 to 377.3 m. These tuffs were logged as mafic and biotite altered felsic tuffs. A gabbro dyke was intersected from 377.3 to 395.7 m. The drill hole ended in felsic tuffs and/or cherty felsic tuffites at 403.1 m. The unit was moderately siliceous, indicating some sedimentary component or reworking. The interval from 395.7 to 403.1 m was sodium depleted with <0.01 % in the alteration samples and 0.08 to 0.20 % in the whole rock samples. The alteration sample across the unit contains 73.7 % SiO2, 1.28 % MgO, 4.11 % K2O, 1.46 % CaO, < 0.01 % Na2O, 2400 ppm Ba, 26 ppm Cu and 50 ppm Zn and had an AI of 79. Between 401.4 and 402.4 m there is 0.30 % Zn hosted in thin fractures with pyrite. Metals outside the interval are low and are weakly elevated within the 1.0 m interval with 56 ppm Cu, < 5 ppm Pb, < 0.5 ppm Ag, 37 ppb Au and 190 ppm As. The low Na2O and elevated Ba are associated with cherty sediments or tuffites, but the elevated K2O as opposed to low K2O suggests hydrothermal alteration of felsic volcaniclastics. The mineralization may be associated with the alteration, but the low background away from the two possible veins indicates that this is unlikely.

CH88-71 was drilled to test a deep IP chargabability anomaly. From 12.8 to 254.8 m, the drill hole intersected pyritic mafic tuffs with on average 2 to 3 % disseminated pyrite and trace chalcopyrite. The tuffs are weakly to strongly carbonatized locally. From 90.1 to 117.4 m the core was logged as intermediate, a alteration sample across the interval is mafic, but from 91.5 to 91.9 m a dacitic sample (64.7 % SiO2, 0.32 % TiO2) and from 116.3 to 116.8 m a rhyolitic sample (71.1 % SiO2, 0.25 % TiO2) were taken. These samples are possibly barium enriched with 1060 and 2180 ppm Ba respectively, but are not sodium depleted or potassium enriched, nor are the mafic samples. There are minor geochemically anomalous zones within the mafic tuffs: 14000 ppm Ba over 1.0 m from 58.0 to 59.0 m; 26 ppb Au and

16 ppm As over 13.0 m from 102.0 to 115.0 m; 475 ppm Cu over 3.0 m from 138.0 to 141.0 m; 347 ppm Zn over 2.0 m from 155.0 to 157.0 m; and 344 ppm Cu over 4.0 m from 177.0 to 181.0 m. These weakly anomalous zones were not physically distinguishable from the barren pyritic zones; however, the weak Au and As zone may be related to felsic volcaniclastics interbedded within the mafics.

The two holes drilled to test IP anomalies intersected pyritic tuffs, which are most likely the source of the anomaly. CH88-69 intersected pyritic felsic tuffs between 148.9 and 193.0 m and these tuffs are located directly under the 32 msec deep IP chargeability anomaly at at depth of 100 to 130 m. Almost the whole length of CH88-71 was pyritic and this must be responsible for the anomaly.

There were mildly encouraging results in CH88-70 with two weak Zn anomalous zones and other minor pyritic and sodium depleted felsic tuffs. The mineralization intersected in CH88-71 is similar to that at the Sharron Showing, which locally contains > 1 % Cu. A 400 m drill hole should be drilled between CH88-70 and 71, it should be located at 25+00 W/1+20 S and drilled at Az: 180/Dip -50. Further drilling would be dependent on the results of this hole and the trenching results.

SECTION 29+50 W (Figure 39) :

Drilling on section 29+50 W (see Figure 39) in 1988 consisted of three drill holes, CH88-66, 67 and 68, with an aggregate length of 759.9 metres. These holes supplemented the 348.0 metres that were drilled in two holes, Chem85-11 and 12A, on the section in 1985. The 1985 drilling tested two coincident deep and shallow IP chargeability anomalies. The 1988 drilling was designed to utilize the previous drilling in the development of a stratigrahic section. CH88-67 also tested a weak one station deep IP chargeability anomaly and CH88-66 was also planned to test a deep IP chargeabiliy build-up towards the southern claim boundary.

CH88-66 was the southernmost drill hole on this section. It collared at 7.9 m in a gabbro. The gabbro was not as copper rich as the Silver Creek Gabbro intersected on section 31+00 W and may be a separate intrusion. It also had much lower levels of Pd (15 to 25 ppb) , Pt (<15 ppb) and Au (<5 ppb) than the Silver Creek Gabbro. Sampling across the gabbro averages 323 ppm Cu and 2.34 % TiO2. The TiO2 values in character samples throughout the gabbro vary between 2.26 and 2.90 %, this lack of variance also suggests that it is a different gabbroic body. Mafic tuffs were intersected from 128.5 to 198.3 m. The mafic tuffs were moderately epidotized and carbonatized with epidotized lapilli. The tuffs were variably mafic crystal and feldspar phyric. Locally chalcopyrite and magnetite occur in strongly altered zones. There were three samples anomalous in Cu, 1820 ppm from 160.4 to 161.0 m, 2600 ppm from 162.3 to 162.8 m and 1080 ppm from 188.7 to 189.4 m. A strontium rich mafic tuff occurs from 149.5 to 152.8 m with a 50 cm sample containing 1270 ppm Sr. From 198.3 to 215.0 m the hole intersected a dominantly mafic tuffaceous conglomerate. The conglomerate contained minor argillite clasts, suggesting that stratigraphic tops is to the north. From 215.0 to 220.6 m the hole intersected cherty argillites with minor tuffaceous clasts. These sediments were barium poor with an average of 423 ppm Ba over the 5.6 m interval. A andesitic ash tuff was intersected from 220.6 to 224.0 m. The hole terminated in chlortic dacitic, possibly reworked, lapilli tuff at 228.0 m. The tuff was possibly elevated in sodium with 6.22 % Na2O over the 4.0 m interval.

CH88-67 was collared to the north of CH88-66 and to the south of Chem85-12A. From 16.3 to 18.6 m the hole intersected a chloritic felsic crystal tuff. A mafic tuff was intersected from 18.6 to 24.0 m and a chloritic felsic quartz phyric tuff was then intersected to 28.0 m. A weakly sodium depleted (1.54% Na2O from 29.9 to 41.5 m, 1.22% from 47.7 to 55.7 m) quartz phyric felsic tuff was intersected from 28.0 to 55.7 m. These tuffs were cut by a major fault

