Box 5

1986 DRILLING REPORT
ON THE
CHEMAINUS JOINT VENTURE
(Chip 1, Holyoak 3 claims)

Situated 8 km southwest of Chemainus, B.C.
in the Victoria Mining Divison

43°53'N, 123°50'W
NTS 92B/13W

Falconbridge Limited
701 - 1281 West Georgia Street
Vancouver, B.C.

February, 1987 Vancouver, B.C.

TABLE OF CONTENTS

TABLE

FIGURES

APPENDIX

SUMMARY

This report presents drill results of the 1986 Chemainus Joint Venture project on Vancouver Island. The exploration target is a volcanic-hosted, polymetallic, massive sulphide deposit of the Kuroko-type. Examples of such deposits in the Sicker volcanic belt include Westmin's Buttle Lake deposits (20 million tons averaging 2% Cu, 6% Zn, 2.5 oz/T Ag and 0.06 oz/T Au) and the Twin J deposits at Mt. Sicker (1 million tons). Abermin has announced significant discoveries on their claims adjacent to the Joint Venture project.

The project-area consists of 15 claims (139 units) in two separate claim blocks located about 60 km northwest of Victoria, B.C.. Kidd Creek Mines (wholly owned subsidiary of Falconbridge Limited) earned a 50 percent interest in the property in 1985 and is the operator of this joint venture with Esso Minerals Canada.

Results of 1986 fieldwork led to late fall drilling on several significant geophysical anomalies thought to be underlain by felsic volcanics. A total of 1854 m was drilled in six widely spaced holes between October 15 and November 15, 1986. The drilling explained the deep IP anomalies and resulted in three significant sulphide intersections on the Chip 1 claim. Two sulphide sections, each about 35 m wide, were drilled in holes Cehm 86-14 and Chem 86-16 which are 400 m apart on the east Chip 1 claim. The sulphides in these two intersections are dominantly pyrite and have a distal polymetallic signature. In hole CHEM 86-14, the sulphides

appear to be bedded. A 70 m zone of stringer sulphides was intersected on the west side of the Chip 1 claim in hole Chem 86-18, which was drilled 100 m east of an old shaft known as the Anita showing. This intersection is thought to represent a stringer pipe because of the cross-cutting, stringer-like sulphides which have a proximal Cu-Zn metal signature. The best mineralization was encountered in this hole and it assayed 5 m of 1.59% Cu which included 2 m of 2.89% Cu with 1 m of 460 ppb Au.

The successful drilling warrants continued exploration with an aggressive drill program in 1987 to follow up on targets near the Anita showing and near the east side of Chip 1 claim. Additional targets resulting from 1986 work must also be explored.

S. G. Enns

CONCLUSIONS:

Three significant types of sulphides were intersected in Myra volcanics.

1. In the Anita area, a 70 m wide intersection of stringer-type pyrite, pyrrhotite and chalcopyrite is present in felsic sericite-rich tuffs. In-situ breccia development was also noted. Stringer sulphides, high Cu/(Cu + Zn) ratio and significant alteration of host rocks in hole CHEM 86-18, indicate proximal sulphide deposition.

2. In the east CHIP 1 area, two holes 400 m apart, each intersected 35 m of laminated sulphides (mainly pyrite) hosted by felsic volcanics. These holes demonstrate 400 m of apparent continuity of a sulphide horizon. The laminated sulphides (bedded in hole CHEM 86-14), low Cu/(Cu + Zn) and weak, but significant hydrothermal alteration of the host rock suggest distal sulphide deposition. This horizon is believed to represent distal mineralization along Abermin's polymetallic Coronation Zone which extends onto the Chip 1 claim.

3. In the southwest corner of Holyoak 3, very coarse, massive, crystalline pyrite and black chlorite bands (1 to several cm wide and up to 1.1 m wide) are hosted in a 41 m interval which straddles felsic crystal tuff and dark green

andesite tuff lithologies. Although the sulphides contain disappointingly low metal levels, the wall rock exhibits strong hydrothermal alteration. The geological setting and nature of sulphides intersected in hole CHEM 86-19 are indicative of "Zone III" (north of Abermin's Coronation Zone).

The section with holes CHEM 86-14 and 15, illustrates the complex stratigraphy and faulting in the Myra Formation. Numerous late gabbroic intrusions further complicate stratigraphic correlation by separating the volcanic stratigraphy.

The "Sediment-Sill Unit" -Myra Formation contact has been located in four drill holes. Its position can be used to guide future drilling.

Lithogeochemistry indicates insignificant thermal influence of gabbroic intrusions on the hydrothermal alteration signature of adjacent volcanic rocks.

Holes CHEM 86-17 and 18 tested the same deep IP anomaly. However, hole 17 intersected Ba-rich, black pyritic sediments of the "Sediment-Sill Unit" instead of Myra volcanics. The contoured interpretation of widely spaced IP lines (200 m) therefore needs to be re-interpreted in this region to guide future drilling.

RECOMMENDATIONS

Continued drilling is recommended for 1987 on the Chip 1, 2, 4 and Holyoak 3 claims. A total of 9400 m, of NQ core in 31 holes is planned to follow-up on 1986 targets and to test new areas (Figure 3). The drilling should be conducted in two phases as follows:

1. Phase 1 comprises 18 holes totalling 5400 m. Half of these holes would be 100 m step-outs in the Anita area. The remaining 9 holes are 200 m step-outs eastward, designed to test deep IP anomalies in felsic Myra volcanics toward the east end of the Chip 1 claim.

2. Phase 2 comprises 13 holes totalling 4000 m on various targets as follows:

   - Line 17E or Line 18E west of Powerline Creek: 2 holes to test an IP and VLF anomaly near the south contact of Myra felsic volcanics and to establish the position of the "Sediment-Sill Unit" north contact.

   - Powerline area, Lines 28E and 32E:
   4 holes to test two short, deep IP anomalies in felsic Myra volcanics which show high hydrothermal alteration geochemistry. A weak Cu-Zn soil anomaly is also present here.

   - West side of Holyoak 3 claim, Line 48 W:
   3 holes to provide a stratigraphic section across relatively unknown geology (Myra felsic volcanics are indicated; Abermin recently announced sulphide intersections northwest along geological strike). Several weak, shallow IP anomalies occur in this region.

DRILLED 50@ 50'

RANDY

- Anderson Creek area on Chip 4 claim:
3 holes are reserved for this area which is underlain by a felsic dome and felsic tuffs with indicated weak IP anomalies.

NOT DRILLED YET

The use of two drills is recommended with start-up by mid-May to complete Phase 1 drilling before the anticipated fire season, sometime in early to mid-July. A mid-summer hiatus would allow drill data evaluation. Phase 2 drilling should start in mid-September with two drills so that work may be completed before the heavy autumn rains.

S. G. Enns

LOCATION, ACCESS, TERRAIN

The Chemainus project area is located on southeast Vancouver Island, about 8 km west of Chemainus, in southwestern British Columbia (Figure 1). Chemainus lies just off the Trans-Canada Highway about 60 km northwest of Victoria. Established port facilities and related infrastructure in Chemainus and vicinity would enhance the economics of an orebody.

Access to the claims is by MacMillan Bloedel's main haul road known as the Copper Canyon road leading west from Chemainus. From this road, three secondary 4-wheel drive roads provide access to various parts of the claims (Figure 2). Property access within the claim area is good due to numerous logging roads and old railway grades.

Surface and timber rights to much of the Brent-Holyoak claims are owned by C.I.P. Forest Products Inc.; nearly all of the Chip claims are under MacMillan Bloedel jurisdiction. Surface access permits must be obtained from the logging companies and exploration is subject to payment of surface-damage compensation.

Rolling topography with incised canyons characterizes the terrain. All of the property has been logged and is in various stages of regrowth with cedar, fir and hemlock. The bush varies from dense second growth to clear cut areas. Undergrowth of salal is widespread and in places can be very thick. Elevations on the property vary between 500 and 1,100 m. Large, old stumps are a common inconvenience to the construction of access routes and drill set-ups.

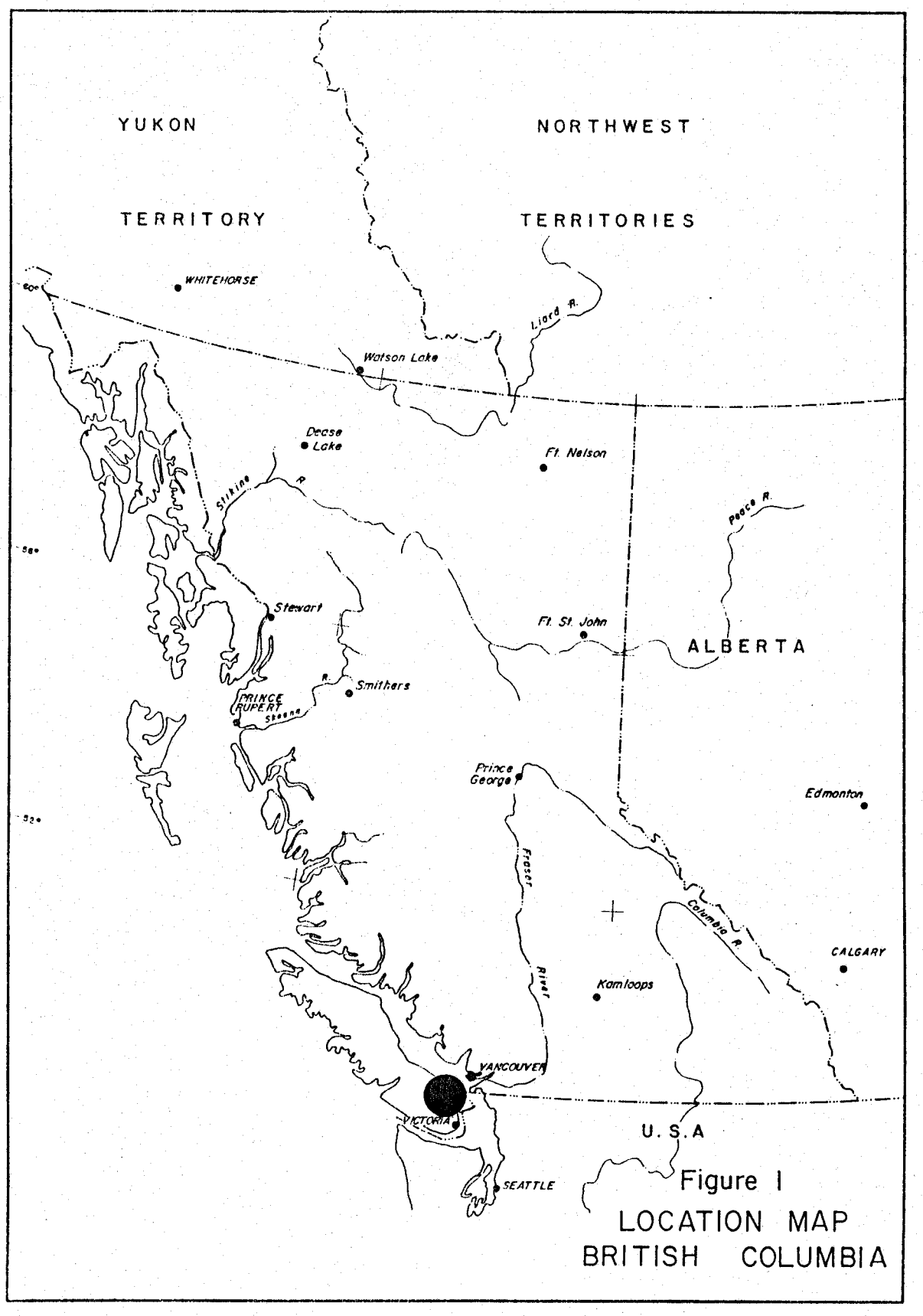
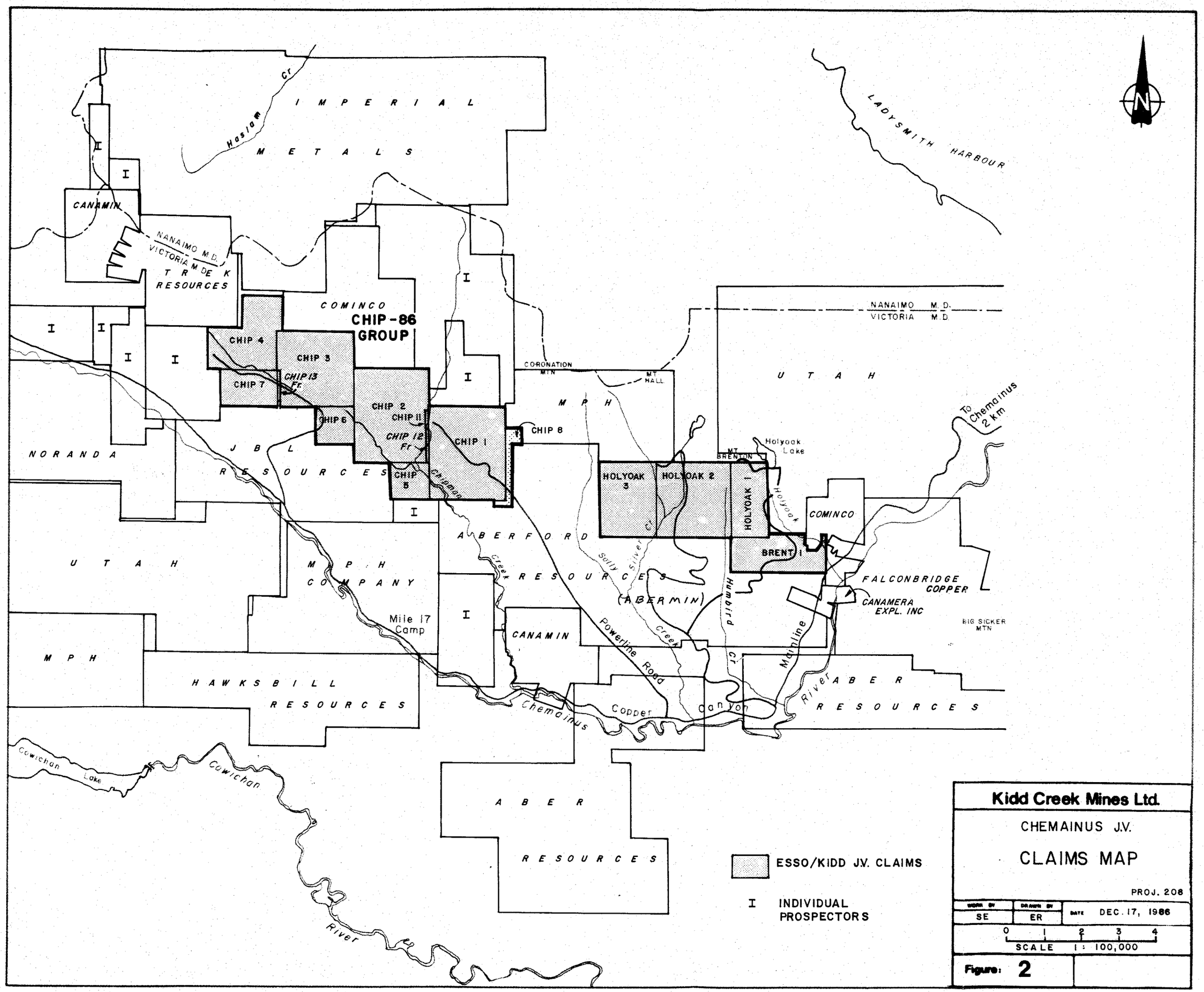


Figure 1
LOCATION MAP
BRITISH COLUMBIA



Kidd Creek Mines Ltd.

CHEMAINUS J.V.

CLAIMS MAP

PROJ. 208

WORK BY	DRAWN BY	DATE
SE	ER	DEC. 17, 1986

0 1 2 3 4

SCALE 1 : 100,000

Figure: 2

A mild climate prevails with warm, dry summers and autumns, and short winters. Spring is usually wet. The higher elevations (above 1000 m) tend to be clear of snow by the end of May. Elevations below 500 m may be snow-free throughout the entire year making extended fieldwork possible. Dry, forest conditions usually occur from mid-July to the end of August and this must be taken into account in planning field work to avoid interruptions due to bush closures.

GENERAL GEOLOGY

The claims are underlain by northwest-trending, steeply dipping felsic and intermediate volcanic rocks of the Myra Formation. The volcanics are flanked on both sides by darkly coloured pelitic and cherty sediments of the "Sediment-Sill Unit". Rocks of the Myra Formation and "Sediment-Sill Unit" belong to the Sicker Group. Felsic volcanics of this group host polymetallic sulphide mineralization. Significant deposits include the nearby Twin J deposits at Mount Sicker and Abermin's recent discovery of the Coronation Zone on claims adjacent to the Joint Venture property. Several of our geophysical anomalies lie along strike with Abermin's Coronation Zone and their Zone III. The latter is a sulphide zone with weak, polymetallic base metal content and it lies as a parallel zone about 200 m north of the Coronation Zone (Figure 3).

Surface mapping has shown that the Myra rocks are a complex interbedded mixture of felsic tuffs, minor felsic flows and intermediate tuffs and flows intruded by late gabbroic sills. Small quartz porphyry bodies

identified at two localities may mark the sites of felsic domes as in the case of "footwall rhyolite", which is believed to lie stratigraphically beneath Amermin's. Coronation Zone.

The targets chosen for 1986 drilling were deep IP anomalies interpreted to be sulphide concentrations at depth, which were identified in, or adjacent to felsic volcanics. Those anomalies which are on strike with the Coronation Zone stratigraphy, were viewed with particular interest. Hydrothermal alteration geochemical signatures were an added incentive for drill targets. The 1986 results of geological mapping and geophysical surveys are covered in two separate reports.

OBJECTIVES OF 1986 DRILLING

The drilling in 1986 was conducted as concluding follow-up work at the end of the field season. The objectives of drilling were as follows:

1. To test three deep IP anomalies identified in felsic volcanics.
   a) east Chip 1 anomaly - 3 holes
   b) west Chip 1 anomaly - 2 holes
   c) southwest Holyoak 3 anomaly - 1 hole

2. To obtain detailed structural and stratigraphic information along the east side of the Chip 1 claim in order to better evaluate the geology.

3. To build up a lithogeochemistry data base for definition of lithological units in the stratigraphy and to identify hydrothermal alteration.

DRILLING

Introduction

The drilling was conducted from October 15 to November 20, 1986. A total of 1854.4 m of NQ core was drilled in 6 inclined holes. Table I summarizes the drilling data. The drilling costs, including consumables and Cat use, were $113,757.

The contractor for the job was Burwash Enterprises Ltd. of Cobble Hill, B.C., who used a Longyear Super 38 drill equipped with an air-cooled diesel engine. A D-6H Caterpillar tractor was leased by the contractor for drill moves and to prepare the sites.

All the drill sites were accessible by four-wheel drive vehicles. Site locations were chosen to avoid large timber and steep slopes as much as possible and to take maximum advantage of abandoned logging roads. The overburden depth varied between 5 and 20 m.

The drill holes are plotted on Figure 3 at a scale of 1:20,000 and shown in sections (Figures 4 to 8) at a scale of 1:1,000. All the core was converted to metric depth, photographed and logged. Selected mineralized intervals were split for analysis, lithogeochemical samples were taken every 10 m (on average) and a skeletal core was selected and taken to Vancouver for reference. All core from the past two years has been stored on racks in Mr. H. Knight's old barn on Knight Road near the Saltair Pub, about 3 km north of Chemainus.

Bondar-Clegg of North Vancouver analysed the split core for Cu, Pb, Zn, Mo, Ag, Fe, Mn, Cd, Co, Ni, As, Au and Ba. An HNO_3-HCl hot extraction and analysis by DC Plasma was used for all elements except Au and Ba.

TABLE I SUMMARY OF DRILLING AND ANALYTICAL RESULTS

HOLE	LOCATION	AZIMUTH	DIP	LENGTH	STARTED/ COMPLETED	INTERVAL (m)	WIDTH (m)	ANALYTICAL RESULTS
CHEM 86-14	East CHIP 1 claim Line 49E; 0+60S Elev: 677 m	210°	55°	381.6	October 15/86 October 21/86	220.7-221.7 317.0-326.0	1 9	2.77% Cu, 11.3 ppm Ag 1500 ppm Zn; includes 3 m 2560 ppm Zn
CHEM 86-15	East CHIP 1 claim Line 49E; 2+47S Elev: 630 m	210°	56.5°	232.6	October 22/86 October 27/86	178.9-179.1 182.0-183.8 236.0-238.0	.2 1.8 2	2868 ppm Cu 4400 ppm Ba 1710 ppm Zn
CHEM 86-16	Mid CHIP 1 claim Line 45E; 0+81S Elev: 630 m	210°	50°	294.2	October 30/86 November 3/86	241.0-244.0	3	2400 ppm Zn 4900 ppm Ba
CHEM 86-17	West CHIP 1 claim Line 32E; 1+62S Elev: 540 m	210°	50°	249.0	November 3/86 November 6/86	105.0-106.0 115.0-118.0 176.0-184.8	3 3 8.4	4400 ppm Ba 4900 ppm Ba 9400 ppm Ba
CHEM 86-18	West CHIP 1 claim Line 28E; 1+40S Elev: 500 m	210°	50°	306.9	November 7/86 November 12/86	74.0-75.0 94.6-96.6 106.0-116.0 118.9-120.9 130.6-133.6 133.6-138.6	1 2 7 2 3 5	1700 ppm Cu, 3700 ppm Zn 460 ppb Au 3440 ppm Ba (2 barren mafic sill gaps) 4300 ppm Ba 2033 ppm Cu, 2370 ppm Ba (incl 1 m 2300 ppm Cu) 2750 ppm Zn 1.6% Cu, 3260 ppm Ba (incl 2 m 2.89% Cu), 15.4 ppm Ag (incl 1 m 460 ppb Au)
CHEM 86-19	Southwest HOLYOAK 3 claim Line 48W; 4+80S Elev: 750 m	210°	50°	390.1	November 13/86 November 20/86	169.0-171.0 172.0-178.0 182.0-184.1 187.8-188.3 197.5-198.4 203.0-204.0 234.0-235.0	2 6 2.1 1 1 1 1	4750 ppm Ba 2500 ppm Ba 2900 ppm Ba 1308 ppm Cu 1953 ppm Cu 1318 ppm Cu 1502 ppm Cu
			TOTAL	1,854.4 m				

A fire assay with AA finish was used for Au and X-ray Fluorescence was used to give a total analysis for Ba. An assay preparation method was applied to all samples.

X-Ray Assay Labs of Don Mills, Ontario analysed the lithogeochemistry samples. Analysis included the standard major oxide plus 8 trace element package which includes Ba. Duplication of Ba analyses on 16 samples by both laboratories (within the range 400 to 7000 ppm) showed a correlation coefficient of 0.9985.

The drill logs together with analytical results are listed in Appendix I.

Drill Results

Drill holes CHEM 86-14 and 15

The purpose of drilling these two holes was to test the east end of the 700 m long (open to east off the claims), >25 m sec chargeability anomaly in the region of east Chip 1. This IP anomaly lies generally along the strike of Abermin's Coronation Zone. A modest copper and zinc soil anomaly is present downslope from the IP anomaly on the Chip claim. The drilling also tested a section of Myra stratigraphy near the eastern edge of our Chip 1 claim to determine the position of the Myra volcanic "Sediment-Sill Unit" contact.

A fence of two drill holes was set up along line 49E just south of the Powerline. The two drill sites have relatively easy road access from existing, abandoned logging roads. The 2 holes were collared about 200 m apart in hopes that together they would provide an easily correlated stratigraphic section. Drill data on these two holes is given on Table I.

The results of drill holes CHEM 86-14 are shown on section in Figure 4. Hole CHEM 86-14 drilled through two signficiant felsic volcanic intersections separated by late gabbro intrusions which contain local white quartz-chalcopyrite veins (eg: 2.77% Cu from 220.7 to 221.7 m). The felsic volcanics are crystal and lapilli tuffs with a rhyodacite to rhyolite composition and they are commonly intruded by narrow, early mafic sills. The upper felsic intersection is not significantly mineralized but the lower felsic volcanics contain a 34.1 m section of sulphide-bearing white to grey crystal tuff (from 275.5 to 327.8 m). A high sericite content yields a fragile core which suggests a structurally incompetent lithological unit subject to ductile deformation. Pyrite is the dominant sulphide and occurs mainly as disseminations and as 4 to 10 mm wide stringers and pyritic bands which parallel strong foliation at an average of 40° to core axis. Total sulphide content varies from 6 to 15 percent with the lower section becoming progressively more rhythmically banded; the lowest 0.5 m of sulphides contains more than 40 percent pyrite (with minor sphalerite and chalcopyrite) bands. This banded pyrite is reminiscent of bedded sulphides although the generally strong foliation throughout the sulphide-bearing interval suggests that shearing may have obliterated the original textures. A fault terminated the sulphides against gabbro. Only geochemical quantities of Zn are present in the lower part of the sulphides. The last sample contains highest Ba content (2800 ppm). Base metal analysis indicates a polymetallic signature with Zn much greater than Cu. Distal sulphide deposition is indicated by the low Cu/(Cu + Zn) ratio of 21 (calculated average).

The Ishikawa Index (Figure 4) indicates moderate to strong (77-87) hydrothermal alteration within sulphide-bearing felsic tuffs. In contrast to this, the geochemistry of the felsic tuff intersections immediately above the sulphide-bearing tuffs (275.5 to 284.4 m) shows distinctly less alteration (Ishikawa Index 17 to 33).

The bottom of the hole intersected black cherty argillite of the "Sediment-Sill Unit".

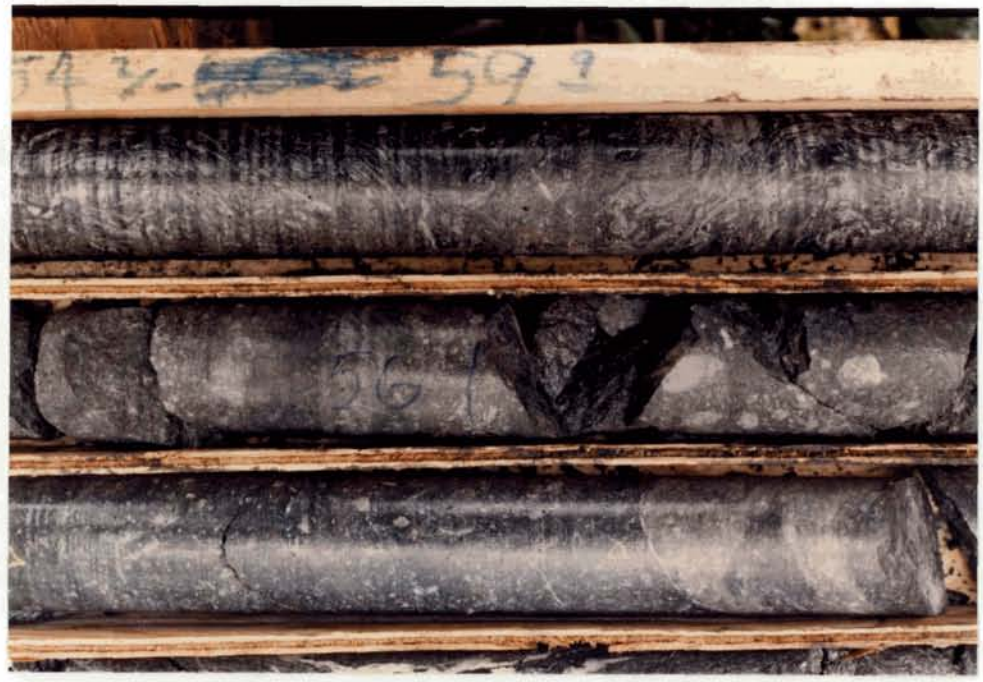
Hole CHEM 86-15 (Figure 4) intersected completely different geology. The upper part of the hole drilled through dark green and grey andesitic crystal and lapilli tuff. The most signficant feature of this hole is a 7 m fault zone (51.2 to 58.0 m) with good core recovery. The fault zone has strong foliation 30 to 40° to core axis. Pyritic white quartz clasts are common in the lower part of the fault intersection. Pyrite, as 4 to 15 percent fine- to medium-grained disseminations, is conspicuous and is associated with occasional trace amounts of chalcopyrite. The fault zone is interpreted to be a shallow, south-dipping fault which may have thrust Cretaceous Nanaimo sediments on top of Myra rocks.

Gabbro is intersected through most of the remainder of the hole. Minor white quartz-chalcopyrite veins and volcanic inclusions are present in the gabbro.

Two intersections of black argillite and cherty argillite of the "Sediment-Sill Unit" were encountered. Where "Sediment-Sill Unit" rock was sampled, high Ba levels are indicated in the black sediments. The "Sediment-Sill Unit" intersection can be reasonably correlated with similar sediments 70 m away in hole 14.

CHEM 86-14 at 325 m showing pyrite laminations parallel to foliation in quartz-sericite crystal tuff.

CHEM 86-14 at 327.8 m showing bedded (?) pyritic sulphides at base of sulphide-bearing, quartz-sericite crystal tuff in faulted contact with late gabbro intrusion (arrow).



CHEM 86-15 at 56 m showing fault breccia expressed as strongly sheared volcanic in upper row, and as comminuted rock in lower two rows. Light coloured clasts are white quartz and quartz-sericite tuff. Matrix contains 2 to 3 percent finely disseminated pyrite.

This section demonstrated the complexity of the structural geology due to faulting, late gabbro injections shouldering aside stratigraphy, and possible ductile deformation of sericite-rich felsic Myra volcanics. Intersection of sulphide-bearing volcanics only partly explains the source of the deep IP anomaly (ie: the south shoulder of the anomaly) at a depth of 175 m. The main anomaly peak (Figure 4) plots 120 m farther north indicating that an undiscovered stronger sulphide zone may lie at depth in this direction. More drilling or a down-hole pulse EM survey is required to test this hypothesis.

Drill Hole CHEM 86-16 (L45E)

This drill hole was planned to test the strongest portion (20 m sec chargeability) at the west end of the same 700 m long, deep IP anomaly as was drilled by hole 14. This hole, situated on line 45E in the middle of the Chip 1 claim, was a 400 m step-out west, along geological strike from hole 14. Table I lists particulars of hole CHEM 86-16.

The access was difficult due to the site location in old logged off, large second growth timber, 200 m away from the nearest abandoned logging road.

The drill hole (Figure 5) intersected a mixed succession of felsic and andesitic tuffs in its upper half. Felsic volcanics of rhyolite composition at the top of the hole are underlain by green volcanics logged as andesitic but which have silica content 69 to 71 percent SiO_2, 5.5 to 6.0 percent Na_2O, indicating a high Na_2O rhyodacite composition. A 4.7 m fault zone was intersected at the base of a gabbro with several volcanic inclusions.

The most significant intersection of this drill hole lies at a depth of about 135 m below surface from 236.0 to 271.8 m. An interval of 35.8 m of sulphide-bearing felsic crystal tuff is nearly identical in appearance and width to the sulphide-bearing intersection encountered in hole 14. Hole 16 differs because it contains less visible base metals and it lacks the same high-sulphide banded section at the base of the sulphide-bearing interval. The interval in hole 16 is dirty white, sericite-rich and strongly foliated 45 to 50° to core axis. Pyrite is the main sulphide mineral and it occurs as 5 to 17 percent disseminations and stringers averaging 1 to 2 mm in width up to 4 cm wide. Trace amounts of chalcopyrite, sphalerite, galena and green mica (mariposite?) are locally present. The sulphide-bearing interval is bounded by early mafic sills and is terminated at the bottom by a small fault. The interval shows a polymetallic, base metal signature with a calculated average Cu/(Cu + Zn) ratio of 13, indicating distal sulphides possibly with a source to the southeast. Whole rock geochemistry (Ishikawa Index) indicates weak to moderate hydrothermal alteration (52 to 76).

The hole ended in cherty black siltstone and grey argillite of the "Sediment-Sill Unit".

This hole intersected and tested the deep IP anomaly, the peak of which plots in a position about 80 m north of the sulphide intersection midpoint. The sulphide-bearing intersection in hole 16 demonstrates continuity of distal sulphides hosted in felsic tuff along 400 m of strike length. Hole 16 also located the position of the "Sediment-Sill Unit"-Myra volcanics contact.

Drill Hole CHEM 86-17

Hole 17 was drilled to test one of the strongest portions (36 msec) of a deep IP chargeability anomaly outlined over 1.3 km ending at the Anita showing (and still open to the west). The set-up was located 500 m east of the Anita, along line 32E on the west side of the Chip 1 claim (Table I). An easily accessible drill site was found beside an abandoned logging road which is still in good condition.

The hole (shown in Figure 6), was collared in Nanaimo conglomerate which unconformably overlies late gabbro intrusions and sediments of the "Sedimentary-Sill Unit". The latter unit is comprised of cherty black argillite and brown greywacke, which display good bedding attitudes in core. Several Ba-rich (where sampled) intervals were intersected, with Ba contents averaging from 4900 to 9400 ppm over significant widths. Black cherty argillite is very pyritic in the interval 163.0 to 184.0 m. Overall pyrite content is 4 to 6 percent as very fine disseminations, foliation parallel stringers and penetrative, cleavage fracture-fillings and rare, up to 1 cm wide rosettes. In the interval 178.0 to 184.0, an average of 12 percent pyrite was intersected with up to 30 percent very fine pyrite as black pyritic, 2 to 4 mm mudstone beds. This pyritic interval also coincides with the highest Ba content. The pyritic intersection in black cherty argillite explains the source of the IP anomaly, and its projected vertical extension corresponds well with the anomaly peak. An altered biotite-bearing gabbro was intersected at the bottom of the hole. This gabbro contains unusually high MgO, TiO_2, Cr, Zr and Nb levels compared to other gabbro phases.

Hole 17 did not intersect Myra volcanics, thus indicating the need for re-interpreting the deep IP data in this vicinity. Data was collected along lines with a 200 m spacing. Ba-rich, pyritic black sediments intersected in this hole demonstrate the westward extension of similar Ba-rich sediments recognized farther east during the 1985 mapping. These sediments may become a useful stratigraphic marker.

Drill Hole CHEM 86-18

Hole 18 was drilled to test the strongest signature (35 msec) at the west end of the same deep IP anomaly as was drilled by hole 17. The geology is poorly exposed, consequently this hole additionally explored the stratigraphy approximately 100 m east of the Anita showing. The set-up was made on line 28E (Table I), 400 m west of hole 17 and required about 300 m of trail construction for access.

Hole 18 (Figure 7) was the best mineralized. After a short gabbro section, the upper half of the hole intersected approximately 70 m of felsic volcanics which are signficantly altered and mineralized. Below the mineralized interval, this hole intersected dark green andesitic flows, lapilli and crystal tuffs with late gabbro intrusions. Distinguishing andesite from fine-grained phases of gabbro was difficult in several instances. The bottom of the hole intersected brown graywacke and cherty black argillite and siltstone of the "Sediment-Sill Unit".

The mineralized section has been divided into strong and fringe stringer zones as shown in Figure 7. Mineralization is hosted by quartz-sericite crystal tuff, and is comprised of pyrite, pyrrhotite, chalcopyrite and

minor sphalerite. Early mafic sills cut the felsic volcanics in short 1 to 2 m sections. Most of the sulphides (varying from 4 to 17 percent) are pyrite and chalcopyrite disseminations, 3 to 4 mm wide stringers and thicker seams (which locally achieve widths of 4 to 5 cm). In most cases, sulphides are parallel to foliation, but locally crosscutting relationships have been noted. An in-situ breccia development was also observed in this section with sulphides surrounding barren clasts; 2 to 3 mm alteration envelopes commonly are marginal to sulphide stringers. A general increase in chalcopyrite and pyrrhotite was observed toward the lower end of the mineralized interval. Ba and Zn are in their highest concentrations at the very base of the interval (1 m of 0.40 percent Zn, 5800 ppm Ba on the last sample). The best mineralized section lies in the interval 133.6 to 138.6 where 5 m assayed 1.59 percent Cu; this included 2 m of 2.89 percent Cu with one sample containing 460 ppb Au.

The calculated average ratio of Cu/(Cu + Zn) is 98, which indicates a near source or vent site of sulphide deposition. Weak to moderate hydrothermal alteration is indicated by Ishikawa Index calculations which vary from 51 to 76 across the strong stringer zone. The hole may have clipped the outer edge of a stringer pipe whose centre may lie at depth or toward the west beneath the Anita showing. Surface lithogeochemistry indicates moderate hydrothermal alteration at the Anita (Ishikawa Index of 69 to 86).

The stringer sulphides explain the cause of the strongest part of the deep IP anomaly, but the low shoulder flanking the main anomaly as shown in profile (Figure 7), immediately south is unexplained.

CHEM 86-18 at 99.4 m showing stringer pyrite parallel to and cross-cutting foliation at a small angle in quartz-sericite crystal tuff. Note subtle, thin alteration envelope on sulphide stringer margins.

CHEM 86-18 at 136.2 m. Seams of pyrite-pyrrhotite and 4 cm wide band comprised of sub-equal pyrite and chalcopyrite.

CHEM 86-18 at 138 m showing ragged pyrrhotite, pyrite and chalcopyrite stringers surrounding felsic clasts as in-situ breccia development.

CHEM 86-18 at 141.2 m showing ragged stringers of pyrrhotite, chalcopyrite and minor, very fine sphalerite. This mineralogy is typically more common near the bottom of sulphide-bearing interval.

Drill hole CHEM 86-19

Hole 19 was drilled to test a 30 msec deep IP anomaly which extends diagonally across the southwest corner of Holyoak 3 claims. This anomaly was interpreted to correlate with Abermin's Zone III lying 200 m north and parallel to their Coronation Zone. Rusty weathering, fine-grained felsic volcanics are exposed along a road cut in the corner of the claim and these rocks display a high alteration signature by the Ishikawa Index (92).

The hole was set up on line 48W (Table I) about 3 km southeast of hole 14, and was drilled at an azimuth of 210°. Access to the set-up is good; old logging roads run within 100 m of the site.

The upper 175 m of the hole intersected felsic crystal tuffs and flows with 69 to 73 percent SiO_2 content indicating rhyolite composition. Much of these felsic volcanics show weak to strong hydrothermal alteration with Ishikawa Index varying 59 to 97. The strongest hydrothermal alteration is indicated in the interval of 120 to 175 m where Ishikawa Index ratios of 85 to 97 are present. SiO_2 contents of 73 to 77 percent and TiO_2 contents of 0.15 to 0.18 percent are present indicating silicification and mobilization of TiO_2. These TiO_2 levels are about half the levels contained by felsic volcanics higher in the hole. The strongly altered zone correlates with the strong alteration signature observed from samples on surface.

The geology changes abruptly below 175 m to dark green andesitic crystal and lapilli tuffs with minor felsic intervals. The strongest suphides occur across a wide interval (166.7 to 208.8 m) which straddles the

felsic and andesitic volcanics. Pyrite is the predominant sulphide which occurs in bands commonly 0.5 to 5 cm wide. Black chlorite is a common accessory to the pyrite which displays a very coarse grain size. Two exceptionally wide massive pyrite intervals 0.6 and 1.1 m wide were intersected respectively at 167.7 and 183.0 m depths. Pyrite crystals up to 15 mm are present in these massive bands and minor chalcopyrite was also observed. Analysis indicated low precious metal levels. The Ba content varies from 3000 to 5000 ppm across 2 m sections. An average calculated Cu/(Cu + Zn) ratio is 83 which indicates near source conditions for sulphide deposition.

The presence of sulphide is sufficient across a 42.1 m interval to explain the deep IP anomaly. The geology of the sulphide-bearing interval is markedly different from the geology which hosts mineralization in holes 14 and 16.

Two short intervals of felsic tuffs (222.4 to 243.7 m and 276.5 to 281.6) contain 3 to 5 percent total sulphides locally with sub-equal proportions of pyrite and chalcopyrite.

With greater depth, the andesitic tuffs become conspicuously epidote-altered in large mottled patches. At a depth of about 350 m the drill hole crossed the claim boundary into Abermin's ground. The hole ended in rhyolitic flows. Poor core recovery and gravelly conditions due to fault zones at that depth discouraged further drilling. The rhyolite is possibly the host lithology to the Coronation Zone.

APPENDIX 1 DRILL LOGS AND ANALYTICAL RESULTS

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-14	1 of 13

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 49+00E at 0+60S

AZIM:	210°	ELEV:	677 m
DIP:	55°	LENGTH:	381.6 m
		CORE SIZE:	NQ
STARTED:	October 15, 1986		
COMPLETED:	October 21, 1986		

PURPOSE: Test deep IP anomaly and get a section of stratigraphy across Myra.

CORE RECOVERY: 99.3%

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
26.5	215°	55½°	358.7	212½°	41½°
78.3	210½°	50°	380.1	092½°	41°
133.2	218°	46½°			
227.7	209½°	44°			
292.9	210½°	42°			

CLAIM No: CHIP 1

SECTION: 49 East

LOGGED BY: S. Enns

DATE LOGGED: October 17-29, 1986

DRILLING CO: Burwash Enterprises Ltd., Cobble Hill

ASSAYED BY: Bondar Clegg, North Vancouver, B.C.

