1987 DRILLING REPORT ON THE CHEMAINUS JOINT VENTURE (Chip 1, Holyoak 3 claims)

Situated 14 km west of Chemainus, B.C. in the Victoria Mining Division

> 45°53'N, 123°50'W NTS 92B/13W

Kidd Creek Mines Ltd. 701 - 1281 West Georgia Street Vancouver, B.C.

> GEOLOGICAL BRANCH ASSESSMENT WARE OVER F.C.

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### SUMMARY

This report presents results of a portion of the 1987 Chemainus Joint Venture drilling program. The target is a volcanic-hosted, polymetallic, massive sulphide deposit in the Sicker Group on Vancouver Island. Examples of such deposits in the Sicker rocks include Westmin's Buttle Lake deposits with more than 21 million tons (production plus reserves) averaging 2% Cu, 6% Zn, 1.7 oz/T Aq and 0.07 oz/T Au) and the Twin J deposits at Mount Sicker which produced over 300,000 tons of ore grading 3% Cu, 7% Zn, 2.75 oz/T Au. Abermin Corporation has announced a significant discovery on claims adjacent to the Joint Venture project. Their Coronation Zone has an average grade of 1.5% Cu, 14.9% Zn, 3.1% Pb, 6.7 oz/T Ag and 0.24 oz/T Au. over 11 feet.

The project area consists of 15 claims (139 units) in two separate claim blocks. Drilling was conducted on the Chip 1 claim of the Chip-86 Group. The drilling was part of an equally funded joint venture program between Kidd Creek Mines Ltd. (wholly owned subsidiary of Falconbridge Limited) and Esso Minerals Canada; Kidd Creek Mines Ltd. was the operator for the Joint Venture.

Positive results of the 1986 drilling program led to drilling in 1987 to follow-up on mineralization discovered on the Chip 1 claim. A total of 3366m in 9 inclined NQ drill holes forms the basis of results presented in this report. This work was conducted over the time period May 24 to July 15, 1987. i

The volcanic stratigraphy of the Chip 1 claim is comprised of a steep north-dipping, felsic mafic volcaniclastic succession, the south portion of which contains mineralization and which appears to be an overturned sequence. Drilling on the east part of the claim has traced weakly mineralized felsic tuffs for 400 m along strike. The felsic host to mineralization, known as the "Active Tuff" is characterized by high sericite content, variable 2 to 30% pyrite, elevated Ba and base metals content, and depleted Na<sub>2</sub>O.

Bore-hole geophysics using the Crone pulse-EM system was conducted on most holes. This survey succeeded in detecting pyrrhotite mineralization but gave no appreciable response to pyritic base metal mineralization which typically is a poor conductor. ii

# LOCATION, ACCESS, TERRAIN

The Chemainus project area is located 12 to 16 km west of Chemainus on southeast Vancouver Island, 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 two claim blocks is by MacMillan Bloedel's main haul road known as the Copper Canyon Mainline which follows the Chemainus River. From this road, three 4-wheel drive roads provide access to various parts of the claims (Figure 2). The powerline road at mile 12 was used as the main access to drilling on the Chip 1 claim. Property access within the claim area is good due to numerous logging roads and old railway grades.

Surface and timber rights on much of the Chip claims are owned by MacMillan Bloedel. Access permits are required and damage to timber is subject to compensation charges.

is characterized by rolling The terrain topography and incised canyons. 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.

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 have more severe winter temperatures and heavy snowfall but are usually 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 mid-September, and forest closures due to high fire hazard must be taken into account when planning field work.



# PROPERTY DEFINITION AND CLAIMS STATUS

The Chemainus property consists of 15 claims (139 units) in two separate blocks within the Victoria Mining Division. Table 1 and Figure 2 summarize relevant details on claim data. The claims are jointly owned by Esso Minerals Canada and Kidd Creek Mines Ltd. (wholly owned subsidiary of Falconbridge Limited).

The Chip claims have all been grouped as the Chip 86 group. At present, the Brent 1 and Holyoak 1 to 3 claims are ungrouped.

### TABLE 1: STATUS OF CLAIMS

CLAIM	RI	ECORD	NO.	UNITS	STAK	ING	DATE		EXP	IRY	DATE
Brent 1		163		10	Mav	5	1978		Mav	11	1996
Holyoak	1	1598		8	Oct	22.	1985		Oct	31.	1996
Holyoak	2	1599		16	Oct	23,	1985		Oct	31,	1996
Holyoak	3	1560		12	Oct	24,	1985	21	Oct	31,	1996
Chip 1		720		20	Nov	11,	1982		Dec	7,	1997
Chip 2		721		20	Nov	13,	1982		Dec	7,	1997
Chip 3		722		16	Nov	13,	1982		Dec	7.,	1997
Chip 4		723		16	Nov	15,	1982		Dec	7,	1997
Chip 5		920		4	May	16,	1983		May	24,	1997
Chip 6		921		4	May	17,	1983		May	24,	1997
Chip 7		922		6	May	18,	1983		May	24,	1997
Chip 8		1424	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	4	Feb	22,	1985		Feb	27,	1997
Chip 11		1526		1 -	May	31,	1985		Jun	17,	1988
Chip 12	Fr	1608		1	Dec	11,	1985		Dec	12,	1997
Chip 13	Fr	1609		1	Dec	11,	1985		Dec	12,	1997

Total 15 claims 139 units

### Notes:

The area comprised by the claims covers about 3,425 hectares (8,424 acres).

The claims are covered by NTS sheets 92 B/13W and 92C/16E.

Expiry dates are pending Gold Commisioner's approval of 1987 assessment work.



# PROPERTY HISTORY OF THE CHIP CLAIMS

The early property history on the Chip claims has been described by Everett and Cooper (1984):

"The Chip claims have seen sporadic periods of exploration acitivity since the early The oldest recorded work was in 1900's. 1915 with the sinking of a 50 foot shaft on a weak chalcopyrite-bearing pyrrhotite vein (part of the Anita showing). Interest in the Sicker schists intensified Group in 1944 with the development of the Twin-J massive sulphideprecious metal deposit, 15 km to the southeast. since undergone The volcanic belt has several periods of staking and prospecting.

In recent years, development of Westmin's deposit in the Buttle Lake Uplift has renewed interest in the Chemainus area. exploration An induced polarization survey was completed by Cominco in the vicinity of the Chip 4 claim in 1966 and a soil survey was completed by UMEX in the vicinity of the Chip 1 claim in 1978."

In 1983, Esso conducted a field program on the Chip claim group. Their work included 2500 scale geologic mapping, soil and stream sampling, line cutting, HLEM and magnetometer surveys of Chip 1, 2 and part of the Chip 3 claims. Part of the favourable felsic volcanic lithology was defined by mapping and several weak, copper-zinc soil anomalies and two weak conductors were identified on the Chip 1 claim. Several whole rock analyses suggested the presence of  $Na_2^0$  depletion on the Chip 1 claim.

Kidd Creek Mines Ltd. entered into an option agreement for a joint venture with Esso Minerals in August 1984. The entire Chemainus property (Brent-Holyoak Chip claims) was flown with Questor's and Mark VT helicopter INPUT system in September 1984. The following year, ground follow-up of the selected airborne anomalies was started using time domain IP (Schlumberger array), VLF and magnetometer surveys, in conjunction with soil sampling and mapping of the grid lines. Most of the work focused on the Brent 1 and Holyoak 1, 2 and 3 claims and resulted in drilling 1534 m in 6 holes. Two of the holes intersected significant sulphides. The geophysical surveys also covered selected parts of the Chip claims.

1986, exploration In focused on the Chip claims. Work included 5,000 scale mapping of most of the claims and expansion of the grid to cover the entire Chip claim block on a 200 m line spacing with IP, VLF and magnetometer surveys. Selected areas were covered with a deep penetrating IP survey using the Gradient Array, results of which guided the late fall drilling program. А total of 1854 m was drilled in six widely spaced holes, four of which intersected significant sulphides (three on the Chip 1 claim). The Anita shaft area was trenched with an excavator, mapped in detail and the exposed pyrrhotite lens was chip-sampled along its entire exposure.

Positive results of this work led to an aggressive drill program for 1987.

### GENERAL PROPERTY GEOLOGY

The two claim blocks lie within the Cowichan-Horne Lake Uplift, in which lower Paleozoic Sicker Group rocks are exposed. The property is underlain by felsic and mafic volcanic rocks (of Myra Formation equivalent) which trend northwest dip and steeply The surface geology of the Chip claims has northeast. been described in greater detail by Mallalieu, et al (1986), Enns (1985), and Everett and Cooper (1984). The volcanics are flanked on both sides by dark coloured pelitic and cherty sediments mapped by Muller (1980) as the "Sediment Sill Unit". These two formations are thought to be separated by a major fault at the north volcanic contact. The felsic volcanics host polymetallic sulphide mineralization.

Surface mapping on the Chip and Holyoak claims has shown that the volcanic succession is comprised of a complex, interbedded mixture of felsic tuffs and flows, mafic tuffs and flows with thin, green and black cherty beds. and minor intermediate tuffs. The volcanic stratigraphy which encloses Abermin's Coronation Zone, 2 km southeast, extends along strike onto the Chip 1 claim. Hanging wall stratigraphy in the Coronation Extension Zone underlies the southwest of corner the Holyoak 3 claim.

Small, localized quartz porphyry bodies (thick rhyolite flows) were identified at five localities and may be sites of felsic domes which could represent important, small, volcanic centres. The "footwall rhyolite" which lies beneath and east of Abermin's Coronation Zone is interpreted to be a local felsic dome.

The volcanics are intruded by late gabbroic sill-like bodies of Jurassic age. These gabbro intrusions have separated or dilated the volcanic stratigraphy, often in mineralized zones. 9

Cretaceous, Nanaimo sediments comprised of basal cobble conglomerate, sandstone and black shale unconformably overlie both volcanic and gabbro lithology. The Nanaimo sediments have been truncated by compressional (reverse) faulting which is bedding plane parallel. These faults have been oversteepened by a yet later structural event.

# THE 1987 DRILLING PROGRAM

The drilling was conducted over a period extending from May 14 to July 15, 1987. Although a total of 6753.7 m of NQ core was drilled in 18 inclined holes, for this report, the drilling results for 9 holes drilled on section 34+00E to section 47+00E on the Chip 1 grid are given. Table 2 summarizes the drilling data including results. The all-inclusive drilling costs for the program were \$580,000.

The contractor for the job was Burwash Enterprises Ltd. of Cobble Hill, B.C., who used two Longyear Super 38 drills equipped with air-cooled diesel engines. A D-6H Caterpillar tractor was used to move drills and to prepare the drill pads.

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.

This year, timber was cut and bucked to 8-foot lengths ahead of construction of access routes. This method significantly reduced timber damage and lowered clean-up costs.

The drill hole locations are plotted on Figure 3 at a scale of 1:10,000 and on Figure 4 at a scale of 1:2,000. Drill sections are plotted on a scale of 1:1,000 (Figures 5 to 10).

Each core run was converted to metric depth, and marked on special pre-cut wooden blocks. The drill core was then systematically photographed and logged. RQD (rock quality designation) data was also recorded for future use. Dip tests were taken by single-shot Sperry



Sun instrument with an attempt to test every 50 to 75 m. Selected mineralized intervals were split, and sawn in half for analysis. Lithogeochemical samples were taken about every 10 metres (on average). A skeletal core record was routinely selected during logging with samples about every 10 or so metres. The skeletal core and major oxide data are valuable in making lithological correlations between drill holes. The logging was conducted using Derry, Michener, Booth and Wahl's LOG II system. Data was entered on Radioshack TRS 80 computers at the core box, then uploaded into a Toshiba T-3100 computer at the end of each day for editing and print-out. Later, the analytical data were merged with the drill logs' 'files' and final logs were printed out. The drill logs are listed in Appendix A.

Most of the drill holes were surveyed with the Crone Pulse-EM bore-hole system. Surveys were conducted by Dennis Woods of White Geophysical Ltd. Prior to the survey, holes were lined with threaded, white plastic piping which was recovered on survey completion. The results from this survey are covered in separate reports.

Bondar-Clegg of North Vancouver analysed the split core by geochemical methods for Cu, Pb, Zn, Mo, Ag, Fe, Mn, Cd, Co, Ni, As and Ba. An HNO3-HC1 hot extraction and analysis by DC Plasma were used for analysis of all elements except Au and Ba. A fire assav preparation 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. Base metal levels exceeding 3000 ppm were re-analysed using standard assay techniques, as were Ag and Au levels respectively, exceeding 30 ppm and 1,000 ppb.

X-Ray assay Labs of Don Mills, Ontario analysed the lithogeochemistry samples. The analysis included a standard major oxide package which includes Cu, Zn and Ba.

Results for base metal analysis are listed by hole in Appendix B and in the drill logs. Major oxide analytical results are listed by hole in Appendix C with sample plots shown on appropriate drill sections keyed to lithology. The Cu, Zn and Ba results of major oxide samples are listed in the drill logs. Major oxides were used to calculate an alkali alteration index which is shown on drill sections for those samples where the index exceeds 60. Calculation of the Ishikawa Index (Ishikawa, et al, 1976) is given by the equation:

 $I = \frac{MgO+K_2O}{MgO+K_2O+Na_2O+CaO}$ 

All the drill core (including previous years' drilling) is stored on racks at a farm just outside Chemainus, at 3037 River Road.

#### TABLE 2: SUMMARY OF DRILLING DATA AND RESULTS

HOLE	LOCATION	DIRECTION	DEPTH	DURATION	TARGET	RESULTS
CHEM87-22 Section 34+00E	CHIP 1 Claim (Centre Grid: 34+20E; 0+20N Elev: 555m UTM: N 5,416,700 E 430,666	) -50/210 Az	474.6m	May 24/87 am May 31/87 am	Determine geology north of "Active Tuff". Test broad, deep resistivity low between 1+00 and 2+005. Test VLF at 1+405 and 2+205.	Felsic tuffs intruded by gabbro at top of hole. Fulford Fault at 195 m has thrust in Nanaimo Group sediments which unconformably overlie gabbro. Graphitic Nanaimo sediments explain resistivity low. Mafic volcanics at bottom of hole.
CHEM87-29 Section 38+00E	CHIP 1 Claim (Centre Grid: 38+00E: 0+888 Elev: 557m UTM: N 5,416,425 E 430,962	) -50/210 Az	296.3m	June 16/87 pm June 20/87 am	Test VLF anomalies at 1+60S and 2+15S and deep chargeability anomaly between 2+20S and 2+80S with a flanking weak resistivity low between 1+85S and 2+00S.	Mafic volcanics at top of hole overlie 58.8 m of felsics in fault contact with Nanaimo sediments. Nanaimo rocks unconformably overlie mafic volcanics. Fault positions explain VLF anomalies. Deep chargeability not explained by drill core.
CHEM87-30 Section 38+00E	CHIP 1 Claim (Centre) Grid: 38+05E; 1+22N Elev: 585m UTM: N 5,416,605 E 431,100	) -50/210 Az	340.2m	June 17/87 am June 21/87 am	Test VLF anomalies at 0+60N and 1+60S at deoth.	VLF explained by faults. Mainly felsic tuffs with short mafic and intermediate sections.
CHEM87-31 Section 40+DDE	CHIP 1 Claim (Centre) Grid: 40+00E; 0+60S Elev: 570m UTM: N 5,416,350 E 431,138	-50/210 Az	340.5m	June 21/87 am June 26/87 am	Test VLF anomaly at 2+005. Test shallow IP anomalies centred at 0+805 and 2+605 and weak, deep IP anomalies centred at 1+405, 2+205 and 3+005.	Mixed mafic and felsic volcanics in upper half of hole. VLF anomaly explained by strong fault at 170 m. Fulford Fault truncated top of 'Active Tuff' at 221.6 m. Chargeability explained by pyritic 'Active Tuff' at 221.6 to 239.7 m above mafic volcanics contact. Mineralized intersection includes 0.4 m 0249.6 m of 0.50% Cu, 1.36% Pb, 134g/t Ag and 4.76g/t Au.
CHEM87-32 Section 36+DDE	CHIP 1 Claim (Centre) Grid: 36+00E; 0+80N Elev: 585m UTM: N 5,416,675 E 430,910	-50/210 Az	465.1m	June 21/87 pm June 28/87 am	Test VLF conductors at 0+60N and 1+80S. Test deep chargeability centred at 1+60S and 2+40S and a broad re- sistivity low centred at 1+80S.	Upper 290 m is mainly felsic with minor mafic volcanic interbeds. Nanaimo shales are faulted in unconformably overlie pyritic felsic tuffs ("Active Tuff"). VLF anomaly explained by fault and resistivity low by the black graphitic Nanaimo shales. 123.5 m of "Active Tuff" with low core angles contain: elevated Ba and Au, (2000 to 4000 ppm Ba and up to 200 ppb Au), including 4.0 m of 3700 ppm Ba @ 410.0 m, and 0.5 m of 2731 ppm Cu @ 416.4 m.



HOLE LOCATION DIRECTION DEPTH DURATION TARGET RESULTS CHEM87-33 CHIP 1 Claim (Fast) -50/210 Az 441.3m June 26/87 pm 85.5 m of felsic tuffs at top of hole. followed by 117.6 m of mafic tuffs and minor flows, followed by 64.4 m Test weak deep IP chargeability Section 43+00E Grid: 43+00E: 0+405 June 29/87 pm anomaly between 1+80S and 3+00S. of faulted-in felsic tuffs and last third is gabbro. Elev: 595m July 9/87 am VLF anomaly expained by Fulford Fault at 226 m. Test strong VLF conductor at UTM: N 5.416.675 July 13/87 pm 2+205 "Active Tuff" absent on this section. E 431,407 Test for strike extention of weakly mineralized zone in hole CHEM86-16, 200 m east. CHEM87-34 CHIP 1 Claim (East) ~50/210 Az 391.1m June 29/87 pm Test coincident, deep and Intersected felsic tuffs to 169.7 m, then mafic tuff to 270 m with narrow pyrrhotite mineralized band Section 47+00E Grid: 47+00E: 0+405 July 5/87 am shallow IP resistivity low in minor felsic succession. Pyrrhotite-pyrite-chalcopyrite band contains 0.69 % Cu over 1.0 m @ 224.0 m. Elev: 66Dm at 2+05S and a shallow IP A major fault (Fulford Fault?) at 270 m lies above "Active Tuff" which includes: UTM: N 5.416.150 chargeability at 2+80. 0.34 % Zn over 2.0 m @ 280.0 m. E 431,850 Test VLF conductors at 2+405 1748 ppm Zn over 2.1 m @ 296.0 m. and 2+805. 1403 ppm Zn over 2.0 m @ 320.0 m. Ba-rich cherts and argillite followed by 39.0 m of gabbro at bottom of hole. Cherty argillite includes:11.000 ppm Ba over 2.0 m at 388.0 m. VLF anomalies caused by faults. Pyrrhotite mineralization cause of VLF at 2+40S CHEM87-35 CHIP 1 Claim (East) -50/210 Az 359.1m June 30/87 pm Define stratigraphy north of Thick sucession of felsic tuffs with 44.9 m of felsic flow or dome? (183.8 to 227.7m) and minor Section 47+00E Grid: 47+00E: 1+83N July 5/87 am holes CHEM87-34 and 36. mafic interbeds. Elev: 710m UTM: N 5,416,248 E 431,862 CHEN87-36 CHIP 1 Claim (East) -45/210 Az 257.6m July 5/87 pm Test VLF anomaly at 2+405 and 140 m felsic sucession including 4.2 m of semi - massive pyrrhotite-pyrite-chalcopyrite-sphalerite with Section 47+00E Grid: 47+00E; 1+525 July 9/87 am 0.89 % Cu over 0.8 m @ 107.0 m corresponds to VLF anomaly at 2+405. 2+805. Elev: 640m Fulford Fault at 145.0 m with underlying 6.1 m of "Active Tuff" correlates with CHEM87-34 and weak Test coincident, shallow and UTM: N 5.415.970 deep chargeability anomalies chargeability anomaly and includes: 1900 ppm Zn over 1.3 m @ 150.7 m E 432,200 at 1+ 805. 1650 ppm Zn over 1.0 m @ 153.0 m Test coincident shallow and 1228 ppm Zn over 1.8 m @ 155.0 m deep IP resistivity lows at Bottom half of hole is mafic cherty tuffaceous sediments transitional into dark cherty argillite, 2+805 and 3+805. as in CHEM87-34.

### DESCRIPTION OF DRILLING RESULTS

### **General Statement**

Drilling on the Chip 1 claim has outlined north-dipping volcanic stratigraphy along strike of Abermin Corporation's Coronation Deposit located 2 km southeast of the claim. A weakly mineralized zone was outlined along 400 m of strike on the east side of the Chip 1 claim.

A major north-dipping fault was encountered on every section drilled. This major structure divides the volcanic sequence into two blocks. It correlates with the Fulford Fault which is a north-dipping, over-steepened reverse fault with a west-northwest strike extending from Fulford Harbour on Saltspring Island along the entire Cowichan - Horne Lake Uplift. Abermin Corporation's Coronation Deposit lies within the hanging wall of this On the Chip 1 claim, however, the strongest fault. sulphide mineralization occurs in the footwall of the fault. Volcaniclastic rocks from the north have been thrust over Late Cretaceous Nanaimo Group sediments to the south along this fault between Lines 29+00E and 38+00E (in the centre of the Chip 1 claim). A north-dipping unconformity separates the Nanaimo sediments from volcaniclastics the south of the fault. Considerable relief this is apparent along conformity.

Sulphides are hosted by a belt of sericitic, felsic, ash to lapilli tuffs and flows collectively known as the "Active Tuff". The "Active Tuff" is characterised by high sericite content and 2 to 30% pyrite, high Ba levels (often 2,000 to 4,000 ppm), variably anomalous Au

levels of 50 to 300 ppb, and Na<sub>2</sub>O depletion. Cu, Pb, Zn and Ag mineralization may be locally present; chalcopyrite commonly is accompanied by trace amounts of pale green mariposite (?). Where present, the "Active Tuff" generally occurs immediately south of the Fulford Fault. The stratigraphic position of the "Active Tuff" appears to be adjacent to the mafic volcanic succession. In the central Chip 1 claim, the "Active Tuff" is partly to completely dyked out by one of several east-trending The "Active Tuff" appears to be continuous from gabbros. Line 45+00E to 49+00E and is at least 15 to 45 m wide. It contains 5 to 178 pyrite with weak base metal mineralization.

The mafic sequence which occurs immediately south of the "Active Tuff" between lines 34+00E and 40+00E is comprised of dark- to medium-green mafic ash to lapilli tuffs, flows and mafic tuffaceous sediments. Bedding is often present; occasional graded beds can be recognized. Most graded beds show tops to the south indicating that stratigraphy is overturned. The mafic tuffs and flows are often spotted with epidote patches 1 to 10 mm long and frequently contain up to 5% black, chloritized hornblende crystals (altered pyroxenes) 1 to 10 mm long. The sequence is about 115 m thick on the west side of Chip 1. The flows are massive with rare amygdaloidal sections. This mafic sequence is "dyked out" on line 43+00E and appears to pinch out into cherty argillites and siltstones farther to the east.

Few holes test the geology north of the Fulford Fault. In general, the felsic tuffs are weakly

chloritic and less sericitic than those south of the fault and they are complexly interbedded with minor mafic and intermediate tuffs.

A distinctive, magnetite-bearing felsic flow approximately 50 m thick is present on Line 47+00E (hole CHEM87-35). This flow is massive and contains up to 5% finely disseminated magnetite. Felsic lapilli tuff with clasts of pink-tinged flow material occurs immediately north and south of the flow. Pinkish tinged, magnetitebearing felsic tuffs were also noted 300 m to the east on section 43+00E (top of hole CHEM87-33).

The structure of the property is still not well understood. One major fault zone (Fulford Fault) has been recognized but numerous fault gouges in most of the holes indicate the abundance of splays and possible offsets. The lack of outcrop and ambiguous core axis angles often limit the reliability of dip measurements. Drill sections on the west side of the Chip 1 claim show that the stratigraphy south of the fault is overturned and dips at 50° to the north, whereas stratigraphy appears to dip 60° north, north of the Fulford Fault. On section 47+00E on the east side of Chip 1, the tuffs north of the fault dip 78° north.

A peculiar lithologic sequence was noted on sections 47+00E and 49+00E. The geology intersected by the two "fences" of drill holes (especially section 49+00E) indicates that in addition to the trace of the Fulford Fault, a shallow, south-dipping fault may be present but with small apparent displacement.

### Section 34+00E (Figure 5):

Hole CHEM87-22 intersected a 170 m succession of relatively barren felsic, intermediate and mafic tuffs followed by 20.6 m of gabbro. The Fulford Fault at 197.4 m has "thrust in" a panel of younger Nanaimo Group sediments unconformably overlying a gabbro intrusion at 261.8 m. This fault appears to dip about 65° north which, when projected to surface, correlates well with the axis of the VLF conductor.

The gabbro extends to a depth of 396.00 m and appears to have completely "dyked out" the "Active Tuff".

A sequence of mafic tuffs, flows and tuffaceous sediments occur beneath the gabbro. The hole ends in a massive hornblende-bearing flow at a depth of 474.6 m.

The broad resistivity low and the broad VLF conductor centred at 2+00S are probably explained by the black graphitic argillite of the Nanaimo Group.

### Section 36+00E (Figure 6)

Drill hole CHEM87-32 was collared in felsic tuff and intersected mainly barren felsic tuff above 289.6 m with minor intervals of chlorite schist and mafic flows, tuffs and sills. At 222.3 m, a graded bed of felsic quartz-feldspar crystal tuff fines to the north. The best assay sample is 0.5 m long, starts at 205.9 m with 4% pyrrhotite and 5% chalcopyrite assaying 1.62% Cu. The weak IP chargeability anomaly is centred on this zone.

The Fulford Fault, at 289.6 m, separates felsic tuffs from Nanaimo Group sediments. The Nanaimo

Group sediments consist of argillite, sandstone and conglomerate. The deep IP resistivity low is probably due to the graphitic Nanaimo argillite. The Nanaimo sediments rest unconformably on felsic tuffs at 322.8 m.

Pyritic felsic tuffs of the "Active Tuff" occur for 123.5 m below the unconformity. Core axis angles are low, indicating that the hole is sub-parallel to the weakly mineralized zone. Minor chalcopyrite, galena and traces of mariposite are locally present where pyrite reaches up to 8%. This unit is probably the source of the second IP chargeability anomaly centred at 2+40S. The entire unit contains anomalous amounts of Au. The longest continuous sample interval is 56.7 m (starting at 324.0 m) which averages 62 ppb Au. A 0.5 m sample taken at 416.4 m contains 2,731 ppm Cu and 2,900 ppm Ba. A 7.0 starting at 410.0 m and m interval including the previously mentioned sample contains 3,300 ppm Ba.

The hole ended in gabbro at a depth of 465.1 m.

### Section 38+00E (Figure 7):

A fence of two holes CHEM87-29 and 30 was drilled along section 38+00E. Hole CHEM87-30 at the north end of the section, intersected relatively barren felsic tuffs with minor mafic tuffs and flows to a depth of 247.7 These tuffs are sheared and contorted; fault gouges m. are common. Two major fault zones occur in this interval. One is at 42 m and corresponds to the VLF conductor at and other is at 150 m and does not have a 0+60N, geophysical expression. A graded bed at 93.7 m fines to the south. Epidote-altered mafic flow occurs between 247.7 and 274.1 m. Below 274.1 m, the hole intersects felsic to intermediate tuffs until it ends at a depth of

340.2 m. A major fault occurs just above the bottom of the hole, which may be a splay off the main Fulford Fault.

CHEM87-29 was collared in epidote-spotted mafic flows with minor mafic tuffs which extend to a depth of 84.9 m. They appear to correlate with epidote-altered mafic flows between 224.3 and 274.1 m in CHEM87-30 indicating that stratigraphy dips 53° north. Core axis angles, however, suggest steeper dips (75 to 80°) to the north.

Chloritic felsic tuff with less than 2% pyrite was intersected between 84.9 and 139.6 m. Numerous minor slips occur throughout this section. A major fault zone at 100 m correlates with the fault zone at the bottom of hole CHEM87-30 (splay from Fulford Fault). It dips 70° north and explains the VLF conductor at 1+60S.

The Fulford Fault at 143.7 m has "faulted in" younger Nanaimo Group sediments below older mafic tuffs. The fault correlates with the VLF conductor at 2+15S. The Nanaimo sediments consist of dark brown argillite with 2-38 very fine grained pyrite and a basal pebble conglomerate. Pebble conglomerate rests unconformably on mafic ash tuff at 156.6 m. The deep resistivity low is probably an expression of the graphitic Nanaimo argillite.

"Active Tuff" has either pinched out or The been completely eroded away on this section. Mafic ash tuff with minor mafic flows and occasional beds of cherty sediments less than 10 CM thick occur below the unconformity and continue to the end of the hole at a depth of 296.3 m. This mafic unit lies directly beneath the deep and shallow IP chargeability anomalies between 2+20S and 2+80S but the amount of contained sulphides encountered in the hole is insufficient to explain the chargeability anomalies.

## Section 40+00E (Figure 8):

Hole Chem87-31 began in barren chloritic tuff but quickly passed into a 92.3 m section of mafic tuffs and flows down to a depth of 118.4 m. The tuffs are medium- to dark-green, are often epidote-spotted and occasionally range into intermediate compositions. They lie 200 m east along strike of the epidote-spotted mafic flows encountered at the top of CHEM87-29 and in the middle of CHEM87-30 on Line 38+00E. The shallow IP chargeability anomaly at 0+40S and the deep IP chargeability anomaly at 1+25S are not explained by the core. The hole may have passed over top of the source to the anomalies.

Between 118.4 and 192.1 m a succession of barren felsic tuffs, usually quartz-eye bearing, contains several minor intervals of mafic to intermediate tuff. A fault at 175 m explains the VLF conductor at 1+80S. fault at 192.1 Another m separates chloritic quartz-feldspar crystal tuff from massive gabbro below which extends down to 221.6 m.

The gabbro contains an 0.8 m wide inclusion of felsic ash tuff and is separated by the Fulford Fault from the "Active Tuff" below.

Pyritic sericitic, mostly quartz-eye bearing felsic tuffs make up the "Active Tuff" (between 221.6 and 239.7 m) which contains 1 to 10% pyrite and nil to trace chalcopyrite. The upper 6.5 m of the section contains 1,093 ppm Cu and 103 ppb Au. Mineralization occurs directly beneath the deep IP chargeability anomaly at 2+20S. The shallow IP anomaly at 2+50S is probably an updip expression of the same zone.

Below the "Active Tuff" the hole intersected a succession of mafic tuffs and flows to the end of the hole at 340.5 m. These mafic rocks differ from those found south of the "Active Tuff" in holes farther to the west in that the mafic rocks here contain trace to 3% disseminated ilmenite (average 0.95% TiO<sub>2</sub>)

A small section of altered quartz-eye bearing felsic ash tuff occurs between 249.3 and 250.0 m with 10% pyrite, 2% chalcopyrite and 1% galena. A 0.4 m sample of this tuff contains 0.59% Cu, 1.36% Pb, 134 g/t Ag and 4.77 g/t Au.

# Section 43+00E (Figure 9):

Drill hole CHEM87-33 was collared in a mottled pale salmon pink to green felsic tuff with traces of magnetite. The pink colouration is caused by hematization of the feldspars. This tuff is similar in appearance to magnetite-bearing felsic tuffs and flows in hole CHEM87-35 (163.9 and 250.9 m) on Line 47+00E. Magnetite-bearing tuffs (felsic and mafic) occur to a depth of 25.5 m. Chloritic felsic ash to lapilli tuffs with minor amounts of mafic ash tuff continue to a depth of 83.5 m.

Mafic ash tuffs and two feldspar porphyritic flows occur between 83.5 and 201.1 m. The feldspar porphyritic flows contain 2 to 3% leucoxene and may actually be gabbro sills. The flows contain an average of 1.89% TiO<sub>2</sub> While the tuffs average 0.70% TiO<sub>2</sub>. This mafic sequence is similar to the one near the top of CHEM87-31 (26.1 to 118.4 m) on Line 40+00E and in the middle of CHEM86-16 (119.5 to 139.5 m) on Line 45+00E.

Felsic tuffs with less than l% pyrite and minor (<1.0 m thick) sections of mafic ash tuffs occur from 202.1 m to 265.5 m. The tuffs are light green and weakly chloritic above 231.7 m. The Fulford Fault occurs at 226.7 m and explains the VLF conductor at station 2+00S. The tuffs below the fault may belong to the "Active Tuff" but are not strongly pyritic. The strongly pyritic portion of the "Active Tuff" at this locality may have been "dyked out" by gabbro which was intersected from 265.5 m to the end of the hole. An inclusion of felsic and mafic tuffs occurs in gabbro between 338.8 and 352.3 m.

# Section 47+00E (Figure 10):

This section of three holes along Line 47+00E includes the following drill holes from north to south; CHEM87-34, 35 and 36.

CHEM87-35 was set up at the north edge of the powerline clearing. It intersected a long sequence of relatively barren felsic tuffs and flows, occasionally intruded by mafic dykes, with minor amounts of mafic tuff. A massive felsic feldspar porphyritic flow which may be part of a felsic dome occurs between 183.8 and 243.8 m. It is intruded by two mafic dykes near its lower contact. The flow has a pinkish tinge similar to that in the upper part of hole CHEM87-33. It contains trace amounts of disseminated magnetite. Magnetite-bearing felsic crystal lapilli tuff with clasts of pinkish flow material occur immediately above and below the flow.

Mafic tuff and flow units alternate with thermal biotite-altered, quartz feldspar crystal tuff between 340.0 m and the end of the hole at 359.1 m. The hole ends in a massive mafic hornblende-bearing mafic flow.

CHEM87-34 was collared in a mafic flow and cut through barren felsic tuffs with minor mafic flows, tuffs and dykes to a depth of 169.7 m. A fault at 56 m explains the VLF anomaly at 0+90S. The sequence of mafic flows and tuffs between 63.0 and 74.6 m correlates with a similar sequence at the bottom of CHEM87-35 indicating dips of 80° north.

Mafic tuffs and flows, (some hornblendebearing), and minor felsic tuffs occur from 169.7 to 269.7 A narrow interval of felsic tuff with up to 15% m. chalcopyrite, 15% pyrrhotite and 12% pyrite occurs between 224.0 and 225.6 m. A 1.0 m sample from the top of the interval contains 0.69% Cu. A 0.2 m sample of the mafic ash tuff contains 0.76% Cu. This zone correlates in a structural sense with a similar zone between 103.6 and CHEM87-36, 107.8 in but m in hole CHEM87-36 the mineralization occurs within a thick sequence of felsic tuffs.

A fault at 271.0 m (Fulford Fault) separates mafic volcanics from felsic volcanics below and explains the VLF conductor at 2+80S.

Pyritic quartz-sericite schist ("Active Tuff") occurs from 271.0 to 324.8 m. The felsic schist contains 1 to 4% disseminated and banded pyrite. Generally the sulphide content increases downhole. This zone is probably responsible for the weak shallow and deep ΙP chargeability anomalies respectively centred at 2+80S and The best assay result from this unit it 1.0 m of 3+00S. 0.52% Zn starting at 280.0 m. The entire unit is slightly anomalous in Au (5 to 140 ppb). A similar but narrower zone of pyritic, quartz-sericite schist occurs between 150.7 and 156.8 m in CHEM87-36. The quartz-sericite schist/gabbro contact appears to dip 83° to the south.

Massive fine- to coarse-grained gabbro with up to 5% ilmenite occurs from 324.8 to 365.8 m. The lower contact of the gabbro dips 73° north.

At the very bottom of this hole, cherty black argillite and siltstone with minor greywacke was intersected. A medium- to dark-green, fine-grained, altered peridotite intrudes the sediments between 380.6 and 385.4 m. This peridotite is identical to that intersected at the bottom of hole CHEM86-17. Cherty sediments above the peridotite contain trace to 5% fracture-controlled pyrite and an average of 3,400 ppm Ba. Below the peridotite, sediments contain an average 7,875 ppm Ba including a 2.0 m section averaging 1.1% Ba.

CHEM87-36 was collared in felsic feldspar crystal tuff. Felsic crystal tuffs with several gabbro intrusions extend to a depth of 140.6 m. This felsic succession does not correlate with the predominantly mafic rocks in hole CHEM87-34. A pyritic quartz-eye bearing tuff between 103.6 and 107.8 m contains an average of 5% pyrite, 2% pyrrhotite, trace to 2% chalcopyrite and nil to trace sphalerite. The bottom 0.8 m of the section contains up to 50% bedded pyrite with 2% chalcopyrite, and 10% pyrrhotite. A 0.8 m sample of this section assayed 0.89% Cu, 570 ppm Zn, and 55 ppb Au. This pyrrhotite mineralized horizon correlates with one between 224.0 and 225.6 m in CHEM87-34 (described above) and explains the VLF conductor at 2+40S indicating a dip of 67° north for the mineralization.

A thin, epidote-spotted andesite occurs below the felsic sequence to a depth of 144.7 m. The Fulford Fault from 144.7 to 150.7 m has truncated the andesite flow.

Pyritic quartz-sericite schist of the "Active Tuff" occurs below the Fulford Fault in the interval 150.7 to 156.8 m. It contains 2 to 7% disseminated and banded pyrite. A 6.1 m interval contains 1,126 ppm Zn, 52 ppb Au and 2,318 ppm Ba. This interval correlates with a similar but thicker section of pyritic quartz sericite schist in CHEM87-34. It is truncated by an 11.3 m long section of gabbro which may be part of a larger, irregular intrusion intersected by hole CHEM87-27, whose northern contact dips 83° south.

Mafic tuffaceous sediments below this gabbro are intruded by several thin gabbro dykes which may be part of the irregular gabbro body mentioned above.

Cherty argillaceous sediments were intersected at the bottom of the hole. A 2.4 m interval of these sediments contains 2,800 ppm Ba.

### REFERENCES

- ENNS, S.G. 1987: 1986 Drilling Report on the Chemainus Joint Venture, Victoria Mining Division; Falconbridge Limited, unpublished report, 21 p.
- EVERETT, C.C. and COOPER, W.G. 1984: Geological, geochemical and geophysical report on Chemainus project, Victoria Mining Division; Esso Resources Canada Limited, unpublished report, 89 p.
- ISHIKAWA, Y., SAWAGUCHI, T., IWAYA, S., and HORIUCHI, M., 1976: Delineation of prospecting targets for Kuroko deposits based on modes of volcanism of underlying dacite and alteration haloes: Mining Geology, v. 26, p. 105-117 (in Japanese with English abs.)
- MALLALIEU, D.G., MONEY D.P., ENNS, S.G. and WHITING, C.P. 1987: 1986 Final Report on the Chemainus Project, NTS 92B/13 and 92C/16. Victoria Mining Division, Falconbridge Limited, unpublished report, 44 p.
- MULLER, J.E. 1980: The Paleozoic Sicker Group of Vancouver Island, British Columbia. Geological Survey of Canada Paper 79-30, 22 p.

CLAIMS: CHIP86 GROUP: work performed on the Chip 1 and Chip 12Fr claims

MINING DIVISION: Victoria

NTS: 092B/13E

PERIOD OF WORK: May 24, 1987 to July 15, 1987

COSTS:

1. Personnel

D.Money, geologist 40 days @ \$115.00/day	\$4,600.00	
J.Pattison, geologist		
40 days @ \$136.00/day	\$5,440.00	
T.Cowans, technician		
40 days @ \$96.50/day	\$3,680.00	
	\$13,720.00	\$13,720.00

2. Vehicle Costs

2 GMC 4x4 pickups		
2677 MK: 61 days @ \$30.00/day	\$1,830.00	
2678 MK: 61 days @ \$30.00/day	\$1,830.00	
Redhawk Rentals 1 Toyota Landeruiser		
61 days @ \$35.00/day	\$2,135.00	
	\$5,795.00 \$	5,795.00

42

1

3. Room and Board

120 man-days @ \$30.00/day \$3,600.00

4. Diamond Drilling Costs Burwash Enterprises Ltd., Cobble Hill, B.C.

DDH CHEM87-22 \$25,224.88 (474.6 m)

DDH CHEM87-29 \$16,125.75 (296.3 m)

DDH CHEM87-30 \$17,773.18 (340.2 m)

DDH CHEM87-31 \$19,304.78 (340.5 m)		
DDH CHEM87-32 \$27,758.10 (465.1 m)		
DDH CHEM87-33 \$32,804.57 (441.3 m)		
DDH CHEM87-34 \$22,509.94 (391.1 m)		
DDH CHEM87-35 \$23,632.49 (359.1 m)	ananto en anto entre ≹genera entre entre traganto entre entre	
DDH CHEM87-36 \$15,588.45 (257.6 m)	andra 1930 - Santa Santa 1930 - Santa Santa Santa 1930 - Santa Santa Santa Santa Santa	
\$200,722.14	\$200,722.14	
Caterpillar Tractor and operator 30 hours @ \$75.00/hr	\$2,250.00	
Core Boxes	\$3,902.81	
Sperry Sun Single Shot Rental 2 months @ \$1575/month	\$3,150.00	
	\$210,024.95	\$210,024.95
5. Analytical Costs		
a. Base and Precious Metals		
Bondar-Clegg and Company Ltd., Van Cu, Pb, Zn, Ag, Cd, Co, Mn, Fe, Ni	couver, B.C. , As, Mo, Au, 1	Ba
214 samples @ \$20.00/sample	\$4,280.00	
b. Major Oxide Analyses		
X-Ray Assay Laboratories, Don Mills	s, Ont.	
469 samples @ \$19.25/sample	\$8,065.75	
	512,345.75	\$12,345.75
6. Report Preparation		
Drafting, typing, computer use, etc	2.	\$1,000.00
	TOTAL:	\$246,485.70

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STATEMENT OF QUALIFICATIONS AND CERTIFICATION

I, Steve G. Enns, of North Vancouver, do hereby

certify that:

- I am a permanently employed geologist of Falconbridge Limited at 701-1281 West Georgia Street, Vancouver, B.C. V6E 3J7
- I have recieved my education as indicated: 1967 B.Sc. Honours Geology from University of Manitoba 1971 M.Sc. Economic Geology from University of Manitoba
- 3. Since graduation I have continuously practiced my profession in British Columbia, Alaska and the Yukon in the employment of various companies listed below: 1971 Cerro Mining of Canada Ltd. 1972 Hudson's Bay Oil and Gas Ltd. 1973-1975 BP Minerals of Canada Ltd. 1975-1979 BP Alaska Exploration Ltd. 1979-1981 Amax of Canada Ltd. 1982-1986 Kidd Creek Mines Ltd. 1986- Falconbridge Ltd.
- The information contained in this report is the result of work conducted by qualified geologists under my supervision and by myself. Individual qualifications are listed.
- 5. Kidd Creek Mines Ltd. (a wholly owned subsidiary of Falconbridge Limited) conducted the work as operator of the Joint Venture with Esso Minerals Canada Ltd. The expenditures accurately reflect the exploration costs.

Dated this 10 day of November, 1987 at Vancouver, B.C.

Steve G. Enns

Steve G. Enns Project Geologist
# STATEMENT OF QUALIFICATION

- I, John Pattison, of Burnaby, B.C. declare that:
- I am a geologist permanently employed with Falconbridge Limited, at 701-1281 West Georgia Street, Vancouver, B.C. V6E 3J7
- I am a graduate of the University of Toronto with a B.Sc. degree in geology (1983).
- 3. Since graduating, I have practiced my profession in Ontario, the Northwest Territories and British Columbia.

Dated at Vancouver, B.C. this

day of

, 198 .

JOHN M. PATTISON

# STATEMENT OF QUALIFICATIONS

I, David P. Money, an employee of Falconbridge Limited, with offices at 701 - 1281 West Georgia Street, Vancouver, British Columbia, do hereby declare that:

- 1. I am a graduate of the University of Toronto, Toronto, Ontario (1987) with a B.A.Sc. degree in Geological Engineering, Mineral Exploration Option.
- 2. For the past six years I have been actively involved in mineral exploration.
- 3. I am an Associate Member of the Geological Association of Canada.

Dated at Vancouver, B.C., this day of , 1987.

David P. Money

# APPENDIX A

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DRILL LOGS AND SELECTED AWALYTICAL RESULTS

Hole Location: 34+20 E 0+20 N

 NTS:
 92B13
 UTM:
 5416700 N
 430666 E

 Azimuth:
 210
 Elevation:
 555 m

 Dip:
 -50
 Length:
 474.6 m

Started: MAY 24, 1987 Completed: 31-MAY-87

Purpose: To examine geology, test a deep, broad resistivity low between 1+00 S and 2+00 S and a VLF conductor between 1+40 S and 2+20 S.