from 41.5 to 46.9 m. A very strongly altered mafic or possibly ultramafic sill was intersected from 55.7 to 59.8 m. A sample from 57.5 to 58.0 m contains 40.0 % SiO_2, 20.5 % Al_2O_3, 8.38 % CaO, <0.01 % Na_2O, 6.95 % K_2O, 3760 ppm Ba and had a loss on ignition of 10.0 %. The sill was strongly carbonatized and hosted 3 % disseminated pyrite. From 55.7 to 59.8 m the sill averaged 3198 ppm Ba. The sill appeared to be identical to those termed "Early Mafic Sills" by Enns in the Anita area. A quartz and feldspar phyric felsic intrusive with trace pyrite was intersected from 59.8 to 86.8 m. The intrusive was not sodium depleted but is elevated in Pb and Ba with 47 ppm Pb and 2124 ppm Ba over 14.0 m from 62.0 to 76.0 m. Aluminous and barium enriched reworked mafic tuffs were intersected from 86.8 to 90.3 m. From 90.3 to 144.2 m the drill hole intersected a sucession of mafic, intermediate and felsic tuffs with minor magnetite and pyrite occurences. A fault was intersected from 144.2 to 144.8 m. A strongly altered sericitic quartz phyric felsic tuff with trace disseminated pyrite and 3 % chlorite wisps was intersected from 144.8 to 152.6 m. A sample from 145.0 to 152.0 contains 66.9 % SiO_2, <0.01 % Na_2O, 5.20 % K_2O and 3220 ppm Ba. It had an A.I. of 61. From 152.6 to 219.9 m another sucession of intercalated mafic and felsic tuffs were intersected. A mafic lapilli tuff contains two weakly Cu anomalous samples with 1000 ppm Cu from 165.0 to 167.0 m and 1050 ppm from 177.0 to 178.0 m. There are weakly sodium depleted felsic tuffs from 181.6 to 187.1 m with 0.95 % Na_2O from 182 to 187 m and from 208.7 to 219.9 m with 0.93 % Na_2O from 209 to 219.9 m. These felsics have trace pyrite and are weakly argillaceous and/or chloritic. Another major fault zone was intersected from 205.5 to 208.7 m. From 219.9 to 248.2 the hole intersected a barium rich andesitic tuff with 57.7 % SiO_2 and 2180 ppm Ba over 25 m from 220 to 245 m. There is elevated Ba towards the lower contact with 5300 ppm from 240.2 to 241.4 m, 3100 ppm from 244.4 to 245.4 m, and 3000 ppm from 246.3 to 248.2 m. A sodium depleted chloritic dacitic tuff was intersected from 248.2 to 251.7 m with 64.4 % SiO_2, <0.01 % Na_2O, 5.71 % K_2O, 3420 ppm Ba and < 10 ppm Zn over the 3.5 m interval. The tuff had an AI of 85. From 251.7 to 267.0 m a locally magnetic andesitic tuff was intersected. From 267.0 to 268.2 m the hole intersected a fault zone. From 268.2 to 317.0 m the drill hole intersected intercalated mafic and felsic tuffs. From 302.6 to 306.3 m the hole intersected a Mn and Ba rich carbonatized mafic tuff with an average of 1835 ppm Ba and 1882 ppm Mn. Structural measurements indicate that the drill hole intersected several fault panels, with dips ranging from vertical to moderate to the south. The geology does not correlate with the steeply dipping units in CH88-66 and this is probably due to the gabbro intrusion in CH88-66.

Chem85-11 and 12A intersected dominantly felsic tuffs and terminated in the Silver Creek Gabbro, a thick

flat lying gabbro sheet. Weak mineralization was intersected in pyritic and sericitic felsic tuffs in both holes. From 133.0 to 134.5 m in Chem85-11 there is 126 ppm Cu, 142 ppm Pb, 1480 pm Zn, 10 ppb Au. 0.2 ppm Ag and 680 ppm Ba. Hole Chem85-12A intersected 82 ppm Cu, 760 ppm Pb, 1750 ppm Zn, 60 ppb Au, 2.7 ppm Ag and 1860 ppm Ba from 38.0 to 40.2 m. There was also a As rich zone associated with a fault in Chem85-12A with 3100 ppm As from 120.0 to 124.0 m. Dips appear to be vertical. The drill core for Chem85-11 and 12A is not logged in detail and there are only two character (whole rock) samples and no alteration samples. For drill logs and complete analytical results for these holes the reader is referred to Enns and Hendrickson, 1986.

CH88-68 is the northernmost drill hole on this section. It intersected moderately carbonatized andesitic tuffs from 4.2 to 54.8 m. From 54.8 to 69.5 the drill hole intersected weakly chloritic felsic crystal to lapilli tuff. Carbonatized argillaceous tuffs occur from 69.5 to 74.0 m. The drill hole intersected very strongly to moderately carbonatized mafic tuffs from 74.0 to 118.1 m. There was locally up to 20 % magnetite between 100.9 and 104.3. A fault zone was intersected from 118.1 to 119.5 m. Intercalated mafic, intermediate and felsic tuffs with minor sediments were intersected from 119.5 to 141.0 m. From 141.0 to 141.1 m a fault zone was intersected. From 141.1 to 171.6 m the drill hole intersected dominantly felsic tuffs with minor intercalated mafic tuffs. The hole terminated in the Silver Creek Gabbro, which was intersected from 171.6 to 214.9 m. Samples of the gabbro contain 2.47 to 3.83 % TiO2.

The stratigraphic section (see Figure 39) was completed and indicated a north - south succession of mafic tuffs to felsic tuffs to mafic tuffs with gabbroic intrusions and faults complicating the stratigraphy. The IP anomalies tested by Chem85-11 and 12A are caused by pyritic felsic tuffs. The weak deep IP chargeability anomaly tested by CH88-67 appears to be caused by the weakly pyritic felsic intrusion. The VLF anomaly at 0+90 S appears to be caused by a fault intersected from 118.1 to 119.5 in CH88-68. The source of the VLF anomaly at 4+10 S is unclear, but is likely one of the major faults intersected in CH88-67. The IP build-up towards the southern boundary may be due to gabbros, but drilling did not clearly indentify the anomaly source.

At this time no further drilling is merited on this section, but as more ideas are developed the information accumulated should be re-evaluated. Drill holes Chem85-11 and Chem85-12A should be relogged and sampled in detail.

SECTION 31+00 W (Figure 38) :

One hole was drilled on this section in 1985, Chem85-10, and one 195.1 m hole was drilled in 1988, CH88-64, for a total of 354.8 metres of drilling on this section (see Figure 38) Chem85-10 tested a shallow IP chargeability anomaly and the downdip extent of mineralization uncovered in a short trench. The trench exposed 1.5 m of semi-massive sulphides of which a grab sample assayed 1.01 % Cu, 0.89 % Pb, 2.40 % Zn, 0.5 g/t Au, 19.5 g/t Ag and 0.17 % Ba. Chem85-10 intersected 7.5 m (43.3 - 50.8 m) of 1742 ppm Cu, 58 ppm Pb, 1.01 % Zn, 6 ppb Au, 1.1 ppm Ag and 1154 ppm Ba. CH88-64 tested the downdip extent of this mineralization and the deep IP chargeability anomaly, which is coincident with the shallow IP chargeability anomaly.