INTERVAL	DESCRIPTION
0 - 4.9	CASING
4.9 - 85.2	MIXED GREENISH GREY CRYSTAL TUFF Bedded 40-50° to core axis with parallel foliation. Ash tuff interval 46.5 to 62.0. First thermal biotite at 57.0. Early altered dyke (?) 41.6 - 46.5. Mixed crystal and lapilli clasts gradational and variable with indication of some coarsening downhole toward 75.0.
85.2 - 92.0	GABBRO PORPHYRY Bleached crystal-lapilli tuff 90.0 - 90.6.
92.0 - 150.5	MIXED GREENISH GREY CRYSTAL LAPILLI TUFF As above, variable. Edpidotized feldspars common. Coarser lapilli clasts near base of interval. Foliation sub-parallels rare bedding of finer tuffs 40-50° to core axis. Brown weathered near contact with gabbro. Tuff bleached adjacent to gabbro.
150.5 - 275.5	GABBRO Some textural variations. Local white quartz veins. Some bleached tuff inclusions 234.2 - 240.2.
275.5 - 327.8	SHEARED PYRITIC CRYSTAL AND QUARTZ CRYSTAL TUFF Strongly foliated 35-40° to core axis, sericitic. Small pyrite clasts at 280.7, 282.7. Altered early mafic sill ? 284.4 - 293.7. Mylonitic texture near upper contact. Pyrite very common throughout (disseminated) and foliation parallel beds. Pyrite increases with depth from 5-6% to about 15%. Pyrite bands (bedded) 40° to core axis 4-10 mm wide rhythmically banded from 323.0 onward and comprise 40-50% of last 0.5 m. Local, minor chalcopyrite accompanies pyrite. Minor mariposite present. Faulted base at interval. Whole interval strongly sheared.
327.8 - 366.9	GABBRO
366.9 - 381.6	CHERTY SILTSTONE Thin bedded grey cherty beds 30-40° to core axis. Thermal biotite alteration. Local pyrite seams subparallel to, and cross-cut the bedding.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 2 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
						0 - 4.9 CASING			
Box 1	4.1	4.9		5		4.9 - 28.0 MEDIUM GREEN CRYSTAL TUFF . Moderate to strongly foliated. Especially in zones of stronger shearing. . Variable intensity of green (chlorite-sericite proportions). . Bedding 40-54° to core axis of fine grained 1-2 mm crystal-ash material at 13.5 - 13.8 and at 14.3 - 14.9. These beds contain 5% (Est.) magnetite and are strongly magnetic. . Foliation appears to parallel bedding (more or less) sheared zone 11.4 - 13.5 greenish grey sericitic. 30° to core axis. Strong lineation of sericite masses developed on foliation surfaces. . Dark chlorite-rich section 8.7 to 10.8 with epidote-calcite 2-3 mm crystals (?). . Gradually more siliceous in composition after 18.0. . Blocky core 4.0 - 33.0; from 9 - 21.4 RQD averages 12. . White, calcite-quartz veinlets and parallel foliation throughout. . No significant sulphides present. . Gradual transition indicated to significantly more sericitic tuff at about 26.0.			
Box 2	11.1	11.3		10	9				
Box 3	17.0	17.4		15	14		21101	14.5	
Box 4	22.2	22.6		20	12				
		26.5		25					
Box 5	27.6	29.6		30		28.0 - 41.6 LIGHT GREENISH GREY CRYSTAL TUFF . Very sericitic, becoming quartz bearing at 34.5; 2-7 mm quartz eyes 4 to 10% from 34.5 - 39.5. . Contorted strong foliation 33.0 - 34.0, small fault 29.3 - 29.6. . Thin bedded aphyric dirty white 2-3 cm beds of sericitic quartz and feldspar. 57° to core axis at 31.7 bedding. . Foliation 50° to core axis at 35.0.	21102	27.6	
		32.6							
	34.2			35					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 3 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 6		35.7		35		28.0 - 41.6 LIGHT GREENISH GREY CRYSTAL TUFF - continued . No sulphides present. . Dark 5-7 mm chloritic streak form lineation of foliation planes . Quartz knots conspicuous on planes.			
		38.4							
	39.7			40					
Box 7		41.8				41.6 - 46.5 DARK MOTTLED GREEN UNIT . Sheared upper contact. Foliation 45-60° to core axis but convoluted. . Unit is dark green characterized by 25% 3-5 mm epidote aggregates (after feldspar ?) and light grey calcite with about 15% chlorite. Fuzzy 6-7 mm feldspars (clasts ?) present over 0.2 m interval.			
		44.8		45		. Cross-cut by numerous calcite 2-3 mm veinlets especially nearer contact zones which become progressively more strongly foliated and sheared. (Especially lower contact.)	21103	45.2	
	46.0								
Box 8		47.5				. Central 3 m of unit is massive. . Lower contact 50° to core axis. . Is unit massive tuff (?) or early altered mafic dyke?			
		50.9		50		. Blocky core 40.0 - 42.0.	21104	50.3	
	52.5					46.5 - 62.0 LIGHT GREENISH GREY CRYSTAL ASH TUFF			
		53.9			12	. Pale brownish-red 0.5 cm beds 47.5 - 47.8 @ 45° to core axis.			
Box 9					9	. Very badly broken core 46.3 - 48.0 in contact zone.			
				55	9	. This unit is banded conspicuously with 3-4 mm chlorite rich green ashy beds 45° to core axis at 50.0.			
		56.3			9				
					10	. Several .5 m - .8 m strongly foliated chloritic-rich chlorite feldspar schist, with 1-2 mm flattened chlorite pin-stripes.			
	57.9				9	. No significant sulphides.			
Box 10					6	. Quartz eyes 6% 1-3 mm start at 53.0 and get to coarser size below 54.0 6-8 mm.			
		59.4			6		21105	59.8	
				60	6				
					8	. Brown biotite (thermal) 35-40% starts at 57.0.			
					5	. Moderate foliation 45° to core axis at 57.0.			
	63.0	62.4			8	. Compositional banding 50° to core axis at 60.2.			
					6	. Clay gouge at 61.4 40° to core axis 5-7 cm shear.			
Box 11					8	62.0 - 85.2 LIGHT GREENISH GREY LAPILLI CRYSTAL TUFF			
		66.1		65	8	. Coarser unit, quartz variable and gradational in abundance 2-6 mm 7-12%.			
					8	. 1 cm biotite bed (?) 40° to core axis at 63.6; nearby is white .1 m quartz vein of minor chlorite crystals.			
					7				
	68.7				5		21106	69.0	

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 4 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 12				70	5	62.0 - 85.2 LIGHT GREENISH GREY LAPILLI CRYSTAL TUFF - continued			
					5	. 3-6 mm epidote segregations in .3 m wide zones 25-30%; brown thermal biotite present as foliation parallel concentrations.			
					6	. .1 m felsic clast (?) at 68.0 surrounded by a more chlorite rich zone.			
					6	. Generally gets coarser toward 75.0 with conspicuous feldspar crystals 15-20% 3-6 mm and zones of 15-20% 5-10 mm epidote clasts (crystals ?) after feldspar. Generally matrix supported with local bands clast supported.			
Box 13	74.6	75.3		75	5	. Foliation moderate 50° to core axis at 74.0, 50° to core axis at 80.0.			
					8	. Bedding of white ash layer 45° to core axis at 74.6.			
					6	. Becoming bleached at 81.0 toward contact.			
		78.5			10	. 0.2 to 0.6 m beds of fine tuff (1-2 mm crystal) strongly foliated and "papery schist" shows thermal biotite streaking along fractures and parallel to foliation. These are very gradational beds.			
					8	. Intense bleaching and weak chloritization at contact.	21107	78.2	
Box 14	80.0			80	5				
		81.4			7				
					7				
					5				
					5				
	85.3			85	5	85.2 - 90.0 GABBRO PORPHYRY			
Box 15					6	. Upper contact 50°, chill margins; lower contact strongly crushed and sheared - lost .5 m core.			
					5	. 2 mineralized 5 mm quartz veinlets 15° to core axis at 88.0 chalcopyrite, pyrrhotite.	21108	86.9	
			83%		3	. 3-5% 2-4 mm plagioclase crystals and glomerophyres.			
				90	6				
						90.0 - 90.6 BLEACHED CRYSTAL LAPILLI TUFF			
Box 16			90%		4	. Lost .3 m core 90.6.			
					4				
		93.6			4	90.6 - 92.0 GABBRO PORPHYRY			
			90%	95	5	. As 85.2 - 89.5	21109	95.0	
					5				
	96.9	96.6			6	92.0 - 103.0 SILICIFIED FINE TUFF			
Box 17					7	. Bleached, with streaky chloritic appearance and brown thermal biotite.			
					7	. Lost .3 m core at 94.0.			
		99.7			7	. Foliation parallels rare bedding 40° to core axis at 96.0.			
				100	8	. Tectonic breccia 3 cm at 98.5, 50° to core axis.			
					8	. Distinctly brown (thermal biotite) section 99.4 - 102.0 with sparse 3-4% feldspar crystals 2-4 mm, minor pyrite on fractures.	21110	101.0	
	102.5				7				
		102.7			7				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 5 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 18					6	103.8 - 108.5 MASSIVE CRYSTAL LAPILLI TUFF			
				105	6	. 20-25% 2-5 mm feldspar crystals, "clast" supported, brownish grey, foliation and vague bedding 45-50° to core axis at 104.0, 5-7% 8-9 mm lithics (?).			
					4				
	107.1				8				
Box 19					6	108.5 - 109.6 MASSIVE EARLY SILL (?)			
		108.8			7	. Massive, pistacio green rock, chlorite flecks 2-4 mm, 8-10% epidote granular and abundant altered mafic sill (?).			
				110	5				
					3				
Box 20		111.9			5	109.6 - 133.0 MOTTLED CRYSTAL LAPILLI TUFF			
					6	. Mottling of greenish grey and brown patches 5 to 10 cm due to sericite and thermal biotite (respective) relative concentrations.			
					8	. Variable quartz and feldspar crystals 3-6 mm 12-20% together. Feldspars commonly epidotized, locally clast supported.			
				115	7	. Locally minor chlorite increase yields medium greenish colour.			
					9	. Local poorly outlined coarse tuff clasts (?) or disrupted tuff beds (?) at 116.2 these are defined by colour and crystal concentration differences. Up to 2 cm in size.			
	117.0				4	. Foliation 40° to core axis at 116.4; 45° to core axis at 122.3.	21111	119.1	
Box 21		117.9			6	. Quite massive no well defined bedding.			
					6	. Coarse grained 6-7 mm pyritic band parallels foliation at 116.4.			
				120	5	. Local siliceous lithic clasts 5 mm by 2 cm.			
		121.0			3	. Milky white feldspars 2-5 mm 7%, epidote aggregates altered feldspars (?) or clasts (?) 7-8% 3-6 mm quartz eyes 2-5 mm glassy, usually less than 5% on average.			
					2	. 15% 3-10 mm epidote crystal replacements locally.			
	122.5				5				
Box 22		124.0			4				
				125	4				
					4				
		127.1			4				
	128.1				6				
							21112	129.1	
Box 23		130.1		130	9				
					5				
					3				
		133.2			3	133.0 - 139.0 LIGHT GREY MOTTLED LAPILLI CRYSTAL TUFF			
	133.6				6	. Mottle pattern due to .5-1.5 cm by up to 3 cm long dirty white felsic lithic clasts which produce planar fabric - matrix supported.			
				135	7	. Foliation and clast orientation bedding (?) 45° to core axis at 134.0.			
Box 24		136.2			7				
					6				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 6 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
					7	133.0 - 139.0 LIGHT GREY MOTTLED LAPILLI CRYSTAL TUFF - continued			
		159.3			8	. Interval 138.0 - 139.3 relatively devoid lithic clasts and contains up to 10% glassy subangular quartz grains 1-3 mm and subrounded 3-5 mm epidote minor white quartz vein material with chalcopyrite hairline fracture fillings.	21113	139.1	
				140	9				
					9				
					7				
					4				
					6	139.0 - 146.0 BROWN WEATHERED MIXED LAPILLI CRYSTAL TUFF			
		154		145	4	. Lapilli as 133.0 - 139.0 with 141.0 - 142.0 devoid lapillis with high sericite.	21114	144.2	
					6	. Limonite oxidation produces brown colour.			
					12	. Larger felsic lithic clasts near base of interval - note quartz eyes in felsic lapillis; also looks more sericitic.	21115	147.0	
					9	. Bedding @ 55° to core axis at 144.0 parallels strong foliation.	21116	148.8	
					7				
				150	11	146.0 - 150.5 BLEACHED LIGHT GREY CRYSTAL LAPILLI TUFF	21117	150.1	
					10	. Lapilli clasts hard to recognize after 148.0 due to increased intensity of bleaching and weak mylonitization.			
					12	. Bedding parallel foliation at 146.3 @ 55° to core axis.			
					11	. Pyritic hairline fracture coatings 149.0 to 150.5.			
	154.2	154.2	83%		-				
				155	8	150.5 - 163.5 GABBRO PORPHTRY			
					9	. Grunged contact zone - limonitic 150.5 - 151.6.			
			93%		7	. Healed calcite-quartz breccia .15 m wide at 152.0, .1 m wide at 151.6.			
		157.6			9	. Pyritic fracture coatings here and there 151.4 - 154.0.			
					5	. Badly broken core at contact, 153.0 - 154.0. Lost .5 m core at 153.5. Lost .2 m core at 157.0, lost core .2 m at 160.4.			
	159.7		93%	160	7	. Gabbro is not magnetic.	21118	159.7	
		160.6			10				
					11	163.5 - 178.3 GABBRO MIXED ZONE			
					14	. Contains thermal biotite bearing and bleached inclusions of crystal tuff 2 cm to 1 m wide. They are strongly foliated and often highly fractured.			
					11				
				165	10	. Gabbro is medium grain sub-equigranular with epidotized feldspars.			
					15	. Some of inclusions poorly display crystals.			
					10	. Lost core .3 m at 178.3.			
					9	. Fractured gouged zone on border of one inclusion.			
					6	. Sample of large inclusion (at 176.0) which extends 176.1 - 178.0 (see lithogeochem sample AB 21119).			
				170	6				
					7				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 7 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
box 31 box 32 box 33 box 34 box 35 box 36	175.8 / 180.9 / 186.2 / 191.7 / 197.6 / 203.0	172.8 / 175.8 / 178.3 / 181.3 / 184.4 / 187.7 / 190.8 / 193.8 / 196.9 / 199.9 / 202.0	88%	175 / 180 / 185 / 190 / 195 / 200 / 205		178.3 - 234.2 SHEARED DARK GREY-GREEN GABBRO . Fine to medium grained, foliated with varying intensity. . Displays plagioclase leucocratic segregatious locally and commonly. . Epidote altered plagioclase 15% 2-4 mm 178.3 - 184.0 equigranular, then rock becomes gradationally variable in texture, grain size and foliation. . Numerous local chloritic slips and 1-2 cm shears. . Local irregular white barren quartz-calcite veins up to 2 cm. . With fine grained massive and foliated brownish biotite bearing zones as at 193.5 - 196.0, 197.5 - 200.0, 205.0 - 208.0. . Foliation at 195.0, 45° to core axis; 198.0, 50° to core axis; 202.0, 50° to core axis. . Light coloured siliceous looking section 201.6 - 202.3 an altered bleached tuff inclusion (?) 1-2 cm coarse tuff clasts present. . Equigranular fine grained gabbro is massive and variably brown biotite bearing 206.0 - 212.0, .2 m very biotite rich section at 213.2 with 35° to core axis sharp contact. It hosts 1-2 mm < 5% quartz and is therefore an thermally altered inclusion of tuff. . Badly broken core 216.4 - 218.0; faulted zone with gouge and slips at 217 and 216.5. Slips with gouge 15° to core axis and 35° to core axis respectively. Lost .3 m of core at 216.5. . Mineralized zone 220.7 - 221.1 (.5 m wide) in strongly foliated dark grey altered tuffaceous rock. About 7% total sulphides pyrrhotite and chalcopyrite. Pyrrhotite is magnetic. Quartz-chlorite masses associated with strongest mineralization - another 1 cm zone at 221.6. . Barren white quartz vein at 224.6. . Calcite-quartz healed fractures 228.7 - 229.5. . 3 cm pyrite-chalcopyrite-pyrrhotite fractures in 5% total sulphides. . Barren quartz 0.1 m wide with chlorite at 233.8.	21119 21120 21121	176.0 192.5 202.2	

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 8 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 37		206.0		205	4		21122	206.3	
					2				
					5				
Box 38	208.6	209.0			4				
				210	6				
					3				
Box 39		212.1			5				
					7				
	2139				4				
Box 40		216.1		215	3				
					8				
		217.6	88%		-				
					-				
		218.5			10				
				220	4				
		221.6			6		21134	220.7	221.7
					7				
					5				
Box 41	225.0	224.6			7				
				225	3				
					7				
		227.7			6				
					5				
					8				
Box 42	2309	230.7		230	7				
					6				
					6				
					8				
		2338			7	234.2 - 240.2 BLEACHED GREY CRYSTAL TUFF INCLUSION			
				235		. 6% 4-7 mm grey quartz crystals in sericite strongly foliated tuff.			
	2365				12	. Locally sheared.			
		236.8			3	. Foliated @ 50° to core axis at 234.5.	21135	236.8	237.5
43					10	. Pyrrhotite and pyrite 7-8% sulphides 236.8 - 237.5 as fracture fillings and disseminations.			
					-				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 9 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 44	241.7	242.9		240	7 11 6 8 4	234.2 - 240.2 BLEACHED GREY CRYSTAL TUFF INCLUSION - continued . .2 m section is very biotite rich. 235.4. . Base of interval .2 m is conspicuously biotite rich with barren white quartz. 240.2 - 275.5 VARIABLE MEDIUM GABBRO . Textural variation fine to medium grained equigranular to plagiophyric fine grained phases. . White 1 to 4 cm barren quartz veins with dark green chlorite and medium brown biotite masses. . Brecciated (rehealed quartz-calcite) zone of crushed gabbro 256.8 to 257.4. This zone contains 0.5 cm chalcopyrite mineralized veinlet with sulphides - minor chalcopyrite-pyrite. Local sheared zones with brown biotite association as narrow 1 to 5 cm intervals. . Occasional 0.1 - 0.2 m tuff inclusions as at 266.0 - 267.0. . Gabbro becomes progressively more fractured with hairline sericite-calcite cross-cutting veinlets below 270.0. . Fault zone with tectonic breccia starts at 275.3, fault gouge at 275.5 0.1 m wide grey gumbo @ 50° to core axis.	21123	248.5	
Box 45	246.0	249.0		245	4 3 3 4 5				
Box 46	253.6	252.0		250	6 11 4 3 4				
Box 47	259.0	261.2		255	3 6 15 9 7				
Box 48	264.6	264.3		260	6 6 6 2 6				
49	270.1	267.3		265	15 4 5 11 9				
		270.4		270	7 5 5 3				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 10 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		273.4			3				
Box 50				275	7				
	275.7				6	275.5 - 284.4 SHEARED CRYSTAL TUFF (FAULTED?)			
		276.5			8	. Occasional 5-8 mm glassy quartz eyes preserved here and there.	21136	276.2	
						. Most of interval is sheared with local pale green sericite-rich	21137	277.2	
		278.3			13	sections which are strongly foliated. 40° to core axis at 277.0.	21138	278.7	
Box 51					12	. Fault breccias at 278.9; at 283.8 - 284.4 with 35° to core axis contact.			
				280	9	. Grey siliceous sections mylonitized but massive (unfoliated) occur at			
	281.3				9	276.5 - 276.7; 278.0 - 280.9; 282.1 - 283.5.			
		281.9			15	. Pyrite as stringers and local sparse disseminations are associated with			
					12	grey siliceous sections. Locally sulphides comprise 4 to 5% over short			
					10	0.1 m intervals.	21139	283.0	
Box 52		285.0		285	7	. Massive pyrite clasts (small) at 280.7 - 0.5 cm; at 282.7 - 2 by 3 cm.			
					5		21140	285.3	
	286.9				4	284.4 - 293.7 ALTERED MAFIC SILL (EARLY?)			
		288.0			5	. *Dark unit with cataclastic texture and white cross-cutting quartz-*			
					5	*calcite veinlets.*			
				290	6	. 5-8% fine grained mafics 1 to 2 mm. - strongly altered to buff brown			
		291.0			6	product. These get very fine grained near upper and lower margins.			
	292.4				4	. About 1% pyrite here and there, *local blebs of coarse grained.*			
		292.9			6	. About 10% 3-5 mm translucent dark grey green mineral.			
Box 53					5	. Locally this unit has equigranular texture with visible2-4 mm feldspars			
		294.7			6	25-30% at 291 - 292.			
				295	9	. *White crackle quartz section at 291.9 - 292.5.*	21141	294.0	295.0
					11		21142	295.0	296.0
					12	293.7 - 327.8 PYRITIC SHEARED QUARTZ CRYSTAL TUFF	21143	296.0	297.0
Box 54	297.9	297.8			12	. Good core recovery throughout - many soft sericitic rich sections dis-	21144	297.0	298.0
					10	play strong foliation - numerous sericite-clay gouge slips.	21145	298.0	299.0
					8	. Pyrite variable as fine disseminations, 1-3 mm seams and foliation	21146	299.0	300.0
				300	8	parallel beds (?) 5-6 mm wide. IP anomaly.*			
		300.8			7	. Section 293.7 - 299.0 strongly deformed with crushed clayey zones,	21147	300.0	301.0
					7	disrupted 5-6 mm pyrite rich bands, sericite rich bands, siliceous	21148	301.0	302.0
					7	pyritic clasts 1-2 cm and core axis parallel foliation here and there.	21149	302.0	303.0
					7	Ghost quartz eyes common. Overall pyrite estimate 5-6%.	21150	303.0	304.0
	303.5				7	. Section 299.0 - 313.5 displays a more regular foliation (numerous	21151	304.0	305.0
		303.9			7	kinks). This section is more massive especially so below 302.5.			
Box 55				305	6	Average pyrite dissemination 3-4% with numerous 2-10 mm pyrite-rich	21152	305.0	306.0
					6	seams locally containing minor chalcopyrite (304.2, 304.7). Seams	21153	306.0	307.0
		306.9			6		21154	307.0	308.0

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 11 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 56 Box 57 Box 58 Box 59 Box 60 Box 61	309.2	310.0		310	9	293.7 - 327.8 PYRITIC SHEARED QUARTZ CRYSTAL TUFF - continued	21155	308.0	309.0
					8	. Section 299.0 - 313.5 - continued	21156	309.0	310.0
					13	structurally discontinuous (for example 304.2) having been sheared out.	21157	310.0	311.0
					8	Foliation 40-45° to core axis 6-7% (locally 10%) 2-4 mm quartz eyes.	21158	311.0	312.0
					13	Estimate pyrite overall 4-5% except 304.0 - 305.0 estimate total sul-	21159	312.0	313.0
		315.0			12	phides 8-10% also trace sphalerite stringers (?) 304.3. Small fault	21160	313.0	314.0
					9	317.0 - 317.3 gouge 45° to core axis.	21161	314.0	315.0
	314.0				4	. Section 313.5 - 316.3 is more strongly foliated and has pale greenish			
				315	5	colour. Quartz eyes are present but not conspicuous. Dark slips off-	21162	315.0	316.0
		316.0			6	set (10-15° to core axis) foliation and pyritic seams. Occasional	21163	316.0	317.0
					10	white quartz vein. Minor green mariposite on slips 314.2. Small fault	21164	317.0	318.0
					10	315.1 60-70° to core axis, 317.6 35° to core axis. Total pyrite 5-6%.	21165	318.0	319.0
		319.1			12	. Section 316.3 - 327.8 same quartz crystal tuff as 299.0 - 313.5.	21166	319.0	320.0
				320	10	Conspicuous quartz eyes 3-5 mm 8-9% with variably sericite rich			
	320.5				5	sections. Minor mariposite throughout 316.0 - 327.8. Numerous 1-10 mm	21167	320.0	321.0
					7	pyritic foliation parallel biotitic seams some showing minor disrup-	21168	321.0	322.0
		322.1			10	tions. Total pyrite 5-7% at 316.3 - 323.0 with minor chalcopyrite,	21169	322.0	323.0
					8	mariposite occurrences. Siliceous 1-10 cm pyrite rich (20% pyrite)	21170	323.0	324.0
				325	7	sections present and contain chalcopyrite. They are foliation parallel.	21171	324.0	325.0
		325.2			7	Mylonitic zone 321.2 - 323.3 @ 10° to core axis. Small fault 324.3 @			
	326.5				9	30° to core axis.	21172	325.0	326.0
					9	.*Marked increase in rhythmically banded pyrite seams 14-15% parallel	21173	326.0	327.0
		328.2			10	foliation at 323.0 - 327.8 along with chalcopyrite occurrence, sili-	21174	327.0	328.0
				330	6	ceous pyrite rich bands - very strong sulphides at 327.3 - 327.8,			
		331.3			9	40-50% pyrite beds @ 40° to core axis cut by sharp fault at lower	21124	328.6	
					6	contact. 7 cm white quartz vein @ 45° to core axis at 327.1 pyritic			
					4	with minor sphalerite.			
		334.3			7	. Faulted contact: 327.8 - 328.4 sheared gabbro.			
				335	8	. Strongly sheared zone with quartz calcite veining, chlorite slips.			
	337.0	336.2			9	. Tectonic brecciated upper contact.			
					7				
					6	327.8 - 345.4 DARK GREEN-GREY GABBRO			
		339.2			8	. 18-19% 2-5 mm plagioclase phenos and aggregates relatively abrupt,			
				340	5	sheared lower contact. 330.4 - 345.4 dark green essentially aphyric			
						rock with 10-40 cm light olive green epidote-rich zones, 45° to core			
						axis - beds (?), 5-6% 2-4 mm spots (contact metamorphic ?) of feldspar			
						and chlorite. Numerous chlorite slips, white calcite-quartz gash			
						fillings. Pale orange granular garnet (?) at 338.9.	21133	340.0	

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 12 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 62 Box 63 Box 64 Box 65 Box 66 Box 67	342.4	342.3			7	327.2 - 345.4 DARK GREEN-GREY GABBRO - continued . Several grey 2-5 cm chert beds 334.5 - 335.5 and 336.4 (?). 60° to core axis. . Is this a large contact metamorphic block of sediment sill (?) (cherts and epidote beds) mixed with mafic flows (?). . Blocky core throughout. . Dark green lithology is heavy. . Lower contact abrupt with narrow fault-clay gouge @ 70° to core axis.		
					7				
					8				
		345.3		345	7				
					7				
					6				
	347.7				10				
		348.7			9				
				350	14				
					12				
		351.7			12	345.4 - 366.9 GREY GABBRO . Grey plagiophyric as 327.8 - 330.4. . Faulted zone 348.7 - gouge and tectonic breccia @ 70° to core axis. . Grey green sparse plagiophyric 1% 2-7 mm plagioclase unit at 348.7 - 353.1 blocky core.		
	352.9	352.7			10				
					8				
				355	7				
		356.7			8				
					9				
	358.0				8				
		358.7			6				
				360	5				
					7				
		361.8			6				
					7				
	363.5				5				
		364.8		365	6				
					6	366.9 - 381.6 CHERTY SILTSTONE . Thinly bedded 1-5 mm - 30° to core axis at 368.4; 35° to core axis at 376.2; 40° to core axis at 373.7; 65° to core axis at 377.4. Minor fold at 377.0. . Strongly contact metamorphosed - spotted hornfels from gabbro contact to 369.0, brown biotite and greenish actinolite (?), diopside (?), outward from contact to end of hole. . Local pyrite seams are bedding parallel 374.6, 378.0, 381.0. . 3-4% disseminated fine pyrite in more massive siltstone bed 381.0. . Fault zone 377.8 - 378.0 tectonic breccia and gouge.		
					8				
		367.9			11				
	368.9				12				
				370	8				
		370.9			10				
					4				
					8				
		374.0			7				
	374.4			375	10				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-14 | PAGE No. 13 of 13

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 68 Box 69	3793	377.0		375	12 10 10 7				
		380.1		380	12 10				
	380	381.6			-	381.6 END OF HOLE			
				385					
				390					
				395					
				400					
				405					

REPORT: 126-6330 (Hole 15 only)

REFERENCE INFO:

CLIENT: FALCONBRIDGE LIMITED
PROJECT: CHEMAINUS #116

SUBMITTED BY: S. ENNS
DATE PRINTED: 27-NOV-86

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
2	Pb	Lead	98	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
3	Zn	Zinc	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
4	Mo	Molybdenum	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
5	Ag	Silver	98	0.5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
6	Fe	Iron	98	0.05 PCT	HNO3-HCL HOT EXTR	D.C. Plasma
7	Mn	Manganese	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
8	Cd	Cadmium	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
9	Co	Cobalt	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
10	Ni	Nickel	98	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
11	As	Arsenic	98	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
12	Au	Gold - Fire Assay	98	5 PPB	FIRE-ASSAY	Fire Assay AA
13	Ba	Barium	98	20 PPM		X-RAY Fluorescence

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	98	2 -150	98	CRUSH,PULVERIZE -150	98

NOTES: = indicates SEE OBS REMARKS

REMARKS: = Ba - INTERFERENCE NOTED DUE TO Fe.

ASSAY OF HIGH Cu TO FOLLOW ON 626-6330.

REPORT COPIES TO: DR. RICHARD MOORE
MR. STEVE G. ENNS

INVOICE TO: DR. RICHARD MOORE

REPORT: 126-6330 PROJECT: CHEMAINUS :116 PAGE 1

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21134	14	220.7-221.7	2.77%	7	688	36	11.3	7.93	446	9	49	15	10	90	1100
AB 21135	14	236.3-237.5	455	16	63	5	<0.5	5.68	785	3	35	17	9	<5	950
AB 21141	14	294.0-295.0	201	<5	90	2	0.6	2.85	246	2	7	3	<5	20	1100
AB 21142	14	295.0-296.0	48	<5	64	1	1.0	2.68	272	1	8	5	6	5	960
AB 21143	14	296.0-297.0	38	6	40	7	0.9	2.95	163	2	9	6	14	10	1200
AB 21144	14	297.0-298.0	24	<5	32	4	0.6	2.54	117	1	9	4	8	15	1300
AB 21145	14	298.0-299.0	31	8	49	3	<0.5	2.76	148	2	9	7	<5	<5	1100
AB 21146	14	299.0-300.0	50	<5	48	4	0.6	2.76	171	2	8	6	<5	10	1100
AB 21147	14	300.0-301.0	47	<5	58	1	0.8	2.77	176	2	8	4	<5	5	1000
AB 21148	14	301.0-302.0	24	<5	77	5	<0.5	2.76	186	2	9	5	<5	10	970
AB 21149	14	302.0-303.0	25	10	81	<1	0.6	2.60	165	2	6	5	8	10	1000
AB 21150	14	303.0-304.0	23	5	81	3	1.1	2.31	127	2	8	3	<5	20	1100
AB 21151	14	304.0-305.0	150	21	96	4	1.7	2.46	91	5	7	<1	<5	25	1100
AB 21152	14	305.0-306.0	14	19	85	<1	1.4	2.08	118	3	6	2	<5	10	1100
AB 21153	14	306.0-307.0	13	34	106	2	1.0	2.54	162	3	8	3	18	15	1100
AB 21154	14	307.0-308.0	10	6	56	2	<0.5	1.90	51	2	4	<1	8	20	1100
AB 21155	14	308.0-309.0	9	<5	37	3	0.7	2.42	56	2	8	3	<5	30	1100
AB 21156	14	309.0-310.0	8	11	38	3	<0.5	2.39	61	2	5	3	<5	30	1100
AB 21157	14	310.0-311.0	3	8	24	2	0.7	2.02	72	2	5	<1	<5	30	1100
AB 21158	14	311.0-312.0	5	9	28	2	0.9	1.81	112	2	3	1	11	35	1400
AB 21159	14	312.0-313.0	9	6	26	3	<0.5	2.58	71	2	6	<1	9	55	1600
AB 21160	14	313.0-314.0	22	20	91	3	1.2	3.08	232	2	8	4	12	80	1900
AB 21161	14	314.0-315.0	45	57	1240	4	1.2	3.61	514	8	10	3	11	60	2200
AB 21162	14	315.0-316.0	18	21	585	4	1.0	3.21	794	4	8	3	<5	30	2000
AB 21163	14	316.0-317.0	35	24	476	5	0.9	1.85	306	2	6	4	<5	30	2300
AB 21164	14	317.0-318.0	393	51	2779	10	1.6	2.08	118	11	7	5	13	65	3000
AB 21165	14	318.0-319.0	212	119	2748	8	2.2	2.98	170	13	6	4	20	95	2500
AB 21166	14	319.0-320.0	399	258	2160	10	3.0	2.37	51	10	4	3	<5	85	1500
AB 21167	14	320.0-321.0	162	58	1340	6	1.0	1.59	51	6	4	3	<5	55	1200
AB 21168	14	321.0-322.0	381	223	1208	15	1.8	3.43	48	7	6	3	5	100	1300
AB 21169	14	322.0-323.0	74	111	559	8	1.3	1.82	54	3	5	3	9	55	1300
AB 21170	14	323.0-324.0	786	244	1029	8	1.6	1.69	105	5	3	4	9	40	1200
AB 21171	14	324.0-325.0	122	99	566	6	0.8	2.40	199	3	5	4	<5	35	1300
AB 21172	14	325.0-326.0	887	192	1187	11	3.0	4.91	86	8	6	4	13	80	1200
AB 21173	14	326.0-327.0	23	36	70	9	1.1	2.21	13	<1	6	5	6	50	1400
AB 21174	14	327.0-328.0	114	193	437	11	3.5	5.18	14	4	6	6	13	120	2800

CHEM 86-14

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TI02	P205	LOI	SUM	Ishikawa Index
AB21101	68.9	13.6	2.42	1.43	5.68	0.73	3.34	0.06	0.36	0.09	2.54	99.3	21
AB21102	72.2	13.7	2.03	1.47	2.67	2.23	2.01	0.02	0.25	0.07	2.93	99.8	44
AB21103	49.7	15.9	8.33	2.85	3.43	1.31	8.88	0.15	0.55	0.16	7.70	99.1	26
AB21104	75.9	10.5	2.66	1.00	1.57	2.30	1.85	0.03	0.26	0.06	3.39	99.7	44
AB21105	74.1	12.5	2.32	0.58	4.17	1.78	1.42	0.02	0.26	0.06	1.70	99.1	27
AB21106	69.1	14.5	2.47	1.40	4.82	1.75	2.98	0.06	0.34	0.08	1.70	99.4	30
AB21107	68.1	14.5	2.29	2.16	5.35	0.89	3.39	0.05	0.36	0.08	2.23	99.5	28
AB21108	48.2	14.1	10.6	5.98	1.96	0.25	13.1	0.19	1.84	0.18	2.85	99.3	33
AB21109	75.1	12.7	1.10	0.87	4.47	1.92	1.44	0.04	0.30	0.06	1.16	99.3	33
AB21110	72.8	13.8	1.09	0.61	5.58	1.94	2.12	0.04	0.20	0.05	0.93	99.3	31
AB21111	70.9	13.8	1.78	1.25	4.64	2.17	2.60	0.06	0.31	0.06	1.31	99.1	35
AB21112	72.5	13.9	1.18	1.20	5.82	1.29	2.25	0.08	0.33	0.07	1.31	100.1	26
AB21113	60.4	15.9	4.48	1.84	3.81	1.83	7.23	0.14	0.74	0.17	2.39	99.1	31
AB21114	69.0	14.8	2.43	1.26	5.08	1.89	2.97	0.08	0.33	0.07	1.54	99.7	30
AB21115	71.9	13.8	0.89	1.78	5.16	1.39	2.20	0.06	0.32	0.07	1.62	99.3	34
AB21116	71.3	14.1	0.79	0.84	5.68	2.88	2.51	0.05	0.33	0.07	1.00	99.8	36
AB21117	71.9	14.0	0.90	0.96	5.85	1.89	2.24	0.05	0.33	0.07	1.08	99.7	30
AB21118	47.9	13.8	11.2	6.34	1.53	0.30	13.2	0.20	1.90	0.18	2.47	99.1	34
AB21119	70.8	13.3	2.85	1.01	5.44	1.33	2.81	0.07	0.35	0.11	1.31	99.6	22
AB21120	50.7	16.8	10.5	5.03	1.52	0.58	9.88	0.19	0.69	0.14	2.93	99.0	32
AB21121	64.2	16.5	3.86	1.65	3.07	2.88	3.82	0.07	0.23	0.15	2.31	98.9	40
AB21122	53.2	16.6	6.86	4.58	3.11	1.33	8.69	0.26	0.65	0.13	3.39	98.9	37
AB21123	53.0	17.3	6.63	4.83	2.89	0.79	9.06	0.18	0.66	0.12	3.16	98.7	37
AB21124	47.0	13.8	11.2	6.31	2.17	0.15	11.2	0.18	1.58	0.15	4.62	98.5	32
AB21133	48.5	16.5	5.06	7.67	4.47	0.61	10.8	0.18	0.91	0.18	4.85	99.8	46
AB21136	67.5	15.7	2.68	0.88	4.46	2.71	2.41	0.04	0.27	0.07	3.54	100.4	33
AB21137	71.3	14.5	1.98	0.84	4.78	2.23	1.37	0.04	0.22	0.06	2.54	100.0	31
AB21138	74.0	12.5	2.32	0.49	4.96	1.64	0.86	0.03	0.18	0.05	2.77	99.9	23
AB21139	74.2	13.1	1.66	0.44	6.30	1.17	0.90	0.03	0.20	0.06	1.85	100.0	17
AB21140	43.1	13.4	8.47	5.21	3.65	0.22	12.1	0.18	2.18	0.21	9.93	98.8	31
AB 21142	68.3	15.1	0.47	2.80	0.52	2.62	4.45	0.07	0.35	0.09	4.70	99.6	84
AB 21152	73.8	14.2	0.20	1.27	0.45	3.18	2.37	0.04	0.30	0.09	3.39	99.4	87
AB 21163	71.5	12.7	1.19	1.83	0.28	3.21	3.44	0.07	0.28	0.08	4.54	99.4	77
AB 21166	78.1	9.32	0.30	0.62	0.21	2.58	4.00	0.02	0.22	0.07	3.93	99.6	86
AB 21170	77.7	10.2	0.79	1.04	0.16	2.74	3.07	0.03	0.23	0.08	3.70	99.9	80

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB21101	30	40	250	20	520	20	720
AB21102	30	40	170	30	220	20	1030
AB21103	50	50	320	20	120	10	730
AB21104	30	50	100	10	180	20	1010
AB21105	30	50	250	<10	90	10	890
AB21106	30	20	270	20	130	10	1450
AB21107	30	30	190	10	120	<10	530
AB21108	120	10	250	30	120	20	100
AB21109	30	50	150	20	130	30	1080
AB21110	30	50	190	30	150	<10	1130
AB21111	30	50	190	30	160	10	1120
AB21112	30	30	120	20	160	20	920
AB21113	80	50	310	20	20	20	810
AB21114	30	20	200	20	160	10	1710
AB21115	30	30	80	10	150	20	830
AB21116	30	50	90	20	150	10	1820
AB21117	30	30	80	40	140	20	3190
AB21118	140	20	210	30	120	30	90
AB21119	50	20	200	20	70	20	1670
AB21120	110	20	310	30	30	<10	190
AB21121	20	80	300	30	170	10	1120
AB21122	60	40	250	<10	40	10	370
AB21123	50	30	290	30	40	<10	430
AB21124	160	10	280	20	90	20	190
AB21133	40	30	170	30	10	30	380
AB21136	20	70	180	10	120	30	650
AB21137	30	60	150	10	100	20	870
AB21138	60	40	150	10	80	20	810
AB21139	30	40	210	20	80	20	540
AB21140	70	10	420	30	130	20	540
AB 21142	80	60	80	20	110	10	940
AB 21152	70	30	50	<10	100	20	1040
AB 21163	90	90	30	<10	90	20	2390
AB 21166	140	70	<10	10	60	10	1520
AB 21170	120	90	10	10	60	10	1210

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-15	1 of 9

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 49+00E at 2+47S

AZIM:	210°	ELEV:	630 m
DIP:	56½°	LENGTH:	232.6 m
		CORE SIZE:	NQ
STARTED:	October 22, 1986		
COMPLETED:	October 27, 1986		

PURPOSE: Test shallow IP anomaly, intersect deep IP anomaly at shallower depth and complete section of stratigraphy across Myra.

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
47.2	206½°	56°			
121.0	205½°	56°			
182.0	208½°	56½°			
221.6	206½°	56½°			

CLAIM No: CHIP 1
SECTION: 49 East
LOGGED BY: S. Enns
DATE LOGGED: October 25-27, 1986
DRILLING CO: Burwash Enterprises Ltd., Cobble Hill
ASSAYED BY: Bondar Clegg, North Vanvouver, B.C.