DIP TESTS

FALCONBRIDGE LIMITED

DIAMOND DRILL LOG

Length	Azi-	Din	Length	Azi-	Din
Hengen	Bach	DIP	nengen	mach	DID
57.00	207.0	-49.5	337.40	211.0	-47.0
127.10	207.0	-48.5	410.60	214.0	-46.0
233.50	209.0	-47.0	474.50	217.0	-46.0
282.50	209.0	-47.0			

From To (m) (m)

(m) (m) -----DESCRIPTION------

#### .0 6.7 OVERBURDEN AND CASING

6.7 **17.6 CHLORITIC INTERMEDIATE CRYSTAL TUFF** Fine-grained feldspar crystals quartz eyes 1 to 4mm < 5%. AB15351 7.3 Locally.2 to.4 m wide crystal- rich tuff beds. Generally greenish-gray in colour. Locally lapilli-sized interval of felsic lapilli, 9.8 to 10.8m. Dark green chlorite-rich bands.1 to.2 m wide at 11.0 to 11.2m ;at 16.9 to 17.6m. Thermal biotite at 8.5 to 9.5m. Strongly foliated throughout 65 degrees to core axis at 7.4 m. 54 Degrees to core axis at 16.7 m. Quartz with minor white calcite bands 1 to 10 cm are locally present here and there between 9 and 15 m ;locally with chalcopyrite at 13.6 m. Shear zone at 14.5 to 15.0 45 degrees to core axis. Lost core:30 cm at 14.7 m and 20 cm at 23.2 m.

17.6 39.0 FELSIC CRYSTAL TUFF

Grey feldspar quartz sericite crystal unit. Variable proportions of AB15352 quartz feldspar and sericite. 5 to 10 % quartz crystals 2 to 10 mm. Unit becomes less sericitic and better sorted between 32.5 and 35.2 m. A few local 5 to 10 cm white quartz bands are present with strongly foliated sheared contacts. The interval is strongly foliated throughout parallel to

bedding. BEDDING ANGLES.

Bedding 35 degrees to core axis at 20.5 m.

HOLE No: Page Number CHEM87-22 1

Claim No. CHIP 1 Section No.: Line 34+00 E

Logged By: S. Enns and J. Pattison Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg & XRAL

Core Size: NQ

7.4

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

17

n/a

89

n/a

n/a

662

.1

15352 31.9 32.0 .1 20 n/a 25 n/a n/a 1180

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m)

> Bedding 40 degrees to core axis at 31.8 m. Bedding 35 degrees to core axis at 33.8 m.

22.8 23.4 Small fault. Variable foliations and gouge zones present.

-----DESCRIPTION------

26.5 29.6 0.15 m of lost core.

33.5 33.9 Minor pyrite (<1%) as foliation parallel disseminations.

36.8 38.1 Fault zone. Gouge and breccia at 43 to 55 degrees to core axis. Strongly contorted to 38.6 m.

39.0 40.4 INTERMEDIATE CRYSTAL TUFF

Dark grey chlorite rich , strongly foliated at 30 to 35 degrees to core axis.

2 to 3 % 2-4 mm quartz eyes and 10 to 12 % 1-4 mm feldspar crystals. Calcareous.

40.4 53.1 FELSIC LITHIC CRYSTAL TUFF

Hard siliceous rock criss-crossed by numerous 1-4 mm white quartz-carbonate veinlets. Many offsets. 1-4 cm white quartz masses. Generally massive grey appearance. Light grey cherty bands 4-10 mm wide at 75 degrees to core axis.

41.5 42.7 0.4 m of lost core.

50.0 52.3 Fault zone. Crushed locally gouge present. Fractured zone extends down to 53.0 m. Small faults (1 cm gouge zones) at 50.2 and 50.4 m at 20 to 30 degrees to core axis.

53.1 57.1 INTERMEDIATE CRYSTAL TUFF

Dark green chlorite rich and strongly foliated. Epidote patches 1 to 2 cm @ 55 degrees to core axis. Local bedding 30 degrees to core axis at 54.7m, and 30 degrees to core axis at 55.2m.

Locally 4 to 5% 3 to 5mm quartz crystal with variable chlorite in local sections.

Minor pyrite fractures parallel to foliation 1 to 2mm wide at 54 to 55 m with epidote quartz calcite alteration.

57.1	88.2 FELSIC CRYSTAL TUFF										
	White foliation quartz sericite crystal tuff.	AB19902	59.0	60.0	1.0	26	8 8	18	<1	- < 5	700
	5 to $6$ % 2 to 10 mm guartz.	AB19903	60.0	61.0	1.0	5	67	.43	1	< 5	840
	Strong foliation 25 degrees to core axis with weak banding parallel	AB15354	60.5	60.6	.1	22	n/a	95	n/a	n/a	900

HOLE No: Page Number CHEM87-22 2

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

AB15353	48.2	48.3	.1	6	10 19	<b>&lt;1</b>	<5	1200

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

bands, beds?. Banding 40 degrees to core axis at 100.7 m 54 degrees

to core axis at 99.7 m.

From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm
		to foliation as bedding ? with disseminated fine-grained 1% pyrite.	AB19904 AB19905	61.0	62.0	1.0	8	58 53	16 26	<1 (1	<5 (5	1000
		FAULT GOUGE at 57.3 to 58.3 lost core. Mafic dark green sills with epidotized feldspars and a few epidote clots 10 to 15mm wide with white quartz veinlets @ 65.2 to 66.1, 66.2 to 66.4, 67.0 to 68.1 m.	AB19906 AB19907 AB15355 AB19908	63.0 64.0 72.3 79.0	64.0 65.0 72.4 80.0	1.0 1.0 .1 1.0	5 5 28 7	19 23 n/a 16	25 29 16 18	<1 <1 n/a <1	<5 <5 n/a <5	1000 950 1480 480
		Unit is massive near top with moderate foliation and 12 to 15%, 2 to 6mm feldspar with indistinct crystals often completely epidotized and 5 to 7% 2 to 8mm rounded quartz eyes. Lower down at about 72m quartz increases and becomes coarser 7 to 10% 5 to 17mm accompanied with much higher sericite. At 72 to 76 m a stronger foliation is present.Interval becomes darker green gray at depth.										
		Core loss 0.2 m at 67.4 m. 0.1 M at 72.0 m. 0.5 M at 74.0 m. 0.7 M at 78.3 m.										
		Small shear 10 degrees to core axis at 74.0 m.				 	·					
		Less pyritic than above 65.2 m at about 0.5% disseminated pyrite as thin 1mm fracture fillings.									n en De	
		White quartz calcite chlorite masses with minor pyrite 76.7 to 79.2m										
		Blocky core 81 to 87m.										
		Rapid gradation to next ashy tuff unit below.								· · ·		
					an de Referencias Julià	· ·						
88.2	110.0	FELSIC ASH TUFF Strongly foliated gray-green, fine-grained sericite rich rock with 1 to 2% 2 to 4mm scattered quartz crystals.	AB19909 AB19910 AB15356	91.3 97.0 98.1	92.3 98.0 98.2	1.0 1.0 .1	28 29 38	6 9 n/a	25 36 24	<1 <1 n/a	<5 <5 n/a	1200 970 1070
	н	Foliated 40 degrees to core axis with 92.4. 55 Degrees to core axis at 97.8.										
		Less than 1% pyrite fracture fillings parallel foliation @ 91.3 to 92.4m and 96.7 to 98.3m. Local siliceous sections show fine bedding 40 degrees to core axis										
		at 93.0 , 55 degrees to core axis at 98.0.										
		Small fault @ 93.6 to 94.5m and contorted foliations below fault.			The second							
		Ninor white 2 to 5cm quartz veins veins 90 to 96 m.	· · · -				- 100	5 (17)b (17)		1997 - 12 1		
		Below 109 m the unit is still felsic in composition but becomes steaky from presence of darker green 2 to 4mm chlorite feldspar										

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		HOLE	No	:

HOLE No: Page Number CHEM87-22 4

(m)DESCRIPTIONDESCRIPTION (ppm)	DEAGE ENDEAN								-		
	DESCRIPTION	No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

Small fault at 109.0 m.

Overall foliation parallel to pyrite with less than 1% chalcopyrite pyrite chlorite fracture fillings parallel to foliation at 108.8 m.

FALCONBRIDGE LIMITED

DIAMOND DRILL LOG

Blocky core 0.3m @ 105.5m. 0.5m @ 106.7m. 0.9m @ 108.5m. 0.2m @ 109.0m.

# 110.0 125.8 INTERMEDIATE CRYSTAL TUFF

Dark green streaky appearance.

Conspicuous quartz sericite crystal tuff with 7 to 10% 2 to 8mm quartz from 112.2 to 112.8m with both contacts 55 degrees to core axis.

15 to 20%, 2 to 8mm Feldspars.

Bedding on compositional banding 53 degrees to core axis at 114.2. 50 Degrees to core axis at 123 to 124 m.

Transitional into coarse generally massive feldspar crystal tuff but banded in places. Bedding 5 to 15 cm,lighter calcareous beds 54 degrees to core axis at 115.3 50 degrees to core axis at 123.8. Pervasive epidote replaced feldspars.

Quartz chlorite pyrite chalcopyrite mass at 125.3 to 125.4.

#### 125.8 132.9 FELSIC CRYSTAL TUFF

Massive dull white unit with 7 to 10% 2 to 8mm quartz in feldspar sericite mass.

Poor foliation 60 degrees to core axis 126 to 130 m. Vague bedding indicated by lighter coloured 5 to 10mm bands.

Dark green 1 to 6 mm chlorite fragments.

Dark green chlorite rich sections 128.3 to 128.6, 130.9 to 131.3 m with white quartz calcite veinlets crisscross this interval. Pyrite chalcopyrite veins 5 to 10mm wide at 128.3 and 128.6m sill margins?.

Hematitic fractures 130.9 to 131.1m.

### 132.9 145.6 MAFIC CRYSTAL TUFF

Dark green relatively massive no bedding recognizable. Epidotized lapilli sized feldspars comprise 7 to 15 % of the rock. Weak pervasive carbonatization. Nil to trace pyrite over most of the section. Foliation is at 65 degrees to core axis at 135.2 m. Upper and lower contacts are also at 65 degrees to core axis.

136.0 136.3 Hematite associated with carbonate veinlet.

AB15357 AB15358	$113.2 \\ 121.3$	113.3 121.4	.1 .1	19 24	n/a n/a	44 n/a 86 n/a	n/a n/a	370 180
		and the second second						

AB15360 133.2 133.3 .1 63 n/a 73 n/a n/a 410

The reader.

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

(m)	(m)	• •		
/ 111 /	(44.)		DESCRIPTION	

139.6 143.0 FAULT ZONE ?. Abundant guartz carbonate veining (veins up to 20 cm thick parallel to foliation) and core is broken and rubbly from 139.6 to 140.3 m. 0.25 m of lost core between 139.3 m and 142.3 m. Two to 3 % pyrite between 140.9 and 142.4 m associated with quartz veining. Clay filled slip at 141.8 m at 30 degrees to core axis.

143.3 143.6 Zone of guartz carbonate veining at 55 to 60 degrees to core axis. Trace pyrite.

145.6 148.1 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF

Pale green-grey with 1 to 10 % quartz eyes 2 to 4 mm in diameter and 5 to 20 % epidotized feldspar crystals 1 to 3 mm long in a fine-grained sericitic matrix. No bedding recognized. Foliation is at 50 degrees to core axis. Lower contact is at 50 degrees to core axis. Nil sulphides except for a 2 mm wide band of pyrite at 145.9 m at 68 degrees to core axis.

148.1 156.5 INTERMEDIATE FELDSPAR CRYSTAL TUFF

Dark green similiar to 132.9 to 145.6 m. Epidotized lapilli-sized feldspar crystals comprise 5 to 20 % of the rock. Occasional lapilli to block-sized lithic clast. Nil sulphides over most of the section. Bedding is at 50 degrees to core axis at 151.3 m. Broken core at the lower contact.

144.3 144.4 Bleached silicified zone with 10 % pyrite filling fractures at 50 to 80 degrees to core axis.

150.0 151.0 Moderate pervasive carbonate.

151.0 3 cm wide clay filled slip at 50 to degrees to core axis

151.0 151.3 Bed of felsic guartz feldspar crystal tuff at 50 degrees to core axis. Moderately carbonatized.

151.3 156.5 FAULT ZONE ?. Many clay-filled slips at 60 to 75 degrees to core axis. Moderately carbonatized and up to 5 % hematite disseminated and along foliation planes.

158.3 10 cm wide barren guartz carbonate vein at 60 to 80 degrees to core axis.

156.5 176.8 MIXED SHEARED ASH TO LAPILLI FELSIC TUFF

Pale to medium grn fine-grained and crushed with nil to 10 % 1 to 4 mm quartz eyes. Weakly chloritized and sericitized. Foliation at 158.5 m and at 162.1 m is at 60 degrees to core axis. Possible bedding plane at 163.7 m is at 60 degrees to core axis. Nil to 2 %

#### HOLE No: Page Number CHEM87-22 5

Sample	From	To	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

AB15361 146.1 146.2 .1 17 n/a 13 n/a n/a 1350

AB15362 148.3 148.4 .1 135 830 n/a 80 n/a n/a

AB15363	157.4	157.5	.1	19	n/a	61	n/a	n/a	1200	
AB15364	167.5	167.6	.1	19	n/a	15	n/a	n/a	360	
AB15365	169.5	169.6	.1	57	n/a	31	n/a	n/a	1020	
AB15366	176.2	176.3	.1	52	n/a	20	n/a	n/a	770	

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

			DIAMOND DRILL LOG										
From (m)	To (m)		DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		fracture core axis.	controlled pyrite. Lower contact is also at 60 degrees to	0									
		157.2	Clay filled slip at 30 degrees to core axis.										
	2 •	163.7 168.0	) Strongly crushed weak to moderate chloritization.	e e e e e e e e e e e e e e e e e e e							4		
		168.0 170.3	FAULT ZONE. Core is highly fractured high clay component. Strongly chloritized and numerous clay filled slips at 40 to degrees to core axis.										
176.8	197.4	FINE GRAIN Fine-grains feldspar pl and rubbly Foliation	ED GABBRO ed dark green highly chloritic with less than 5 % menocrysts 1 to 3 mm in length. Core is generally broken y over most of the section above 192.0 m (RQD > 12). Is at about 50 degrees to core axis. Nil sulphides.	AB15367 n AB15368	178.2 195.5	178.3 195.6	.1 .1	37 228	n/a n/a	82 104	n/a n/a	n/a n/a	100 290
		177.4 177.3	Abundant carbonate-quartz veins (about 50 % of rock) parallel to foliation at 50 degrees to core axis. Nil sulphides.					San Se an acc S					
		179.2 179.8	Broken rubbly core.										
		180.6 182.3	Blocky, highly fractured core.										
		182.9	Trace chalcopyrite along foliation planes.										· · · · · · · · · · · · · · · · · · ·
		183.7 188.0	) 3 mm wide clay filled slip at 20 degrees to core axis.										
	· · · ·	185.0	2 mm wide quartz veinlet with chalcopyrite at 35 degrees to core axis.						•		a A A A A		
		186.7 189.0	) Blocky, highly fractured core.										
		190.2 190.	Blocky, highly fractured core.										
		192.0	Clay-filled slip at 65 degrees to core axis.										•
		193.0 193.	Blocky, highly fractured core.										
		195.1	4 mm wide carbonate hematite vein at 40 degrees to core axis.	e									

HOLE No:

CHEM87-22

Page Number 6

196.4 197.4 Moderate fracture controlled carbonate alteration.

197.4 198.2 FAULT ZONE

Loosely consolidated fault breccia with high clay component and a moderate amount of carbonate. Upper and lower contacts are at 70

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m) -----DESCRIPTION------

degrees to core axis.

# 198.2 218.3 DARK BROWN ARGILLITE

Dark brown very fine-grained and soft with slaty cleavage at 25 to 30 degrees to core axis. Relatively massive bedding rarely seen. Core is broken and crumbly above 209.0 m (RQD > 15). Bedding at 216.6 m is at 55 degrees to core axis. Lower contact is at 68 degrees to core axis.

200.7 1 cm wide clay filled slip at 80 degrees to core axis.

203.3 3 cm wide clay filled slip at 75 degrees to core axis.

206.3 206.4 Fault zone (?). Crushed with high clay component. The zone is at 60 degrees to core axis.

206.7 3 cm wide bed of greywacke at 55 degrees to core axis. Graded bedding fines downhole. A 1 X 4 cm clast of greywacke is 3 cm downhole from the greywacke bed.

213.4 213.7 Several round clasts of greywacke up to 4 cm in diameter

215.6 Bedding plane at 65 degrees to core axis.

216.3 218.3 Unsorted angular quartz granules and granule to pebble sized round lithic clasts comprise nil to 50 % of the rock.

# 218.3 231.3 GREYWACKE AND PEBBLE CONGLOMERATE

Grey fine-grained massive with 1 to 5 % black mud clasts up to 4 mm long and occasional pebble-sized lithic clasts. Beds of unsorted pebble conglomerate up to 30 cm thick comprise about 10 % of the unit. The pebble conglomerates are matrix supported and contain rounded pebbles of Myra Formation volcaniclastics (50-80%, some with quartz eyes and sulphides) feldspar phyric gabbro ( $\langle 1-20$ %) mafic clasts (1-10%) and quartz pebbles (1-3%). Bedding is at 55 to 60 degrees to core axis. Lower contact is at 60 to degrees to core axis. Bedding is at 55 to 60 degrees to core axis. Lower contact is at 60 degrees to core axis.

# 231.3 261.8 COBBLE CONGLOMERATE

Medium green clast supported conglomerate composed of unsorted, rounded to angular pebble-sized clasts of feldspar phyric gabbro (70-80%), sediment sill sediments (nil-5%), Myra volcaniclastics (nil-30%) and quartz (nil-5%) in a matrix of greywacke. Below 256.4 m the matrix is composed mostly of quartz granules. Some Myra clasts contain disseminated sulphides (pyrite and chalcopyrite). Boulder-sized gabbro clasts are common below 255.0 m. Bedding is HOLE No: Page Number CHEM87-22 7

Au

Ba

(ppb) (ppm)

Sample	From	То	Width	Cu	Pb	Zn	Åα
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

# From To (m) -----DESCRIPTION------

at 68 degrees to core axis at 244.0 m. Occasional local quartz fracture filling. Lower contact is an unconformity at 30 degrees to core axis.

- 237.0 Bull quartz vein 3 to 7 cm thick at 90 degrees to core axis.
- 243.0 243.3 Fault breccia (?) at about 90 degrees to core axis. Angular pale brown clasts in a carbonate rich matrix.
- 243.3 244.0 Relatively clast free section.
- 252.4 253.0 Beds of greywacke with 5 to 10 % granular sized quartz and lithic clasts. Bedding is at about 70 degrees to core axis.
- 254.4 2.5 cm wide clast of felsic tuff with 1 % pyrite and chalcopyrite.
- 254.8 4.0 cm wide rounded clast of Myra felsic with 3 % pyrite and 1 % chalcopyrite.
- 259.0 1.5 X 4.0 cm clast of felsic Myra tuff with 20 % pyrite.

#### 261.8 396.0 FELDSPAR PHYRIC GABBRO

Massive dark green medium to coarse-grained sections 0.5 to 10.0 m long alternate with fine-grained sections 0.1 to 4.0 m long which are usually associated with quartz +/- carbonate veins. Fine-grained below 391.0 m. Feldspar phenocrysts 1 to 4 mm long comprise about 30 % of the rock. Nil to 5 % hematite as grains less than 2 mm in diameter and smeared along foliation planes. Foliation is at 50 degrees to core axis at 359.5 m. Nil to trace chalcopyrite most of which is in minor quartz-carbonate veins at 20 to 60 degrees to core axis. Lower contact is at 15 degrees to core axis.

- 263.7 264.2 Abundant quartz veining (<2 cm wide) and clotting at 20 degrees to core axis. Trace chalcopyrite.
- 266.3 266.6 Fine-grained section associated with a 1.0 cm wide barren quartz vein at 60 degrees to core axis. Weak fracture controlled epidotization.
- 268.7 268.9 Brown mafic dyke or carbonatized zone. Dark brown fine-grained feldspar phyric strong fracture controlled carbonatization. Sharp contacts. Runs almost parallel to the core axis.
- 271.1 271.2 Dark brown fine-grained mafic dyke at 39 degrees to core axis.

1815760	263 3	263 4	1	185	n/a .	91	n/a	n/a	110
ADIJJUJ	403.3	203.4	• *	105	ш/ a	51	4/4	ш/ Ф	110
AB15370	287.4	287.5	.1	13	n/a	160	n/a	n/a	150
AB15371	308.4	308.5	.1	146	n/a	156	n/a	n/a	460
AB15372	315.4	315.5	.1	148	n/a	90	n/a	n/a	110
AB15373	349.6	349.7	.1	336	n/a	87	n/a	n/a	120
AB21551	363.0	364.0	1.0	78	12	84	<1	<5	160
AB21552	364.0	365.0	1.0	269	< 5	119	<1	5	160
AB21553	365.0	366.0	1.0	57	< 5	84	(1	-5	50
AB21554	366.0	367.0	1.0	161	5	63	(1	<5	40
AB21555	367.0	368.0	1.0	336	< 5	96	<1	<5	60
AB15374	369.2	369.3	.1	287	n/a	148	n/a	n/a	860
AB21556	377.0	378.0	1.0	252	5	98	<1	<5	140

asens.

Sample Width From To Cu Pb Zn Åα Au Ba No. (m) (m)· (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm)

# HOLE No: Page Number CHEM87-22 8

100000	
1 3	
( )	
N. 1	
WHEELS CHART	

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From T	0		
(m) (	m)	DESCRIPTION	-

278.1 278.2 Quartz vein 2 cm wide with trace chalcopyrite and a silicified halo which extends 5 cm from the vein.

281.5 281.8 Fine-grained section with 7 % hematite.

- 284.2 288.0 Fine-grained section. Abundant quartz-carbonate veining. Soft beige anhedral mineral occurs as spots less than 3 mm wide throughout the section and comprises less than 5 % of the rock. Quartz-carbonate-chlorite veins from 285.6 to 285.8 m and from 286.4 to 286.8 m at 40 to 80 degrees to core axis.
- 297.0 297.8 Moderate hematite alteration associated with carbonate veinlets at 40 to 80 degrees to core axis.
- 308.3 308.8 Mafic dyke (?). Dark brown fine-grained massive moderate fracture controlled carbonatization and 3 % fracture controlled pyrite. Sharp upper contact at 50 degrees to core axis and lower contact at 72 degrees to core axis.
- 330.0 1.0 cm wide quartz-carbonate vein at 30 degrees to core axis with trace chalcopyrite.

332.4 333.6 Barren quartz-carbonate vein at 30 degrees to core axis.

- 333.6 334.4 Abundant quartz-carbonate veins and pods at 30 degrees to core axis.
- 339.4 340.5 Moderate fracture controlled carbonate alteration. Carbonate filled hairline fractures at 30 to 40 to degrees to core axis.
- 352.2 Several blebs of chalcopyrite associated with minor quartz-carbonate veinlets at 58 degrees to core axis.
- 353.6 354.9 Weak fracture controlled carbonatization. Most fractures at 20 degrees to core axis.
- 362.9 368.0 Quartz-carbonate veins 1.0 to 10.0 cm wide at 20 to 50 degrees to core axis comprise about 20 % of the section. The veins contain up to 2 % chalcopyrite.
- 368.1 369.9 Massive fine-grained dark grey brown mafic dyke. Upper contact is sharp and irregular at 40 degrees to core axis. The lower contact is sharp and irregular at 40 to 55 degrees to core axis. Inclusion (?) of gabbro from 369.4 to 369.7 m at 30 degrees to core axis.
- 371.0 371.2 Mafic dyke as 368.1 to 369.9 with 2 % fracture controlled pyrite. Upper contact is at 20 degrees to core axis and lower contact is at 40 to degrees to core

HOLE No: Page Number CHEM87-22 9

Sample	From	To	Width Cu	Pb Zn	Ag	Au Ba	1
No.	(m)	(m)	(m) (ppm)	(ppm) (ppm)	(ppm)	(ppb) (pp	)m)

#### PROPERTY: CHEMAINUS JV HOLE No: Page Number FALCONBRIDGE LIMITED CHEM87-22 10 DIAMOND DRILL LOG From To From Sample To Width Cu Pb Zn λα Au Ba (m) (m) -----DESCRIPTION------No. (m) (m) (m) (mag) (ppm) (ppm) (ppm) (ppb) (ppm) axis. 375.6 Quartz vein 2.0 cm wide at 50 degrees to core axis with 1 % chalcopyrite. 377.2 0.8 X 0.8 cm wide patch of chalcopyrite and pyrite centred on a quartz clot of about the same size. Several nearby guartz-carbonate veins less than 1.0 cm wide at 20 to 30 degrees to core axis contain specks of chalcopyrite. 394.4 395.0 Moderate chloritization. Rock is strongly foliated. Foliation is at 20 degrees to core axis. 395.0 396.0 Moderate fracture controlled carbonatization at 30 degrees to core axis. Fault breccia at 40 degrees to core axis between 395.5 and 395.6 m. 396.0 406.7 MIXED TUFFACEOUS SEDIMENTS Medium green fine-grained with patchy thermal biotite alteration. AB15375 399.7 399.8 .1 54 n/a 59 n/a n/a 1200 Generally mafic to intermediate in composition. Nil sulphides. AB15376 404.6 404.7 .1 58 30 n/a n/a n/a 290 Lower contact is at 20 degrees to core axis. BEDDING ANGLES: 20 to 30 degrees to core axis at 396.9 m. 30 Degrees to core axis at 397.8 m. 48 Degrees to core axis at 398.7 m. 50 Degrees to core axis at 400.1 m. 40 Degrees to core axis at 403.5 m. 404.1 404.7 Felsic crystal tuff. Contacts are gradational. 406.7 420.3 MASSIVE MAFIC FLOW Medium green fine-grained massive feldspar crystals less than 4 mm AB15377 413.9 414.0 .1 171 n/a 95 210 n/a n/a long in a chloritic matrix comprise less than 5 % of the rock. Finely disseminated hematite (?) comprises about 5 % of the core and occurs in the centre of white specks less than 2 mm in diameter (deuturic alteration of amphiboles ?). Rock is very weakly magnetic. Nil sulphides. Lower contact is at 55 degrees to core axis 421.1 421.6 Zone of moderate carbonatization and strong epidotization. Lower contact is at 40 degrees to core axis. Upper contact is indistinct. 420.3 474.6 MASSIVE MAFIC HORNBLENDE-BEARING FLOW As 406.7 to 420.3 but has only trace hematite smeared along AB15378 428.6 428.7 75 460 .1 n/a 84 n/a n/a foliation planes and nil to 1 % hornblende as subhedral crystals up AB15379 438.3 438.4 .1 78 n/a 350 64 n/a n/a

AB15380 456.3 456.4

AB15381 467.2 467.3

.1

.1

217

235

n/a

n/a

61

57

n/a

n/a

n/a

n/a

159

196

to 2 mm in diameter above 428.0 m. Below 428.0 m up to 10 %

hornblende crystals up to 4 mm in diameter. Nil to trace

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From	То			Sample	From
(m)	(m)	DESCRIPTION		No.	(m)

HOLE No: Page Number CHEM87-22 11

To (m) Width Cu Pb Au Zn Ag (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm)

Ba

disseminated chalcopyrite. Foliation is at 55 degrees to core axis at 445.5 and 452.6 m.

- 427.0 428.0 Moderate epidote alteration centred on carbonate veins up to 7.0 cm wide at 20 to 45 degrees to core axis.
- 430.3 433.3 Quartz-carbonate +/- epidote veins less than 1.0 cm wide at 50 degrees to core axis comprise about 5 % of the rock. Carbonate-hematite vein 0.5 cm wide at 80 degrees to core axis at 433.3 m.
- 443.1 5 mm wide carbonate-hematite vein at 80 degrees to core axis.
- 445.4 Carbonate-hematite vein 1.0 cm wide at 70 degrees to core axis.
- 446.5 Quartz-carbonate-hematite vein 5 mm wide at 50 to 60 degrees to core axis cross-cuts quartz-carbonate pods.
- 449.2 449.5 Fault breccia zone at 60 degrees to core axis. Angular clasts some of which are bleached in a guartz calcite matrix.
- 449.5 455.7 Randomly oriented quartz-carbonate +/- hematite filled fractures generally less than 1.0 cm wide comprise about 5 % of the rock. Minor fault breccia 3 cm wide at 70 degrees to core axis at 451.4 m. Rock is darker and more chloritic in this section.
- 471.2 Quartz-carbonate vein 5 mm wide at 50 degrees to core axis with several blebs of chalcopyrite.
- 473.2 473.3 Dark brown feldspar phyric dyke (?). Feldspars are less than 2 mm long and comprise about 4 % of the rock. 2 % finely disseminated pyrite. Contacts are sharp and irregular at 50 to 80 degrees to core axis.



HOLE No: Page Number CHEM87-29 1

Claim No. CHIP 1 Section No.: Line 31+00 East

Logged By: J. Pattison Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg & XRAL

Core Size: NQ

 NTS:
 92B13
 UTM:
 5416425 N
 430962 E

 Azimuth:
 210
 Elevation:
 557 m

 Dip:
 -50
 Length:
 296.3 m

Started: 16-JUNE-87 Completed: 20-JUN-87

PROPERTY: CHEMAINUS JV

Hole Location: 38+00 E 0+88 S

Purpose: To test VLF anomalies at 1+60 S and 2+15 S, a deep IP chargeability anomaly between 2+20 and 2+80 S and a deep IP resistivity low between 1+85 and 2+00 S.

# DIP TESTS

	Azi-			Azi-		
Length	muth	Dip	Length	muth	Dip	
39.00	205.0	-50.0	224.60	210.0	-46.0	
148.40	208.0	-48.0	282.50	211.0	-45.0	

From	То		Sam	le Fro	n To	Width	Cu	Pb Zr	n Ag	Au Ba
(m)	(m) ·	DESCRIPTION	N	). (m	) (m)	(m)	(ppm)	(ppm) (pp	om) (ppm)	(ppb) (ppm)

#### .0 12.2 OVERBURDEN AND CASING

12.2 84.9 EPIDOTE SPOTTED MAFIC FLOWS WITH MINOR MAFIC ASH TUFFS Dark green massive fine to medium-grained and spotty epidote alteration. Epidote spots (altered feldspars) are <1-3mm in diameter and comprise about 30 % of the rock. Occasional epidote-carbonate patches up to 10 cm wide with minor pyrite and sometimes chalcopyrite.

Appears to be tuffaceous between 57.0 and 69.0 m. Rock has a vague banded appearance. Two block sized mafic clasts at 57.9 m. Core is broken and blocky for 4.7 m from the lower contact. The lower contact is at 50 degrees to core axis.

- 28.3 28.9 Blocky, highly fractured core. Rust along fractures.
- 29.5 31.0 2-3% pyrite and trace chalcopyrite associated with quartz-carbonate +/- epidote veins and clots up to 5 cm wide.
- 36.1 36.7 Broken rubbly core. Fractured surfaces are rusty.
- 62.0 64.5 INTERMEDIATE ASH TUFF epidote spots are rare and rock is intermediate in composition.
- 65.4 Vague banding (bedding?) at 45 degrees to core axis.
- 69.9 20 cm wide band of (1-3mm quartz filled amygdales at 40 degrees to core axis.
- 73.4 Minor slip at 70 degrees to core axis.

341 AD02401 24.2 24.3 .1 105 n/a 111 n/a n/a AD02402 51.3 51.4 .1 100 n/a 111 n/a n/a 472 63.8 43 67 n/a n/a 1170 AD02403 63.7 .1 n/a AD02404 79.9 80.0 .1 152 n/a 115 n/a n/a 108



FALCONBRIDGE LIMITED

DIAMOND DRILL LOG

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### From To (m) (m) -----DESCRIPTION------

76.0 79.0 Minor hematite within carbonate veinlets and clots.

80.2 81.7 Blocky, highly fractured core. 0.7 m of lost core.

82.0 Flow contact (?) at 52 degrees to core axis.

82.6 84.9 Blocky, highly fractured core.

88.4 CHLORITIC FELSIC ASH TUFF 84.9

> Pale grey-green hard and siliceous. Chlorite occurs in spots and streaks. Core is broken and blocky over the entire section. 2 % disseminated and fracture controlled pyrite. Foliation is at 60 degrees to core axis at 87.6 m. Broken core at lower contact.

85.0 87.5 0.4 m of lost core.

87.1 15.0 cm wide fault gouge at about 5 degrees to core axis.

87.8 Minor slip at 60 degrees to core axis.

#### 88.4 90.0 MAFIC DYKE

Massive dark grey-green and fine-grained. Moderate pervasive carbonate alteration. Broken and blocky core over the entire section

90.0 99.7 CHLORITIC FELSIC TUFF

> Medium grey-green and well foliated. Foliation is contorted. Locally quartz eye bearing. <1-3%, 1-4mm quartz eyes. Moderate spotty and pervasive chloritization and pervasive sericitization. 1-2 % disseminated and fracture controlled pyrite. Lower contact is sharp at 65 degrees to core axis.

- 92.4 1.5 cm wide clay filled slip at 50 degrees to core axis.
- 96.3 Minor slip at 50 degrees to core axis.
- 97.1 Minor slip at 30 degrees to core axis.
- 99.7 104.8 FAULT ZONE

Loosely consolidated fault breccia comprised of broken and crushed felsic tuff fragments in a clay-rich matrix. Upper contact is at 70 degrees to core axis and lower contact is at 60 degrees to core axis. LOST CORE INTERVALS:. 99.4-101.5 m 0.6 m of lost core. 103.1-104.2 m 0.9 m of lost core.

104.8 139.6 CHLORITIC FELSIC TUFF

AD02405	85.7	85.8	.1	138	n/a	38	n/a	n/a	1910

(ppm)

#### Width Cu Pb Zn Àσ

Page Number

2

(ppm) (ppm)

Au

(ppm)

Ba

(ppb) (ppm)

HOLE No:

CHEM87-29

(m)

Sample

No.

From

(m)

То

(m)

02405	85.7	85.8	.1 138	8 n/a	38	n/a	n/a	1910	

AD02406 99 551 99.4 99.5 .1 n/a 33 n/a n/a

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

# From To (m) (m)

As 90.0 to 99.7 m. Numerous minor slips rock has crushed appearance above 108.0 m. Between 108.0 and 125.6 m sections of massive siliceous quartz crystal tuff (~ 5% of unit) alternate with sections of crushed felsic tuff. Below 125.6 m rock is crushed and occasionally mylonitic. Moderate to strong sericitization and weak spotty chloritization. Lower contact is gradational. Trace to 1% disseminated pyrite.

104.8 107.0 Blocky, highly fractured core. Rock is crushed. Numerous slips at 50-60 degrees to core axis.

107.0 107.3 Fault at 5 degrees to core axis.

- 107.4 10 cm wide fault at 30 degrees to core axis.
- 110.0 Several minor slips at 80-90 degrees to core axis.
- 111.0 Minor slip at 78 degrees to core axis.
- 115.5 118.3 Blocky, highly fractured core. 0.5 m of lost core between 117.7 and 118.3 m.
- 118.8 2.0 cm wide clay-filled slip at 48 degrees to core axis.
- 119.9 121.0 Blocky, highly fractured core.

124.0 Strong foliation at 48 degrees to core axis.

- 124.0 124.4 Fault breccia at 40 degrees to core axis. Tightly packed clasts of felsic tuff <0.5 5.0 cm in diameter in a sericitic matrix.
- 125.6 126.1 Fault breccia. As 124.0 and 124.4 m except matrix is a soft black mud.
- 127.1 129.7 Fault breccia. Foliation is at 20-30 degrees to core axis
- 129.7 131.3 Intensely crushed zone. Rock is very soft and loosely consolidated.
- 130.6 132.1 Strongly chloritized zone or mafic dyke at 60 degrees to core axis. Fine-grained and dark green. Moderate hematization and weak fracture controlled quartz-carbonate alteration. Strongly crushed for 70 cm from upper contact.

132.8 133.8 Blocky, highly fractured core.

139.5 Minor slip at 25 degrees to core axis.

Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
AD02407	119.3	119.4	.1	37	n/a	65	n/a	n/a	1020
AD02408	131.7	131.8	.1	141	n/a	47	n/a	n/a	505

Page Number

3

HOLE No:

CHEM87-29

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

# HOLE No: Page Number CHEM87-29 4

From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba ) (ppm)
119 6	143 7	FRISTC LADILLT THEF										
135.0	113.1	Pale grey to pale green lapilli and occasional block-sized felsic clasts (5-15%) in a light grey sericitic matrix. Occasional pyrite clast. Foliation is at 30-35 degrees to core axis. Lower contact is	AE08600 AD02409 AE08651	139.6 141.0 141.1	140.6 141.1 142.0	1.0 .1 .9	496 51 68	36 n/a 20	115 37 72	1 n/a <1	15 n/a 5	1500 1820 1400
	•	a sharp fault at 60 degrees to core axis.	AE08652 AE08653	142.0 143.0	143.0 143.7	1.0 .7	88 181	28 18	84 78	1 <1	5 5	1300 2000
		SUDPHIDES:. 139.6-142.0 M Nil-1% disseminated pyrite. 142.0-143.0 m 1-3 % disseminated pyrite. 143.0-143.7 m 5 % disseminated pyrite.										
		141.6 Clay-filled slip at 60 degrees to core axis. Rock is strongly crushed for 50 cm below the slip.					· ·					· · ·
143.7	155.6	DARK BROWN ARGILLITE										
		Dark brown almost black and soft. Broken and blocky over the entire section. $2-3\%$ very fine-grained pyrite. The pyrite occurs in clots <3 mm in diameter. Massive bedding not observed. Lower contact is sharp at 70 degrees to core axis.	AE08654	143.7	144.7	1.0	92	19	176	<1	<5	860
155.6	156.6	PEBBLE CONGLOMERATE Matrix supported, unsorted, angular quartz (50 %) fine-grained mafic material (30 %), gabbro (10 %) and assorted lithic (<10 %) clasts in a dark brown fine-grained matrix. Lower contact is sharp at 70 degrees to core axis. A slip at 90 degrees to core axis occurs 2.0 cm below the lower contact.										
156.6	285.0	MAFIC ASH TUFF										
•		Fine-grained medium green soft, crushed, sheared and strongly chloritic. The unit may include some minor flows. Foliation is at a very low angle to the core axis throughout the section $(0-20)$ degrees to core axis ). Occasional bed (<2.0 cm thick) or clast of cherty grey-green sediment. Nil sulphides.	AD02410 AD02411 AD02412 AD02413 AD02414	159.7 173.4 192.7 217.6 223.4	159.8 173.5 192.8 217.7 223.5	.1 .1 .1 .1 .1	218 100 163 204 140	n/a n/a n/a n/a	83 83 110 78 97	n/a n/a n/a n/a	n/a n/a n/a n/a	601 869 1050 792 831
		Rock has a more sedimentary appearance below 207.0 m. Thermal biotite alteration is stronger and cherty sediment beds become more	AE08655	248.0	249.0	1.0	126	66. 61	205	(1	. (5	350
		common and thicker (up 10.0 cm thick). The cherty beds sometimes	AE08657	250.0	251.0	1.0	84	57	132	<1	<5	300
		contain trace to 1 % pyrite in hairline fractures. Broken core at lower contact.	AD02415	260.3	260.4	.1	230	n/a	245	n/a	n/a	553
		CORE ANGLES:.										
		Bedding is at 30 degrees to core axis at 164.5 m. Bedding is at 12 degrees to core axis at 169.1 m. Minor slip at 30 degrees to core axis at 169.4 m.							•			
		Bedding is at 15 degrees to core axis at 175.7 m. Bedding is at 0 degrees to core axis at 179.3 m.										
		Bedding (?) is at 40 degrees to core axis at 190.0 m. Bedding is at 17 degrees to core axis at 203.6 m.										

FALCONBRI	DGE	ΓI	MITED	
DIAMOND	DRIL	Ŀ	LOG	

From То (m) (m)

Bedding is at 14 degrees to core axis at 207.0 m. Bedding is at 10 degrees to core axis at 209.4 m. Bedding is at 14 degrees to core axis at 209.7 m. Bedding is at 25 degrees to core axis at 217.0 m. Bedding is at 20 degrees to core axis at 218.0 m. Bedding is at 42 degrees to core axis at 224.3 m. Bedding is at 35 degrees to core axis at 225.9 m. Bedding is at 17 degrees to core axis at 230.0 m. Bedding is at 5 degrees to core axis at 231.0 m. Bedding is at 20 degrees to core axis at 244.0 m. Bedding is at 20 degrees to core axis at 248.5 m. Bedding is at 50 degrees to core axis at 255.4 m. Bedding is at 17 degrees to core axis at 265.0 m. Bedding is at 30 degrees to core axis at 265.2 m. Bedding is at 25 degrees to core axis at 266.8 m. Bedding is at 12 degrees to core axis at 267.6 m. Bedding is at 0 degrees to core axis at 268.5 m. Bedding is at 35 degrees to core axis at 282.8 m.

-----DESCRIPTION------

170.3 173.1 Blocky, highly fractured core.

173.1 174.3 Moderate pervasive thermal biotite alteration.

173.5 175.9 Blocky, highly fractured core.

178.3 180.1 About 0.9 m of EXCESS CORE.

187.7 209.0 Weak-nil thermal biotite alteration.

189.5 190.2 Blocky, highly fractured core.

194.3 Minor slip at 0 degrees to core axis.

195.4 195.7 Blocky, highly fractured core.

- 199.0 203.8 1.0 cm wide clay-filled slip at 0 degrees to core axis. Core is broken and blocky over most of this section.
- 208.1 208.7 0.5 cm wide clay-filled slip at 0 degrees to core axis. Core is broken and blocky.
- 209.0 Moderate to strong patchy thermal biotite alteration. Up to 10 % pale to dark green lapilli-sized clasts.

215.0 Several guartz eyes 3-4 mm in diameter.

231.9 233.5 Blocky, highly fractured core.

234.8 235.4 Blocky, highly fractured core.

240.3 240.8 Blocky, highly fractured core.

HOLE No: Page Number CHEM87-29 5

ample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

HOLE No: Page Number CHEM87-29 6

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

 From
 To

 (m)
 (m)

241.1 241.7 Minor slip at 5 degrees to core axis.

241.7 242.9 Blocky, highly fractured core.

245.4 246.3 Blocky, highly fractured core. 0.2 m of lost core between 244.4 and 246.0 m.

250.1 251.2 Blocky, highly fractured core.

252.4 255.4 Blocky, highly fractured core. 0.3 m of lost core between 252.4 and 253.3 m.

273.7 273.9 Blocky, highly fractured core.

274.3 275.6 Blocky, highly fractured core. 0.3 m of lost core between 273.4 and 275.5 m.

277.8 278.4 Bleached, quartz flooded fault breccia. Upper contact is at 12 degrees to core axis and lower contact is at 30 degrees to core axis.

285.0 296.3 MAFIC FLOW

Massive dark green and fine-grained. Nil-5 % chlorite-filled AD02416 291.7 291.8 .1 242 n/a 76 n/a n/a 401 amygdales < 3 mm in diameter. Nil to trace disseminated chalcopyrite



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**PROPERTY:** Chemainus J.V. - Chip Claims

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 38+05 E 1+22 N

 NTS:
 092/B13
 UTM:
 5416605
 N
 431100
 E

 Azimuth:
 210
 Elevation:
 585 m

 Dip:
 -50
 Length:
 340.2 m

Started: June 17, 1987 Completed: June 21, 1987

Purpose: To test a VLF anomalies at 0+60 N and 1+60 S.

HOLE No: Page Number CHEM87-30 1

n/a 1090

n/a 1060

n/a 1510

Claim No. CHIP 1 Section No.: 38+00 East

Logged By: David P. Money Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg and X-Ray Assay

Core Size: NQ

		Azi-			Azi-	
	Length	muth	Dip	Length	muth	Dip
	102.40	209.0	-48.0	256.00	212.0	-46.0
	203.00	212.0	-48.0	340.20	213.0	-46.0

DIP TESTS

From	То		Sample	From	To	Width	Cu	Pb Zn	Ag	Au Ba	
(m)	(m)	DESCRIPTION	No.	(m)	(m)	(m)	(ppm)	(ppm) (ppm)	(ppm)	(ppb) (ppm	)

AB21636

AB21637

13.3

25.1

AB21638 38.4

13.4

25.2

38.5

.1

.1

.1

25

22

32

n/a

n/a

n/a

28

25

64

n/a

n/a

n/a

#### .0 9.1 OVERBURDEN AND CASING

9.1 40.0 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Light grey to medium green tuff with on average 5 %, 2 to 3 mm, quartz eyes and 10 %, 1 to 2 mm, feldspar grains. The rock is moderately contorted and hosts local dust tuff beds and/or cherty beds. The rock is oxidized with minor rust throughout and trace to nil disseminated pyrite. There are 5, 0.5 to 1.5 mm, pyrite bands from 39.4 to 39.6.