Chem85-10 was collared in quartz and feldspar phyric felsic tuffs which were intersected from 9.4 to 34.3 m. From 34.3 to 52.0 m an enigmatic unit was encountered. The unit was logged as intermediate volcaniclastics, appears to be a mafic tuff breccia and the one whole rock sample from the unit has the typical chemistry of a gabbro (45.1% SiO2 and 1.74% TiO2). This unit hosts wispy sulphide, pyrrhotite, pyrite, sphalerite and chalcopyrite, bands, which were interpreted to be stringers. From 43.3 to 50.8 m the sulphides were Zn rich with 1.01 % over the 7.5 m intersection. The hole intersected more quartz and feldspar phyric felsic tuffs from 52.0 to 64.0 m. At 64.0 m the hole entered the Silver Creek Gabbro and terminated in the gabbro at 159.7 m.

CH88-64 collared in a gabbro dyke at 10.2 m. At 14.4 m the hole intersected variably chloritic and quartz phyric felsic tuffs. The three hole rock samples and one alteration sample taken indicate that the tuffs are intermediate, locally carbonatized and are not sodium depleted. A sample across the tuffs from 14.4 to 30.8 m contains 61.1 % SiO2, 0.42 % TiO2 and 3.00 % Na2O. From 23.0 to 25.2 m the tuffs contain 3 to 5 % pyrrhotite. Marginal to this zone the tuff is elevated in Zn with 820 ppm Zn from 22.0 to 23.0 m and 605 ppm Zn from 25.2 to 26.0 m. From 30.8 to 35.1 m a gabbro dyke was intersected. A felsic quartz and feldspar phyric tuff was intersected from 35.1 to 39.0 m. The tuff appears to be welded with collapsed pumice, stretched quartz eyes and reaction rims on the feldspars, some of the features may be due to tectonization. The tuff had dacitic chemistry with a sample containing 64.2 % SiO2 across the interval. From 39.0 to 39.8 a gabbro dyke was intersected. The possibly welded dacitic tuff was intersected from 39.8 to 47.3 m. At 47.3 m the hole entered the Silver Creek Gabbro. The gabbro is multiphased from

coarse grained to feldspar grains in a fine-grained groundmass. The gabbro is ilmenite-bearing with 2 to 20 % ilmenite locally. From 125 to 134 m there is 15 % ilmenite and there is 10 to 12 % ilmenite with 0.25 % disseminated chalcopyrite from 104.0 to 122.0 m. From 104.0 to 122.0 m the gabbro contains 539 ppm Cu, 7 ppm Ni, 23 ppb Au, 79 ppb Pd and < 15 ppb Pt. Sampling throughout the gabbro indicated a TiO2 content variable between 1.90 and 3.94 %. TiO2 content does not correlate well with the ilmenite content, this indicates that a lot of the TiO2 is hosted by fine-grained leucoxene and sphene. TiO2 contents indicate that the hole was stopped a long way from the lower contact of the gabbro. Cu contents indicate that the hole required another 80 m to leave the gabbro. The gabbro was fining in grain size from about 164.0 m, indicating that the lower contact was probably between 50 and 100 m away. This indicates that the Silver Creek Gabbro is a sheet about 180 m thick.

CH88-64 indicated that the IP anomaly is at least partially caused by the ilmenite rich zones in the Silver Creek Gabbro. The mineralization was dyked out by gabbro and may continue under the sheet.

A steep hole should be drilled to penetrate the gabbro and test for the Zn rich sulphides under the gabbro. Chem85-10 should be relogged and the tuffs should be sampled for alteration and character samples should also be taken.

SECTION 32+00 W (Figure 37) :

One hole was drilled on this section, Chem85-13, in 1985 with a length of 134.1 m (see Figure 37). The drill hole was planned to test IP chargeability anomalies. The hole intersected the Silver Creek Gabbro over its entire length. The IP anomaly was interpreted to be caused by a chalcopyrite rich quartz vein, which assays 2.82 % Cu over 30 cm from 81.4 to 81.7 m. This quartz vein lies within a zone of medium to coarse grained gabbro, which contains about 3 % ilmenite from 55 to 96 m. The ilmenite is more likely the source of the anomaly with the vein possibly adding a nominal amount to the magnitude of the anomaly. No further work is merited on this section at this stage of exploration and work on this section is of great logistical difficulty due to the steepness of the creek valley walls.

SECTION 50+00' W (Figure 34) :

Drilling on section 50+00' W consisted of five drill holes with an aggregate length of 1421.0 metres (see Figure 34). The holes were drilled at an azimuth of 210 degrees to intersect the geology perpendicularly, as the grid is not aligned perpendicular to geology. Line 50+00' W intersects the grid lines at 48+00 W/ 4+80 N and 46+00 W/ 8+10 N. Distances along 50+00' W are measured from the baseline, with CH88-59 at 7+72 N, 60 at 10+38 N, 61 at 5+77 N, 62 at 9+85 N and 63 at 9+25 N. For cross reference CH88-63 is at 46+00 W/ 8+10 N. The northernmost three drill holes, CH88-60, 62 and 63, were designed to test deep and shallow IP chargeability anomalies along strike from Abermin's Randy North Zone. The two southern holes, CH88-59 and 61, were stratigraphic holes planned to develop a stratigraphic section to the property boundary, which could be combined with drilling information from Abermin to produce a 2 km stratigraphic section.

CH88-60 was the northernmost drill hole on section 50+00' W and was collared on the southern edge of a swamp. The hole collared in gabbro, which was intersected to 23.0 m. From 23.0 to 41.4 m the hole intersected unaltered chloritic felsic lapilli tuff. Mafic carbonatized tuffs with cherty sediments occur from 41.4 to 42.4 m. From 42.4 to 78.2 m a variably chloritic felsic quartz phyric ash to lapilli tuff with local disseminated pyrite was intersected. Sodium depleted felsic tuffs with interbedded argillaceous sediments were intersected from 78.2 to 93.9 m, a sample across this interval contains 63.6 % SiO2 (dilution due to argillites), 0.58 % Na2O and 3590 ppm Ba. From 93.9 to 233.5 m, end of hole, the hole intersected sodium depleted felsic quartz phyric tuffs with on average 1 to 3 % pyrite. Samples across the interval indicated an average sodium content of about 0.3 % and a alteration index of approximately 60. Within the tuff was a 50 cm interval from 197.4 to 197.9 with 5 % light brown sphalerite and 8 % pyrite that assays 2.04 % Zn. There are several thin carbonatized mafics within the felsic and they may be volcaniclastic, volcanic or intrusive in origin.