Core recovery : 97%

INTERVAL	DESCRIPTION
0 - 14.3	CASING
14.3 - 26.4	GABBRO
26.4 - 51.2	MIXED GREY GREEN CRYSTAL AND LAPILLI TUFF Variable siliceous and chloritic composition, locally clast supported sections. Quartz and feldspar crystals 8-10% combined in places and 15% feldspars elsewhere.
51.2 - 58.0	CATACLASTIC ZONE Contacts 55° to core axis; some penetrative foliation. Greenish and grey in colour subangular to sub-rounded 3-5 mm clasts in crushed rock matrix. Some clasts are pyrite or pyrite rich (30-40%). Quartz, feldspar, quartz crystal tuff clasts recognizable. Minor chalcopyrite present. Finely disseminated pyrite throughout from 3-4% to 15% and locally exceeding 25% with fine chalcopyrite. Clay gouge zones present 57.8 @ 40° to core axis.
58.0 - 59.7	DARK GREEN SHEARED VOLCANICLASTIC 7-8% 2-3 mm quartz in dark green foliated matrix. 65° to core axis foliation. 2-3% pyrite.
59.7 - 63.5	SHEARED QUARTZ CRYSTAL TUFF Light coloured 5-6% 3-5 mm quartz and sericite tuff. Strongly sheared. Locally 2-3% pyrite. Faulted lower contact.
63.5 - 179.2	GABBRO Some variable phases. Altered volcaniclastic inclusion 122.3 - 126.2.
179.2 - 184.7	CHERTY GREY AND BLACK SILTSTONES Thin bedded 30-40° to core axis. Thermal biotite altered. Pyrite parallel to bedding and cross fractures.
184.7 - 191.1	GABBRO
191.1 - 201.6	GREY CHERTY SILT STONES As 179.2 - 184.7.
201.6 - 232.6	GABBRO

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 2 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
						0 - 14.3 CASING			
				5					
	1	8.2							
		10.7		10					
		11.3							
Box 1		14.3				14.3 - 26.4 MEDIUM GRAINED PLAGIO PHYRIC GABBRO . Blocky core with limonitic fractures and a few mud seams near top of hole.			
				15					
	17.0	17.4							
Box 2									
		20.4		20					
							21125	21.0	
	22.3								
Box 3		23.5							
				25					
		26.5				26.4 - 34.0 GREY LAPILLI TUFF . Siliceous grey and intermediate and a few dark green chloritic (mafic) clasts. . In places clast-supported near top of interval.			
	27.3								
		29.3							
Box 4				30		. 8-10% 2-4 mm feldspar and quartz crystals in matrix which shows variable grey-green colour.	21126	29.9	
		32.6							
	33.3								
						34.0 - 46.8 GREY SILICEOUS CRYSTAL TUFF			
				35					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 3 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		35.7		35		34.0 - 46.8 GREY SILICEOUS CRYSTAL TUFF - continued	21127	35.2	
Box 5			79%			. Hard siliceous rock with chlorite streaks defining foliation 2-8 mm wide.			
		38.1				. 1-2 mm feldspar crystals 30%.			
	38.6					. Foliation @ 60° to core axis at 40.0 m. Numerous kinks.			
Box 6				40		. 0.5 m lost core 37.2 - 38.1. Shear zone at 38.0, 42.6 - 43.1 blocky core.			
	/	41.7				. White quartz veins here and there.			
						. 2-3% 3-4 mm quartz eyes here and there.			
	43.8								
		44.8		45		46.8 - 49.6 SHEARED GREEN CRYSTAL TUFF			
Box 7						. Strongly foliated chloritic tuff with 15% feldspars 2-4 mm.			
						. Sharp upper contact @ 40° to core axis.			
						. 3 cm quartz vein at 48.8. 55° to core axis, at 49.3.	21128	46.1	
		47.2				. Foliation 64° to core axis.			
	49.0					49.6 - 51.2 GREY SILICEOUS CRYSTAL TUFF			
						. Some intermixed greenish sections.			
		50.3		50		. Similar to 34.0 - 46.8.			
Box 8						51.2 - 52.0 CATACLASTIC ZONE - GREEN	21175	51.2	52.0
						. Both contacts @ 55° to core axis. Throughgoing foliation is same.	21176	52.0	53.0
		53.3				. White quartzose clasts subangular to subrounded about 20% 2-5 mm set in dark green chloritic crushed rock matrix.	21177	53.0	54.0
	54.2						21129	54.0	
				55		. Some clasts conspicuously pyritic (30-40% disseminated).	21178	54.0	55.0
						. Occasional dark crushed 3-4 mm pyritic seams 45-50° to core axis.			
						. Overall pyrite 3-4% fine to medium disseminations, trace chalcopyrite.			
						52.0 - 55.2 SHEARED GREEN VOLCANICLASTIC ?			
						. Similar lithology to 51.2 - 52.0 but less crushed.			
						. Foliation penetrative 35° - 40° to core axis - kinks noted.			
						. White pyrite bearing clasts 5-10 mm set in dark green chloritic matrix.			
						. 1-2% disseminated pyrite.			
						55.2 - 58.0 GREY CATACLASTIC INTENSE ZONE			
						. Grey crushed rock matrix mixed with variable chlorite hosts quartz crystal, feldspar crystal and quartz feldspar crystal tuff clasts, generally 5-10 mm with occasional clasts 3-4 cm across which retain original foliation.			
						. Variable disseminated pyrite content averaging 15% with local concentrations up to 20-25% very fine grained. Trace chalcopyrite.			
						. Lost core 0.1 m at 57.9.			

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 4 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO.*	FROM	TO
							*All samples prefixed by AB.		
Box 9						55.2 - 58.0 GREY CATACLASTIC INTENSE ZONE - continued . 0.2 m clay gouge fault zone. 40° to core axis at 57.8. . This is probably quartz crystal tuff lithology.			
				55		58.0 - 59.7 DARK GREEN VOCANICLASTIC (?) . Foliation @ 65° to core axis. . 7-8% 2-3 m quartz in dark chloritic foliated matrix. . 2-3% pyrite dissemination. . Creamy faulted crush zone with copious iron carbonate from 59.8 - 60.3.	21179 21180 21181	55.0 56.0 57.0	56.0 57.0 58.0
	5	56.4 57.9	93%						
Box 10	59.9			60		59.7 - 63.5 SHEARED QUARTZ CRYSTAL TUFF . Light coloured 5-6% 3-5 mm quartz and sericite tuff. . Strongly sheared throughout, clay gouge slips 61.4 - 61.7 @ 30° to core axis. . Variable foliation becomes core axis parallel at 62.0. . Locally 2-3% finely disseminated pyrite. . White quartz bands 5-10 mm.	21130	62.3	
		63.1							
Box 11	65.3			65		. Sheared lower contact with narrow clay gouge @ 80° to core axis. . This is probably a rhyolitic tuff unit which has been strongly sheared.			
		66.1							
Box 12	70.2	69.2		70		63.5 - 122.3 GREY GABBRO . 0.1 .. gouge fault zone at 63.8. . Plagio phyric greenish grey rock to inequigranular texture. . Small faults - 60° to core axis at 70.0 - gouge seam 75° to core axis at 79.1 - gouge seam 15° to core axis at 80.4 - gouge seam brecciation and shearing extends down to about 84.0 with abundant quartz calcite veinlet healing fractures. 93.0 10° to core axis at 95.0 - 95.5 - gouge seam. . Porphyritic feldspar phyric section 97.0 - 98.7. . Small faults @ 20° to core axis at 101.5 - 102.1. . Numerous fractured sections throughout. . Transitional 5-6% feldspar phyric phase 103.0 - 111.0 grades into same as 63.5 - 97.0. . 0.4 m lost core at 117.8, 1.5 m lost core at 118.4 - 121.0. . Small fault - 25° to core axis at 117.0, 118.4 - 118.8. . Strong shear 121.0 - 121.5 fault gouge 121.3 @ 45° to core axis.			
		72.2							
Box 13	76.0	75.3		75					
		78.3							
Box 14	81.1	80.8		80					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 5 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		84.4		85					
Box 15	86.3	87.5							
	91.3	90.5		90					
Box 16		93.0							
		96.0		95					
Box 17	97.1	99.0							
				100					
Box 18	102.2	102.1							
		104.5							
		105.8		105					
Box 19	107.5								
				110					
	112.8	111.9							
Box 20		114.9		115					
		118.0	87%						

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 2 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
						0 - 14.3 CASING			
				5					
	1	8.2							
		10.7		10					
		11.3							
Box 1		14.3				14.3 - 26.4 MEDIUM GRAINED PLAGIO PHYRIC GABBRO . Blocky core with limonitic fractures and a few mud seams near top of hole.			
				15					
	17.0	17.4							
Box 2									
		20.4		20					
							21125	21.0	
	22.3								
Box 3		23.5							
				25					
		26.5				26.4 - 34.0 GREY LAPILLI TUFF . Siliceous grey and intermediate and a few dark green chloritic (mafic) clasts. . In places clast-supported near top of interval.			
	27.3								
		29.3							
Box 4				30		. 8-10% 2-4 mm feldspar and quartz crystals in matrix which shows variable grey-green colour.	21126	29.9	
		32.6							
	33.3								
						34.0 - 46.8 GREY SILICEOUS CRYSTAL TUFF			
				35					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 5 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		84.4		85					
Box 15	86.3	87.5							
	91.3	90.5		90					
Box 16		93.0							
		96.0		95					
Box 17	97.1	99.0							
				100					
Box 18	102.2	102.1							
		104.5							
		105.8		105					
Box 19	107.5								
				110					
	112.8	111.9							
Box 20		114.9		115					
		118.0	87%						

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 6 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 21	118.8					122.3 - 126.2 INCLUSION . Altered volcaniclastic (?), fine grained lithology contains conspicuous brown thermal biotite. . Highly fractured healed by quartz-calcite veinlets. . Some of this looks like fine sheared gabbro particularly near margins. . Strongly sheared fabric @ 30° to core axis with rotated clasts.		
		121.0	50%	120				
		124.0		125			21131	124.9
Box 22	125.8	127.1				126.2 - 163.0 GREY INEQUIGRANULAR GABBRO . 129.8 - 130.0 fault zone @ 20° to core axis. . 0.4 lost core at 138.4. . 0.4 lost core at 139.9. . Small shear @ 30° to core axis at 140.1; 145.1 - 146.8 parallel to core axis. . White milky quartz vein 150.0 - 151.5 contains coarse blebs of chalcopyrite and dark chlorite patches. . Several 1 cm white quartz calcite veins generally barren contain red mineral.		
		130.1		130				
Box 23	131.2	133.2						
		136.2		135				
Box 24	136.9		82%					
		138.4	44%					
		139.3		140				
		141.1						
Box 25	142.3	142.3						
		144.2		145				
		146.3						
Box 26	147.7	148.4						
				150			21182	150.0 151.0
		151.5						

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 7 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO.*	*All samples prefixed by AB. FROM	TO
Box 27	153.1								
		154.5		155					
Box 28	158.0	157.6							
		160.6		160					
Box 29	163.7	163.7				**163.0 - 170.8 GREY FINE GRAINED SHEARED GABBRO** . Fine grained, plagioclase rich 35-40% - shows relict gabbroic texture 167.0 - 170.0. . Cross cut by quartz-calcite veinlets and fractured. . Fault gouge 165.3 @ 50° to core axis.			
				165					
		167.0							
	168.7						21132	169.5	
Box 30		170.4		170		**170.8 - 179.2 GREEN INEQUIGRANULAR PLAGIOPHYRIC GABBRO** . Fault zone 173 - 174. Gouge and sand, lost 0.4 m core. . Narrow chalcopyrite-bearing white quartz vein 174.6. . White chalcopyrite-bearing quartz vein 177.5 - 179.2 @ 50° to core axis upper contact. . Numerous fractured sections throughout especially adjacent to quartz veins.			
		172.8							
Box 31	174.0		86%						
		174.7		175					
		176.2							
		178.6					21183	178.0	179.1
Box 32	179.1					**179.2 - 184.7 CHERTY GREY AND BLACK SILTSTONES** . Thin bedded and highly fractured core. Quartz healed fractures common. . Pyrite parallels bedding here and there, but also commonly cross cuts bedding. . Bedding - 30° to core axis at 182.3; 40° to core axis at 184.6. . Weak light brown thermal biotite development. . Lost core: 0.4 m at 180.6; 0.5 m at 183.7.			
		180.2	75%	180					
		182.0	72%				21184	182.0	183.8
		183.5					21185	183.8	184.7
	185.1	184.7		185					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 8 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 33		187.5				184.7 - 191.1 GABBRO . Fine grained green section 184.7 - 187.5 becoming progressively coarser with depth. . Fault zone 188.2 - 188.4 fault gouge; 189.9. . Dark gabbro phase 188.4 - 189.9 then medium grained light green gabbro is present lower down to contact at 191.1.			
		188.4							
		189.9							
	190.3	191.1	67%	190					
Box 34									
			80%						
				195					
	196.6	196.0				191.1 - 201.6 GREY CHERTY SILTSTONES . Lost core: 0.8 m at 190.4; 1.0 m at 192.0 - 193.0. . White quartz vein 191.4 weakly pyritic. . Weak presence of pale brown thermal biotite throughout. . Less fractured interval than 179.2 - 184.7. . Pyritic fracture fillings and occasional bedding parallel. . Bedding - 25° to core axis at 195.2; 30° to core axis at 199.0. . Black carbonaceous interval 198.7 - 199.7. . Fractured and brecciated toward lower contact. Shearing 45° to core axis here.			
Box 35		198.7							
	200.0			200					
		201.8							
Box 36						201.6 - 232.6 GREY GABBRO . Medium grained plagiophyric inequigranular. . Small fault 226.8 @ 30° to core axis. . Rods stuck in hole - shut down.			
		204.3		205					
	207.3								
		209.8							
Box 37				210					
	213.0	212.4							
Box 38				215					
		216.6							
	218.6	218.5							
				220					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-15 | PAGE No. 9 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO.*	*All samples prefixed by AB. FROM	TO
Box 39 Box 40 Box 41	224.2 / 229.7 / 232.6	221.6 / 224.6 / 227.7 / 230.7 / 232.6		220 / 225 / 230 / 235 / 240 / 245 / 250		232.6 END OF HOLE			

REPORT: 126-6330 PROJECT: CHEMAINUS :116 PAGE 1

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21175	15	051.2-052.0	171	<5	105	3	<0.5	4.56	1237	2	24	33	<5	10	620
AB 21176	15	052.0-053.0	116	<5	183	<1	1.0	6.09	2259	2	37	80	<5	<5	<20
AB 21177	15	053.0-054.0	79	<5	136	1	<0.5	5.80	1848	2	32	50	7	5	140
AB 21178	15	054.0-055.0	25	<5	35	2	<0.5	1.93	315	<1	8	23	9	<5	550
AB 21179	15	055.0-056.0	73	<5	59	<1	<0.5	4.34	908	2	20	19	<5	5	550
AB 21180	15	056.0-057.0	132	<5	59	<1	0.7	4.49	1004	2	20	8	7	5	1100
AB 21181	15	057.0-058.0	271	7	139	3	1.4	4.82	1074	2	24	20	16	5	940
AB 21182	15	150.0-151.1	392	<5	40	1	0.7	3.24	514	<1	19	43	<5	<5	260
AB 21183	15	178.9-179.1	2868	<5	32	<1	1.6	0.80	84	4	8	9	11	<5	<20
AB 21184	15	182.0-183.8	41	9	47	3	1.1	2.18	304	<1	4	19	12	5	4400
AB 21185	15	183.8-184.7	30	19	73	4	<0.5	2.06	376	<1	5	13	11	5	1900
			2.7	36	14	60		.5						5	3150

CHEM 86-15

SAMPLE	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	LOI	SUM	Ishikawa Index
AB21125	47.8	13.7	10.0	5.77	2.07	0.36	13.6	0.20	2.31	0.22	2.62	98.7	34
AB21126	61.9	18.2	0.71	1.83	6.78	1.54	4.80	0.12	0.57	0.14	2.00	98.7	31
AB21127	67.5	16.1	1.41	1.31	2.70	3.39	3.26	0.07	0.39	0.09	2.39	98.9	53
AB21128	69.8	13.9	2.85	1.01	3.43	2.57	2.23	0.06	0.37	0.09	3.08	99.6	36
AB21129	41.7	9.81	14.6	7.58	0.22	0.16	10.2	0.30	0.50	0.11	13.7	99.0	34
AB21130	61.9	16.1	4.64	1.42	1.57	4.59	2.86	0.07	0.33	0.09	5.70	99.4	49
AB21131	43.9	11.4	10.6	7.67	0.85	0.60	10.6	0.17	1.27	0.11	11.8	99.0	42
AB21132	27.7	15.4	15.6	7.95	1.80	0.96	11.4	0.24	1.65	0.15	16.3	99.2	34

CHEM 86-15

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB21125	130	20	320	30	130	30	110
AB21126	230	50	120	10	120	20	610
AB21127	30	100	170	10	120	20	1700
AB21128	30	70	160	10	110	20	1060
AB21129	610	20	70	10	<10	<10	40
AB21130	30	110	160	20	150	20	860
AB21131	230	<10	50	<10	60	10	180
AB21132	180	40	160	10	70	20	200

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-16	1 of 14

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 45+00E at 0+81S

AZIM: 210° ELEV: 630 m

DIP: 50° LENGTH: 294.2 m

CORE SIZE: NQ

STARTED: October 30, 1986

COMPLETED: November 3, 1986

PURPOSE: Test deep IP anomaly and get a section of stratigraphy across Myra.

CORE RECOVERY: 97%

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
24.1	211°	47½°			
115.0	212½°	44½°			
203.4	212½°	43°			
288.8	211°	40°			

CLAIM No: CHIP 1

SECTION: 45 East

LOGGED BY: S. Enns & D. Mallalieu

DATE LOGGED: November 1-5, 1986

DRILLING CO: Burwash Enterprises Ltd., Cobble Hill

ASSAYED BY: Bondar Clegg, North Vancouver, B.C.

INTERVAL	DESCRIPTION
0 - 16.0	CASING
16.0 - 23.3	FELSIC CRYSTAL AND ASH TUFF Grey and grey-green, variable composition 4-5% 2-4 mm quartz eyes. Foliation 50-60° to core axis.
23.3 - 25.2	GABBRO
25.2 - 35.4	FELSIC CRYSTAL AND ASH TUFF As above, variable, transitional to greenish andesitic composition.
35.4 - 75.3	ANDESITIC CRYSTAL AND ASH TUFF Dominantly feldspar crystal in chloritic actinolitic matrix and variable sericite content. Less than 1% 1-3 mm quartz eyes. Thin ashy intervals.
75.3 - 83.0	GABBRO
83.0 - 119.5	ANDESITIC CRYSTAL AND LAPILLI TUFF Greenish grey, variable clast crystal proportion 5-10% lithic, feldspar dominant 45° and 60° to core axis foliation. Epidote alteration of feldspars common. Thermal biotite starts 86.0.
119.5 - 185.0	GABBRO Bleached white crystal tuff interval 139.5 - 141.0.
185.0 - 202.8	ANDESITE FLOWS (?) Dark green, massive, fine grained with intervals of epidote altered feldspars. Coarsens and fines locally, with sheared sections. Light grey silicified (?) crystal tuff interval 188.6 - 195.2.
202.8 - 207.5	FAULT ZONE Quartz sericite tuff clasts preserved.
207.5 - 236.0	FELSIC CRYSTAL ASH TUFFS 5-6% quartz eyes, 30-40° bedding lower end of interval. Several narrow early mafic dykes.
236.0 - 271.8	PYRITIC WHITE FELSIC CRYSTAL TUFFS 8-17% pyrite mainly as foliation parallel stringers 1-2 mm wide, locally 5 mm to 4 cm wide pyrite bands noted. Minor visible chalcopyrite, sphalerite and galena. Strongest chalcopyrite noted at 267.1.
271.8 - 282.5	EARLY MAFIC DYKE Massive, criss-crossed by myriad white narrow quartz-calcite veinlets.
282.5 - 294.2	GREY ARGILLITE AND CHERTY BLACK SILTSTONES Thin bedded, hard black chert. Sediment sill succession.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 2 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
				0		0 - 16.0 CASING			
				5					
	1								
				10					
				15					
Box 1	16.0					16.0 - 20.0 GREYISH GREEN STRONGLY FOLIATED CRYSTAL TUFF . Foliation @ 60° to core axis. . Sheared and faulted @ 50° to core axis at 16.4. . White quartz veins 1 cm at 18.0, 18.5. . Gradual transition to next interval. Quartz also present 3-4% 2-4 mm.			
		17.4	-						
		20.1		20					
	21.1		-			20.0 - 23.3 FINE GREY CRYSTAL TUFF . 5-6% 2-6 mm quartz eyes conspicuous near top of interval. . Foliation @ 50° to core axis at 22.0. . Interval gets darker grey toward 23.0. . 4-5% 2-4 mm quartz crystal up to 8 mm in light greenish sericite ± chlorite matrix. .*21.4 - 21.6 fault zone, rehealed, occupied by 1 cm barren white quartz vein, 30° to core axis.			
Box 2		23.2	-						
		24.7		25					
	26.4								
						23.3 - 25.2 FOLIATED GABBRO SILL . 3-4 mm white calcite ± quartz veinlets, 4 cm white quartz vein. . Foliation @ 35° to core axis.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 3 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 3 / Box 4	26.4	24.7	-	25		25.2 - 26.3 GREY-GREEN CRYSTAL TUFF . 5-6% 2-7 mm epidotized feldspars. . 3-4% quartz. . Epidotized feldspars gradually decrease toward 26.3. . Foliated 50-55° to core axis. . Fault at 26.3 with gouge.			
		26.5	100%		9 10	26.3 - 31.0 FINE GREY CRYSTAL TUFF . More chlorite interval 26.3 - 27.5. Foliation @ 50° to core axis. . Lighter grey (more sericite component) 27.5 onward, 5-6%.	21326	28.1	
					5	. Foliation @ 50° to core axis.			
		29.6	100%	30	11 10	. Occasional creamy sericitic foliation parallel bands (ash beds?) 30.5 and more sericite-rich 4-5 m wide bands (beds?). These fine ashy bands become dominant 31.0 - 33.0.			
	32.0	32.6			10 10	. Ash composition transition 32.6 - 32.7, intermediate to high intermediate (dacitic ?).			
			100%		11	. 32.7 - 34.5 light grey, dominantly sericite rich ash, foliation 50° to core axis, pyrite disseminations throughout, 1-2%, subequant quartz eyes up to 10 x 5 mm, <1%, composed of broken grains (1 mm).			
		35.7		35	12	. 34.5 - 35.4 light green chlorite-sericite rich ash, foliation 32° to core axis, anhedral feldspar grains (maximum .3 mm, 2%), equant quartz eyes (2-3 mm, 1%), homogeneous section.			
	37.6					35.4 - 35.9 GRADUAL TRANSITION . From crystal tuff to locally banded chlorite-rich tuff.			
						35.9 - 36.1 CHLORITIC MEDIUM TO DARK GREEN TUFF (ANDESITIC) . Displaying convoluted banding. Bands 2-3 mm, anhedral white feldspar grains (<1 mm, 3%), subequant quartz eyes, grey 4x3 mm, 1%), banding 85° to core axis.			
						36.1 - 36.5 QUARTZ-FELDSPAR CRYSTAL TUFF . Grey-green intermediate composition. . As described at 34.5 - 35.4.			
						36.5 - 37.6 CHLORITIC FELDSPAR CRYSTAL TUFF . Andesitic, banded, medium green, slightly convoluted, minor acrystalline beds (pale green, 1 cm) 90° to core axis. 37.3 - 37.6 crystal-rich section (feldspar), broken, anhedral to equant, range from <1 mm - 13 mm, 12%, irregular contact with accrystalline interval.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 4 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 5 Box 6	37.6	35.7	100%	35	9 11 6	37.6 - 38.3 GREY-GREEN CHLORITE-SERICITE-RICH TUFF (DACITIC) . Randomly distributed, equant to subequant quartz eyes, more prevalent to base of interval (2-7 mm, 1%). . 38.3 - Two narrow grey bands, fine grained 1 cm width. Contains sub-equant grey quartz grains (<1 mm-4 mm), subequant white feldspar grains (3 mm, <1%). 39.3 - 40.8 AS DESCRIBED ABOVE AT 37.6 - 38.3	21327	38.1	
		38.7			10				
			100%	40	8	40.8 - 42.0 SLIGHT COMPOSITIONAL VARIATION IN ASH . Medium green colour, fine grained, dominantly feldspar crystalline, light green, slightly sausseritized cores (1 mm, 10%). Rare subequant grey quartz aggregates (3 mm). Foliation 35° to core axis.			
		41.8			10 11				
	42.9		100%		11				
					9	42.0 - 42.5 MAFIC COMPOSITION DARK GREEN DYKE/SILL . Feldspars (1 mm, 25-30%). Light green rims, unaltered cores, anhedral black amphibole (2x1 mm, >50%). Lower contact sharp, 55° to core axis.			
		44.8		45	13				
	48.2					42.5 - 45.0 SHEARED ANDESITIC COMPOSITION MEDIUM GREEN TUFF . Foliation 60° to core axis, minor convolutions in fine bands, rare kink banding. Bands defined by stretched/flattened feldspar grains, up to 8x1 mm, 20%. Actinolite grains as above, grains in actinolite-feldspar groundmass. . 43.3 - White-green subrounded fragments, up to 20x15 mm, restricted to 30 mm thick band.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 5 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 7 Box 8	48.2 / 53.8 / 59.5	44.8 / 47.8 / 50.9 / 53.9 / 57.0 / 60.0	100% / 100% / 100% / 100% / 100%	45 / 50 / 55 / 60	10, 11, 11, 11, 11, 13, 12, 13, 13, 4, 8, 7, 7, 10, 11	**45.0 - 49.8 INTERMEDIATE COMPOSITION TUFF** . Finely banded, light green, fine grained, composed of anhedral feldspar, actinolite, <1 mm diameter, acrystalline. Foliation 60° to core axis. **49.8 - 58.8 FELDSPAR CRYSTAL ANDESITIC COMPOSITION TUFF** . Light green, finely crystalline near top of interval to crystal-rich at base. . 49.8 - First detection of slight purple-brown biotite? Rimming white feldspar grains (1 mm), feldspar anhedral (1x2 mm, 40%), light green actinolite, anhedral, shard shaped, (1x2 mm, >40%). Foliation 55° to core axis. . 50.0 - Three 1 cm bands, feldspar grains - rims unaltered, cores totally replaced by green sericite, specks of brown biotite throughout. . 50.3, 50.4 - 3-4 mm quartz veins at 65° to core axis, limonite staining throughout. Feldspar grains increase in size (2-3 mm, 5-7%). . 50.4 - Brown-purple biotite easily visible, in association with orange tinged feldspar grains (clinozoisite ?). . 50.6, 51.8 - Banding, brown-purple biotite? Replacement of feldspar cores, bands 6 mm thickness, 60° to core axis. Bands 10 mm thickness. . 51.8 - 53.1 - Light white-green andesitic composition tuff, distinct chlorite banding, irregular thicknesses, ranging from 2-6 mm, (5%). Pale feldspar grains, anhedral, (2-4 mm, 5%) throughout. Biotite ? Haloes always surround chlorite bands, aureole variable on thickness of chlorite, usually 3-5 mm bands 75° to core axis. . 53.2 - 10 cm thick fault gouge. Yellow-green colour, subrounded to subangular tuff, quartz fragments. 90° to core axis. . 53.2 - 54.3 - Feldspar crystal andesitic composition tuff. Feldspar crystals yellow-green (2-4 mm, 6%). Cores grey, rims yellow-green. Matrix is aggregate of elongate feldspar (0.3 mm x 2 mm, >35%) and shard shaped actinolite (3x1-2 mm, >15%). Foliation 65° to core axis. Rare lithic clasts as below. . 54.3 - 57.1 - As described above. . 54.8 - Clast rich section, elongate in plane of foliation, light grey, aphanitic crystallinity, up to 3x1 cm, <5%. . 57.1 - 57.8 - Zone of silicification, quartz flooding, pervasive alteration of crystal tuff save for 1 cm thick bands at 25° to core axis. (>80% interval silicified.) . 57.8 - 58.8 - Andesitic composition feldspar crystal tuff, as previously described (53.2 - 54.3). Alteration less intense, feldspar generally	21328 21329	48.9 58.4	

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 6 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
						49.8 - 58.8 FELDSPAR CRYSTAL ANDESITIC COMPOSITION TUFF - continued 100% yellow-green, clinozoisite? No lithic clasts.			
						58.8 - 59.8 ASH . Composition variation of feldspar crystal tuff. Light grey-green, fine grained, dominantly sericite-rich, feldspar, white, (1 mm, 4%). Foliation at 60° to core axis.			
	59.5	60.0		60	11	59.8 - 60.8 GRAPHITIC ASH TUFF . Fault zone 10° to core axis at 60.7. . Looks hematitic tinge.			
Box 9			100%		7	59.8 - 68.3 GREY CRYSTAL TUFF . Mainly feldspar crystals with 0.1-1.0 m intervals of variable crystal size, generally 3-5 mm.			
		63.1			6				
					8	. Quartz eyes variable 5-6%.			
	64.9		100%	65	7	. Foliation 55° to core axis at 64.4.			
Box 10		66.1			8	68.3 - 69.9 COARSE EPIDOTE BEARING CRYSTAL TUFF	21330	66.3	
					8	. 15-20% 2-10 mm epidote aggregate after feldspar crystals.			
			100%		11				
					5	69.9 - 75.3 GREY CRYSTAL LAPILLI TUFF			
		69.2		70	7	. As above but with about 5% generally less than 1 cm lithic clast parallel foliation.			
	70.6		100%		8				
					4	. Feldspars 12-15% 3-5 mm becoming dominant 72.0 to 75.3.			
		72.2			6	. Hematitic tinged near gabbro contact from 72.0 - looks more siliceous.			
Box 11			100%		9	. Sheared contact.			
						. 74.2 - 75.3 - 3-4% pyrite dissemination and fractures.	21186	74.1	75.1
		75.3		75	10				
	76.1								

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 7 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 12	76.1	75.3	100%	75	6 6 10 8	75.3 - 83.0 PLAGIOPHYRIC GABBRO . 5-7% 1-7 mm feldspar phenocrysts and aggregates in fine grey green matrix. . White quartz veins 0.5 to 1 cm except 81.0 - 81.4 with chalcopyrite and chlorite. . 3-4% pyrite in fractures 129.4.			
Box 13	81.8	78.3	100%	80	4 3 6	83.0 - 119.5 LAPILLI CRYSTAL TUFF . Greenish grey average 7-8% lithic clasts of dark green andesite and grey quartz sericite tuff in matrix of sericite and chlorite. . Whitish and translucent 2-5 mm feldspars.			
Box 14	87.4	81.4	100%	85	4 4 4 7	. Clast proportion varies. 5 to more than 10%. . Epidote replacing clasts and feldspar crystals selectively 90.0 - 92.0 and commonly throughout. . Brown thermal biotite starts at about 86.0 and is present below that depth. . 5 mm pyrite seam at 85.7.	21331	84.0	
Box 15	92.8	84.4	100%	90	5 5 6 4 4	. Foliation 45° to core axis at 84.0; 45° to core axis at 91.0. . Strongly foliated section - sheared (?) 92.0 - 92.6 at 50° to core axis with about 2% pyrite stringers. . Local fine grained ashy short intervals. Less than 0.1 m at 93.2 - 93.6, and 101.5.	21187	92.0	92.6
Box 16	98.5	90.5	100%	95	3 5 4 3 6	. Foliation less pronounced below 97.0 - unit becomes more massive with common epidote alteration intervals. . 2% pyrite fractures @ 55° to core axis at 101.9. . 110.0 - 112.0 - Quartz veined and partially silicified section. . Foliation 60° to core axis at 112.3.	21332	94.9	
Box 17	104.4	96.6	100%	100	5 3 3 6 3	. Local patches and intervals epidote altered and silicified pervasively. For example 115.3. . Thermal biotite stops at about 115.0, tuff looks bleached, only sericite co-exists with lithic clasts and feldspars. Very bleached, white 116.7 - 117.7. . Foliation 60° to core axis at 116.3. . Core becomes blocky toward contact and limonite stained. 119.0 - contact 119.5 which is sheared and faulted (minor).	21333	104.0	
		99.7	100%		7 4 3				
		102.7	100%	105	4 5 4 5				
		105.8							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 8 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
		108.8			4				
	110.1		100%	110	8				
Box 18		111.9							
			100%						
		114.9					21334	114.0	
Box 19	115.8			115			21335	115.3	
			100%		6				
		118.0			8		21336	117.8	
			100%		13	119.5 - 139.5 DARK FINE GREEN GABBRO			
		119.5				. Equigranular fine to medium grained - limonite stained from contact to 120.9.			
Box 20	120.7	121.0	100%	120	14	. Foliated @ 70° to core axis - weak.			
					10	. Fault 120.5 - 120.7 @ 55° to core axis.			
					5				
			100%		4				
		124.1			7				
					5				
			100%	125	6				
Box 21	126.5				6				
		127.1					21337	127.3	
			100%		7				
					2				
		130.1		130	3				
			100%		7				
	132.1				5				
		133.2			3				
					7				
			100%	135	8				
Box 22		136.2			7				
					8				
	137.8		100%		2	139.5 - 141.0 BLEACHED WHITE CRYSTAL TUFF			
					5	. Lost core 0.6 m at 140.5			
		139.3			7	. Quartz sericite tuff; looks silicified and in places pyritic at 140.1.			
Box 23			80%	140	-				
					-				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 9 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
		~~142.3~~			5	141.0 - 143.4 GABBRO			
	143.8		100%		6	. A bit altered feldspars to epidote. 143.5 - 146.7 altered tuff inclusion.			
Box 24		144.8		145	6	. Bleached upper contact, thermal biotite altered lower contact 146.0 - 146.7.			
			100%		6				
		146 6			3	. Limonitic fractures 143.5 - 144.8, pyritic fracture filling 1-2%.			
			100%		5				
		148 4			5	. Foliation variable.	21338	148.1	
Box 25	149.5								
			100%	150	4	146.7 - 185.0 GABBRO (?)			
					8	. Foliated near upper contact. Lacks good equigranular or porphyritic texture.			
		151.5			6				
			100%		9	. Massive green medium grained unit. Feldspars epidote altered. Dark green unit.			
		153.3	100%		5				
Box 26	154.5	154.5				. Patches of epidote-quartz-calcite common 154.0 - 157.0.	21339	153.8	
				155	4	. Transition to clastic texture cozrser section with clasts of more leucocratic phase with 7-8% 2-4 mm chlorite pseudomorphs after hornblende. Epidote alteration common as feldspar replacement and aggregates. Transition begins at 156.5. Black mafics often exhibit tails parallel to foliation.			
			100%		3				
					6				
		157.6			8				
			100%		3	. Weak to moderate foliation with common black chlorite on planes. 45° to core axis at 155.0.			
	160.2			160	5		21340	159.4	
Box 27		160.6			8	.*Perhaps this interval is an andesitic flow and flow breccia (?).			
			100%		6	. Foliation strong @ 47° to core axis at 165.0.			
					8	. Leucocratic patches associated with quartz 169.0 - 170.5.			
		163.7			2	. Strong foliation @ 50° to core axis at 171.0.			
			100%	165	5	. Black chlorite streaks define foliation in this interval - on foliation planes chlorite is shiny black with 1-3 mm knots (crystals of feldspar) and green sericite is abundant also.			
	165.7				4				
		166.7			5	. Variability of the texture in this unit is characteristic and argues in favour of andesite flow (as opposed to gabbro) mixed with some clastic component, and local zones of bleaching, thermal biotite, strong foliation.			
Box 28					4				
			100%		6				
		169.8		170	4	. Strongly foliated bleached zone 174.5 - 176.5. Foliation @ 55° to core axis, 2-3% pyrite, sericite altered mafics with tails, pyrite masses with white quartz vein at 175.2; pyrite concentration 10% over 2 cm at 174.6.			
	171.5		100%		4				
					4				
		172.8			4				
					3	. White barren quartz-calcite-chlorite section 177.5 - 177.9 @ 25° to core axis.	21341	173.0	
Box 29			100%	175	2				
		176.9			4				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 10 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 30 Box 31 Box 32 Box 33	176.9		100%		7	146.7 - 185.0 GABBRO (?) - continued			
					6	. Foliation @ 55° to core axis at 180.1; @ 45° to core axis at 179.1. These stronly foliated sections are 0.5 m lengths alternating with massive fine to medium grained equigranular sections.			
		178.9			8				
			100%	180	6	. 182.2 - 182.4 - Pyrite, chalcopyrite, pyrrhotite with quartz vein mass. Pyrrhotite is stongly magnetic.			
					8				
		182.0			6	. 4-5% pyrite on short 0.1 m sections 183.0, 184.7.			
	182.6		100%		8				
					5				
		185.0		185	7	185.0 - 188.6 DARK GREEN ANDESITE FLOW			
					7	. Similarity to gabbro by feldspar phenocrysts in short intervals of 0.2 m - 5% 2-4 mm feldspars.			
			100%		9				
	188.0	188.1			6	. Lower contact is transitional.	21342	187.7	
					8	. White quartz vein at 186.0 2 cm, 186.2 4 cm.			
			100%	190	10	. Fine grained massive lighology, 50-55° to core axis foliation, 15-20% less than 1 mm feldspars in green chloritic feldspar matrix. Black chlorite foliation planes.	21343	190.1	
		191.1			4		21344	191.3	
					4				
			100%		5	188.6 - 195.2 LIGHT GREY SILICIFIED CRYSTAL TUFF			
	193.6				6	. Banded intervals, mottled grey with obscure lithic (?) outlines and moderately well developed foliation @ 50° to core axis at 190.0.			
		194.2			10				
			100%	195	4	. Alternating strongly foliated intervals 0.1 to about 1 m wide epidote altered feldspars 3-4 mm 5-7%. In these crystal tuff sections fine silty ash tuff (?) 2-5 mm layers parallel foliation @ 50° to core axis at 193.0.			
					6				
		197.2			7	. Siliceous lithic clasts 193.0 - 194.0 (?).	21345	198.3	
	199.1		100%		3				
		200.3		200	6	195.2 - 202.8 DARK GREEN ANDESITE FLOW - GABBRO (?)			
						. Massive fine to locally medium grained feldspar phyric.			
						. 15-17% 2-3 mm epidote altered feldspars in green chlorite actinolite matrix.			
						. Local sheared sections, and some lighter green altered sections.			
						. Coarsens and fines locally.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 11 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
	199.1					202.8 - 207.5 FAULT ZONE			
						. Good core recovery.			
						. Crushed white quartz clasts in ground matrix of clay-sericite and pyrite.			
						. Quartz commonly calcite (tension gash) veined, some are pyrite rich.			
		200.3		200		. Pyrite varies, locally 20% at 205.5 - 205.7.			
					6	. Gumbo gouge upper contact adjacent foliation @ 40° to core axis.			
			100%		6	Lower contact foliation @ 50° to core axis.			
		203.3			8	. Some clasts perhaps are sericite quartz tuff but poorly preserved.	21188	202.8	203.8
					7		21189	203.8	204.8
			100%		7	207.5 - 210.7 BLACK EARLY MAFIC SILL	21190	204.8	205.8
				205	7	. Very fine grained feldspar phyric (15% 1-2 mm feldspars) rock, with penetrative foliation weakly developed.	21191	205.9	206.8
		206.3			6		21192	206.8	207.5
					7	. White quartz-calcite 1-3 mm veinlets criss-cross rock throughout.			
			100%		8	. Hematite on slips and fractures and quartz-calcite veinlets.			
					10				
		209.4		210	9	210.7 - 211.4 SILICIFIED QUARTZ SERICITE CRYSTAL TUFF			
			90%		12	. Lost .2 m core at 210.7; this unit may be source of clasts in fault zone.			
					9				
		212.4			8	211.4 - 221.5 DARK GREY FINE SERICITIC CRYSTAL TUFF			
			100%		11	. Narrow band of above unit 30° to core axis at 211.7.			
				215	7	. Foliation @ 40-45° to core axis.			
		215.5			6	. Quartz-calcite veinlets 1-2 mm wide criss-cross foliation.	21346	215.4	
			100%		9	. Up to 5-6% 1-2 mm quartz eyes. Varying locally.			
					6	. Becoming more massive 215.0 onwards, but still is weakly foliated and contains up to 3 mm lithic clasts and feldspar-quartz crystals. For example 219.8.			
		218.5			13				
			82%	220	6	221.5 - 225.5 LIGHT GREY FELSIC TUFF			
					11	. Very sericitic with short silicified (?) intervals.			
		221.6			22	. Extremely broken fractured core - crumbly 222.0 - 225.0	21347	222.5	
			79%		22	. Faulted upper contact.			
		224.0			22	. Foliation @ 30° to core axis.			
				225	20	. 0.6 m lost core at 221.6; .5 m lost core at 224.7.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 12 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		~~224.0~~		~~225~~		225.5 - 231.0 EARLY MAFIC DYKE			
			100%		18	. Dark green, fine grained, hematitic fractures and criss-cross quartz-calcite veinlets - as 207.5 - 210.7.			
		227.1			15				
					10	. Faulted upper and lower contact @ 40° to core axis.			
			100%		7				
						231.0 - 236.0 LIGHT GREY FELSIC TUFF			
		230.1		~~230~~	10	. Hard siliceous almost cherty bedding @ 40° to core axis at 232.0; 30° to core axis at 233.0.			
					11				
			100%		12	. Sericite and chlorite interbeds (?) foliation plane parallel.			
					5	. Sheared 233.8 - 234.0.			
		233.2			12	. Small fault 236.0 @ 50° to core axis. Gouge and breccia. Early mafic dyke .2 m at 234.2, 236.0.			
			100%	~~235~~	7				
					12	236.0 - 255.0 WHITE PYRITIC CRYSTAL TUFF	21348	235.7	
		236.2			12	. Very sericitic, sheared (ductile deformation), strongly foliated @ 40° to core axis at 242.8; 37° at 246.0.	21193	236.0	237.0
			100%		9		21194	237.0	238.0
					10	. Fine pyrite dissemination 4-5% average.	21195	238.2	239.0
		239.3			11	. Pyritic stringers 1-2 mm foliation parallel, occasional 1 cm pyrite-rich parallel bands (beds ?) at 243.6 (40° to core axis), 245.6, 241.0.	21196	239.0	240.0
				~~240~~	11		21197	240.0	241.0
			100%		9	Total sulphides 8-10%	21198	241.0	242.0
					7	. Minor chalcopyrite here and there; galena, sphalerite 243.0 in 10° to core axis stringer, 245.6 in pyritic bed (!).	21199	242.0	243.0
		242.6			6		21200	243.0	244.0
			100%		6	. Numerous micro faults with gouge and breccia.	21201	244.0	245.0
					8	. Fault zone - crushed 246.8 - 247.3.			
				~~245~~	6	. 2-3 mm quartz present 5-6% but variable and obscure in dominantly sericite mineralogy.	21202	245.0	246.0
		245.7			7		21203	246.0	247.0
			100%		14	. Brecciated section 248.8 - 249.0 @ 40-50° to core axis with black rehealed breccia sections.	21204	247.0	248.0
					10		21205	248.0	249.0
		248.7			10	. Box 40 one end a bit jumbled (partially spilled).	21206	249.0	250.0
			100%	~~250~~	10	. Pyrite beds (?) 249.3 @ 50° to core axis 1 cm, 250.9, 254.7, 254.9, 255.4.	21207	250.0	251.0
					10		21208	251.0	252.0
					12	. Tuff gradually coarsens at 254.0 - 256.0.	21209	252.0	253.0
		251.8			13	. Small faults 255.4, kink folds (including pyrite foliation parallel stringers) 253.7 - 254.2.	21210	253.0	254.0
			100%		10		21211	254.0	255.0
					8	. Dark green mafic dyke 238.0 - 238.3.			
		254.8		~~255~~					

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-16 | PAGE No. 13 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		254.8		255		255.0 - 269.2 DIRTY WHITE PYRITIC CRYSTAL TUFF			
					11	. Similar lithology as above but looks coarser quartz-feldspar, higher pyrite content. 255.5 - 260.2 average total sulphide 15-17% locally 20-25%.	21212	255.0	256.0
			100%		7		21213	256.0	257.0
		257.9			9		21214	257.0	258.0
					6	. Foliation parallel pyrite-rich bands 5 mm - 4 cm wide contain up to 30% pyrite with trace chalcopyrite. For example 257.0 - 259.0.	21215	258.0	259.0
			100%				21216	259.0	260.0
				260	11	. Small fault 256.4 - 256.9 @ 10° to core axis.	21321	260.0	261.0
		260.9			9	. Knots quartz on sericitic surface, grey bands of possible silicification.	21322	261.0	262.0
					6		21323	262.0	262.8
			84%		11	. Crystals readily recognizable near base of interval 7-8% 2-5 mm quartz eyes, feldspars harder to spot.	21324	264.2	265.0
					-				
		264.0			7	. Foliations 55° to core axis at 259.8; 55° to core axis at 265.4; 50° to core axis at 267.7.	21325	265.0	266.0
			100%	265	7		21217	266.0	267.0
					11	. Total sulphides falls off gradually below 260.2 averaging 10-12%. Pyrite (foliation) parallel still present - frequently sheared off. At 267.2 quartz vein with trace molybdenum (?) or unidentified sulfo salt.	21218	267.0	268.0
		267.0			11		21219	268.0	269.0
			100%		8		21302	269.0	270.0
		270.1		270	10	. 0.1 m epidote-rich altered sills? 262.9, 264.0.			
						. Fault zone 263.0 - 264.0? Lost core .5 m. Unknown pink mineral 7% feldspar alteration?			
						. Small fault 269.3 - 269.9; 30-40° to core axis.			
						. Delicate core; pieces fall apart along sericite rich foliation surfaces.			
						. Numerous small slips - micro faults throughout.			
						. At 267.1 narrow chalcopyrite seams parallel foliation and are kinked but retain most of their integrity. White 5 cm pyrite quartz vein nearby. This is strongest visible chalcopyrite mineralization.			