> Foliations :. At 10.0 the foliation is at 27 degrees to core axis. At 20.8 the foliation is at 52 degrees to core axis. At 30.5 the foliation is at 60 degrees to core axis. At 38.5 the foliation is at 51 degrees to core axis.

Bedding :. At 21.6 the bedding is at 52 degrees to core axis. At 24.7 the bedding is at 61 degrees to core axis. At 33.4 the bedding is at 45 degrees to core axis.

40.0 42.1 FELSIC TUFF Rusty felsic tuff with quartz eyes, 2 to 3 %, 1 to 3 mm and no AB21639 41.2 41.3 .1 23 n/a 17 n/a n/a 1280 visible sulphides in a medium fine-grained greenish grey siliceous matrix. At 40.7 the foliation is at 65 degrees to core axis and the bedding is at 48 degrees to core axis.

### 42.1 46.0 FAULT ZONE

From 42.1 to 45.3 there is 0.8 m of lost core in a blocky, highly

PROPERTY: Chemainus J.V. - Chip Claims HOLE No: Page Number FALCONBRIDGE LIMITED CHEM87-30 2 DIAMOND DRILL LOG To From Sample From Width Cu То Pb Zn λσ Âu Ba (m) (m) -----DESCRIPTION-----No. (m) (m) (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm) fractured core chloritic rock with a shear zone from 45.3 to 46.0. 59.7 ALTERED INTERMEDIATE CRYSTAL TUFF 46.0 Moderately sheared tuff, which is locally weakly to strongly AB21640 47.0 47.1 .1 52 n/a 49 776 n/a n/a contorted and has been subjected to weak to moderate AB21641 57.1 57.2 .1 67 38 757 n/a n/a n/a carbonatization and moderate to strong chloritization. The tuff hosts quartz eyes and feldspar grains and calcite occurs in the pressure shadow of the quartz eyes and as local fracture controlled veinlets. There are also minor contorted guartz veins. The unit is disky and medium green with chlorite bands. Foliations :. At 47.0 the foliation is at 55 degrees to core axis. At 49.4 the foliation is at 61 degrees to core axis. At 53.7 the foliation is at 71 degrees to core axis. At 56.9 the foliation is at 59 degrees to core axis. At 58.9 the foliation is at 55 degrees to core axis. 59.7 153.6 QUARTZ EYE BEARING FELSIC TUFF White to grey felsic quartz eye crystal tuff with minor dust or AB21642 64.2 64.4 .2 28 n/a 34 n/a n/a 1400 fine-grained ash beds. The unit is sulphide poor with a pyrite cube AB21643 71.1 71.2 .1 18 n/a 46 n/a n/a 980 at 64.5 and trace disseminated pyrite locally after 98.2. The AB21644 88.7 88.8 .1 39 n/a 100 n/a n/a 963 depth of oxidation is to 63 m. There are numerous local faults and AB21645 97.2 97.3 .1 41 126 880 n/a n/a n/a shears, which are weakly to strongly contorted with orientations AB21646 114.5 114.6 .1 26 n/a 36 n/a n/a 755 of 0 to 90 degrees to core axis. AB21647 128.3 128.4 .1 23 n/a 61 n/a n/a 960 STRUCTURE :. Fault gouge :. 66.1 to 66.2. 79.2 to 80.0. 82.8 to 83.1. 131.7 to 134. 136.3 to 136.9. 139.4 to 140.2. 146.5 to 147.1. 147.5 to 153.6. Blocky, highly fractured core :. 59.7 to 63.0. 66.0 to 68.5. 74.3 to 92.0. 103.0 to 111.8. 134.0 to 136.3. Chloritic shear zones :. 96.3 to 96.5. 98.2 to 99.1. 107.6 to 108.0.

# PROPERTY: Chemainus J.V. - Chip Claims

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m) -----DESCRIPTION------117.9 to 118.2.

123.3 to 123.7. 140.2 to 140.4. Locally minor between 142.3 and 146.5. Locally minor between 148.3 and 153.6.

Lost core :.

0.1 M from 67.7 to 68.6. 2.0 M from 75.3 to 78.0. 0.2 M from 74.1 to 75.3. 0.3 M from 85.0 to 87.3. 0.15 M from 88.1 to 89.9. 0.1 M at 107.6. 1.0 M from 111.3 to 113.7.

Foliations :.

At 60.0 the foliation is at 70 degrees to core axis. At 69.9 the foliation is at 35 degrees to core axis. At 80.5 the foliation is at 88 degrees to core axis. At 93.5 the foliation is at 55 degrees to core axis. At 96.2 the foliation is at 53 degrees to core axis. At 102.8 the foliation is at 56 degrees to core axis. At 116.0 the foliation is at 57 degrees to core axis. At 127.3 the foliation is at 55 degrees to core axis. At 138.0 the foliation is at approximately 60 degrees to core axis.

## Bedding :.

At 93.7 the bedding is at 48 degrees to core axis. No other measurements were obtainable due to the deformed nature of the core.

#### Tops :.

A bedding at 93.7 indicates that tops is dowhhole.

# 153.6 164.0 MAFIC LAPILLI TUFF

Mafic to intermediate lapilli tuff with epidote lapilli and grains. The tuff is dark to medium green with minor local fault gouge, local quartz - carbonate veins and trace to nil disseminated pyrite and pyrite cubes. There are minor kinks and contortions with the foliation at 163.2 at 45 degrees to core axis and at 155.5 at 70 degrees to core axis. The bedding at 158.3 is at 52 degrees to core axis and at 162.2 it is at 54 degrees to core axis.

164.0	224.3 FELSIC TUFF			the lease "								
	164.0 175.4	Felsic tuff with minor local intermediate zones. The	AB21649	167.3	167.4	.1	34	n/a	14	n/a	n/a	1060
		tuff is white to medium grey - green in colour with	AB21650	181.4	181.5	.1	38	n/a	17	n/a	n/a	1330
		epidote grains and trace lapilli. There are minor local	AB21651	195.6	195.7	.1	29	n/a	<10	n/a	n/a	1430
		fault slips and quartz veins. From 166.4 to 166.5	AE08620	199.5	201.0	1.5	46	6	10	(1	. (5	1500
		there is fault gouge and shear.	AE08621	201.0	201.7	.7	66	<5	20	<1	< 5	1300

AB21648 157.8 157.9

.1

154

n/a

80

n/a

n/a

85

# HOLE No: Page Number CHEM87-30 3

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

# **PROPERTY:** Chemainus J.V. - Chip Claims

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To

(m) (m)

Bedding :. At 165.8 the bedding is at 65 degrees to core axis. At 169.1 the bedding is at 55 degrees to core axis. At 171.4 the bedding is at 60 degrees to core axis.

Foliation :.

The foliation at 169 is at 54 degrees to core axis.

175.4 178.7 Sheared and contorted felsic tuff to sericite schist with local kinked zones and fault gouge. There is a chlorite shear over 5 cm at 177.7 with an orientation of 50 degrees to core axis.

-----DESCRIPTION-----

178.7 215.2 Medium grey - green to very light green - white felsic tuff with minor intermediate tuff component locally. Siliceous rock with localized quartz eyes and epidote grains. Hosts minor epidote - carbonate clots or lapilli with trace pyrite. The quartz eyes are locally up to 10 %, 1 to 4 mm, average 2 mm. From 201.0 to 201.7 there is 1 to 2 % fine-grained pyrite stringer with trace to 1 % pyrite locally on the margin of this zone. There are rhyolitic lapilli from 192.5 to 193.0. There is a epidote rich zone from 203 to 205, sediment enriched ?. From 182.4 to 185 there are black chlorite - carbonate cross-cutting 2 to 5 mm slips or shears at 20 to 25 degrees to core axis and minor slips and gouge also occur at 186.4, 187.6, 192.2, 193.4, and 193.6.

Bedding :.

At 184.4 bedding is at 42 degrees to core axis. At 201.2 bedding is at 45 degrees to core axis.

Foliations :. At 181.5 the foliation is 46 degrees to core axis. At 187.1 the foliation is 66 degrees to core axis. At 192.7 the foliation is 61 degrees to core axis. At 199.8 the foliation is 60 degrees to core axis. At 211.4 the foliation is 55 degrees to core axis.

215.2 224.3 Light green to grey felsic tuff with 5 % 1 to 4 mm quartz eyes on average. Minor suggary white quartz veins, ie. 215.0 to 215.2 and there is a zone, 216.0 to 216.2 with minor chlorite. There are local epidote rich beds. There is trace to nil pyrite cubes. The unit terminates in a fault.

Foliations :. At 215.3 the foliation is 72 degrees to core axis. At 218.2 the foliation is 64 degrees to core axis. At 221.3 the foliation is 47 degrees to core axis.

5 1100
a 1020
a 1050
a 970

Page Number

Δ

HOLE No:

CHEM87-30

r	KOPERT	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	o: Pa 30	ge Numb 5				
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	.B) (p
		At 222.7 the foliation is 46 degrees to core axis.					н н н 1					
224.3	230.0	SHEARED FINE GRAINED MAFIC FLOW Fine-grained to medium grained locally moderately sheared mafic flow with epidote grains and crystals with trace quartz eyes. The	AB21655	229.8	229.9	.1	252	n/a	89	n/a	n/a	47
		rock is massive with no layering. There are local chlorite - carbonate veins and and a minor fault with clay at 229.9. The foliation at 227.8 is at 43 degrees to core axis.										
230 0	233 5	FRISTC CRYSTAL THEF										
		Light grey massive siliceous felsic tuff with 15 % crystals, epidote, feldspar and quartz eyes. There are local feldspar lath rich beds. Bedding appears to be sub-parallel to foliation. The foliation at 230.8 is at 43 degrees to core axis and the foliation at 232.9 is at 54 degrees to core axis. Nil to trace disseminated pyrite occurs.	AB21656	232.8	232.9	.1	40	n/a	24	n/a	n/a	1460
233.5	242.0	FELDSPAR PORPHYRITIC MAFIC FLOW Mafic flow with 20 to 30 %, approximately 1 mm, epidote to feldspar grains and trace quartz crystals. There are minor quartz veins and trace to nil disseminated pyrite. The foliation varies locally from 30 to 90 degrees to core axis.										
242.0	244.9	FELSIC TUFF Epidote crystal rich felsic tuff with large quartz eyes, up to 6 mm in diameter. There is a 15 cm chloritic shear zone at 244.1. The foliation at 243.4 is at 46 degrees to core axis.	AB21657	243.6	243.7	.1	41	n/a	25	n/a	n/a	130(
244.9	245.7	FELDSPAR PORPHYRITIC MAFIC FLOW As from 233.5 to 242.0.										
245.7	247.7	FELSIC TUFF As from 242.0 to 244.9.										
247.7	274.1	MAFIC FLOW Mafic flow rich in epidote grains, after feldspar crystals. Minor alteration zones with chlorite stringers. Local quartz - carbonate veins up to 10 cm wide occur, which host trace chalcopyrite blebs.	AB21658 AB21659	249.3 264.3	249.4 264.4	.1 .1	241 178	n/a n/a	120 119	n/a n/a	n/a n/a	32 54
		veinlets (?). At 253.6 there is minor chloritization with 2, 1 to 2 mm, fine-grained pyrite bands. The foliation varies locally from 20 to 90 degrees to core axis.										

PROPERTY: Chemainus J.V. - Chip Claims

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

 From
 To

 (m)
 -----DESCRIPTION-----

- 274.1 279.3 MASSIVE FELSIC BLOCK TUFF Tuff breccia with epidote blocks. There are quartz - carbonate veins and veinlets with local trace pyrite and trace to nil chalcopyrite.
- 279.3 283.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Felsic to intermediate tuff with epidote grains and minor local quartz eyes. The rock is moderately sheared and epidotized. There are local quartz veins with chlorite margins. The foliation varies locally.
- 283.6 331.0 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Highly contorted and moderately sheared felsic to intermediate tuff with quartz eyes and minor chlorite shear zones, which host trace to 1 % pyrite. The foliation trend varies from 20 to 90 degrees to core axis. There are minor quartz - carbonate veins and local kink bands and minor local micro-faults.

STRUCTURE :.

Fault gouge :. 283.6 to 284.0. 286.2 to 286.4. 287.6 to 290.0. 290.7 to 291.9. 300.0 to 300.3. 303.2 to 303.3. 303.7 to 304.2.

Shear zones :. 284.0 to 284.4. 285.6 to 285.8.

Clay :. 293.8 to 294.0.

# 331.0 337.0 FAULT ZONE

Fault breccia with clasts of the underlying rhyolitic tuff.

# 337.0 340.2 FELSIC TUFF

Massive green felsic tuff or possibly (?) a flow with a cherty component and 3 % stretched epidote grains. Slightly banded with green and white bands/ beds (?). Trace disseminated pyrite occurs. There is 0.9 m of lost core from 337.1 to 340.2 and the core is moderately blocky. AB21660 339.5 339.7 .2 44 n/a 34 n/a n/a 153

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Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

Concerned and		autoread.								-	<b>)</b>	
PROPERTY:	Chemainus J.V Chip Claims	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE NO CHEM87-	o: Pa 30	ge Numb 7	er			
From To (m) (m)	DESCRIPT	ION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)



# **PROPERTY: CHEMAINUS JV - Chip Claims**

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 40+00 E 0+60 S

NTS: 92B13		UTM:	541635	ON	431138	Е
Azimuth: 21	.0	Eleva	tion:	570	m	
Dip: -5	0	Lengt	h:	340.	5 m	

Started: 21-JUNE-1987 Completed: 26-JUNE-1987

Purpose: To test a VLF conductor at 1+80 S. a shallow IP chargeability anomaly between 0+80 and 1+60 S. and an IP chargeability anomaly between 1+25 and 2+00 S.

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HOLE No:	Page	Number	
CHEM87-31		1	

Claim No. CHIP 1 Section No.: Line 40+00 E

Logged By: J. Pattison Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg and XRAL

Core Size: NO

(m)

(m)

		DIL 11	6919					
	Azi- Length muth	Dip	Length	Azi- muth Di	р			
	102.70 209.0 191.10 209.0	-50.0 -48.5	290.50 340.50	210.0 -48. 215.0 -48.	5 5			
T0 (m)	 DESCRIPTION			Sample No.	From T (m) (	o Width m) (m)	Cu (mag)	Pb 2 (חסק ( אסק

0	10.	.7	OVERBURDEN	AND	CASING
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From

(m)

10.7 26.1 CHLORITIC FELSIC TUFF

> Light green fine-grained moderate chloritization and sericitization and well foliated. Generally an ash tuff but occasional lapilli-sized felsic clast. Nil to 5 % 2-4 mm guartz eyes. Locally intensely microfractured and brecciated. Microfractures are filled with sericite.

> Below 21.0 m there are no quartz eyes. Rock varies from felsic to intermediate in composition, contains up to 25 % epidotized feldspar crystals and has a crushed almost mylonitic appearance. Nil-trace pyrite. Lower contact is at 40 degrees to core axis.

# CORE AXIS ANGLES:.

Foliation is at 40 degrees to core axis at 12.4 m. Foliation is at 50 degrees to core axis at 15.0 m. Bedding (?) is at 50 degrees to core axis at 16.5 m. Minor slip is at 60 degrees to core axis at 17.7 m. Foliation is at 40 degrees to core axis at 18.8 m. Foliation is at 45 degrees to core axis at 19.8 m. Foliation is at 44 degrees to core axis at 23.1 m.

11.8 12.2 Blocky, highly fractured core.

13.0 Intensely microfractured zone. Microfractures are filled with sericite.

17.4 20.4 0.2 m of lost core.

19.1 21.0 MAFIC DYKE (?). Strongly chloritic and carbonatized. Rock is dark green fine-grained and mafic in composition.

AD02417	15.6	15.7	.1	- 33	n/a	13	n/a	n/a	940

(ppm)

Au

Aα

(ppm)

(mag) (mag)

Ba

(ppb) (ppm)

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From (m)	To (m)		DESCRIPTION		Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
			Broken core at upper and lower contacts.											
	1 1 22	20.2 23.0	) Blocky, highly fractured core. 0.4 m of lost core b 20.4 and 22.6 m. Fault gouge at 22.6 m. Core is br not possible to measure orientation. 0.3 M of lost between 22.6 and 23.5.	oetween roken : core										
		24.2 24.3	MAFIC DYKE (?). Dark green fine-grained massive at degrees to core axis. 1.0 cm wide quartz vein at 1 contact.	40 Lower									· ·	
		24.7 24.8	Barren quartz vein at 60 degrees to core axis.											
		24.8 25.2	2 MAFIC TUFF. Dark green mafic epidote spotted tuff.											
26.1	33.5	MAFIC ASH	I TUFF											
		Dark gree diameter. core axis	en fine-grained and massive. Occasional quartz eye 2- . Trace disseminated pyrite. Bedding is at 37 degrees s at 31.0 m. Lower contact is at 55 degrees to core	-3 mm in es to axis.	AD02418	31.8	31.9	.1	30	n/a	97	n/a	n/a	363
		29.3 29.9	Bleached quartz flooded zone at 50 degrees to core	axis.										
		30.2 30.6	5 Blocky, highly fractured core. Hematite along folia planes.	ation										
а. Э.Э. Б	00 0	WINTS NO.										-		
33.5	99.8	MAFIC TO Medium gr lapilli-s spots (s a chlori sections quartz po Lower con	INTERMEDIATE ASH TOFF een relatively massive and epidote spotted. 5 % ash sized quartz grains and 3-10 % ash to lapilli-sized e some are feldspar crystals and others are altered cla tic matrix. Dominantly mafic in composition but min may be intermediate. Occasional block-sized fine-gr orphyritic felsic clast. Fracture surfaces are often htact is at 65 degrees to core axis.	n to epidote asts) in nor rained n rusty.	AD02419 AD02420 AD02421 AD02422 AE08624 AE08625 AE08625 AE08627	34.8 45.8 54.3 75.4 85.7 86.7 87.7 88.7	34.9 45.9 54.4 75.5 86.7 87.7 88.7 89.7	.1 .1 .1 1.0 1.0 1.0	292 115 169 137 277 260 105	n/a n/a n/a 28 20 6 54	124 93 97 81 87 56 47 88	n/a n/a n/a <1 <1 <1 <1	n/a n/a n/a (5 10 (5 5	521 313 323 1030 830 990 790 950
		BEDDING A Bedding i Bedding ( Bedding i	ANGLES:. is at 60 degrees to core axis at 36.8 m. (?) is at 40 degrees to core axis at 69.5 m. is at 48 degrees to core axis at 94.5 m.		AD02423	93.8	93.9	.1	211	n/a	88	n/a	n/a	266
		SULPHIDES 40.5-41.8 43.3-47.0 chalcopyr	5:. 3 m 2 % disseminated pyrite. ) m 1-2 % disseminated pyrite. Most as euhedral cubes rite at 35.4 m.	s. Trace										
		80.0-89.0	) m 1-2 % pyrrhotite disseminated and in clots and qu	lartz	in the second					1. •				

+/- carbonate +/- epidote veinlets and 1-2 % fracture controlled pyrite.

36.1 36.8 MAFIC LAPILLI TUFF. Quartz eyes are rare.

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From (m)	To (m)	DESCRIPTION
		67.7 86.0 Weak to moderate thermal biotite alteration.
		71.3 71.9 Blocky, highly fractured core. Fractures are rusty.
1. 		75.1 76.8 Blocky, highly fractured core. Rusty fractures.

80.0 80.4 Blocky, highly fractured core. Rusty fractures.

- 85.1 86.0 Blocky, highly fractured core. 0.2 m of lost core.
- 86.9 87.5 FELSIC ASH TUFF. Fine-grained light grey siliceous and massive.
- 87.7 88.7 Numerous (~25 % of the sec). Unoriented quartz +/carbonate +/- epidote veins and pods <3.0 cm wide. 3 % pyrrhotite and 1 % pyrite mostly in veins.

89.3 89.8 Blocky, highly fractured core.

90.0 91.8 Weak patchy thermal biotite alteration.

91.8 93.4 Moderate thermal biotite alteration. Quartz flooded between 92.6 and 92.8 m.

96.5 99.8 Weak patchy thermal biotite alteration.

## 99.8 103.4 FELDSPAR PORPHYRITIC MAFIC FLOW / GABBRO

Massive 1-5 %, 1-3 mm white feldspar laths in a fine-grained green chloritic matrix. Trace disseminated pyrite and pyrrhotite. Occasional quartz +/- carbonate vein < 1.0 cm wide with trace pyrrhotite and pyrite. Lower contact is at 34 degrees to core axis.

103.4 114.0 MAFIC TO INTERMEDIATE ASH TUFF

Medium green and epidote spotted. Similiar to 33.5 to 99.8 m except this unit contains beds of cherty pale green to brown tuffaceous sediments up to 15.0 cm thick which contain up to 5 % fracture controlled pyrite. Weak thermal biotite alteration gives rock a banded appearance. Lower contact is at 70 degrees to core axis.

## BEDDING ANGLES:.

Bedding is at 33 degrees to core axis at 103.4 m. Bedding is at 45 degrees to core axis at 104.9 m. Bedding is at 37 degrees to core axis at 108.5 m.

103.4 104.1 Blocky, highly fractured core.

106.6 106.9 Blocky, highly fractured core.

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HOLE No:

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Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m) -	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

# AD02424 102.6 102.7 .1 311 n/a 124 n/a n/a 140

AD02425 108.9 109.0 .1 192 n/a 151 n/a n/a 369



**PROPERTY: CHEMAINUS JV** HOLE No: Page Number FALCONBRIDGE LIMITED CHEM87-31 4 DIAMOND DRILL LOG From To Sample From Width То Cu Рb Zn Ag Au Ba (m) (m) -----DESCRIPTION------No. (m) (m) (m) (mqq) (ppm) (ppm) (ppm) (ppb) (ppm) 109.9 110.2 Blocky, highly fractured core. 0.2 m of lost core between 108.8 and 111.9 m. 111.9 112.5 Blocky, highly fractured core. 112.5 112.7 2 % pyrite 2 % pyrrhotite and trace chalcopyrite concentrated in microfractures. 114.0 118.4 FELDSPAR PORPHYRITIC MAFIC FLOW / GABBRO As 99.8 to 103.4. Trace disseminated pyrite. Lower contact is at AD02426 116.8 116.9 .1 271 n/a 155 n/a n/a 65 about 45 degrees to core axis. 118.4 129.6 ALTERED FELSIC ASH TUFF Light grey to green-grey fine-grained and well foliated (foliation AD02427 120.2 120.3 32 n/a .1 60 n/a n/a 957 is sometimes kinked). Core is broken and blocky over the entire section. Moderately sericitized above 120.2 m. Sericite-filled microfractures are common. Becomes moderately chloritized below 120.2 m. Chlorite tends to occur in discrete streaks and bands .1-3 mm wide parallel to foliation. Moderate pervasive carbonatization between 121.6 and 125.0 m. Nil-trace disseminated pyrite. Broken core at lower contact. FOLIATION ANGLES: . Foliation is at 50 degrees to core axis at 118.9 m. Foliation is at 47 degrees to core axis at 119.7 m. Foliation is at 53 degrees to core axis at 122.0 m. Foliation is at 57 degrees to core axis at 124.7 m. Foliation is at 60 degrees to core axis at 128.6 m. 121.6 128.6 Poker chip core. 124.9 128.0 3-10 % lapilli-sized felsic clasts and rare chloritic lapilli-sized clasts. 127.4 128.6 0.6 m of lost core. 129.6 139.7 OUARTZ EYE BEARING FELSIC TUFF Medium grey fine-grained moderately sericitic and weakly chloritic. AD02428 131.1 131.2 .1 50 n/a 81 n/a n/a 1140 6 % clear 1-4 mm quartz eyes stretched slightly parallel to foliation. Below 137.2 m quartz eyes are <1.5 mm in diameter and comprise  $\langle 1 \rangle$  of the rock. Core is broken and blocky over the entire section. Trace disseminated pyrite. Fault at lower contact. FOLIATION ANGLES:. Foliation is at 60 degrees to core axis at 131.1 m. Foliation is at 70 degrees to core axis at 133.0 m. Foliation is at 68 degrees to core axis at 137.1 m. Foliation is at 67 degrees to core axis at 138.1 m.

P	ROPERT	Y: CHEMAINUS JV				HOLE N	o: P	are Numb	er			
	•	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	31	5			τŧ.	
From	То		Sample	From	То	Width	Cu	Pb	Zn	Aa	Au	Ba
(m)	(m)	DESCRIPTION	No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)
		138.6 138.7 Two minor slips at 40 and 75 degrees to core axis.						a service transformer				
		139.4 139.7 Fault gouge. Loosely consolidated fault breccia. Rock is soft and clay-rich. Not possible to measure the orientation of the fault. 0.2 m of lost core between 139.3 and 142.3 m.										
139.7	145.4	MAFIC TO INTERMEDIATE ASH TUFF Medium green massive fine-grained and well foliated. Foliation is often kinked. Moderate to strong pervasive carbonatization. Nil sulphides. Foliation is at 51 degrees to core axis at 142.2 m.	AD02429	140.8	140.9	.1	425	n/a	93	n/a	n/a	271
		Minor slip at 60 degrees to core axis at 144.3 m. Ground core at lower contact						•.				
145.4	145.8	QUARTZ EYE BEARING FELSIC TUFF As 129.6 to 139.7. 5 % 1-4 mm quartz eyes. Nil sulphides. Lower										
		contact is sharp at 65 degrees to core axis.										
145.8	147.8	MAFIC TO INTERMEDIATE ASH TUFF Similiar to 139.7 to 145.4 m. Strongly deformed foliation is kinked	AD02430	147.6	147.7	.1	182	n/a	132	n/a	n/a	762
		and contorted. Moderate pervasive carbonatization. Lower contact is sharp at 68 degrees to core axis.										
147.8	153.8	QUARTZ EYE BEARING FELSIC TUFF Felsic tuff accounts for 70 % of the unit and is as 129.6 to 139.7 m. Up to 7 % 1-6 mm quartz eyes. Strongly crushed. Foliation is	AD02431	150.7	150.8	.1	35	n/a	72	n/a	n/a	848
		contorted for 0.6 m from upper contact. Foliation is contorted throughout the unit. Weak to moderate pervasive chloritization. Nil sulphides.				·						
		Mafic tuff occurs in 3 beds at 60-70 degrees to core axis. Lower contact is at 55 degrees to core axis.										
		FOLIATION ANGLES:. Foliation is at 68 degrees to core axis at 148.2 m. Foliation is at 60 degrees to core axis at 150.6 m.										
		149.0 Clay-filled slip at 65 degrees to core axis.										
		149.4 Clay-filled slip at 45 degrees to core axis.										
		150.8 151.5 Bed of CARBONATIZED MAFIC TUFF at 33 degrees to core axis. As 145.8 to 147.8 m. Drag structures along the upper and lower bedding contacts.		• • • • • • • • • • • • • • • • • • •							, , , , , , , , , , , , , , , , , , , ,	-
		152.1 Minor slip at 53 degrees to core axis.										

# FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m) ------DESCRIPTION------

- 152.3 3.0 cm wide bed of MAFIC ASH TUFF at 70 degrees to core axis.
- 152.6 152.7 Lapilli to block-sized felsic fragments.
- 152.7 153.4 Carbonatized, crushed MAFIC ASH TUFF bed at 60 degrees to core axis. Minor slip at 60 degrees to core axis at 153.1 m and another at 50 degrees to core axis at 153.2 m
- 153.5 153.8 FAULT GOUGE. Medium green to grey loosely consolidated clay-rich fault breccia at 55 degrees to core axis.

### 153.8 160.3 MASSIVE SILICEOUS FELSIC TUFF/FLOW

Mottled aphyric very hard siliceous and microfractured. Weak spotty chloritization. Core is broken and blocky over the entire section. Locally up to 5 % 1-2 mm epidotized feldspar crystals. Trace-1% pyrite and nil-trace chalcopyrite concentrated in microfractures. Broken core at lower contact.

154.5 156.1 0.6 m of lost core. Fault gouge 3.0 cm wide at 30 degrees to core axis at 156.0 m.

157.0 Slip at 30 degrees to core axis.

- 157.0 158.3 Many slips at 50-60 degrees to core axis. Rock is crushed and the core is rubbly.
- 158.2 159.1 0.3 m of lost core.
- 158.3 158.8 Weak thermal biotite alteration.
- 158.8 160.3 Moderate sericitization.

160.0 Lapilli-sized felsic fragments.

160.3 165.8 THERMAL BIOTITE ALTERED FELSIC ASH TUFFS AND CHERTY ARGILLACEOUS SEDIMENTS

Grey-brown, moderately sericitized and weakly to moderately chloritized felsic ash tuffs (85 % of the unit) with 1.0 to 10.0 cm thick sections of medium grey cherty fine bedded to laminated sediments with occasional clasts of black cherty argillite up to 0.5 cm wide and 4.0 cm long. Core is broken and and blocky over the entire section. Rock has a crushed texture and foliation varies from 0-50 degrees to core axis. Lower contact is arbitrary.

BEDDING ANGLES:. Bedding is at 65 degrees to core axis at 161.7 m. Bedding is at 40 degrees to core axis at 164.9 m. Bedding is at 65 degrees to core axis at 165.6 m.

Width Cu Ba Sample From To Pb Zn λđ Au No. (ppm) (ppm) (ppb) (ppm) (m) (m) (m) (nom) (תמס)

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AD02432 153.9 154.0 .1 30 n/a 14 n/a n/a 868

AD02433	161.1	161.2	.1	39 69	n/a	56	n/a	n/a n/a	1430
	104-0	TAFT	• •			40	447 94	, u	
## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

from	To	DECARTMETAN	
(m)	(11)		

- 161.7 5.0 cm wide bed of argillaceous sediments at 65 degrees to core axis.
- 162.7 Slip at 0 degrees to core axis.
- 162.8 0.5 cm wide clay-filled slip at 47 degrees to core axis.
- 163.1 163.5 40.0 cm wide bed of cherty argillaceous sediments. Broken core at upper and lower contacts. Bedding is at 55 degrees to core axis. 1-2 % disseminated pyrite.
- 164.0 164.2 Cherty argillaceous sediments. Bedding is contorted. Broken core at upper and lower contacts.
- 165.0 Bedded argillaceous cherty sediments. Beds are 2-5 mm wide and are contorted (15-50 degrees to core axis ).

### 165.8 176.0 FELSIC ASH TUFF

Light grey and fine-grained. Moderate thermal biotite alteration above 169.0 m. Moderately sericitized over most of the section. Weak to moderate patchy chloritization above 169.0 m. Up to 10 % altered feldspar crystals in less sericitized sections. Rock has a crushed appearance and foliation is contorted over most of the section. 1-5 %, 1-3 mm quartz eyes between 174.7 and 175.5 m. Lower contact is a fault at 45 degrees to core axis.

### FOLIATION ANGLES:.

Foliation is at 10 degrees to core axis at 166.4 m. Foliation is at 45 degrees to core axis at 166.7 m. 1.0 Cm wide fault gouge is at 30 degrees to core axis at 168.4 m. Foliation is at 30 degrees to core axis at 171.4 m. Foliation is at 30 degrees to core axis at 172.0 m.

168.6 168.8 Blocky, highly fractured core.

- 169.7 170.0 Fault gouge at 20 degrees to core axis. Core is broken blocky and crushed.
- 170.5 Minor slip at 15 degrees to core axis.
- 170.6 171.6 Blocky, highly fractured core.

172.2 Minor slip at 25 degrees to core axis.

173.3 174.0 Blocky, highly fractured core. 0.5 m of lost core between 169.8 and 173.1. 0.1 m of lost core between 173.1 and 173.4. 0.3 m of lost core between 173.4 and 174.0.

Sample	From	To	Width	Cu	Pb Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(mgg) (mgg)	(maga)	(ppb)	(ppm)

# AD02435 171.5 171.6 .1 41 n/a 20 n/a n/a 1320

### HOLE No: Page Number CHEM87-31 7

C



### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From	То			s.		
(m)	(m)		·	]	DESCRIPTION-	 

174.8 175.6 Blocky, highly fractured core. 0.3 m of lost core between 174.0 and 175.6 m.

### 176.0 178.3 MASSIVE CARBONATIZED MAFIC FLOW/INTRUSION

Massive fine-grained dark green. Moderate to strong fracture controlled and pervasive carbonatization. Locally core is speckled ( $\langle 3 \rangle$ ) with a beige alteration mineral (probably a carbonate). Moderate fracture controlled hematization. Hematite is often associated with carbonate veinlets. Core is broken and blocky over most of the section. Broken core at lower contact.

178.3 179.7 CHLORITIC FELSIC ASH TUFF

Pale grey-green hard siliceous and microfractured. Weakly chloritized (microfracture controlled). Foliation is at a low angle to the core axis (< 20 degrees). Lower contact is a chloritic slip at 55 degrees to core axis.

178.9 179.1 Slip at 20 degrees to core axis.

### 179.7 180.8 LITHIC LAPILLI TUFF

1-3 % lapilli-sized felsic and cherty sedimentary lithic fragments in a felsic to intermediate matrix of quartz chlorite biotite and carbonate. Core is broken and blocky over most of the section. 0.4 m of lost core between 178.3 to 180.4 m. Trace disseminated pyrite. Lower contact is a slip at 60-70 degrees to core axis.

180.8 2 X 5 cm clast of felsic quartz eye tuff with 4 % fracture controlled pyrite.

### 180.8 183.8 MASSIVE MAFIC ASH TUFF

As 176.0 to 178.3 but only weak fracture controlled carbonatization and rare  $\langle 2 \text{ mm quartz eyes}$ . Core is broken and blocky over most of the section. Lower contact is sharp at 65 degrees to core axis.

### 183.8 192.1 CHLORITIC QUARTZ-FELDSPAR CRYSTAL TUFF

Grey-green, 5-7 %, 1-4 mm quartz and feldspar crystals in a fine-grained to aphyric siliceous matrix. Weakly to moderately sericitic. Weak thermal biotite alteration. Occasional brown lapilli-sized lithic clast. Trace disseminated pyrite. Broken core (fault) at lower contact.

190.4 Slip at 15 degrees to core axis.

1904.0 192.0 Blocky, highly fractured core. 0.2 m of lost core between 191.1 and 192.0 m.

### HOLE No: Page Number CHEM87-31 8

Sample From Width Cu To Ph Zn Aσ Au Ba No. (m) (m) (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm)

AD02436 177.0 177.1 .1 530 n/a 131 n/a n/a 205

AD02437 179.4 179.5 .1 69 n/a 26 n/a n/a 1380

AD02438 183.3 183.4 .1 129 n/a 115 n/a n/a 592

AD02439 185.0 185.1 .1 42 n/a 46 n/a n/a 822

**PROPERTY: CHEMAINUS JV** HOLE No: Page Number FALCONBRIDGE LIMITED CHEM87-31 9 DIAMOND DRILL LOG From To Width From To Cu РЬ Sample Zn Aσ Ău Ba (m) (m) -----DESCRIPTION------No. (m) (m) (m) (ppm) (mog) (mog) (מממ) (mod) (dod) 192.1 203.9 GABBRO ? Medium green medium-grained and massive. About 2-5 % ilmenite most AD02440 199.0 199.1 .1 252 n/a 112 n/a n/a 131 of which has altered to leucoxene. Fine-grained for 0.5 m from the upper contact and for 1.0 m from the lower contact. Weak fracture controlled carbonatization and moderate hematization. Nil sulphides. Lower contact is at 70-80 degrees to core axis. 194.5 195.7 Blocky, highly fractured core. 0.5 m of lost core. 197.9 198.1 Blocky, highly fractured core. 0.2 m of lost core between 197.2 and 198.1 m. 199.7 200.3 Blocky, highly fractured core. 0.1 m of lost core between 198.1 and 200.3 m. 203.9 204.7 MASSIVE SILICEOUS FELSIC ASH TUFF Massive hard siliceous, mottled and microfractured. Occasional (<1 AD02441 204.3 204.4 .1 39 35 n/a n/a n/a 624 %) 1-3 mm feldspar crystals. Nil sulphides. Lower contact is at 15 degrees to core axis. 204.2 Slip at 65 degrees to core axis. 204.7 221.6 GABBRO ? Massive dark green medium to fine-grained. Biotite rich for 10.0 cm AD02442 214.3 214.4 .1 172 n/a 91 n/a n/a 102 from the upper contact. 2-3% ilmenite most has been altered to AE08658 220.6 221.6 206 77 1.0 8 (1) ٢5 180 leucoxene. Similiar to 192.1-203.9 m. Lower contact is a fault gouge at 55 degrees to core axis. 213.1 213.5 Moderate pervasive carbonatization. 221.6 229.1 SERICITIC FELSIC TUFF Light grey fine-grained and well foliated. Occasional hairline AE08659 221.6 222.6 1.0 400 1645 110 1200 86 <1 fracture filled with black material (fine-grained sulphides ?). AE08660 222.6 223.7 1.1 649 21 509 (1 130 920 <1-5 % lapilli-sized felsic fragments. Quartz eye bearing below AE08661 223.7 224.4 2112 33 156 <1 240 940 .7 223.2 m. <5 %, 1-2 mm feldspars below 227.1 m. Lower contact is at AE08662 224.4 225.4 1079 19 1.0 149 <1 95 970 48 degrees to core axis. AE08663 225.4 226.3 .9 964 19 196 (1 75 1000 AE08664 226.3 227.1 . 8 2231 23 161 (1 70 1100 FOLIATION ANGLES:. AD02443 227.3 227.4 .1 703 n/a 277 n/a n/a 1390 Foliation is at 50 degrees to core axis at 222.4 m. AE08665 227.1 228.1 1.0 784 5 432 <1 30 1100 Foliation is at 20 degrees to core axis at 223.3 m. AE08666 228.1 229.1 1.0 163 33 190 <1 10 1700 Foliation is at 20 degrees to core axis at 225.7 m. Foliation is at 20 degrees to core axis at 226.8 m. Foliation is at 30 degrees to core axis at 228.6 m.

### SULPHIDES:.

221.6-222.6 m 3-5 % pyrite in 1-3 mm bands parallel to foliation and in 2-5 mm long spots stretched parallel to foliation.

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		DIAMOND DRILL LOG				• • • •							
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm	)
		222.6-223.7 m 5-7 % pyrite and trace chalcopyrite as above.											•
		223.7-224.4 m 7-10 % pyrite and trace-0.25 % chalcopyrite in 1-3 mm											
		bands and 2-5 mm spots at about 20 degrees to core axis.											
		224.4-226.3 m 7 % pyrite and trace chalcopyrite as above.						$(1,1) \in \mathcal{A}_{1}^{1}$					
		226.3-227.1 m 5-7 % pyrite and 0.25-0.5 % chalcopyrite as above.								1.1	an a		
		227.1-229.1 m 3-5 % disseminated pyrite and occasional lapilli-sized											
		clast of pyrite.			,								
		221.6 221.8 Fault gouge at 55 degrees to core axis. Upper 10 cm is a											
		dark brown mud (similiar to the dark brown argillite											
		described in previous holes). Lower 10 cm is crushed											
		felsic tuff											
		222.9 223.1 Slip at 0 degrees to core axis	1										
		Laber have bill at a degree to core with											
		223.1 223.2 Fault gouge at 30 degrees to core axis.											
		224.5 Slip at 10 degrees to core axis.							an Artista Maria				
229.1 23	0.5	MAFIC FLOW ?											
		Pale green relatively massive and medium-grained. Composed of 30-40	AE08667	229.1	230.0	.9	119	13	68	(1	<5	30	
		* white < 3 mm feldspars in a chloritic matrix. Weak to moderate	AD02444	229.9	230.0	.1	178	n/a	100	n/a	n/a	56	
		pervasive carbonatization. May be a dyke, Lower contact is sharp at	AE08668	230.0	230.5	.5	56	19	88	(1	<5	730	
		20 degrees to core axis.											
230.5 23	9.7	SERICITIC QUARTZ EYE BEARING FELSIC TUFF											
		Light grey fine-grained weakly chloritic in places, 1-5 %, 1-5 mm	AE08669	230.5	231.5	1.0	72	14	92	(1	< 5	640	
		guartz eves. Locally up to 5 % lapilli-sized felsic fragments. 1-3	AE08670	231.5	232.5	1.0	18	14	68	<1	(5	830	
		* pyrite disseminated roughly parallel to foliation. Lower contact	AE08671	232.5	233.5	1.0	15	15	73	(1	(5	760	
		is at 40 degrees to core axis.	AE08672	233.5	234.3	. 8	53	10	73	(1	10	380	
			AD02445	234.3	234.4	.1	46	n/a	87	n/a	n/a	720	
		FOLTATION AND BEDDING ANGLES.	AE08673	234.5	235.5	1.0	20	24	122	(1	30	810	
		Poliation is at 45 degrees to core avis at 230 7 m	AE08674	235 5	236.5	1.0	14	12	51	(1)	10	960	
		Foliation is at 40 degrees to core avis at 200.7 m.	AF08675	236 5	237.5	1 0	14	22	51	(1	35	1 300	
na sa		Foliation is at 40 degrees to core avis at 231.5 m.	1200075	230.5	238 5	1.0	20	11	51	/1	30	1400	
		Poliation is at 10 degrees to core axis at 233.4 m.	1500070	231.3	230.3	1 2	210	56	A1 -	21	25	1200	
		rollation is at 40 degrees to core axis at 433.4 m.	ALVOUII	230.3	433.1	1.4	410		**	VI.	<u>.</u>	*****	
		bedding is at ov degrees to core axis at 403.7 m.						$(A_{i},A_{i}) \in \mathcal{A}$					
		Follation is at 40 degrees to core axis at 435.0 m.											
		Foliation is at 50 degrees to core axis at 236.2 M.											
		Bedding is at 45 degrees to core axis at 236.8 m.											
		Follation is at 45 degrees to core axis at 238.0 m.											

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233.6 234.0 Bleached zone.

233.7 233.8 Sericitic tuffaceous sediments. Bedding is at 50 degrees to core axis.

235.1 235.3 Bleached, weakly carbonatized zone at 60-40 degrees to core axis with 15 % pyrite.

### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

## HOLE No: Page Number CHEM87-31 11

From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm)
		238.1 238.9 Bed of MAFIC ASH TUFF. Nil sulphides. Broken core at upper and lower contacts. 0.5 cm wide clay-filled slip at 30 degrees to core axis in the middle of the bed.										
										· .		
239.7	249.3	MAFIC TUFFS WITH MINOR MAFIC TUFFACEOUS SEDIMENTS Dark green massive mafic tuff or flow with minor beds and rip up clasts of pale green mafic tuffaceous sediments (<5.0 cm thick). 1-3 % finely disseminated ilmenite. Occasional epidote-rich patch up to 10 cm in diameter. Weak to nil carbonatization. Broken core at lower contact.	AE08678 AD02446 AE08679	239.7 241.9 248.6	240.7 242.0 249.6	1.0 .1 1.0	336 246 129	373 n/a 25	72 106 78	2 n/a <1	160 n/a 15	250 154 120
		BEDDING ANGLES:. Bedding is at 53 degrees to core axis at 242.6 m. Bedding is at 55 degrees to core axis at 247.0 m.										
		239.7 240.4 Finely bedded pale green ash tuff. Bedding is very contorted.										
		245.0 245.4 Blocky, highly fractured core. 0.2 m of lost core.										
		248.8 249.3 Blocky, highly fractured core.										
249.3	250.0	ALTERED FELSIC ASH TUFF Massive hard and bleached looking. 10 % pyrite 2 % chalcopyrite and 1 % galena (?) concentrated in microfractures. Broken core at upper and lower contacts.	AE08680	249.6	250.0	.4	5900	13600	231	134	4766	1300
250 0	340 5	MTYPE MAPTO THERE AND PLOUS		· · ·								
230.0	5.02	Dark green massive with 1-2 % finely disseminated ilmenite above 275.0 m. Occasional epidote rich patches < 10.0 cm in diameter. From 250.0 to 251.7 m MAFIC LITHIC LAPILLI TUFF. About 20 % pale green lithic fragments in a chloritic matrix. From 251.7 to 259.1 m MAFIC ASH TUFF with minor beds (<3.0 cm thick) and rip up clasts of pale green cherty sediments. 1-5 %, 1-3 mm feldspars. From 259.1 to 262.4 m WEAKLY THERMAL BIOTITE ALTERED MAFIC ASH TUFF.	AE08681 AD02447 AD02448 AD02449 AD02450 AD02451 AD02452 AD02453	250.0 257.3 262.6 273.7 286.0 296.1 314.6 331.3	251.0 257.4 262.7 273.8 286.1 296.2 314.7 331.4	1.0 .1 .1 .1 .1 .1 .1	353 349 276 164 44 103 39 166	379 n/a n/a n/a n/a n/a n/a	102 104 85 96 91 93 89 90	<1 n/a n/a n/a n/a n/a n/a	85 n/a n/a n/a n/a n/a n/a	190 154 615 1480 231 407 535 560
		From 262.4 to 275.0 m STRONG THERMAL BIOTITE ALTERED MAFIC TUFF. Occasional bed or clast of pale brown cherty sediment. From 275.0 to 283.5 m FINE MAFIC ASH TUFF. Weak patchy thermal biotite alteration. Occasional minor bed of cherty tuffaceous beds become more common below 279.0 m and less deformed.										
		From 283.5 to 298.5 m massive fine-grained section rare lapilli-sized mafic clast (flow?). Up to 3 % up to 3 mm wide chlorite spots which occur in clusters < 10.0 cm thick (amygdales?). Also up to 3 % lighter coloured epidote carbonate spots <3 mm wide. Weak fracture controlled hematite-carbonate alteration. Several										

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

### From (m)

То

(m)

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irregular epidote carbonate patches up to 15 cm in diameter. Some of these patches have a pinkish caste. Nil to trace pyrite and nil to trace chalcopyrite.