CH88-62 was the drill hole immediately south of CH88-60. It collared in weakly sodium depleted (0.96 % Na2O) felsic tuff with weak chloritization and trace pyrite that was intersected from 6.4 to 17.2 m. From 17.2 to 24.2 m the drill hole intersected cherty argillites. From 24.2 to 37.2 m a strongly altered chloritic quartz phyric felsic tuff was intersected. A sample across the interval contains 0.26 % Na2O and had a A.I. of 87. From 34.0 to 40.0 m the hole intersected a zone enriched in Zn, Au and As, which averages 39 ppm Cu, 36 ppm Pb, 667 ppm Zn, 71 ppb Au, <0.5

ppm Ag, 137 ppm As and 897 ppm Ba over the 6.0 m. From 37.2 to 41.8 m the hole intersected cherty tuffites with argillite and 5 % pyrite. Chloritic quartz phyric felsic tuffs were intersected from 41.8 to 125.1 m. Sampling across the tuff averaged 0.23 % Na2O and the tuff had an A.I. of 63. The tuff averaged 3 to 4 % pyrite. From 74.0 to 85.0 m the tuff was elevated in Au with 22 ppm Cu, <5 ppm Pb, 59 ppm Zn, 55 ppb Au, 0.5 ppm Ag, 16 ppm As and 1018 ppm Ba over the 11 m intersection. There is trace to 1 % yellow sphalerite from 117.0 to 119.0 m with 4 to 5 % pyrite. From 116.0 to 119.0 the tuff contains 0.19 % Zn and included a 1.0 m interval of 150 ppm Cu, 129 ppm Pb, 0.33 % Zn, 45 ppb Au, 0.9 ppm Ag, 55 ppm As and 460 ppm Ba from 117.0 to 118.0 m. A strongly altered mafic unit was intersected from 125.1 to 127.1 m, it contains 44.5 % SiO2, <0.01 % Na2O, 11.1 % CaO and has a loss on ignition of 11.2 %. From 127.1 to 191.3 m a quartz phyric chloritic felsic tuff with 1 to 3 % disseminated pyrite and strong sodium depletion, average 0.21 % Na2O and an A.I. of 62, were intersected. A cherty felsic tuffite with minor interbedded argillite, and argillite and felsic tuff lapilli was intersected from 191.3 to 199.0 m. Another quartz phyric chloritic felsic tuff with 3 to 4 % pyrite and 0.28 % Na2O was intersected from 199.0 to 221.2 m. A interval from 196.0 to 202.0 m was anomalous in Au, Ag and As with 21 ppm Cu, 9 ppm Pb, 110 ppm Zn, 63 ppb Au, 1.6 ppm Ag, 85 ppm As and 838 ppm Ba over the 6 m intersection. The hole terminated in intercalated felsic tuffs, tuffites and argillites.

CH88-63 was the southernmost of the three drill holes testing the IP chargeability anomalies. It collared in chloritic quartz phyric felsic tuffs at 3.0 m and intersected them to 21.6 m. The felsic tuff contains 2 to 4 % pyrite and a sample over the interval contains 0.27 % Na2O and had an A.I. of 60. A strongly altered mafic tuff was intersected from 21.6 to 26.6 m. The mafic was carbonatized with 10.7 % CaO over the 5.0 m interval and < 0.01 % Na2O. From 26.6 to 120.9 m the hole intersected chloritic felsic quartz phyric ash to lapilli tuffs with minor interbedded mafic tuffs and/or mafic dykes, which were locally clinopyroxene phyric. The felsic tuffs contain on average 1 to 3 % disseminated and fracture filling pyrite. From 50.0 to 51.5 m there is quartz - carbonate veining with chalcopyrite, sphalerite, galena and pyrite. This 1.5 m interval assays 0.31 % Cu and 0.36 % Zn, it also contained 860 ppm Pb, 49 ppb Au, 7.2 ppm Ag, 33 ppm As and 950 ppm Ba. This zone appears to line up with the Zn mineralization in CH88-60 and 62 with the Zn in hole 63 being remobilized and possible Cu and Pb addition by the veining. There is 1517 ppm Zn from 98.0 to 98.65 which was adjacent to a quartz vein and while being more similar to the intersection in Ch88-62 does not appear to correlate. The felsic tuffs are strongly sodium depleted with 0.13 to 0.36 % Na2O in samples

across the interval. The cpx phyric mafic dykes were also strongly altered with < 1 % Na2O and > 7 % CaO. Trace elements did not appear similar to the available samples of Nitinat formation rocks, but the alteration makes comparisons difficult. A silicified fault breccia occurs from 120.9 to 124.0 m. A clinopyroxene phyric mafic dyke was intersected from 124.0 to 126.9 m. From 126.9 to 171.6 m the hole intersected a chloritic quartz phyric felsic tuff with on average 0.54 % Na2O and up to 1 % disseminated pyrite. Within the felsic tuff, minor mafic dykes and argillaceous zones were intersected. Cherty felsic tuff with about 25 % interbedded argillite and 3 % pyrite was intersected from 171.6 to 181.5. From 181.5 to 246.3 the hole intersected dominantly unaltered quartz phyric chloritic crystal tuffs with trace disseminated pyrite. Within the felsic tuffs were carbonatized mafic tuff beds from 230.6 to 233.5 m, and 236.9 to 239.9 m. The argillites appear to be a cap to the alteration.

CH88-59 was the northernmost of the two drill holes designed to complete the stratigraphic section. The hole intersected chloritic felsic to dacitic quartz phyric tuffs from 9.8 to 30.1 m. From 30.1 to 63.1 m mafic tuffs with locally interbedded argillites were intersected. Variably chloritic felsic quartz phyric tuffs with numerous thin mafic intercalations were intersected fom 63.1 to 148.7 m. These felsic tuffs did not exhibit sodium depletion, but were locally pyritic. From 148.7 to 249.7 m the hole intersected weakly to moderately carbonatized mafic tuffs with very minor felsic and intermediate interbeds. From 249.7 to 297.3 m the hole intersected dominantly mafic tuffs, logged as mafic to felsic tuffs, with local mafic crystals and felsic fragments. A quartz vein with chalcopyrite occurs in these mafic tuffs and assays 2.80 % Cu and 0.62 g/t Au over 50 cm from 270.4 to 270.9 m. Chloritic quartz phyric felsic tuffs were intersected at 297.3 and are dominant to the end of the hole at 340.5 m, with minor mafic tuff interbeds intercalated.

CH88-61 was the southernmost hole drilled on section 50+00' W. It collared in weakly chloritic quartz phyric felsic tuffs with 3 to 5 % pyrite and minor mariposite. From 14.2 to 242.4 m a tuffaceous sucession of dominantly mafic tuffs with minor chloritic intermediate to felsic tuffs were intersected. Some of the tuffs logged as intermediate may be very strongly chloritized felsics as they contain TiO2 values typical of felsic tuffs; for example a sample from 14.5 to 15.0 contains 0.38 % TiO2 and 56.8 % SiO2. From 67.1 to 68.6 m the hole intersected sericitic felsic tuffs with 5 to 7 % pyrite and strong fracture controlled calcite veining that assays 0.40 % Zn over the 1.5 m intersection. Another calcite - pyrite alteration zone, in chloritic felsic tuffs, contains 500 ppm

As and 138 ppm Mo from 145.2 to 145.7 m. Anhydrous values for the chlorite schists indicate that they were probably intermediate in composition, as typically they contain about 50 % SiO2, 10 % CaO and have a loss on ignition of 10 %. From 242.4 to 363.0 m the drill hole intersected mainly chloritic quartz phyric felsic tuffs. The felsic tuffs appeared to be a volcanic wacke in some of the core. Within the felsic tuff were minor chlorite schist layers, two ultramafic dykes and a thin argillite. The ultramafic dykes occurred as two 20 cm intersections, from 273.0 to 273.2 m and 284.2 to 284.4 m and a whole rock sample from the first dyke contains 39.8 % SiO2 and 3.34 % TiO2. The tuffs were locally pyritic, but no sodium depleted tuffs were intersected.