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. Chem 86-16 | PAGE No. 14 of 14

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
		270.1		270		269.2 - 271.8 WHITE PYRITIC CRYSTAL TUFF . Sericitic, strongly foliated and sheared - being affected by nearby fault. . 5-6% 2-3 mm quartz eyes. . Pyrite disseminated, stringers (foliation parallel) and totals about 5%.	21303 21304	270.0 271.0 270.0 271.8
			100%		9 7				
		273.1			7				
			100%		5		21349	273.5	
				275	6	271.8 - 282.5 DARK GREEN MAFIC DYKE . Massive, criss-crossed by thin white quartz calcite veinlet. (Tension gash in-fillings.)		
		276.1			5				
					7	. Pale epidote alteration patches here and there.			
			100%		6	. 5% 2-3 mm chlorite altered mafics in equigranular aphyric matrix. . 280.3 - 281.4 crushed fault zone 10-20° to core axis.			
					4	. Black chlorite on fracture and hematite-limonite.			
		279.2		280	18	. Early mafic sill? or possible flow.			
			100%		15				
		281.6			13	282.5 - 294.2 GREY ARGILLITE AND BLACK CHERTS . Very broken interval severe core loss due to combined hard rock and worn bit.			
			100%		8				
					11	. Brown thermal biotite altered argillite and black cherts.			
		284.4			11	. Lost core 0.9 m, 284.4 - 286.2; 1.4 m, 286.2 - 288.6;			
			56%	285	18	0.5 m, 288.6 - 289.6; 0.5 m, 289.6 - 291.4;			
		286.2			20	2.1 m, 291.4 - 294.2.			
			42%		20	. Bedded about 15° to core axis near 285.0.			
		288.6			18	. Faults - 286.0 (breccia) and 287.0.			
		289.6	50%		12	. "Sediment-sill" unit.			
			72%	290	15				
		291.4				294.2 END OF HOLE			
			25%						
		294.2							

REPORT: 126-6738 ,126-6330 PROJECT: CHEMAINUS : 116 PAGE 1

SAMPLE NUMBER	Hole #	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21186	16	074.1-075.1	64	9	114	1	0.8	1.60	371	1	10	5	24	<5	1200
AB 21187	16	092.0-092.6	117	10	63	<1	<0.5	3.27	405	<1	11	2	<5	<5	1600
AB 21188	16	202.8-203.8	80	8	78	2	0.7	4.45	958	1	22	43	24	<5	1000
AB 21189	16	203.8-204.8	91	6	85	<1	1.1	5.50	1110	1	26	20	16	10	370
AB 21190	16	204.8-205.8	72	9	101	3	0.7	3.45	632	1	12	13	66	20	380
AB 21191	16	205.8-206.8	122	5	45	2	0.5	1.98	313	2	5	3	61	25	400
AB 21192	16	206.8-207.8	50	13	67	5	<0.5	2.56	468	1	8	8	54	30	340
AB 21193	16	236.0-237.0	108	104	1377	1	<0.5	1.35	388	6	4	5	8	25	2200
AB 21194	16	237.0-238.0	239	256	2004	<1	1.7	2.35	357	9	6	5	11	70	1900
AB 21195	16	238.0-239.0	64	64	289	3	<0.5	2.63	514	1	10	6	15	35	1800
AB 21196	16	239.0-240.0	145	174	1264	3	0.7	2.45	218	7	8	4	8	45	1700
AB 21197	16	240.0-241.0	187	247	940	3	1.0	2.91	753	5	9	5	36	50	1700
AB 21198	16	241.0-242.0	405	59	2347	3	1.0	2.72	506	11	7	4	6	50	1500
AB 21199	16	242.0-243.0	375	1071	2692	2	0.9	2.37	981	12	3	6	9	30	1500
AB 21200	16	243.0-244.0	434	581	2195	3	0.9	2.72	736	9	9	2	21	15	2100
AB 21201	16	244.0-245.0	121	382	680	3	0.6	2.37	1107	5	7	2	9	5	2400
AB 21202	16	245.0-246.0	85	261	424	<1	<0.5	2.38	751	4	8	2	22	5	2100
AB 21203	16	246.0-247.0	145	275	504	3	1.3	2.48	620	4	8	4	51	10	1500
AB 21204	16	247.0-248.0	140	296	946	2	<0.5	2.15	1526	7	9	5	<5	5	1800
AB 21205	16	248.0-249.0	151	171	602	2	<0.5	2.65	1639	6	13	11	10	40	1700
AB 21206	16	249.0-250.0	324	189	608	2	1.4	2.98	423	4	8	5	138	60	2400
AB 21207	16	250.0-251.0	131	90	475	1	0.8	2.39	789	4	9	5	40	25	1900
AB 21208	16	251.0-252.0	136	7	181	2	<0.5	1.50	147	2	5	2	7	5	1500
AB 21209	16	252.0-253.0	35	17	118	2	<0.5	0.93	135	<1	4	2	<5	5	1600
AB 21210	16	253.0-254.0	37	<5	150	1	<0.5	1.44	92	3	5	3	<5	5	1600
AB 21211	16	254.0-255.0	177	<5	84	2	<0.5	1.61	71	2	4	3	<5	10	1480
AB 21212	16	255.0-256.0	132	<5	24	3	<0.5	2.23	68	<1	7	5	12	10	1500
AB 21213	16	256.0-257.0	118	12	11	<1	<0.5	2.50	67	2	4	4	19	10	1600
AB 21214	16	257.0-258.0	173	<5	12	2	<0.5	3.43	68	3	8	5	28	15	920
AB 21215	16	258.0-259.0	132	<5	11	2	<0.5	3.30	69	2	10	5	28	65	780
AB 21216	16	259.0-260.0	494	9	54	3	<0.5	2.93	164	4	12	8	22	45	1100
AB 21321	16	260.0-261.0	763	8	57	2	0.6	2.67	333	3	12	9	24	50	1500
AB 21322	16	261.0-262.0	169	<5	283	<1	<0.5	1.28	245	4	3	3	<5	10	1600
AB 21323	16	262.0-262.8	72	<5	47	1	<0.5	1.31	205	2	4	1	8	15	1400
AB 21324	16	264.2-265.0	66	16	293	2	<0.5	1.67	249	2	4	4	<5	60	1700
AB 21325	16	265.0-266.0	71	34	278	2	<0.5	1.55	198	4	6	3	<5	50	1800
AB 21217	16	266.0-267.0	256	47	455	2	0.7	1.79	304	94	6	4	<5	60	1900
AB 21218	16	267.0-268.0	457	41	414	2	1.7	2.55	404	4	8	6	<5	190	2100
AB 21219	16	268.0-269.0	146	25	175	2	0.6	2.30	268	3	9	6	<5	100	1800
AB 21302	16	269.0-270.0	50	<5	59	2	<0.5	1.04	192	3	4	4	<5	10	1500
AB 21303	16	270.0-271.0	26	10	68	1	<0.5	1.05	281	2	3	4	<5	5	1100
AB 21304	16	271.0-271.8	12	13	74	2	0.6	0.88	185	2	3	4	<5	25	1300

CHEM 86-16

SAMPLE	SIO2	AL203	CAO	MGO	NA2O	K2O	FE203	MNO	TIO2	P2O5	LOI	SUM	Ishikawa Index
AB 21190	59.1	14.5	5.81	2.76	0.78	3.66	4.96	0.09	0.47	0.13	7.16	99.5	49
AB 21199	67.0	15.0	1.50	1.65	0.31	4.08	3.82	0.20	0.37	0.11	4.93	99.2	76
AB 21207	64.7	15.4	2.10	1.82	0.56	3.43	5.07	0.21	0.44	0.11	5.70	99.8	66
AB 21218	67.0	13.4	2.50	1.27	0.43	2.91	5.60	0.09	0.31	0.09	5.62	99.5	59
AB 21321	66.0	14.2	2.80	1.23	0.35	2.62	5.80	0.07	0.32	0.10	5.62	99.3	55
AB21326	72.2	13.0	3.12	1.11	1.31	3.12	2.27	0.05	0.24	0.06	3.85	100.5	49
AB21327	66.1	15.6	3.68	1.39	2.59	2.92	2.64	0.03	0.28	0.07	4.39	99.8	41
AB21328	70.3	14.2	2.55	1.23	3.56	2.34	2.18	0.03	0.30	0.07	3.23	100.1	37
AB21329	70.1	14.3	1.95	2.19	2.79	2.44	2.82	0.05	0.33	0.07	2.62	99.8	49
AB21330	68.1	15.1	2.71	1.33	5.53	1.36	3.18	0.06	0.36	0.08	2.08	100.1	25
AB21331	71.7	14.3	1.65	1.06	6.14	1.09	2.64	0.11	0.33	0.07	0.93	100.2	22
AB21332	70.7	14.9	1.46	1.07	6.72	1.27	2.58	0.07	0.35	0.07	0.93	100.3	22
AB21333	74.8	13.1	1.96	0.44	5.76	1.42	1.72	0.06	0.31	0.07	0.62	100.4	19
AB21334	73.2	13.6	1.63	0.91	5.82	1.26	2.14	0.05	0.32	0.07	1.31	100.5	22
AB21335	70.8	14.1	3.18	0.61	5.88	1.12	2.69	0.07	0.31	0.07	1.77	100.8	16
AB21336	70.3	14.4	2.03	1.34	3.44	2.81	3.40	0.07	0.34	0.07	2.47	100.9	43
AB21337	58.7	17.6	5.39	4.69	4.47	1.08	9.17	0.20	0.64	0.12	3.08	100.3	37
AB21338	51.5	18.5	3.88	6.61	4.20	1.22	9.22	0.24	0.80	0.10	3.62	100.0	49
AB21339	51.2	16.1	4.62	8.69	4.33	0.25	10.1	0.18	0.72	0.12	3.54	99.9	50
AB21340	51.5	15.9	8.20	6.29	4.58	0.32	9.79	0.24	0.66	0.12	2.62	100.3	34
AB21341	50.4	17.0	8.92	5.75	2.09	1.17	9.71	0.23	0.68	0.15	2.85	99.1	38
AB21342	48.6	13.7	11.4	6.25	1.15	0.13	13.4	0.21	1.94	0.18	3.16	100.2	34
AB21343	75.9	11.4	2.15	1.06	3.02	1.77	1.89	0.06	0.27	0.07	2.31	100.1	35
AB21344	76.3	11.7	2.48	0.75	2.90	1.79	1.96	0.05	0.27	0.07	1.62	100.1	32
AB21345	51.6	16.6	8.20	5.61	2.42	0.25	10.1	0.22	0.68	0.14	3.23	99.1	35
AB21346	60.7	16.1	2.36	3.09	5.15	2.21	6.22	0.13	0.67	0.21	3.23	100.2	41
AB21347	64.9	17.2	0.78	2.79	1.72	4.27	4.20	0.05	0.43	0.12	3.31	100.0	74
AB21348	69.5	14.2	1.87	1.91	2.69	3.06	2.94	0.05	0.31	0.08	3.23	100.0	52
AB21349	45.0	16.8	7.47	6.20	3.70	1.21	10.5	0.16	0.90	0.16	7.23	99.5	40

CHEM 86-16

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB 21190	90	120	160	10	90	10	380
AB 21199	80	90	30	<10	100	20	1410
AB 21207	80	70	90	<10	100	20	1870
AB 21218	140	70	120	<10	90	20	2120
AB 21321	160	<10	200	<10	80	20	1460
AB21326	10	60	100	30	100	10	1040
AB21327	20	70	140	<10	130	30	840
AB21328	30	70	180	20	150	10	830
AB21329	10	60	130	<10	130	10	1090
AB21330	30	30	270	20	160	20	860
AB21331	60	20	130	40	140	20	1150
AB21332	30	30	140	20	140	10	1090
AB21333	30	20	150	20	130	20	1260
AB21334	50	40	150	30	160	20	950
AB21335	50	30	210	<10	150	20	850
AB21336	90	60	120	20	140	10	1710
AB21337	30	30	270	20	40	20	530
AB21338	30	30	190	10	40	20	730
AB21339	120	20	200	10	30	10	210
AB21340	80	20	450	20	30	10	250
AB21341	60	20	240	20	30	20	660
AB21342	90	20	550	20	90	20	90
AB21343	70	40	250	10	110	10	1160
AB21344	70	50	290	10	110	20	1180
AB21345	70	20	280	10	30	10	150
AB21346	30	60	120	50	130	30	770
AB21347	50	110	50	30	200	20	1200
AB21348	30	90	50	30	180	10	920
AB21349	40	60	190	<10	40	10	510

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-17	1 of 9

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 32+00E at 1+62S

AZIM:	210°	ELEV:	540 m
DIP:	50°	LENGTH:	249.0 m
		CORE SIZE:	NQ
STARTED:	November 3, 1986		
COMPLETED:	November 6, 1986		
PURPOSE:	Test deep IP anomaly		

CORE RECOVERY: Very good (not calculated)

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
41.5	212½°	51°			
133.2	215½°	50°			
212.4	218½°	48°			

CLAIM No: CHIP 1
SECTION: 32 East
LOGGED BY: S. Enns
DATE LOGGED: November 6-7, 1986
DRILLING CO: Burwash Enterprises Ltd., Cobble Hill
ASSAYED BY: Bondar Clegg, North Vancouver, B.C.

INTERVAL	DESCRIPTION
0 - 6.1	CASING
6.1 - 10.5	NANAIMO CONGLOMERATE Black hard cherty pebbles in sandy matrix. Faulted lower contact (?).
10.5 - 83.9	GABBRO
83.9 - 118.2	GREY CHERTY ARGILLACEOUS SEDIMENTS Laminated to thinly bedded, thermal biotite altered sediment sill succession. Bedding 25-35°. Thick intervals of massive brown greywacke also biotite altered. Locally cherty sediments are pyritic in foliation parallel and cross-cutting fractures.
118.2 - 135.0	GABBRO
135.0 - 145.5	GREY AND BROWN CHERT Thinly laminated 50°.
145.5 - 147.7	FAULT ZONE Crushed gouge zone black graphite-rich.
147.7 - 184.8	BLACK CHERT AND CHERTY ARGILLITE 40-45° bedding with local variations. Very pyritic 163 - 184 as foliation parallel and weak penetrative secondary cleavage fractures (4-6% pyrite). Local 2 to 4 mm pyritic black argillaceous beds contain 30% fine pyrite (pyritic mudstones) but overall 178 - 184 averages 12% pyrite.
184.8 - 249.0	ALTERED BIOTITE GABBRO Medium grained biotite pseudomorphs after amphibole in talcy matrix. Locally looks like peridotite. Two short intervals of biotite hornfels altered cherty sediments at 236.0 - 239.5; 240.7 - 244.2.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 2 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 1						0 - 6.1 CASING			
				5					
	6.1					6.1 - 10.5 CONGLOMERATE . Conglomerate of black cherty subrounded pebbles in medium grained sandy Matrix. . Nanaimo - blocky core throughout. . Fractured lower contact. Looks sheared and faulted but not severely faulted if at all. Unconformity more likely.			
		8.2							
				10					
		11.0							
Box 2						10.5 - 83.9 GABBRO . Blocky core throughout. 10.5 to about 47.0. . Fine grained phase 10.5 to 17.5. . 17.5 - 26.2 medium gabbro, fine phase 26.2 - 45.0. . Fault 21.0 - 21.5 20° - 40° to core axis. 23.3 - 23.8 26.2 - 29.3 Green gouge - major structure - Hematitic limonite on fractures 38.6 - 39.0 . White quartz vein 47.2 - 47.4. . Medium gabbro 45.0 - 46.0. . Fine gabbro 46.0 - 48.6. . Medium gabbro 48.6 - 71.5 then becoming gradually feldspar phyric. . Small fault 52.6 - 52.8. . White quartz vein 56.6 - 56.8 barren. 58.0 - 59.0 barren @ 40° to core axis. 66.7 - 10 cm. @ 35° to core axis. 71.9 5 cm. @ 35° to core axis. 79.3 10 cm. @ 45° to core axis. . Near lower contact gabbro is feldspar phyric 5-7% 2-6 mm feldspars.			
	13.7	13.7							
				15					
		17.4							
Box 3	19.0								
		20.1		20					
		23.5							
Box 4	24.5			25					
		26.2							
		29.6		30					
	32.0								
		32.3							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 3 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 6 Box	37.4	35.7		35					
		38.4							
Box 7	41½	39.3							
		40.2		40					
		41.5							
		43.6							
		44.8		45					
Box 8	47.1	46.9							
		48.2							
		50.9		50					
Box 9	52.8	53.3							
				55					
		56.4							
Box 10	57.9								
		59.7		60					
		62.8							
Box 11	63.8								
		65.5		65					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 4 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 12	69.0	68.9		70					
Box 13	74.5	71.9 74.7		75					
Box 14	79.0	76.8 78.3		80					
Box 15	84.1	81.4 82.6 86.6		85		83.9 - 98.4 CHERTY SEDIMENTS . Thinly laminated 2-3 mm grey beds of argillaceous cherty sediments. . Conspicuously thermal biotite altered, criss-crossed by abundant thin white quartz veinlets. . Bedding predominates 25-30° to core axis at 85.0 to 90.0 m. . 87.6 rare pyrite seams parallel bedding. . Bedding @ 37° to core axis at 90.2; 30° to core axis at 94.0. . Fault breccia 95.6 - 96.5 @ 25° to core axis gouge. . Fault 97.2 - 97.6 @ 25° to core axis breccia and gouge.			
Box 16	89.4	87.5 89.3		90					
Box 17	95.0	92.4		95					
Box 18	100.3	96.6 99.7		100		98.4 - 100.5 GABBRO 100.5 - 109.2 CHERTY SEDIMENTS . As above with thermal biotite alteration - light brown and grey. . Laminations 2-3 mm as beds @ 35° to core axis at 102.6			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 5 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 19	105.9	102.7		105		100.5 - 109.2 CHERTY SEDIMENTS - continued . Laminations 2-3 mm as beds @ 35° to core axis at 105.9. . 2-3 mm pyrite laminations parallel bedding total 3% fine grained 105.0 - 107.0. . Bedding @ 30° to core axis at 106. . Brown thin interbeds thermal biotite altered.	21305 21306 21307	105.0 106.0 107.0	106.0 107.0 108.0
Box 20	111.3	108.5		110		109.2 - 110.4 BROWN GREYWACKE . Fine-grained, criss-crossed by white quartz calcite veinlets, massive. . Preferentially thermal biotite altered - brown.			
		111.9				110.4 - 112.5 GREY CHERTY ARGILLITE . Swirled thin laminated beds, subparallel to core axis.			
Box 21	116.4	114.9		115		112.5 - 114.0 BROWN GREYWACKE . As 109.2 - 110.4.	21308 21309 21310	115.0 116.0 117.0	116.0 117.0 118.0
		118.0				114.0 - 118.2 GREY CHERTY SEDIMENTS . Bedded 30° to core axis at 114.8, brown thermal biotite altered argillaceous bed 2-5 mm. . Pyrite foliation parallel stringers 115.0 - 118.0; chalcopyrite 116.6 in cross-cutting veinlet set.			
Box 22	121.5	121.0		120					
		122.5				118.2 - 135.0 GABBRO . Fine grained plagiophyric 5-8% 2-6 mm plagioclase. . White quartz healed fractures common. . Sheared lower contact @ 40° to core axis.			
		124.1		125					
Box 23	126.9	127.1							
		130.1		130					
	132.6	133.2							
Box 24		135.0 135.6		135		135.0 - 145.5 GREY AND BROWN CHERT			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 6 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 25	157.3					135.0 - 145.5 GREY AND BROWN CHERT - continued . Microfractured throughout. . Bedding - thin laminations @ 50° to core axis at 136.4; 50° to core axis at 141.7. . Brown thermal biotite throughout varying in intensity depending on primary argillaceous component. . Pyrite fracture coatings 135.6 (near gabbro contact).			
		153.7							
				140					
		141.3							
Box 26	144.0								
		144.5		145		145.5 - 147.7 FAULT ZONE . Crushed gouge zone - black graphite rich. . 25° to core axis.			
		147.2							
Box 27	149.3					147.7 - 184.8 BLACK CHERT AND CHERTY ARGILLITE . 2-3 mm to 1 cm grey silty beds in very black graphitic chert and argillite. . Criss-crossed with white quartz calcite veinlets - dewatering (?) diagenetic. . Bedding generally at angle to core axis but locally swirls or is parallel. For example 151.5, 156.0 respectively. . Good example of white quartz veinlets normal to bedding, 147.2 to 150.3 . Bedding @ 40° to core axis at 148.7; 45° to core axis at 155.0. . Diagenetic breccia 155.2 - 155.8. . Pyrite fractures very common hairline (<1 mm) to 3 mm wide plus disseminated: total sulphides about 4% at 148.0 - 163.0. Pyrite fracture fillings as poorly developed secondary cleavage; commonly parallel foliation; pyrite up to 6-8 mm flat crystals. . Grey 0.2m silty beds 161.7, 163.0 @ 35° to core axis. . 169.8 - 170.8 greenish grey cherty and poorly sorted sandy bed. 3-4% pyrite in places. . Pyrite total sulphides 163.0 - 168.0 - 6%; 168.0 - 178.6 - 4%. . Small shear 166.0 @ 55° to core axis. Crushed - graphitic. . Sulphide "mud" 178.6 - 184.0. Thin pyrite rich 30-40% very fine pyrite beds 2-4 mm wide and very abundant veinlet, disseminated, secondary cleavage fracture pyrite. Total sulphides 10-12% (estimate). This probably explains the deep IP anomaly.			
		150.3		150					
		151.5							
Box 28	154.5	154.5		155					
		157.6							
Box 29	159.5	159.4		160					
		162.2							
Box 30	164.7	165.2		165					
		168.2							
	169.7	169.8		170					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 7 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
				170					
Box 31		172.8							
	175.0			175			21311	175.0	176.0
Box 32	/	175.9					21312	176.0	177.0
							21313	177.0	178.0
		178.9					21314	178.0	179.0
				180			21315	179.0	180.0
Box 33	181.6	182.0					21316	180.0	181.0
							21317	181.0	182.0
							21318	182.0	183.0
							21319	183.0	184.0
							21320	184.0	184.8
		185.0		185		184.8 - 236.0 ALTERED BIOTITE GABBRO			
Box 34	186.1					. Contact brecciated and fractured - black graphitic argillite clasts. (.2 m inclusion 185.4).			
						. Fine to medium grained equigranular contact to about 190.0.			
		188.1				. Medium brownish grey massive rock with white criss-cross quartz veinlets. White veined quartz section 195 - 197.			
						. Gracually coarsening downhole.	21350	189.7	
				190		. 8% biotite altered amphibole 2-5 mm.; 12% 2-4 mm feldspars (nearer contact).			
	191.6	191.1				. Matrix of sericite - talc.			
						. Further downhole lithology looks like peridotite (?). 10-12% coarse biotite pseudomorphs after amphibole in greenish talc-sericite-chlorite ground mass. For example 203.0 - 220.0.			
Box 35		194.2							
				195		. Local gabbroic phases (white feldspars visible).			
						. Becoming finer grained 224 onward to contact.			
	197.3	197.2							
Box 36									
		200.3		200					
	202.7								
		203.3							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 8 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 37		206.3		~~205~~			21351	207.9	
	208.4	209.4		~~210~~					
Box 38	/	212.4							
	214.2	216.5		~~215~~					
Box 39		218.5							
	219.8	221.6		~~220~~					
Box 40		224.6		~~225~~					
	225.4	227.7							
Box 41		230.7		~~230~~					
	231.0	233.8		~~235~~					
Box 42		236.8				236.0 – 239.5 ALTERED SEDIMENTS . Cherty composition and appearance - massive.			
43	236.7								

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-17 | PAGE No. 9 of 9

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 44 Box 45	240.0	239.9		240		236.0 - 239.5 ALTERED SEDIMENTS - continued . Micro fractured throughout. Looks silicified. Upper contact sharp @ 20° to core axis; lower contact @ 45° to core axis. Greenish tinge with local thermal biotite patches further from contact. Primary bedding (?).			
		242.9				239.5 - 240.7 ALTERED BIOTITE GABBRO . Fine grained.			
	↓	246.0		245		240.7 - 244.2 ALTERED SEDIMENTS . Lower contact @ 60° to core axis. . As 236.0 - 239.5.	21352	247.7	
	247.5								
	249.0	249.0		250		244.2 - 249.0 ALTERED BIOTITE GABBRO . As 184.8 - 236.0 lower section.			
						249.0 END OF HOLE			
				255					
				260					
				265					
				270					

REPORT: 126-6738

PROJECT: CHEMAINUS 116 PAGE 1

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21305	17	105.0-106.0	33	<5	35	<1	<0.5	2.05	422	2	5	16	<5	<5	3600
AB 21306	17	106.0-107.0	35	<5	27	<1	<0.5	2.34	336	4	6	16	<5	<5	4500
AB 21307	17	107.0-108.0	25	<5	38	<1	<0.5	2.45	395	3	5	13	<5	<5	5100
AB 21308	17	115.0-116.0	56	<5	45	1	0.5	3.10	426	3	6	22	27	<5	3500
AB 21309	17	116.0-117.0	80	6	47	<1	0.6	3.18	401	4	7	28	13	<5	7000
AB 21310	17	117.0-118.0	77	6	42	3	<0.5	2.52	338	2	6	29	10	<5	4300
AB 21311	17	175.0-176.0	18	<5	67	<1	0.7	1.89	319	2	3	10	<5	<5	3000
AB 21312	17	176.0-177.0	22	<5	89	<1	<0.5	2.51	616	2	4	12	7	<5	6100
AB 21313	17	177.0-178.0	23	<5	112	<1	<0.5	2.75	606	3	5	11	6	<5	4900
AB 21314	17	178.0-179.0	25	7	96	<1	<0.5	2.87	599	2	6	11	<5	<5	5900
AB 21315	17	179.0-180.0	24	6	86	<1	0.5	2.33	321	1	4	21	7	<5	9100
AB 21316	17	180.0-181.0	29	7	137	<1	0.8	2.24	298	2	5	24	<5	<5	16000
AB 21317	17	181.0-182.0	32	<5	132	1	1.0	1.78	260	2	3	23	<5	<5	6200
AB 21318	17	182.0-183.0	34	9	99	2	1.0	2.15	268	2	4	25	14	<5	19000
AB 21319	17	183.0-184.0	41	<5	70	2	0.6	1.93	288	2	4	23	<5	<5	8000
AB 21320	17	184.0-184.8	27	<5	74	2	<0.5	1.40	257	1	3	21	<5	<5	4700
			154 37	5	75		0.5							<5	6931

CHEM 86-17

SAMPLE	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	LOI	SUM	Ishikawa Index
AB21350	44.9	13.5	10.4	10.2	2.17	0.84	9.64	0.20	1.61	0.29	5.23	99.3	47
AB21351	44.1	11.6	10.7	14.2	1.07	0.82	10.9	0.19	1.67	0.31	3.85	99.6	56
AB21352	42.4	9.49	9.38	19.0	0.32	0.19	11.6	0.20	1.32	0.22	5.39	99.7	66

CHEM 86-17

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB21350	390	30	380	20	110	40	1230
AB21351	540	30	260	<10	100	60	780
AB21352	650	10	100	<10	70	30	180

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-18	1 of 11

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 28+00E at 1+40S

AZIM:	210°	ELEV:	500 m
DIP:	50°	LENGTH:	306.9
		CORE SIZE:	NQ
STARTED:	November 8, 1986		
COMPLETED:	November 12, 1986		
PURPOSE:	Test deep IP anomaly and get part of a stratigraphic section in vicinity of Anita showing.		
CORE RECOVERY:	99%		

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
29.6	210½°	48°			
124.1	210°	46°			
188.2	211½°	46°			
282.3	213°	45-3/4°			

CLAIM No:	CHIP 1
SECTION:	28 East
LOGGED BY:	S. Enns
DATE LOGGED:	November 9-13, 1986
DRILLING CO:	Burwash Enterprises Ltd., Cobble Hill
ASSAYED BY:	Bondar Clegg, North Vancouver, B.C.

INTERVAL	DESCRIPTION
0 - 21.0	CASING
21.0 - 56.8	GABBRO
56.8 - 91.8	MIXED FELSIC CRYSTAL TUFFS 5-8% 2-4 mm quartz eyes present, very sericitic with subordinate local darker chlorite rich intervals. Foliation 50-60°. Minor lapilli sized lithic clasts present.
91.8 - 141.6	PYRITIC FELSIC QUARTZ SERICITE CRYSTAL TUFF Greyish white sericite tuff with 6-17% sulphides (PyPoCpy) mainly as foliation parallel stringers and seams, and cross-cutting foliation with grey alteration envelopes of silica-veinlets appear to surround barren clasts 129.7 - 138.0. Local sulphides 4-5 cm wide massive chalcopyrite greater than pyrite 134.0 - 139.0. Increasing chalcopyrite and minor sphalerite with depth of interval. Stringer pipe zone.
141.6 - 165.1	ANDESITE FLOW (?) Dark green, massive, fine grained with narrow crystal tuff section at base.
165.1 - 183.4	GABBRO Amphibole phyric, medium grained, both contacts are fine grained.
183.4 - 213.3	MIXED GREEN TUFFS Medium green, andesitic crystal and ash with minor creamy cherty inter beds. Thermal biotite altered.
213.3 - 239.9	GABBRO
239.9 - 244.0	MIXED GREEN TUFFS As 183.4 - 213.3 green and brown, 50° bedding.
244.0 - 248.4	ANDESITE FLOW (?)
248.4 - 280.5	MIXED GREYWACKE AND CHERTY ARGILLITE Thin silty beds 50°. Sediment-sill succession.
280.5 - 288.1	GABBRO
288.1 - 306.9	MIXED GREYWACKE AND CHERTY ARGILLITE Two short gabbro intervals 303.8 - 304.3, 305.4 - 306.7.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 2 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 1	21.0	17.4		20		0 - 21.0 CASING			
		20.4							
		21.0				21.0 - 25.0 GABBRO			
						. Fine grained dark green gabbro.			
		23.5				. White quartz veined short interval 22.0, 23.0.			
						. Blocky core			
				25					
Box 2	26.0	26.5	67%			25.0 - 56.8 GABBRO			
						. Feldspar phyric 10-12%. 2-6 mm feldspar crystals and aggregates in fine grained hypidiomorphic matrix. Inequigranular textured section. 30.1 - 30.5 with fine grained patches.			
		29.6				. White chalcopyrite bearing quartz vein 27.9 - 28.3.			
				30		. Epidote veinlets and patches.			
						. White quartz veins over short intervals 32.1, 34.9.			
	31.5					. Foliated fine grained section 33.4 - 34.8 @ 45° to core axis.			
Box 3		33.6				. Blocky core down to 37.0.			
						. Lost core .5 m at 23.7; .5 m at 25.5.			
						. Pegmatitic feldspar-amphibole segregations 44.2.			
				35		. White quartz vein 52.3 - 52.9 with "late" blebs of chalcopyrite and green chlorite. Smaller quartz veins 53.2, 53.5.			
		36.7				. Finer grained phases mixed with feldspar phyric phases toward lower contact at 56.8 @ 57° to core axis.			
	36.7								
		39.1							
Box 4									
				40					
	41.4	41.1			8				
					9				
		43.3			9				
Box 5					10				
		44.8		[illegible]	10				
					11				
	46.5	47.2			9				
					6				
Box 6		49.1			10				
				50	3				
		50.9			10				
	51.6				7				
					6				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 3 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 7					8				
				55	7				
		55.7			8	56.8 - 66.0 ALTERED FELSIC TUFF			
					8	. Mottled light brown, massive lithology with abundant micro fracturing.			
Box 8	57.4				8	. Hard, siliceous.			
		58.5			11	. Variable 5-6% 2-4 mm quartz eyes present as crystal tuff?			
					11	. Pyrite dissemination overall 1-2 mm about 1-2%.			
				60	7	. Garnet-epidote-pyrrhotite-pyrite occurrence 62.8 (reddish brown garnet) copious thermal biotite.	21353	59.9	
					13				
		61.7			12	. Foliation weak to moderate intensity @ 50° to core axis at 65.5.			
	62.6				12				
		63.1			9				
Box 9					9				
				65	9				
		66.1			12	66.0 - 70.0 WHITE FELSIC LAPILLI TUFF	21354	65.8	
					9	. 7-8% 2-4 mm quartz eyes (maximum 7-8 mm) concentrated in clasts.			
	67.8				6	. Foliation @ 55° to core axis at 69.7.			
		69.2			7	. 2% disseminated pyrite, occasional pyrite stringers.	21355	68.7	
Box 10				70	12	. Few brown thermal biotite stringers. Sericite content increasing toward lower part of interval.			
					5				
		72.2			5	70.0 - 81.4 SERICITE GREENISH-GREY CRYSTAL TUFF			
					5	. Variable sericite-chlorite ratio; strong foliation @ 40-45° to core axis at 73.0 - 75.0. Darker chloritic interval 73.0 - 75.5 with 2-3 mm 7-8% quartz eyes; also contains more pyrite and specks of chalcopyrite.	21220	73.0	74.0
	73.5				5		21221	74.0	75.5
Box 11		75.3		75	11				
					9	. 73.0 - 75.5 3-4% disseminated and micro stringers pyrite and chalcopyrite including 73.8 - 74.5 interval of 7-8% pyrite and chalcopyrite. Disseminations and stringers.	75.3 for Sp		
					5				
					8	. Short interval of white quartz calcite healed fractures 77.1 - 77.7.			
	78.9	78.3			5	. Foliation parallel 2-3 mm pyrite stringers 78.3 - 80.0; at 79.0 0.2 m of 10% pyrite.	21222	78.3	79.3
				80	1		21358	79.7	
Box 12					1	. Very friable - pulls apart easily due to high sericite content.			
		81.4			10	. Increasingly crushed and sheared toward lower contact.			
			30%		12				
	84.5	84.9			12	81.4 - 83.4 "EARLY" MAFIC SILL			
				85	12	. Fine grained with numerous white quartz-calcite veinlets criss-crossing.	21359	84.3	
			50%		12	. Upper contact sheared @ 65° to core axis, lower contact sharp @ 35° to core axis. Lost .6 m of core at 83.0.			
					12	. 4% fine disseminated pyrite throughout.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 4 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
							*All samples prefixed by AB.		
Box 13		87.5			12	83.4 - 90.0 SERICITE LIGHT GREY CRYSTAL TUFF			
					13	. Sericite partings yield friable core, felsic composition			
	90.1		90%	90	14	. 8-9% 2-8 mm quartz elongate (fractured) parallel foliation.	21360	89.8	
		90.5			9	. Foliation @ 60° to core axis, 86.9, 94.0.			
					8	. 1-2% disseminated pyrite; locally 4%.			
Box 14					7	. Interval 88.1 - 90.0 contains less sericite, looks grey and silicified It contains 5-10 mm foliation parallel pyrite bands; average 4-5% pyrite dissemination.	21361	93.8	
	↓	93.6			7				
				95	11	. Lost core 1.15 m at 85.5; .3 m at 90.0.	21223	94.6	95.9
	95.9				9	90.0 - 91.8 EARLY ALTERED ANDESITIC DYKE (?)	21224	95.9	96.6
		96.6			7	. Massive pale olive green but altered to epidote, fine biotite, as fracture and pyrite seam envelopes.	21225	96.6	97.6
Box 15					10		21226	97.6	98.6
					11	. Coarse pyrite aggregate pyrite-black chlorite stringers, pyrrhotite in similar mode.	21227	98.6	99.6
		99.7		100	13	. Also fine reddish brown garnet.			
					7	. Both contacts @ 65° to core axis.	21363	101.0	
	101.4				6				
Box 16		102.7			9	91.8 - 111.6 GREY PYRITIC SERICITE QUARTZ CRYSTAL TUFF			
					9	. Looks fractured and mylonitized 91.8 - 94.0 similar to 83.4 - 90.0.			
				105	9	. 4-5% disseminated pyrite some foliation parallel stringers in upper part of interval.			
		105.8			6	. 94.6 - 96.0 increased pyrite dissemination and foliation stringers.	21228	106.0	107.0
					9	This interval also looks darker grey and silicified pyrite 10-12%.	21229	107.0	108.0
	107.2				10	. Small shear @ 25° to core axis at 96.6, small fault 97.7 gouge.	21230	108.0	109.0
Box 17		108.6			10	. Pyrite stringers and seams cut foliation and have grey siliceous envelopes from 96.0 onward. (Stringer zone?) For example 97.0.	21231	109.0	110.0
					9		21364	110.0	
				110	8	Chalcopyrite trace at 98.7; seams of pyrite up to 1 cm at 99.0.	21232	110.0	111.6
		111.9			9	. Stringers cut by late white quartz-calcite veinlets.			
	112.8				9	. Below shear at 99.7 rock is more sericitic again. Local quartz eyes 8-10 mm for example at 101.5 - 102.3. Sparse foliation parallel stringers.	21233	113.3	114.1
					11		21234	114.7	116.0
		114.9			11	. 106.1 - 106.9 10% pyrite foliation parallel stringers. Sphalerite at 106.8.	21235	116.9	117.9
				115			21236	117.9	118.9
						. 107.4 2 cm 20% fine pyrite foliation parallel band 1 cm band at 111.0.	21237	118.9	119.9
						. Foliation 109.5 @ 55° to core axis.	21238	119.9	120.9
						. 108.0 - 111.6 pyrite content 10-11% foliation parallel and rock has mottled grey appearance due to silicification and variable sericite content.			
						. Small shear at 110.7 @ 45° to core axis.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 5 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION
Box 18						111.6 - 113.3 ALTERED EARLY MAFIC DYKE . Similar to 81.4 - 83.4. . Sheared upper contact; lower contact @ 40° to core axis.
Box 19	118.2	118.2		115	15	113.3 - 120.9 GREY PYRITE SERICITE QUARTZ CRYSTAL TUFF . Two altered andesite dykes. 114.1 - 114.5 @ 25° to core axis. Reddish brown pale garnet and 116.0 - 116.2 similar to 90.0 - 91.8. . Variable silicification (?), 113.3 - 114.1, 116.5 - 120.9 due to adjacent gabbro (?). . Pyrite mainly foliation parallel disseminations, stringers seams and concentrated bands as fine (syngenetic ?) and coarse sulphides (remobilized). . Sphalerite 3 mm seam at 120.3 - pyrite rich (20-30%) clast at 120.2, 119.3. . Pyrite estimate 9-10% at 113.3 - 114.1; 6-7% at 114.5 - 116.0; and 14-15% at 116.2 - 120.9. . Foliation @ 55° to core axis at 120.0. . Small shear at 118.9 @ 60° to core axis. . Sulphide (pyrite-rich) clast at 120.2 1x3 cm.
Box 20	123.8	121.0 124.1		120 125	11 16 12 7 5 12 5 5 5	120.9 - 128.6 GREEN GABBRO . Feldspar phyric 5-9% 2-4 mm. . Sharp contacts intact; upper @ 45° to core axis, lower @ 65° to core axis. Adjacent crushing.
Box 21	129.4	127.1 130.1		130	12 10 5 8 7 5 8 3	128.6 - 141.6 GREY SERICITE QUARTZ CRYSTAL TUFF . Mylonitic texture near upper contact, strongly sheared rock 131.7 - 132.0 @ 60° to core axis. . Variable sericite and quartz content - up to 7-8% quartz 2-3 mm noted 137.0. . Appearance of large clasts 129.0 - 130.0 2-3 cm which are sulphide barren. . This interval is sulphide zone averaging more than 10% total sulphides comprised of pyrite, chalcopyrite, pyrrhotite, sphalerite. Pyrite and pyrite plus chalcopyrite stringers (2-4 mm wide) and seams (0.5-2 cm wide) are most common. Exhibit dark grey silicic envelopes and display cross-cutting relationship here and there to foliation @ 60-70° to core axis. The cross-cutting feature looks like sulphides surrounding larger clasts: 129.7 - 130.0, 131.0 - 131.6, 135.0 - 138.0.
Box 22	135.3	133.2 136.2		135	8 6 6	

*All samples prefixed by AB.