-----DESCRIPTION------

From 298.5 to 318.5 m WEAKLY TO STRONGLY THERMAL BIOTITE ALTERED MAFIC TUFF. Occasional bed of finer light brown tuffaceous sediment and up to 15 % lapilli-sized lithic fragments of tuffaceous sediment From 318.5 to 322.2 m MASSIVE MAFIC FLOW ?. Chlorite spotted as 283.5 to 298.5 m. Trace chalcopyrite associated with quartz-carbonate veinlets and pods. Fault gouge at lower contact

(not possible to measure orientation) 0.3 m of lost core between 319.1 and 322.2 m.

From 322.2 to 326.6 m MAFIC TUFF with beds of tuffaceous sediments. Moderate patchy thermal biotite alteration. Thermal biotite appears to occur in discrete beds.

From 326.6 to 337.4 m MAFIC FLOW ?. Massive no thermal biotite alteration chlorite spots as 283.6 to 298.5 m. Below 328.7 m occasional bleached patch up to 15.0 cm in diameter. Ash tuff from 330.9 to 331.2 m.

Form 337.4 to 340.5 MAFIC ASH TUFF with beds of pale green cherty tuffaceous sediments  $\langle 3.0 \ cm$  thick. Moderate patchy thermal biotite alteration.

ANGLES TO CORE AXIS:.

Bedding is at 20 degrees to core axis at 266.9 m. Minor slip at 15 degrees to core axis at 268.5 m. Bedding is at 15 degrees to core axis at 272.8 m. Bedding is at 12 degrees to core axis at 275.6 m. Bedding is at 70 degrees to core axis at 279.7 m. Bedding is at 77 degrees to core axis at 280.0 m. Bedding is at 66-70 degrees to core axis at 281.0 m. Bedding is at 70 degrees to core axis at 281.8 m. Bedding is at 60 degrees to core axis at 299.5 m. Bedding is at 65 degrees to core axis at 299.9 m. Bedding is at 40 degrees to core axis at 301.6 m. Bedding is at 40 degrees to core axis at 304.3 m. Bedding is at 15 degrees to core axis at 306.5 m. Bedding is at 25 degrees to core axis at 315.2 m. Bedding is at 58 degrees to core axis at 323.0 m. Bedding is at 25 degrees to core axis at 338.2 m. Bedding is at 40 degrees to core axis at 339.8 m. Bedding is at 38 degrees to core axis at 340.0 m.

251.7 Broken rubbly core.

259.5 260.0 Blocky, highly fractured core.

278.0 278.3 Blocky, highly fractured core.

313.1 1.0 cm wide clay-filled slip at 15 degrees to core axis.

313.1 318.5 Fault zone. Blocky, highly fractured core. 2.4 m of lost

HOLE No: Page Number CHEM87-31 12

Sample From To Width Cu Pb Zn Aα Au Ba No. (m) (m) (m) (ppm) (mgg) (mgg) (ppm) (ppb) (ppm)

PPOPFPTV.	CHEMATNIIS IV	

From

(m)

To (m)

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DIAMOND	DRII	Ŀ	LOG	

HOLE No: Page Number CHEM87-31 13

	Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
	No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

core between 312.4 and 318.5 m.

324.3 326.1 Fault zone. Blocky, highly fractured core. 0.7 m of lost core between 323.7 and 325.8 m.

-----DESCRIPTION-----



FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 36+00 E 0+80 N

NTS: 092/	B13	UTM: 54166	75 N	430910	E
Azimuth:	210	Elevation:	585	m	
Dip:	-50	Length:	465	.1 m	

Started: June 21, 1987 Completed: June 28, 1987

Purpose: To test VLF conductors at 0+60 N and 1+80 S. a shallow IP chargeability anomaly between 0+80 and 1+00 S and a deep IP chargeability anomaly between 1+25 and 2+20 S.

	Azi-			Azi-	
Length	muth	Dip	Length	muth	Dip
50.30	212.0	-50.0	320.30	218.0	-45.0
120.70	213.0	-46.0	388.30	220.0	-44.0
196.90	216.0	-45.0	455.70	218.0	-42.0
260.90	217.0	-45.0			· · · ·

DIP TESTS

rom	То		Sample	From	То	Width	Cu	Pb Zn	λα	Au Ba
(m)	(m)	DESCRIPTION	No.	(m)	(m)	(m)	(ppm)	(ppm) (ppm)	(ppm)	(ppb) (ppm)

.0 20.3 OVERBURDEN AND CASING

20.3 26.1 FELSIC FELDSPAR CRYSTAL TUFF

> Medium to dark bluish- green tuff with up to 20 %, up to 2 mm, feldspar crystals. There is a minor fault slip at 20.6 with the orientation at 54 degrees to core axis and there is 0.6 m of lost core just prior to 23.2 and there is 2.1 m of lost core between 23.2 and 26.2. The foliation at 20.4 is at 50 degrees to core axis and at 21.3 it is at 60 degrees to core axis.

26.1 26.6 FAULT GOUGE

F

26.6 **30.6 SERICITIC QUARTZ-FELDSPAR CRYSTAL TUFF** Felsic tuff with white - green sericite and 1 to 2 %, 1 to 2 mm, quartz eyes and 10 to 15 %, 2 mm, feldspar grains. There is trace to nil disseminated pyrite and a local pyrite band, 1 mm thick, at 29.1. There is 0.6 m of lost core between 28.0 and 29.3. The foliation at 29.4 is at 38 degrees to core axis.

#### 30.6 32.7 CHLORITIC SHEAR ZONE

Chloritic shear with minor quartz eyes and calcite grains. There are quartz +/- carbonate +/- feldspar veins, up to 10 cm thick. The upper and lower contacts are at 31 degrees to core axis and 29 degrees to core axis respectively and are very sharp with minor faulting cutting the lower contact. There is minor fault gouge in the zone.

HOLE No: Page Number CHEM87-32 1

Claim No. Chip 1 Section No.: Line 36+00 East

Logged By: David P. Money Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg and X-Ray Assay

Core Size: NO

Sample	From	To	Width	Cu	Pb	Zn	λα	A11	Ba
				· · ·			, <b></b>		, <b>* *</b>
NO.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

AB21661 21.9 22.0 .1 61 n/a 38 n/a n/a 708

AB21662 32.1 32.2 .1 73 n/a 169 n/a n/a 1090

FALCONBRIDGE LIMITED DIAMOND DRILL LOG HOLE No: Page Number CHEM87-32 2

		DIAMOND DRILL LOG										
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
									•	N		
32.7	59.0	SERICITIC QUARTZ-FELDSPAR CRYSTAL TUFF										
		Locally schistose to massive siliceous felsic tuff with $\langle 1 \text{ to } 5 \rangle$ , up to 3 mm guartz even and 5 to 15 k up to 2 mm feldemar	AB21663	43.7	43.8	.1	27	n/a	64	n/a n/a	n/a n/a	813 974
		grains. The rock is locally moderately contorted. The rock has been	ADZI004	JJ • 4	20.5	• •	50	ц/а		n/a	u/a	514
		locally bleached and is medium grey to white. There is blocky,										
·		highly fractured core from 36 to 46. There is 0.3 m of lost core										
		from 37 to 38, 0.4 m from 38.4 to 40.5, and 0.4 m from 40.5 to										
		40.1. There is rault gouge from 40.0 to 40.5. From 42.6 to 42.8 there is a minor chloritic shear at 43 degrees to core axis. The										
		foliation at 46.0 is at 41 degrees to core axis, at 52.7 is at 41										1.1
		degrees to core axis and at 57.0 is at 27 degrees to core axis. At										
		41.5 there is a 4 cm quartz +/- chlorite vein with a 1 cm pyrite										
		bleb at an orientation of 10 degrees to core axis.										
59.0	59.6	CHLORITE SCHIST										
· · · · ·		Blocky, highly fractured core, possibly a shear zone.						-				
59 6	68 0	SHEARED INTERMEDIATE THEF										
55.0	00.0	Sheared felsic to intermediate tuff with chert (?) or ash / dust	AB21665	66.4	66.6	.2	40	n/a	42	n/a	n/a	494
	• 	tuff beds and minor quartz eyes. There is nil sulphides and local										
		white bull quartz veins with chlorite margins at low angles to the	•									
		core axis.				·						
		Foliations :.										
		At 63.0 the foliation is at 32 degrees to core axis.				- 1						
		At 67.0 the foliation is at 46 degrees to core axis.										
		hadding a							•			
		Bedding :. At 65.4 the hedding is at 45 degrees to core axis		1.00								
		At 62.5 the bedding is at 48 degrees to core axis.										
68.0	69.8	CHLORITE SCHIST										
		unionite schist with carbonate vehicles and quartz - carbonate veins. There are minor calcite eves and the rock is sheared with										
		the foliation at 68.6 at 45 degrees to core axis.										
69.8	71.0	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF										
		and up to 5 % feldspar grains. The rock is moderately kinked and										
		contorted.										
										•		
71 0	70 0	ANI ADTRE CONTAR										
/1.0	72.3	CHLORITE SURIST. Sheared chlorite - carbonate zone with calcite, weine and a 6 cm										
. * 		quartz - chlorite - calcite vein at the base.				an an an an an Chuirteach						

	C										)	
PR	OPERT	Y: Chemainus J.V Chip Claims FALCONDRIDGE LIMITED				HOLE N CHEM87-	o: Pa 32	ige Numb 3	er			
		DIAMOND DRILL LOG										
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
72 3	73.7	FELSIC OHARTZ-FELDSPAR CRYSTAL THEF										
/2.3	,,,,,	Felsic tuff with 2 %, up to 5 mm, quartz eyes and 5 to 20 % feldspar grains locally with a 5 cm shear at 72.8.	AB21666	72.7	72.8	.1	55	n/a	18	n/a	n/a	622
			a da ante da a									
13.1	14.1	CHLORITE SCHIST As in previous intervals.										
74 7	70 3	ANADAT FVF SPADING FFICIC THEF								an an tarta. An tarta		
/ . /	17-3	Moderately schistose to massive siliceous grey felsic tuff with trace quartz eyes. The foliation at 76.7 is at 30 degrees to core										
		axis. At 77.2, there is a 10 cm shear with the orientation at 36 degrees to core axis. From 75.2 to 75.5 there is a fault with chloritic gunge and quartz veins that are cross-cut by slips.										
79.3	79.8	CHLORITE SCHIST Black sheared chlorite schist with pervasive and veinlet hosted carbonate.			i san i T							
79.8	80.0	WHITE BULL QUARTZ VEIN +/- CHLORITE WITH NO SULPHIDES			1							
80.0	86.8	FELSIC OUARTZ-FELDSPAR CRYSTAL TUFF										
		Siliceous grey - green moderately contorted felsic tuff with 1 to 3 %, 2 to 4 mm, quartz eyes and up to 20 % feldspar grains. There are	AB21667	84.7	84.8	.1	54	n/a	44	n/a	n/a	939
		degrees to core axis. No sulphides occur. The foliation at 84.0 is at 51 degrees to core axis. There is blocky, highly fractured core										
		from 83.3 to 83.8.				, <del>-</del> .						
										н. <sup>н</sup> н		
80.8	87.0	FAULT GOUGE										
97 0	04 1	PPI CTC MIPP	e e de d									
07.0	74.1	Locally chloritic felsic tuff, broken with fault gouge at 89.6 and 91.2 for 15 to 20 cm. From 92.4 to 94.1 there is sericitic quartz	AB21668	93.4	93.5	.1	29	n/a	14	n/a	n/a	1270
		eye crystal tuff with fine-grained feldspar grains and minor ash to dust tuff beds. The bedding at 94.0 is at 48 degrees to core axis and the foliation at 93.7 is at 55 degrees to core axis.										
÷												
94.1	97.3	MAFIC TO INTERMEDIATE LAPILLI TUFF Sheared and carbonitized mafic to intermediate lapilli tuff with large epidote clots with quartz - carbonate veinlets. The top of the unit is sheared chlorite and carbonate bands.										

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FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m)

97.3 106.5 FELSIC TUFF

97.3 97.4 Weakly contorted felsic tuff with epidote grains. The foliation is at 67 degrees to core axis and the bedding is at 47 degrees to core axis.

-----DESCRIPTION------

- 97.4 (?) fault, missing core (?).
- 97.4 99.2 Felsic tuff, intermediate lapilli tuff and fault gouge in the core with the orientation at 0 degrees to core axis.
- 99.2 99.3 Fault gouge.
- 99.3 106.5 Locally weakly to moderately contorted sericitic felsic tuff with trace to 2 %, 2 to 4 mm, quartz eyes and 5 to 15 % fine-grained epidote grains. The foliation at 101 is at 49 degrees to core axis and at 105.8 is at 25 degrees to core axis.
- 106.5 110.3 MAFIC TO INTERMEDIATE LAPILLI TUFF

Intermediate / mafic lapilli tuff with epidotized clasts and minor quartz +/- carbonate veining.

110.3 110.3 FAULT GOUGE

110.3 115.8 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Locally chloritic and sericitic tuff with local quartz - carbonate veins and kink bands. The foliation is between 60 and 90 degrees to core axis, with the rock being moderately contorted and a chlorite shear at 112.3. There is trace to 1 % local disseminated pyrite.

### 115.8 137.3 SERICITIC QUARTZ-FELDSPAR CRYSTAL TUFF

Moderately sericitic to siliceous felsic tuff with 2 to 3 %, 2 to 6 mm, quartz eyes and approximately 10 % feldspar grains. There are minor fracture controlled guartz - carbonate veinlets. The rock is grey - green in colour and at approximately 118 becomes moderately contorted and more siliceous, with an increase in quartz eyes to 4 to 5 % and in average size to 3.5 mm. The foliation at 118.6 is at 61 degrees to core axis. From 119.3 to 119.8 there is a guartz vein with a biotite margin and in spurs, which is at 20 to 25 degrees to core axis and appears to be along a fault slip. At 120.3 there is a 7 cm mafic sill or dyke with epidote grains and the orientation at 74 degrees to core axis. At 121.2 there is a chlorite - carbonate shear. The rock is highly contorted from 124 to 125. From 125 to 132.9 is darkish grey - green with local fracture controlled carbonate veinlets. At 125.1 bedding is at 36 degrees to core axis. At 126.3 the foliation is at 30 degrees to core axis. At 130.0 there is a 1 mm pyrite stringer. There is minor fault gouge at 132.2. From 132.9 to 137.3 there is a bleached HOLE No: Page Number CHEM87-32 4

Sample From To Width Cu Pb Zn Au Ba λg No. (m) (m) (m) (ppm) (ppm) (ppm) (pom) (mgg) (dgg)

AB21669 105.0 105.1 .1 231 n/a 103 n/a n/a 312

AB21670 114.7 114.8 .1 61 n/a 93 n/a n/a 927

AB21671	129.1	129.2	.1	38	n/a	<10	n/a	n/a	1020
AE08628	132.9	134.0	1.1	<1	12	8 8 6	<1	10	850
AE08629	134.0	135.0	1.0	1	11	7	<1 ···	<5	890
AE08630	135.0	136.0	1.0	(1 )	. 6	9	(1	< 5	910
AE08631	136.0	137.3	1.3	<1	13	6	<1	< 5	11,00

<ul> <li>From To the serie of the serie of the series of t</li></ul>	r	ROPERTY	': Chemainus J.V Chip Claims	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE N CHEM87-	o: Pa 32	ge Numb 5	er			
<pre>white sericitic tuff with 1 to 2 % disseminated pyrite and 3 to 5 %, 3 to 6 mm, curate yes. There are since more pyrite stringer from 135.1 to 135.4. There is 5 cm of carboatization with 5 % pyrite at 136.5 th fo foliation at 1.30.6 is at 2 degrees to core axis.</pre>	From (m)	T0 (m)	DESCRIPTIC	DN	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba ) (ppm
<ul> <li>137.3 140.0 INTERMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUFF AE08632 137.3 138.2 .9 66 9 25 (1 (5 64) 140.0 164.6 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Interesting to 137.5 to 139.0 with ainor trace chalcopyrite blebs and up to 3 % pyrite. File-grained white to mediam grained gray organ siliceous felsic tuff with quartz eyes and local epidote crystal rich beds and epidote crystal rich tuff to bediam grained gray organ siliceous felsic tuff with quartz eyes and local epidote crystal rich beds and epidote crystal to 3 m, 4 m, 4 100 pt 0 3 % pyrite. File-grained white to aediam grained gray organ siliceous felsic tuff with quartz eyes and local epidote crystal rich beds and epidote crystal to 20 %, 1 m, feldspar / epidote grains. The root is locally contorted with trace to 1 % pyrite banks, up to 1 am occuring locally. Foliations : At 143.1 : 45 degrees to core axis. At 143.1 : 45 degrees to core axis. At 143.1 : 45 degrees to core axis. At 143.1 : 42 degrees to core axis. Blocky, highly fractured core : 144 to 145.1. 155.7 to 151.4. 152.7 to 152.8. 164.6 165.8 CHORFITIC SHEAR ZONE Chorize - carbonate hear with the foliation trend at about 80 degrees to core axis. 165.8 107EHMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to 15 % pidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 86.1 to 164.3 to 164.3. 165.4 105.5 CHORFITIC SHEAR ZONE Chorize - carbonate hear with the foliation trend at about 80 degrees to core axis. 165.6 107EHMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to 15 % pidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 86.1 to 164.3 to 164.3. 165.4 105.5 CHORFITIC SHEAR TONE [block for 165, 0 15 % pidote grains in a medium to dark green atorix. There is blocky, highly fractured core from 86.1 to 164.3 to 164.3. 165.8 165.6 CHORFITIC SHEAR TONE [block for 165, 0 15 % pidote grains in a medium to dark green atorix. There is bl</li></ul>			white sericitic tuff with 1 to 2 % %, 2 to 6 mm, quartz eyes. There are 133.1 to 133.4. There is 5 cm of car 135.6. The foliation at 134.0 is at 136.1 is at 39 degrees to core axis	disseminated pyrite and 3 to 5 e minor pyrite stringer from bonatization with 5 % pyrite at 28 degrees to core axis and at										
<ul> <li>ADD0612 137.3 138.2 .9 66 9 25 (1 (5 640)</li> <li>140.0 164.6 FELSIC QUART2-FELDSPAR CRYSTAL TUFF Intersediate to felsic trystal rich tuff with chlorite - carbonate shear from 137.5 to 139.0 with ainor trace chalcopyrite blebs and up to 3 % pyrite. Fine-grained white to medium grained grey - green siliceous felsic tuff with quart eyes and local epidote crystal rich beds and epidote crystal: throughout. The rock gradually changes throughout the with ? and regrate discontrystal rich beds and epidote crystal: context writes from trace to 5 %, 1 to 3 m, quartz eyes and 5 to 30 %, 1 mm, feldspar / epidote griens. The rock is locally contorted whith trace to 1 % pyrite bands, up to 1 mm occuring locally.</li> <li>Pollations: At 143.3 : 45 degrees to core axis. At 161.2 : 41 degrees to core axis. At 161.2 : 41 degrees to core axis. At 161.2 : 41 degrees to core axis. Blocky, highly fractured core : 144.4 to 145.1. 159 to 160.</li> <li>Pault gouge : 164.5 165.8 CHCNITIC SHERE ZOME Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 165.6 INTERMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUFF Hoderately sheared intermediate to flasic tuff with minor felsic ash to dark tuff heds. There are 10 how, highly fractured core fit asf7.4 to 16.5 to 16.5 to 50.5 There are 10 to 15 % epidote griat in a medium to dark green matrix. There is Dlocky, highly fractured core fit asf7.4 to 16.5 to 15.5 to 16.5 to 15.5 to 16.5 to 16.5 to 15.5 to 15.5</li></ul>	137 3	140 0	THEFTHER TO FRICTO DIADER FVF AND											
<ul> <li>140.0 164.6 FELSIC QUART2-FELDSFAR CRYSTAL TUFF Intermediate to felsic crystal rich tuff with chlorite - carbonate sherr from 317.5 to 139.0 with minor trace chalcopyrite biebs and will crow is felsic tuff with quartr syses and loadle pidde crystal rich beds and epidote crystal throughout. The rock gradually changes throughout the unit. The crystal content waries from trace to 5%, 1 to 3 mm, quartz syses and 50 a 0%, 1 mm, feldspar / epidote grains. The rock is locally contorted with trace to 1 % pyrite bands, up to 1 mm occuring locally.</li> <li>Foliations : At 142.3 : 45 degrees to core axis. At 161.2 : 41 degrees to core axis. At 161.2 : 10 is 12.8. life.4 to 145.1. 154.4 to 145.1.</li> <li>154.6 165.3 CHLORFTIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis. At 161.7 to 151.2. 165.8 165.4 INTERMEDIATE TO FELSIC QUARTZ XYE AND FELDSPAR CRYSTAL TUFF Moderately mheated intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % to 150.1 is 0.1 is 0.1</li></ul>	137.3	140.0	INTERMEDIATE TO FELSIC QUARTZ ETE ANI	FELDSPAR CRISIAL IOFF	AE08632	137.3	138.2	.9	66	9	25	<1	< 5	640
<ul> <li>140.0 164.6 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Intermediate to failed crystal rich to fuff with chlorite - carbonate AB21672 141.3 141.4 .1 53 m/s 10 m/s n/s 1060 more state to failed crystal at hough to 3 more drawn of the state of the st</li></ul>														
<ul> <li>abear from 137.5 to 139.0 with minor trace chalcopyrite blebs and A21673 156.9 157.0 .1 31 n/a 23 n/a n/a 1210 up to 34 pyrite. Fine-grained white to medium grained gray - green siliceous felsic tuff with quartz eyes and local epidote crystal rich beds and epidote crystal kroughout the unit. The crystal content varies from trace to 5 %, 1 to 3 mm, quartz eyes and local epidote crystal trace to 5 %, 1 to 3 mm, quartz eyes and b to 20 %, 1 mm, feldspar / epidote grains. The rock is locally contorted with trace to 1 % pyrite bands, up to 1 mm occuring locally.</li> <li>Foliations :.</li> <li>Foliations :.</li> <li>At 143.1 : 45 degrees to core axis.</li> <li>At 143.1 : 42 degrees to core axis.</li> <li>At 161.2 : 41 degrees to core axis.</li> <li>Blocky, highly fractured core :.</li> <li>164.6 165.8 (ELONTHIC SHEAR ZONE Chlorid the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INFERMENTAR TO FELSIC QUARTZ EFE AND FELSPAR CHYSTAL TUPP Moderating where a form after and the short foliation trend is not 15.0 foliation and the short of the short extend to the short of the short of</li></ul>	140.0	164.6	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Intermediate to felsic crystal rich	tuff with chlorite - carbonate	AB21672	141.3	141.4	.1	53	n/a	10	n/a	n/a	1060
<ul> <li>rich beds and epidote crystals throughout. The rock gradually changes throughout the unit. The crystal content writes from trace to 5 %, 1 to 3 mm, quartz eyes and 5 to 20 %, 1 mm, feldspar / epidote grains. The rock is locally contorted with trace to 1 % pyrite bands, up to 1 mm occuring locally.</li> <li>Foliations : At 143.1 45 degrees to core axis. At 149.1 : 46 degrees to core axis. At 161.2 : 41 degrees to core axis. At 161.2 : 41 degrees to core axis. Blocky, highly fractured core : 144.4 to 145.1. 155 to 150.</li> <li>Fault gouge : 151.3 to 151.4. 152.7 to 152.8. 164.3 to 164.3.</li> <li>164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to days turff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 367.2 to 168.2 and from 169.3 to 169.6 hedding at 168.0 is at 71 degrees to core axis and dopears to be sub-parallel to bedding.</li> </ul>			shear from 137.5 to 139.0 with minor up to 3 % pyrite. Fine-grained white siliceous felsic tuff with quartz es	r trace chalcopyrite blebs and e to medium grained grey - green yes and local epidote crystal	AB21673	156.9	157.0	.1	31	n/a	23	n/a	n/a	1210
<ul> <li>epidote grains. The rock is locally contorted with trace to 1 % pyrite bands, up to 1 mm occuring locally.</li> <li>Poliations :. At 142.3 : 45 degrees to core axis. At 143.1 : 46 degrees to core axis. At 151.1 : 42 degrees to core axis. At 151.2 : 41 degrees to core axis.</li> <li>Blocky, highly fractured core :. 144.4 to 145.1. 159 to 160.</li> <li>Fault gouge :. 151.3 to 151.4. 152.7 to 152.8. 164.3 to 164.3.</li> <li>164.4 to 145.1.</li> <li>165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUPF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 157.2 to 158.2 and fon 169.3 to 159.6. Bedding at 168.0 is at 71 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>			rich beds and epidote crystals throughout the unit. The crystol to 5 %, 1 to 3 mm, quartz eyes and 9	nghout. The rock gradually ystal content varies from trace 5 to 20 %, 1 mm, feldspar /										
<pre>Foliations :. At 142.3 : 45 degrees to core axis. At 152.1 : 46 degrees to core axis. At 151.2 : 41 degrees to core axis. Blocky, highly fractured core :. 144.4 to 145.1. 159 to 160. Fault gouge :. 151.3 to 151.4. 152.7 to 152.8. 164.3 to 164.3.</pre>			epidote grains. The rock is locally pyrite bands, up to 1 mm occuring lo	contorted with trace to 1 % ocally.					n na saa Saa					
<ul> <li>At 149.1 : 46 degrees to core axis.</li> <li>At 161.2 : 41 degrees to core axis.</li> <li>Blocky, highly fractured core :.</li> <li>144.4 to 145.1.</li> <li>159 to 160.</li> <li>Fault gouge :.</li> <li>151.3 to 151.4.</li> <li>152.7 to 152.8.</li> <li>164.3 to 164.3.</li> </ul> 164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis. 165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EVE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % spidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and appears to be sub-parallel to bedding.	· · · · · ·		Foliations :. At 142.3 : 45 degrees to core axis.											
<ul> <li>Blocky, highly fractured core :. 144.4 to 145.1. 159 to 160.</li> <li>Fault gouge :. 151.3 to 151.4. 152.7 to 152.8. 164.3 to 164.3.</li> <li>164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>			At 149.1 : 46 degrees to core axis. At 153.1 : 42 degrees to core axis. At 161.2 : 41 degrees to core axis.						میر در ۲۰۱۰ مربع ۱۰		· · . ·			
<ul> <li>Fault gouge :. 151.3 to 151.4. 152.7 to 152.8. 164.3 to 164.3.</li> <li>164.4 to 164.3.</li> <li>165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>			Blocky, highly fractured core :. 144.4 to 145.1. 159 to 160.											
<ul> <li>152.7 to 152.8.</li> <li>164.3 to 164.3.</li> <li>164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>			Fault gouge :. 151.3 to 151.4.											
<ul> <li>164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>			152.7 to 152.8. 164.3 to 164.3.											
<ul> <li>164.6 165.8 CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the foliation trend at about 80 degrees to core axis.</li> <li>165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.</li> </ul>							19 (a) 19 (a)							
degrees to core axis. 165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.	164.6	165.8	CHLORITIC SHEAR ZONE Chlorite - carbonate shear with the s	Eoliation trend at about 80										
165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.			degrees to core axis.										÷	
165.8 169.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Moderately sheared intermediate to felsic tuff with minor felsic ash to dust tuff beds. There are 10 to 15 % epidote grains in a medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.		i s											· · · ·	
medium to dark green matrix. There is blocky, highly fractured core from 167.2 to 168.2 and from 169.3 to 169.6. Bedding at 168.0 is at 71 degrees to core axis and foliation varies locally from 60 to 90 degrees to core axis and appears to be sub-parallel to bedding.	165.8	169.6	INTERMEDIATE TO FELSIC QUARTZ EYE AND Moderately sheared intermediate to fe ash to dust tuff beds. There are 10	D FELDSPAR CRYSTAL TUFF elsic tuff with minor felsic to 15 % epidote grains in a									• •	
degrees to core axis and appears to be sub-parallel to bedding.			medium to dark green matrix. There is from 167.2 to 168.2 and from 169.3 71 degrees to core axis and foliation	blocky, highly fractured core to 169.6. Bedding at 168.0 is at on varies locally from 60 to 90										
			degrees to core axis and appears to 1	be sub-parallel to bedding.										

P	ROPERT	Y: Chemainus J.V Chip Claims				HOLEN	۰ »»	de Numh	or				
		FALCONBRIDGE LIMITED				CHEM87-	32 ra	ge namb 6	e1				
		DIAMOND DRILL LOG											
_	_												
From	To	DECONTONI	Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
(m)	(101)	DESCRIPTION	NO.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb	) (ppm)	
169.6	188.5	INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF		ι					1.14				
		Locally white and siliceous, usually medium to dark green and	AB21674	174.5	174.6	.1	49	n/a	17	n/a	n/a	1440	
	· •	moderately siliceous. Hosts 20 %, up to 1 mm, crystals as 5 %	AE08633	177.8	178.3	.5	410	11	38	(1	(5	200	
		quartz eyes and 15 % epidote grains. From 176 to 177 it is	AB21675	184.6	184.7	.1	397	n/a	60	n/a	n/a	203	
3		moderately sheared.								, -		200	
		At 178.0 there are blebs of chalcopyrite in a guartz vein. At 187.6											
		there is a carbonate - hematite veinlet. The tuff is bleached from											
		186.6 to 187.0.							•				
		Foliations :.		н. 1									
		170.4 : 65 degrees to core axis.											
		1/4.5 : 65 degrees to core axis.											
		1/1.5 : /U degrees to core axis.											
		184.1 : 50 degrees to core axis.											
		Podding .											
		$174.8 \cdot 53$ degrees to core axis											
		179.3 : 38 degrees to core axis											
		17710 . JO ACGICCS CO COLC AND.											
						·							
188.5	199.2	MASSIVE FELSIC CRYSTAL TUFF		12.1									
		Massive medium grained felsic tuff with 20 to 25 % epidote, 2 to 4	AB21676	192.8	192.9	.1	59	n/a	18	n/a	n/a	1120	
		mm, as grains and laths and 1 to 3 % quartz eyes, 1 to 5 mm. There											
		are local quartz veinlets and the foliation at 191.5 is at 61											
		degrees to core axis.											
					1. S. 1								
199.2	201.3	MAFIC SILL						•					
		Black chloritic mafic sill or dyke with a sharp upper contact and	AB21677	199.3	199.4	.1	101	n/a	104	n/a	n/a	931	
		the lower contact at a fault. There are no quartz eyes and there											
		are 20 to 30 % epidote grains. The rock is moderately sheared with	· · ·										
		carbonate veinlets and moderate pervasive carbonatization locally.											
		The follation at 199.5 is at 46 degrees to core axis.											
									·				
201 2	202.2	ANADAT EVE DEADTHA DELATA MILEE	·										
201.3	203.3	Grav to green giligeous tuff with 3 to 5 % 2 to 4 mm guests ever											
		The foliation at 202 6 is at 65 degrees to core avis											
		ine forfaction at 202.0 15 at 05 degrees to core axis.		÷ .									
203.3	204 4	MAFIC SILL											
		Fine-grained green sill with 30 %, up to 1 mm, epidote grain and											
		minor chlorite - carbonate veinlets and guartz veins. There are	4										
		sharp contacts, with the lower contact orientation at 58 degrees to											
		core axis and the foliation variable between 30 and 90 degrees to											
		core axis.											

100000

204.4 207.6 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF

ALCONTRA.

Felsic tuff with 2 to 4 %, 2 to 5 mm, quartz eyes and locally up to

AE08634 205.9 206.9 1.0 28 <5 20 <1 <5 950

	(	) in the second s									)	
P	ROP	f: Chemainus J.V Chip Claims FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE M CHEM87-	No: Pa -32	age Numbe 7	er			
From (m)	T0 (m)	DESCRIPTION	Sample No.	From (m)	T0 (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		15 % epidote grains. From 206.85 to 207.35 there is 5 to 6 % chalcopyrite and 3 to 4 % weakly magnetic pyrrhotite as blebs and bands in quartz veins, which comprise 20 % of that interval.	AE08635 AE08636	206.9 207.4	207.4 208.4	.5 1.0	16200 756	10 <5	311 56	9 1	75 <5	930 700
207.6	211.7	MAFIC SILL Same as from 203.3 to 204.35 with minor chalcopyrite and pyrite in a quartz vein at the base of the unit.										
211.7	214.3	MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF Massive light grey to a epidote yellow coloured felsic tuff with 5 %, 2 to 4 mm, quartz eyes and 35 %, 2 to 3 mm, epidote grains and laths, after feldspar with local epidotized blocks, up to 7 cm long.	AB21678	213.4	213.5	.1	29	n/a	23	n/a	n/a	932
214.3	217.5	MAFIC TO INTERMEDIATE LAPILLI TUFF Mafic tuff with minor quartz eyes, epidote lapilli and grains. The foliation is from 60 to 80 degrees to core axis. From 217.2 to 217.5 there is blocky, highly fractured core and fault gouge.										
217.5	219.5	MAFIC FLOW OR TUFF Massive mafic rock with approximately 1 % fracture controlled carbonate veinlets at 0 to 90 degrees to core axis. There is minor pyrite in local quartz veins. There are approximately 20 % epidote grains and no quartz eyes are present.	AB21679	218.8	218.9	-1	35	n/a	16	n/a	n/a	1270
219.5	223.2	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Felsic tuff with approximately 10 %, 1 to 5 mm, epidote grains and trace quartz eyes. Trace pyrite occurs. A graded crystal rich bed at 222.3 indicates that tops is uphole. At 222.7 the foliation is at 55 degrees to core axis and bedding is at 62 degrees to core axis.										
223.2	251.0	MAFIC FLOW Mafic flow with local zones of epidotization and chloritization with 2 to 3 % carbonate - hematite veinlets. There is local pyrite in the zones of epidotization. At 248.0 there is a 2 to 5 mm band of chalcopyrite and pyrite, which occurs with a quartz vein and hematite. The veins are at orientation of 0 to 90 degrees to core axis and the foliation varies from 30 to 90 degrees to core axis locally.	AB21680 AE08638 AE08637 AE08639 AE08640 AE08541 AE08642	228.8 242.4 243.4 244.4 245.4 246.4 247.6	228.9 243.4 244.4 245.4 246.4 247.6 248.1	.1 1.0 1.0 1.0 1.0 1.2 .5	74 222 175 116 197 81 2951	n/a 10 <5 15 10 17 11	154 45 60 61 51 46 143	n/a <1 <1 <1 <1 <1 1	n/a <5 <5 <5 <5 <5 <5 <5	175 630 1000 500 710 110 530
251 0	256 A	FAILT ZONE										
	250.0	Fault gouge with local felsic tuff and mafic flow material. From 253.8 to 255.3 there is 1 to 2 % pyrite in a felsic tuff.	AE08643	253.8	254.7	.9	50	9	20	<1	10	1000

# FALCONBRIDGE LIMITED

		DIAMOND DRILL LOG										
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
256.0	269.4	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Locally contorted siliceous white to medium grey felsic tuff with feldspar crystals and trace quartz eyes. There are numerous minor	AB21681	258.2	258.3	.1	32	n/a	12	n/a	n/a	536
		cross-cutting carbonate veinlets and local bull quartz veins. Up to 1 % pyrite occurs as bands and blebs. There is 0.5 m of lost core at 268.0 and 0.3 m between 268.5 and 269.4. There is local minor fault gouge.										
											11 A.	
269.4	274.4	MAFIC SILL										
		Fine-grained dark green sill with 10 % leucoxene and trace disseminated pyrite. The upper contact is at blocky, highly fractured core and the lower contact is sharp at 47 degrees to core axis. There is moderate fracture controlled carbonate and local quartz - carbonate weinlets. There is minor hematite on the	AB21682	273.4	273.5	.1	348	n/a	112	n/a	n/a	117
		fractures.										
274.4	276.2	QUARTZ EYE BEARING FELSIC TUFF Whitish felsic tuff with 2 to 3 % quartz eyes. There are numerous										
		fracture controlled carbonate veinlets. The foliation at 275.1 is at 55 degrees to core axis. There is 0.2 m of lost core at 275.6 and the lower contact is at minor fault gouge.										
276.2	278.5	MAFIC SILL As from $269.4$ to $274.4$ and lower contact is fault breaking				•						
		AD FIOM BOST TO BITT AND KOWCL CONTACT IS FAULT DECCIA.										
218.5	283.6	QUARTZ BYE BEARING FELSIC TOFF White siliceous to weakly sericitic felsic tuff with quartz eyes.	AB21683	281.0	281.1	.1	43	n/a	36	n/a	n/a	1150
		moderately pervasively carbonitized. The tuff is weakly brecciated and the lower contact is a fault breccia.										
283.6	284.5	MAFIC SILL As from 276.2 to 278.5.										
284.5	285.5	QUARTZ EYE BEARING FELSIC TUFF Highly contorted and moderately silicified quartz eye felsic tuff										
	· *.	with fracture controlled carbonate veinlets.							-			

285.5 286.6 MAFIC SILL As from 283.6 to 284.5.

AB21684 286.4 286.5 .1 243 n/a 99 n/a n/a 141

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286.6 289.6 QUARTZ EYE BEARING FELSIC TUFF As from 284.5 to 285.5 with lower 50 cm sheared.

PF	OPERTY	Y: Chemainus J.V Chip Claims FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE N CHEM87-	o: Pag 32	re Numbo 9	er	- 		
-	<b>.</b>			<u>.</u>	_		- 1					
from (m)	(m)	DESCRIPTION	Sample No.	from (m)	TO (m)	width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm
			· · · ·									
A	100 4											
<b>9.</b> 0	320.4	DARK BROWN ARGILLITE Brown argillite, soft with strong to moderate pervasive carbonatization, with up to 1 % carbonate veinlets and minor pyrite blebs, trace to 1 %. There is up to 2 % very fine-grained pyrite in	AB21685 AB21686	300.0 318.3	300.1 318.4	.1 .1	126 126	n/a n/a	136 144	n/a n/a	n/a n/a	637 961
		the matrix. The top of the unit is fault gouge to 292.1. There is blocky, highly fractured core from 314.0 to 320.4.								•		
0.4	321.4	SANDSTONE										
		argillite, felsic tuff and Nanaimo conglomerate matrix as clasts in the lower 35 cm with grading indicating that tops is uphole.										
1.4	321.7	DARK BROWN ARGILLITE As before with minor inclusions of the underlying fine-grained green										
		sandstone.									```	
1.7	322.4	SANDSTONE Fine-grained green sandstone with 3 to 5 % nyrite blebs	1508644	321 7	322 1	7	156	11	105	/1	10	2000
		rine grained green banaptone with 5 to 5 t printe brebs.	ADOODAA	541.1	522.4	• 1	1.50	17	105		TO	2000
2 1	200 0	NANATMO CONCLONEDATE										
4.4	542.0	Gabbro and felsic tuff cobbles in a matrix similar to the green sandstone.										
					· · ·							
2.8	446.3	PYRITIC FELSIC TUFF										
		The unconformity with the Nanaimo Group sedimentary cover is at an	AE08645	324.0	324.7	.7	29	43	56	<1	35	1500
		sulphide and whole rock compositions.	AE08645 AE08647	324.7	326.0	1.5	6	41 60	25	<1	25 65	2000
		322.8 324.7 Brecciated with local Nanaimo Group inclusions.	AE08648	327.5	329.0	1.5	3	36	23	<1	65	2000
		324.7 349.8 Felsic tuff with trace quartz eyes and locally 5 to 15 %	AE08649	329.0	330.5	1.5	10	50	52	<1	90	1100
		feldspar grains, up to 1 mm. The average pyrite content	AE08650	330.5	332.0	1.5	47	78	23	<1	15	1600
		The purity is discominated and bedded. There is 0.5 m of	AE08702	334.0	335.5	1.5	56	78	37	<u>,</u>	50	1400
		lower contact from 342.9 to 344.4 and 0.5 m of lower	AE08703	335.0	336.5	1.5	39	102	55	(1)	35	960
		contact from 344.4 to 345.9. There is blocky, highly	AE08704	336.5	338.0	1.5	46	106	57	<1	55	980
		fractured core and fault gouge from 343 to 345.9.	AE08705	338.0	339.0	1.0	52	107	217	<1	70	970
		Locally there are fracture controlled carbonate veinlets.	AE08706	339.0	340.0	1.0	79	145	453	(1	180	1500
		349.8 Micro-fault.	AE08707	340.0	341.5	1.5	.60	83	89	(1	160	1500
		J47.0 JJL.U BLEACHED LEISIC TULL WITH STRINGER PERVASIVE	AEUS/US	341.5 343 n	345.0	3 U T.D	44	51 53	60 TQ1	(1	75	1400
		351.0 354.8 Locally weakly to moderately brecciated felsic tuff with	AE08710	346.0	347.2	1.2	37	56	284	<1	65	1400
		quartz - carbonate and carbonate veins and veinlets	AE08711	347.2	348.5	1.3	26	41	101	<1	50	1200
		with 1 to 2 % disseminated pyrite. The foliation is	AE08712	348.5	349.8	1.3	207	9	37	1	65	1300
		parallel to or sub- parallel to to the core axis.	AE08713	349.8	351.0	1.2	167	17	203	(1	200	380
						-					-	

From

(m)

То

(m)

# FALCONBRIDGE LIMITED

		DIAMOND DRILL LOG				cindito /	J4	10					
		DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (mqq)	Au (ppb)	Ba ) (ppm	a)
355.2 3	67.7	Light to medium grey siliceous to locally sericitic	AE08715	353 0	355 0	2.0	74		585	(1	- 65	1200	
		felsic tuff with minor guartz eves, trace to 2 %, up to	AE08716	355.0	357.0	2.0	52	36	133	. (1	60	1500	
		7 mm. From 358.0 to 358.2 there is bleaching with a	AE08717	357.0	359.0	2.0	13	42	77	· (1	65	1400	
		true thickness of 2 cm. which hosts 1 to 2 % pyrite and	AE08718	359.0	361.0	2.0	21	61	95	(1	30	1300	
		is at an orientation of 3 degrees to core axis, bedding	AE08719	361.0	363.0	2.0	12	92	94	1	35	1000	
		(?). There are local lithic lapilli in the tuff. There	AE08720	363.0	365.0	2.0	19	54	284	<u>(1</u> )	20	1100	
		are minor guartz - carbonate veinlets. The average	AE08721	365.0	367.0	2.0	15	30	54	a	35	2300	
		pyrite content is 2 %, which is disseminated with trace	AE08722	367.0	369.0	2.0	45	16	48	<1	60	1700	
		beds or bands.	AE08723	369.0	371.0	2.0	40	14	59	<1	80	1700	
363.0		Minor fault gouge.	AE08724	371.0	373.0	2.0	27	10	43	<1	100	1600	
367.7 3	368.0	Fault gouge.	AE08725	373.0	375.0	2.0	32	12	30	<1	35	1400	
368.0 3	81.0	White grey speckled tuff with minor fracture controlled	AE08726	375.0	377.0	2.0	120	16	38	(1	25	1700	
		carbonate veinlets and 3 to 4 % disseminated pyrite and	AE08727	377.0	379.0	2.0	282	12	45	(1	30	1200	
		minor trace stringer pyrite.	AE08728	379.0	380.7	1.7	104	21	17	<1	25	1500	
381.0 3	388.6	Grey moderately siliceous to sericitic tuff with quartz	AE08729	387.0	388.6	1.6	57	11	13	<1	60	2800	
		eyes and lapilli. The tuff is locally weakly to	AE08730	388.6	389.8	1.2	484	10	35	<1	10	2000	
		strongly contorted. On average there is trace to 1 %	AE08731	389.8	391.4	1.6	65	8	17	(1	110	1300	
		pyrite with 10 to 15 % locally over 5 to 10 cm at 384.9	AE08732	391.4	392.0	.6	17	24	12	<1	5	1200	
		and at 386.6. There are local quartz - carbonate veins	AE08733	392.0	393.0	1.0	14	23	18	· <b>(1</b> )	40	1200	
		with local pyrite cubes. The veins are up to 2 cm thick.	AE08734	393.0	395.0	2.0	35	<b>7</b> - 1 at	16	<1	35	1300	
388.6 3	89.8	7 to 8 % fine-grained pyrite bands parallel to foliation	AE08735	400.5	402.0	1.5	31	29	12	<1	15	1800	
		in a grey fine-grained quartz sericite schist cross-cut	AE08736	402.0	403.0	1.0	67	39	11	<1	40	2100	
		by minor quartz - carbonate veinlets.	AE08737	403.0	404.0	1.0	19	63	16	(1	10	2200	
389.8 3	91.4	1 to 2 % disseminated and trace band pyrite in a grey	AE08738	404.0	404.8	. 8	53	172	51	<1	20	2100	
		quartz sericite schist.	AE08739	404.8	406.3	1.5	18	49	16	<1	< 5	2600	
391.4 3	92.0	Trace chalcopyrite and 5 % pyrite as folded and pinched	AE08740	410.0	412.5	2.5	37	22	21	(1	<5	4000	
		out bands sub- parallel to and parallel to to	AE08741	412.5	414.0	1.5	104	70	24	<1	20	3300	
		foliation. There is also trace fuchsite in this tuff,	AE08742	415.0	416.4	1.4	51	29	35	(1	< 5	2900	
		which varies locally from massive to schistose and is	AE08743	416.4	416.9	.5	2731	68	236	4	120	2900	
		quartz eye bearing.	AE08744	416.9	418.0	1.1	66	22	° 40	1	<5	2400	
392.0 3	93.0	2 to 3 % pyrite, which occurs as from 391.4 to 392.0.	AB21687	427.2	427.3	.1	34	n/a	17	n/a	n/a	1210	
393.0 4	02.0	Tuff contains 1 to 2 % pyrite, which is disseminated and	AE08745	427.3	428.7	1.4	45	12	17	<1	<5	1000	
		also occurs as minor bands, which are locally	AE08746	428.7	429.5	. 8	187	83	26	<1	30	750	
		concentrated over 10 to 15 cm as 5 to 10 % at 393.8 and	AE08747	429.5	431.0	1.5	61	19	30	(1	<5	810	
		400.6.	AB21688	434.1	434.2	.1	170	n/a	237	n/a	n/a	276	
402.0 4	04.8	3 to 4 % parallel to foliation pyrite, which is	AE08748	444.0	445.0	1.0	172	11	21	(1	30	710	

AE08749 445.0 446.3

1.3

327

11

32

<1

740

15

402.0 404.8 3 to 4 % parallel to foliation pyrite, which is fine-grained and occurs in 1 to 4 mm bands. The tuff also contains minor parallel to foliation quartz veins with trace pyrite.