The objectives of the drilling program were met. The northernmost drill holes intersected pyritic felsic tuffs, which account for the IP chargeability anomalies. The holes appear to have intersected the Randy North Zone with the anomalous Zn intersections in CH88-60 (2.04 % over 50 cm), CH88-62 (0.33 % over 1.0 m), and CH88-63 (0.36 % over 1.5 m). The stratigraphic section was completed and it connects with Abermin's most eastern drill section resulting in a section of about 2 km in length.

The northernmost end of the section (see Figure 34) is at the collar of CH88-60. At the northern end of the section drilling intersected about 200 m of strongly sodium depleted felsic tuffs with weak chloritization and on average 2 % disseminated pyrite. These altered felsics host the Randy North Zone (a.k.a. The Blandy Zone) and contain minor argillites and mafic tuffs and dykes. Further to the south is approximately 100 m of unaltered felsic tuffs, which is followed by 250 metres of dominantly mafic tuffs. Minor intermediate tuffs and sediments are intercalated throughout. These are followed by 400 metres of variably chloritic felsic tuffs and then a 80 to 100 m thick diorite or gabbro stock. A further 700 metres of tuffs were intersected before the Coronation Extension. Dips appear subvertical with a steep northern dip.

The grid lines should be extended to the north as the IP anomalies tested were at the north end of the lines. The grid lines should be mapped and surveyed with VLF-Magnetometer and IP surveys. A program of trenching across the IP anomalies should be conducted at 200 m spacing. The trenches should be mapped and sampled in detail to provide a focus for drilling in the area. The shallow overburden greatly facilitates trenching, which is a much more cost effective method for gaining data than reconnaisance grid drilling. Section 50+00' W should be extended to the north by one or two holes. The drilling should locate the northern end of the felsic tuffs, test the

felsic-mafic transition and under the swamp for possible massive sulphide occurences. This program of work would provide a preliminary evaluation of the area and allow the development of a strong exploration plan for the area.

SUMMARY OF 1988 CHEMAINUS DIAMOND DRILL HOLES

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
CH88-38	CHIP 1 Claim Grid: 47+00 E; 0+38 S Elev: 651.4m UTM: 5416053.2N 431803.0E	-65/210 Az	438.0 m	Downdip extension of the PEM conductor in overlying holes CHEM87- 34 and 36.	Hole intersected a 13 m section of felsic tuffs with a 20 cm and a 30 cm zone of pyrrhotite - chalcopyrite mineralization. The best result was 50 cm of 2428 ppm Cu, 1.3 g/t Ag and 30 ppb Au. The hole also indicated the structural complexity of the area.
CH88-39	CHIP 1 Claim Grid: 48+00 E; 1+00 S Elev: 647.6m UTM: 5415951.0N 431863.3E	-50/210 Az	308.8 m	Eastern edge of PEM conductor detected from holes CHEM87-34 and 36	Hole intersected a 1.0 m section of felsic lapilli tuff with 20 % pyrrhotite and 4 % chalcopyrite which assayed 4.68 % Cu 0.35 % Zn, 18.7 g/t Ag and 195 ppb Au. The sulphides appear to be syngenetic. The intersection occurs at 160.5 m, approxmately where the PEM data indicated it would occur.
CH88-40	CHIP 1 Claim Grid: 46+00 E; 1+00 S Elev: 627.6m UTM: 5416049.6N 431685.9E	-50/210 Az	281.0 m	Western edge of PEM conductor in holes CHEM87-34 and 36.	Hole intersected 17 metres of felsic tuff with weak pyrrhotite, chalcopyrite and pyrite mineralization. From 172.6 to 173.1 there is 15 % pyrrhotite and 2.5 % cpy which assayed 0.97 % Cu, 3.8 g/t Ag and 35 ppb Au. The best intersection terminated against a gabbro dyke The hole intersected 40 m of active tuff with on average 3 % pyrite and trace chalcopyrite. In the active tuff from 232 to 246 m there is anomalous Au (average is approximately 200 ppb) and Ag (average is approx. 3 g/t)
CH88-41	CHIP 1 Claim Grid: 28+00 E; 4+97 N Elev: 593.3m UTM: 5417474.3N 430380.6E	-50/210 Az	346.3 m	Geology between the powerline and the "Fulford Fault Splay". A weak shallow I.P. chargeability anomaly between 3+40 N and 4+20 N	Intersected a long sequence of steeply north dipping, weakly chloritic felsic crystal tuffs. A 108 m long interval contains trace-2 % disseminated pyrite which explains the IP anomaly. Strongly carbonatized mafic tuffaceous sediments occur in the last 75 m's of the hole.
CH88-42	CHIP 1 Claim Grid: 30+00 E; 4+80 N Elev: 592.6m UTM: 5417347.1N 430548.8E	-50/030 Az	196.9 m	"Powerline Anomaly", a coincident Cu and Zn soil anomaly and deep and shallow IP	Intersected felsic tuffs to 40.9 m and then remained in gabbro. The IP anomalies were caused by a zone of greater than 15 % disseminated ilmenite. The Cu soil anomaly