SAMPLE NO. *	FROM	TO	Visual % Sulphides			
21239	128.6	129.6	6 Py			
21240	129.6	130.6	7 Py			
21241	130.6	131.6	7 Py	Cpy around barren clasts		
21242	131.6	132.6	10 Py			
21243	132.6	133.6	12 Py	Po Cpy stringers		
21244	133.6	134.6	10 Cpy	Py		
21245	134.6	135.6	17 Cpy	Py Seams & stringers		
21246	135.6	136.6	15 Py	Cpy Seams & stringers		
21247	136.6	137.6	10 Py	Cpy Stringers & Seams		
21248	137.6	138.6	12 Py	Po Cpy Stringers & Seams		
21249	138.6	139.6	7 Po	Cpy Py Stringers		
21250	139.6	140.6	5 Po	Py Cpy Stringers		
21301	140.6	141.6	7 Po	Py Sph Stringers		

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 6 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 23	141.1	139.3		140	13	128.6 - 141.6 Grey Sericite Quartz Crystal Tuff - continued			
					8	. Local sulphide seams are massive over 3-4 cm, chalcopyrite is locally spectacular. 134.0 - 139.0.			
		142.3			11	. Pyrrhotite, Chalcopyrite and some pyrite display a remobilized texture; pyrrhotite is strongly magnetic.	21365	143.5	
					9	. Sphalerite increases in incidence from 140.0 - 141.6.			
					4	. This interval represents a sulphide stringer zone - possible pipe.			
		145.4		145	3	. Minor faulted (?) lower contact - sheared.			
	146.8				4				
					6	141.6 - 162.0 DARK GREEN ANDESITE FLOW			
Box 24		148.4			6	. Fine grained massive rock with local sheared sections and epidote-quartz sections about 0.1 m wide some containing minor chalcopyrite.			
					5	. Upper contact at 0.5 m. 60° to core axis. Strong foliation and quartz veining due to shearing along minor fault.			
				150	8	. Andesite is largely aphyric but locally displays 3-4% 1-3 mm black chlorite pseudomorphs with "tails"; locally lighter green lithology displays 3-4% 2-3 mm feldspars. Matrix is green aphanitic.			
					5	. Narrow sections of very fine grained sheared andesite.			
	152.1	151.5			9	. Numerous white/quartz veinlets and epidote filled fractures.			
					7				
Box 25					8				
		154.5		155	6				
					6				
					6				
	157.7	157.6			8				
					7				
Box 26				160	4				
		160.6			6	162.0 - 165.1 DARK GREEN CHRYSTAL TUFF			
					7	. Strongly foliated @ 45° to core axis. Chlorite and minor sericite. Crystals of feldspar, epidote altered feldspar, quartz 2-3 m near top, 5-6 mm near base of interval.			
					9	. Mafic gabbro dyke - narrow 163.3 - 164.6 with chill zones.			
	163.5	163.7			6				
				165	7				
Box 27					2	165.1 - 183.4 AMPHIBOLE PHYRIC GABBRO (?)			
		166.7			1	. Medium green, massive, medium grained rock with numerous epidote fractures.			
					5	. 10% 2-4 mm amphibole phyric - black.			
	169.1				8	. 1-2 cm clasts of similar lithology.			
		169.8		170	4	. Fine grained phases upper and lower portion of interval.	21366	169.7	
Box 28					5	. This could just as likely be andesite lava flows.			
					3				
		172.0			6				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 7 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 29	174.7	175.9		175	3 7 5				
					4 6				
		178.9			5				
	180.5			180	7 7		21367	180.3	
Box 30		182.0			6 5	183.4 - 213.3 MIXED TUFFACEOUS SEDIMENTS . Upper interval bedded @ 35° to core axis. Fine crystal-ash tuff of medium green colour with creamy cherty interbeds. . 187.4 - 190.3 brown thermal biotite altered ash tuffs interbedded with .5-2 cm cherty beds. 65° to core axis at 187.8. . Narrow fine gabbroic sills at 189.6 0.1 m wide. 190.4 - 192.5. . Sediments 192.5 - 199 are heterogeneous with brown cherty argillaceous beds (thermal biotite altered) gradually becoming greenish downhole. Abrupt (sharp) 45° to core axis contact. Coarsening to lapilli tuff at 194.7 very immature sorting. Subangular elongate lithic clasts @ 70° to core axis. Commonly display alteration rind. This cycle gradually fines downhole toward 197.0. 2-4 m quartz eyes 4-8%. Other cycles 197.2 - 200.3; 200.3 - 213.0? . Light feldspar phyric interval 197.5 - 198.0. Myra? . Unit gradually grades into medium green coarse tuff down to 211.0 then becomes brown from thermal biotite alteration 211.0 to contact. . Fine silty ash tuffs (top of cycle?) 211.5 - 213.3. Bedding @ 70° to core axis. Minor pyrite, foliation-parallel. . Tops downhole by 3 determinations of fine-graded bedding features and on basis of cycle fining downhole.			
		185.0		185	10 8				
Box 31	186.1				2 7				
		188.1			6				
					9				
				190	9				
	191.8	191.1			8 7				
					8				
Box 32		194.2			8				
				195	9				
					3				
	197.5	197.2			5		21368	197.0	
Box 33					10				
					5				
		200.5		200	3				
	202.3				7				
					7				
		205.5			4				
					6				
Box 34				205	6				
		206.5							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 8 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 35	208.0				3				
					5				
		209.4		210	5				
					10				
					11				
		212.4			7				
Box 36					9				
	214.7			215	7				
		215.5			7				
					7				
					4				
		218.5			7				
Box 37				220	9				
	220.4								
		221.6							
		224.6							
Box 38				225					
	226.0						21369	226.7	
		227.7							
				230					
		230.7							
Box 39	231.7								
		235.8							
				235					
		236.8							
Box 40	237.4								
		239.9		240			21370	240.5	

213.3 - 239.9 AMPHIBOLE PHYRIC GABBRO

- Similar to 165.1 - 183.4.
- Finer marginal contact phase 213.3 - 215.0.
- Small shear @ 65° to core axis at 214.5.
- Andesite lava flows (?).
- 0.1 to 0.7 m sections dark green aphanitic with white quartz-calcite veinlets.
- Specks chalcopyrite locally.
- Lower portion of interval displays conspicuously more epidote alteration of feldspars in matrix, as phenocryts and along veinlets.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 9 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 41	242.9	242.9		245		239.9 - 244.0 DARK GREEN MIXED TUFFS . Ash and coarse crystal tuffs similar to 197.0. . Bedding @ 50° to core axis at 240.3 of fine ash - dark green. . Coarse crystal poorly sorted 210.7 - light green abrupt contact @ 60° to core axis.			
Box 42	248.4	246.0 249.0		250		244.0 - 248.4 GREEN ANDESITE . Similar composition 213.3 - 239.9. . Chill phase both margins. . Bleached epidote altered intervals 245.1 - 245.8, 247.5 - 247.6. . Spherulites 245.0 1 cm, also small round spherulites 247.6 - 243.4. . Possible lava flow with top to base of interval (?).			
Box 43	254.1	252.1 255.1		255		248.4 - 280.5 BROWN GREYWACKE . Probably a volcanic wacke. . Short intervals of silty tuffs with tops indications: 248.5 tops uphole @ 50° to core axis. 248.8 tops downhole @ 50° to core axis. 248.1 tops downhole @ 25° to core axis. 255.8 tops downhole @ 50° to core axis. 261.1 tops downhole @ 50° to core axis.			
Box 44	259.8	258.2		260		. 261.2 - 263.0 sheared section - clasts and grains linearly deformed. . Brown colour is probably not entirely due hornfels (thermal) biotite development. Although it intensifies near gabbro contact.			
Box 45	265.0	263.0 267.3		265					
Box 46	270.9	270.4 273.4		270 275					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 10 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 47	276.5	276.5		280		280.5 - 288.1 GABBRO . Typical feldspar phyric variety. . Sharp upper contact. . Lower contact hard to determine - taken as 288.1 - first recognizable bedding. . White 7 cm quartz vein with abundant chalcopyrite at 286.8.			
Box 48	282.0	279.5 282.5		285					
Box 49	287.8	285.6 288.6		290		288.1 - 294.1 BROWN GREYWACKE . As 248.4 - 280.5. . 65° to core axis, Bedding at 293.3.			
Box 50	293.4	291.7 294.7		295		294.1 - 303.8 MIXED GREYWACKE AND CHERTY ARGILLITE . 294.1 - 294.8 - Grey greywacke - massive. . 294.8 - 296.5 - Black cherty argillite and minor greywacke beds with argillites 2-4 cm, greywacke beds 4-5 cm wide. Bedding @ 50° to core axis. . 296.7 - 299.1 - Massive greenish-grey greywacke - volcanic - andesitic composition. . 299.1 - 303.8 - Thermal biotite altered thinly bedded cherty argillite and medium 4-5 cm coarse greywacke beds, also biotite hornfels altered. 60° to core axis at 299.7. . Pyrite fractures in black graphitic argillite section.			
	299.1	297.8		300					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-18 | PAGE No. 11 of 11

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 51 Box 52	304.8 306.9	300.8 303.9 306.9		300 305 310		303.8 - 304.3 GABBRO . As 280.5 - 288.1. . Lower contact @ 45° to core axis. 304.4 - 305.4 GREYWACKE . Greenish grey andesitic composition - sheared. 50° to core axis. Foliation. 305.4 - 306.7 GABBRO . As 280.5 - 288.1. . Upper contact @ 35° to core axis. . Lower contact @ 50° to core axis. 306.7 - 306.9 GREYWACKE . As 304.3 - 305.4. 306.9 END OF HOLE			

REPORT: 126-6438 PROJECT: CHEMAINUS :116 PAGE 1

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Co PPM	Ni PPM	Mn PPM	Cd PPM	Ag PPM	Fe PCT	As PPM	Au PPB	Ba PPM
AB 21220	18	073.0-074.0	833	20	216	3	8	4	112	2	1.7	3.91	<5	80	2000
AB 21221	18	074.0-075.5	1719	130	0.37%	2	5	3	105	26	2.5	4.91	<5	50	2100
AB 21222	18	078.3-079.3	54	49	154	2	3	3	54	1	<0.5	1.45	<5	10	2000
AB 21223	18	094.6-095.6	260	35	107	3	4	4	42	2	1.0	3.98	20	280	1400
AB 21224	18	095.6-096.6	421	113	319	3	4	3	37	2	2.0	4.34	17	640	1400
AB 21225	18	096.6-097.6	156	20	33	1	4	3	38	<1	0.5	2.36	<5	50	1500
AB 21226	18	097.6-098.6	139	25	143	<1	3	3	32	1	<0.5	2.94	8	20	1700
AB 21227	18	098.6-099.6	365	351	1837	3	8	3	127	10	1.6	4.22	8	65	1200
AB 21228	18	106.0-107.0	113	442	1535	5	6	2	44	8	1.5	3.20	8	35	3700
AB 21229	18	107.0-108.0	117	481	445	5	5	<1	31	2	1.5	1.13	<5	20	3000
AB 21230	18	108.0-109.0	46	14	39	4	6	2	34	1	0.8	1.63	<5	15	2600
AB 21231	18	109.0-110.0	112	44	216	4	7	1	34	1	1.5	2.20	<5	35	2900
AB 21232	18	110.0-111.6	57	6	131	5	7	3	53	<1	1.2	2.52	<5	60	3800
AB 21233	18	113.3-114.1	31	6	18	4	10	1	103	<1	0.8	3.83	6	110	3900
AB 21234	18	114.7-116.0	62	39	27	2	7	3	113	<1	0.9	1.99	8	30	4200
AB 21235	18	116.9-117.9	77	<5	6	3	12	5	9	<1	1.0	2.06	<5	25	2100
AB 21236	18	117.9-118.9	95	<5	4	2	6	2	8	<1	1.1	1.34	<5	10	2200
AB 21237	18	118.9-119.9	249	24	191	4	14	5	29	2	1.5	3.19	<5	45	3500
AB 21238	18	119.9-120.9	731	11	499	5	17	20	87	4	1.9	3.66	11	65	5100
AB 21239	18	128.6-129.6	1200	6	34	6	19	4	83	1	1.5	3.65	7	480	1100
AB 21240	18	129.6-130.6	700	6	19	4	10	5	19	2	1.4	4.03	<5	70	1600
AB 21241	18	130.6-131.6	2300	15	2748	7	8	3	19	17	3.6	3.32	15	70	2300
AB 21242	18	131.6-132.6	1500	7	81	14	15	56	183	2	2.3	6.79	37	70	3300
AB 21243	18	132.6-133.6	2300	5	70	10	14	6	36	2	2.4	4.04	9	170	1500
AB 21244	18	133.6-134.6	8300	6	128	6	17	83	183	2	4.9	4.37	8	205	2600
AB 21245	18	134.6-135.6	38000	7	576	8	9	53	131	6	19.5	>10.00	45	70	2000
AB 21246	18	135.6-136.6	19800	8	648	9	23	16	24	4	10.9	>10.00	28	410	2500
AB 21247	18	136.6-137.6	6600	10	106	6	12	7	31	2	4.9	6.26	17	205	5700
AB 21248	18	137.6-138.6	6690	<5	378	6	12	11	25	3	4.5	>10.00	<5	140	3500
AB 21249	18	138.6-139.6	1800	6	220	5	15	12	21	2	2.0	7.45	9	140	7500
AB 21250	18	139.6-140.6	2400	25	524	2	6	3	13	3	3.1	4.13	6	170	6700
AB 21301	18	140.6-141.6	2300	66	0.40%	3	21	37	47	21	3.3	7.40	<5	70	5800

CHEM 86-18

SAMPLE	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	LOI	SUM	Ishikawa Index
AB 21225	72.3	13.4	0.75	0.80	0.94	3.19	4.02	0.01	0.28	0.06	3.93	99.9	70
AB 21229	70.9	16.3	1.15	0.78	1.41	3.37	2.43	0.01	0.37	0.05	3.16	100.3	62
AB 21236	73.7	14.8	0.42	0.10	1.42	2.09	2.77	0.01	0.36	0.08	3.77	99.8	61
AB 21242	56.9	11.2	2.86	1.76	0.76	2.35	13.6	0.03	0.35	0.06	9.93	100.2	53
AB 21247	68.1	5.91	2.21	0.17	0.89	1.18	11.6	0.01	0.17	0.08	8.08	99.1	30
AB 21250	67.0	15.6	0.14	0.14	1.06	2.71	7.61	0.01	0.39	0.08	4.70	100.3	70
AB21353	70.7	14.8	2.31	1.84	3.16	2.29	2.30	0.10	0.32	0.08	1.93	100.1	43
AB21354	70.9	13.8	2.65	2.43	1.15	3.14	2.62	0.12	0.30	0.07	2.77	100.2	59
AB21355	71.4	13.7	2.25	1.80	0.89	3.44	2.83	0.12	0.29	0.07	3.23	100.1	63
AB21358	74.5	14.5	0.86	0.98	2.81	2.45	1.45	0.02	0.32	0.08	1.93	100.2	48
AB21359	73.6	14.1	1.15	0.92	2.25	2.60	2.20	0.02	0.31	0.07	2.54	100.0	51
AB21360	74.3	13.4	1.41	1.01	0.54	3.33	2.65	0.03	0.30	0.07	3.16	100.4	69
AB21361	72.1	14.1	0.85	1.15	0.70	3.64	3.52	0.02	0.37	0.08	3.54	100.3	76
AB21363	74.9	14.5	1.02	0.83	1.19	3.41	1.05	0.01	0.32	0.07	2.70	100.3	66
AB21364	62.6	13.8	1.13	0.85	0.40	3.30	9.56	0.01	0.41	0.09	7.38	100.0	73
AB21365	49.5	13.8	9.69	6.95	3.01	0.19	12.5	0.20	1.80	0.17	1.77	99.7	36
AB21366	50.4	13.7	8.81	9.71	3.24	0.36	10.3	0.19	0.64	0.14	2.47	100.1	46
AB21367	49.6	14.0	11.7	8.63	2.68	0.28	9.90	0.17	0.57	0.13	2.23	100.0	38
AB21368	54.3	18.4	7.42	3.80	2.16	1.14	8.64	0.15	0.94	0.33	2.85	100.3	34
AB21369	47.4	13.8	13.8	7.91	1.86	0.34	9.41	0.16	0.53	0.13	4.62	100.1	34
AB21370	47.7	17.6	7.84	7.25	2.81	1.64	11.0	0.20	0.84	0.21	2.85	100.1	46

CHEM 86-18

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB 21225	70	80	90	10	140	30	1500
AB 21229	80	80	150	10	140	<10	3070
AB 21236	70	60	220	<10	120	10	2210
AB 21242	240	<10	70	<10	80	30	3430
AB 21247	150	<10	60	<10	50	20	6220
AB 21250	80	<10	260	10	130	20	7020
AB21353	90	70	250	20	120	20	1410
AB21354	50	80	150	10	100	20	1800
AB21355	60	90	110	10	110	10	1330
AB21358	30	60	280	20	120	<10	1920
AB21359	50	60	160	10	140	20	1750
AB21360	60	90	100	40	120	10	1740
AB21361	60	100	70	10	120	20	2030
AB21363	40	90	110	20	120	10	2460
AB21364	60	90	160	<10	130	<10	3420
AB21365	130	20	200	30	100	20	260
AB21366	300	10	190	10	20	30	220
AB21367	300	<10	390	20	<10	10	290
AB21368	20	40	440	50	110	10	560
AB21369	276	20	400	10	<10	20	190
AB21370	60	50	380	10	40	20	810

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-19	1 of 16

PROPERTY: CHEMAINUS JV

HOLE LOCATION: Line 48+00W at 4+80S

AZIM: 210° ELEV: 750 m

DIP: 52° LENGTH: 390.1 m

CORE SIZE: NQ

STARTED: November 13, 1986

COMPLETED: November 20, 1986

PURPOSE: Test geology of southwest Holyoak 3 and deep IP anomaly.

CORE RECOVERY: 97%

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP
20.4	211½°	51½°	346.9	209°	45°
62.5	211½°	50½°	389.9	209½°	44°
124.0	209½°	46½°			
205.1	209½°	44°			
276.1	208½°	45½°			

CLAIM No: HOLYOAK 3

SECTION: 48 West

LOGGED BY: S. Enns

DATE LOGGED: November 15-23, 1986

DRILLING CO: Burwash Enterprises Ltd., Cobble Hill

ASSAYED BY: Bondar Clegg, North Vancouver, B.C.

INTERVAL	DESCRIPTION
0 - 10.7	CASING
10.7 - 26.4	ANDESITE TUFF Green crystal and ash tuff.
26.4 - 59.0	DACITE FLOW Massive, light greenish grey, 1-2% pyrite dissemination. Early mafic dyke 29.3 - 31.5.
59.1 - 63.3	RHYOLITE FLOW White, quartz-bearing generally massive, cut by pyrite and minor chalcopyrite. Probably flow.
63.3 - 84.9	DACITE FLOW Feldspar phyric similar to 26.4 - 59.1. Pyrite stringers common in lower part of interval.
84.9 - 104.4	RHYOLITE FLOW Probably flow. Generally light grey, 3-10% 2-6 mm quartz eyes, mottled due to variable minor chlorite. Pyrite stringers with 2-3 mm alteration rims. 20-30 cm pyrite quartz bands with minor chalcopyrite.
104.4 - 136.4	FELSIC CRYSTAL TUFF Greenish grey 5-6% 2-4 mm quartz, local felsic clasts, 3% pyrite as stringers with altered envelopes and minor chalcopyrite. Lower interval quartz poor, 1-2% pyrite.
136.4 - 145.9	GABBRO
145.9 - 173.9	FELSIC TUFF Lapilli 5-20 mm near top of mainly crystal tuff 2-7% coarse disseminated pyrite 145.0 - 163.0, quartz common lower down. 5-12% very coarse pyrite with black chlorite as 5-50 mm seams. Pyrite aggregates 1-15 mm. 40% pyrite.
173.9 - 211.7	ANDESITE TUFF Crystal ash tuff green, generally massive, locally sharp banded 50-55° 4% pyrite, locally 10-30% as 20-30 cm very coarse seams with black chlorite.
211.7 - 226.8	RHYOLITE FLOW White, semi-massive, 1% pyrite disseminations and pyrite-chalcopyrite stringers with altered envelopes. Gabbro 214.3 - 222.4.
226.8 - 243.7	RHYOLITE TUFF Greenish with more sericite than above. 5% pyrite dissemination and foliation parallel stringers. Black chlorite accompanies coarse pyrite seams 10-20 mm wide.

FALCONBRIDGE LTD

DRILL HOLE LOG

HOLE No.	PAGE No.
CHEM 86-19	2 of 16

PROPERTY:

HOLE LOCATION:

AZIM: ELEV:

DIP: LENGTH:

CORE SIZE:

STARTED:

COMPLETED:

PURPOSE:

CORE RECOVERY:

SURVEY

DEPTH	AZIM.	DIP	DEPTH	AZIM.	DIP

CLAIM No:

SECTION:

LOGGED BY:

DATE LOGGED:

DRILLING CO:

ASSAYED BY:

INTERVAL	DESCRIPTION
	- PAGE TWO -
243.7 - 276.3	ANDESITE FLOW Massive dark green flows and coarse tuff. 5-6% pyrite overall. Coarse black chlorite-pyrite seams 10-40 mm.
276.5 - 281.6	DACITE TUFF Pale grey fine grained, sericitic.
281.6 - 307.0	ANDESITE TUFF As 243.7 - 276.5 probably mainly tuff.
307.0 - 354.8	ALTERED ANDESITE Massive, dark green with 10-80% epidote altered patches 5 to 50 cm in size. Coarse tuff unit.
354.8 - 370.9	RHYOLITE Tuff? 10% 3-6 mm quartz eyes, 1-2% pyrite disseminations - significant core loss in interval.
370.9 - 384.4	ALTERED ANDESITE As 307.0 - 354.8. Mixed fault zone 377.0 - 382.4 with andesite and tuff clasts.
384.4 - 390.1	RHYOLITE FLOW Massive, white, crushed sericite rich sections. "Early" mafic dyke 384.4 - 386.3.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 3 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
				0		0 - 10.7 CASING			
				5					
	1								
				10		10.7 - 21.3 GREEN ANDESITIC CRYSTAL TUFF . 15% 4-6 mm granular feldspar aggregates in dark green chlorite matrix. Feldspars show a foliation @ 50° to core axis at 17.5. 1-2% calcite. . 3% 1-2 mm dark flat chloritic crystals with "tails" parallel foliation. . Less than 1% pyrite along fractures which display black chlorite			
Box 1	10.7	13.1							
				15			21431	15.6	
Box 2	16.0	16.2							
		18.3							
		19.5							
	20.2	20.4		20		21.3 - 26.4 DARK GREEN ANDESITIC FINE TUFF . Similar to above but finer grained with proportionally higher chlorite flat "tail" crystals. . Foliation @ 55° to core axis at 24.3 gets stronger toward lower contact of interval as fault zone is approached. . Less than 1% pyrite dissemination along foliation planes. . Strong fizz with HCl - proportionally higher calcite present estimate 5-6%. . Blocky core.			
Box 3		23.5							
	25.6			25					
		26.5							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 4 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 4	25.6	26.5		25		26.4 - 29.3 MASSIVE DACITIC FLOW . Fault zone 26.4 @ 45° to core axis gouge, also 26.5 @ 50° to core axis crushed. . Massive, hard. Light greenish grey, sericite-rich with variable black chlorite 7-8% on foliation planes. . Blocky core.			
	30.6	28.9 29.9		30		29.3 - 31.5 BLACK EARLY MAFIC DYKE . Chill margins, highly fractured minor quartz-calcite veinlets. . 1-2 mm feldspars 15% and 5% 3-5 mm amphiboles.	21432	28.7	
Box 5		32.3 32.6	77%			31.5 - 44.8 LIGHT GREENISH GREY FELDSPAR CRYSTAL FLOW . 40° to core axis foliation. . 1-2 cm darker and light lithic clasts 2-5% from 31.5 - 33.0.			
				35		. Subequant feldspars 2-3 mm 7-10% throughout; locally 1-2 mm and 4-6 mm.			
	36.3	35.7				. Pyrite 1-2% but very local, generally confined to 2-3 mm stringers which cut and parallel foliation.	21433	35.7	
Box 6		38.7		40		. Unit is characteristically massive, with weakly developed penetrative cleavage having the appearance of a dacitic flow. . Local zones of flow brecciation, for example 39.4, 40.1, and 41.4. . Aphyric siliceous hard wavey bands 0.5 to 1 cm wide 43.5 - 44.1. 80° to core axis at 40.8 as possible interflow dust tuffs?			
	42.0	41.8				. Narrow 5 mm gouge slip 44.3. . Lost core .7 m at 33.0			
Box 7		44.8		45		44.8 - 47.5 SHEARED DACITE FLOW . Similar composition to above but more strongly foliated and broken. 30° to core axis. . Sericite more abundant. . Quartz vein 20 cm 46.7, 10 cm 47.5, 48.4 chlorite commonly present.			
	47.4	47.5				. Lost core 0.2 m at 48.2.			
		49.1	88%						
		50.6		50			21434	49.8	

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 5 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 8	47.4					47.5 - 59.1 FELDSPAR PHYRIC DACITE FLOW . Greenish-grey translucent matrix appearance, probably similar in composition to 31.5 - 44.8. Blocky core highly fractured - local gravelly core sections 50.4 - 52.7. . Subequant white 2-5 mm feldspars in aphyric matrix. . Foliation controlled fractures about 40° to core axis, local flow banding (?) 40° to core axis at 50.3. . 1-2% disseminated fine pyrite. . Lost core 0.5 m at 52.0. . Small shears at 50.4 - 30-45° to core axis; 53.7 - 45° to core axis; 55.0 - 45° to core axis; 55.5 - 56.0 @ 05° to core axis; 56.8 - 40° to core axis. . Pyrite 1-2% 50.0 - 52.0, 55.0 - 58.0. . Aphyric felsic greenish grey vague 0.5 - 1 cm bands 80° to core axis at 54.8 and becoming common 56.5 - 58.2? An injection of felsic material cuts across foliation at 58.4.			
		51.5		50					
Box 9	52.7		79%						
		53.9		55					
		56.4							
Box 10	58.3						21435	57.8	
		59.4		60		59.1 - 63.3 GREY QUARTZ PHYRIC FLOW . Similar composition as 47.5 - 59.1 but 4-6% 2-5 mm quartz eyes present and feldspars largely absent. . Foliation 55° at 61.7. . Pyritic interval 59.8 - 59.9. 10% pyrite plus minor chalcopyrite. . More strongly foliated than 47.5 - 59.1. . Small fault at 63.3 - 63.4 @ 45° to core axis.	21436	60.4	
	63.5	62.5							
Box 11		65.5		65					
	68.7	68.6 69.2							
				70					

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 6 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 12	68.7			70		63.3 - 84.9 FELDSPAR PHYRIC DACITE FLOW . Greenish-grey similar to 31.5 - 44.8, simi-massive, quartz eyes largely absent, subequant feldspars. . Grey felsic aphyric clasts injections ? (as 58.4) at 64.5. . Local banding flow (?) 64.6 parallels foliation cleavage 50.0, also 75.4 - 77.0.			
		72.2				. Local, minor pyritic 2-5 mm seams-foliation parallel.			
Box 13	74.2					. White sericite rich interval 67.9 - 68.1 with adjacent minor sear 45° to core axis and 3 mm quartz-pyrite seam.	21437	73.3	
		75.3		75		. Fine grained section 70.9 - 71.1, coarser intervals 69.7 - 70.9, 71.5 - 72.0, 75.4 - 76.7, 3-5 mm feldspars. . Strong shearing 69.0 - 69.4 @ 50° to core axis, 71.5 @ 50° to core axis. . Foliation cleavage 50° to core axis at 76.0.			
		78.0				. Pyrite stringers are common and foliation parallel - 72.0 - 79.3 estimate 2% pyrite; chalcopyrite at 79.2.			
Box 14	79.3			80		. Lighter interval (more sericitic) 74.2 - 75.4 also stronger foliation. . Foliation becomes strong 83.0 - 84.9 @ 60° to core axis.			
		81.4				. Silicified faulted contact accompanied by minor pyrite and sericite. . Lost core 0.6 m at 83.8, 1.2 m at 86.3, 0.2 m at 89.8. . Sheared fault 60° to core axis gouge at 84.9.			
			90%						
Box 15	85.2			85		84.9 - 104.4 GREY SILICIFIED FELSIC FLOW . Mottled 88.0 - 90.0 by minor chlorite presence.	21438	85.8	
		87.5	80%			. Very broken core 84.9 - 85.7 pyrite and minor chalcopyrite present. . Mylonitic 85.7 - 97.1.			
						. Pyrite quartz zones 0.2-0.3 m wide up to 10% pyrite at 92.3, 94.8, 95.3, 95.8 local specks chalcopyrite.			
		90.5	93%	90		. Strongest (bleached) silification 84.9 - 86.7. . 3-10% 2-6 mm quartz eyes throughout but variable.	21439	90.9	
Box 16	91.6					. Flow on basis of relatively massive, homogeneous appearance of lithology.			
		93.6				. Lower section of interval becomes mottled due to greenish chloritic streaks in core.			
				95		. Foliation 55° to core axis at 100.0.	21371	95.0	96.0
		96.3				. Small fault at 102.0, gouge and breccia.			
	97.1					. 3 cm pyrite 20% band with gouge slip on margin at 102.6.	21440	96.4	
17					11	. Occasional 2-3 mm pyrite stringers with grey silica alteration envelope 99.0 - 104.0.			
		99.4			10 9				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 7 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
				100	10	104.4 - 114.4 GREENISH GREY CRYSTAL TUFF	21441	100.8	
Box 18	102.8	102.4			10	. Felsic composition, 8-10% 2-7 mm white rounded feldspars. Locally variable 5-6% 2-4 mm quartz eyes. Massive to strongly foliated as a function of sericite content. Felsic lithic clasts present especially 108.0 - 110.5. Pyrite-rich clast at 106.7 - 1 cm.			
					15				
					14				
				105	14	. Sheared section with gouge seams 105.7 - 106.7. 50° to core axis.			
		105.5			14	. Pyrite veinlets 2-3 mm some with silicic envelopes, occasionally with minor chalcopyrite. Average pyrite disseminated plus veinlets about 3% in this interval.			
Box 19					15				
	108.1				9				
		108.8			8	. Darker section with coarser clasts 109.5 - 111.0 also has higher pyrite content - about 5% with veinlets and 2-3 cm pyrite-rich bands sometimes associated with chalcopyrite at 113.3.			
				110	14				
					10	. Foliation @ 50° to core axis at 113.5.			
		111.9			11				
Box 20					9	114.4 - 136.4 WHITE QUARTZ SERICITE CRYSTAL-ASH TUFF (?)	21442	112.8	
	113.9				8	. Sericitic, commonly broken to "poker-chip" pieces.			
		114.9				. Upper contact sheared but abrupt.			
				115	17	. Soft 2-10 mm sericite bands parallel foliation.			
					18	. High sericite content due to ashy component or alteration (?).	21443	116.1	
					10	. Less than 5% 1-2 mm quartz eyes - locally more common.			
		118.0			12	. Disseminated fine pyrite 1-2% locally coarse, and pyrite stringers 1-2 mm with grey alteration envelopes are common. Foliation parallel 1-3 mm some contain chalcopyrite - 120.7 - 121.0.			
		119.2			19				
	119.5			120	15	. Lost core 123.8 1.8 m - probable fault zone	21444	120.2	
		120.7			14	. Foliation 45° to core axis at 119.4; 55° to core axis at 124.5; 45° to core axis at 135.0.	21424	120.3	121.3
Box 21			33%		-				
					-	. Fault zone - breccia and gouge 127.6 - 128.3 3-4% pyrite, quartz clasts. Foliation @ 45° to core axis; another small fault 135.0 - 135.1 45° to core axis.	21425	123.4	124.4
		123.4			-		21426	124.4	125.4
							21427	125.4	126.4
		125.3		125	15		21428	126.4	127.4
	126.3				11	. Unit turns darker - more greenish due to minor chlorite increase 133.0 - 136.4 also appears to increase felsic clastic content-crystals and some sheared lapilli?	21445	126.9	
		127.1			10		21429	129.0	130.0
Box 22					16				
					7				
		129.2							
				130	8		21430	130.0	131.0
					9		21446	131.3	
	132.0				10				
23		132.3			20				
		133.8			19				

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 8 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 24		136.2		135	15	136.4 - 145.9 GABBRO			
	137.3				15	. Sharp contact @ 65° to core axis, strongly foliated margin phase with 3% pyrite over first 0.3 m.			
					12	. 4-5% pyrite dissemination 142.0 - 142.3.			
		139.3			6	. Inequigranular gabbro medium grained with fine grained marginal phases.			
					6	. Sharp lower contact @ 45° to core axis.			
Box 25				140	7				
					5				
		142.3			6				
	142.8				8				
					8				
		145.4		145	7	145.9 - 165.9 FELSIC LAPILLI CRYSTAL TUFF			
					8	. Whitish ghost lapilli 0.5-2 cm size are common, their composition is very siliceous. Short 0.1-0.3 m sections of fine felsic ash tuff ? are interspersed with lapilli and crystal tuffs. Increased minor chlorite gives mottled appearance locally.			
Box 26					13				
	148.0				14				
		148.4			11		21447	148.8	
				150	11	. Variable pyrite-rich sections - short; coarse disseminations 5-6% 151.5 - 153.5 with local concentration 10% at 152.7 accompanied by chalcopyrite. Chalcopyrite also noted 157.1. Overall pyrite: 145.9 - 155.0 - 2%; 155.0 - 157.0 - 3% - several coarse bands 5-10 mm pyrite 156.3 over 10 cm; 157.0 - 157.6 - 25% fault @ 60° to core axis gouge. Pyrite here is accompanied by black chlorite. 159.0 - 161.0 7% coarse pyrite bands 1-5 cm wide-generally foliation-parallel. Minor sphalerite. 161.0 - 163.0 4% coarse pyrite.			
		151.5			12				
					10				
					8				
					11				
Box 27	154.0	154.5		155	6				
					15				
					12	. 2-4 mm quartz eyes and epidote altered feldspars are present about 5% each from 164.0 onward to 165.1 then altered feldspars become larger and predominant 165.1 - 165.9.			
		157.6			12		21372	157.0	157.6
					10				
	159.4								
		160.6		160	7				
					11				
Box 28					11				
					12				
		163.7			17				
	165.1			165	10	165.9 - 173.9 FELSIC CRYSTAL ASH TUFF			
		166.7				. White, felsic composition, 5-6% 2-4 mm quartz eyes 165.9 - 169.0; epidote altered 4-5 mm feldspars absent below 166.7. Upper contact			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 9 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
						165.9 - 173.9 FELSIC CRYSTAL ASH TUFF - continued			
						is rapidly transitional; 40° to core axis foliation. This section becomes very fine-grained (ashy) below 169.3 for example 169.5 - 170.5 look like sulphide-rich mudstones with sericitic beds.			
						. 166.7 - 167.7 - 10% pyrite dissemination and stringers.			
						167.7 - 168.3 - 40% pyrite crystal aggregates 1 mm - 15 mm with sericite and quartz. No chalcopyrite.			
						169.0 - 170.0 - 5% pyrite (shear 169.0 - 169.3 with 10% coarse pyrite).			
						170.9 - 171.0 - 12% pyrite coarse and fine syngenetic bands of pyrite.			
						. 170.5 - 173.9 - Generally fine ashy tuff with narrow crystal interbeds.			
						. 171.0 - 172.0 - 3% pyrite.			
						172.0 - 174.0 - 4% pyrite.			
						. Foliation mudstones (pyritic) beds 55° to core axis at 170.3.			
						. Trace mariposite at 168.9			
						. Small gouge filled shear at lower contact of interval 50° to core axis.			
						173.9 - 180.7 GREEN ASH CRYSTAL TUFF			
						. Shows bedding of ashy tuffs. 45° to core axis at 174.6.			
						. 8-10% pyrite disseminations and foliation parallel stringers. Local 10 cm sections 15-20% pyrite often coarse accompanied by grey quartz and sericite.			
						. Andesitic composition with 10 cm beds of quartz eye-epidote altered feldspar here and there.			
						. Shear zone 179.7 - 180.2 40-50° to core axis gouge and coarse pyrite 5-10 mm.			
						. 177.0 - 178.5 - 4 10 cm sections of 25% coarse pyrite.			
						. Occasional coarse quartz eyes and felsic lithic clasts.			
Box 29	165.1	166.7		165	6		21373	166.7	167.7
					13		21374	167.7	168.3
					9		21375	169.0	170.0
					11		21376	170.0	171.0
		169.6		170	11				
	170.9				9				
Box 30					9		21377	172.0	173.0
		172.6			15		21378	173.0	174.0
					12		21379	174.0	175.0
				175	12		21380	175.0	176.0
	176.4	175.9			11		21381	176.0	177.0
					11		21382	177.0	178.5
Box 31					9				
		178.9			11				
				180	16				
	181.8	182.0							

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 10 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
				180	14	180.7 - 181.7 GREEN ANDESITE SILL?			
Box 32	181.8	182.0			13	. Equigranular 15% 2-4 mm equant feldspars. Sharp upper contact 70° to core axis.	21383	182.0	183.0
					6		21384	183.0	184.1
					9	. Small shear 181.4.	21385	184.1	185.1
		185.0		185	11	. Could also be thin flow.			
					10		21386	185.1	186.1
Box 33	187.2				7	181.7 - 211.7 GREEN CRYSTAL ASH TUFF	21387	187.8	188.3
		188.0			9	. Generally massive, andesitic composition; as 173.9 - 180.7 - variable textural grain size fine to coarse.			
					12	. Generally contains 4% disseminated pyrite except locally:			
				190	10	182.0 - 183.0 - 10% pyrite 10-15 mm over 20 cm.	21453	189.3	
		191.1			8	183.0 - 184.1 - 30% pyrite 10-30 mm.			
					9	. Coarse pyrite crystals up to 3 cm with minor dark green chlorite and 40-50% grey sericite foliated 60-70° to core axis comprise 183.1 - 184.1 as a replacement along shear? Minor white quartz is present. Lithology appears to have been fine grained (probably ash) tuff now altered. No chalcopyrite.			
Box 34	192.9				7				
		194.2			7				
				195	8	. Sharp banded ashy tuff beds 188.3 - 190.0 @ 50-55° to core axis.			
					8	. Chalcopyrite in 3 cm pyrite seam at 188.2.			
		197.2			11	. Crystal tuff bedding 63° to core axis at 192.0. Medium to coarse grained crystals.	21388	197.5	198.4
	198.4		90%		10				
					12	. Crystal tuff bedding 197.0 @ 45° to core axis.			
Box 35		200.3		200	10	. Local pyrite seams 1-2 cm wide with dark chlorite 197.8 (plus chalcopyrite), 198.3, 200.5, 200.6, 204.0 (plus chalcopyrite).	21454	199.2	
					10		21389	200.3	201.3
		202.1			17	. Narrow 10-20 cm sections of coarse epidote altered feldspar crystal tuff.			
					9	. Lost core 0.3 m at 200.3.			
	204.2				9	. Bleached section 198.4 - 199.0, 201.7 - 202.0 pyrite-sericite grey quartz @ 55° to core axis foliation.	21390	203.0	204.0
		205.1		205	6				
					12	. Quartz-pyrite flooded section 207.5 - 207.9 15% coarse pyrite. No chalcopyrite, 3 cm also at 208.3.	21391	207.5	207.9
Box 36			87%		11	. Lost core 0.4 m at 208.4.			
		208.2			10	. Small shear 206.7 @ 60° to core axis. Blocky core 206.0 - 217.0.			
					-	. 206.0 - 211.0 - Several short intervals of fine grained grey sharp-banded ash tuffs 55° to core axis at 209.5.			
	209.8			210	12	. Narrow mafic dykes 210.3 - 210.5, 211.1 - 211.7.			