- 404.8 416.6 1 to 3 % pyrite, average 1.5 to 2 %, concentrated in zones of guartz - carbonate veinlets. Pyrite is disseminated and also occurs as minor 1 mm bands.
- 416.6 416.8 8 % pyrite with dust tuff beds, parallel to foliation and discordant with trace chalcopyrite.
- 416.8 426.0 Quartz eye rich, 5 to 7 %, up to 4 mm, locally with stringer pervasive carbonatization, felsic tuff with on average 1 % pyrite, locally 10 % over up to 10 cm.
- 426.0 428.7 Same as above with tr to 1 % pyrite.
- 428.7 429.5 Quartz eye rich felsic tuff with 15 % disseminated and band pyrite.
- 429.5 429.7 Beige sill with trace pyrite and stringer pervasive

HOLE No: CHEN97-32

Page Number 10

FALCONBRIDGE LIMITED DTAMOND DRTLL LOG

#### From Τo (m) (m)

Width Cu Pb Sample From To Źn Åα Au Ba No. (m) (m) (m) (ppm) (ppm) (ppm) (ppb) (ppm) (ppm)

## carbonatization.

429.7 433.7 Tuff with trace to 1 % disseminated pyrite and trace to nil pyrite bands.

-----DESCRIPTION-----

- 433.7 434.4 Beige sill as at 429.5 with sharp lower and upper contacts at 13 degrees to core axis. The sill has been subjected to stringer pervasive carbonatization and the composition is beige biotite and carbonate.
- 434.4 442.0 Ouartz eye feldspar rhyolitic tuff with trace to nil pyrite and minor pyrite with quartz - carbonate veins.
- 442.0 442.1 Beige sill.
- 442.1 444.5 Silicified tuff, similar to 434.4 to 442.0.
- 444.5 446.3 Moderately carbonitized distorted and weakly brecciated felsic tuff with 2 % pyrite. There is local fuchsite throughout in trace guantities. There are guartz carbonate veinlets throughout, that cross-cut and have no dominant orientation.

### Foliations :.

To approximately 355 at approximately 0 degrees to core axis. 360 : 20 degrees to core axis.

362 : 18 degrees to core axis.

365.2 : 13 degrees to core axis.

370 : 10 degrees to core axis.

375 : 14 degrees to core axis.

380 : 21 degrees to core axis.

385 : 25 degrees to core axis.

388.7 : 29 degrees to core axis. 389 : 31 degrees to core axis.

390 : 14 degrees to core axis.

395 : 22 degrees to core axis.

400 : 23 degrees to core axis.

405 : 6 degrees to core axis.

415 : 22 degrees to core axis. 420 : 12 degrees to core axis. 425 : 21 degrees to core axis. 430 : 17 degrees to core axis. 435 : 25 degrees to core axis.

410 : 13 degrees to core axis.

440 : 35 degrees to core axis. 445 : 35 degrees to core axis.

### 446.3 465.1 FINE GRAINED PLAGIOPHYRIC GABBRO

Chilled margin type gabbro with approximately 5 %, 1 to 3 mm, feldspar grains in a fine-grained green matrix. The gabbro is very weakly magnetic with 2 to 3 % fine-grained ilmenite, which is breaking down to hematite. There are local quartz - carbonate veins with chlorite margins.

AE08750 446.3 447.3 157 <5 91 <1 < 5 <20 1.0 n/a 183 AB21689 456.9 457.1 .2 242 n/a 96 n/a

HOLE No: Page Number CHEM87-32 11



**PROPERTY: CHEMAINUS JV - Chip Claims** 

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 43+00 E 0+40 S

 NTS:
 92B13
 UTM:
 5416225
 N
 431407
 E

 Azimuth:
 210
 Elevation:
 595 m
 Dip:
 -50
 Length:
 441.3 m

Started: 26-June-1987 Completed: 13-July-1987 HOLE No: Page Number CHEM87-33 1

Claim No. CHIP 1 Section No.: 43+00 East

Logged By: J. Pattison Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg & Co and XRAL

Core Size: NQ

Purpose: To test a weak, deep IP chargeability anomaly between 1+80 S and 3+00 S.

anomary	DIP	TESTS	

					Length	muth	Dip	Length	muth	. Dip			·. •					 . •	
					38.40 117.90 194.10 276.50	213.0 214.0 215.0 216.0	-52.5 -50.0 -49.0 -48.0	324.90 388.00 424.00	216.0 217.0 217.0	-47.5 -46.0 -46.0									
From (m)	To (m)		 	]	DESCRIPTIO	N				Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)

. . .

AD02454

10.6

10.7

.1

57

n/a

31 n/a

685

n/a

.0 9.1 OVERBURDEN AND CASING

9.1 15.5 MOTTLED FELSIC TUFF

Mottled, pale salmon pink, green and and cream coloured. Relatively massive hard and siliceous. Rare quartz eye. Pink colour may be due either to rhodonite or to hematization of feldspars. Moderate spotty chlorite alteration and moderate pervasive sericitization. Core is blocky and broken over the entire section. Trace disseminated magnetite and trace fracture controlled pyrite. Broken core at lower contact.

LOST CORE INTERVALS:. 9.1 - 9.8 m 0.6 m of lost core. 9.8 - 11.3 m 0.7 m of lost core. 11.3 - 12.2 m 0.7 m of lost core. 12.2 - 12.5 m 0.1 m of lost core. 12.5 - 13.0 m 0.3 m of lost core.

15.5 19.0 CARBONATIZED MAFIC LAPILLI TUFF

Dark green and fine-grained. Dominantly an ash tuff with up to 5 % AD02455 16.3 16.4 .1 42 n/a 106 n/a n/a 1140 chloritic lapilli-sized fragments stretched parallel to foliation. Foliation is at 40 degrees to core axis at 18.0 m. Nil-3% disseminated magnetite. Broken core at lower contact.

15.5 16.8 0.2 m of lost core.

19.0 83.5 MIXED CHLORITIC FELSIC TUFFS

F	ALCONBRI	DGE	LI	MITED
	DIAMOND	DRIL	Г	LOG

#### То (m) (m)

Similiar to 9.1 to 15.5 m but not as pink. Trace disseminated magnetite. Becomes a chloritic ash tuff below 25.5 m. Occasional chloritic lapilli-sized clast. <1 %. 3-5 mm guartz eves and no magnetite below 25.5 m. Occasional bed of mafic tuff. Nil sulphides but rusty fractures are common throughout the unit. From 47.3 to 53.9 m 10-30 % lapilli-sized felsic clasts in a guartz + sericite + chlorite matrix. Weak-nil pervasive carbonate. No guartz eves.

-----DESCRIPTION------

From 53.9 to 58.7 m weakly carbonatized felsic ash tuff and minor argillaceous sediments. Argillaceous sediments are black to medium grey and occur in beds and rip-up clasts < 2.5 cm thick and comprise < 5 % of the section (some are graphitic).

From 58.7 to 68.9 m FELDSPAR CRYSTAL TUFF (< 1% quartz eyes ). 5-10 %, 1-4 mm feldspars in a hard very siliceous, almost aphyric matrix. Moderate patchy thermal biotite alteration with beds of thermal biotite altered mafic tuff and tuffaceous sediments up to 1.1 m thick From 59.8 to 60.5 m 20 % lapilli-sized felsic clasts.

From 68.2 to 68.9 m 5 % felsic lapilli-sized clasts.

From 68.9 to 69.8 m chloritic and rust spotted. 5 % chlorite and 2-3% rust spots <4 mm in diameter. Rusty spots are centred on specks of chalcopyrite +/- sphalerite (?). Occasional patch of malachite on fracture surfaces. Mafic tuff bed from 69.2 to 69.5 m which also contains rusty spots.

From 69.8 to 72.2 m felsic ash tuff with rusty fractures and occasional mafic tuff beds.

72.2 to 74.1 m mafic tuff with up to 5 % 1-3 mm epidote spots (altered feldspars ). Minor beds with lapilli-sized clasts of cherty felsic rock. Broken core at upper contact. Lower contact is at 35 degrees to core axis.

From 74.1 to 75.4 m felsic feldspar crystal tuff. Mottled appearance due to thermal biotite alteration variable sericite and chlorite content and quartz flooding. Up to 5 % lapilli-sized felsic clasts. Grades into a mafic to intermediate tuff at the lower contact.

75.4-76.3 M mafic tuff with minor beds and clasts of cherty tuffaceous sediments. Grades into felsic tuff.

76.3-77.0 M felsic feldspar +/- guartz crystal tuff. Moderate thermal biotite alteration. Lower contact is gradational. 77.0-78.0 M felsic ash-lapilli tuff. Gradational lower contact.

78.0-82.5 M felsic quartz-feldspar crystal tuff. 15 % epidotized feldspar crystals 1-3 mm long 1-4 % quartz eyes 2-5 mm in diameter. Ouartz eyes have a bluish caste. Moderate thermal biotite alteration. Grades into the mafic tuff below.

82.5-83.1 M mafic ash tuff. Nil-trace disseminated chalcopyrite. Lower contact is at 50 degrees to core axis.

83.1-83.5 M felsic quartz-feldspar crystal tuff. As 78.0 to 82.5 m. Rusty microfractures.

LOST CORE INTERVALS:. 20.4-21.3 m 0.2 m of lost core. 21.3-21.9 m 0.2 m of lost core.

HOLE No: Page Number CHEM87-33 2

Sample No.	From (m)	To . (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
AD02456	20.8	20.9	.1	37	n/a	27	n/a	n/a	874
AD02457	30.0	30.1	.1	36	n/a	18	n/a	n/a	961
AD02458	44.4	44.5	.1	35	n/a	24	n/a	n/a	634
AD02459	54.2	54.3	.1	35	n/a	12	n/a	n/a	1450
AD02460	64.5	64.6	.1	26	n/a	16	n/a	n/a	1370
AE08682	67.9	68.9	1.0	15	5	24	(1	<5	1300
AE08683	68.9	69.8	. 9	449	< 5	100	(1	<5	1300
AD02461	72.6	72.7	.1	47	n/a	61	n/a	n/a	181
AD02462	79.7	79.8	.1	34	n/a	17	n/a	n/a	1710

From

From

(m)

To

(m)



FALCONBRIDGE LIMITED

DIAMOND DRILL LOG

### HOLE No: Page Number CHEM87-33 3

Sample	From	To	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

25.9-26.5 m 0.5 m of lost core. 26.5-27.4 m 0.7 m of lost core. 27.4-28.0 m 0.4 m of lost core. 28.0-29.3 m 0.7 m of lost core.

### STRUCTURE:.

Foliation is at 50 degrees to core axis at 20.0 m. Foliation is at 35 degrees to core axis at 22.5 m. 0.4 Cm wide clay-filled slip at 30 degrees to core axis at 23.3 m. Foliation is at 55 degrees to core axis at 25.0 m. Fault gouge at 80 degrees to core axis at 26.5 m. Bedding is at 40 degrees to core axis at 30.8 m. Foliation is at 70 degrees to core axis at 35.0 m. Foliation is at 60 degrees to core axis at 37.0 m. Minor slip is at 60 degrees to core axis at 37.9 m. Foliation is at 58 degrees to core axis at 38.0 m. Foliation is at 50 degrees to core axis at 39.3 m. Minor slip is at 47 degrees to core axis at 40.1 m. Bedding is at 45 degrees to core axis at 42.2 m. Foliation is at 58 degrees to core axis at 43.4 m. Foliation is at 50 degrees to core axis at 46.4 m. Foliation is at 60 degrees to core axis at 47.2 m. Bedding is at 50 degrees to core axis at 47.2 m. Bedding is at 55 degrees to core axis at 47.6 m. Foliation is at 50 degrees to core axis at 52.1 m. Foliation is at 52 degrees to core axis at 53.3 m. Minor slips are at 55-60 degrees to core axis at 53.8 m. Foliation is at 60 degrees to core axis at 55.0 m. Bedding is at 66 degrees to core axis at 56.8 m. Bedding is at 65 degrees to core axis at 57.3 m. Bedding is at 50 degrees to core axis at 59.5 m. Foliation is at 50 degrees to core axis at 68.2 m. Bedding is at 35 degrees to core axis at 71.0 m. Bedding is at 35 degrees to core axis at 74.1 m. Bedding is at 58 degrees to core axis at 82.2 m.

----DESCRIPTION-----

23.7 Minor hematite along foliation planes.

30.4 30.8 Crushed zone. Core is broken and blocky.

- 31.8 32.0 Bed of mafic tuff at 40 degrees to core axis. Weak pervasive carbonatization.
- 32.4 32.6 Mafic tuff bed at 55-60 degrees to core axis. Moderate carbonatized.

33.3 34.1 Blocky, highly fractured core.

41.1 42.2 Blocky, highly fractured core.

42.2 Bed of cherty, cream coloured felsic tuffaceous sediments

### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From	То	
(m)	(m)	DESCRIPTION

### at 45 degrees to core axis.

- 43.0 47.3 Weak-nil thermal biotite alteration. 1-2 % 2-4 mm quartz eyes.
- 47.0 10.0 cm wide bed of carbonatized mafic tuff at 50 degrees to core axis.
- 47.6 5.0 cm wide bed of mafic tuff at 55 degrees to core axis.
- 52.4 10.0 cm wide bed of carbonatized mafic tuff at 25 degrees to core axis.
- 54.0 54.8 Moderate pervasive carbonatization.
- 57.2 57.3 Carbonatized mafic tuff bed at 60-70 degrees to core axis.
- 59.5 59.8 Bed of thermal biotite altered mafic tuffaceous sediments at 50 degrees to core axis.
- 62.5 63.7 Thermal biotite alteration mafic tuffaceous sediments. Medium green-brown, medium-grained with 10-15 % epidote spots < 5 mm in diameter. Upper contact is at 35 degrees to core axis. Lower contact is gradational into felsic feldspar crystal tuff.
- 68.7 68.9 Mafic tuff bed at 45 degrees to core axis.

### 83.5 140.2 MAFIC TUFF

Medium to dark grey-brown fine-grained and relatively massive. May be intermediate in compostion in some places. Dominantly an ash tuff above 105.6 m but occasional lapilli rich sections. Nil-weak thermal biotite alteration. Up to 2 % 1-3 mm chlorite spots. Fracture surfaces are rusty throughout the unit.

Nil-trace chalcopyrite pyrite and sphalerite associated with minor quartz-carbonate clots and veinlets. Locally up to  $5 \times 1-5$  mm epidote spots below 103.8 m.

Below 105.6 m 5-10 % rounded felsic fragments 1.0-10.0 cm in diameter. Trace-2 % disseminated pyrite nil-trace chalcopyrite and sphalerite. Lower contact is at 47 degrees to core axis.

### BEDDING ANGLES:.

Bedding is at 57 degrees to core axis at 89.8 m. Bedding is at 50 degrees to core axis at 123.3 m. Bedding is at 60 degrees to core axis at 132.6 m. Bedding is at 50 degrees to core axis at 135.0 m. Bedding is at 47 degrees to core axis at 140.2 m.

94.0 94.1 3.0 cm long clast of felsic tuff.

AD02463	88.4	88.5	.1	16	n/a	83	n/a	n/a	507
AD02464	98.2	98.3	.1	51	n/a	98	n/a	n/a	612
AD02465	108.7	108.8	.1	277	n/a	650	n/a	n/a	221
AD02466	124.4	124.5	.1	179	n/a	134	n/a	n/a	588
AD02467	136.8	136.9	.1	98	n/a	101	n/a	n/a	298

### HOLE No: Page Number CHEM87-33 4

Sample	From	To	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

	1000	<u>}</u>												1	
	Cusso				Contraction of the second								- Statestinger	)	
P	ROPERT	Y: CHEMAINUS	JV	FALCONBRIDGE LIN DIAMOND DRILL N	MITED Log				HOLE N CHEM87-	o: Pa 33	ge Numbe 5	Ξ			
From (m)	To (m)		DESCR	IPTION	-	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
n e National		98.2 98.4 B	locky, highly fractur	ed core											
		134.2 134.7	Blocky, highly fract	ured core.											
140.2	146.0	FELDSPAR PC	PRPHYRITIC MAFIC FLOW												
		Medium gree with 2-3 % pyrrhotite quartz-carh fine-graine	n up to 7 % white 1-4 finely disseminated and trace pyrite and bonate veinlets. Rust d for 20.0 cm from lo	mm feldspars in a chl leucoxene. Trace-1 % chalcopyrite associate y fractures common. Ve wer contact. Broken co	loritic matrix disseminated ed with ery ore at lower	AD02468	143.3	143.4	.1	253	n/a	118	n/a	n/a	160
		contact.													
146.0	196.8	MAFIC TUFF As 83.5 to Rusty fract pyrite. Wea pervasive c sediments b	140.2 m. No chloriti ures occur throughout k-moderate patchy the arbonatization. Mixed elow 194.2 m. Lower	c or felsic clasts abo the unit. Trace diss rmal biotite alteratic mafic to felsic tuffa contact is at 60 degre	ove 155.7 m. seminated on. Weak-nil aceous ees to core axis	AD02469 AD02470 AD02471 AD02472 AD02473 AD02474	153.6 154.9 165.2 169.3 180.4 192.2	153.7 155.0 165.3 169.4 180.5 192.3	.1 .1 .1 .1 .1 .1	381 40 126 32 157 79	n/a n/a n/a n/a n/a	90 27 125 321 138 43	n/a n/a n/a n/a n/a	n/a n/a n/a n/a n/a	287 1330 324 780 420 917
		STRUCTURE:. Slip at 25 Bedding is Bedding is Bedding is Foliation i	degrees to core axis at 50 degrees to core at 36 degrees to core at 45 degrees to core s at 45 degrees to co	at 146.4 m. axis at 165.9 m. axis at 188.1 m. axis at 194.1 m. re axis at 194.1 m.									• • • • •		
		146.4 147.0	Blocky, highly fract between 145.4 and 14	ured core. 0.3 m of 1c 7.0 m. Rusty microfrac	ost core ctures.		n Marian Tanàn Taona							•	
		154.6 155.7	QUARTZ EYE-BEARING F alteration. 7-10 %, siliceous aphyric ma nil-trace pyrrhotite band of strongly bio Broken core at upper degrees to core axis	ELSIC TUFF. Weak therm 2-5 mm quartz eyes in trix. 1-2% disseminate and chalcopyrite. 10 tite altered sediment contact. Lower contac	mal biotite n a hard ed pyrite and D.0 cm wide at 155.4 m. ct is at 47										
		169.9 171.3	FESIC ASH TUFF. Grey 1-3 mm sericitzed f degrees to core axis	hard and siliceous wi eldspars. Bedding is a •	ith up to 20 % at 40-60										
		171.3 192.0	Mafic tuff is very m ash-sized.	assive. No clasts larg	ger than										
		192.0 193.4	FELSIC ASH TUFF. Mod chloritic. Minor ep Occasional cherty fe diameter. Upper con and lower contact is	erately sericitic and idote spots. Nil sulph lsic clasts up to 1.0 tact is at 50 degrees at 60 degrees to core	weakly hides. cm in to core axis axis.										

1000m

PP	OPERT	Y: CHEMAINUS JV				HOLE N	~ P-	no Numh	ar			
FA	OF EKT	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	о: Ра 33	ge Numb 6	er			
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm
		194.2 195.0 Beds < 0.5 cm wide of tuffaceous sediments at 50 degrees to core axis.										
96.8	201.1	FELDSPAR PORPHYRITIC MAFIC FLOW As 140.2 to 146.0 m. Several quartz-carbonate veins and pods up to 3 cm wide with 1-3 % pyrrhotite and trace chalcopyrite. Lower contact is at 52 degrees to core axis.	AD02475	199.9	200.0	.1	249	n/a	115	n/a	n/a	46
		199.4 199.9 Blocky, highly fractured core.										
		200.6 201.1 Moderate pervasive carbonatization.										
								- - -				
01.1	215.3	CHLORITIC FELSIC TUFF Fine-grained medium green-grey foliated. Foliation is contorted and kinked over most of the section. Weak-nil pervasive	AD02476	208.3	208.4	.1	35	n/a	38	n/a	n/a	869
		carbonatization. Occasional 1-3 mm quartz eye. Foliation is at a very low angle (< 15 degrees) to the core axis between 204.0 and 205.3 m. Trace- 1 % disseminated and fracture controlled pyrite. Nil-trace chalcopyrite. Broken core at lower contact.			-a •w							
		STRUCTURE:. Bedding is at 50 degrees to core axis at 202.2 m. 0.5 Cm clay-filled slip at 85 degrees to core axis at 203.2 m. Foliation is at 65 degrees to core axis at 207.3 m. Foliation is at 55 degrees to core axis at 210.8 m. Foliation is at 50 degrees to core axis at 212.4 m.										
		209.7 210.2 Bed of carbonatized mafic ash tuff at about 50 degrees to core axis. Upper and lower contacts are gradational.										
		213.7 214.0 Bed of carbonatized mafic tuff. Broken core at upper contact. Lower contact is at 25 degrees to core axis.										
		214.2 215.3 Blocky, highly fractured core.										
	 -											
15.3	217.5	CHLORITIC QUARTZ EYE BEARING FELSIC TUFF 3-7 %, 1-5 mm quartz eyes in a fine-grained pale green-grey, quartz+sericite+chlorite matrix. Many of the quartz eyes have a bluish caste. Trace finely disseminated pyrite. Very rare lapilli-sized pyrite clast. Foliation at 217.0 m is at 45 degrees	AD02477	215.7	215.8	.1	36	n/a	30	n/a	n/a	884
	· · · ·	to core axis. Lower contact is parallel to foliation at 70 degrees to core axis.		• • •								
.7.5	219.3	CHLORITIC FELSIC TUFF As 201.1 to 215.3 m. Dominantly an ash tuff but lapilli-sized felsic	AD02478	217.8	217.9	.1	60	n/a	34	n/a	n/a	1160

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

r I Om	10	
(m)	(m)	DESCRIPTION

of mafic tuff and biotite-rich tuffaceous sediments at 60-70 degrees to core axis. Nil-trace disseminated pyrite.

217.6 Minor slip at 76 degrees to core axis.

219.3 225.6 CHLORITIC OUARTZ EYE BEARING FELSIC TUFF

As 215.3 to 217.5 m. Trace-1 % finely disseminated pyrite. Lower contact is at 70-75 degrees to core axis.

- 232.2 Chloritic slip at 47 degrees to core axis.
- 224.0 224.3 Two 10.0 cm wide biotite rich mafic tuffaceous sediment beds at 65-70 degrees to core axis.
- 224.4 224.9 Altered mafic tuff. Bleached and weakly to moderately carbonatized. Irregular upper and lower contacts.
- 225.6 226.1 ALTERED MAFIC-INTERMEDIATE TUFFACEOUS SEDIMENTS Pale green-brown, bleached, fine-grained and relatively massive. Moderate thermal biotite alteration. Broken core at lower contact.
- 226.1 226.4 MAFIC ASH TUFF Dark green and fine-grained. Moderate fracture controlled hematization. Broken core at upper contact. Lower contact is a slip at 70 degrees to core axis.
- 226.4 228.3 FAULT GOUGE Up to 20 % 0.5-3.0 cm long fine-grained chloritic felsic clasts in a clay-rich loosely consolidated matrix. Core is broken and blocky over the first 0.2 m of the unit.

228.3 231.7 FELSIC FELDSPAR CRYSTAL TUFF Light green siliceous and hard with up to 10 % 1-2 mm white feldspar

crystals. Strongly crushed above 228.7 m. Weakly to moderately sericitic and weak to nil chloritization. Microfractured. Lower contact is a slip at 75 degrees to core axis.

228.3 229.0 Numerous slips at 70-80 degrees to core axis.

229.3 230.0 MAFIC TUFF. Dark green fine-grained and massive with up to 20 % 1-3 mm epidote spots and 3 % chlorite spots up to 3 mm in diameter often with epidote alteration halos. 1-3 % fracture controlled pyrite and nil-trace disseminated pyrrhotite and trace chalcopyrite associated with guartz-carbonate veins up to 4.0 cm wide. Upper contact is a slip at 70 degrees to core

HOLE No: Page Number CHEM87-33 7

Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)	
AD02479	223.6	223.7	.1	37	n/a	54	n/a	n/a 1	460	

AD02637 230.5 230.6 21 .1 983 n/a 45 n/a n/a

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m) -----DESCRIPTION-

axis. Lower contact is at 50 degrees to core axis.

231.0 231.1 FAULT ZONE at 40 degrees to core axis.

231.2 231.7 3 % chlorite spots < 2mm in diameter.

### 231.7 247.6 FELSIC FELDSPAR-QUARTZ CRYSTAL TUFF

Light grey to grey-green with 10-15 % < 3 mm feldspar crystals and 1-10 % < 3 mm quartz eyes in hard siliceous microfractured very fine-grained to aphyric matrix. Up to Nil to weak sericitization, chloritization and epidotization. Nil-1 % disseminated and fracture controlled pyrite. Lower contact is sharp at 70 degrees to core axis

232.0 232.2 Fault (?). Core is broken and rubbly. 0.3 m of lost core between 230.4 and 232.6 m.

232.6 233.4 Blocky, highly fractured core.

- 233.7 235.3 Blocky, highly fractured core. Fault centred at 235.1 m. Not possible to measure orientation of the fault. 0.6 m of lost core.
- 235.7 236.5 Dark green MAFIC TUFF. Relatively massive fine-grained with up to 30 % <3 mm epidote spots. Upper contact is a chloritic slip at 23 degrees to core axis. 1-2 % finely disseminated beige alteration mineral. Weak fracture controlled carbonatization. Broken core at lower contact.
- 237.1 237.2 Crushed FAULT ZONE at 60 degrees to core axis.

237.7 238.2 Blocky, highly fractured core.

- 239.0 5.0 cm wide FAULT at 40-50 degrees to core axis.
- 239.5 239.7 <5 % lapilli-sized felsic clasts and spots of very fine-grained pyrite <2 mm in diameter.
- 242.2 242.3 FAULT ZONE at 30 degrees to core axis.
- 242.3 243.3 Rock is crushed and moderately sericitic. Foliation is at 40-50 degrees to core axis. 2-3 % < 3mm chlorite spots (altered clasts ?).
- 244.0 244.8 Blocky, highly fractured core. Fault at 50 degrees to core axis. 0.6 m of lost core between 242.3 and 244.8 m.
- 245.2 245.3 FAULT ZONE. Loosely consolidated fault breccia at 60 degrees to core axis.

245.5 245.6 1.0 cm wide fault gouge at 12 degrees to core axis.

AD02638	239.3	239.4	.1	28	n/a	16	n/a	n/a 40	)9
AD02639	246.4	246.5	.1	16	n/a	21	n/a	n/a 11.	30

### HOLE No: Page Number CHEM87-33 8

Pb

Zn

(ppm) (ppm)

λg

(ppm)

Ba

(ppb) (ppm)

Au

Cu

(pom)



Sample

No.

From

(m)

To

(m)

Width

(m)

# FALCONBRIDGE LIMITED

P	ROPERT	Y: CHEMAINUS	JV				HOLE N	o: Pa	ge Numbe	er			
•			FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	33	9				
From (m)	To (m)		DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		246.1	8.0 cm thick bed of brown thermal biotite altered volcanic wacke at 58 degrees to core axis.		· · ·								
		236.9 Minor	slip at 40 degrees to core axis.				ч. -				•		
247.6	249.1	FELSIC ASH Light grey 60-70 degre	TUFF moderately sericitic and well foliated. Foliation is a es to core axis. Nil-1 % fracture controlled pyrite.	at AD02640	248.4	248.5	.1	19	n/a	16	n/a	n/a	840
		247.8	0.5 cm wide clay-filled slip at 15-40 degrees to core axis.	3									
		248.9	Minor slip at 42 degrees to core axis.										
249.1	251.4	FELSIC QUAR Light grey- feldspar cr clasts. We Trace disse clay-filled	TZ-FELDSPAR CRYSTAL TUFF green and comprised mainly of ash-sized quartz and ystals. Up to 5 % fine-grained lapilli-sized felsic ak pervasive chloritization and moderate sericitizatio minated pyrite. Lower contact is a 1.0 cm wide slip at 45 degrees to core axis.	ADO2641	251.1	251.2	.1	25	n/a	10	n/a	n/a	784
251.4	252.5	QUARTZ EYE Up to 5 % w fine-graine disseminate	BEARING FELSIC TUFF eakly chloritized 2-4 mm quartz eyes in a light grey w d hard siliceous microfractured matrix. Nil-trace d pyrite. Lower contact is at 60 degrees to core axis	very 5.									
		251.7 252.2	Veinlets of a beige to bright pink, soft mineral whic fizzes only weakly in HCl.	:h	• • •			ан салан Ал	·				
252.5	265.5	FELSIC QUAR Light grey quartz eyes conspicuous and relativ chalcopyrit contact. Lo	TZ-FELDSPAR PHYRIC TUFF/FLOW with up to 20 % <3 mm feldspars and up to 10 % < 5 mm above 254.0 m. Below 254.0 m feldspars become much 1 and quartz eyes become more abundant. Weakly serici ely massive. Trace-1 % disseminated pyrite and nil-tr e. Rock is broken and blocky for 0.8 m from the lower wer contact is a fault at 55 degrees to core axis.	AD02642 Less Ltic race	264.4	264.5	.1	17	n/a	27	n/a	n/a 1	1550
		252.6	Slip at 66 degrees to core axis.									 7.	
		260.8 260.9	FAULT GOUGE at 80 degrees to core axis.										
		261.0 261.1	FAULT GOUGE at 50 degrees to core axis.										
		261.6 261.9	Dark green mafic dyke $<1.0$ cm wide runs nearly parall to core axis.	lel		•						-	

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

### From To (m) (m

(m) -----DESCRIPTION-----

264.8 265.5 Blocky, highly fractured core. Weak to moderate fracture controlled Fe-carbonate alteration.

### 265.5 338.8 GABBRO

Dark green massive and fine-grained for 6.5 m from the upper contact and for 16.2 m from the lower contact. Becomes medium-grained below 272.0 m. Up to 5 % disseminated ilmenite paritially altered to leucoxene. Locally moderate fracture controlled carbonate alteration. The carbonate altered rock is darker green and finer grained than the unaltered gabbro. The carbonate altered zones contain up to 3 % <3 mm spots of a beige alteration mineral. Weak to moderate fracture controlled hematite alteration is often associated with calcite veins and veinlets between 272.0 and 286.2 m, 298.1 and 304.5 m and btwn 308.6 and 321.1 m. Nil-trace disseminated pyrite and chalcopyrite. Broken core (fault) at lower contact.

- 266.0 266.1 FAULT ZONE. Rubbly core, not possible to measure orientation of the fault.
- 273.8 275.2 Slip runs along the core axis. Core is broken and blocky between 274.6 and 275.2 m.
- 275.7 275.9 FAULT ZONE at 50 degrees to core axis. Core is broken and blocky.
- 277.4 280.7 Core is blocky over most of the section. Moderate fracture controlled hematization.
- 284.5 286.1 Blocky, highly fractured core.
- 287.9 301.9 Moderate pervasive carbonatization.
- 291.0 Minor slip at 10 degrees to core axis.
- 294.0 297.2 Blocky, highly fractured core. 0.4 m of lost core between 294.7 and 297.2 m.
- 297.5 298.1 Blocky, highly fractured core.
- 302.3 302.9 Blocky, highly fractured core.
- 304.6 304.8 Blocky, highly fractured core.
- 305.8 308.6 Moderate to strong pervasive carbonatization.
- 308.4 Minor slip at 25 degrees to core axis.
- 310.4 Minor slip at 45 degrees to core axis.

#### AD02643 269.4 269.5 128 n/a 202 .1 n/a 103 n/a AD02644 280.7 280.8 333 122 150 .1 n/a n/a n/a AD02645 304.3 304.4 .1 335 116 198 n/a n/a n/a AD02646 329.6 329.7 .1 308 89 108 n/a n/a n/a

Cu

(ppm)

Page Number

10

Рb

1 6 54 15 3.

Zn

(ppm) (ppm)

λg

(ppm)

Ba

(mag) (dag)

Au

HOLE No:

CHEM87-33

Width

(m)

Sample

No.

From

(m)

То

(m)

### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

# From To (m) (m)

310.4 312.3 Moderate pervasive carbonatization.

- 318.3 8 Minor FAULT GOUGE. Not possible to measure its orientation.
- 321.2 328.6 Sheared fine-grained and moderately carbonatized zone. Foliation is at 15-25 degrees to core axis. 0.5 cm wide clay-filled slip at 30 degrees to core axis.
- 330.0 331.3 Fine-grained sheared carbonatized zone. Shearing is at 45 degrees to core axis.
- 337.3 338.4 Inclusion of FLESIC QUARTZ-FELDSPAR CRYSTAL LAPILLI TUFF up to 10 % <4 mm feldspar crystals and quartz eyes and < 5% lapilli-sized felsic fragments in a very fine-grained to aphyric light grey-green, siliceous, hard and microfractured matrix. Weak pervasive chloritization. Trace disseminated pyrite. Upper and lower contacts are at 30 degrees to core axis.

### 338.8 340.4 FELSIC ASH TUFF

Medium grey-brown with up to 2 % < 2 mm clear quartz eyes. Vague bedding at 30 degrees to core axis. Up to Weak to moderate thermal biotite alteration and weak chloritization and carbonatization. Trace- 1 % disseminated and fracture controlled pyrite and trace finely disseminated sphalerite. Lower contact is at 30 degrees to core axis.

### 340.4 348.3 THERMAL BIOTITE ALTERED MAFIC ASH TUFF

Dark brown-green. Moderate to weak thermal biotite alteration and fracture controlled carbonatization. Ripped up beds of cherty tuffaceous sediment are common. Trace-2 % pyrite in hairline fractures. Lower contact is gradational. BEDDING ANGLES:. Bedding is at 35 degrees to core axis at 341.3 m. Bedding is at 50 degrees to core axis at 347.4 m.

340.4 341.3 Moderate pervasive carbonatization.

341.4 341.7 4 % <4 mm epidote spots.

342.7 343.2 Blocky, highly fractured core.

345.4 347.0 Trace-2 % (3 mm quartz eyes.

346.0 347.5 Trace-2 % < 4 mm epidote spots.

# HOLE No: Page Number CHEM87-33 11

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

AD02647 339.2 339.3 .1 29 n/a 34 n/a n/a 1140

AD02648 347.2 347.3 .1 86 n/a 80 n/a n/a 330

HOLE No: Page Number

		FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	33	12	- 1 <sup>1</sup>			
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		Medium green chloritic mafic matrix with up to 5 % lapilli to ash-sized pale green to cream coloured felsic and mafic clasts. Bedding is at 55 degrees to core axis at 348.5 m. Nil-2 % fracture controlled pyrite. Lower contact is a fault at 45 degrees to core axis.										
352.3	441.3	FELDSPAR PHYRIC GABBRO 20 % white feldspars in a medium green fine-grained matrix. 1-3 % disseminated ilmenite. Rare speck of chalcopyrite or pyrite.	AD02649 AD02650	359.3 404.4	359.4 404.5	.1 .1	88 110	n/a n/a	68 62	n/a n/a	n/a n/a	341 438
		352.3 352.5 Fault gouge at 45 degrees to core axis.										
		352.7 352.9 Fault gouge at 70 degrees to core axis. 0.2 m of lost core.										
		352.9 354.8 Moderate pervasive carbonatization. No feldspar phenocrysts. Calcite-filled fractures and gashes are common.							· · · ·			
		365.3 365.8 Blocky, highly fractured core.										
1. s		369.1 369.8 Dark green fine-grained section.										
		373.1 376.4 Dark green fine-grained section. Slip at 30 degrees to core axis at 374.7 m.										
		382.3 382.6 Blocky, highly fractured core.										
		384.6 385.0 Blocky, highly fractured core.										
		390.8 391.1 Blocky, highly fractured core.										
		394.8 395.0 Crushed zone (FAULT) at 35 degrees to core axis.										
		405.7 407.1 Fine-grained moderately carbonatized zone.		•								
		421.2 423.1 Moderate pervasive carbonate alteration. Weak hematization associated with calcite veins and veinlets. Slip at 60 degrees to core axis at 421.7 m.										
		423.4 424.3 Blocky, highly fractured core. 0.2 m of lost core between 422.7 and 424.0 m.									•	
		427.6 428.1 Blocky, highly fractured core. 0.2 m of lost core.										
		428.8 441.3 Finer-grained section with <1 % feldspar phenocrysts. Minor patchy carbonatization.								,		
		441.3 Hole abandoned due to caving.									· · ·	



### HOLE No: Page Number CHEM87-34 1

Claim No. : CHIP 1 Section No.: Line 47+00 East

Logged By: David P. Money Drilling Co.: Burwash Enterprises Assayed By: Bondar-Clegg and X-Ray Assay

Core Size: NQ

AB21901

8.3

8.4

.1

PROPERTY:	Chemainus	J.V.	~ C	hip	Claims
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### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 47+00 E 0+40 S

NTS: 092,	/B13	UTM:	54161	50 N	431850	E
Azimuth:	210	Elev	ation:	660	m.	
Dip:	-50	Leng	th:	391	.1 m	

Started: June 28, 1987 Completed: July 5, 1987

Purpose: To test VLF conductors at 0+90, 2+40 and 2+80 S, coincident deep and shallow IP resistivity lows at 2+05 S and a shallow IP chargeability anomaly at 2+80 S.

DIP TESTS

Length	Azi- muth	Dip	Length	Azi- muth	Dip
29.30	206.0	-50.0	251.50	207.0	-42.0
87.20	205.0	-45.0	340.80	208.0	-39.5
165.80	204.0	-44.0			

From	To	
(m)	(m)	DESCRIPTION

Sample From То Width Cu РЪ Zn Au Ba Aα No. (m) (m) (m) (ppm) (ppm) (ppm). (ppm) (ppb) (ppm)

695

n/a

77

n/a

n/a

839

.0 8.2 OVERBURDEN AND CASING

8.2 9.2 MAFIC FLOW

Moderately contorted massive , but with a well developed schistosity, mafic rock, which has undergone pervasive carbonatization. Hosts trace to 2 % epidote grains and 1 to 2 % hematite cubes, up to 3 mm, after pyrite. The foliation varies locally from approximately 50 to 80 degrees to core axis.

### 9.2 11.5 FELSIC TUFF

Green to grey felsic tuff with minor feldspar to epidote grains. At the top there are numerous quartz - carbonate veinlets. There is 0.3 m of lost core from 9.2 to 10.1, 0.7 m lost core from 10.1 to 11.0 and 0.4 m lost core from 11.0 to 11.9. The unit is blocky, highly fractured core with fault gouge at the lower contact.

11.5 13.5 CHLORITIC SHEAR ZONE Chlorite - carbonate schist with minor carbonate veinlets, which has been highly sheared at approximately 70 to 80 degrees to core axis. There is 0.7 m of lower contact from 11.9 to 13.1.