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
				chargeability anomaly.	was caused by chalcopyrite in the gabbro and the Zn soil anomaly is not clearly explained.
CH88-43	CHIP 1 Claim Grid: 28+00 E; 3+30 N Elev: 552.2m UTM: 5417328.7N 430301.5E	-50/210 Az	391.4 m	Geology between the powerline and the "Fulford Fault Splay".	Intersected weakly chloritic felsic tuffs and three intervals of carbonatized mafic tuffaceous sediments. One interval included an 8.9 m section of tuffaceous conglomerate containing pebbles of magnetite-rich mafic material and several cobbles a feldspar +/- quartz porphyritic felsic flow.
CH88-23	CHIP 1 Claim Grid: 28+00 E; 1+10 N Elev: 525.9m UTM : 5417132.2N 430195.7E	-50/210 Az	568.8 m	Extend CHEM87-23 to locate the southern contact of the "Anita Gabbro".	The southern contact of the "Anita Gabbro" dips 72 S. The hole intersected "Active Tuff" with approximately 1 % disseminated pyrite and trace pyrrhotite, chalcopyrite and sphalerite immediately south of the gabbro. The hole ended in mafic porphyritic mafic flows and mafic tuffs intercalated with cherty argillites.
CH88-44	CHIP 1 Claim Grid: 28+00 E; 2+40 S Elev: 495.3m UTM: 5416831.7N 430015.0E	-45/210 Az	203.3 m	To explain discrepencies between the dips measured in the trench and those indicated by holes CHEM86-18 and CHEM87-37.	The hole collared in gabbro and quickly passed into mafic volcanics/volcaniclastics which typically occur south of the "Active Tuff". The hole ended in cherty sediments (argillite--siltstone-greywacke). Numerous graded beds occur and the majority fine to the south. New information from this hole and CH88-23 indicates that stratigraphy south of the "Anita Gabbro" dips steeply south with a local flexure in the vicinity of CHEM86-18 and CHEM87-37 which creates an apparent dip of 55 N.
CH88-45	CHIP 1 Claim Grid: 28+00 E; 1+10 N Elev: 525.9m UTM: 5417131.9N 430195.6E	-58/210 Az	439.5 m	"Active tuff" north of the "Anita Gabbro" and 80 m downdip of CHEM87-23.	Stratigraphy is identical to CHEM87-23. Dips are 75-85 N. Weak pyrite mineralization occurs in the "active tuff" just north of the "Anita Gabbro".
CH88-46	CHIP 1 Claim Grid: 29+00 E; 1+48 S Elev: 499.8m UTM: 5416852.8N 430157.1E	-58/210 Az	257.9 m	"Active tuff" 100 m east along strike of holes CHEM86-18 and CHEM87-37 and 130 m updip of CHEM87-27	Stratigraphy is similiar to that in holes 18 and 37 but economic mineralization is much weaker. The flexure which occurs on 28+00 E does not appear to extend to this section. Three beds of massive pyrite up to 6 cm thick occur over a 1.9 m interval

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
					in the "active tuff". A 3.8 m gabro dyke separates this interval from a 9.4 m thick sphalerite-chalcopyrite bearing felsic lapilli tuff. A 3.7 m section, at the "felsic-mafic" contact contains 0.15% Cu, 0.89% Zn and 198 ppb Au.
CH88-47	CHIP 1 Claim Grid: 29+00 E; 2+10 S Elev: 505.0m UTM: 5416799.6N 430125.5E	-50/210 Az	294.4 m	Stratigraphy on section 29+00 E south of the "active tuff".	The hole collared in a sequence of mafic flows, tuffs and tuffaceous sediments that typically occurs south of the "Active Tuff". It then passed into cherty black argillites followed by felsic tuffaceous sediments and lithic tuffs.
CH88-48	CHIP 1 Claim Grid: 27+00 E; 1+61 S Elev: 456.5m UTM : 5416951.4N 429985.6E	-45/210 Az	256.3 m	"Active tuff"140 m updip of CHEM87-28 and 100 m west along strike of holes CHEM86-18 and CHEM87-37.	The hole collared in the "Anita Gabbro" and intersected 60 m of "active tuff" south of the gabbro. Disseminated and locally massive pyrite occurs throughout the "active tuff". A 1.3 m interval, 6 m from the top of the "active tuff" (ie felsic-mafic contact). grades 0.70% Cu, 5.4 g/t Ag and 0.1 g/t Au. Mafic tuffs and mafic porphyritic flows with minor cherty sediments and occasional gabbro dykes occur south of (above) the "active tuff".
CH88-49	CHIP 1 Claim Grid: 26+98 E; 2+18 S Elev: 470.7m UTM : 5416897.4N 429956.0E	-45/210 Az	252.1 m	"Active tuff" 100 m west along strike from holes CHEM86-18 and CHEM87-37 and up dip from CH88-48.	Hole collared in pyritic "active tuff" with 1 to 7 % disseminated and banded pyrite. A mafic porphyritic sill, identical to those that occur above the (south of) the "active tuff", intrudes the "active tuff" between 46.7 and 52.2 m. The "active tuff" hosts 4.9 m of strong mineraliztion which assayed 2.30% Cu, 3.66% Zn, 0.49 g/t Ag, 1.90 g/t Au and 2.11% Ba 1.3 m from the top of the "active tuff". The mineralization consists of pyrite, pyrrhotite, chalcopyrite and sphalerite. A thin gabbro dyke has been intruded along the "felsic-mafic contact" at the top of the "active tuff". Mafic tuffs and mafic porphyritic flows with minor cherty, argillaceous sediments occur above the "felsic-mafic contact". mafic-felsic contact.
CH88-50	CHIP 1 Claim Grid: 30+02 E; 0+95 S	-50/210 Az	300.5 m	"Active Tuff" on section 30+00 E.	Hole collared just north of the Fulford Fault Splay. The fault is very sharp and

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
	Elev: 510.3m UTM : 5416854.9N 430278.4E				separates Sicker Group felsic tuffs to the north from almost 53 m of Nanaimo Group sediments which rest unconformably on Sicker Group felsic tuffs. A 6.1 m wedge of Sicker felsic volcanics has been thrust into the Nanaimo sediments. The felsic tuffs at the unconformity are weakly chloritic but become less chloritic with depth. A 6.0 m interval of felsic lapilli tuff contains over 10 % pyrite, which is disseminated throughout the matrix. A 2.4 m interval of felsic lapilli tuff contains up to 7% disseminated sphalerite, 5% pyrite and 1.5% chalcopyrite 5.0 m from the "felsic-mafic contact". The interval assayed 0.48% Cu, 3.51% Zn, 27.8 g/t Ag and 1.81 g/t Au.
CH88-51	CHIP 1 Claim Grid: 26+92 E; 3+10 S Elev: 495.0m UTM : 5416817.7N 429904.4E	-45/210 Az	159.7 m	Shallow I.P. chargeability anomaly (31.5 msec) south of the "active tuff" between 3+60 and 4+00 S and a V.L.F. conductor at 3+60 S.	Hole collared in gabbro and entered cherty black argillite with 4 % fracture filling pyrite, strongly carbonatized mafic lapilli tuffs with up to 2 % pyrite and biotite altered tuffs intercalated with cherts. The I.P. anomaly is caused pyritic and weakly graphitic argillite. The V.L.F. conductor can not been explained.
CH88-52	CHIP 1 Claim Grid: 31+00 E; 1+90 S Elev: 524.6m UTM : 5416718.7N 430307.3E	-60/210 Az	203.3 m	"Active tuff" 100 m updip from CHEM87-24.	The hole collared south of the "active tuff" and intersected felsic tuffite/wacke intercalated with chert, argillite and minor ammounts of mafic tuff intruded by mafic porphyritic sills. The hole indicates that stratigraphy dips < 70 S.
CH88-53	CHIP 1 Claim Grid: 30+02 E; 1+95 S Elev: 511.0m UTM : 5416761.1N 430229.8E	-50/210 Az	272.5 m	"Active tuff" 100 m updip from CH88-50 and stratigraphy along section 30+00 E.	Hole collared in mafic flows and tuffaceous sediments that typically occur south of (above) the "Active Tuff", indicating that stratigraphy dips <75 S. After passing through gabbro and cherty black argillites the hole intersected over 200 m of barren, reworked, coarse, quartz grain rich felsic tuff with lesser ammounts of felsic ash tuff. The tuffs are very massive and bedding is rare but where it is recognizable it is at an extremely low angle to the core axis.
CH88-54	CHIP 1 Claim	-45/210 Az	291.7 m	Stratigraphy north	Hole collared 90 m north of the "Fulford