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 11 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
				210	17	**211.7 - 214.3 WHITE SERICITE TUFF**			
Box 37		211.2			9	. Felsic, "poker chip" about 1% pyrite. Foliation @ 50° to core axis.			
					15	. Minor chlorite component gives mottled appearance.	21456	212.8	
		214.3			14		21392	213.0	214.0
Box 38	215.2			215	10	**214.3 - 222.4 GREEN GABBRO**			
					16	. Upper contact phase is fine grained and sheared 214.3 to about 217.5 getting progressively coarser.			
		216.7			5	. Quartz, white vein 214.6 - 214.9 with chalcopyrite blebs, also 215.8 with chalcopyrite 217.9.			
					9				
		218.5			8	. Lower contact is abrupt - fine grained phase 0.1 m sharp contact is irregular.			
				220	5				
Box 39	220.6	221.0			10	**222.4 - 226.8 WHITE SERICITIC SILICEOUS RHYOLITE**			
					5	. Felsic composition. Altered by pervasive silification + sericite.	21393	222.5	223.0
					4	. Abundant blue-grey quartz-chalcopyrite-pyrite veinlets cut across foliation and sub-parallel.	21394	223.0	224.0
		223.7			9		21395	224.0	225.0
				225	3	. Total sulphides about 3% - sub-equal pyrite-chalcopyrite.	21396	225.0	226.0
Box 40	225.8				4	. Foliation @ 30-35° to core axis. Generally weak - sub-massive possible flow rock. Less than 5% 1-2 mm quartz eyes.	21397	226.0	227.0
		226.8			12	. Interesting section. Altered and weakly copper mineralized - pipe zone?			
			88%		22	. Fault with gouge 226.8 crumbly. Lower contact of this unit.			
		229.2			–				
				230	–	**226.8 - 243.7 GREENISH SERICITIC RHYOLITE**			
Box 41	230.9	230.7			5	. Lost core 0.5 m at 229.2. Gravelly core 227.9 - 227.6; 228.3 - 229.3.	21398	231.0	232.0
					8	. Foliation sub parallels core axis.	21399	232.0	233.0
					7	. Similar massive rhyolitic composition as 222.4 - 226.8 but with higher light greenish sericite content. Less than 4% 1-2 mm quartz eyes, feldspars. Altered flow?	21400	233.0	234.0
		233.8			6		21401	234.0	235.0
		234.4		235	4		21402	235.0	236.0
	236.1				4	. Pyrite stringers with minor chalcopyrite here and there; pyrite 3-6 mm. Total sulphide 230.0 - 235.0 5% including 232.0 - 233.0 10% coarse quartz pyrite section.	21403	236.0	237.0
		236.8			6		21404	237.0	238.0
					5		21405	238.0	239.0
Box 42					4	. Chalcopyrite 234.0 - 236.3.			
		239.9		240	5	. Minor dark chlorite with pyrite stringers. For example 237.6.			
	241.3				6	. Becomes increasingly fractured toward lower contact 291.5 to 243.7. Small fault with gouge 242.4 @ 5° to core axis.			
					5				
43		242.9			9		21459	243.4	
					6				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 12 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
Box 44 Box 45 Box 46 Box 47 Box 48 Box 49	246.5 / 252.0 / 257.3 / 262.7 / 267.8 / 272.2	245.7 / 248.7 / 251.8 / 254.2 / 258.2 / 261.2 / 264.3 / 267.3 / 269.2 / 271.6 / 274.3 / 276.5	86%	245 / 250 / 255 / 260 / 265 / 270 / 275	7, 10, 9, 6, 8, 13, 12, 8, 10, 9, 8, 10, 12, 7, 7, 5, 9, 4, 5, 6, 6, 12, 10, 6, 9, 10, 9, 8, 11, –, 17	**243.7 - 252.0 DARK GREEN ANDESITE** . Massive to poorly foliated equigranular rock. 12-15% 2-4 mm equant feldspars in dark green chloritic matrix. Local 6-10 mm zones of epidote altered feldspars 10 cm wide at 251.6. . Pyrite common as disseminations and narrow foliation parallel seams and pyrite rich zones which contain minor chalcopyrite. 248.0 - 252.0 5-6% total sulphides. Locally 15% across 30 cm width as at 248.9. Black chlorite associated with pyrite concentrations. . Small shears with a minor gouge @ 60° to core axis at 246.9; 80° to core axis at 249.4. **252.0 - 276.5 DARK GREEN ANDESITE** . Clastic (?) crystals of quartz 1% 4-5 mm at 252.3 - possible tuff. Also 255.6. . 6-7% pyrite; local 40% (over 2-4 cm) seams with black chlorite and minor chalcopyrite 256.0 - 257.0. 4-5% disseminated pyrite 257.0 - 258.0. . Fine tuff beds 55° to core axis 259.1 - 259.3. Contact with coarse tuff at 259.9 @ 45° to core axis. . Variable fine to medium grained epidotized feldspars and fine grained grey sections with sub-rounded quartz. . Pyrite rich seams 2-3 cm wide 268.0, 268.6 with chalcopyrite. . Fault 268.0 - 268.3, breccia, gouge. . Foliation 40° to core axis. Tuffaceous bedding (?) 271.0 - 271.2 with 12% pyrite and black chlorite; minor chalcopyrite 223.6, 275.0. . Blocky core 275.5 - 276.5; lost core 276.5 .3 m. . Minor chalcopyrite 273.6, 275.0, 277.3. **276.5 - 281.6 PALE GREY DACITE** . Dacitic composition, fine grained with less than 5% 2-6 mm sparse quartz eyes, possible flow? More likely massive tuff - poorly sorted. . Foliation generally 10-20° to core axis - hackly fracture pattern. . Pyrite, minor chalcopyrite stringers common here and there. 277.3, 278.7, 281.0, 281.2. . Small fault 280.4 - 280.7, 281.6 brecciated with 10% 2-4 mm pyrite. . White barren 15 cm quartz vein at 279.8.	21460 21406 21407 21408 21409 21410 21411 21461 21462 21412 21463	246.3 248.0 249.0 250.0 251.0 256.0 257.0 259.3 268.9 270.3 277.7	249.0 250.0 251.0 252.0 257.0 258.0 271.3

*All samples prefixed by AB.

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 13 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 50	278.4	278.6			14	281.6 - 307.0 DARK GREEN ANDESITE			
				280	10	. Similar to 252.0 - 276.5 though generally coarse crystal with common 2-7 mm quartz eyes about 7% but variable.	21464	281.0	
		281.3			10	. Probably coarse crystal tuff.			
					8	. Chalcopyrite with pyrite 2-4 mm stringers 282.4, 282.8 associated with black chlorite.			
	283.0				6				
Box 51		283.6			10	. More regularly foliated 40-55° to core axis, 285.0 - 288.0.			
				285	7	. Abrupt transitional variations in fine grain size to 1 cm epidote replaced clasts (?) coarse epidote patches are narrow intervals 10-20 cm wide. Pyrite-black chlorite stringers with minor chalcopyrite 289.8 - 303.3, pyrite-black chlorite seam 2 cm wide 294.5, 301.1, 302.0 (1 cm), 303.0, 304.7, 305.8, 306.5 (shear).			
		285.6			12				
			93%		11				
	288.0				8				
Box 52		288.5			1	. 288.5 lost core .2 m.			
				290	8	. Epidote patches become larger and occur at more frequent intervals within a remainder lithology of fine-grained dark grey tuff that is foliated and broadly banded. Sample 302.5 weakly epidote altered.			
					5				
		291.5			10				
					8				
	293.4				8				
Box 53		294.7		295	7				
					8				
		297.2			9				
					9		21465	297.8	
	298.1				7				
Box 54		300.2		300	11				
					8				
					10		21466	302.5	
		303.3			10				
	304.2				9				
Box 55				305	7				
		305.3			8				
					9	307.0 - 341.4 EPIDOTE SPOTTED ANDESITE	21467	307.5	
					4	. Pale olive green mottled appearance, generally massive, altered (?).			
					5	. Epidote patches olive green, occasionally minor pale pink mineral (clinozoisite) accompanies intense epidote; in places epidote appears to occur (up to 3 cm) in broad bands of 10 cm or more. Samples 307.5, 313.3 strongly altered.			
	309.7	309.4			6				
Box 56				310	8				
					6				

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 14 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	FROM	TO
		312.4			7	307.0 - 341.4 EPIDOTE SPOTTED ANDESITE - continued			
					6	. Pyrite-black chlorite seams and stringers still present, generally foliated or with small shears, sometimes with chalcopyrite. For example 312.0 1 cm @ 55° to core axis; former noted 310.0, 310.7 2 cm @ 60° to core axis, 312.8, 313.9, 314.0, 314.3, 315.1.	21468	313.3	
	315.3	315.5		315	8				
					5				
					4				
					10	. Chalcopyrite in pyrite-chlorite shear. 317.7 - 326.3.			
		318.5			7	. Pyrite-black chlorite seams 321.2, 323.0, 325.4, 326.2, 322.3 - 324.9 4% pyrite.			
				320	8	. Hematitic limonite on fractures 328.4.			
	320.6				4	. Shearing - small fault 325.4 @ 60° to core axis.			
		321.6			7	. Strong shearing 323.0 - 324.0 @ 30° to core axis.			
					9	. White quartz vein 338.0, 339.4 (with chalcopyrite), 341.4 - 342.0 (latter as large angular pieces, with massive 40% pyrite surrounding white quartz - total pyrite 15%).	21413	323.0	324.0
					6				
		324.9		325	4	. Large epidote spots more common and statistically larger 337.0 - 341.0.	21414	325.0	326.0
			94%		9	. Lost core .2 m at 326			
	326.6				8				
		328.0			9				
					9				
				330	6				
		331.0			6				
	332.2				7				
					5				
		334.1			5				
				335	8				
					10				
		337.1			10				
	337.7				7				
					7		21469	338.8	
		340.2		340	10	341.4 - 344.8 FINE GRAINED BRECCIATED ANDESITE			
					6	. Brecciated, fractured, pyrite disseminated and white quartz vein.			
			94%		8	. Chalcopyrite bleb in chlorite with quartz 344.3.	21415	341.4	342.4
					10	. Strong shearing starting 342.0, brecciation of 5% disseminated pyrite fine-grained massive andesite clasts and abundant black chlorite on fractures.			
	343.3	343.5			-				
			81%	345	11	. Lost core .2 m at 341.5; .4 m at 344.5.			
		345.5			8				

*All samples prefixed by AB.

Box 57 Box 58 Box 59 Box 60 Box 61 Box 62

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 15 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE * NO.	*All samples prefixed by AB. FROM	TO
Box 63 Box 64 Box 65 Box 66	349.0	346.9			10	**344.8 - 351.3 ALTERED EPIDOTE SPOTTED ANDESITE**			
					10	. Looks silicified, otherwise as 307.0 - 341.4, numerous shears.			
					9	. White chalcopyrite quartz vein 345.9 - 346.3.			
		349.6		350	9	. Sheared black fault gouge @ 45° to core axis. 346.5 - 346.8 with high pyrite (30%?) content; 345.3 - 345.5 fault breccia; strong shearing 348.1 - 348.4 @ 45° to core axis. 12% pyrite.			
					7				
					10	. Very siliceous 349.1 - 349.8.	21416	352.0	353.0
		352.7			9		21417	353.0	354.0
					15	**351.3 - 354.8 STRONGLY ALTERED EPIDOTE SPOTTED ANDESITE**			
	354.4			355		. Strongly silicified with weak ghosts of epidote patches. Quartz eyes 5-6% 3-5 mm intensified.			
		355.4				. Pyritized 4-6% disseminated pyrite 352.0 - 353.0.			
						. Pyritized 6-8% disseminated pyrite 353.0 - 354.0.			
						. Strongly fractured @ 40-60° to core axis.			
		358.5				. Fault gouge @ 60° to core axis at 354.3.	21418	358.5	359.5
	360.0			360		. Several sections of unaltered andesite.	21419	359.5	360.5
		361.2				**354.8 - 370.9 WHITE QUARTZ EYE TUFF**			
			55%			. Rhyolite composition, fractured, numerous quartz veinlets. 10% 3-6 mm quartz eyes (bluish) 5-10% 2-4 mm feldspars.			
		363.0							
			35%			. Black chlorite-pyrite seams and disseminated 1-2% 1-2 mm pyrite gives grey (darker) colour 356.0 - 358.0.	21420	364.5	366.1
		364.5				Lost core 0.4 m at 357.0; 0.2 m at 361.2; 0.6 m at 363.0;			
			64%	365		0.5 m at 363.2; 0.5 m at 364.5; 0.6 m at 366.1.	21421	366.5	367.5
		366.1				. Disseminated and coarse pyrite along stringers; latter 364.6 - 364.8, 8% total pyrite, also 366.7 strongly sheared.			
	367.0					. Short intervals of fine sericite.			
		367.9				. Fault 362.2 gouge.			
				370		. Shear zone dark chloritic 55°to core axis 367.0 - 367.5 - strung out epidote clasts. Again 45° to core axis 368.6 - 368.8.			
		370.9				. Dark chlorite on fractures.			
	372.2								

FALCONBRIDGE LTD — DRILL HOLE LOG

HOLE No. CHEM 86-19 | PAGE No. 16 of 16

BOX	INTERVAL	RUNS	REC'Y	DEPTH	RQD	DESCRIPTION	SAMPLE NO. *	*All samples prefixed by AB. FROM	TO
Box 67 Box 68 Box 69 Box 70	372.2	374.0		370		370.9 - 377.0 SHEARED EPIDOTE SPOTTED ANDESITES . Strongly foliated @ 45° to core axis. Blocky core. . Local 3-5 cm epidote patches. . Grey siliceous rhyolitic-pyritic section 376.2 - 377.0 12% pyrite. Foliation parallel.	21422	369.9	370.0
	377.7	377.0		375		377.0 - 382.4 MIXED FAULT ZONE . Short sections of quartz eye rhyolite tuff and epidote spotted andesite; latter predominates. . Strongly foliated and tectonic breccia @ 55° to core axis at 379.7; 60° to core axis at 383.7. . White 1-2 mm quartz-calcite veinlets criss-cross throughout.	21423	376.2	377.0
	382.9	383.1		380		382.4 - 384.4 FOLIATED EPIDOTE SPOTTED ANDESITE . Cut by narrow dark mafic sills (?) 3 to 5 cm wide at 383.7 - 384.0 @ 70° to core axis. . Strongly foliated epidote spots 2 mm to 2 cm wide.			
		386.2	60%	385		384.4 - 386.3 GREY MAFIC SILL Uniform fine grained, white quartz-calcite veinlets criss-cross throughout. . Fault zone @ 55° to core axis. 10 cm wide grey gouge 386.3 - 386.4.			
	388.4	389.2							
	390.1	389.6 390.1		390		386.3 - 390.1 QUARTZ EYE RHYOLITE . Strongly sheared and fractured through most of interval with short massive sections 5-20 cm wide. . Blocky core turning gravelly at bottom of hole - short runs with short recovery - 1.6 m of core recovered 386.2 - 390.1. . Lithology is feldspar crystal tuff (?) 12-15% 3-6 mm feldspars, minor felsic lithic clasts. . Sericite rich sections are crushed and comprise 30% of interval. . Good intervals showing lithology are the exception in this fractured interval.			
						390.1 END OF HOLE			

REPORT: 126-6738 PROJECT: CHEMAINUS #116 PAGE 1A

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21371	19	095.0-096.0	57	86	60	<1	<0.5	3.50	566	2	4	2	7	10	1000
AB 21424	19	120.3-121.3	116	<5	5	4	<0.5	0.60	95	<1	1	2	<5	25	2100
AB 21425	19	123.4-124.4	3	<5	6	2	<0.5	0.73	73	<1	<1	1	<5	35	1800
AB 21426	19	124.4-125.4	<1	<5	10	<1	<0.5	0.63	91	1	1	2	<5	30	1900
AB 21427	19	125.4-126.4	4	<5	<1	3	<0.5	1.01	68	1	2	1	<5	55	1800
AB 21428	19	126.4-127.4	<1	5	6	5	<0.5	1.06	71	3	2	3	<5	55	1800
AB 21429	19	129.0-130.0	4	<5	8	<1	<0.5	0.78	97	1	<1	2	<5	10	1600
AB 21430	19	130.0-131.0	17	<5	16	<1	<0.5	0.81	143	<1	<1	<1	<5	5	1600
AB 21372	19	157.0-157.6	43	16	112	16	2.0	>10.00	831	4	23	10	44	160	1000
AB 21373	19	166.7-167.7	9	<5	16	8	<0.5	2.53	94	2	15	<1	8	5	2400
AB 21374	19	167.7-168.3	308	9	50	12	0.7	>10.00	217	7	108	4	72	40	2100
AB 21375	19	169.0-170.0	30	10	48	6	<0.5	3.47	488	1	14	7	17	15	4100
AB 21376	19	170.0-171.0	20	<5	42	8	<0.5	2.03	374	2	9	10	10	15	5400
AB 21377	19	172.0-173.0	17	<5	43	17	<0.5	2.66	303	2	10	12	<5	25	3200
AB 21378	19	173.0-174.0	10	<5	29	19	0.6	2.38	291	2	9	12	<5	20	3000
AB 21379	19	174.0-175.0	246	<5	52	6	<0.5	3.96	564	2	16	7	<5	10	2700
AB 21380	19	175.0-176.0	64	<5	52	14	<0.5	7.53	616	3	31	10	6	10	2300
AB 21381	19	176.0-177.0	24	<5	56	<1	<0.5	4.57	754	2	21	11	19	<5	1900
AB 21382	19	177.0-178.0	230	<5	60	<1	<0.5	9.88	873	4	88	14	25	10	1900
AB 21383	19	182.0-183.0	18	<5	27	<1	<0.5	6.40	422	2	28	9	25	5	2600
AB 21384	19	183.0-184.1	34	<5	13	3	<0.5	>10.00	296	4	46	11	25	5	3200
AB 21385	19	184.1-185.1	81	<5	73	<1	<0.5	6.11	1263	3	24	13	13	<5	1300
AB 21386	19	185.1-186.1	318	<5	65	2	<0.5	5.45	976	2	24	15	20	5	1500
AB 21387	19	187.8-188.3	1308	<5	83	11	<0.5	7.52	1191	4	38	14	13	25	1100
AB 21388	19	197.5-198.4	1953	<5	113	18	0.6	5.99	1386	3	22	15	<5	25	1400
AB 21389	19	200.3-201.3	107	<5	74	5	<0.5	6.90	1303	3	24	17	9	<5	1300
AB 21390	19	203.0-204.0	1318	<5	117	5	<0.5	5.63	1554	3	25	15	6	<5	1200
AB 21391	19	207.5-207.9	15	<5	9	65	<0.5	8.10	197	3	142	9	18	10	900
AB 21392	19	213.0-214.0	209	<5	14	2	<0.5	0.54	118	<1	2	<1	<5	5	1900
AB 21393	19	222.5-223.0	87	<5	3	16	<0.5	0.72	81	<1	4	5	26	<5	2400
AB 21394	19	223.0-224.0	47	<5	1	8	<0.5	0.53	57	<1	3	1	<5	15	1900
AB 21395	19	224.0-225.0	491	<5	10	14	<0.5	0.81	61	2	2	2	<5	45	1900
AB 21396	19	225.0-226.0	5	<5	<1	2	<0.5	0.16	63	<1	<1	2	<5	<5	1900
AB 21397	19	226.0-227.0	241	<5	5	2	<0.5	1.06	79	<1	3	2	11	10	1700
AB 21398	19	231.0-232.0	55	<5	10	3	<0.5	1.37	172	<1	4	<1	<5	15	1600
AB 21399	19	232.0-233.0	19	<5	14	8	<0.5	3.70	208	2	12	2	14	20	1300
AB 21400	19	233.0-234.0	5	<5	12	1	<0.5	1.16	187	2	4	2	6	10	1600
AB 21401	19	234.0-235.0	1502	<5	18	4	0.9	1.38	150	2	5	1	<5	10	1600
AB 21402	19	235.0-236.0	7	<5	9	<1	<0.5	0.74	172	<1	<1	1	<5	5	1500
AB 21403	19	236.0-237.0	510	<5	38	<1	<0.5	1.49	211	3	2	<1	7	10	1600

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21404	19	237.0-238.0	7	<5	14	3	<0.5	1.19	177	<1	2	<1	13	15	1500
AB 21405	19	238.0-239.0	8	<5	14	1	<0.5	0.96	168	<1	2	<1	<5	<5	1700
AB 21406	19	248.0-249.0	876	<5	141	3	<0.5	7.01	1411	2	27	14	31	25	1700
AB 21407	19	249.0-250.0	483	<5	111	1	<0.5	6.97	1274	3	27	15	7	15	1400
AB 21408	19	250.0-251.0	425	<5	97	<1	<0.5	5.66	1310	3	25	16	15	10	690
AB 21409	19	251.0-252.0	427	<5	117	3	<0.5	7.09	1413	2	33	17	<5	15	260
AB 21410	19	256.0-257.0	595	<5	109	2	<0.5	8.66	1286	4	35	14	<5	25	1100
AB 21411	19	257.0-258.0	490	<5	98	<1	<0.5	4.96	1261	3	18	11	7	5	1000
AB 21412	19	270.3-271.3	708	<5	95	<1	<0.5	8.76	1310	4	33	16	29	20	520
AB 21413	19	323.0-324.0	416	<5	115	<1	<0.5	8.65	1136	2	37	25	6	20	880
AB 21414	19	325.0-326.0	118	<5	129	<1	<0.5	7.18	1310	3	31	27	<5	15	1000
AB 21415	19	341.0-342.4	248	<5	132	<1	2.0	8.29	1251	4	77	25	25	80	380
AB 21416	19	352.0-353.0	42	<5	39	<1	<0.5	2.80	424	1	13	7	<5	<5	870
AB 21417	19	353.0-354.0	13	<5	27	1	<0.5	3.03	313	2	16	20	<5	<5	480
AB 21418	19	358.5-359.5	13	<5	5	<1	<0.5	1.24	181	<1	5	3	<5	<5	740
AB 21419	19	359.5-360.5	12	<5	6	<1	<0.5	1.25	158	1	4	2	<5	5	1000
AB 21420	19	364.5-366.1	77	8	27	2	<0.5	2.21	493	1	7	2	<5	10	1500
AB 21421	19	366.5-367.5	45	<5	46	<1	<0.5	2.46	758	1	11	6	11	<5	2200
AB 21422	19	369.9-370.9	5	<5	14	<1	<0.5	0.82	234	<1	3	2	<5	<5	1100
AB 21423	19	376.2-377.0	18	<5	13	<1	<0.5	2.59	524	2	14	4	<5	<5	1400

CHEM 86-19

SAMPLE	SIO2	AL203	CAO	MGO	NA2O	K2O	FE203	MNO	TIO2	P2O5	LOI	SUM	Ishikawa Index
AB 21431	46.8	18.5	5.84	4.40	4.15	1.15	10.6	0.20	0.86	0.17	6.62	99.4	36
AB 21432	71.2	14.0	1.96	1.56	3.00	2.19	2.69	0.06	0.32	0.07	2.62	99.8	43
AB 21433	68.9	14.2	2.09	1.67	2.85	2.62	2.81	0.10	0.33	0.08	3.31	99.1	46
AB 21434	68.3	16.2	0.45	2.29	2.51	3.09	2.71	0.04	0.38	0.08	3.16	99.4	64
AB 21435	68.5	15.5	1.34	3.11	1.95	3.07	2.45	0.12	0.34	0.07	3.47	100.1	65
AB 21436	73.2	12.4	0.32	2.88	2.87	1.65	3.11	0.06	0.23	0.06	3.00	99.9	59
AB 21437	66.2	15.8	1.33	2.89	2.33	3.05	3.32	0.13	0.37	0.08	3.39	99.1	62
AB 21438	72.9	12.5	1.59	1.35	2.88	2.37	2.55	0.09	0.30	0.07	3.08	99.9	45
AB 21439	70.0	14.8	0.28	3.25	3.31	2.28	2.60	0.05	0.36	0.08	2.70	99.9	61
AB 21440	71.8	13.6	1.08	2.30	3.57	2.11	1.57	0.10	0.32	0.07	2.70	99.4	49
AB 21441	73.0	13.4	0.53	2.53	2.34	2.69	2.03	0.04	0.31	0.07	2.93	100.1	64
AB 21442	63.7	13.1	3.26	4.32	3.70	1.50	3.48	0.22	0.30	0.07	5.00	98.9	45
AB 21443	77.1	12.2	0.73	1.03	0.13	3.73	1.66	0.03	0.16	0.02	2.85	100.1	85
AB 21444	77.6	12.1	0.21	0.92	0.16	3.67	1.74	0.02	0.16	0.03	2.70	99.6	92
AB 21445	73.2	14.2	0.05	1.45	0.18	4.07	2.76	0.02	0.18	0.03	3.62	100.0	96
AB 21446	77.4	11.7	0.23	2.42	0.10	2.91	1.79	0.05	0.15	0.03	2.70	99.7	94
AB 21447	71.9	13.9	0.09	4.54	0.15	3.30	1.76	0.06	0.19	0.04	3.31	99.5	97
AB 21453	55.9	17.6	1.03	5.68	2.97	2.44	7.23	0.16	0.65	0.15	5.08	99.1	67
AB 21454	58.7	15.2	0.84	7.03	1.54	1.83	8.27	0.25	0.56	0.13	4.93	99.5	79
AB 21456	76.8	11.5	2.12	0.66	0.85	2.82	1.43	0.04	0.19	0.04	2.62	99.3	54
AB 21459	74.9	12.4	0.39	2.94	0.11	3.39	1.83	0.07	0.20	0.04	2.93	99.5	93
AB 21460	50.0	16.9	1.11	9.93	1.72	1.19	11.2	0.33	0.71	0.14	6.16	99.5	80
AB 21461	50.7	16.5	1.87	6.88	2.11	1.77	12.2	0.27	0.70	0.15	6.00	99.3	68
AB 21462	49.0	16.6	2.32	6.90	2.04	1.65	13.0	0.30	0.72	0.12	6.47	99.2	66
AB 21463	74.1	13.5	1.26	1.28	3.91	1.99	1.91	0.04	0.24	0.07	1.93	100.4	39
AB 21464	74.1	12.6	0.62	1.61	2.21	2.50	2.61	0.06	0.23	0.06	2.31	99.1	59
AB 21465	54.7	16.9	1.13	6.65	3.12	1.69	8.94	0.24	0.66	0.12	4.85	99.2	66
AB 21466	55.7	16.8	2.98	6.54	3.28	0.99	7.77	0.28	0.66	0.12	4.31	99.5	54
AB 21467	53.0	15.4	8.41	6.31	1.93	0.15	8.83	0.33	0.59	0.11	4.47	99.6	18
AB 21468	52.7	15.9	7.92	6.84	1.89	0.09	8.71	0.29	0.58	0.12	4.85	99.9	41
AB 21469	53.0	14.6	8.25	6.03	2.19	0.09	9.01	0.29	0.56	0.12	4.08	98.3	37

CHEM 86-19

SAMPLE	CR	RB	SR	Y	ZR	NB	BA
AB 21431	60	30	180	10	30	20	320
AB 21432	10	70	150	20	140	10	690
AB 21433	10	70	110	20	130	10	1070
AB 21434	20	80	70	30	160	20	1320
AB 21435	10	60	80	20	130	10	1450
AB 21436	20	50	90	<10	100	<10	1190
AB 21437	10	80	120	30	160	10	1390
AB 21438	10	50	130	20	110	<10	1420
AB 21439	20	60	110	20	150	<10	1550
AB 21440	10	50	160	20	120	10	1250
AB 21441	20	60	110	30	130	10	1410
AB 21442	10	<10	230	<10	110	<10	1490
AB 21443	10	60	40	20	120	10	3940
AB 21444	10	<10	20	<10	100	20	2490
AB 21445	20	100	30	20	120	<10	2010
AB 21446	10	70	20	<10	90	10	1460
AB 21447	10	10	<10	10	130	20	2090
AB 21453	30	50	40	10	60	10	1540
AB 21454	50	40	20	20	60	20	1430
AB 21456	10	<10	40	<10	100	20	1650
AB 21459	10	80	<10	10	120	20	2070
AB 21460	60	20	40	30	60	10	770
AB 21461	40	<10	50	<10	40	20	1160
AB 21462	50	<10	60	10	30	20	960
AB 21463	10	50	120	30	100	20	1070
AB 21464	10	10	60	10	100	20	1460
AB 21465	40	50	50	20	40	20	1360
AB 21466	40	30	90	20	40	10	690
AB 21467	130	20	190	20	30	20	120
AB 21468	120	10	190	20	40	10	80
AB 21469	130	20	250	20	30	10	70

FALCONBRIDGE LIMITED

Summary Map

Chemainus Joint Venture
Vancouver Island, British Columbia
Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 3
DATE: Fall 1986	NTS: 92 B/13W	

- Nanimo Sedimentary Cover
- Gabbro Intrusions (5a,b,c)
- Sediment Sill Unit (4a,b)
- Myra Felsic Volcanics (3a,b,c)
- Myra Intermediate Volcaniclastics (2b,3b)
- Myra Andesitic Flows and Pyroclastics (2a,c)

- (92) Alteration: Ishikawa Index
- Drill-holes:
  1-6: Esso 1978
  7-13: Kidd 1985
  14-19: Falconbridge 1986
- --VLF Anomalies
- Shallow IP Anomalies
- Deep IP Anomalies
- Soil Anomalies

Proposed Drilling for 1987:
- first phase drilling
- second phase drilling

(-50° inclination unless otherwise indicated)

6E 8E 10E 12E 14E 16E 18E 20E 22E 24E 26E 28E 30E 32E 34E 36E 38E 40E 42E 44E 46E 48E

CHIP 2 | CHIP 11 | CHIP 1 | CHIP 8 | CHIP 5 | FACE | TL | ALSO | HOLYOAK 3 | HOLYOAK 2

Power Line Creek | Bowman Creek | Boulder Creek Road | road | Solly Creek | Silver Creek

ANITA | Cu,Zn | WIMP | UGLY | SOLLY | ZONE III | PIT

CORONATION ZONE
.65Cu
.79Pb
19' 3.20Zn
2.04Ag
.09Au

CORONATION EXTENSION
1.16Cu
12' 2.53Pb
9.22Zn
8.60Ag
.21Au

46W 40W 32.5W 50W 48W 35.5W 29.5W

6 km Anderson Creek Area

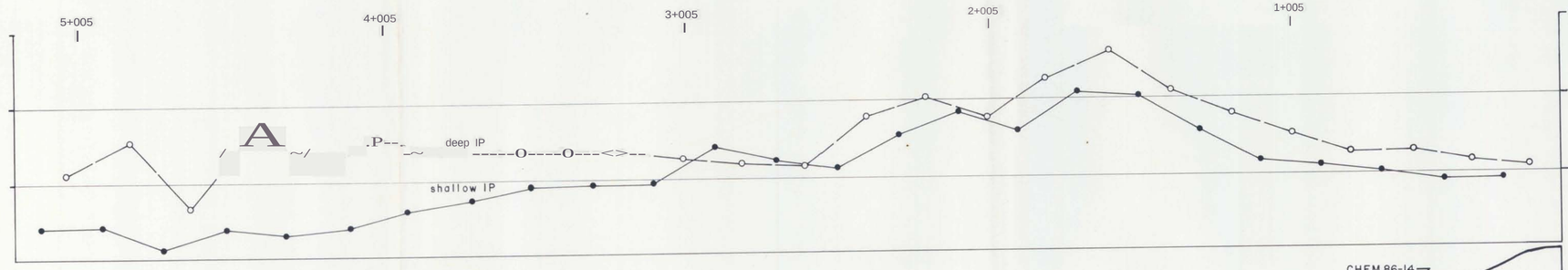
to Copper Canyon (mainline road)

outer limit of MacMillan Bloedel Lands

0 1 2
kilometres
1:20,000

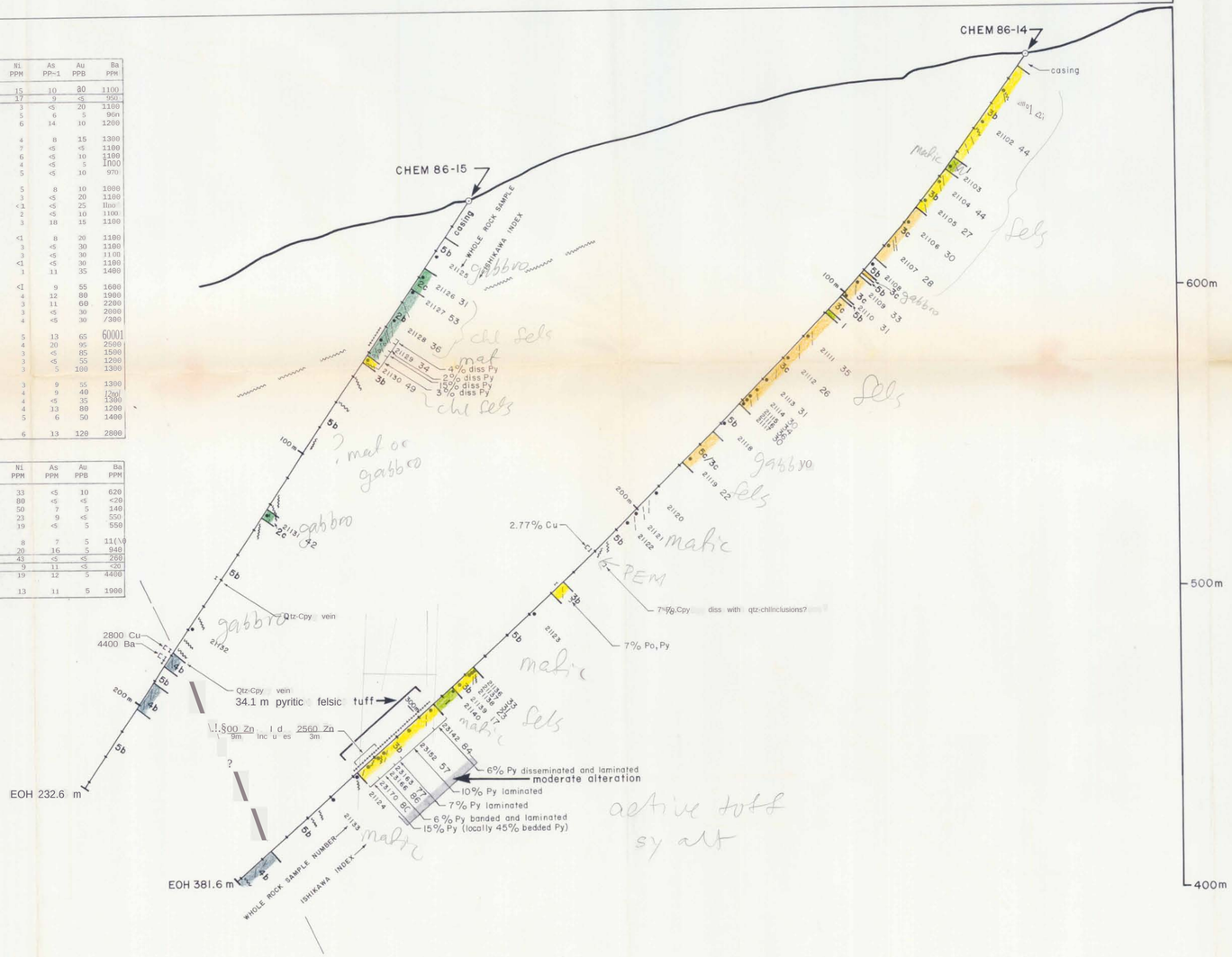
SOUTH

NORTH



SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21134	14	220.7-221.7	2.77%	7	688	36	11.3	7.13	446	9	49	15	10	80	1100
AB 21135	14	236.3-23-7.5	455	16	63	5	<0.5	5.68	785	2	35	17	9	<5	950
AB 21141	14	294.0-295.0	201	<5	90	2	0.6	2.85	24 G	2	7	3	<5	20	1100
AB 21142	14	295.0-296.0	48	<5	64	1	1.0	2.68	272	1	8	5	6	5	900
AB 21143	14	296.0-297.0	38	6	40	7	0.9	2.95	163	2	9	6	14	10	1200
AB 21144	14	297.0-298.0	24	<5	32	4	0.6	2.54	117	1	9	4	8	15	1300
AB 21145	14	298.0-299.0	31	8	49	3	<0.5	2.76	148	2	9	7	<5	<5	1100
AB 21146	14	299.0-300.0	50	<5	48	4	0.6	2.76	171	2	8	6	<5	10	1100
AB 21147	14	300.0-301.0	47	<5	58	1	0.8	2.77	176	2	8	4	<5	5	1100
AB 21148	14	301.0-302.0	24	<5	77	5	<0.5	2.76	186	2	9	5	<5	10	970
AB 21149	14	302.0-303.0	25	10	81	<1	0.6	2.60	165	2	6	5	8	10	1000
AB 21150	14	303.0-304.0	23	5	81	3	1.1	2.31	127	2	8	3	<5	20	1100
AB 21151	14	304.0-305.0	150	21	96	4	1.7	2.46	91	5	7	<1	<5	25	1100
AB 21152	14	305.0-306.0	14	19	85	<1	1.4	2.08	118	3	6	2	<5	10	1100
AB 21153	14	306.0-307.0	13	34	106	2	1.0	2.54	162	3	8	3	18	15	1100
AB 21154	14	307.0-308.0	10	6	56	2	<0.5	1.90	51	2	4	<1	8	20	1100
AB 21155	14	308.0-309.0	9	<5	37	3	0.7	2.42	56	2	8	3	<5	30	1100
AB 21156	14	309.0-310.0	8	11	38	3	<0.5	2.39	61	2	5	3	<5	30	1100
AB 21157	14	310.0-311.0	3	8	24	2	0.7	2.02	72	2	5	<1	<5	30	1100
AB 21158	14	311.0-312.0	5	9	28	2	0.9	1.81	112	2	3	1	11	35	1400
AB 21159	14	312.0-313.0	9	6	26	3	<0.5	2.58	71	2	6	<1	9	55	1600
AB 21160	14	313.0-314.0	22	20	91	3	1.2	3.08	232	2	8	4	12	80	1900
AB 21161	14	314.0-315.0	45	57	1240	4	1.2	3.61	514	8	10	3	11	60	2200
AB 21162	14	315.0-316.0	18	21	585	4	1.0	3.21	794	4	8	3	<5	30	2000
AS 21163	14	316.0-317.0	35	24	476	5	0.9	1.85	306	2	6	4	<5	30	/300
AS 21164	14	317.0-318.0	393	51	2779	10	1.6	2.08	118	11	7	5	13	65	60001
AS 21165	14	318.0-319.0	212	119	2748	8	2.2	2.98	170	13	6	4	20	95	2500
AS 21166	14	319.0-320.0	399	258	2160	10	3.0	2.37	51	10	4	3	<5	85	1500
AD 21167	14	320.0-321.0	162	58	1340	6	1.0	1.59	51	6	4	3	<5	55	1200
AS 21168	14	321.0-322.0	381	223	1208	15	1.8	3.43	48	7	6	3	5	100	1300
AS 21169	14	322.0-323.0	74	111	559	8	1.3	1.82	54	3	5	3	9	55	1300
AS 21170	14	323.0-324.0	786	244	1029	8	1.6	1.69	105	5	3	4	9	40	12pc
AB21171	14	324.0-325.0	122	99	566	6	0.8	2.40	199	3	5	4	<5	35	1300
AS 21172	14	325.0-326.0	887	192	1187	11	3.0	4.91	86	8	6	4	13	80	1200
AS 21173	14	326.0-327.0	23	36	70	9	1.1	2.21	13	<1	6	5	6	50	1400
AS 21174	14	327.0-328.0	114	193	437	11	3.5	5.18	14	4	6	6	13	120	2800