13.5 22.5 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF

Grey siliceous felsic tuff with fine-grained feldspar grains and trace quartz eyes and pyrite. The unit is oxidized throughout with strong rust (goethite) from 15.1 to 16.3. The rock is locally weakly contorted. AB21902 14.1 14.2 .1 53 n/a 36 n/a n/a 901

	C										)	
P	ROPERT	Y: Chemainus J.V Chip Claims FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE N CHEM87-	o: Pa 34	ge Numb 2	er			
From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		Foliations :. 15.5 : 65 degrees to core axis. 19.8 : 54 degrees to core axis. 22.4 : 56 degrees to core axis.										
22.5	22.6	CHLORITIC SHEAR ZONE Moderately magnetic chlorite - carbonate shear zone with 2 to 3 % calcite blebs with rust rims. The orientation is at 52 degrees to core avis										
		CUTE dAIS.										
22.6	32.1	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Same as from 13.5 to 22.5 with oxidation ceasing after 30.2 and the inclusion of minor dust tuff or cherty green siliceous beds.	AB21903	25.5	25.6	.1	43	n/a	27	n/a	n/a	1460
		Foliations :. 25.0 : 63 degrees to core axis. 30.2 : 56 degrees to core axis.										
		Bedding :. 28.2 : 53 degrees to core axis. 30.0 : 66 degrees to core axis.										
32.1	38.7	FELSIC TUFF Blocky, highly fractured core felsic tuff with local quartz veins. Lost core : 0.4 m from 32.3 to 33.5, 0.3 m from 33.5 to 34.1, 0.7 m from 36.3 to 37.2 and 0.2 m from 37.2 to 38.7.										
20 7		EEI ÓTA MIIDE				· .						
30.1	27.1	Sericite schist, after felsic tuff with trace quartz eyes and feldspar grains. There is local quartz +/- chlorite veinlets, usually 5 mm to 3 cm, but there is a vein from 48.5 to 48.8. There is local sericitization in the upper half and a progressive	AB21904 AB21905	43.8 51.3	44.0 51.5	.2 .2	48 35	n/a n/a	<10 10	n/a n/a	n/a n/a	1310 1150
		increase in sericitization in the lower half accompanied by deformation, such as kinking. No sulphides were observed. There is 0.3 m of lost core from 42.0 to 42.7 and there is 10 cm of fault gouge at 53.3.										
		Foliations :. 44.3 : 58 degrees to core axis. 51.2 : 61 degrees to core axis. 56.6 : 56 degrees to core axis.										
57.1	57.3	FAULT GOUGE 16.5 Cm of fault gouge.										
			ی بر بر ایک ا									

PRC	PERTY	7: Chemainus J.V Chip Claims FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE N CHEM87-	o: Pag 34	ge Numbe 3	er			
rom (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm
.3	59.6	MAFIC FLOW Moderately sheared carbonitized mafic flow with trace to 2 % epidote grains and local trace pyrite cubes, up to 3 mm. Hosts quartz - carbonate veins up to 5 cm thick.	на на страна 1949 — Страна 1940 — Страна 19									
		Foliations :. 57.6 : 55 degrees to core axis. 58.8 : 52 degrees to core axis.										
. 6	63.0	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Green siliceous felsic tuff with approximately 5 % stretched feldspar ash and trace to 4 % ( average 3 % ), 3 to 5 mm, quartz eyes local epidote, after feldspar, rich 1 to 3 mm beds at the base of the unit, above the basal 5 cm hydraulic fracture quartz - calcite vein. There are minor sericitic zones.	AB21906	59.7	59.8	.1	31	n/a	16	n/a	n/a 1	.220
		Foliations :. 60.0 : 61 degrees to core axis. 61.3 : 71 degrees to core axis.										
		Bedding :. 59.9 : 66 degrees to core axis. 62.8 : 41 degrees to core axis.										
.0	65.8	MAFIC FLOW Fine-grained green mafic flow with 15 to 30 % epidote grains locally. The flow is weakly sheared locally and at 64.6 there is 4 cm of quartz eye felsic tuff, indicating bedding at 51 degrees to core axis. No sulphides occur.										
		Foliations :. 63.4 : 43 degrees to core axis. 65.0 : 49 degrees to core axis.							•			
, 8	71.9	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF White to medium grey - green felsic tuff with 3 to 5 %, 1 to 4 mm, quartz eyes and approximately 5 %, 1 mm, stretched feldspar grains. The first 25 cm is composed of highly contorted sericite. There is 0.7 m of lost core from 67.0 to 68.0. There is 2 mm of fault gouge at 70.6. No sulphides are present.	AB21907	70.3	70.4	.1	63	n/a	<10	n/a	n/a :	.020
		Foliations :. 68.2 : 49 degrees to core axis. 69.2 : 42 degrees to core axis. 71.8 : 54 degrees to core axis.										1 - y . - y . -
		Bedding :. 66.2 : 46 degrees to core axis.										
PROPERTY:	Chemainus	J.V	Chip	Claims								
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FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From То (m) (m)

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Page Number

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HOLE No:

CHEM87-34

-----DESCRIPTION-----

Sample	From	To	Width	Cu	Pb	Zn	Ag	Au Ba	t
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb) (ppm)	

71.9 74.6 MAFIC TUFF Mafic tuff with trace quartz eyes, 10 to 25 % epidote grains, after feldspar, locally and locally up to 8 % chlorite as stretched grains, after hornblende (?). To 72.7 the tuff is extremely contorted. The rock has been subjected to moderate pervasive carbonatization and there are local veins of epidote - quartz calcite, quartz - calcite, and calcite, up to 7 cm in width.

> Foliations :. 73.2 : 73 degrees to core axis. 74.0 : 75 degrees to core axis.

- 74.6 75.1 MASSIVE OUARTZ EYE BEARING FELSIC TUFF Dark green siliceous felsic tuff with 3 to 5 %, < 1 mm to 5 mm, guartz eyes.
- 75.1 78.2 CHLORITIC SHEAR ZONE Sheared chlorite - carbonate schist with local very contorted zones. The foliation varies, but trends at approximately 80 degrees to core axis.
- 78.2 79.6 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Chloritic and sericitic tuff with 20 to 30 % fine-grained guartz and feldspar crystals to grains. Local carbonate veinlets and weak carbonatization.

Foliation : 79.1 : 56 degrees to core axis.

- 79.6 80.4 CHLORITIC SHEAR ZONE Sheared felsic and intermediate tuff with a dominant composition of chlorite - carbonate.
- 80.4 81.7 SERICITIC FELSIC CRYSTAL LAPILLI TUFF Felsic lapilli in a sericite schist matrix with local zones of sericitization. The tuff is weakly to strongly contorted.
- 81.7 91.3 MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF Locally light grey to medium green tuff with up to 10 % quartz eyes, < 1 to 5 mm, and up to 20 % feldspar grains, 1 to 3 mm.

#### Foliations :.

81.8 : 54 degrees to core axis. 84.9 : 60 degrees to core axis.

AB21909	86.7	86.8	.1	31	n/a	16	n/a	n/a	807

AB21908 74.7 74.8 .1 31 81 n/a 86 n/a n/a



FALCONBRIDGE LIMITED DIAMOND DRILL LOG

## HOLE No: Page Number CHEM87-34 5

From (m)	To (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		90.0 : 67 degrees to core axis.								· · ·		
		Bedding :. 85.2 : 55 degrees to core axis. 89.6 : 76 degrees to core axis.										
91.3	93.2	MASSIVE QUARTZ-FELDSPAR PORPHYRITIC FLOW Black crystal rich massive intrusive or extrusive rhyolite with 15 to 20 %, 1 to 3 mm, feldspar grains and 5 to 10 %, 2 to 5 mm, quartz eyes. Very siliceous with no evidence of bedding or flow barding	AB21910	92.6	92.8	.2	38	n/a	<10	n/a	n/a	812
		Danuting.										-
93.2	97.1	MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF	3001011	05 4	05 6		20	- 1-	16	- 1-	- 1-	097
		Foliations :. 93.5 : 61 degrees to core axis. 96.7 : 45 degrees to core axis.	AD21911	90.4	93.0	• 4	20	n/a	10	n/a	n/a	987
		Lost core :. 0.2 M from 94.0 to 95.1. 0.1 M from 95.1 to 95.4.										
97.1	98.0	MASSIVE QUARTZ-FELDSPAR PORPHYRITIC FLOW As from 91.3 to 93.2, but is dark green.										
98.0	98.4	MAFIC SILL Symmetrically zoned mafic sill with fine-grained speckled rims, 15 cm at upper contact and 2 cm at the lower. The core of the sill is a fine-grained green matrix with 3 %, 2 mm, feldspar grains. There is also a 1 to 2 cm quartz veins. It is non-magnetic. The foliation is at 60 degrees to core axis.										
98.4	101.8	MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF Felsic tuff with (?) bedding and local lapilli. Hosts approximately 5 %, 1 to 3 %, quartz eyes and 10 to 20 % locally, feldspar white grains. The unit is oxidized. Tan brown to green due to presence of thermal biotite. May be a flow, but appears to be tuffaceous.										
	• .	Foliations :. 99.8 : 58 degrees to core axis. 100.1 : 54 degrees to core axis.					••••••					
		Polding .										

Bedding :. 100.0 : 67 degrees to core axis.

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•	KOI DAI	FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	о: Ра 34	ige Numb 6	er			
From (m)	TO (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm)
101.8	103.3	MAFIC SILL Fine-grained green mafic sill with white barren bull quartz veins and locally epidote / feldspar phyric.										
103.3	104.5	FELSIC CRYSTAL LAPILLI TUFF Locally biotitic white rhyolitic lapilli tuff with felsic lapilli and feldspar crystals. From 103.9 to 140.1 there is rusty blocky										
		highly fractured core.										
		Bedding :. 103.6 : 68 degrees to core axis. 103.9 : 70 degrees to core axis.										
			· .			1997 - 1997 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -						
104.5	108.6	FINE GRAINED PLAGIOPHYRIC GABBRO Fine-grained gabbro with 5 to 7 %, 1 to 2 mm, feldspar grains and local quartz - chlorite veins.	AB21912	106.5	106.6	.1	263	n/a	116	n/a	n/a	96
108.6	116.2	ALTERED FELSIC CRYSTAL LAPILLI TUFF Bleached felsic tuff with felsic lapilli and sausuritized feldspar grains. Hosts 2 to 3 % fracture controlled pyrrhotite with trace chalcopyrite. There is 1.8 m of lost core as approximately 10 cm blocky, highly fractured core from 112.8 to 114.6. Thermal biotite	AE08751 AE08752 AE08753	111.4 112.8 114.6	112.8 114.6 116.2	1.4 1.8 1.6	45 28 57	5 8 8	22 18 26	<1 <1 <1	<5 <5 <5	1500 1600 1000
		appears throughout and increases with depth.										
		Foliations :. 115.0 : 80 degrees to core axis. 116.0 : 80 degrees to core axis.										
116.2	120.7	MASSIVE QUARTZ-FELDSPAR PORPHYRITIC FLOW Grey to green oxidized felsic flow with 10 to 15 %, 1 to 2 mm, sausuritized feldspar grains and 1 to 3 % quartz grains. The foliation waries locally and averages 55 degrees to core avis	AE08754 AB21913	116.2 118.4	117.7 118.5	1.5 .1	28 44	5 n/a	45 24	<1 n/a	<5 n/a	1000 1360
		isitation varies iscarry and averages 33 degrees to thre axis.								•		
120.7	121.4	MAFIC SILL Fine-grained green mafic sill with sharp lower and upper contacts, at 42 and 47 degrees to core axis. The sill hosts 1 to 2 % pyrite and trace carbonate veinlets. The foliation averages 45 degrees to core axis										
121.4	154.3	MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF Dark black to medium grey - green felsic tuff with locally variable crystal content, 2 to 25 % ( average 15 % ), 1 to 3 mm, feldspar grains to laths and trace to 5 % ( average ( 1 % ) guartz	AE08755 AE08756 AE08757	125.0 126.4	126.4 127.0	1.4 .6	41 88	6 6	31 73	<1 <1	5 (5	890 1800
		crystals. There are up to 5 % epidotized clasts, which range from	AB21914	128.6	128.8	.1	37	n/a	23	n/a	n/a	847

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and trace to 2 %, up to 2 mm, quartz eyes. There are minor local

From (m)	Т (1	o m)DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		1 cm by 0.5 cm to 10 cm thick and continuous across the core. Some clasts have been completely replaced by epidote and others have been rimmed by ep or have 20 to 50 % epidote interstitial to feldspar grains. There is very rusty, bleached and cooked tuff from 142.0 to 143.2 and from 146.2 to 151.6. There is only trace pyrite in the rusty zones. There are trace local, approximately 5 cm superior and other to the solution.	AB21915 AE08758 AB21916 AE08759 AE08760 AE08761	134.6 146.6 148.8 148.1 149.0 150.0	134.8 148.1 148.9 149.0 150.0 151.9	.1 1.5 .1 .9 1.0 1.9	56 12 38 27 11 13	n/a 6 n/a 5 11 5	25 31 21 28 26 23	n/a <1 n/a <1 <1 <1	n/a <5 n/a <5 <5 <5	675 1200 680 1100 930 1200
		thermal biotite is a dominant feature and it occurs to a lesser degree throughout.	and Antonia Antonia Antonia Antonia		•							
		There are minor other lithologies :. 123.7 123.8 Rusty mafic sill. 126.4 127.0 Intermediate lapilli tuff with epidote lapilli, 20 to										
		35 %, in a thermal biotite matrix with 1 to 2 % pyrrhotite and trace chalcopyrite.	e sin en									
 • • .		Foliations :. 126.6 : 59 degrees to core axis. 131.5 : 61 degrees to core axis.										
		134.5 : 41 degrees to core axis. 144.1 : 60 degrees to core axis. 152.4 : 56 degrees to core axis.										
154.3	155	.9 INTERMEDIATE LAPILLI TUFF 30 to 40 % epidote grains and lapilli in a intermediate to felsic matrix. The tuff is massive and possibly is a flow.	AB21917	154.5	154.6	.1	51	n/a	125	n/a	n/a	120
155.9	169	.7 MASSIVE QUARTZ-FELDSPAR CRYSTAL TUFF At upper contact is similar to 121.4 to 154.3 til 161 where clasts disenser and tuff is locally light green and black zones with on	AB21918	163.5	163.6	.1	34	n/a	24	n/a	n/a	1970
		average 5 % feldspar and quartz crystals. There are minor dust tuff beds. Locally there is fracture controlled carbonatization.	ana Ana Ar Ar									
an Roman Roman		Foliations :. 162.3 : 43 degrees to core axis. 163.5 : 20 degrees to core axis.										
		166.0 : 54 degrees to core axis. 168.5 : 50 degrees to core axis.										
a si ja a		Bedding :. 162.5 : 43 degrees to core axis. 162.0 : 70 degrees to core axis.										
169.7	224	.0 INTERMEDIATE TO MAFIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF	AR21919	- #852 A PS	185 6	- 1	181	n/a	234	n/a	n/s	805
		with a gradational transition into rhyolitic tuff for 1 to 2 m. The tuff hosts 5 to 30 % epidote to feldspar grains, up to 2 mm,	AB21920 AB21921	201.5	201.6	.1	129 196	n/a n/a	134 107	n/a n/a	n/a n/a	366 638

AB21921 206.5 206.6 .1 AE08762 212.1 213.1 1.0

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HOLE No: Page Number CHEM87-34 8

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From (m)	T0 (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		beds, with chlorite crystals after hornblende. There is trace to nil local chalcopyrite and pyrite associated with epidotization. Thermal biotite occurs from 204.5 to the end of the unit. There is rust from 174 to 187.5 locally.	AB21922 AE08763	218.4 223.0	218.5 224.0	.1 1.0	329 182	n/a <5	140 73	n/a (1	n/a (5	171 1600
		Foliations :. 173.0 : 36 degrees to core axis. 178.5 : 15 degrees to core axis. 184.5 : 40 degrees to core axis. 188.4 : 40 degrees to core axis. 194.0 : 36 degrees to core axis. 203.6 : 54 degrees to core axis. 209.5 : 50 degrees to core axis. 215.4 : 51 degrees to core axis. 223.7 : 61 degrees to core axis. Bedding :. 185.4 : 55 degrees to core axis. 195.8 : 53 degrees to core axis.										
224.0	225.0	FELSIC TUFF Felsic tuff with thermal bt and, trace quartz eyes and 30 % sulphides. The sulphides are 12 % pyrite, 12 % pyrrhotite and 6 % chalcopyrite. The sulphides occur as disseminated and pseudo- stringers. Pyrite occurs as cubes which occur separately from and with the other sulphides. The pyrrhotite and chalcopyrite are ductilely deformed and occur together.	AE08764 AB21923	224.0 224.5	225.0 224.6	1.0 0.1	6900 18	17 n/a	151 18	2 n/a	35 n/a	1400 1690
225.0	225.4	INTERMEDIATE ASH TUFF Andesitic fine-grained green tuff with basal quartz eyes. The tuff	AE08765	225.0	225.4	0.4	568	<5	92	<1	<5	<20
225 4	225 6	has been subjected to pervasive carbonatization.										
	22010	15 % chalcopyrite and 15 % pyrrhotite, with a swirled deformation texture, with quartz veins, which host trace chalcopyrite in a felsic rock, tuff (?).	AE08766	225.4	225.6	0.2	7600	<5	195	2	25	60
225.6	228.4	FELDSPAR PORPHYRITIC MAFIC FLOW Fine-grained green mafic flow with feldspar phenocrysts, similiar to a chilled margin gabbro. Local quartz - epidote veinlets occur. Sheared at 40 degrees to core axis for lower 1 m. There is trace disseminated pyrite. Trace quartz crystals occurs. The foliation at 226.7 is at 44 degrees to core axis.										
228.4	231.1	FELSIC FLOW										

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	From (m)	To (m)	DESCRIPTION	Sam N	ple Fro	om To 1) (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
			Fine-grained massive felsic flow with purple tint, due to the biotite. Blocky, highly fractured core from 228.8 to 231.1.	ermal									
	231.1	242.0	MAFIC FLOW Medium green matic flow with 20 to 30 % enidote grains. There	are AB21	224 233	3 233 4	1	27	n/a	110	n/2	n/2	526
			local quartz +/- chlorite +/- epidote veins. In the upper 1 m are felsic dust tuff beds or cherty beds, 1 mm to 2 cm thick bedding at 60 degrees to core axis.	h there k with	<i></i>	5 255.4	•1	41	ц/а	110	п, а	11 <i>7</i> a	230
											÷		
	242 0	247 3	SEDICITIC AUXONT EVE DENDING EELSIG THEE										
	242.0	247.3	8 to 9 %, 2 to 8 mm, quartz eyes in a rhyolitic tuff to seric schist, which is weakly to moderately contorted with local k bands. Bedding appears to be sub-parallel to the foliation.	cite AB21 cink	925 242.	1 242.2	.1	44	n/a	49	n/a	n/a 1	1090
			Foliations :. 242.3 : 41 degrees to core axis. 243.5 : 61 degrees to core axis.										
			245.3 : 58 degrees to core axis.										
÷ .													
	247.3	247.4	FAULT GOUGE Fault gouge to clay green rubble.										
	247.4	269 7	MARTC FLOW										
			Andesitic fine-grained light green flow with approximately 30 to 1 mm epidote grains and local quartz +/- chlorite +/- carb	% up AB21 bonate	926 264.	6 264.8	.1	142	n/a	98	n/a	n/a	187
			veins to veinlets. There is local trace to 0.5 % disseminated pyrite. Contain locally trace to 4 % quartz grains, averages approximately 1 %.	<b>l</b>									
			Foliations ·										
			249.0 : 46 degrees to core axis. 261.0 : 51 degrees to core axis.								8 - 1 1		
	269.7	271.0	FAULT COUGE										
			Andesitic fault gouge and clay for 30 cm from upper contact a then felsic fault gouge to lower contact.	and									
	271.0	324.8	PYRITIC QUARTZ-SERICITE SCHIST										
jer i L			271.0 272.8 Highly to moderately contorted felsic with a deformational breccia structure. Hosts 1 to 2 %	AEO8 AEO8	767 272. 768 280.	8 274.1 0 281.0	1.3	712 912	64 286	560 5200	1 <1	80 30	1200 1500
			272.8 273.0 FAULT ZONE black pyrite rich matrix with minor brecciated clasts	AEOS AEOS	709 281. 770 282. 771 285	0 282.0	1.0	222 20	438 42 91	1587 396 262	1	45 5	1600
			273.0 274.1 Brecciated zone with fault gouge and black fault material. Trend at approximately 70 degrees to co	AE08 AE08 Dre AE08	172 286. 173 287.	0 287.0 0 288.0	1.0 1.0	57 173	38 20	96 48	<1 <1	10 35	2000 2000

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From (m)	T0 (m)			DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm	)
				axis. 2 % pyrite occurs.	AE08774	288.0	289.0	1.0	300	24	31	(1	65	1300	
		274.1	274.9	Weak pervasive carbonatization in white rhyolitic rock	AE08775	289.0	290.0	1.0	122	12	16	1	45	890	
				with trace to 1 % disseminated pyrite.	AE08776	290.0	291.6	1.6	68	6	7	(1	20	860	
		274.9	275.0	Mafic sill with 1 % disseminated pyrite.	AE08777	291.6	292.6	1.0	70	6	. 7	1	20	550	
		275.0	281.0	Brecciated felsic with local minor fault slips and	AE08778	292.6	293.8	1.2	95	8	7	(1	30	630	
				guartz veins. Pyrite content averages 2 % and locally	AE08779	293.8	295.0	1.2	186	11	232	(1	20	1800	
				there is trace to nil chalcopyrite.	AE08780	295.0	296.0	1.0	237	108	415	(1)	- <sup>-</sup> 5	1800	
		281.0	281.7	5 to 6 % banded pyrite, bands up to 7 mm at average	AE08781	296.0	297.1	1.1	275	17	1814	<1	30	1800	
				foliation of approximately 40 degrees to core axis.	AE08782	297.1	298.1	1.0	482	48	1675	2	130	1500	
				Pyrite is fine-grained and hosts trace to nil	AE08783	298.1	299.0	. 9	449	68	487	1	55	1700	
				chalcopyrite.	AE08784	299.0	299.9	.9	896	13	275	<1	15	1700	
	·	281.7	285.6	Sericite schist with local guartz +/- carbonate veins	AE08785	300.0	300.7	.7	569	<5	342	(1	30	640	
				and 1 to 2 % disseminated pyrite with minor local	AE08786	300.7	302.0	1.3	986	10	185	(1	15	1400	
				micro-bands of fine-grained pyrite. There is minor	AE08787	302.0	303.0	1.0	416	16	210	(1	15	1400	
				fuchsite at 282.75. Foliation varies locally from 20 to	AE08788	303.0	304.0	1.0	277	45	352	(1	95	1100	
				30 degrees to core axis. There is minor local fault	AE08789	304.0	305.0	1.0	122	38	432	(1	55	1700	
				gouge.	AE08790	305.0	306.0	1.0	132	13	217	<1	45	1600	
		285.6	291.6	Highly contorted with chevron style kinking. Local	AE08791	306.0	307.0	1.0	122	10	57	(1	15	1300	
				fault gouge at 288.8, 289.4 and 291.4 for on average	AE08792	307.0	307.8	.8	82	12	49	(1	<5	<20	
	· · · · · · ·			10 cm. Pyrite is disseminated and banded conformable to	AE08793	307.8	309.4	1.6	54	21	27	(1	< 5	860	
				foliation, which is sub-parallel to the core axis.	AE08794	309.4	310.4	1.0	50	8	17	(1	35	1200	
				There is average 4 % pyrite, locally 2 to 7 %. There	AE08795	310.4	312.0	1.6	19	16	33	(1	25	1200	
				are local quartz veins with trace pyrite cubes. There	AE08796	313.0	314.5	1.5	80	13	386	1	20	1100	
			1.1	is trace chalcopyrite locally.	AE08797	314.5	316.0	1.5	39	28	141	1	35	990	
		291.6	293.8	Silicified rock with approximately 2 % disseminated	AE08798	316.0	317.5	1.5	50	97	210	2	50	1200	
				pyrite and sericite fault gouge at 292.6 and 293.6.	AE08799	320.0	322.0	2.0	173	147	1403	4	140	2300	
				Locally contorted with foliation trend at approximately	AE08800	323.5	324.5	1.0	248	105	1297	1	45	2400	
				25 degrees to core axis. Minor fuchsite at 292.35.											
		293.8	297.1	White, bleached and highly contorted sericite schist											
				with local pyrite band rich zones, up to 10 % over 10											
				cm, average 1 to 2 % pyrite, most is disseminated.							1 1 A A 👘		· · ·		
				Local chalcopyrite blebs. 1.5 cm fuchsite rich band at											
				295.2.											
		297.1	297.4	Light green mafic sill with 22 cm barren bull quartz											
				vein core.											
		297.4	297.5	Fault gouge.											
		297.5	298.1	Moderately contorted silicified rock with 2 to 3 %											
				disseminated and banded pyrite with trace fuchsite.											
		298.1	299.0	Sericite and carbonate fault gouge.						1 - C					
		299.0	299.9	Contorted weakly silicified. Micro-scale chevrons. 1 to											
				2 % very fine-grained disseminated pyrite.	· · ·										
		299.9	300.6	Mafic sill or dyke, fine-grained light light green with											
				1 to 3 % carbonate veinlets that host 1 % pyrite cubes											
				and grains.											
		300.6	307.0	Sericite schist with approximately 2 % pyrite											
	يد أيدين م	COMPLEX.		disseminated and local bands, up to 2 mm. 10 blebs of	an an tha an that and a star	1.181.1			· · · · ·		-				· w.
				chalcopyrite at 300.9 and trace to nil elsewhere.											
a di si				Locally weakly to strongly contorted. Foliation at 302											
				is 50 degrees to core axis and at 305 is at 62 degrees											
				to core axis. From 303.2 to 303.4 and 305.0 to 305.1											
				there are mafic sills as from 299.9 to 306.6.			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1								

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### From To (m) (m)

(111)

307.0 307.8 Dark green mafic sheared and carbonitized sill. Upper contact at 20 degrees to core axis and lower contact is sharp, but irregular.

-----DESCRIPTION------

- 307.8 308.5 Contorted white to light green sericite schist with approximately 5 %, up to 2 mm, quartz eyes.
- 308.5 308.7 Mafic sill as from 307.0 to 307.8.
- 308.7 309.1 Sericite schist as from 307.8 to 308.5 with silicification below the sill for approximately 10 cm. Foliation at 309.1 : 59 degrees to core axis.
- 309.1 309.4 0.3 m of lost core.
- 309.4 310.1 2 to 3 % banded pyrite in contorted guartz sericite schist. Local guartz eyes.
- 310.1 312.2 Quartz sericite schist with 3 to 5 %, 1 to 3 mm, quartz eyes and trace to 1 % local disseminated and banded pyrite.
- 312.2 312.3 Mafic sill, as from 308.5 to 308.7 with fault gouge over lower 5 cm.
- 312.3 324.5 Quartz sericite with local quartz eyes, up to 5 %, up to 4 mm. Local fuchsite, 1 cm thick, semi-continous band at 315 .1. Pyrite averages approximately 1 %, locally trace to 2 % is both disseminated and rarely bands, fine-grained up to 3 mm. Foliations : 316.1 : 35 degrees to core axis, 320.4 : 51 degrees to core axis, 323.2 : 38 degrees to core axis and 324.4 : 51 degrees to core axis.

324.5 324.8 Fault gouge and quartz veins.

#### 324.8 365.8 GABBRO

- 324.8 348.1 Fine-grained gabbro, chilled margin, feldspar phyric, up to 20 %, up to 2 mm. Contains numerous epidote, quartz, and carbonate veins and veinlets. There is minor hematite lining some vnlt' and after ilmenite. Up to 5 % leucoxene also occurs and the rock is weakly magnetic.
- 348.1 357.4 Coarse grained gabbro with 3 to 5 % weakly magnetic ilmenite.
- 357.4 361.4 Medium grained.
- 361.4 365.8 Fine-grained gabbro, less veining than at upper contact.

## 365.8 380.6 CHERTY BLACK ARGILLITE AND SILTSTONE WITH MINOR GREYWACKE

- 365.8 368.9 Medium to dark green to grey siliceous siltstone with minor black argillite beds and local fracture controlled carbonate veinlets and local quartz veins. There is trace to 0.5 % fracture controlled pyrite. Bedding at 368 is at 60 degrees to core axis.
- 368.9 370.3 Black cherty argillites with local whitish chert beds. There are numerous cross-cutting fracture controlled carbonate veinlets. The zone hosts approximately 5 % pyrite, about 1 % is disseminated and fine-grained, 1 %

AD02652	367.8	368.9	1.1	32	7	64	<1	۲5	2800
AD02653	368.9	370.3	1.4	50	14	58	(1	<5	4500
AD02654	371.1	372.0	.9	37	7	111	(1	<5	2900
AD02655	372.7	374.0	1.3	33	···· 7	58	<1	<5	2700
AD02656	374.0	375.0	1.0	35	9	54	(1	<5	4000
AD02657	375.0	376.0	1.0	31	<5	87	<1	<5	4600
AD02658	376.0	377.0	1.0	25	. 7	90	(1	(5	3500
AD02659	377.0	377.7	.7	32	6	73	(1	(5	3500
AD02660	377.7	378.5	.8	58	11	59	(1	<5	3700

## HOLE No: Page Number CHEM87-34 11

Sample From To Width Cu РЪ Zn λα ÂIJ Ba No. (m) (m) (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm)

AB21927	356.8	357.0	. 3	260	D n/a	103	- n / n 1 >	. (5	200	
			• •	200	117 a.	105	n/a	ш/а	540	

3 DOOCES 305 0

226 0

From To

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### HOLE No: CHEM87-34 Page Number 12

Fro (m	m To ) (m)		DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (pph	Ba ) (ppm)
			is fracture controlled and 3 % is in beds as original	AD02661	378.5	379.5	1.0	35	7	51	<1	.<5	3300
			pyrite beds and/or as replacement.	AD02662	379.5	380.6	1.1	52	8	163	< (1	35	2000
		Bedding :.											5
		369.0 : 30	degrees to core axis.										
		369.5 : 33	degrees to core axis.										
		370.2 : 40	degrees to core axis.										
		370.3 371.	1 Grev brown siliceous sandstone hosts minor argillite										
			clasts and 1 to 2 % disseminated and banded pyrite.						1.1				
			There are guartz grains which fine out downhole.										
		371.1 372.	0 Black argillite and tan chert with minor carbonate										
			veinlets and up to 3 % pyrite in the argillite. Bedding										
			at 371.8 is at 40 degrees to core axis.										
		372.0 372.	7 Sandstone as before.					· · · · · ·					
		372.7 372.	9 Black cherty argillite with 5 % pyrite.										
		372.9 380.	4 Tan cherty sand/siltstones interbedded with cherty										
			black argillites. All host fracture controlled carbonate								•		
			vnlt'. From 377.7 to 378.5 there is a black argillite										
÷.,			with numerous 1 to 3 mm pyrite heds / hands total										
			purite approximately 5% Redding · 374 8 · 46 degrees										
			to core avis 376 0 · 45 degrees to core avis 378 0 ·										
			A3 degrees to core avis and $380.4$ : A5 degrees to core										
			ay degrees to core axis and sourd . As degrees to core										
		380 4 380	Enis. 5 Peridotite as below										
		380 5 380	6 Green chert or siltstone										
		500.5 500.	o oreen chert of sirtstone.										
380 6	395 4	DEDIDOTT											
500.0	101.4	Modium to	dark groon fina-grained logally washin to many strengly	1001000	300 7	200 0	4	477		401			0.520
		medium co o	adia green rine-grained locally weakly to very strongly	AD21920	380.7	300.0	.1	41.	n/a	401	n/a	n/a	2630
		Thorn in	olew and fault gauge from 202 0 to 202 1 which hasts 0 to	AD02003	300.0	301.7	. 1.1	94	· D	1//	(1)	()	1900
		linere is o	The upper contest is new share at 201 0 three is	AD02664	381./	381.9	. 4	239	8	120	(1 )	- 75	1800
		J & aspest	bs. The upper contact is very sharp at 381.8 there is a	AD02665	381.9	382.8	.9	145	1	161	(1		830
		/ mm quart:	z vein with 2 % chalcopyrite. Minor quartz - calcite -	AB21929	384.3	384.4	.1	8	<2	100	<1	<1	162
		biotite ve	ining at the base.										
										1997 - 1997 1997 - 1997 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19			
205 4													
385.4	391.1	CHERTY BLA	CK ARGILLITE AND SILTSTONE WITH MINOR GREYWACKE		1.1.1.1								
		385.4 38/	Green cherts and greywackes.	AD02666	387.0	388.0	1.0	33	5	80	<1	<5	5600
		387.3 389.1	s Green and Drown cherts and cherty argillites with	AD02667	388.0	389.0	1.0	58	7	27	<1	<5	11000
			fracture controlled carbonate and local fracture	AD02668	389.0	390.0	1.0	72	8	36	<1	< 5	11000
			controlled pyrite pseudo-beds, total pyrite	AD02669	390.0	391.0	1.0	39	6	24	<1	<5	3900
			approximately 2 %.										
*		389.8 390.	2 1 to 2 % disseminated pyrite in a dark green greywacke.							11			
		390.2 391.3	l Cherts and argillites as before.										
		Bedding :.				1 A							
		360 0 . 35	demand he are ends										

368.8 : 35 degrees to core axis. 388.4 : 26 degrees to core axis. 390.5 : 38 degrees to core axis.

Lost core :. 0.4 M from 388.6 to 389.0.



HOLE No: Page Number CHEM87-35 1

Cu

(ppm)

Pb

Zn

(mog) (mog)

Ag

(ppm)

Au

Ba

(ppb) (ppm)

Claim No. CHIP 1 Section No.: Line 47+00 E

Logged By: S.G. Enns and J. Pattison Drilling Co.: Burwash Enterprises egg & Co and XRAL

	Started: 30 Completed:	-June-1987 5-July-1987							A:	ssayed	By: Bo	ondar-Cle
	· _ · · _	-		• • <u>•</u> • • •					C	ore Siz	:e: NQ	
	Purpose: To VLF anomal	define stratigr ies tested by ho	aphy north les CHEM87	of IP a -34 and	nd 36.							
						DIP	TESTS					
					Azi-			Azi-	i			
		· · · ·		Length	muth	Dip	Length	muth	Dip			
				32.60	206.0	-52.0	281.90	206.0	-47.5			
				127.10	206.0	-48.0	353.60	206.0	-42.0			
				215.50	206.0	-49.0						
	'rom To								Sample	From	To	Width
•	(m) (m)		DE	SCRIPTIO	N				No.	(m)	(m)	(m)

FALCONBRIDGE LIMITED

DIAMOND DRILL LOG

#### .0 3.4 OVERBURDEN AND CASING

3.4 19.1 FELSIC QUARTZ CRYSTAL TUFF

> Overall colour of unit is pale greenish-gray but in detail white and AD02480 903 16.8 16.9 .1 32 n/a 28 n/a n/a dark green slightly chloritic steaks produce a distinctly banded appearance. White 2 to 8 cm bands are parallel to foliation as beds (?). Unit is strongly foliated and sericite-rich. Foliation and bedding (?) 60 degrees to core axis at 8.7 m. 50 Degrees to core axis at 10.7 m.

8 to 15 % 2 to 8 mm guartz eyes, up to 1 cm locally; feldspars generally nil to minor.

2 to 3 mm white guartz veins about 2 per m 70 to 80 degrees to core axis.

Rare pyrite as 1 to 4 mm cubes up to 1 cm - less than 1 %.

White irregular guartz vein masses several cm wide at 17.0 to 17.4 m and 18.2 to 18.4 m.

Fine grained dark green section 17.4 to 17.6 m - early mafic dyke ?. Lower contact becomes darker green but retains guartz content and is weakly calcareous.

19.1 24.6 MAFIC TUFF

AD02481 103 n/a 142 21.3 n/a n/a

Probably a sheared mafic tuff. Unit has a dark green colour, is streaky in appearance, strongly foliated and calcareous. 5 to 6 % 2 to 3 mm quartz eyes are present in this unit. Abrupt, gradational upper contact; lower contact grades into massive

PROPERTY: CHEMIANUS J.V. - Chip Claims

Hole Location: 47+00 E 1+83 N

NTS: 92B13	UTM: 5416248 N	431862	Ε
Azimuth: 210	Elevation: 710	m	
Dip: -50	Length: 359	.1 m	

	C						• • •					
	PROPERT	Y: CHEMIANUS J.V. FALCONBRIDGE LIMITED DIAMOND DEILL LOG		· ·		HOLE N CHEM87-	lo: Pa 35	ge Numb 2	er			
From (m	n To ) (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb	Ba ) (ppm)
		guartz bearing tuff.				N 11						
		At 24.2 m a massive dark green quartz crystal tuff is present. Locally, epidote stringers parallel foliation cleavage.					a Ala Ala ana					
	1 A.								•			
	1. 									•		
24.6	36.5	CHLORITIC FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF					2 - 1 - 1					
		Unit has a dark green colour, is strongly follated 60 degrees to	AE08684	25.0	26.0	1.0	317	<5	63	<1	<5	1100
		Ouartz eves 4 to 7 %. 2 to 6 mm and up to 8 mm and grav feldspar 7	AE08686	20.0	27.0	1.0	51	· (5	49	(1	(5)	760
		to 10 %, 3 to 6 mm.	AE08687	28.0	29.0	1.0	43	< 5	35	<1	5	770
		At 25 to 26 m a few white flattened lithic clasts 2 to 5 mm by 20 mm										
		long. Purito as foliation parallal stringars 2 to 2 % from 25 to 20 m										
		Unit has a steaky appearance caused by variably chlorite-rich dark green and pale green epidote (after feldspar) bands 5 to 10 mm wide. Weakly calcareous.										
				1.1.1								
36.5	108.2	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF										
		Unit is similar to 3.4 to 19.1 m.	AD02482	40.3	40.4	.1	36	n/a	38	n/a	n/a	1070
		upper contact grades from 10 % feidpspar to quartz-rich sericite	ADU2483	53.2	53.3	.1	37	n/a	36	n/a	n/a	1120
		12 to 15 %, 2 to 8 mm guartz and abundant sericite.	AE08689	62.3	63.3	1.0	4	6	21	- (1	(5	1100
		Generally sub-massive; locally streaky due to variable sericite	AD02484	70.2	70.3	.1	25	n/a	27	n/a	n/a	1250
		content.	AD02485	85.5	85.6	.1	23	n/a	26	n/a	n/a	1020
		A few sericitic lithic clasts parallel foliation cleavage at 41.2 m.	AD02486	95.3	95.4	.1	49	n/a	64	n/a	n/a	1240
		Pollation at 40.2 m is at 60 degrees to core axis.	AD02487	105.1	105.2	•1	34	n/a	24	n/a	n/a	649
		degrees to core axis at 35.5 to 35.7 m.										
		Streaky sections 46.7 to 49.0 defined by finer grained more										
		chlorite-rich.										
		And epidote altered feldspar bands (beds ?) 60 degrees to core axis									· .	
		Fale pistachio green enidote veined sections with irregular guartz										
		veining 43.9 to 44.2 m.										
		Feldspars generally more common, 6 to 10 % 2 to 6 mm and generally		-								
		epidote altered at 50 to 53 m.	. 1	ł								
		At 54.1 to 54.5 m white quartz veins with dark chlorite.										
		appearance to this generally massive unit. Local steaking is caused										
		by variable chlorite content.										
		Foliation of streaks at 62.0 m is at 60 degrees to core axis.										
		Small fault (chlorite slip) 5 cm wide at 59.2 m.					•					
		OCCassional pyrite crystals, overall less than quarter %.										
		reaches 2 to 3 % in fine grained siliceous looking grav guarty										
		sericite tuff.	4									

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### From To (m) (m) -----DESCRIPTION------Below 66.0 m the unit becomes predominantly greener due to increase in chlorite. Feldspar also increases to 8 to 10 % as 2 to 4 mm crystals. Foliation at 69.0 m is at 55 degrees to core axis. Stretched lithic clasts at 69.5 and 72.3 m. White guartz vein masses accompanied by dark chlorite at 71.0 to72.2 m. From 69.0 to 90.0 m monotonous lithology of variably streaked overall light greenish quartz feldspar crystal tuff. Probable bedding is defined by increased darker chlorite content relative to quartz and feldspar. Feldspar generally is subordinate in amount to guartz. Bedding defines foliation cleavage:. 50 Degrees to core axis at 74.6 m. 55 Degrees to core axis at 80.0 m. 55 Degrees to core axis at 80.3 m. 55 Degrees to core axis at 86.8 m. 55 Degrees to core axis at 93.7 m. 50 Degrees to core axis at 101.4 m. Blocky core 88.2 to 89.2 m small fault 35 degrees to core axis. Blocky core 90.4 to 91.2 m. Rare pyrite crystals 4 to 6 mm at 89.1 m. Small fault with gouge 92.5 m. Small fault with gouge 105.8 is at 50 degrees to core axis. Dark green chlorite calcite epidote sheared sections:. 50 Degrees to core axis at 97.5 98.1 m.

50 Degrees to core axis at 97.5 98.1 m. 50 Degrees to core axis at 99.1 99.3 m with small fault. 50 Degrees to core axis at 102.2 102.9 m. Lower contact sharp.

## 108.2 113.5 QUARTZ-FELDSPAR PORPHYRITIC FELSIC FLOW This interval is massive less sericitic and only moderately foliated AD02488 110.2 110.3 .1 24 n/a 25 n/a n/a 1170 compared to the above unit. Darker gray coloured, possible flow unit. Moderate foliation at 109.0 m is at 55 degrees to core axis.

113.5 127.8 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Same gray colour as unit above but with stronger foliation. AD02489 124.8 124.9 .1 105 n/a 35 n/a n/a 726 Lithic clasts here and there. 10 to 13 % 2 to 4 mm quartz eyes, 8 to 10 % 2 to 4 mm feldspars with proportional ratios quite variable in broad 0.1 to 0.7 m bands. Also, local 1 to 7 cm dark green chlorite shear zones. Local white quartz veins here and there parallel foliation. Lithic clasts 115.3 m. Fault with gouge 114.2 to 114.9 m; adjacent foliation 45 degrees to

#### HOLE No: Page Number CHEM87-35 3

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	



#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From To (m) (m)

(m)

Sample From To Width Cu Pb Zn No. (m) (m) (m) (ppm) (ppm)

HOLE No:

CHEM87-35

Page Number

Δ

Pb Zn Ag Au Ba

(ppm)

(mqq) (dqq)

core axis Lost core 0.4 m. Foliations:. 55 Degrees to core axis 121.2 m. 53 Degrees to core axis 125.0 m. Blocky core 126.5 to 127.8 m.

127.8 128.6 EARLY MAFIC SILLS

Dark mafic dyke/sill with sharp upper and lower contacts respectively 90 and 60 degrees to core axis. Lithology is fine-grained moderately magnetic (in contrast to tuffs), highly calcareous (HCl fizz) and riddeled with calcite veinlets.

-----DESCRIPTION-----

#### 128.6 136.0 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF

Similar to 113.5 to 127.8 m but with dark streaks of sheared dark gray argillaceous bands 3 to 5 mm wide sheared beds. Bedding; 45 degrees to core axis at 131.7 m. 48 Degrees to core axis at 135.4 m. Local large isolated quartz eyes 8 to 12 mm. Small fault @ 130.9 m 58 degrees to core axis. White 0.2 m quartz vein @ 133.5 m. Last 0.2 m of interval is more strongly sheared. Less than 1/4 % pyrite dissemination as 1 to 2 mm crystals here and there.

#### 136.0 141.0 QUARTZ-FELDSPAR PORPHYRITIC FELSIC FLOW

White unit; contrastinly distinctive from above unit, especially near the top of this interval. 15 % 2 to 6 mm white feldspar; 7 to 10 % 2 to 4 mm quartz. Banded 1 to 3 cm wide; otherwise massive: 55 degrees to core axis at 137.2 m.

#### 141.0 148.0 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF

This interval is strongly foliated, darker gray than above unit and grades from it. The composition looks similar but with more sericite and foliation parallel irregular 5 to 15 mm calcite patches (some pink calcite). Fault with gouge 35 to 50 degrees to core axis at 144.3 145.3 m Lost Core 0.5 m.

AD02490 137.4 137.5 .1 46 n/a 33 n/a n/a 1070

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

HOLE No: Page Number CHEM87-35 5

Sample	From	То	Width	Cu	Pb	Zn	Ag	Au	Ba
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

From To (m) (m)

Lower contact 40 degrees to core axis.

## 148.0 155.5 FELSIC ASH TUFF

Felsic to intermediate composition dust and ash tuff with hard cherty intervals and minor dark green intervals. Strong foliation cleavage, except near faults 60 to 68 degrees to

-----DESCRIPTION------

core axis. Faults : 149.0 to 149.2 m 53 degrees to core axis Lost Core 0.2 m. 150.0 to 150.4 m 30 to 74 degrees to core axis gouge and Lost Core 0.4 m.

150.7 to 150.8 m 70 degrees to core axis.

#### 155.5 158.2 EARLY MAFIC DYKE

Sharp upper contact 62 degrees to core axis ; lower contact broken core.

White calcite veinlets and irregular patches; pervasive calcite throughout.

Fine grained equigranular.

158.2 160.7 FELSIC CRYSTAL ASH TUFF Mainly broken core hard, cherty, and siliceous. 1/2 % pyrite dissemination.

#### 160.7 163.9 EARLY MAFIC DYKE

As above in 155.5 to 158.2. Small 2 cm fault with gouge at 162.5 m 80 degrees to core axis.

#### 163.9 183.8 FELSIC CRYSTAL LAPILLI TUFF

Mottled appearance with gray-green and pink tinged white patches. Possible weak chloritic alteration on fractures especially 166 to 170 m. Pale pink hue appears to be on larger lithic clasts 2 to 3 cm with poorly defined outlines. (Perhaps a welded lithic tuff ?) Very fine grained less than 1/2 mm disseminated magnetite crystals noted - about 1/2 % and cause of pinkish tinge. Darker matrix to the pale patches (clasts) is quartz feldspar crystal composition similar to unit 141 to 148 m above.

AD02492	169.5	169.6	.1	44	n/a	35	n/a	n/a	786
AD02493	177.8	177.9	.1	63	n/a	47	n/a	n/a	1100
		i ka shakara shakara							

AD02491 157.6 157.7 .1 47 n/a 86 n/a n/a 682

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### From To (m) (m) -----DESCRIPTION-----

The intervals 170.4 to 171.6 m and 174.0 to 175.0 m looks like a white quartz crystal tuff, with distinctive quartz eyes. Small mafic dyke 172.5 to 172.8 m - weakly magnetic. Small faults with gouge : 30 degrees to core axis at 173.5 m. 45 Degrees to core axis at 176.3 m. Lower 2 m possibly weakly tectonized - pinkish tinge conspicuous due to disseminated fine grained magnetite presence.