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
	Grid: 32+00 E; 0+49 S Elev: 529.0m UTM : 5416783.6N 430468.2E			of CHEM86-17, which intersected cherty, pyritic, Ba-rich argillites.	Fault Splay" in chloritic felsic tuffs. The "Fulford Fault Splay" separates Sicker Group tuffs from Nanaimo Group sediments which rest unconformably on Sicker volcanics further to the south. A minor fault occurs along the unconformity. A succession of mafic tuffs with minor ammounts of cherty, argillaceous sediments occurs below the unconformity. The cherty pyritic argillites were not intersected in this hole indicating that stratigraphy dips <55 S.
CH88-55	CHIP 1 Claim Grid: 30+00 E; 3+60 S Elev: 527.7m UTM : 5416632.4N 430152.7E	-45/210 Az	215.5 m	Strong (44 msec) IP chargeability anomaly centred at 4+40 S	Hole intersected gabbro over its entire length. A coarse-grained, ilmenite-rich granophyric phase of the gabbro occurs roughly 50 m beneath the IP anomaly. A 2.5 m interval contains 3.5 % chalcopyrite (_____% Cu). The steeply dipping cherty sediments, which outcrop between 4+50 S and 4+80 S are a pendant in the gabbro.
CH88-56	CHIP 1 Claim Grid:31+00 E; 0+01 N Elev: 525.9m UTM : 5416879.1N 430407.7E	-55/210 Az	486.8 m	"Active tuff" 100 m downdip of CHEM87-24.	Hole collared in chloritic felsic tuffs typical of those north of the "Fulford Fault Splay. The "Fulford Fault Splay" was intersected at a depth of 147.6 m and it dips 68 N. Nanaimo Group sediments occur below the fault and rest unconformably on a gabbro dyke at 186.6 m. The unconformity dips 65 N. The hole intersected "active tuff" intruded by several gabbro dykes for 250 m below the unconformity. The "active tuff" is weakly pyritic throughout. A 6.8 m interval at the "felsic-mafic contact" contains 20 to 30 cm thick bands of semi-massive sphalerite +/- chalcopyrite +/- galena. The interval assayed 1.55% Zn, 0.14% Pb, 0.45% Cu, 18.4 g/t Ag and 0.82 g/t Au.
CH88-57	CHIP 1 Claim Grid: 40+00 E; 1+90 S Elev: 536.5m UTM : 5416242.3N 431130.2E	-50/210 Az	313.3 m	Updip extent of a 0.4 m wide altered felsic tuff with 1.36 % Pb, 0.59 % Cu, 13.4 g/t Ag and 4.8 g/t Au intersected by CH87-31.	Hole interesected felsic to intermediate tuffs before reaching the Fulford Fault splay at a depth of 51 m. Nanaimo Sediments occur below the fault and rest unconformably on a gabbro body at a depth of 83.8 m. A 15.5 m wedge of Sicker Group felsic "Active Tuff" and mafic tuffaceous sediments have been faulted into the Nanaimo Group Sediments. The gabbro below the unconformity extends to a depth of 262.0 m and has cut off the mineralized

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
					tuff in CH87-31. Reworked felsic tuffs and argillite occur below the gabbro.
CH88-58	CHIP 1 Claim Grid: 39+00 E; 4+10 S Elev: 520.1m UTM : 5416090.1N 430933.8E	-50/210 Az	248.7 m	Coincident deep and shallow IP chargeability anomalies centred at 5+00 S. The anomalies are 57.0 and 49.3 msec respectively.	The hole intersected gabbro, felsic tuffite and reworked tuffs above 18.5 m. Below 18.5 m various phases of a large gabbro body were encountered including fine to medium grained feldspar porphyritic, medium to coase-grained ilmenite-rich, and leucocratic gabbro. The gabbro contains an average of 3 % ilmenite. The coarser, ilmenite-rich phases contain 10-12 % ilmenite and trace to 1 % chalcopyrite and are probably responsible for the chargeability anomalies.
CH88-59	HOLYOAK 3 Claim Grid: 50+00W; 7+72 N Elev: 919.0 m	-50/210 Az	340.5 m	Stratigraphic section	Hole collared into pyritic, variable chloritic quartz phyric felsic tuffs and quickly passed into intermediate to mafic tuffs and tuffaceous sediments, containing minor interbeds of interlaminated to intercalated argilite. Variable chloritic, quartz phyric felsic tuffs with interbedded mafic tuffs from 63.1 - 148.7 m, where mafic interbeds increase in frequency towards 148.7 m. A thick succesion of carbonitized mafic tuffs with minor interbeds of intermediate to felsic tuffs is followed to 288.7 m From 288.7 - 340.5 m consists primarily of variable chloritic tuffs with interbedded intermediate and mafic tuffs
CH88-60	HOLYOAK 3 Claim Grid: 50+00 W; 10+38 N Elev: 909.0 m	-50/210 Az	233.5 m	Weak shallow IP chargeability anomaly (18 msec) between 9+60 and 10+00 N. Also, part of stratigraphic section.	Hole collared in fine-grained gabbro but quickly passed into a thick succession of moderately sericitic, weakly chloritic felsic quartz eye tuffs. A 15.7 m interval of intercalated felsic tuffs and and argillaceous sediments occurs near the top of the hole and there are several carbonatized mafic tuffs less than 1.0 m thick near the bottom of the hole. The felsic tuffs contain an average of 2 % disseminated pyrite below the IP chargeability anomaly. The strongest mineralization (3-5% pyrite) occurs south of the IP anomaly, between 132.0 and 151.0 m in the hole. A 0.5 m interval at 197.4 m contains 8 % pyrite and 5 % pale