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21175	15	051.2-052.0	171	<5	105	3	<0.5	4.56	1237	2	24	33	<5	10	620
AS 21176	15	052.0-053.0	116	<5	183	<1	1.0	6.09	2259	2	37	80	<5	<5	<20
AS 21177	15	053.0-054.0	79	<5	136	1	<0.5	5.80	1848	2	32	50	7	5	140
AS 21178	15	054.0-055.0	25	<5	35	2	<0.5	1.93	315	<1	8	23	9	<5	550
AS 21179	15	055.0-056.0	73	<5	59	<1	<0.5	4.34	908	2	20	19	<5	5	550
AS 21180	15	056.0-057.0	132	<5	59	<1	0.7	4.49	1004	2	20	8	7	5	11(0
AS 21181	15	057.0-058.0	271	7	139	3	1.4	4.82	1074	3	24	20	16	5	940
AB 21182	15	150.0-151.1	392	<5	40	1	0.7	3.24	514	<1	13	43	<5	<5	260
AS 21183	15	178.0-179.1	2868	<5	32	<1	1.6	0.88	84	4	8	9	11	<5	<20
AB 21184	15	182.0-183.8	41	9	47	1	<0.5	2.10	384	<1	4	19	12	5	4400
AS 21185	15	183.8-184.7	30	19	73	4	<0.5	2.06	376	<1	5	13	11	5	1900



"SEDIMENT SILL UNIT"

MYRA FORMATION

- 6 Nanaimo conglomerate
- 5c late gabbro and felsic tuff
- 5b late gabbro sills
- 5a biotite altered gabbro
- 4b cherty black argillite and siltstone with minor greywacke
- 4a brown graywacke
- 3c felsic lapilli crystal tuffs
- 3b felsic crystal tuffs
- 3a felsic flows
- 2c dark green andesitic lapilli crystal tuffs
- 2b dark green andesitic crystal tuffs
- 2a dark green andesitic flows
- 1 early mafic sills

- bedding
- foliation
- fault
- shear
- breccia
- whole rock sample
- geochemical/assay samples (ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na_2O + CaO} \times 100$$

FALCONBRIDGE LIMITED

Section 49+00E

DDH CHEM 86-14 and 15

East Chip 1 Claim

Chemainus Joint Venture

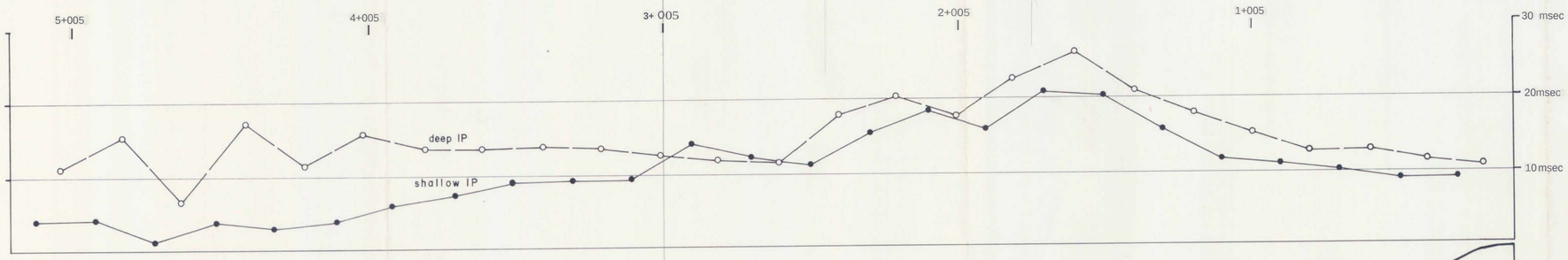
Vancouver Island, British Columbia

Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 4
DATE: Fall 1986	NTS: 92 B/13W	

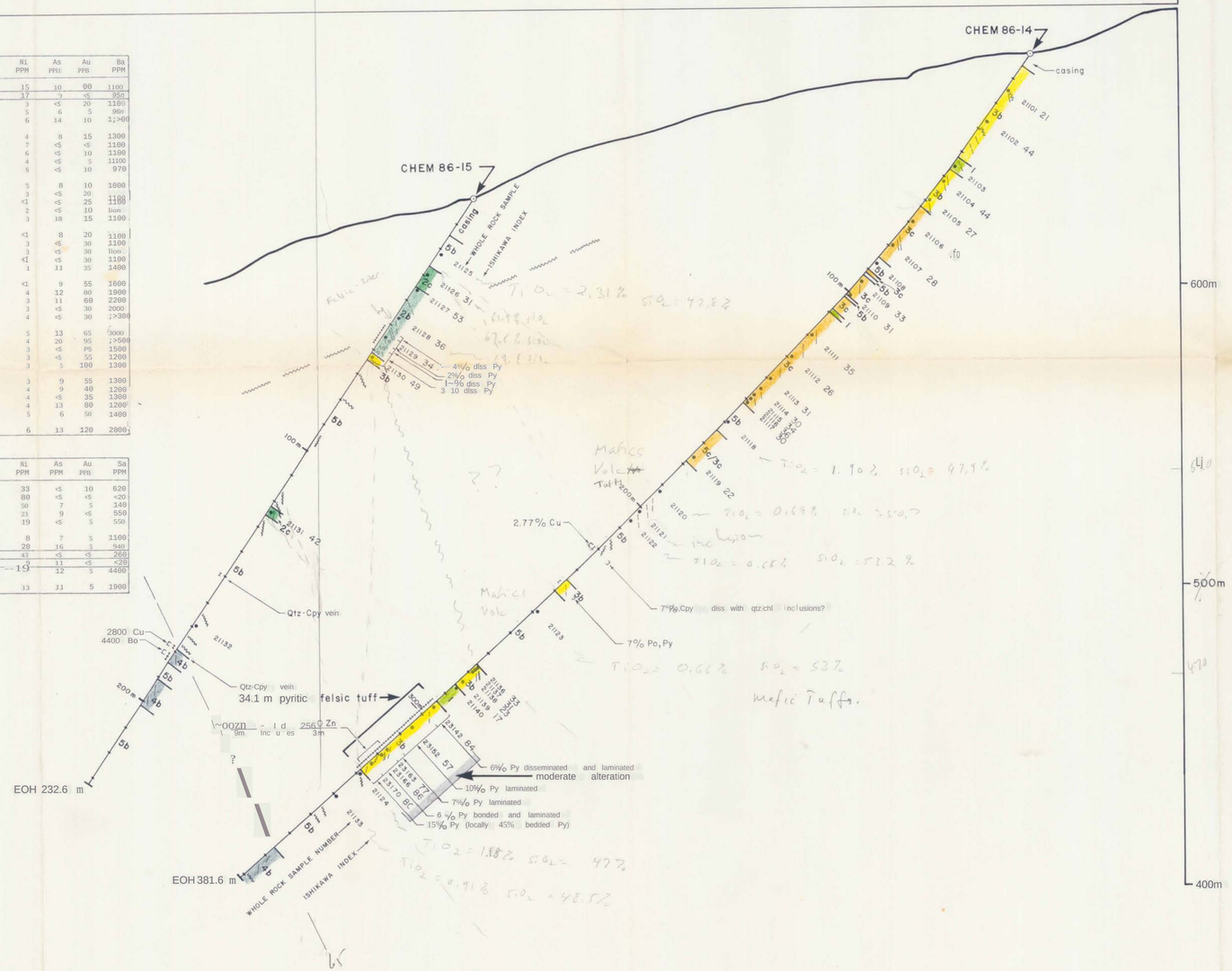
SOUTH

NORTH



SAMPLE NUMSER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Aq PPM	Fe PCT-	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AS 21134	14	220.7-221.7	2.77%	7	688	36	11.3	7.13	446	9	49	15	10	00	1100
AS 21135	14	2f6.3-237.5	455	16	63	5	<0.5	5.68	785	3	25	17	7	<5	950
A0 21141	14	294.0-295.0	201	<5	90	2	0.6	2.85	246	2	7	3	<5	20	1100
AS 21142	14	295.0-296.0	48	<5	64	1	1.0	2.68	272	1	8	5	6	5	900
AS 21143	14	296.0-297.0	38	6	40	7	0.9	2.95	163	2	9	6	14	10	1;>00
AS 21144	14	297.0-298.0	24	<5	32	4	0.6	2.54	117	1	9	4	8	15	1300
AS 21145	14	298.0-299.0	31	8	49	3	<0.5	2.76	148	2	9	7	<5	<5	1100
AS 21146	14	299.0-300.0	50	<5	48	4	0.6	2.76	171	2	8	6	<5	10	1100
AS 21147	14	300.0-301.0	47	<5	58	1	0.6	2.77	176	2	8	4	<5	5	1100
AS 21148	14	301.0-302.0	24	<5	77	5	<0.5	2.76	186	2	9	5	<5	10	970
A8 21149	14	302.0-303.0	25	10	81	<1	0.6	2.60	165	2	6	5	8	10	1000
AS 21150	14	303.0-304.0	23	5	81	3	1.1	2.31	127	2	8	3	<5	20	1100
AS 21151	14	304.0-305.0	150	21	96	4	1.7	2.46	91	5	7	<1	<5	25	1100
AS 21152	14	305.0-306.0	14	19	85	<1	1.4	2.98	118	3	6	2	<5	10	1100
AS 21153	14	306.0-307.0	13	34	106	2	1.0	2.54	162	3	8	3	18	15	1100
AS 21154	14	307.0-308.0	10	6	56	2	<0.5	1.90	51	2	4	<1	8	20	1100
AS 21155	14	308.0-309.0	9	<5	37	3	0.7	2.42	56	2	8	3	<5	30	1100
AS 21156	14	309.0-310.0	8	11	38	3	<0.5	2.39	61	2	5	3	<5	30	1100
AS 21157	14	310.0-311.0	3	8	24	2	0.7	2.02	72	2	5	<1	<5	30	1100
AS 21158	14	311.0-312.0	5	9	28	2	0.9	1.01	112	2	3	1	11	35	1400
AS 21159	14	312.0-313.0	9	6	26	3	<0.5	2.58	71	2	6	<1	9	55	1600
AS 21160	14	313.0-314.0	22	20	91	3	1.2	3.08	232	2	8	4	12	80	1900
AS 21161	14	314.0-315.0	45	57	1240	4	1.2	3.61	514	8	10	3	11	60	2200
AS 21162	14	315.0-316.0	18	21	585	4	1.0	3.21	794	4	8	3	<5	30	2000
AS 21163	14	316.0-317.0	35	24	476	5	0.9	1.85	306	2	6	4	<5	30	;>300
AS 21164	14	317.0-318.0	393	51	2779	10	1.6	2.88	118	11	7	5	13	65	3000
AS 21165	14	318.0-319.0	212	119	2748	8	2.2	2.98	170	13	6	4	20	95	;>500
AS 21166	14	319.0-320.0	399	258	2160	10	3.0	2.37	51	10	4	3	<5	95	1500
AS 21167	14	320.0-321.0	162	58	1340	6	1.0	1.59	51	6	4	3	<5	55	1200
AS 21168	14	321.0-322.0	381	223	1208	15	1.8	3.43	48	7	6	3	5	100	1300
AS 21169	14	322.0-323.0	74	111	559	8	1.3	1.82	54	3	5	3	9	55	1300
AS 21170	14	323.0-324.0	786	244	1029	8	1.6	1.69	105	5	3	4	9	40	1200
AB21171	14	324.0-325.0	122	99	566	6	0.8	2.40	199	3	5	4	<5	35	1300
AS 21172	14	325.0-326.0	887	192	1187	11	3.0	4.91	86	8	6	4	13	80	1200
AS 21173	14	326.0-327.0	23	36	70	9	1.1	2.21	13	<1	6	5	6	50	1400
AS 21174	14	327.0-328.0	114	193	437	11	3.5	5.18	14	4	6	6	13	120	2800

SAMPLE NUMSER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Aq PPM	Fe PCT-	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Sa PPM
AS 21175	15	051.2-052.0	171	<5	105	3	<0.5	4.56	1237	2	24	33	<5	10	620
AS 21176	15	052.0-053.0	116	<5	183	<1	1.0	6.09	2259	2	37	80	<5	<5	<20
AS 21177	15	053.0-054.0	79	<5	136	1	<0.5	5.80	1848	2	32	50	7	5	140
AS 21178	15	054.0-055.0	25	<5	35	2	<0.5	1.93	315	<1	8	23	9	<5	550
AS 21179	15	055.0-056.0	73	<5	59	<1	<0.5	4.34	908	2	20	19	<5	5	550
AS 21180	15	056.0-057.0	132	<5	59	<1	0.7	4.49	1004	2	20	8	7	5	1100
AS 21181	15	057.0-058.0	271	7	139	3	1.4	4.82	1074	2	24	20	16	5	940
AS 21182	15	150.0-151.1	392	<5	40	1	0.7	3.24	514	<1	11	41	<5	<5	260
AS 21183	15	178.9-179.1	2868	<5	32	<1	1.6	0.80	84	4	8	9	11	<5	<20
AS 21184	15	182.0-183.8	41	9	47	1	<1	2.18	384	<1	4	15	12	5	4400
AS 21185	15	183.8-184.7	30	19	73	4	<0.5	2.06	376	<1	5	13	11	5	1900



"SEDIMENT SILL UNIT"

LAYA FORMATION

- 6 Nanaimo conglomerate
- 5c late gabbro and felsic tuff
- 5b late gabbro sills
- 5a biotite altered gabbro
- 4b cherty black argillite and siltstone with minor greywacke
- 4a brown graywacke
- 3c felsic lapilli crystal tuffs
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- 3a felsic flows
- 2c dark green andesitic lapilli crystal tuffs
- 2b dark green andesitic crystal tuffs
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- bedding
- foliation
- fault
- shear
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- whole rock sample
- geochemical/assay samples (ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na_2O + CaO} \times 100$$

FALCONBRIDGE LIMITED

Section 49+00E

DDH CHEM 86-14 and 15

East Chip 1 Claim

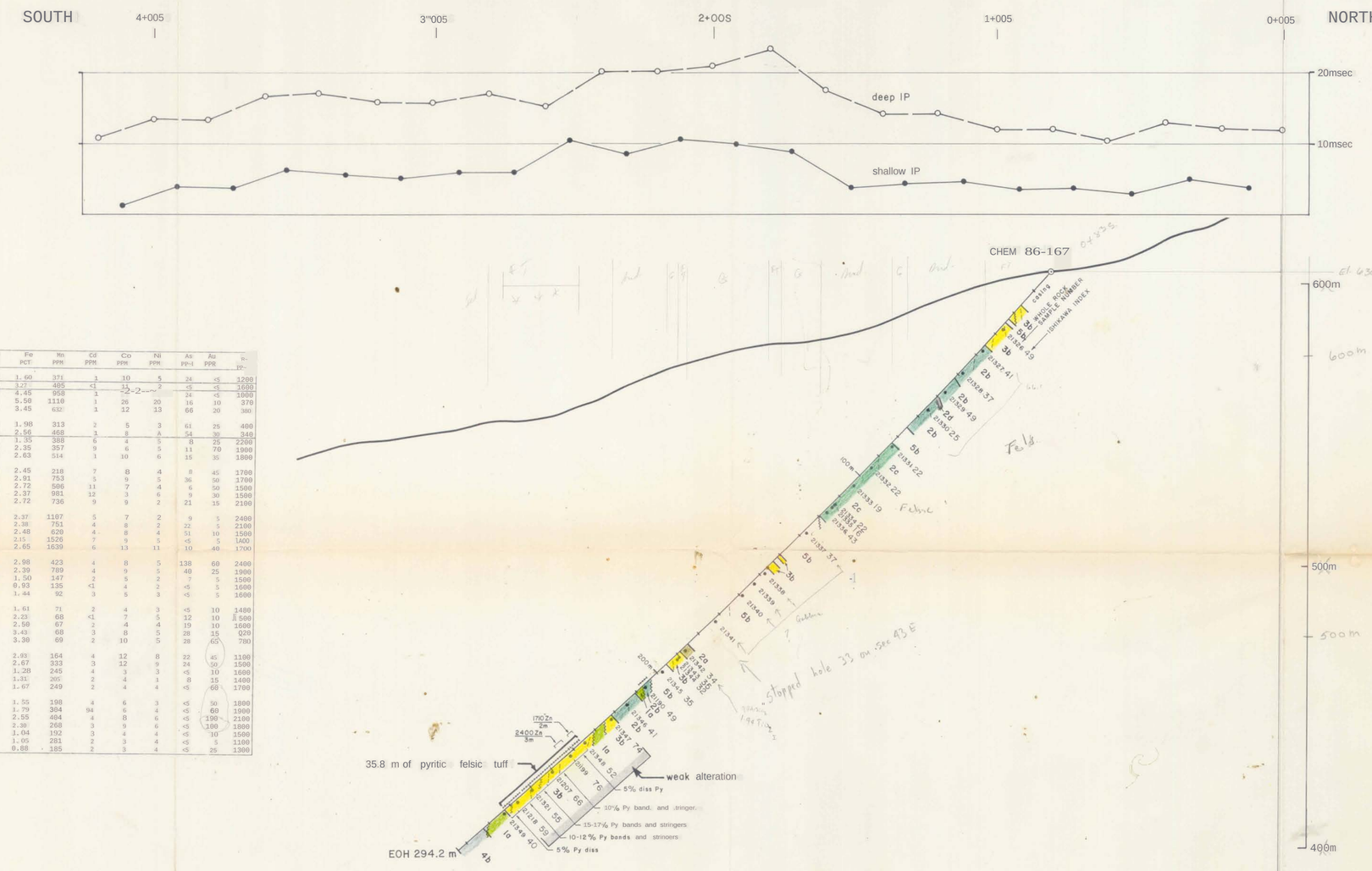
Chemainus Joint Venture

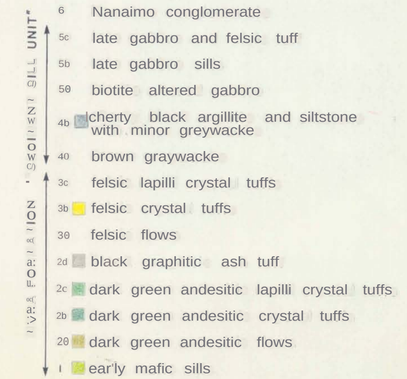
Vancouver Island, British Columbia

Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 4
DATE: Fall 1986	NTS: 92 B/13W	

SAMPLE NUMBER	Hole	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	R- PP-
AB 21186	16	074.1-075.1	64	9	114	1	0.8	1.60	371	3	10	5	24	<5	1200
AB 21187	16	092.0-092.6	117	10	61	<1	<0.5	3.22	485	<1	11	2	<5	<5	1600
AS 21188	16	202.8-203.8	88	8	78	2	0.7	4.45	958	1	26		24	<5	1000
AS 21189	16	203.8-204.8	91	6	85	<1	1.1	5.50	1110	1	26	20	16	10	370
AB 21190	16	204.8-205.8	72	9	101	3	0.7	3.45	632	1	12	13	66	20	380
AS 21191	16	205.8-206.8	122	5	45	2	0.5	1.98	313	2	5	3	61	25	400
AB 21192	16	206.8-207.8	50	13	67	3	<0.5	2.56	468	1	8	4	54	30	340
AS 21193	16	236.0-237.0	108	104	1377	1	<0.5	1.35	388	6	4	5	8	25	2200
AS 21194	16	237.0-238.0	239	256	2004	<1	1.7	2.35	357	9	6	5	11	70	1900
AS 21195	16	238.0-239.0	64	64	289	3	<0.5	2.63	514	1	10	6	15	35	1800
AS 21196	16	239.0-240.0	145	174	1264	3	0.7	2.45	218	7	8	4	8	45	1700
AB 21197	16	240.0-241.0	187	247	948	3	1.0	2.91	753	5	9	5	36	50	1700
AS 21198	16	241.0-242.0	405	59	2347	3	1.0	2.72	586	11	7	4	6	50	1500
AS 21199	16	242.0-243.0	375	1071	2692	2	0.9	2.37	981	12	3	6	9	30	1500
AS 21200	16	243.0-244.0	434	581	2195	3	0.9	2.72	736	9	9	2	21	15	2100
AB 21201	16	244.0-245.0	121	382	680	3	0.6	2.37	1107	5	7	2	9	5	2400
AB 21202	16	245.0-246.0	85	261	424	<1	<0.5	2.38	751	4	8	2	22	5	2100
All 21203	16	246.0-247.0	145	275	584	3	1.3	2.48	620	4	8	4	51	10	1500
AS 21204	16	247.0-248.0	148	296	946	2	<0.5	2.15	1526	7	9	5	<5	5	1400
AS 21205	16	248.0-249.0	151	171	602	2	<0.5	2.65	1639	6	13	11	10	40	1700
AS 21206	16	249.0-250.0	324	189	608	2	1.4	2.98	423	4	8	5	138	60	2400
AS 21207	16	250.0-251.0	131	90	475	1	0.8	2.39	789	4	9	5	48	25	1900
AS 21208	16	251.0-252.0	136	7	181	2	<0.5	1.50	147	2	5	2	7	5	1500
AB 21209	16	252.0-253.0	35	17	118	2	<0.5	0.93	135	<1	4	2	<5	5	1600
All 21210	16	253.0-254.0	37	<5	150	1	<0.5	1.44	92	3	5	3	<5	5	1600
AB 21211	16	254.0-255.0	177	<5	84	2	<0.5	1.61	71	2	4	3	<5	10	1400
AB 21212	16	255.0-256.0	132	<5	24	3	<0.5	2.23	68	<1	7	5	12	10	1500
AB 21213	16	256.0-257.0	118	12	11	<1	<0.5	2.50	67	2	4	4	19	10	1600
AB 21214	16	257.0-258.0	173	<5	12	2	<0.5	3.43	68	3	8	5	28	15	020
AB 21215	16	258.0-259.0	132	<5	11	2	<0.5	3.30	69	2	10	5	28	65	780
AS 21216	16	259.0-260.0	494	9	54	3	<0.5	2.03	164	4	12	8	22	45	1100
AS 21321	16	260.0-261.0	763	8	57	2	0.6	2.67	333	3	12	9	24	50	1500
AB 21322	16	261.0-262.0	169	<5	283	<1	<0.5	1.28	245	4	3	3	<5	10	1600
AS 21323	16	262.0-262.8	71	<5	47	1	<0.5	1.31	205	2	4	1	8	15	1400
AS 21324	16	264.2-265.0	66	16	293	2	<0.5	1.67	249	2	4	4	<5	60	1700
AB 21325	16	265.0-266.0	71	34	278	2	<0.5	1.55	198	4	6	3	<5	50	1800
AS 21217	16	266.0-267.0	256	47	455	2	0.7	1.79	304	94	6	4	<5	60	1900
AS 21218	16	267.0-268.0	457	41	414	2	1.7	2.55	404	4	8	6	<5	190	2100
AB 21219	16	268.0-269.0	146	28	175	2	0.6	2.38	268	3	9	6	<5	100	1800
AS 21302	16	269.0-270.0	50	<5	59	2	<0.5	1.04	152	3	4	4	<5	10	1500
AB 21303	16	270.0-271.0	26	10	68	1	<0.5	1.05	281	2	3	4	<5	5	1100
AB 21304	16	271.0-271.8	12	13	74	2	0.6	0.88	185	2	3	4	<5	25	1300





FALCONBRIDGE LIMITED

Section 45+00E

DOH CHEM 86-16

East Chip 1 Claim

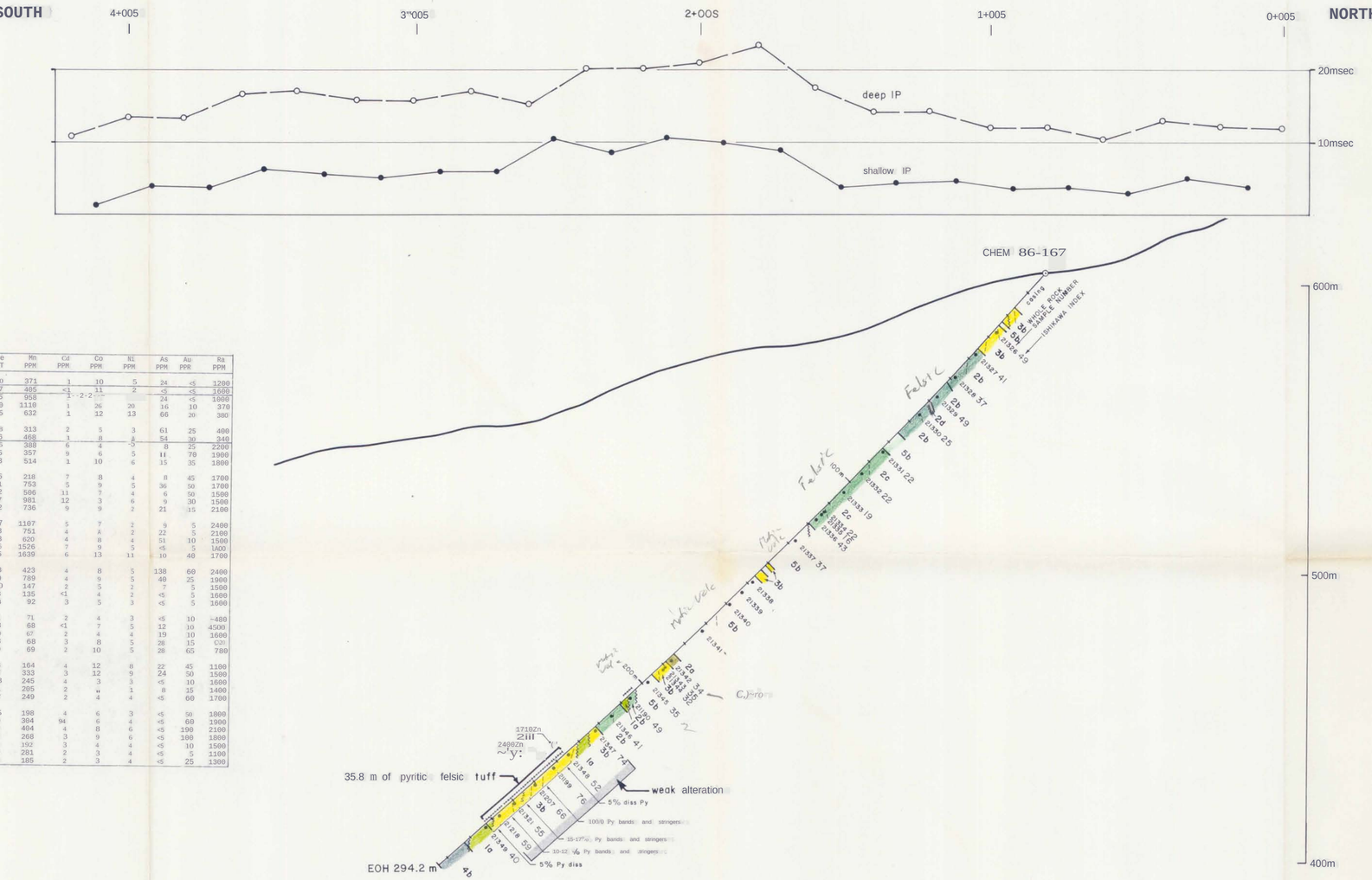
. Cheminus Joint Venture

Vancouver Island, British Columbia

Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 5
DATE: Fall 1986	NTS: 92 Bf 13W	

SAMPLE NUMBER	Hole #	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cd PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21186	16	074.1-075.1	64	9	114	1	0.A	1.60	371	1	10	5	24	<5	1200
AB 21187	16	092.0-092.0	117	10	63	<1	<0.5	3.27	465	<1	11	2	<5	<5	1600
AB 21188	16	202.8-203.8	80	8	78	2	0.7	4.45	958	1	2-2	[illegible]	24	<5	1600
AB 21189	16	203.8-204.8	91	6	85	<1	1.1	5.50	1110	1	26	20	16	10	370
AB 21190	16	204.8-205.8	72	9	101	3	0.7	3.45	632	1	12	13	66	20	380
AB 21191	16	205.8-206.8	122	5	45	2	0.5	1.98	313	2	5	3	61	25	400
AB 21192	16	206.8-207.8	50	13	67	5	<0.5	2.56	468	1	8	8	54	30	340
AB 21193	16	236.0-237.0	108	104	1377	1	<0.5	1.35	388	6	4	<5	8	25	2200
AB 21194	16	237.0-238.0	239	256	2004	<1	1.7	2.35	357	9	6	5	11	70	1900
AB 21195	16	238.0-239.0	64	64	289	3	<0.5	2.63	514	1	10	6	15	35	1800
AB 21196	16	239.0-240.0	145	174	1264	3	0.7	2.45	218	7	8	4	8	45	1700
AB 21197	16	240.0-241.0	187	247	948	3	1.0	2.91	753	5	9	5	36	50	1700
AB 21198	16	241.0-242.0	405	59	2347	3	1.0	2.72	506	11	7	4	6	50	1500
AB 21199	16	242.0-243.0	375	1071	2692	2	0.9	2.37	981	12	3	6	9	30	1500
AB 21200	16	243.0-244.0	434	581	2195	3	0.9	2.72	736	9	9	2	21	15	2100
AB 21201	16	244.0-245.0	121	382	680	3	0.6	2.37	1107	5	7	2	9	5	2400
AB 21202	16	245.0-246.0	85	261	424	<1	<0.5	2.38	751	4	A	2	22	5	2100
AB 21203	16	246.0-247.0	145	275	504	3	1.3	2.48	620	4	8	4	51	10	1500
A? 21204	16	247.0-248.0	140	296	946	2	<0.5	2.15	1526	7	9	5	<5	5	1A00
AB 21205	16	248.0-249.0	151	171	602	2	<0.5	2.65	1639	6	13	11	10	40	1700
AS 21206	16	249.0-250.0	324	189	608	2	1.4	2.98	423	4	8	5	138	60	2400
AB 21207	16	250.0-251.0	131	90	475	1	0.8	2.39	789	4	9	5	40	25	1900
AS 21208	16	251.0-252.0	136	7	181	2	<0.5	1.50	147	2	5	2	7	5	1500
AS 21209	16	252.0-253.0	35	17	118	2	<0.5	0.93	135	<1	4	2	<5	5	1600
AD 21210	16	253.0-254.0	37	<5	150	1	<0.5	1.44	92	3	5	3	<5	5	1600
AS 21211	16	254.0-255.0	177	<5	84	2	<0.5	1.61	71	2	4	3	<5	10	~480
AS 21212	16	255.0-256.0	132	<5	24	3	<0.5	2.23	68	<1	7	5	12	10	4500
AB 21213	16	256.0-257.0	118	12	11	<1	<0.5	2.50	67	2	4	4	19	10	1600
AS 21214	16	257.0-258.0	173	<5	12	2	<0.5	3.43	68	3	8	5	28	15	C30
AS 21215	16	258.0-259.0	132	<5	11	2	<0.5	3.30	69	2	10	5	28	65	780
AB 21216	16	259.0-260.0	494	9	54	3	<0.5	2.93	164	4	12	8	22	45	1100
AB 21321	16	260.0-261.0	763	8	57	2	0.6	2.67	333	3	12	9	24	50	1500
AS 2H22	16	261.0-262.0	169	<5	283	<1	<0.5	1.28	245	4	3	3	<5	10	1600
AS 21323	16	262.0-262.8	72	<5	47	1	<0.5	1.31	205	2	4	1	8	15	1400
AS 21324	16	264.2-265.9	66	16	293	2	<0.5	1.67	249	2	4	4	<5	60	1700
AS 21325	16	265.0-266.0	71	34	278	2	<0.5	1.55	198	4	6	3	<5	50	1800
AS 21217	16	266.0-267.0	256	47	455	2	0.7	1.79	304	94	6	4	<5	60	1900
AS 21218	16	267.0-268.0	457	41	414	2	1.7	2.55	404	4	8	6	<5	190	2100
AS 21219	16	268.0-269.0	146	25	175	2	0.6	2.38	268	3	9	6	<5	100	1800
AS 21302	16	269.0-270.0	50	<5	59	2	<0.5	1.04	192	3	4	4	<5	10	1500
AS 21303	16	270.0-271.0	26	10	68	1	<0.5	1.05	281	2	3	4	<5	5	1100
AS 21304	16	271.0-271.8	12	13	74	2	0.6	0.88	185	2	3	4	<5	25	1300



SWPIMENT SILL UNIT

TYEE FORMATION

- 6 Nanaimo conglomerate
- 5c late gabbro and felsic tuff
- 5b late gabbro sills
- 50 biotite altered gabbro
- 4b cherty black argillite and siltstone with minor greywacke
- 40 brown graywacke
- 3c felsic lapilli crystal tuffs
- 3b felsic crystal tuffs
- 30 felsic flows
- 2d black graphitic ash tuff
- 2c dark green andesitic lapilli crystal tuffs
- 2b dark green andesitic crystal tuffs
- 2a dark green andesitic flows
- 1 early mafic sills

- bedding
- foliation
- fault
- shear
- breccia
- whole rock sample
- geochemical/assay samples (ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na2O + CaO} \times 100$$

~ FALCONBRIDGE LIMITED

Section 45+00E

DDH CHEM 86-16

East Chip 1 Claim

Cheminus Joint Venture

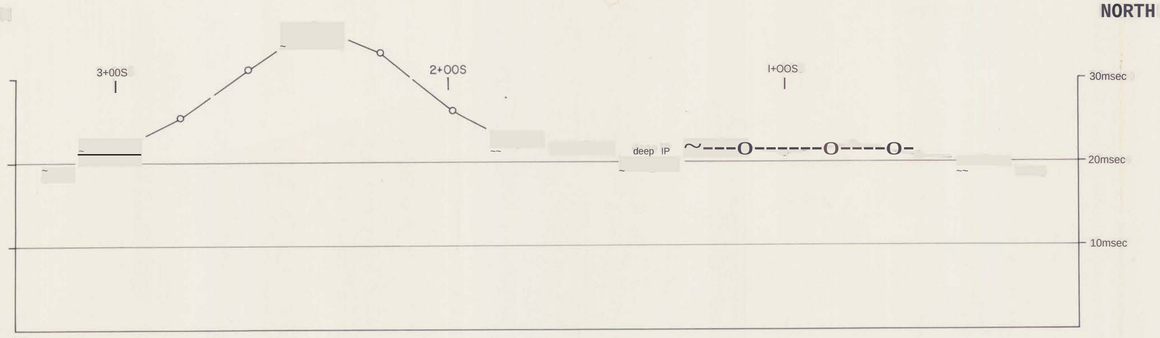
Vancouver Island, British Columbia

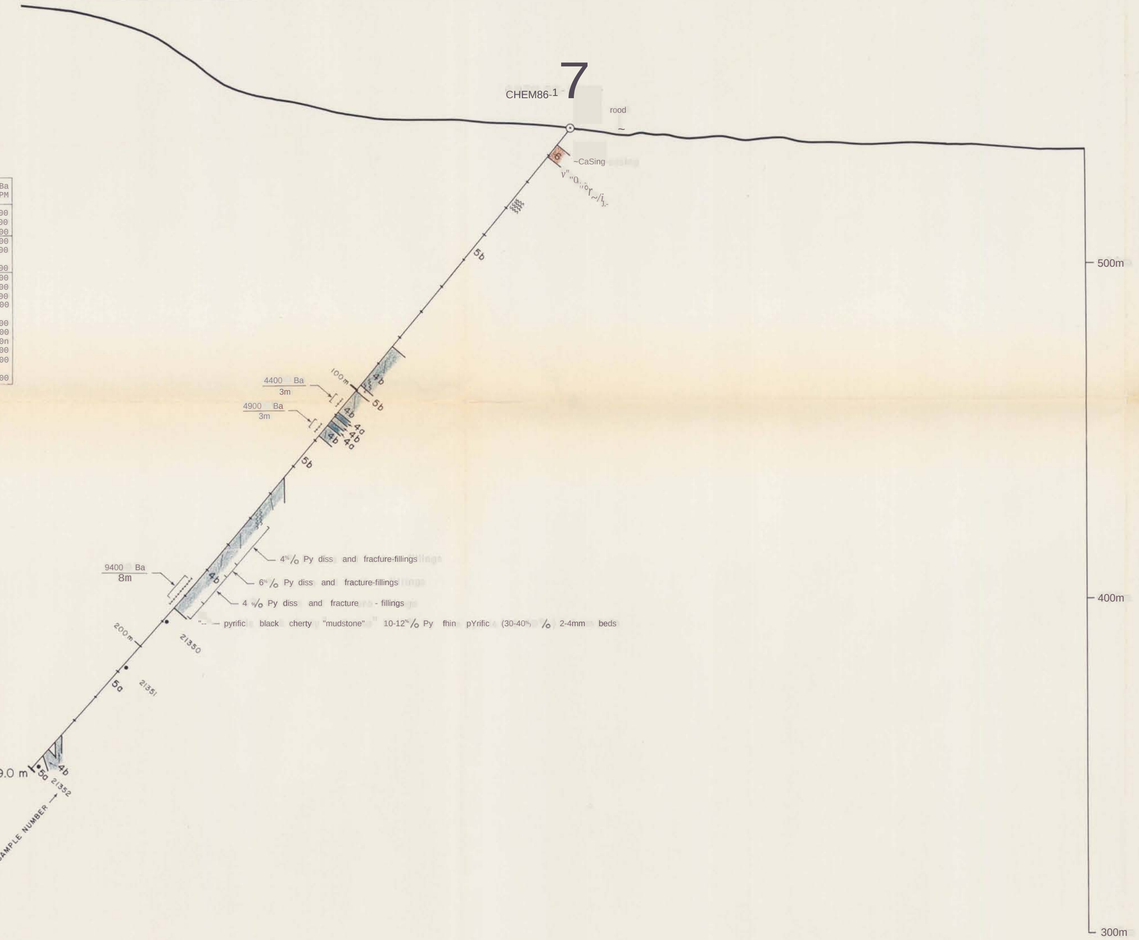
Project Number 116

WORK BY: SGE	DRAWN BY: 8JM Feb 1987	FIGURE: 5
DATE: Fall 1986	NTS: 92 8/13W	

SOUTH

NORTH





SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	MO PPM	Aa PPM	Fe PCT	~In PPM	Crl PPM	Co PPM	N1 PPM	As PPM	Au PPB	Ba PPM
AS 21305	17	105.0-106.0	33	<5	35	<1	<0.5	2.05	422	2	5	16	<5	<5	3600
AB 21306	17	106.0-107.0	35	<5	27	<1	<0.5	2.34	336	4	6	16	<5	<5	4500
AS 21307	17	107.0-108.0	25	<5	38	<1	<0.5	2.45	395	3	5	13	<5	<5	5100
AS 2-	17	115.0-116.0	56	<5	45	1	0.5	3.10	426	3	6	22	27	<5	3500
AB 21309	17	116.0-117.0	80	6	47	<1	0.6	3.18	401	4	7	2S	13	<5	7000
AS 21310	17	117.0-118.0	77	6	42	3	<0.5	2.52	338	2	6	29	10	<5	4300
AS 21311	17	175.0-176.0	18	<5	67	<1	0.7	1.89	319	2	3	10	<5	<5	3000
AB 21312	17	176.0-177.0	22	<5	89	<1	<0.5	2.51	616	2	4	12	7	<5	6100
AS 21313	17	177.0-178.0	2]	<5	112	<1	<0.5	2.75	606	3	5	11	6	<5	4900
AB 21314	17	178.0-179.0	25	7	96	<1	<0.5	2.87	599	2	6	11	<5	<5	5900
AB 21315	17	179.0-180.0	24	6	86	<1	0.5	2.]]	321	1	4	21	7	<5	9100
AB 21316	17	180.0-181.0	29	7	1]7	<1	0.8	2.24	298	2	5	24	<5	<5	16000
AB 21317	17	181.0-182.0	32	<5	]]2	1	1.0	1.78	268	2	1	2]	<5	<5	620n
aB 21]18	17	182.0-183.0	34	9	99	2	1.0	2.15	268	2	4	25	14	<5	19000
AB 21319	17	18].0-184.0	41	<5	70	2	0.6	1.9]	288	2	4	23	<5	<5	8000
AB 21320	17	184.0-184.8	27	<5	74	2	<0.5	1.40	257	1	1	21	<5	<5	4700