183.8	227.7 QUARTZ-FELDSPAR PORPHYRITIC FELSIC FLOW	
	This unit has a massive uniform structure without mottled	AD02494
	appearance, and has a pinkish tinge.	AD02495
	10 % 2 to 6 mm quartz and 8 to 12 % 2 to 4 mm feldspar and about 1 5	AD02496
	disseminated magnetite. Local, 8 to 9 mm quartz-eyes.	AD02497
	Fairly uniform 50 to 55 degrees to core axis foliation cleavage	
e tradición de la composición de la com	throughout unit.	
	3 Cm shear slip, dark-green with magnetite and hematite	
	concentrations at 193.3 m and common 193.5 to 194.4 m.	
	From about 197 to 206 m this interval is cross-cut by semi-random	
	sericite and minor chlorite fractures about 15 to 20 per metre. At	
	204.0 to 204.5 the fracturing reaches pseudo-breccia intensity.	
	Small, creamy-white 1 to 2 cm felsic clasts here and there eg. 209 m.	
	At 203.5 m, a 1 cm guartz vein with blades of hematite (?).	
	Below 209.0 m get fine grained short sections of felsic flow.	
	Local fine grained magnetite concentrations 4 to 5 % magnetite @	
	197.2 to 197.4 m in short sections 50 degrees to core axis.	-
	At 212 to 217 m the unit is fine to medium grained and becomes pale	
	greenish in colour; it displays a local clastic (lithic) structure	
	due to flow brecciation (?).	
	Below 217 m unit is generally similar to above 212 m with pinkish	
	tinge and conspicuous quartz eyes and accessory $1/2$ to 1 $\%$	
	accessory magnetite.	a de la composición d
	Local shears with brecciation:.	
	30 Degrees to core axis at 212.1 m.	1 1 L
	60 Degrees to core axis at 218.9 m.	
	60 Degrees to core axis at 219.1 m.	
	60 Degrees to core axis at 221.1 m.	
	45 Degrees to core axis at 224.5 m gouge.	
	50 Degrees to core axis at 224.8 m.	
	56 Degrees to core axis at 227.0 m gouge.	
	Core becomes increasingly blocky below 222.5 m and foliation	
	cleavage core axis angles gradually change to 45 degrees to core	
	axis.	
	Lower contact faulted.	

AD02494	187.0	187.1	.1	31	n/a	37	n/a	n/a	1410
AD02495	196.3	196.4	.1	43	n/a	30	n/a	n/a	785
AD02496	206.1	206.2	.1	40	n/a	46	n/a	n/a	1020
AD02497	219.8	219.9	.1 * **	36	n/a	19	n/a	n/a	1590

HOLE No:

CHEM87-35

Width

(m)

Cu

(ppm)

Sample

No.

From

(m)

То

(m)

Page Number

6

Рb

Zn

(ppm) (ppm)

Åα

(ppm)

Ba

(ppb) (ppm)

Au

				$\bigcirc$	•								)	
P	ROPERTY	: CHEMIANUS J.V.	FALCONBRIDGE LIMITED DIAMOND DRILL LOG					HOLE N CHEM87-	lo: I 35	Page Numb 7	er			
From (m)	To (m)		-DESCRIPTION		Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
		Calcite veined, and moderat Visible fine-grained disser	tely magnetic. minated 1 % magnetite visible.		AD02498	227.7	227.8	.1	38	n/a	83	n/a	n/a	1120

228.3 230.0 QUARTZ-FELDSPAR PORPHYRITIC FELSIC FLOW

Pink tinge as before.

Very siliceous 0.1 m section adjacent to mafic sill at upper contact. Strong foliation cleavage 40 degrees to core axis.

230.0 232.0 EARLY MAFIC DYKE

Upper contact 40 degrees to core axis Lower contact 36 degrees to AD02499 230.6 230.7 .1 39 n/a 96 n/a n/a 1330 core axis. As 227.7 to 228.3 m.

Strong foliation cleavage 35 to 40 degrees to core axis.

#### 232.0 243.8 FELDSPAR PORPHYRITIC FELSIC FLOW

Gray colour ,fine-grained with less conspicuous quartz-eyes; feldspar crystals predominant. Locally sheared. Early mafic dykes 234.8 to 235.0 m contacts 50 degrees to core axis and 55 degrees to core axis respectively and at 237.5 to 237.7 m. Faults generally small and numerous:. 237.8 to 237.9 m. 238.7 to 239 0 m strongly sheared 238.3 to 239.8 m with foliation 45 to 50 degrees to core axis. 240.9 to 241.2 m 30 degrees to core axis. 243.7 to 243.8 m 45 degrees to core axis.

Pyrite about 1 % 236.6 to 245.0 m as minor disseminations in 1 to 5 cm wide zones parallel to core axis at 40 to 45 degrees.

243.8 250.9 FELSIC LAPILLI TUFF

Felsic clasts generally cream to pale pink tinged flow material less than 1 to 5 cm (as 183.3 to227.7 m). Overall greenish gray colour. Contacts very deformed by shearing and small faults. Foliation cleavage 35 to 40 degrees to core axis. A few fine-grained pyrite stringers parallel foliation 250.0 to 250.2 m (2 to 3 % pyrite).

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#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

HOLE No: Page Number CHEM87-35 8

From	То				Sample	From	То	Width	Cu	Pb 🕤	Zn	Ag	Au	Ba
(m)	(m)	 DE	SCRIPTION		No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)

#### 250.9 254.9 EARLY MAFIC DYKE

Both contacts 45 degrees to core axis. Dark-green, strongly foliated but otherwise massive unit. Flat 1 by 5 mm chloite patches parallel foliation at 45 degrees to core axis.

254.9 268.4 FELSIC CRYSTAL LAPILLI TUFF

Greenish-gray strongly foliated locally sheared and faulted unit. Weak pyritic stringers 262.2 m, less than 1 %. Foliation cleavage 55 degrees to core axis. Faults: 258.7 to 259.4 m; 0.4 m Lost Core. 260.0 to 261.2 m; 1.0 m Lost Core; 45 degrees to core axis. 261.4 to 261.8 m; 55 degrees to core axis. AD02500 262.4 262.5 .1 48 n/a 128 n/a n/a 583

#### 268.4 271.6 EARLY MAFIC DYKE

Dark green chlorite schist. White ragged calcite patches are very common. At 269.2 to 269.4 m white siliceous felsic tuff inclusion. Lower 0.2 m section is epidote altered in 1 to 3 cm patches. Strong foliation cleavage, generally 30 to 40 degrees to core axis. Small fault 5 cm at 271.2 m with gouge, 75 degrees to core axis. Lower contact 65 degrees to core axis.

271.6 278.0 FELSIC CRYSTAL LAPILLI TUFF

Light gray colour, strongly sheared blocky core. At 273.9 to 275.1 m gravel - strong fault; adjacent shearing 50 degrees to core axis; Lost Core 0.9 m. Small fault 275.8 m; 50 degrees to core axis. Fine-grained section 275 to 277.5; bedding 45 degrees to core axis. Abundant quartz carbonate pods between 277.9 and 278.0 m. Broken core at lower contact.

#### 278.0 281.7 FELDSPAR PORPHYRITIC FELSIC FLOW

5 to 10 % < 2 mm epidotized feldspar in a hard massive siliceous aphyric matrix. Weak to moderate, pervasive, chlorite alteration makes the rock a light green colour. Moderately sericitic below 281.0 m. Nil to trace pyrite. Lower contact is at 42 degrees to

FALCONBRI	DGE	LIM	ITED
DIAMOND	DRIL	ււ	OG

From

(m) (m)

То

core axis.

#### 281.7 285.8 MAFIC AND FELSIC TUFFS

Roughly 60 % felsic ash tuff in beds 0.3 to 1.4 m thick and 40 % mafic ash tuff in beds 0.2 to 1.0 m thick. The felsic tuffs are light to medium grey-green relatively massive weakly chloritized ash tuffs. The mafic tuffs are dark green foliated contain 1-10 %, 1-3 mm long epidotized feldspars and are weakly to moderately carbonatization with calcite-filled gashes and microfractures. STRUCTURE:. Bedding is at 42 to degrees to core axis at 281.8 m. Foliation is at 42 to degrees to core axis at 281.8 m. Minor slip is at 76 degrees to core axis at 282.4 m. Bedding is at 60 degrees to core axis at 282.5 m. Bedding is at 65 degrees to core axis at 283.3 m. Bedding is at 68 degrees to core axis at 283.5 m.

-----DESCRIPTION------

Foliation is at 62 degrees to core axis at 284.0 m. Bedding is at 74 degrees to core axis at 284.2 m. Bedding is at 76 degrees to core axis at 284.4 m. 0.5 Cm wide clay-filled slip is at 65 degrees to core axis at 285.4 m Minor clay-filled slip is at 60 degrees to core axis at 285.5 m. Minor clay-filled slip is at 55 degrees to core axis at 285.7 m.

- 281.7 282.2 Moderately carbonatized MAFIC TUFF. Nil sulphides. Quartz-carbonate vein at lower contact.
- 282.2 282.5 Felsic tuff with 5 % 1-3 mm epidote spots (altered feldspars). Lower contact is a chloritic slip at 70 degrees to core axis.
- 282.5 283.5 MAFIC ASH TUFF. 5.0 cm wide bed of felsic ash tuff at 65 degrees to core axis at 283.3 m. Lower contact is at 68 degrees to core axis.
- 283.5 284.2 FELSIC ASH TUFF. Lower contact is at 74 degrees to core axis.
- 284.2 284.4 Mafic tuff. Lower contact is at 76 to degrees to core axis.
- 284.4 285.8 FELSIC TUFF. 5.0 cm wide mafic ash tuff bed at 60-70 degrees to core axis near the upper contact. Below 285.4 m rock has a crushed tectonized appearance. Several clay-filled slips at 60-70 degrees to core axis. Bed of mafic tuff between 285.5 and 285.6 m. Lower contact is at 65 degrees to core axis.

#### 285.8 291.4 MAFIC FLOWS/DYKES AND FELSIC TUFFS

Mafic flows/dykes are fine-grained dark green with numerous

HOLE No: Page Number CHEM87-35 9

Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)	
	•									
AD02601 AD02602	282.7	282.8 283.9	.1	33 29	n/a n/a	61 (10	n/a n/a	n/a	813 1550	

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

#### From To -----DESCRIPTION------(m) · (m)

calcite-filled microfractures and clots. Up to 10 % 1-3 mm epidotized feldspars. Very similiar to the Early Mafic Dykes described earlier in this hole. They alternate with beds of grey felsic tuff described in more detail below. Lower contact is at 70 degrees to core axis. STRUCTURE: .

Bedding is at 70 degrees to core axis at 288.2 m. 0.5 Cm wide clay-filled slip at 55 degrees to core axis at 288.4 m. Bedding is at 70 degrees to core axis at 289.7 m. Bedding is at 60 degrees to core axis at 290.7 m.

- 287.2 287.5 FELSIC TUFF. Rare lapilli-sized felsic clast. Lower contact is a slip at 30 degrees to core axis.
- 288.2 288.5 Bed of FELSIC TUFF with <1% rusty <2 mm in diameter centred on a silver metallic mineral ( arsenopyrite or metal from the core barrel).
- 289.1 289.2 FELSIC TUFF.
- 289.7 0.3 cm wide FELSIC TUFF bed at 70 degrees to core axis.
- 290.7 291.0 CHERTY MAFIC TUFFACEOUS SEDIMENTS. Numerous sericite-filled fractures and gashes. Upper contact is at 60 degrees to core axis and the lower contact is at 75 degrees to core axis.
- 291.4 294.9 MAFIC TUFF WITH MINOR BEDS OF CHERTY SEDIMENTS

Dark green moderately carbonatized mafic tuff with occasional beds up to 1.5 cm thick of cherty sediments. Nil-trace disseminated chalcopyrite. Lower contact is gradational. STRUCTURE:.

Bedding is at 50 degrees to core axis at 292.5 m. Bedding is at 65 degrees to core axis at 292.6 m. Minor slip is at 65 degrees to core axis at 293.3 m. Foliation is at 55 degrees to core axis at 294.2 m.

#### 294.9 335.6 CHLORITIC FELSIC ASH-LAPILLI TUFF

Medium green hard siliceous and aphyric with up to 10 % ash-sized epidotized feldspars. Feldspars tend to occur in bands or patches 3.0 - 7.0 cm wide. < 1-5% lapilli-sized felsic clasts. Moderate to strong chloritization. 2-3 %, 2-5 mm guartz eyes between 317.6 and 319.6 m and between 332.0 and 334.0 m. Foliation is at a low angle to degrees to core axis ( $\langle 25 \text{ degrees} \rangle$ ) between 301.4 and 303.9 m. STURCTURE:.

Bedding is at 60 degrees to core axis at 296.5 m. Foliation is at 65 degrees to core axis at 300.4 m. Minor slip is at 25 degrees to core axis at 301.8 m. Minor slip is at 15 degrees to core axis at 302.8 m.

		Server 1	್ ಕರ್ಷ ನಿರ್ಮ	difference in a second					
AD02608	332.5	332.6	.1	34	n/a	14	n/a	n/a	1020
AD02607	319.4	319.5	.1	28	n/a	16	n/a	n/a	1780
AD02605	307.4	307.5	.1	30	n/a	16	n/a	n/a	1240
AD02604	296.8	296.9	.1	23	n/a	13	n/a	n/a	1180
AD02606	295.7	295.8	.1	19	n/a	14	n/a	n/a	688

HOLE No: Page Number CHEM87-35 10

Sample Width Cu From То Pb Zn λq Au Ba No (m) (m) (m) (ppm) (ppm) (ppm) (ppm) (ppb) (ppm)

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From (m)	То (m)	DESCRIPTION	

- Bedding is at 50 degrees to core axis at 304.6 m. Foliation is at 15 degrees to core axis at 310.0 m. Bedding is at 47 degrees to core axis at 310.9 m. Bedding is at 55 degrees to core axis at 312.8 m. Bedding is at 45 degrees to core axis at 315.1 m. 1.0 Cm wide clay-filled slip is at 80 degrees to core axis at 317.0 m Slip is at 90 degrees to core axis at 317.6 m. Bedding is at 55 degrees to core axis at 320.5 m. Foliation is at 52 degrees to core axis at 324.3 m. Bedding is at 40 degrees to core axis at 324.9 m. Bedding is at 45 degrees to core axis at 325.7 m. Bedding is at 40 degrees to core axis at 326.0 m. Bedding is at 50 degrees to core axis at 326.8 m. Bedding is at 50 degrees to core axis at 328.1 m. Bedding is at 45 degrees to core axis at 330.0 m. Bedding is at 45 degrees to core axis at 331.5 m. Foliation is at 55 degrees to core axis at 333.5 m. Bedding is at 50 degrees to core axis at 334.6 m.
- 298.1 298.6 Carbonatized MAFIC ASH TUFF. Broken core at upper and lower contacts.
- 298.6 300.0 Foliation is contorted and kinked. Strong chlorite-calcite alteration between 299.3 and 299.7 m. 1 % disseminated pyrite.
- 309.4 310.3 Carbonatized MAFIC TUFF with nil-3 % disseminated magnetite. Quartz vein parallel to core axis at the upper contact. Lower contact is a slip at 30 degrees to core axis.
- 310.9 311.0 MAFIC TUFF BED at 47 degrees to core axis.
- 312.8 312.9 MAFIC TUFF BED at 55 degrees to core axis.
- 315.1 1.0 cm wide MAFIC TUFF bed at 45 degrees to core axis.
- 317.6 318.5 Blocky, highly fractured core. Rock is crushed.
- 320.5 321.8 Massive MAFIC FLOW OR TUFF. Upper contact is at 55 degrees to core axis and lower contact is at 75 degrees to core axis.

322.0 322.3 Bed of MAFIC TUFF.

- 324.7 324.9 Carbonatized MAFIC TUFF bed at 48 degrees to core axis.
- 325.0 325.7 MAFIC TUFF bed at 45-50 degrees to core axis.
- 325.9 326.1 MAFIC TUFF bed with 3 % disseminated pyrite at 40 degrees to core axis.

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Sample	From	То	Width	Cu
No.	(m)	(m)	(m)	(ppm)

РЪ Zn λσ Au Ва (ppm) (ppm) (ppm) (ppb) (ppm)

# HOLE No:



PROPERTY: CHEMIANUS J.V. HOLE No: Page Number FALCONBRIDGE LIMITED CHEM87-35 12 DIAMOND DRILL LOG To From Sample From То Width Cu Pb Zn Aα Au Ba (m) (m) -----DESCRIPTION------No. (m) (m) (m) (ppm) (ppb) (ppm) (ppm) (ppm) (ppm) 326.8 327.2 MAFIC TUFF bed at 50 degrees to core axis. 327.6 328.1 MAFIC TUFF/FLOW at 50 degrees to core axis. 328.4 328.7 MAFIC TUFF at 50 degrees to core axis. 328.7 335.6 INTERBEDDED FELSIC ASH TUFF (70%) AND MAFIC ASH TUFF (30%). Felsic tuff beds are <1.0 cm to 10.0 cm thick and mafic tuff beds are <1.0-5.0 cm thick. 335.6 340.0 THERMAL BIOTITE ALTERED FELSIC ASH-LAPILLI TUFF Massive mottled green-brown with nil to 2 % 2-4 mm guartz eyes. Up AD02609 337.2 337.3 .1 25 n/a 15 n/a n/a 1510 to 15 % 1-3 mm epidotized feldspars. Nil sulphides. Foliation is at 55 degrees to core axis at 339.3 m. Lower contact is at 55 degrees to core axis. 340.0 341.9 MAFIC ASH TUFF Medium green massive 5 - 10 % ash-sized epidotized fragments. 0.5 cm AD02610 341.2 341.3 .1 37 n/a 48 n/a n/a 483 cream-coloured chert bed at 55 degrees to core axis at 341.8 m. Nil sulphides. Lower contact is at 60 degrees to core axis. 341.9 347.7 THERMAL BIOTITE ALTERED OUARTZ-FELDSPAR CRYSTAL TUFF 20 % white 1-2 mm feldspar crystals and <1-7 %, 2-4 mm quartz eyes AD02611 345.4 345.5 .1 47 n/a 22 n/a 1220 n/a in a mottled, pale brown-green, hard, siliceous very fine-grained to aphyric matrix. Nil sulphides. Lower contact is at 55 degrees to core axis. 344.5 344.7 Bed of MAFIC ASH TUFF at 55 degrees to core axis. 346.0 346.1 Bed of MAFIC ASH TUFF at 55 degrees to core axis. 347.7 351.0 MAFIC ASH TUFF Massive fine-grained dark green to brown-green. Weak to moderate AD02612 350.8 350.9 .1 37 n/a n/a 315 45 n/a patchy thermal biotite alteration. Two bleached patches. One 20.0 cm wide at 348.7 m and another 10.0 cm wide at 350.0 m. Patches are medium-grained and feldspar rich (looks like a leucocratic mafic intrusive). Lower contact is gradational.

351.0 354.4 THERMAL BIOTITE ALTERED QUARTZ-FELDSPAR CRYSTAL TUFF As 341.9 to 347.7 m. Nil sulphides. Broken core at the lower contact

353.3 353.6 Ground core.

## FALCONBRIDGE LIMITED DIAMOND DRILL LOG

 From
 To

 (m)
 (m)

## 354.4 359.1 MASSIVE MAFIC HORNBLENDE-BEARING FLOW

Massive dark green fine-grained with 2-4 %, 1-4 mm subhedral chloritized hornblende crystals and up to 10 % 2-10 mm wide epidote spots. Nil-trace disseminated chalcopyrite and sphalerite.

356.0 Flow contact (?) at 50 degrees to core axis.

357.8 358.0 Blocky, highly fractured core.

#### HOLE No: Page Number CHEM87-35 13

Sample No.	From (m)	T0 (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
AD02613	358.6	358.7	.1	296	n/a	172	n/a	n/a	327



FALCONBRIDGE LIMITED DIAMOND DRILL LOG

Hole Location: 47+00 E 1+50 S

NTS: 092/	'B13	UTM:	54159	70 N	43	2200	Е
Azimuth:	210	Eleva	ation:	640	m		
Dip:	-45	 Leng	th:	257	.6 m		

Started: July 6, 1987 Completed: July 9, 1987

Purpose: To test VLF anomalies at 2+40 and 2+80 S, coincident shallow and deep IP chargeability anomalies at 1+80 S, coincident deep and shallow IP resistivity lows at 2+05 S and IP chargeability anomalies at 2+80 and 3+00 S

#### DIP TESTS

HOLE No: Page Number CHEM87-36 1

Claim No. CHIP 1 Section No.: Line 47+00 East

Logged By: David P. Money Drilling Co.: Burwash Enterprises, Cobble Hill Assayed By: Bondar-Clegg, Vancouver and X-Ray Assay, Don Mills

Core Size: NQ

27.8

27.9

.1

					Length	Azi- muth	Dip	Length	Azi- muth	Dip	)								
					32.00 110.90	211.5 211.0	-46.0 -46.0	203.00 257.60	210.0 211.5	-44.( -44.(	) )								
From (m)	To (m)		· 	 D	ESCRIPTIO	4				Sample No.	From (m)	T0 (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)

#### .0 11.0 OVERBURDEN AND CASING

11.0 21.9 FELSIC FELDSPAR CRYSTAL TUFF

Same as tuff beginning at 9.2 in DDH CHEM87-34. Blue to white rusty, oxidized felsic tuff, locally siliceous with 5 to 15 %, up to 2 mm, average 1 mm, feldspar grains. Locally weakly contorted. Minor local vugs, may have hosted calcite, some associated with minor local quartz veins and veinlets. Trace disseminated pyrite occurs.

	1					
Bedding	1:	•				
11.5 :	73	degrees	to	core	axis.	
17.0 :	68	dearees	to	core	axis.	

21.6 : 54 degrees to core axis.

Foliations :. 12.6 : 58 degrees to core axis. 17.1 : 63 degrees to core axis.

21.9 22.0 FAULT ZONE

Rusty clay and blocky, highly fractured core.

#### 22.0 34.2 FINE GRAINED PLAGIOPHYRIC GABBRO

Dyke or sill of chilled margin type gabbro with 5 to 10 %, up to 2 AB21931 mm, feldspar phenocrysts. The gabbro is rusty and broken with 0.7 m lost core from 32.0 to 33.4. There are numerous vugs throughout the gabbro and in the rare quartz veins.

AB21930 17.1 17.3 .2 52 n/a 371 n/a n/a 1670

204 n/a 106 n/a n/a 155

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

## HOLE No: Page Number CHEM87-36 2

From (m)	To (m)		DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
34.2	55.5	FELSIC QU	JARTZ-FELDSPAR CRYSTAL TUFF										
		34.2 35.4	Rusty blocky, highly fractured core with 0.4 m of lost core.	AB21932 AB21933	38.6 51.2	38.7 51.3	.1	25 37	n/a n/a	24 27	n/a n/a	n/a n/a	1310
		35.4 40.0	) Very rusty tuff with 2 % biotite +/- goethite (?). The tuff is white to medium grey and is very likely altered									,,	
			hydrothermally, with the est A.I. = 75, H.A.I. = 82. The										
			crystal content varies from 2 to 10 %, 1 to 3 mm, quartz	(1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,									
			eyes and 5 to 15 %, up to 2 mm, feldspar grains. There is trace local pyrite.										
		40.0 41.5	Medium grey to bluish siliceous tuff with approximately										
		41.5 43.8	Moderately rusty version of 40.0 to 41.5.										
		43.8 55.5	Grey to blue tuff with local rusty zones, up to 30 cm										
			thick, with thermal biotite appearing at 48.8. The rust										
			poor, with up to 10 % feldspar grains in the more porous										
			rusty zones and trace to 1 % quartz eyes and trace to 2 %										
	1.1		feldspar grains in the weakly contorted grey siliceous										

50.4 : 52 degrees to core axis.

36.4 : 70 degrees to core axis. 44.4 : 73 degrees to core axis.

Foliations :.

#### 55.5 61.6 FINE GRAINED PLAGIOPHYRIC GABBRO

Fine-grained gabbro with 3 to 10 % feldspar grains and rust coated fracture and local vugs, concentrated especially in the trace local quartz veins.

zones. There is local epidotization, up to 5 cm thick with 1 to 2 % associated disseminated and fracture controlled pyrite. There is trace to 1 % local disseminated and stringer pyrite throughout the zone.

## AB21934 56.3 56.4 .1 208 n/a 97 n/a n/a 98

Lost core :. 0.5 M from 56.7 to 58.5. 0.2 M from 58.5 to 60.7. 0.3 M from 60.7 to 61.6.

61.6 63.0 INTERMEDIATE TO FELSIC QUARTZ EYE AND FELDSPAR CRYSTAL TUFF Rusty and vuggy green tuff with 5 to 10 % feldspar grains and trace quartz eyes. Hosts local quartz veins.

#### 63.0 65.9 ALTERED FELSIC CRYSTAL TUFF

Siliceous or silicified grey to white felsic tuff with up to 1 % pyrite +/- goethite stringers. The crystal content varies from approximately nil to 30 % epidote grain to crystals, up to 3 mm. There are local quartz +/- carbonate veins and local chlorite +/- goethite veins.

AB21935 64.4 64.5 .1 125 n/a <10 n/a n/a 1540

FALCONBRIDGE LIMITED DIAMOND DRILL LOG

HOLE No: Page Number CHEM87-36 3

Âu

Ba (ppb) (ppm)

From	To			Cample	From	TO	Width	Cu	Dh	7n	ħ.e.
L L OH	10			Dambie	riom	10	"HIGCH	Cu .	r y	411	ny
(m)	(m)	DESCRIPTION		No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)

Foliations :. 63.8 : 47 degrees to core axis. 65.6 : 38 degrees to core axis.

65.9 67.6 MAFIC SILL

Weakly magnetic mafic sill, dyke or flow with approximately 20 % epidote grains in a medium to dark green fine-grained matrix. There are local minor quartz - carbonate +/- biotite veinlets and trace pyrite.

67.6 76.3 FELSIC FELDSPAR CRYSTAL TUFF

Moderately siliceous bluish grey locally rusty tuff with 5 to 15 %, up to 2 mm feldspar / epidote grains. There are minor guartz +/carbonate +/- biotite veins and veinlets. There is trace local disseminated and fracture controlled pyrite.

Foliations :. 68.8 : 43 degrees to core axis. 74.5 : 34 degrees to core axis.

Lost core : 0.2 m from 71.9 to 73.2.

- 76.3 77.5 MASSIVE FELSIC LAPILLI TUFF Massive light green felsic tuff with epidotized lapilli.
- 77.5 82.0 FELSIC FELDSPAR CRYSTAL TUFF

Medium grey locally oxidized and vuggy felsic tuff with trace to 20 **%** feldspar to epidote grains. There is bleaching centred at 80.6. The foliation averages approximately 70 to 80 degrees to core axis.

82.0	83.0 MAFIC SILL										
	Salt and pepper texture mafic sill or dyke. Weak pervasive	AB21936	82.4	82.5	.1	147	n/a	77	n/a	n/a	261
	carbonatization. Non-magnetic.										
83.0	103.6 FELSIC TUFF										
	83.0 89.0 FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF, moderately sericitic	AB21937	86.8	87.0	.2	33	n/a	28	n/a	n/a	1410
	to siliceous medium grey felsic tuff with 5 to 15 %	AB21938	91.6	91.7	.1	24	n/a	14	n/a	n/a	2900
	fine-grained feldspar / epidote and trace to 5 , up to 3	AD02670	102.0	103.6	1.6	13	<5	62	<1	<5	1300
	mm, quartz eyes. There are local kink bands. There are								÷		
	white bull quartz veins +/- chlorite +/- biotite +/-										
	pyrite.										
	89 0 95 0 STLICTETED FELSIC FELDSPAR CRYSTAL THEF silicified	100 C									

'ELSIC FELDSPAR CRYSTAL TUFF, silicified white to light grey, locally weakly to moderately contorted felsic tuff with average 10 %, up to 2 mm,

PRO	: Chemainus J.V Chip Claims FALCONBRIDGE LIMITED DIAMOND DRILL LOG				HOLE N CHEM87-	No: Pa -36	ge Numbe 4	r		
From To (m) (m)	DESCRIPTION	Sample No.	From (m)	To (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au Ba (ppb) (ppm)
	<pre>feldspar grains with minor feldspar / epidote crystal rich, up to 10 cm bands. There is local pyrite blebs and fracture controlled stringers which are up to 1 % over 1 m 95.0 103.6 Locally varies from silicified lapilli tuff, with epidotized lapilli to as at the start, ie. 83 - 89. Local quartz +/- chlorite veins with trace to 5 % pyrite over up to 5 cm. Local kink bands and is weakly contorted</pre>									
	Foliations :. 85.2 : 61 degrees to core axis. 88.0 : 56 degrees to core axis. 93.0 : 49 degrees to core axis. 99.2 : 49 degrees to core axis. 102.2 : 75 degrees to core axis.									
	Bedding :. 89.7 : 73 degrees to core axis. 94.1 : 65 degrees to core axis.				۰ ۲۰ ۲۰ ۲۰ مر ۲۰					
103 6 107 8	DVDITTC ANADTZ FVF BEADING FFISIC THEF									
	<ul> <li>Locally bleached and sheared felsic tuff with trace to 5 %, up to 4 mm, quartz eyes. Hosts pyrite, pyrrhotite, chalcopyrite and sphalerite.</li> <li>103.6 103.9 7 % pyrite, 2 % chalcopyrite, 2 % pyrrhotite and trace sphalerite. Siliceous grey rhyolitic tuff with the pyrite as fine-grained cubes in pseudo- bands with the other sulphides in the pyrite bands.</li> <li>103.9 105.4 Weakly to moderately bleached grey to white, weakly contorted tuff with quartz eyes and 1 to 2 % disseminated pyrite and trace to 1 % disseminated chalcopyrite and sphalerite.</li> </ul>	AD02671 AD02672 AD02673 AD02674	103.6 104.8 106.0 107.0	104.8 106.0 107.0 107.8	1.2 1.2 1.0 .8	1900 700 365 8900	22 32 8 41	765 360 189 570	1 <1 <1 5	20 1800 45 2600 <5 2100 55 2300
	<ul> <li>105.4 105.7 Sheared sericite and chlorite with approximately 4 % pyrrhotite and trace to 0.5 % chalcopyrite.</li> <li>105.7 106.8 Similiar to both 103.9 to 105.4 and 105.4 to 105.7. Greyish moderately to weaked sheared tuff with sericite development and quartz eyes. Sulphide stringers appear to be parallel to foliation, but this may be due to deformation. Hosts approximately 2 % pyrrhotite, 1 % pyrite and trace to 0.5 % chalcopyrite and sphalerite.</li> </ul>									
	<pre>106.8 107.4 50 % coarse grained pyrite in beds with up to 2 % chalcopyrite. There are trace local pyrrhotite stringers 107.4 107.8 10 % pyrrhotite and up to 1 % chalcopyrite in rock similiar to 105.4 to 105.7.</pre>									
107.8 140.6	FELSIC QUARTZ-FELDSPAR CRYSTAL TUFF Locally light grey to medium - dark black - green weakly sericitic to siliceous felsic tuff, changes are transitional and moderate.	AD02675 AB21939	107.8 114.9	109.0 115.0	1.2 .1	310 - 64	5 n/a	110 48	<1 n/a	<5 2100 n/a 850

	Children of the second										<b>9</b>	
P	ROPERT	Y: Chemainus J.V Chip Claims		1997 - 19		HOLE N	o: Pa	ge Numb	er			
		FALCONBRIDGE LIMITED DIAMOND DRILL LOG				CHEM87-	36	5		*£		
From	To		Samplo	From	TO	Vidth	Cn ·	Ph	75	10	<b>7</b>	Ba
(m)	(m)	DESCRIPTION	No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)
		Hosts trace to 4 %, up to 3 mm, quartz eyes and locally up to 15 % epidote / feldspar grains. From 138.0 to 140.6 appears to be silicified with thermal biotite. Is sericitic at the upper contact. There are local minor quartz +/- biotite veins and veinlets. Oxidized to 128.6.	AB21940 AB21941	128.8 138.8	128.9 138.9	.1 .1	32 32	n/a n/a	35 34	n/a n/a	n/a n/a	811 744
		Foliations :. 109.5 : 64 degrees to core axis. 115.0 : 61 degrees to core axis. 128.8 : 76 degrees to core axis. 137.1 : 61 degrees to core axis. 140.2 : 72 degrees to core axis.										
140.6	144.7	EPIDOTE SPOTTED ANDESITE Light to medium green flow, locally contorted with chevron kinks. Hosts 10 to 30 % epidote grains. Trace local quartz - carbonate veinlets.	AB21942	143.3	143.4	.1	188	n/a	119	n/a	n/a	989
144.7	150.7	<ul> <li>FAULT ZONE</li> <li>144.7 145.0 Chloritic fault gouge and green and grey clays.</li> <li>145.9 145.9 Sheared to fault gouge chlorite and carbonate.</li> <li>145.9 147.1 Grey clay and sericite shear and rubble with local minor chlorite bands.</li> <li>147.1 149.1 Chlorite clay, shears and local rock with pyrite and quartz veins.</li> </ul>	AD02676	149.0	150.7	1.7	92	33	86	<1	15	1200
		149.1 150.7 Felsic shear, clay and rubble.						t state				
		Trend varies, average approximately 60 to 80 degrees to core axis.										н. Марияна С
150 7	150 0	NUNTRIA ANIADRA ADDIATRA AAUTAM										
150.7	120.8	PYRITIC QUARTZ-SERICITE SCHIST 150.7 151.1 Sericite schist with foliation at 30 degrees to core axis and 1 % disseminated pyrite and 2 to 3 % pyrite parallel to foliation.	AD02677 AD02678 AD02679	150.7 152.0 153.0	152.0 153.0 154.0	1.3 1.0 1.0	96 23 63	44 29 165	1900 265 1650	2 1 2	55 45 75	2600 3000 2300
		151.1 155.2 Light grey fault gouge to schist with foliation approximately 0 degrees to core axis and is moderately contorted. Hosts trace local fuchsite and 2 % disseminated pyrite.	AD02680 AD02681 AD02682	154.0 155.0 156.0	155.0 156.0 156.8	1.0 1.0 .8	27 71 880	30 45 147	275 1050 1450	1 1 3	35 20 90	2100 1600 2200
		155.2 156.8 Moderate contorted light greenish sericite schist with trace local quartz eyes, 1 % disseminated and parallel to foliation pyrite to 156.0 and 5 to 7 % banded pyrite with trace to 0.25 % chalcopyrite in up to 5 mm bands.										
		Foliations :.										
		To 154 : 0 to 30 degrees to core axis locally, contorted. 155.0 : 16 degrees to core axis. 155.5 : 51 degrees to core axis.										н 19
		156.3 : 58 degrees to core axis.	•									

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From	То		
(m)	(m) ·	DESCRIPTION	

156.8 168.1 FINE GRAINED PLAGIOPHYRIC GABBRO

Locally sheared and fine-grained, but dominantly 20 to 40 % feldspar grains in a fine-grained dark green chloritic matrix with trace to nil ilmenite. There are numerous quartz +/- epidote +/- chlorite +/- biotite veins and veinlets with no sulphides and thicknesses up to 20 cm and orientations from 0 to 90 degrees to core axis. The upper contact is at 52 degrees to core axis and the lower contact is in blocky, highly fractured core. The foliation varies locally from approximately 40 to 90 degrees to core axis.

- 168.1 197.0 MAFIC TUFFACEOUS SEDIMENTS
  - 168.1 170.0 Sheared and moderately contorted soft green sediment with numerous quartz - carbonate - chlorite veins and veinlets. Local weak thermal biotite.
  - 170.0 181.2 Immature soft green tuffaceous mafic sediment with local cherty epidote contorted bands. Foliation is parallel to sub- parallel to the core axis. There are local minor quartz, quartz - chlorite +/- biotite +/epidote veins.
  - 181.2 184.0 Blocky, highly fractured core and local competent green tuffaceous sediments. There is 0.6 m of lower contact from 181.2 to 181.8 and 0.6 m of lower contact from 183.5 to 184.7.
  - 184.0 190.8 Similiar to green mafic tuffaceous sediments, but is brown, locally has minor cherty bands. Lower transition to green is gradational over 0.5 m. Cherty near the base with minor fracture controlled pyrite, locally up to 1 %. Bedding and foliations vary locally.
  - 190.8 191.8 Brecciated green cherty with minor fault gouge and trace fracture controlled pyrite.
  - 191.8 5 cm fault gouge with slip at 21 degrees to core axis.
  - 191.8 197.0 Immature sediment to tuffaceous sediment, soft and mafic, dominantly brown, locally green. 1 % local fracture controlled carbonate veinlets. Foliation and bedding vary, average approximately 50 degrees to core axis. Minor local fracture controlled pyrite, trace to nil.

#### 197.0 202.0 CONGLOMERATE

Mafic green tuffaceous sediments and cherts, faulted and brecciated with numerous fracture controlled carbonate veinlets. Trace pyrite as ripped beds (?). Lower zone hosts cherty cobbles and boulders.

#### 202.0 206.6 MAFIC TUFFACEOUS SEDIMENTS

Green to brown mafic tuffaceous sediments as before.

HOLE No: Page Number CHEM87-36 6

		Sample No.	From (m)	T0 (m)	Width (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	Ba (ppm)
				1999 - A. A.							
40 %		AD02683	156.8	158.0	1.2	150	. 9	795	<1	10	80
natrix w	ith 👘	AB21943	162.2	162.4	. 2	260	n/a	90	n/a	n/a	291

AB21944	173.3	173.4	.1	120	n/a	77	n/a	n/a	556
AD02684	189.0	191.0	2.0	106	6	63	<1	<5	1500

#### FALCONBRIDGE LIMITED DIAMOND DRILL LOG

From	То	
(m)	(m)	DESCRIPTION

206.6 208.2 FINE GRAINED PLAGIOPHYRIC GABBRO Gabbro sill or dyke with approximately 5 to 10 % feldspar grain in fine-grained green matrix with local quartz and epidote veinlets.

#### 208.2 232.0 CHERTY TUFFACEOUS SEDIMENTS

Begins with brown sandstone/ quartzite as in DDH CHEM87-34 and alternates with green cherty tuffaceous sediments. Bedding is not visible and the foliation ranges very locally from 30 to 70 degrees to core axis.

#### Lost core :. 0.5 M from 198.0 to 198.7. 0.2 M from 223.1 to 223.2. 0.2 M from 230.0 to 231.0.

#### 232.0 242.2 FINE GRAINED PLAGIOPHYRIC GABBRO

From 232 to 240 is competent and relatively unbroken gabbro with 5 to 15 %, up to 2 mm, feldspar grains and local quartz +/- chlorite +/- biotite and epidote veins to veinlet. From 240 on it is sheared or blocky, highly fractured core.

#### Lost core :. 0.6 M from 240.0 to 240.8.

#### 242.2 257.6 CHERTY ARGILLACEOUS SEDIMENTS

Black, brown and grey cherty beds and argillites as in DDH CHEM87-34 with minor mafic tuffaceous sediment inclusions.

#### Lost core :. 0.7 M from 242.3 to 243.8. 0.3 M from 245.2 to 246.2. 0.4 M from 250 to 250.5. 0.8 M from 250.5 to 251.9. 0.2 M from 251.9 to 252.3.

0.2 M from 252.3 to 253.0. 0.7 M from 253.0 to 254.2.

Bedding :. 243.9 : 47 degrees to core axis. 245.3 : 47 degrees to core axis. 255.4 : 36 degrees to core axis.

Sample	From	To	Width	Cu	Pb	Zn	Ag	Au	Ba	
No.	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppb)	(ppm)	

Page Number

7.