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
					cream-brown sphalerite.
CH88-61	HOLYOAK 3 Claim Grid: 50+00' W; 5+77 N Elev: 876 m	-50/210 Az	363.0 m	Stratigraphic section	Hole collared in pyritic felsic tuffs from 6.4 to 14.2 m with 3 to 5 % disseminated pyrite and trace mariposite. From 14.2 to 242.4 there is dominantly mafic tuffs with numerous felsic to intermediate crystal tuffs constituting approximately 30 % of the interval. The mafic tuffs are strongly carbonatized with up to 40 % white calcite streaks parallel to the foliation, calcite averages 5 to 10 % in the mafic tuffs and is rarely present in the felsic tuffs. From 242.4 to 363.0, end of hole, there are mainly felsic crystal tuffs to volcanic wackes with variable weak chloritization and trace < 1 m mafic tuffs or sills. There was a 50 cm argillite bed from 335.5 to 336.0. The upper portion of the drill hole correlated with Ch88-59 indicating a northerly dip of 60 to 75 degrees.
CH88-62	HOLYOAK 3 Claim Grid: 50+00 W; 9+85 N Elev: 917 m	-50/210 Az	237.7 m	Stratigraphic information and coincident weak (14 to 16 msec) deep and shallow IP chargeablity anomalies at 8+80 N.	Hole intersected felsic quartz eye tuffs with occasional intervals of argillaceous sediments less than 10.0 m long in core. These sediments are not bedded and have a churned up appearance suggesting that they are slump deposits. Correlations with hole CH88-60 show that stratigraphy dips steeply to the north. The felsic tuffs contain an average of 2 % and locally up to 8 % disseminated pyrite. There is no particular build-up of sulphides beneath the anomaly. A 2.0 m interval of felsic tuff with 4 % pyrite and 0.5 % sphalerite occurs at 117.0 m.
CH88-63	HOLYOAK 3 Claim Grid: 50+00 W; 9+25 N Elev: 925 m	-50/210 Az	246.3 m	Stratigraphic information and test a deep IP anomaly.	Hole intersected chloritic quartz eye felsic volcanics, minor magnetic mafic tuff and interbedded felsic and argillite. Minor sphalerite, chalcopyrite and galena in several quartz-carbonate veins occurs over an interval of 2 metres and 30cm 1% sphalerite 98.3 to 98.6 metres. Correlation with hole CH88-62 difficult but dips may be 60 degrees to north. IP caused by intervals of 2 to 3% pyrite.

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
CH88-64	HOLYOAK 2 Claim Grid: 31+00 W; 1+30 S Elev: 797 m	-50/180 Az	195.1 m	Mineralization downdip from CH85-10 and coincident deep and shallow IP chargeability and VLF anomalies.	Hole collared in a gabbro dyke and entered variably chloritic felsic tuffs at 14.4 m. The felsic tuffs persisted to 47.3 m with thin gabbro dykes from 30.8 to 35.1 and 39.0 to 39.8 m. There is 3 to 5 % fracture controlled pyrrhotite from 23.0 to 25.2 m. From 47.3 to 195.1 the Silver Creek Gabbro was intersected. From 104.0 to 122.0 the gabbro was coarse grained and hosted trace to 0.5 % chalcopyrite interstially. The probable cause of the chargeability anomalies was the 9 m zone of 15 % ilmenite from 125 to 134 m. From 136.1 to 138.0 the gabbro hosted 5 to 7 % pyrite, 1 to 2 % pyrrhotite and trace chalcopyrite as fracture fillings. The VLF anomaly is likely associated with the pyrrhotite - sphalerite mineralization encountered in the 1985 trenching and drilling program.
CH88-65	HOLYOAK 2 Claim Grid: 25+00 W Elev: 899 m	-50/180 Az	458.7 m	Stratigraphy north of the IP chargeability anomalies between 1+80 N and 0+40 S.	Hole collared in gabbro and then passed into volcanic wackes, cherty siltstone and black argillite typical of the Cameron River Formation. A fault at 92.6 m separates the sediments from a 72 m thick (true thickness) sequence of mafic tuffs. Some of the tuffs are mafic porphyritic. The pyroxene crystals have been altered to chlorite which is smeared along foliation planes. A 47 m thick gabbro separates the mafic tuffs from a 110 m sequence of weakly to moderately chloritized felsic tuffs. The tuffs host weak stringer pyrite mineralization (up to 5 %) between 430.7 and 441.1 m. This mineralization is likely responsible for the deep I.P. chargeability anomaly between 1+20 N and 0+60 S. Weakly chloritic quartz eye bearing felsic tuff occurs below 441.1 m and becomes intercalated with mafic tuff below 453.4 m.
CH88-66	HOLYOAK 2 Claim Grid: 29+50 W; 5+01 S Elev: 806 m	-50/180 Az	228.0 m	Stratigraphic information.	Hole collared in the Silver Creek Gabbro at 7.9 m and entered mafic tuffs at 128.5 m. The mafic tuffs are variably epidote spotted and locally there is magnetite and chalcopyrite associated with fracture controlled calcite and chlorite in the epidotization. From 198.3 to 215.0 there

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
					is a tuffaceous conglomerate. Well bedded cherty argillaceous sediments occur from 215.0 to 220.6. Mafic tuff occurs to 224.0 and the hole terminates in a chloritic felsic lapilli tuff at 228.0 at the property boundary with Abermin.
CH88-67	HOLYOAK 2 Claim Grid: 29+50 W; 3+50 S Elev: 816 m	-50/180 Az	317.0 m	Stratigraphic information.	Hole intersected 3 strong faults and interbedded chloritic felsic, mafic and sericitic felsic tuffs with a weakly pyritic felsic intrusive from 59.8 to 88.0 m. There is strong fracture controlled carbonatization, mostly in the mafics. Foliations and bedding averages 20 degrees to core axis with minor zones at 70 degrees. The anticipated intersection of the Silver Creek Gabbro did not occur. This may be due to the faults.
CH88-68	HOLYOAK 2 Claim Grid: 29+50 W; 0+05 S Elev: 836 m	-50/180 Az	214.9 m	Stratigraphic information.	Hole collared in mafic tuffs, which dominated the hole to 147.8 m. There were minor chloritic felsic tuff and argillaceous zones within the first 147.8 m. From 147.8 to 171.8 there were felsic crystal tuffs with very weak pyrrhotite mineralization. From 171.8 to 214.9, the hole intersected the Silver Creek Gabbro.
CH88-69	HOLYOAK 2 Claim Grid: 25+00 W; 2+20 N Elev: 905 m	-50/180 Az	423.4 m	Stratigraphic information and a deep IP chargeability anomaly between 1+00 and 1+20 N	Hole intersected a sequence of mafic tuffs and felsic flows and tuffs intruded occasionally by narrow gabbro dykes. The IP anomaly is due to a weakly mineralized (3-5 % disseminated pyrite) quartz-sericite schist between 153.7 and 162.4 m.
CH88-70	HOLYOAK 2 Claim Grid: 25+00 W; 0+04 S Elev : 901 m	-50/180 Az	403.1 m	Stratigraphic information.	Hole collared in mafic tuffs, which were the dominant lithology encountered. There was weak mineralization in chloritic felsic to andesitic tuffs from 267.0 to 279.8 m, there was up to 7 % pyrite and pyrrhotite with up to 2 % sphalerite and trace chalcopyrite over short intervals. Felsic component increases substantially downhole.

HOLE	LOCATION	DIRECTION	DEPTH	TARGET	RESULTS
CH88-71	HOLYOAK 2 Claim Grid: 25+00 W; 2+25 S Elev: 897 m	-50/180 Az	254.8 m	Stratigraphic information and a deep IP chargeability anomaly centred at 3+20 S.	Hole intersected mafic and intermediate tuffs. The intermediate tuffs contain 2 to 5 % disseminated pyrite. The pyrite is associated with chlorite alteration and sometimes contains traces of chalcopyrite. The intermediate tuffs may in fact be chloritized felsic crystal tuffs.