6 Nanaimo conglomerate

"SEDIMENT SILL UNIT"

5c late gabbro and felsic tuff

5b late gabbro sills

50 biotite altered gabbro

4b cherty black argillite and siltstone with minor greywacke

40 brown graywacke

HYPO FORMATION

3c felsic lapi"i crystal tuffs

3b felsic crystal tuffs

30 felsic flows

2c dark green andesitic lapilli crystal tuffs

2b dark green andesitic crystal tuffs

20 dark green andesitic flows

1 early mafic sills

bedding

foliation

fault

shear

breccia

whole rock sample

~eochemicalfaSSay samples ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na_2O + CaO})(100$$

~ FALCONBRIDGE LIMITED

Section 32+00E

DDH CHEM 86-17

West Chip 1 Claim

Chemainus Joint Venture

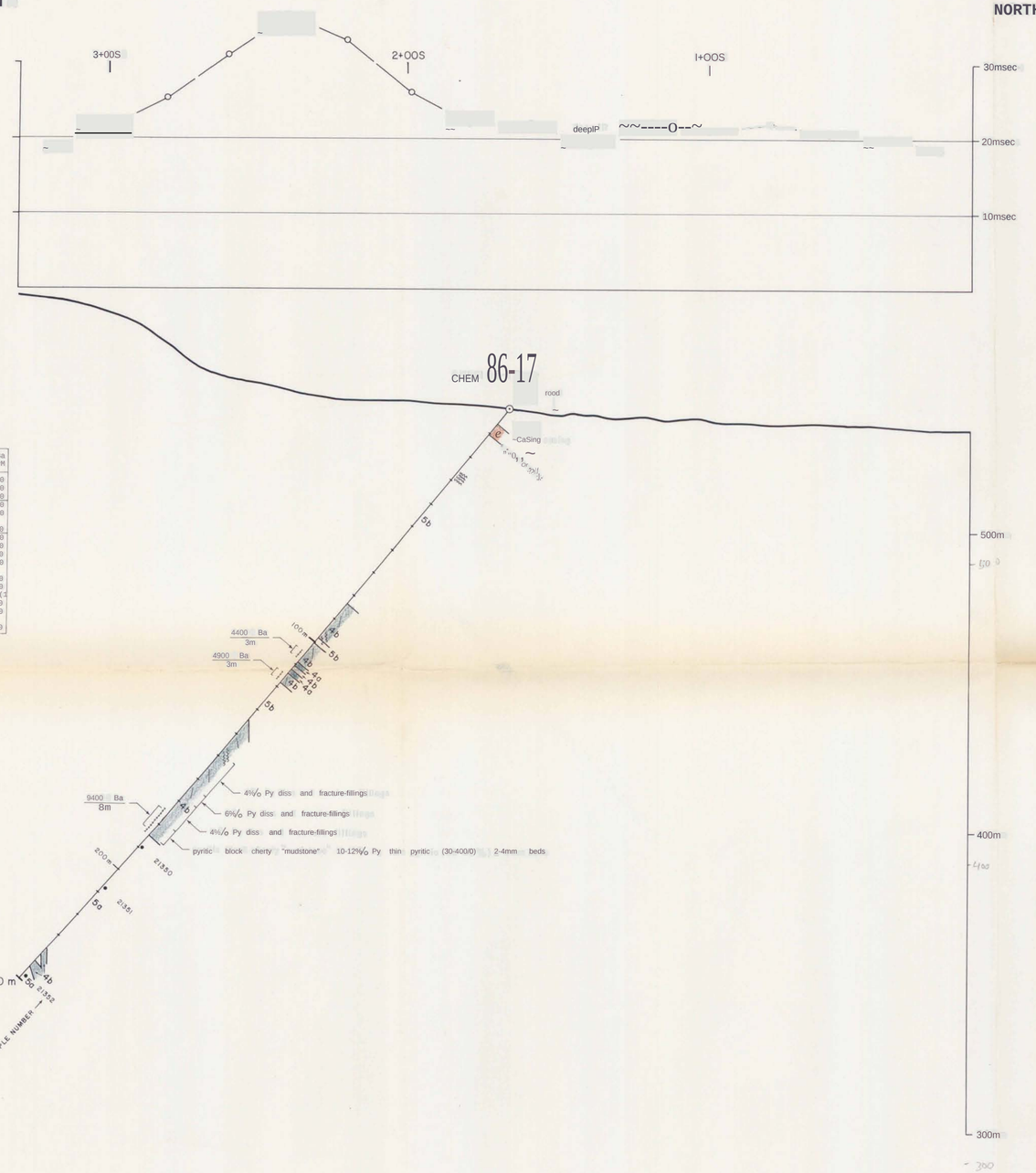
Vancouver Island, British Columbia

Project Number 116

WORK BY: SGE	DRAWN BY: BJ M Feb 1987	FIGURE: 6
DATE: Fall 1986	NTS: 92 Bf 13W	

SOUTH

NORTH



SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Cn PPM	Co PPM	Ni PPM	As PPM	Au PPB	Ba PPM
AB 21305	17	105.0-106.0	33	<5	35	<1	<0.5	2.05	422	2	5	16	<5	<5	3600
AS 21306	17	106.0-107.0	35	<5	27	<1	<0.5	2.34	336	4	6	16	<5	<5	4500
AS 21307	17	107.0-108.0	25	<5	38	<1	<0.5	2.45	395	3	5	13	<5	<5	5100
AS 21308	17	115.0-116.0	56	<5	45	1	0.5	3.10	426	3	6	22	27	<5	3500
AS 21309	17	116.0-117.0	80	6	47	<1	0.6	3.18	401	4	7	28	13	<5	7000
AB 21310	17	117.0-118.0	77	6	42	3	<0.5	2.52	338	2	6	29	10	<5	4300
AS 21311	17	175.0-176.0	18	<5	67	<1	0.7	1.89	319	2	3	10	<5	<5	3000
AB 21312	17	176.0-177.0	22	<5	89	<1	<0.5	2.51	616	2	4	12	7	<5	6100
AS 21313	17	177.0-178.0	23	<5	112	<1	<0.5	2.75	606	3	5	11	6	<5	4900
AS 21314	17	178.0-179.0	25	7	96	<1	<0.5	2.87	599	2	6	11	<5	<5	5900
AS 21315	17	179.0-180.0	24	6	86	<1	0.5	2.33	321	1	4	21	7	<5	9100
AS 21316	17	180.0-181.0	29	7	137	<1	0.8	2.24	298	2	5	24	<5	<5	16000
AS 21317	17	181.0-182.0	32	<5	132	1	1.0	1.78	260	2	3	23	<5	<5	6200
AS 21318	17	182.0-183.0	34	9	99	2	1.0	2.15	268	2	4	25	14	<5	19000
AS 21319	17	183.0-184.0	41	<5	70	2	0.6	1.93	288	2	4	23	<5	<5	8000
AS 21320	17	184.0-184.8	27	<5	74	2	<0.5	1.40	257	1	3	21	<5	<5	4700

"SECUKENT SILL UNIT"

MYRA FORMATION

6 Nanaimo conglomerate

5c late gabbro and felsic tuff

5b late gabbro sills

5a biotite altered gabbro

4b cherty black argillite and siltstone with minor greywacke

4a brown graywacke

3c felsic lapilli crystal tuffs

3b felsic crystal tuffs

3a felsic flows

2c dark green andesitic lapilli crystal tuffs

2b dark green andesitic crystal tuffs

2a dark green andesitic flows

1 early mafic sills

"~ bedding

foliation

fault

~~" shear

breccia

• whole rock sample

~eochemical/assay samples ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_20 + MgO}{K_20 + MgO + Na_20 + CaO})(100$$

~ FALCONBRIDGE LIMITED

Section 32+00E

DOH CHEM 86-17

West Chip 1 Claim

Chemainus Joint Venture

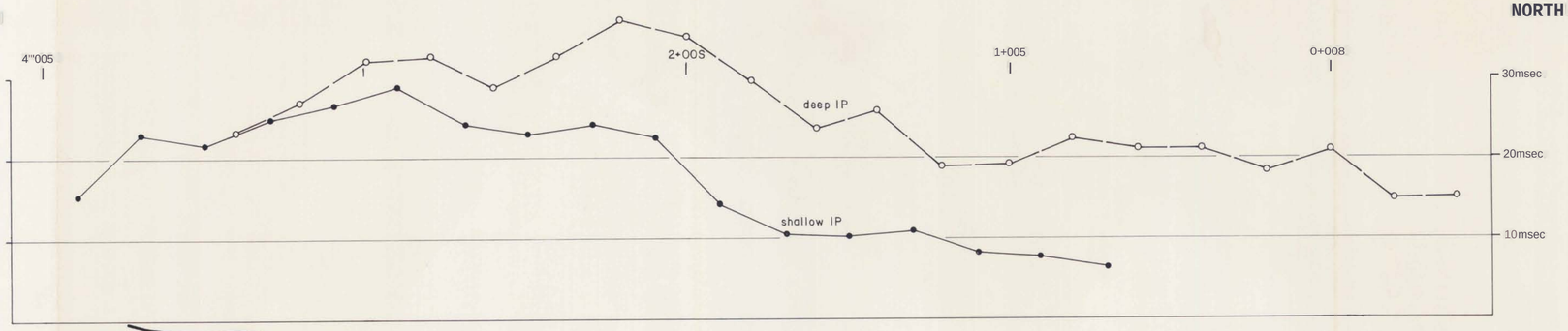
Vancouver Island, British Columbia

Project Number 116

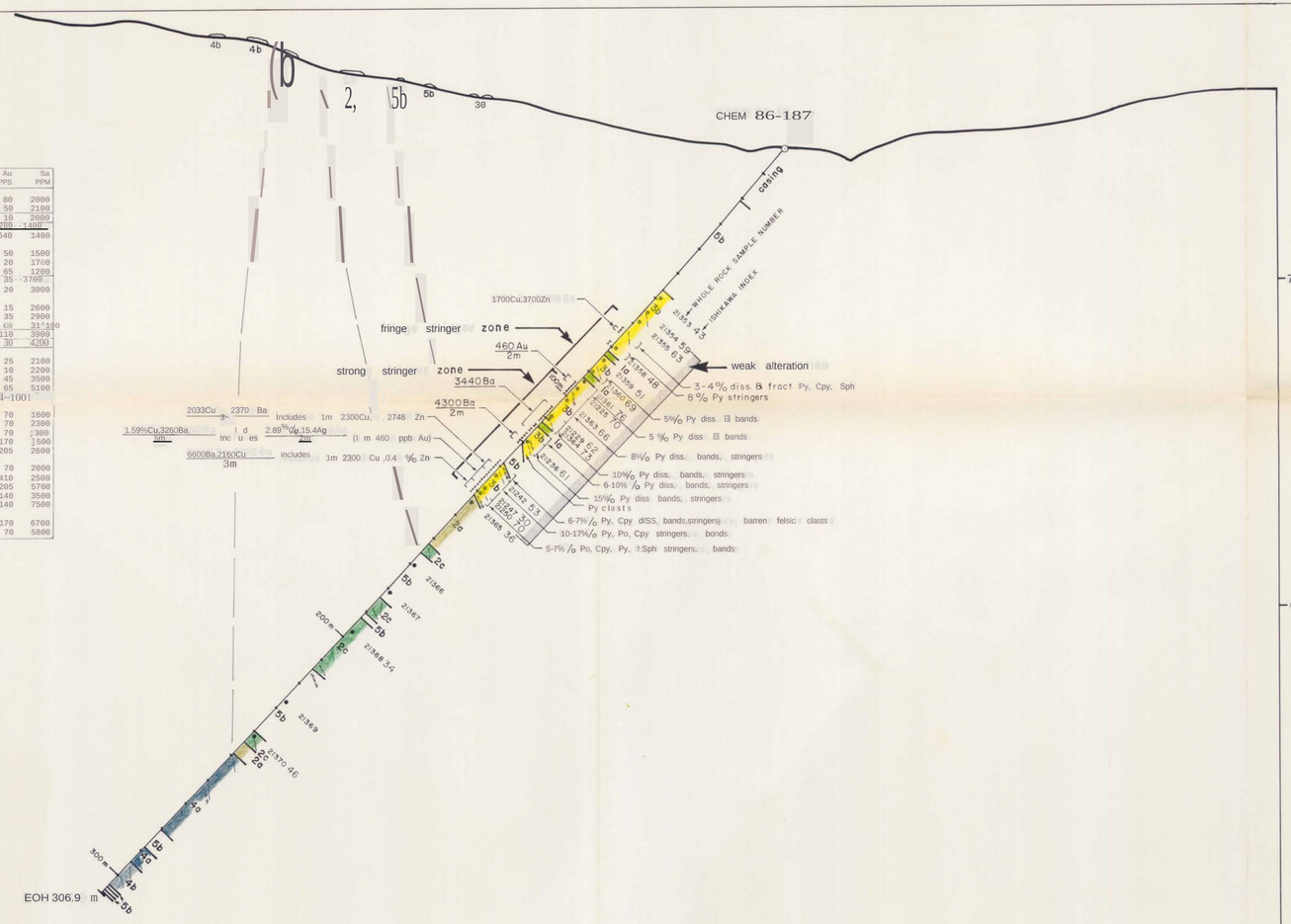
WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 6
DATE: Fall 1986	NTS: 92 B/13W	

SOUTH

NORTH



SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Co PPM	Ni PPM	Mn PPM	Cd PPM	Au PPM	Fe PCT	As PPM	Au PPB	Sb PPM
AB 21220	18	073.0-074.0	833	20	216	3	8	4	112	2	1.7	3.91	<5	80	2000
AB 21221	18	074.0-075.0	1719	130	0.37%	2	5	3	105	26	2.54.91	[illegible]	<5	50	2100
AB 21222	18	078.3-079.3	54	49	154	2	3	3	54	[illegible]	[illegible]	[illegible]	<5	10	2000
AB 21223	18	094.6-095.6	260	35	107	3	4	4	42	2	1.0	3.90	20	280	1400
AB 21224	18	095.6-096.6	421	113	319	3	4	3	37	2	2.0	4.34	17	640	3400
AB 21225	18	096.6-097.6	156	20	33	1	4	3	38	<I	0.5	2.36	<5	50	1500
AB 21226	18	097.6-098.6	139	25	143	<1	3	3	32	1	<0.5	2.94	[illegible]	20	1700
AS 21227	18	098.6-099.6	365	351	1837	3	8	3	127	10	1.6	4.22	8	65	1200
AS 21228	18	106.6-107.6	113	442	1535	5	6	2	44	8	1.5	3.20	8	35	3700
AS 21229	18	107.0-108.0	117	481	445	5	5	<1	31	2	1.5	1.13	<5	20	3000
AB 21230	18	108.0-109.0	46	14	39	4	6	2	34	1	0.8	1.63	<5	15	2600
AB 21231	18	109.0-110.0	112	44	216	4	7	1	34	1	1.5	2.20	<5	35	2900
AB 21232	18	110.0-111.6	57	6	131	5	7	3	53	<I	1.2	2.52	<5	60	31'100
AS 21233	18	113.3-114.1	31	6	18	4	10	1	103	<I	0.8	3.83	6	110	3900
AS 21234	18	114.7-116.0	62	39	27	2	7	3	113	<I	0.9	1.99	8	30	4200
AB 21235	18	116.9-117.9	77	<5	6	3	12	5	9	<I	1.0	2.06	<5	25	2100
AB 21236	18	117.9-118.9	95	<5	4	2	6	2	8	<I	1.1	1.34	<5	10	2200
AB 21237	18	118.9-119.9	249	24	191	4	14	5	29	2	1.5	3.19	<5	45	3500
AB 21238	18	119.9-120.9	731	11	499	5	17	20	87	4	1.9	3.66	11	65	5100
AS 21239	18	128.6-129.6	1200	6	34	6	19	4	83	1	1.5	3.65	[illegible]	4-100	[illegible]
AB 21240	18	129.6-130.6	700	6	19	4	10	5	19	2	1.4	4.03	<5	70	1600
AB 21241	18	130.6-131.6	2300	15	2748	7	8	3	19	17	3.6	3.32	15	70	2300
AS 21242	18	131.6-132.6	1500	7	81	14	15	56	183	2	2.3	6.79	37	70	2300
AS 21243	18	132.6-133.6	2300	5	70	10	14	6	36	2	2.4	4.04	9	170	1500
AS 21244	18	133.6-134.6	8300	6	128	6	17	83	183	2	4.9	4.37	[illegible]	205	2600
AS 21245	18	134.6-135.6	38000	7	576	8	9	53	131	6	19.5	>10.00	45	70	2000
AS 21246	18	135.6-136.6	19800	8	648	9	23	16	24	4	10.9	>10.00	28	410	2500
AB 21247	18	136.6-137.6	6600	10	106	6	12	7	31	2	4.9	6.26	17	205	5700
AB 21248	18	137.6-138.6	6600	<5	378	6	12	11	25	3	4.5	>10.00	<5	140	3500
AS 21249	18	138.6-139.6	1800	6	220	5	15	12	21	2	2.0	7.45	9	140	7500
AS 21250	18	139.6-140.6	2400	25	524	2	6	3	13	3	3.1	4.13	6	170	6700
AB 21301	18	140.6-141.6	2300	66	0.40%	3	21	37	47	21	3.3	7.40	<5	70	5800



"ascii/sen/ BILL UNIT"

MYRA FORMATION

- 6 Nanaimo conglomerate
- 5c late gabbro and felsic tuff
- 5b late gabbro sills
- 5a biotite altered gabbro
- 4b cherty black argillite and siltstone with minor greywacke
- 4a brown graywacke
- 3c felsic lapilli crystal tuffs
- 3b felsic crystal tuffs
- 3a felsic flows
- 2c dark green andesitic lapilli crystal tuffs
- 2b dark green andesitic crystal tuffs
- 2a dark green andesitic flows
- 1 early mafic sills

- bedding
- foliation
- fault
- shear
- breccia
- whole rock sample
- ~eochemicalfaSSay samples ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na2O + CaO} \times 100$$

~ FALCONBRIDGE LIMITED

Section 28+00E

DDH CHEM 86-18

West Chip 1 Claim

Chemainus Joint Venture

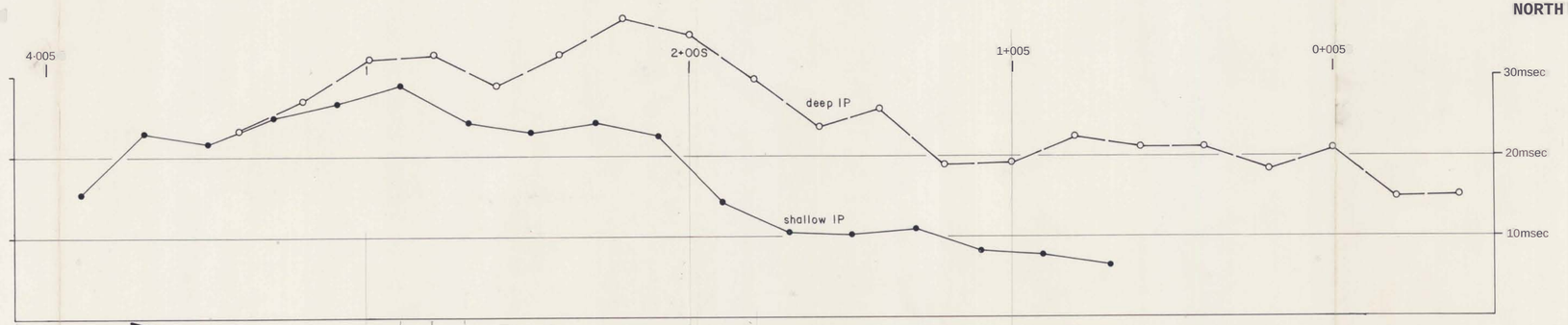
Vancouver Island, British Columbia

Project Number 116

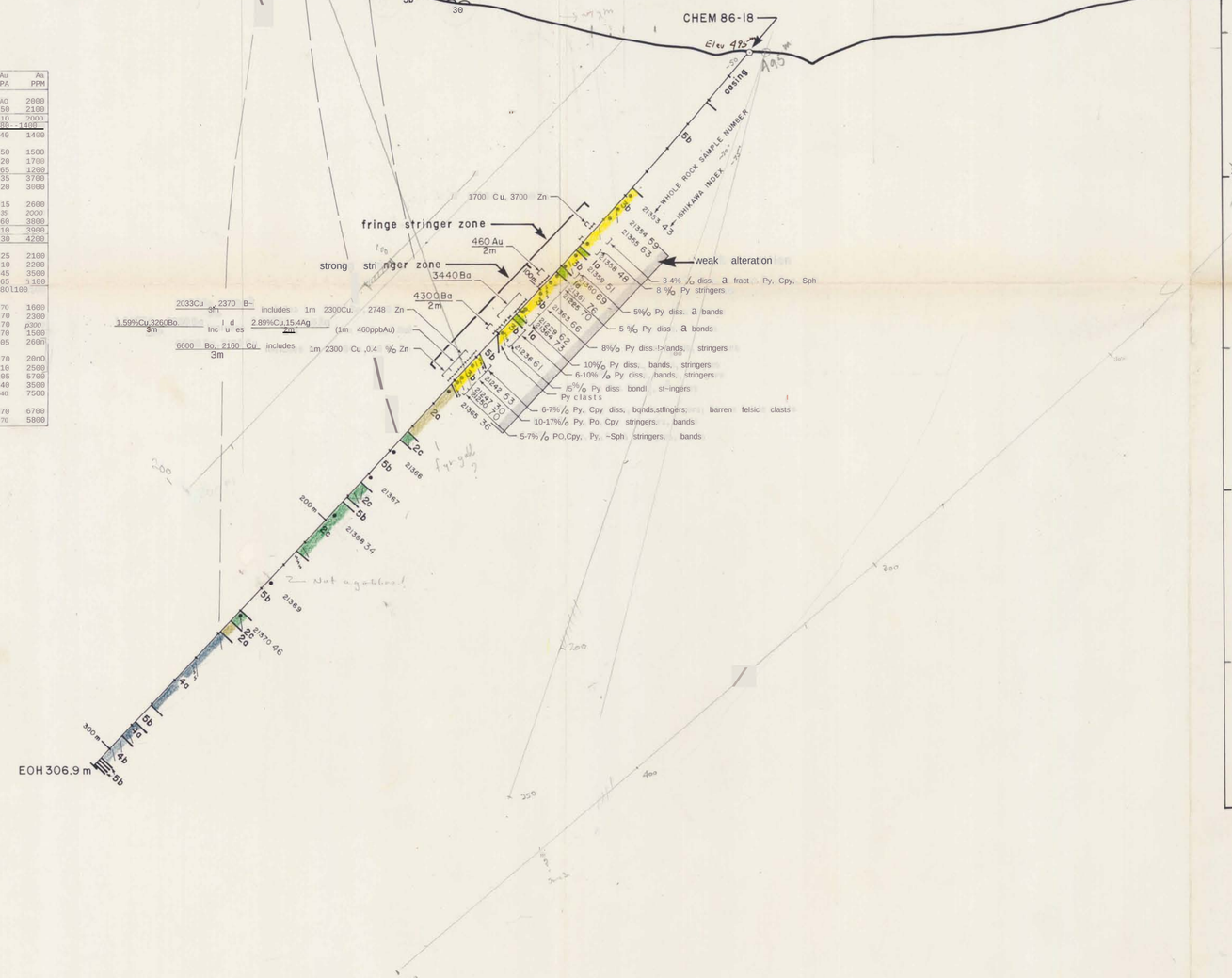
WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 7
DATE: Fall 1986	NTS: 92 Bf 13W	

SOUTH

NORTH



SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Co PPM	Ni PPM	Mn PPM	Cd PPM	Ag PPM	Fe PCT	As PPM	Au PPB	Au PPM
AS 21220	18	073.0-074.0	833	20	216	3	8	4	112	2	1.7	3.91	<5	40	2000
AS 21221	18	074.0-075.0	1719	130	0.37%	2	5	3	105	26	2.5	4.91	<5	50	2100
AS 21222	18	075.3-079.3	54	49	154	2	3	3	54	<1	1.5	3.45	<5	10	2000
AS 21223	18	094.6-095.6	260	35	187	3	4	4	42	2	1.0	3.98	10	280	1400
AS 21224	18	095.6-096.6	421	113	319	3	4	3	37	2	2.0	4.34	17	640	1400
AS 21225	18	096.6-097.6	156	20	33	1	4	3	38	<1	0.5	2.36	<5	50	1500
AS 21226	18	097.6-098.6	139	25	143	<1	3	3	32	1	<0.5	2.04	8	20	1700
AS 21227	18	098.6-099.6	305	351	1837	3	8	3	127	10	1.6	4.22	8	65	1200
AS 21228	18	106.0-107.0	113	442	1535	5	6	2	44	8	1.5	3.20	4	35	3700
AS 21229	18	107.0-108.0	117	481	445	5	5	<1	31	2	1.5	1.13	<5	20	3000
AS 21230	18	108.0-109.0	46	14	39	4	6	2	34	1	0.8	1.63	<5	15	2600
AS 21231	18	109.0-110.0	112	44	216	4	7	1	34	1	1.5	2.20	<5	35	2000
AS 21232	18	110.0-111.6	57	6	131	5	7	3	53	<1	1.2	2.52	<5	60	3800
AS 21233	18	113.3-114.1	31	6	18	4	10	1	103	<1	0.8	3.83	6	110	3900
AS 21234	18	114.7-116.0	62	39	27	2	7	3	113	<1	0.9	1.99	<5	30	4200
AS 21235	18	116.9-117.9	77	<5	6	3	12	5	9	<1	1.0	2.06	<5	25	2100
AS 21236	18	117.9-118.9	95	<5	4	2	6	2	8	<1	1.1	1.34	<5	10	2200
AS 21237	18	118.9-119.9	249	24	131	4	14	5	29	2	1.5	3.14	<5	45	3500
AS 21213	18	119.9-120.9	731	11	499	5	17	20	87	4	1.9	3.44	11	65	4100
AS 21239	18	128.6-129.6	1200	6	34	6	19	4	83	11.	.5	1.6	7	4801100	
AS 21240	18	129.6-130.6	700	6	19	4	10	5	19	2	1.4	4.03	<5	70	1600
AS 21241	18	130.6-131.6	2300	15	2748	7	8	3	19	17	3.6	3.32	15	70	2300
AS 21242	18	131.6-132.6	1500	7	81	14	15	56	183	2	2.3	6.79	37	70	2300
AS 21243	18	132.6-133.6	2300	5	70	10	14	6	96	2	2.4	4.04	9	170	1500
AS 21244	18	133.6-134.6	8300	6	128	6	17	83	143	2	4.0	4.37	8	205	2600
AS 21245	18	134.6-135.6	38000	7	576	8	9	53	131	6	19.5	>10.00	45	70	2000
AS 11246	18	135.6-136.6	19000	8	648	9	23	16	24	4	10.9	>10.00	28	410	2500
AS 21247	18	136.6-137.6	6600	10	106	6	12	7	31	2	4.9	6.26	17	205	5700
AS 21248	18	137.6-138.6	6600	<5	378	6	12	11	25	3	4.5	>10.00	<5	140	3500
AS 21249	18	138.6-139.6	1800	6	220	5	15	12	21	2	2.0	7.45	9	140	7500
AS 21250	18	139.6-140.6	2400	25	524	2	6	3	13	3	3.1	4.13	6	170	6700
AS 21301	18	140.6-141.6	2300	66	0.40%	3	21	37	47	21	3.3	7.40	<5	70	5800



MYRA FORMATION — SILL UNIT

- 6 Nanaimo conglomerate
- 5a late gabbro and felsic tuff
- 5b late gabbro sills
- 5c biotite altered gabbro
- 4b cherty black argillite and siltstone with minor greywacke
- 4a brown graywacke
- 3c felsic lapilli crystal tuffs
- 3b felsic crystal tuffs
- 3a felsic flows
- 2b dark green andesitic lapilli crystal tuffs
- 2b dark green andesitic crystal tuffs
- 2a dark green andesitic flows
- 1 early mafic sills

- bedding
- foliation
- fault
- shear
- breccia
- whole rock sample
- geochemical/assay samples (ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na_2O + CaO} \times 100$$

~ FALCONBRIDGE LIMITED

Section 28+00E

DOH CHEM 86-18

West Chip 1 Claim

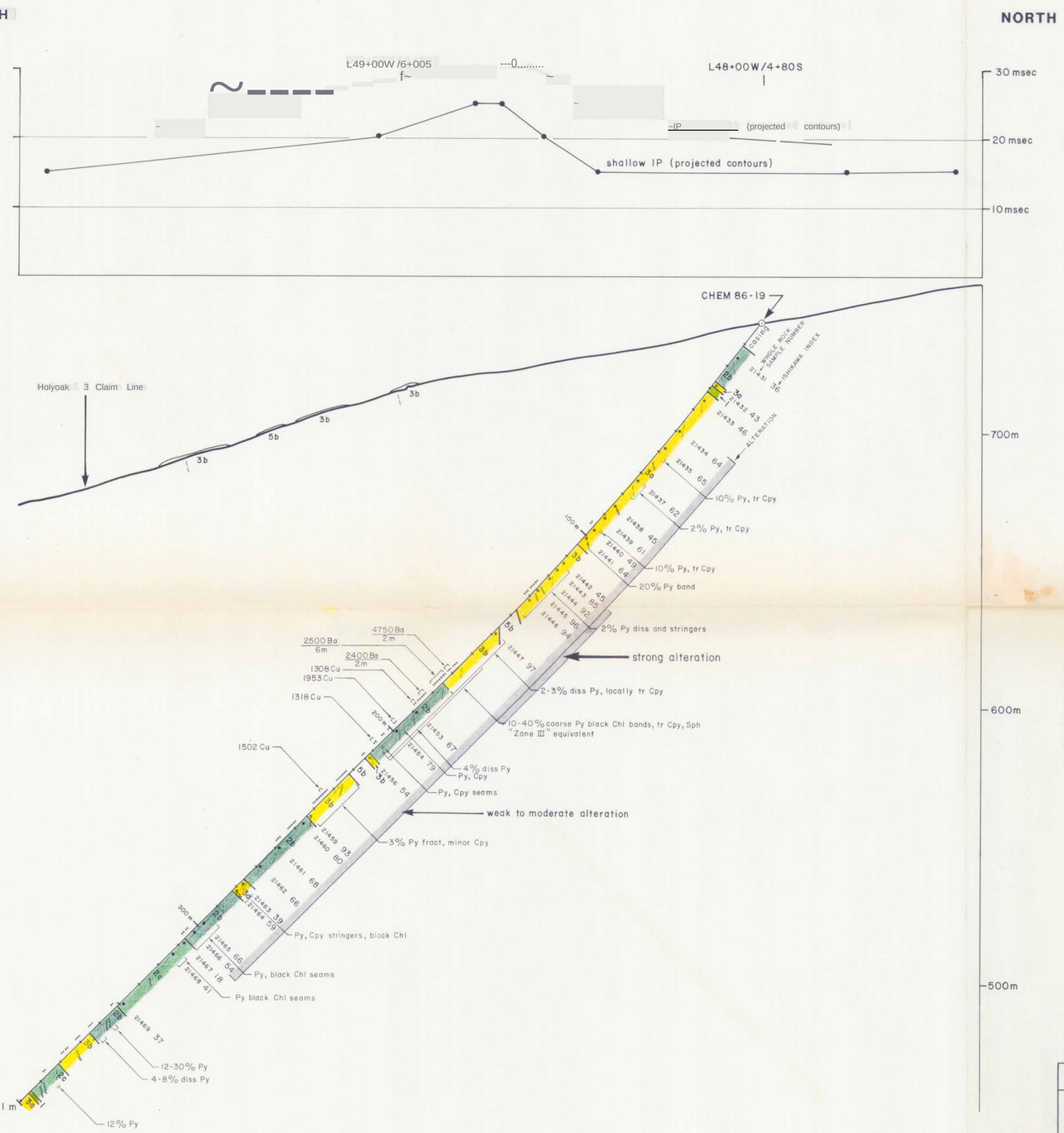
Chemainus Joint Venture

Vancouver Island, British Columbia

Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1981	FIGURE: 7
DATE: Fall 1986	NTS: 92 Bf 13W	

SAMPLE NUMBER	Hole Number	Sample Interval(m)	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	Fe PCT	Mn PPM	Co PPM	Ni PPM	As PPM	Au PPB	Pb PPM
AS 21371	19	095.0-096.0	57	86	60	<1	<0.5	3.50	566	2	4	2	7	10	1000
AS 21424	19	120.3-121.3	116	<5	5	4	<0.5	0.60	95	<1	1	2--65--25-			100
AB 21425	19	123.4-124.4	3	<5	6	2	<0.5	0.73	73	<1	<1	1	<5	35	1800
AS 21426	19	124.4-125.4	<1	<5	10	<1	<0.5	0.63	91	1	1	2	<5	30	1900
AB 21427	19	125.4-126.4	4	<5	<1	3	<0.5	1.01	68	1	2	1	<5	55	1800
AL 21428	19	126.4-127.4	<1	5	6	5	<0.5	1.06	71	3	2	3	<5	55	1800
AS 21429	19	129.0-130.0	4	<5	8	<1	<0.5	0.78	97	1	<1	2	<5	10	1600
AB 21430	19	130.0-131.0	17	<5	16	<1	<0.5	0.81	143	<1	<1	<1	<5	5	1600
AS 21372	19	157.0-157.6	43	16	112	16	2.0	>10.00	831	4	23	10	44	160	1000
AB 21373	19	166.7-167.7	9	<5	16	8	<0.5	2.53	94	2	15	<1	8	5	2400
AB 21374	19	167.7-168.3	1388	9	50	12	0.7	>10.00	217	7	108	4	72	40	2100
AB 21375	19	169.0-170.0	30	10	48	6	<0.5	3.47	488	1	14	7	17	15	4100
AS 21376	19	170.0-171.0	20	<5	42	8	<0.5	2.63	374	2	9	10	10	15	5400
AL 21377	19	172.0-173.0	17	<5	43	17	<0.5	2.66	383	2	10	12	<5	25	3200
AB 21378	19	173.0-174.0	10	<5	29	19	0.6	2.38	291	2	9	12	<5	20	3000
AL 21379	19	174.0-175.0	246	<5	52	6	<0.5	3.96	564	2	16	7	<5	10	2700
AB 21380	19	175.0-176.0	64	<5	52	14	<0.5	7.53	616	3	31	10	6	10	2300
AL 21381	19	176.0-177.0	24	<5	56	<1	<0.5	4.57	754	2	21	11	19	<5	1900
AB 21382	19	177.0-178.0	230	<5	60	<1	<0.5	9.88	873	4	88	14	25	10	1900
AL 21383	19	182.0-183.0	18	<5	27	<1	<0.5	6.40	422	2	28	9	25	5	2600
AB 21384	19	183.0-184.1	34	<5	13	3	<0.5	>10.00	296	4	46	11	25	5	3200
AS 21385	19	184.1-185.1	81	<5	73	<1	<0.5	6.11	1263	3	24	13	13	<5	1300
AB 21386	19	185.1-186.1	318	<5	65	2	<0.5	5.45	976	2	24	15	20	5	1500
AS 21387	19	187.8-188.3	1388	<5	83	11	<0.5	7.52	1191	4	38	14	13	25	1100
AS 21388	19	197.5-198.4	1953	<5	113	18	0.6	5.99	1386	3	2-;2-15		<5	25	1400
AS 21389	19	200.3-201.3	107	<5	74	5	<0.5	6.90	1303	3	24	17	9	<5	1300
AB 21390	19	203.0-204.0	1318	<5	117	5	<Q.~ 5.~~/554			3	2s--1s		6	<5	1200
AL 21391	19	207.5-207.9	15	<5	9	65	<0.5	8.10	197	3	142	9	18	10	900
AB 21392	19	213.0-214.0	209	<5	14	2	<0.5	0.64	118	<1	2	<1	<5	5	1900
AL 21393	19	222.5-223.0	87	<5	3	16	<0.5	0.72	81	<1	4	3	26	<5	2400
AL 21394	19	223.0-224.0	47	<5	1	8	<0.5	0.53	57	<1	3	1	<5	15	1900
AB 21395	19	224.0-225.0	491	<5	10	14	<0.5	0.81	61	2	2	2	<5	45	1900
AS 21396	19	225.0-226.0	5	<5	<1	2	<0.5	0.16	63	<1	<1	2	<5	<5	1900
AL 21397	19	226.0-227.0	241	<5	5	2	<0.5	1.06	79	<1	3	2	<1	10	1700
AS 21398	19	231.0-232.0	55	<5	10	3	<0.5	1.37	172	<1	4	<1	<5	15	1600
AS 21399	19	232.0-233.0	19	<5	14	8	<0.5	3.70	208	2	12	2	14	20	1300
AL 21400	19	233.0-234.0	5	<5	12	1	<0.5	1.16	187	2	4	2	6	10	1600
AS 21401	19	234.0-235.0	1502	<5	18	4	0.9	1.38	150	2	5	1	<5	10	1600
AS 21402	19	235.0-236.0	7	<5	9	<1	<0.5	0.74	172	<1	<1	1	<5	5	1500
AL 21403	19	236.0-237.0	510	<5	38	<1	<0.5	1.49	211	3	2	<1	7	10	1600
AB 21404	19	237.0-238.0	7	<5	14	3	<0.5	3.19	177	<1	2	<1	13	15	1500
AB 21405	19	238.0-239.0	8	<5	14	1	<0.5	0.96	168	<1	2	<1	<5	<5	1700
AS 21406	19	248.0-249.0	876	<5	141	3	<0.5	7.01	1411	2	27	14	31	25	1700
AL 21407	19	249.0-250.0	483	<5	111	1	<0.5	6.97	1274	3	27	15	7	15	1400
AS 21408	19	250.0-251.0	425	<5	97	<1	<0.5	5.66	1310	3	25	16	15	10	690
AB 21409	19	251.0-252.0	427	<5	117	3	<0.5	7.09	1413	2	33	17	<5	15	760
AB 21410	19	256.0-257.0	595	<5	189	2	<0.5	8.66	1286	4	35	14	<5	25	1100
AB 21411	19	257.0-258.0	490	<5	98	<1	<0.5	4.96	1261	3	18	11	~	5	1000
AS 21412	19	270.3-271.3	708	<5	95	<1	<0.5	8.76	1310	4	33	16	29	20	520
AS 21413	19	323.0-324.0	416	<5	115	<1	<0.5	8.65	1136	2	37	25	6	20	880
AB 21414	19	325.0-326.0	118	<5	129	<1	<0.5	7.18	1310	3	31	27	<5	15	1000
AB 21415	19	341.0-342.4	248	<5	132	<1	2.0	8.29	1251	4	77	29	25	80	380
AB 21416	19	352.0-353.0	42	<5	39	<1	<0.5	2.80	424	1	13	7	<5	<5	870
AS 21417	19	353.0-354.0	13	<5	27	1	<0.5	3.83	313	2	16	20	<5	<5	480
AL 21418	19	358.5-359.5	13	<5	5	<1	<0.5	1.24	181	<1	5	3	<5	<5	740
AL 21419	19	359.5-360.5	12	<5	6	<1	<0.5	1.25	158	1	4	2	<5	5	1000
AS 21420	19	364.5-366.1	77	8	27	2	<0.5	2.21	493	1	7	2	<5	10	1500
AS 21421	19	366.5-367.5	45	<5	46	<1	<0.5	2.46	758	1	11	6	11	<5	2200
AS 21422	19	369.9-370.9	5	<5	14	<1	<0.5	0.82	234	<1	3	2	<5	<5	1100
AL 21423	19	376.2-377.0	18	<5	13	<1	<0.5	-2--59-	324	2	14	4	<5	<5	1400



"SEDIMENT SILL UNIT"

MYRA FORMATION

6 Nanaimo conglomerate
5c late gabbro and felsic tuff
5b late gabbro sills
5a biotite altered gabbro
4b cherty black argillite and siltstone with minor greywacke
4a brown graywacke
3c felsic lapilli crystal tuffs
3b felsic crystal tuffs
3a felsic flows
2c dark green andesitic lapilli crystal tuffs
2b dark green andesitic crystal tuffs
2a dark green andesitic flows
1 early mafic sills

bedding
foliation
fault
shear
breccia
whole rock sample
geochemical/assay samples (ppm unless indicated otherwise)

Ishikawa Index of alteration:

$$59 = \frac{K_2O + MgO}{K_2O + MgO + Na_2O + CaO} \times 100$$

FALCONBRIDGE LIMITED

Section A to A' at 210° Az
DDH CHEM 86-19
Southwest Holyoak 3 Claim

Chemainus Joint Venture
Vancouver Island, British Columbia
Project Number 116

WORK BY: SGE	DRAWN BY: BJM Feb 1987	FIGURE: 8
DATE: Fall 1986	NTS: 92 B/13W	