HOLE No:

CHEM87-36

## AB21945 237.9 238.1 .2 73 n/a 93 n/a n/a 204

# AD02685 244.0 246.4 2.4 58 7 46 <1 <5 2800

# APPENDIX B

ANALYTICAL RESULTS -- METALS

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppan)	AG (ppm)	AU (ppb)	CO (ppm:)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) ROCK * 100	CODES ALT MI
											•••••••••••••••••••••••••••••••••••••••				
AB15353	48.20	48.30	1200.0	6.0	19.0	<0.5	<5.0	<1.0	1.0	10.0	6.0	<1.0	<1.0	24.0 TEAYEL	? A
AB19902	59.00	60.00	700.0	26.0	18.0	<0.5	<5.0	2.0	2.0	8.0	5.0	<1.0	2.0	59.1	
AB19903	60.00	61.00	840.0	5.0	43.0	<0.5	<5.0	2.0	2.0	67.0	7.0	<1.0	2.0	10.4	
AB19904	61.00	62.00	1000.0	8.0	16.0	<0.5	<5.0	1.0	1.0	58.0	<5.0	<1.0	1.0	33.3	
AB19905	62.00	63.00	1000.0	4.0	26.0	<0.5	<5.0	1.0	5.0	53.0	7.0	<1.0	2.0	13.3	
AB19906	63.00	64.00	1000.0	5.0	25.0	<0.5	<5.0	4.0	2.0	19.0	6.0	<1.0	1.0	16.7	
AB19907	64.00	65.00	950.0	5.0	29.0	<0.5	<5.0	4.0	2.0	23.0	6.0	<1.0	2.0	14.7	
AB19908	79.00	80.00	480.0	7.0	18.0	<0.5	<5.0	<1.0	1.0	16.0	<5.0	<1.0	<1.0	28.0	
AB19909	91.30	92.30	1200.0	28.0	25.0	<0.5	<5.0	4.0	5.0	6.0	65.0	<1.0	2.0	52.8	
AB19910	97.00	98.00	970.0	29.0	36.0	<0.5	<5.0	7.0	12.0	9.0	363.0	<1.0	2.0	44.6	
AB21551	363.00	364.00	160.0	78.0	84.0	<0.5	<5.0	36.0	191.0	12.0	9.0	<1.0	<1.0	48.2	
AB21552	364.00	365.00	160.0	269.0	119.0	<0.5	5.0	36.0	130.0	<5.0	<5.0	<1.0	<1.0	69.3	
AB21553	365.00	366.00	50.0	57.0	84.0	<0.5	5.0	19.0	64.0	<5.0	<5.0	<1.0	<1.0	40.4	
AB21554	366.00	367.00	40.0	161.0	63.0	<0.5	<5.0	18.0	54.0	5.0	<5.0	<1.0	<1.0	71.9	
AB21555	367.00	368.00	60.0	336.0	96.0	<0.5	<5.0	25.0	79.0	<5.0	<5.0	<1.0	<1.0	77.8	
AB21556	377.00	378.00	140.0	252.0	98.0	<0.5	<5.0	25.0	74.0	5.0	<5.0	<1.0	<1.0	72.0	

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	2N (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT MIN
										· · ·						
AE08600	139.60	140.GO	1500.0	496.0	115.0	1.1	15.0	14.0	3.0	36.0	10.0	<1.0	1.0	81.2		
AE08655	248.00	249.00	350.0	126.0	205.0	<0.5	<5.0	25.0	22.0	66.0	21.0	<1.0	1.0	38.1		
AE08656	249.00	250.00	420.0	127.0	206.0	<0.5	<5.0	25.0	16.0	61.0	16.0	<1.0	<1.0	39.1		
AE08657	250.00	251.00	300.0	84.0	132.0	<0.5	<5.0	22.0	24.0	57.0	19.0	<1.0	1.0	38.9		

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	HQ (ppm)	CU/(CU+; * 100	ZN)	ROCK	CODES ALT	MIN
										•							****	
AE08620	199.50	201.00	1500.0	46.0	10.0	<0.5	<5.0	8.0	3.0	6.0	43.0	<1.0	1.0	82.1				
AE08621	201.00	201.70	1300.0	66.0	20.0	<0.5	<5.0	14.0	6.0	<5.0	16.0	<1.0	1.0	76.7				
AE08622	201.70	203.20	1100.0	7.0	3.0	<0.5	<5.0	3.0	2.0	8.0	75.0	<1.0	1.0	70.0				

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm.)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppa)	AS (ppm)	CD (ppm)	HO (ppm)	CU/(CU+ZN) ROCK * 100	CODES ALT	MIN
AE08624	85.70	86.70	830.0	277.0	87.0	<0.5	<5.0	26.0	20.0	28.0	19.0	<1.0	1.0	76.1		
AE08625	86.70	87.70	990.0	260.0	56.0	<0.5	10.0	26.0	15.0	20.0	163.0	<1.0	2.0	82.3		
AE08626	87.70	88.70	790.0	105.0	47.0	<0.5	<5.0	19.0	13.0	6.0	52.0	<1.0	1.0	69.1		
AE08627	88.70	89.70	950.0	110.0	88.0	<0.5	5.0	21.0	21.0	54.0	19.0	<1.0	2.0	55.6		
AE08658	220.60	221.60	180.0	206.0	77.0	<0.5	<5.0	33.0	79.0	8.0	<5.0	<1.0	<1.0	72.8		
AE08659	221.60	222.60	1200.0	400.0	1645.0	<0.5	110.0	9.0	11.0	86.0	25.0	8.0	2.0	19.6		
AE08660	222.60	223.70	920.0	649.0	509.0	<0.5	130.0	7.0	4.0	21.0	29.0	2.0	2.0	56.0		
AE08661	223.70	224.40	940.0	2112.0	156.0	<0.5	240.0	11.0	3.0	33.0	23.0	<1.0	2.0	93.1		
AE08662	224.40	225.40	970.0	1079.0	149.0	<0.5	95.0	5.0	1.0	19.0	19.0	<1.0	2.0	87.9		
AE08663	225.40	226.30	1000.0	964.0	196.0	<0.5	75.0	6.0	2.0	19.0	12.0	<1.0	3.0	83.1		
AE08664	226.30	227.10	1100.0	2231.0	161.0	<0.5	70.0	4.0	2.0	23.0	18.0	<1.0	1.0	93.3		
AE08665	227.10	228.10	1100.0	784.0	432.0	<0.5	30.0	1.0	1.0	5.0	<5.0	1.0	<1.0	64.5		
AE08666	228.10	229.10	1700.0	163.0	190.0	<0.5	10.0	5.0	2.0	33.0	8.0	<1.0	2.0	46.2		
AE08667	229.10	230.00	30.0	119.0	68.0	(0.5	<5.0	38.0	195.0	13.0	110.0	(1.0	1 0	63-6		
AE08668	230.00	230.50	230.0	56.0	88.0	(0.5	(5.0	14.0	66.0	19.0	79 0	<1 0	2.0	38 9		
AE00640	220 50	201 50		50.0				11.0	00.0	17.0	20.0	11.0	2.V		· · · · ·	
HEVO009	230.50	231.50	640.0	72.0	92.0	<0.5	<5.0	18.0	84.0	14.0	34.0	<1.0	2.0	43.9		
AE08670	231.50	232.50	830.0	18.0	68.0	<0.5	<5.0	4.0	6.0	14.0	9.0	<1.0	3.0	20.9		

Hole No. CHEM87-31
SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppa)	ZN (ppm.)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	HO (ppm)	СU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
							•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••									
AE08671	232.50	233.50	760.0	15.0	73.0	<0.5	<5.0	3.0	7.0	15.0	9.0	<1.0	2.0	17.0			
AE08672	233.50	234.50	380.0	53.0	73.0	<0.5	10.0	15.0	28.0	10.0	13.0	<1.0	3.0	42.1			
AE08673	234.50	235.50	810.0	20.0	122.0	<0.5	30.0	8.0	17.0	24.0	13.0	<1.0	4.0	14.1			
AE08674	235.50	236.50	960.0	14.0	51.0	<0.5	10.0	3.0	1.0	12.0	12.0	<1.0	2.0	21.5		• • • •	. •
AE08675	236.50	237.50	1300.0	14.0	51.0	<0.5	35.0	4.0	2.0	22.0	8.0	<1.0	3.0	21.5			
AE08676	237.50	238.50	1400.0	29.0	60.0	<0.5	30.0	2.0	1.0	11.0	13.0	<1.0	2.0	32.6			
AE08677	238.50	239.70	1200.0	210.0	41.0	<0.5	25.0	15.0	35.0	56.0	23.0	<1.0	2.0	83.7			
AE08678	239.70	240.70	250.0	336.0	72.0	1.6	160.0	35.0	82.0	373.0	20.0	<1.0	1.0	82.3			
AE08679	248.60	249.60	120.0	129.0	78.0	<0.5	15.0	33.0	77.0	25.0	7.0	<1.0	1.0	62.3			
AE08680	249.60	250.00	1300.0	5900.0	231.0	134.4	4765.6	9.0	7.0	13600.0	<5.0	7.0	7.0	96.2	-	1. 1. A. 1.	
AE08681	250.00	251.00	190.0	353.0	102.0	<0.5	85.0	36.0	69.0	379.0	16.0	<1.0	2.0	77.6			
		1997 - 1997 -															

Hole No. CHEM87-31

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DIAMOND DRILL CORE LITHOGEOCHEMICAL RECORD (MINOR ELEMENTS)

SAMPLE		~~~~~		****	***********					****					
NUMBER	FROM	TO	BA (ppm)	CU ) (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CQ (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) ROCK * 100	ALT MI
					· .	-									
AE08628	132.90	134.00	850.0	<1.0	8.0	<0.5	10.0	2.0	5.0	12.0	<5.0	<1.0	<1.0		an a
AE08629	134.00	135.00	890.0	1.0	7.0	<0.5	<5.0	3.0	3.0	11.0	<5.0	<1.0	1.0	12.5	
AE08630	135.00	136.00	910:0	<1.0	9.0	<0.5	<5.0	1.0	1.0	6.0	<5.0	<1.0	<1.0		
AE08631	136.00	137.30	1100.0	<1.0	6.0	<0.5	<5.0	1.0	2.0	13.0	<5.0	<1.0	1.0		
AE08632	137.30	138.20	640.0	66.0	25.0	<0.5	<5.0	27.0	6.0	9.0	<5.0	<1.0	1.0	72.5	
AE08633	177.75	178.25	200.0	410.0	38.0	<0.5	<5.0	20.0.	11.0	11.0	<5.0	<1.0	1.0	91.5	
AE08634	205.85	206.85	950.0	28.0	20.0	<0.5	<5.0	3.0	7.0	<5.0	<5.0	<1.0	1.0	58.3	
AE08635	206.85	207.35	930.0	16200.0	311.0	8.5	75.0	74.0	23.0	10.0	13.0	4.0	4.0	98.2	
AE08636	207.35	208.35	700.0	756.0	56.0	1.0	<5.0	16.0	15.0	<5.0	<5.0	<1.0	<1.0	93.1	
AE08638	242.40	243.40	630.0	222.0	45.0	<0.5	<5.0	19.0	7.0	10.0	<5.0	<1.0	<1.0	83.2	
AE08637	243.40	244.40	1000.0	175.0	60.0	<0.5	<5.0	13.0	10.0	<5.0	<5.0	<1.0	<1.0	74.5	
AE08639	244.40	245.40	500.0	116.0	61.0	<0.5	<5.0	19.0	10.0	15.0	<5.0	<1.0	1.0	65.5	
AE08640	245.40	246.40	710.0	197.0	51.0	<0.5	<5.0	19.0	8.0	10.0	<5.0	<1.0	<1.0	79.4	
AE08641	246.40	247.60	530.0	465.0	72.0	<0.5	<5.0	22.0	18.0	<5.0	<5.0	<1.0	1.0	86.6	
AE08642	247.60	248.10	530.0	2951.0	143.0	1.2	<5.0	32.0	27.0	11.0	<5.0	<1.0	1.0	95.4	
AE08643	253.80	254.70	1000.0	50.0	20.0	<0.5	10.0	8.0	3.0	9.0	<5.0	<1.0	1.0	71-4	
AE08644	321.70	322.40	2000.0	156.0	105.0	<0.5	10.0	17.0	18.0	14.0	<5.0	<1.0	2.0	59.8	

Hole No. CHEM87-32

SAMPLE NUMBER	FROM	то	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CB (ppm)	KO (ppm)	CU/(CU+ZN) ROCK * 100	CODES ALT	MIN
											**********				- <b></b>	
AE08645	324.00	324.70	1500.0	29.0	56.0	<0.5	35.0	5.0	8.0	43.0	<5.0	<1.0	1.0	34.1		
AE08646	324.70	326.00	3100.0	6.0	25.0	<0.5	25.0	2.0	2.0	41.0	<5.0	<1.0	1.0	19.4		
AE08647	326.00	327.50	2000.0	6.0	24.0	<0.5	65.0	3.0	2.0	60.0	<5.0	<1.0	1.0	20.0	•	
AE08648	327.50	329.00	2000.0	3.0	23.0	<0.5	65.0	3.0	4.0	36.0	<5.0	<1.0	2.0	11.5		
AE08649	329.00	330.50	1100.0	10.0	52.0	<0.5	90.0	4.0	<1.0	50.0	<5.0	<1.0	1.0	16.1		
AE08650	330.50	332.00	1600.0	47.0	23.0	<0.5	15.0	5.0	15.0	78.0	7.0	<1.0	4.0	67.1		
AE08701	332.00	333.50	1500.0	75.0	20.0	0.7	55.0	6.0	1.0	169.0	6.0	<1.0	1.0	78.9		
AE08702	333.50	335.00	1400.0	56.0	37.0	<0.5	50.0	5.0	5.0	78.0	<5.0	<1.0	2.0	60.2		
AE08703	335.00	336.50	960.0	39.0	55.0	<0.5	35.0	4.0	<1.0	102.0	<5.0	<1.0	1.0	41.5		
AE08704	336.50	338.00	980.0	46.0	57.0	<0.5	55.0	4.0	<1.0	106.0	<5.0	<1.0	<1.0	44.7		
AE08705	338.00	339.00	970.0	52.0	217.0	<0.5	70.0	5.0	<1.0	107.0	6.0	<1.0	1.0	19.3		
AE08706	339.00	340.00	1500.0	79.0	453.0	<0.5	180.0	4.0	<1.0	145.0	17.0	2.0	1.0	14.9		
AE08707	340.00	341.50	1500.0	60.0	89.0	<0.5	160.0	5.0	<1.0	83.0	23.0	<1.0	2.0	40.3		
AE08708	341.50	343.00	1400.0	44.0	187.0	<0.5	95.0	4.0	<1.0	57.0	14.0	<1.0	2.0	19.0		
AE08709	343.00	346.00	1400.0	40.0	99.0	<0.5	75.0	4.0	1.0	53.0	11.0	<1.0	2.0	28.8		
AE08710	346.00	347.20	1400.0	37.0	284.0	<0.5	65.0	4.0	2.0	56.0	<5.0	1.0	2.0	11.5		
AE08711	347.20	348.50	1200.0	26.0	101.0	(0.5	50.0	4.0	1.0	41.0	(5.0	<1.0	2.0	20.5		
	U17 1 2V	010100	1400.0	20.0			50.0	1.0	1.0	11.0	(3.0	11.0	2.0	20.0		

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	РВ (ррв)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	M IN
AE08712	348.50	349.80	1300.0	207.0	37.0	0.9	65.0	6.0	3.0	9.0	8.0	<1.0	<1.0	84.8			
AE08713	349.80	351.00	380.0	167.0	203.0	<0.5	200.0	27.0	50.0	17.0	35.0	<1.0	<1.0	45.1			
AE08714	351.00	353.00	1200.0	26.0	39.0	<0.5	70.0	7.0	10.0	14.0	7.0	<1.0	1.0	40.0			
AE08715	353.00	355.00	1200.0	74.0	585.0	<0.5	65.0	7.0	8.0	33.0	14.0	3.0	1.0	11.2			
AE08716	355.00	357.00	1500.0	52.0	133.0	<0.5	60.0	10.0	10.0	36.0	17.0	<1.0	1.0	28.1			
AE08717	357.00	359.00	1400.0	13.0	77.0	<0.5	65.0	4.0	1.0	42.0	8.0	<1.0	1.0	14.4			
AE08718	359.00	361.00	1300.0	21.0	95.0	<0.5	30.0	5.0	<1.0	61.0	9.0	<1.0	1.0	18.1			
AE08719	361.00	363.00	1000.0	12.0	94.0	<0.5	35.0	4.0	<1.0	92.0	7.0	<1.0	1.0	11.3			
AE08720	363.00	365.00	1100.0	19.0	284.0	<0.5	20.0	4.0	<1.0	54.0	9.0	1.0	1.0	6.3			
AE08721	365.00	367.00	2300.0	15.0	54.0	<0.5	35.0	5.0	<1.0	30.0	9.0	<1.0	1.0	21.7			
AE08722	367.00	369.00	1700.0	45.0	48.0	<0.5	60.0	5.0	<1.0	16.0	7.0	<1.0	2.0	48.4			
AE08723	369.00	371.00	1700.0	40.0	59.0	<0.5	80.0	5.0	1.0	14.0	8.0	<1.0	1.0	40.4			
AE08724	371.00	373.00	1600.0	27.0	43.0	<0.5	100.0	4.0	<1.0	10.0	<5.0	<1.0	2.0	38.6			
AE08725	373.00	375.00	1400.0	32.0	30.0	<0.5	35.0	4.0	<1.0	12.0	8.0	<1.0	1.0	51.6			
AE08726	375.00	377.00	1700.0	120.0	38.0	<0.5	25.0	6.0	<1.0	16.0	<5.0	<1.0	2.0	75.9			
AE08727	377.00	379.00	1200.0	282.0	45.0	<0.5	30.0	6.0	2.0	12.0	5.0	<1.0	2.0	86.2			
AE08728	379.00	380.70	1500.0	104.0	17.0	<0.5	25.0	7.0	2.0	21.0	5.0	<1.0	1.0	85.9			

Hole No. CHEM87-32

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppa)	AS (ppm.)	CD (ppm)	HO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
														· · · · · · · · · · · · · · · · · · ·		•	
AE08729	387.00	388.60	2800.0	57.0	13.0	<0.5	60.0	5.0	<1.0	11.0	7.0	<1.0	3.0	81.4			
AE08730	388.60	389.80	2000.0	484.0	35.0	<0.5	10.0	12.0	2.0	10.0	12.0	<1.0	3.0	93.3			
AE08731	389.80	391.40	1300.0	65.0	17.0	<0.5	110.0	5.0	<1.0	8.0	<5.0	<1.0	2.0	79.3			
AE08732	391.40	392.00	1200.0	17.0	12.0	<0.5	5.0	4.0	1.0	24.0	<5.0	<1.0	2.0	58.6			
AE08733	392.00	393.00	1200.0	14.0	18.0	<0.5	40.0	5.0	1.0	23.0	<5.0	<1.0	2.0	43.7			
AE08734	393.00	395.00	1300.0	35.0	16.0	<0.5	35.0	3.0	1.0	7.0	<5.0	<1.0	2.0	68.6			
AE08735	400.50	402.00	1800.0	31.0	12.0	<0.5	15.0	5.0	1.0	29.0	<5.0	<1.0	2.0	72.1			
AE08736	402.00	403.00	2100.0	67.0	11.0	<0.5	40.0	4.0	1.0	39.0	<5.0	<1.0	5.0	85.9			
AE08737	403.00	404.00	2200.0	19.0	16.0	<0.5	10.0	3.0	<1.0	63.0	<5.0	<1.0	2.0	54.3			
AE08738	404.00	404.80	2100.0	53.0	51.0	<0.5	20.0	3.0	1.0	172.0	<5.0	<1.0	2.0	51.0			
AE08739	404.80	406.30	2600.0	18.0	16.0	<0.5	<5.0	3.0	<1.0	49.0	<5.0	<1.0	1.0	52.9		n e de la composition	
AE08740	410.00	412.50	4000.0	37.0	21.0	<0.5	<5.0	3.0	<1.0	22.0	<5.0	<1.0	2.0	63.8			
AE08741	412.50	414.00	3300.0	104.0	24.0	<0.5	20.0	4.0	<1.0	70.0	<5.0	<1.0	2.0	81.2	· .		
AE08742	415.00	416.40	2900.0	51.0	35.0	<0.5	<5.0	3.0	1.0	29.0	<5.0	<1.0	2.0	59.3		· ·	
AE08743	416.40	416.90	2900.0	2731.0	236.0	4.3	120.0	11.0	1.0	68.0	5.0	2.0	3.0	92.1			
AE08744	416.90	418.00	2400.0	66.0	40.0	0.6	<5.0	3.0	41.0	22.0	<5.0	<1.0	5.0	62.3		N	
AE08745	427.30	428.70	1000.0	45.0	17.0	<0.5	<5.0	5.0	22.0	12.0	<5.0	<1.0	3.0	72.6			

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NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppd)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
											**********	*****					
AE08746	428.70	429.50	750.0	187.0	26.0	<0.5	30.0	17.0	13.0	83.0	71.0	<1.0	17.0	87.8			
AE08747	429.50	431.00	810.0	61.0	30.0	<0.5	<5.0	8.0	16.0	19.0	8.0	<1.0	5.0	67.0			
AE08748	444.00	445.00	710.0	172.0	21.0	<0.5	30.0	13.0	11.0	11.0	<5.0	<1.0	6.0	89.1			
AE08749	445.00	446.30	740.0	327.0	32.0	<0.5	15.0	17.0	15.0	11.0	11.0	<1.0	3.0	91.1			
AE08750	446.30	447.30	<20.0	157.0	91.0	<0.5	<5.0	30.0	61.0	<5.0	10.0	<1.0	2.0	63.3			

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SAMPLE NUMBER	FROM	то	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	МО (ррм)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
																• • • • • • • • • • • • • • • • • • •	
AE08682	67.90	68.90	1300.0	15.0	24.0	<0.5	<5.0	9.0	23.0	5.0	<5.0	<1.0	1.0	38.5			
AE08683	68.90	69.80	1300.0	449.0	100.0	<0.5	<5.0	18.0	18.0	<5.0	<5.0	1.0	1.0	81.8			

Hole No. CHEM87-33

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SAMPLE													********				
NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MI
					· .				********				•				
AE08751	111.40	112.80	1500.0	45.0	22.0	<0.5	<5.0	6.0	5.0	5.0	47.0	<1.0	1.0	67.2			
AE08752	112.80	114.60	1600.0	28.0	18.0	<0.5	<5.0	7.0	6.0	8.0	47.0	<1.0	1.0	60.9			
AE08753	114.60	116.20	1000:0	57.0	26.0	<0.5	<5.0	7.0	3.0	8.0	25.0	<1.0	1.0	68.7			
AE08754	116.20	117.70	1000.0	28.0	45.0	<0.5	<5.0	6.0	6.0	5.0	5.0	<1.0	1.0	38.4			
AE08755	125.00	126.40	890.0	41.0	31.0	<0.5	5.0	10.0	1.0	6.0	<5.0	<1.0	1.0	56.9			
AE08756	126.40	127.00	1800.0	88.0	73.0	<0.5	<5.0	15.0	3.0	6.0	<5.0	<1.0	2.0	54.7			
AE08757	127.00	128.00	1200.0	10.0	30.0	<0.5	<5.0	6.0	2.0	8.0	<5.0	<1.0	1.0	25.0			
AE08758	146.60	148.10	1200.0	12.0	31.0	<0.5	<5.0	5.0	3.0	6.0	5.0	<1.0	1.0	23.0			ŝ.
AE08759	148.10	149.00	1100.0	27.0	28.0	<0.5	<5.0	5.0	1.0	<5.0	<5.0	<1.0	1.0	40 1			
AE08760	149.00	150.00	930.0	11.0	26.0	<0.5	<5.0	5.0	2.0	11.0	<5.0	<1.0	1.0				
AE08761	150.00	151.90	1200.0	13.0	23.0	<0.5	<5.0	3.0	3.0	5.0	<5.0	(1.0	1.0	29.7			
AE08762	212.10	213.10	1000.0	1050.0	78.0	<0.5	<5.0	17.0	10.0	70.0	<b>/5 0</b>	~	10.0	36.1			
AE08763	223.00	224.00	1600.0	182.0	73.0	<0.5	<5.0	23.0	13.0	/5.0	X5.0	<1.0	10.0	93.1			
AE08764	224.00	225.00	1400.0	6900.0	151.0	2.1	35.0	55 0	10.0	17.0	12.0	<1.V	5.0	71.4			
AE08765	225.00	225.40	<20.0	568.0	92.0	(0.5	<5 A	26.0	72.0	17.0	12.0	<1.0	50.0	97.9			
AE08766	225.40	225 60	60.0	7600 0	195 0		25.0	30.0	72.0	<5.0	<5.0	<1.0	5.0	86.1			
AE08767	272 04	224 10	1200.0	7000.0	560.0	4.4	40.0	33.0	66.0	<5.0	<5.0	1.0	63.0	97.5			
nuvo/o/	4/4.00	4/4.10	1200.0	/12.0	560.0	0.5	80.0	10.0	8.0	64.0	42.0	3.0	5.0	56.0			

Hole No. CHEM87-34

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SAMPLE NUMBER	FROM	то	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	HO (ppm)	CU/(CU+ZN) ROC # 100	CODES K ALT MIN
AE08768	280.00	281.00	1500.0	912.0	5200.0	<0.5	30.0	12.0	10.0	286.0	61.0	36.0	6.0	14.9	
AE08769	281.00	282.00	1800.0	593.0	1587.0	0.6	65.0	17.0	12.0	438.0	<5.0	9.0	5.0	27.2	
AE08770	282.00	283.00	1600.0	222.0	396.0	0.6	45.0	6.0	3.0	42.0	<5.0	2.0	3.0	35.9	
AE08771	285.00	286.00	1600.0	80.0	262.0	<0.5	5.0	6.0	3.0	94.0	<5.0	1.0	3.0	23.4	
AE08772	286.00	287.00	2000.0	57.0	96.0	<0.5	10.0	7.0	3.0	38.0	6.0	<1.0	3.0	37.3	
AE08773	287.00	288.00	2000.0	173.0	48.0	<0.5	35.0	10.0	5.0	20.0	33.0	<1.0	5.0	78.3	
AE08774	288.00	289.00	1300.0	300.0	31.0	<0.5	65.0	10.0	3.0	24.0	57.0	<1.0	3.0	90.6	
AE08775	289.00	290.00	890.0	122.0	16.0	<0.5	45.0	11.0	2.0	12.0	38.0	<1.0	2.0	88.4	
AE08776	290.00	291.60	860.0	68.0	7.0	<0.5	20.0	10.0	3.0	6.0	13.0	<1.0	2.0	90.7	
AE08777	291.60	292.60	550.0	70.0	7.0	<0.5	20.0	10.0	5.0	6.0	20.0	<1.0	2.0	90.9	
AE08778	292.60	293.80	630.0	95.0	7.0	<0.5	30.0	11.0	7.0	8.0	22.0	<1.0	5.0	93.1	
AE08779	293.80	295.00	1800.0	186.0	232.0	<0.5	20.0	17.0	17.0	11.0	11.0	1.0	3.0	44.5	
AE08780	295.00	296.00	1800.0	237.0	415.0	<0.5	5.0	11.0	10.0	108.0	<5.0	4.0	2.0	36.3	
AE08781	296.00	297.10	1800.0	275.0	1814.0	<0.5	30.0	8.0	34.0	17.0	(5.0	15.0	2.0	13.2	
AE08782	297.10	298.10	1500.0	482.0	1675.0	1.7	130.0	12.0	30.0	48.0	<5:0	12.0	2.0	22.4	
AE08783	298.10	299.00	1700.0	449.0	487.0	20.5	55 0	9.0	15.0	69.0	(5.0	2 0	2.0	42.1	
AF00794	290 00	200 00	1700.0	004 0	275 0	20 E	15.0		10.0	00.V	(3.0	3.0	2.0	48.0	
NSV0/04	477.00	477.70	1/00.0	876.0	2/3.0	(0.5	12.0	6.0	12.0	13.0	<5.0	2.0	1.0	76.5	

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	HO (ppm)	CU/(CU+ZN)ROCK * 100	CODES ALI MIN
					•								*******		
AE08785	300.00	300.70	640.0	569.0	342.0	<0.5	30.0	32.0	64.0	<5.0	<5.0	<1.0	1.0	62.5	
AE08786	300.70	302.00	1400.0	986.0	185.0	<0.5	15.0	5.0	8.0	10.0	<5.0	1.0	1.0	84.2	
AE08787	302.00	303.00	1400.0	416.0	210.0	<0.5	15.0	5.0	6.0	16.0	<5.0	1.0	1.0	66.4	
AE08788	303.00	304.00	1100.0	277.0	352.0	<0.5	95.0	17.0	17.0	45.0	<5.0	2.0	1.0	44.0	
AE08789	304.00	305.00	1700.0	122.0	432.0	<0.5	55.0	7.0	5.0	38.0	<5.0	3.0	1.0	22.0	
AE08790	305.00	306.00	1600.0	132.0	217.0	<0.5	45.0	10.0	6.0	13.0	<5.0	1.0	1.0	37.8	
AE08791	306.00	307.00	1300.0	122.0	57.0	<0.5	15.0	8.0	9.0	10.0	<5.0	<1.0	2.0	68 2	
AE08792	307.00	307.80	<20.0	82.0	49.0	<0.5	<5.0	33.0	190.0	12.0	<5.0	<1.0	1.0	62 6	
AE08793	307.80	309.40	860.0	54.0	27.0	<0.5	<5.0	9.0	49.0	21.0	<5.0	<1.0	3.0	66 7	
AE08794	309.40	310.40	1200.0	50.0	17.0	<0.5	35.0	5.0	7.0	8.0	8.0	(1.0	3.0	7. (	
AE08795	310.40	312.00	1200.0	19.0	33.0	<0.5	25.0	5.0	5.0	16.0	7 0	<1.0	2.0	71.0	
AE08796	313.00	314.50	1100.0	80.0	386.0	0.5	20.0	8.0	5.0	13.0	(5.0	4.0		36.3	
AE08797	314.50	316.00	990.0	39.0	141.0	1.1	35.0	4.0	5.0	78.0	<b>15</b> 0		4.0	17.2	
AE08798	316.00	317.50	1200.0	50.0	210.0	2.1	50.0	6.0	4 0	97 0	X5.0	1.0	4.0	21.7	
AE08799	320.00	322.00	2300.0	173.0	1403.0	3.7	140.0	5.0		147.0	×3.0	1.0	4.0	19.2	
AE08800	323 50	324 50	2400 0	240 0	1207 0	1.0		5.0	5.0	147.0	(3.0	9.0	5.0	11.0	
AD02651	325.75	376 00	50 0	150.0	107/ .V	1.5	43.V	J.U	5.0	105.0	<5.0	7.0	5.0	16.0	
	923113	J.U.VV	30.0	130.0	/0.V	10.0	<3.0	36.0	104.0	5.0	44.0	<1.0	2.0	66.4	e e e e e e e e e e e e e e e e e e e

Hole No. CHEM87-34

SAMPLE NUMBER	FROM	1 TO	BA (ppm)	CU ) (ppm)	ZN (ppm)	АG (ррж)	AU (ppb)	CQ (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (DDM)	CU/(CU+ZN) ROCK	CODES ALT	MIN
AD02652	367.80	368.90	2800.0	32.0	64.0	<0.5	<5.0	8.0	45.0	7.0	<5.0	<1.0	2.0	23.2		
AD02653	368.90	370.30	4500.0	50.0	58.0	<0.5	<5.0	5.0	40.0	14.0	<5.0	<1.0	2.0			
AD02654	371.10	372.00	2900.0	37.0	111.0	<0.5	<5.0	5.0	26.0	7.0	<5.0	<1.0	2.0	46.3		
AD02655	372.70	374.00	2700.0	33.0	58.0	<0.5	<5.0	23.0	166.0	7.0	22.0	(1.0		23.0		· ·
AD02656	374.00	375.00	4000.0	35.0	54.0	<0.5	<5.0	4.0	32.0	9.0	<5.0	<1.0	2.0	36.3		
AD02657	375.00	376.00	4600.0	31.0	87.0	<0.5	<5.0	3.0	28.0	/5 A			۰.۰	39.3		
AD02658	376.00	377.00	3500.0	25.0	90.0	<0.5	<5.0	3.0	22.0	7.0	(5.0	<1.0	11.0	26.3		
AD02659	377.00	377.70	3500.0	32.0	73.0	<0.5	<5.0	3.0	21 0	6.0	X5 A	~	4.0	21.7		
AD02660	377.70	378.50	3700.0	58.0	59.0	<0.5	<5.0	4.0	39 0	11.0	<5.0	(1.0	4.0	30.5		
AD02661	378.50	379.50	3300.0	35.0	51.0	20° 5	15 0			11.0	.J.V	<1.0	7.0	49.6		
AB02662	070 60			55,0	51.0	(0.5	<5.0	3.0	26.0	7.0	<5.0	<1.0	5.0	40.7		
HDA7007	3/9.50	380.60	2000.0	52.0	163.0	<0.5	35.0	9.0	57.0	8.0	<5.0	<1.0	2.0	24.2		
AD02663	380.60	381.70	1900.0	94.0	177.0	<0.5	<5.0	36.0	194.0	6.0	<5.0	<1.0	3.0	34.7		
AD02664	381.70	381.90	1800.0	239.0	120.0	<0.5	75.0	40.0	230.0	8.0	<5.0	<1.0	3.0	66.6		
AD02665	381.90	382.80	830.0	145.0	161.0	<0.5	<5.0	44.0	301.0	7.0	<5.0	(1.0	3.0	47 A		
AB02666	387.00	388.00	5600.0	33.0	80.0	<0.5	<5.0	5.0	20.0	5.0	42.0	<1.0	<1.0	77.4		
AD02667	388.00	389.00	11000.0	58.0	27.0	<0.5	<5.0	5.0	28.0	7.0	35.0	<u>()</u>	2.0			
AD02668	389.00	390.00	11000.0	72.0	36.0	<0.5	<5.0	5.0	26.0	8.0	<5.0	<1.0	1.0	68.2		
				1.1						1977 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 - 1978 -			* * *	00./		

Hole No. CHEM87-34

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SAMPLE							· · · · · · · · · · · · · · · · · · ·			*****						CODES	
NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	- HO (ppm)	CU/(CU+ZN) + 100	ROCK	ALT	МІМ
													******				
AD02669	390.00	391.00	3900.0	39.0	24.0	<0.5	<5.0	2.0	18.0	6.0	18.0	<1.0	. <1.0	61.9			

Hole No. CHEM87-34

1

SAMPLE NUMBER AE08684

<0.5

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5.0

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2																CUDES
ł	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	МО (ррм)	CU/(CU+ZN) * 100	ROCK	ALT
					- 14 40 40 40 40 40 40 40 40 40 40 40 40 40											
	25.00	26.00	1100.0	317.0	63.0	<0.5	<5.0	16.0	17.0	<5.0	<5.0	<1.0	2.0	83.4		
	26.00	27.00	760.0	63.0	49.0	<0.5	<5.0	15.0	16.0	<5.0	<5.0	<1.0	3.0	56.2		

14.0

11.0

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56.2

56.0

55.1

30.8

16.0

DIAMOND DRILL CORE LITHOGEOCHEMICAL RECORD (MINOR ELEMENTS)

Hole No. CHEM87-35

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AE08685

AE08686

AE08687

AE08688

AE08689

26.00

27.00

28.00

61.30

62.30

27.00

28.00

29.00

62.30

63.30

760.0

790.0

770.0

1000.0

1100.0

63.0

51.0

43.0

8.0

4.0

40.0

35.0

18.0

21.0

MIN

SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
															*********		-***
AD02670	102.00	103.60	1300.0	13.0	62.0	<0.5	<5.0	5.0	4.0	<5.0	8.0	<1.0	<1.0	17.3			
AD02671	103.60	104.80	1800.0	1900.0	765.0	1.0	20.0	7.0	6.0	22.0	57.0	5.0	10.0	71.3			
AD02672	104.80	106.00	2600.0	700.0	360.0	<0.5	45.0	12.0	10.0	32.0	40.0	2.0	7.0	66.0			
AD02673	106.00	107.00	2100.0	365.0	189.0	<0.5	<5.0	6.0	4.0	8.0	32.0	1.0	2.0	65.9			
AD02674	107.00	107.80	2300.0	8900.0	570.0	5.0	55.0	46.0	30.0	41.0	93.0	4.0	79.0	94.3			
AD02675	107.80	109.00	2100.0	310.0	110.0	<0.5	<5.0	8.0	8.0	5.0	32.0	<1.0	4.0	73.8			
AD02676	149.00	150.70	1200.0	92.0	86.0	<0.5	15.0	5.0	11.0	33.0	10.0	<1.0	4.0	51.7			
AD02677	150.70	152.00	2600.0	96.0	1900.0	1.5	55.0	5.0	4.0	44.0	6.0	8.0	6.0	4.8			
AD02678	152.00	153.00	3000.0	23.0	265.0	1.0	45.0	5.0	4.0	29.0	32.0	1.0	6.0	8.0			
AD02679	153.00	154.00	2300.0	63.0	1650.0	2.0	75.0	5.0	6.0	165.0	20.0	9.0	9.0	3.7			
AD02680	154.00	155.00	2100.0	27.0	275.0	0.5	35.0	5.0	6.0	30.0	33.0	<1.0	4.0	8.9			
AD02681	155.00	156.00	1600.0	71.0	1050.0	0.5	20.0	5.0	4.0	45.0	34.0	4.0	4.0	6.3			
AD02682	156.00	156.80	2200.0	880.0	1450.0	3.0	90.0	4.0	6.0	147.0	54.0	5.0	10.0	37.8			
AD02683	156.80	158.00	80.0	150.0	795.0	<0.5	10.0	35.0	83.0	9.0	23.0	<1.0	2.0	15.9			
AD02684	189.00	191.00	1500.0	106.0	63.0	<0.5	<5.0	20.0	28.0	6.0	32.0	<1.0	1.0	62.7			
AD02685	244.00	246.40	2800.0	58.0	46.0	<0.5	<5.0	7.0	30.0	7.0	<5.0	<1.0	7.0	55.8			

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SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
		*****															
AE08690	15.20	16.60	1000.0	14.0	31.0	<0.5	<5.0	4.0	4.0	5.0	<5.0	<1.0	3.0	31.11			
AE08691	16.60	18.00	920.0	79.0	30.0	<0.5	<5.0	8.0	6.0	<5.0	6.0	<1.0	3.0	72.48			
AE08692	18.00	19.00	1300.0	315.0	43.0	<0.5	15.0	15.0	10.0	6.0	<5.0	<1.0	7.0	87.99			
AE08693	19.00	20.00	1500.0	310.0	41.0	<0.5	25.0	12.0	8.0	7.0	13.0	<1.0	7.0	88.32			
AE08694	20.00	21.00	1600.0	28.0	26.0	<0.5	5.0	7.0	5.0	7.0	14.0	<1.0	3.0	51.85			
AE08695	21.00	22.00	1900.0	28.0	24.0	<0.5	<5.0	6.0	3.0	9.0	<5.0	<1.0	2.0	53.85			
AE08696	22.00	23.00	1700.0	23.0	29.0	<0.5	<5.0	4.0	2.0	7.0	33.0	<1.0	4.0	44.23			
AE08697	23.00	24.00	1200.0	50.0	25.0	<0.5	<5.0	7.0	4.0	6.0	<5.0	<1.0°.	3.0	66.67			
AE08698	24.00	25.00	1600.0	34.0	29.0	<0.5	<5.0	6.0	4.0	7.0	<5.0	<1.0	3.0	53.97			
AE08699	25.00	26.00	1700.0	14.0	23.0	<0.5	<5.0	4.0	2.0	8.0	26.0	<1.0	3.0	37.84			
AE08700	26.00	27.00	1200.0	14.0	14.0	<0.5	<5.0	1.0	2.0	7.0	17.0	<1.0	2.0	50.00			
AB21951	27.00	28.00	1300.0	45.0	36.0	0.5	<5.0	4.0	5.0	14.0	15.0	<1.0	2.0	55.56			
AB21952	28.00	29.00	1900.0	104.0	25.0	<0.5	10.0	13.0	8.0	8.0	31.0	<1.0	4.0	80.63			
AB21953	29.00	30.00	1500.0	57.0	22.0	<0.5	<5.0	7.0	4.0	9.0	8.0	<1.0	3.0	72.15			
AB21954	30.00	31.00	2000.0	74.0	26.0	<0.5	<5.0	7.0	5.0	8.0	12.0	<1.0	3.0	74.00			
AB21955	31.00	32.00	2100.0	32.0	28.0	<0.5	10.0	6.0	3.0	6.0	23.0	<1 0	1.0	53.33			
AB21956	32.00	33.00	2000.0	29.0	23.0	(0.5		5.0	A 0	9 0	19.0	<1 0	<1 0				
	CALVU	00100	4VVV+V	67.V	20.0	NV.0	(J.V.	v	7.0	0.0	13.0	V110	<1.V	- J.J / /			

Hole No. CHEM87-37

SAMPLE NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	4I M
AB21957	33.00	34.00	1800.0	31.0	18.0	<0.5	<5.0	3.0	5.0	9.0	<5.0	<1.0	<1.0	63.27			
AB21958	34.00	35.00	2400.0	24.0	19.0	<0.5	15.0	7.0	5.0	10.0	12.0	<1.0	1.0	55.81		•	
AB21959	35.00	36.00	230010	48.0	17.0	<0.5	10.0	5.0	4.0	9.0	<5.0	<1.0	1.0	73.85			
AB21960	36.00	37.00	2100.0	88.0	41.0	0.5	10.0	7.0	6.0	17.0	12.0	<1.0	1.0	68.22			
AB21961	37.00	38.00	2400.0	23.0	25.0	<0.5	<5.0	5.0	4.0	24.0	<5.0	<1.0	<1.0	47.92			
AB21962	38.00	39.00	2100.0	53.0	42.0	<0.5	10.0	5.0	3.0	40.0	26.0	<1.0	1.0	55.79			
AB21963	39.00	40.00	910.0	110.0	76.0	<0.5	10.0	25.0	12.0	17.0	10.0	<1.0	1.0	59.14			
AB21964	40.00	41.00	1700.0	99.0	.75.0	<0.5	10.0	17.0	10.0	11.0	79.0	<1.0	3.0	56.90			
AB21965	41.00	42.00	2800.0	44.0	56.0	<0.5	5.0	12.0	8.0	12.0	<5.0	<1.0	1.0	44.00			
AB21966	42.00	43.00	2300.0	30.0	42.0	<0.5	20.0	5.0	2.0	50.0	9.0	<1.0	2.0	41 67			
AB21967	43.00	44.00	2600.0	39.0	46.0	<0.5	5.0	4.0	4.0	63.0	26.0	<1.0	1.0	AE 00			
AB21968	14.00	45.00	2900.0	19.0	26.0	<0.5	<5.0	5.0	4.0	37.0	11.0	<1.0	<1.0	10.00			
AB21969	45.00	46.00	2800.0	52.0	55.0	<0.5	25.0	9.0	6.0	107 0	20.0	<1.0	2.0	******			
AB21970	46.00	47.00	4500.0	240.0	615.0	3.0	40.0	7.0	6.0	395 0	28.0	3.0	5.0	48.60			
AB21971	47.00	48.00	4500.0	200.0	250 0	2.0	70.0	7 0		200.0	40.V	0.0	5.0	28.07			
4821972	49 00	49 00	2600.0	222.0	20.0	2.V	/V.V	7.0	4.0	200.0	<5.0	3.0	5.0	21.05			
AP21072	40.00	77.VV	2000.0	44.V	20.0	(0.5	92.0	8.0	3.0	12.0	31.0	<1.0	4.0	44.00			
nD417/3	47.00	30.00	2300.0	26.0	30.0	<0.5	70.0	6.0	4.0	13.0	24.0	<1.0	5.0	46.43			•

Hole No. CHEM87-37

SAMPLE NUMBER	FROM	то	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CB (ppm)	MG (ppm)	СU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
		÷ .															
AB21974	50.00	51.00	4100.0	132.0	64.0	1.0	110.0	12.0	7.0	8.0	26.0	<1.0	5.0	67.35			. · · ·
AB21975	51.00	52.00	3200.0	12.0	11.0	<0.5	40.0	9.0	4.0	<5.0	<5.0	<1.0	4.0	52.17			
A821976	52.00	53.00	1700:0	29.0	14.0	<0.5	25.0	5.0	3.0	<5.0	37.0	<1.0	3.0	67.44			
AB21977	53.00	54.00	2100.0	10.0	13.0	<0.5	<5.0	5.0	3.0	5.0	<5.0	<1.0	4.0	43.48			
AB21978	54.00	55.00	1600.0	30.0	15.0	<0.5	<5.0	7.0	3.0	<5.0	21.0	<1.0	4.0	66.67			
AB21979	55.00	56.00	1700.0	41.0	21.0	<0.5	5.0	9.0	5.0	7.0	8.0	<1.0	3.0	66.13			
AB21980	56.00	57.00	1700.0	119.0	25.0	<0.5	15.0	11.0	6.0	13.0	7.0	<1.0	6.0	82.64			
AB21981	57.00	58.00	1900.0	138.0	26.0	<0.5	15.0	7.0	6.0	16.0	12.0	<1.0	6.0	84.15			
AB21982	58.00	59.00	1800.0	20.0	39.0	<0.5	<5.0	6.0	4.0	7.0	11.0	<1.0	3.0	33.90			
AB21983	59.00	60.00	1100.0	7.0	25.0	<0.5	<5.0	3.0	3.0	6.0	<5.0	<1.0	4.0	21.87		an An an An	
AB21984	60.00	61.00	960.0	20.0	22.0	<0.5	<5.0	5.0	4.0	6.0	<5.0	<1.0	3.0	47.62			
AB21985	61.00	62.00	1100.0	53.0	16.0	<0.5	<5.0	4.0	4.0	6.0	18.0	<1.0	3.0	76.31			
AB21986	62.00	63.00	960.0	19.0	17.0	<0.5	<5.0	2.0	2.0	7.0	<5.0	<1.0	2.0	52.78			
AB21987	63.00	64.00	1000.0	5.0	18.0	<0.5	<5.0	2.0	2.0	<5.0	6.0	<1.0	2.0	21 74	-		
AB21988	64.00	65.00	720.0	20.0	19.0	<0.5	<5.0	4.0	3.0	5.0	20.0	<1.0	1.0	51 28			
AB21989	65.00	66.00	960.0	40.0	15.0	<0.5	<5.0	4.0	3.0	<5.0	<5.0	<1.0	1.0	72.73			
AB21990	66.00	67.00	1200.0	14.0	12.0	<0.5	<5.0	4.0	4.0	<5.0	27.0	<1.0	1.0	53.85			

Hole No. CHEM87-37

SAMPLE			*******		**********		*******										
NUMBER	FROM	TO	BA (ppm)	CU (ppm)	ZN (ppm)	AG (ppm)	AU (ppb)	C() (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	мп
								************		**********	*********	*********					
AB21991	67.00	68.00	1200.0	8.0	11.0	<0.5	15.0	4.0	2.0	<5.0	21.0	<1.0	1.0	42 11			
AB21992	68.00	69.00	1600.0	18.0	14.0	<0.5	<5.0	4.0	3.0	<5.0	21.0	<1.0	2.0	56 00			
AB21993	69.00	70.00	1900:0	5.0	13.0	<0.5	<5.0	4.0	2.0	<5.0	<5.0	(1.0	1.0	00.40			
AB21994	70.00	70.60	2000.0	6.0	21.0	<0.5	<5.0	2.0	2.0	<5.0	(5.0	<1.0	1.0	4/./8			
AB21995	70.60	71.60	630.0	63.0	113.0	<0.5	<5.0	26.0	40.0	5.0	<5.0	(1.0	1.0	32.22			
AB21996	72.30	73.30	270.0	260.0	82.0	<0.5	<5.0	29.0.	61.0	75.0	(5.0	×1.0	1.0	35.80			
AB21997	73.30	74.00	2400.0	116.0	31.0	<0.5	<5.0	14.0	12.0	17 0	25 A	<1.0	1.0	76.02			
AB21998	74.00	75.00	1800 0	320 0	490 0	15	150 0		1410	12.0	10.0	(1.0	3.0	78.91			
AP21000	25		1000.0	520.0	100.0	1.J	130.0	14.0	17.0	28.0	24.0	2.0	6.0	40.00			
HB21999	75.00	76.00	1600.0	440.0	63.0	<0.5	20.0	13.0	10.0	7.0	17.0	<1.0	5.0	87.48			
AB22000	76.00	77.20	3600.0	410.0	49.0	1.0	50.0	11.0	10.0	10.0	47.0	<1.0	3.0	89.32			
AF00151	77.20	78.00	3700.0	720.0	3800.0	6.0	750.0	10.0	8.0	101.0	14.0	20.0	20.0	15.93	n e <sup>n</sup> a c		
AF00152	78.00	79.30	2800.0	260.0	104.0	1.5	35.0	6.0	4.0	11.0	24.0	<1.0	8.0	71.43		•	
AF00153	79.30	80.30	1900.0	86.0	30.0	1.0	5.0	4.0	3.0	11.0	9.0	<1.0	4.0	70 10			
AE00154	80.30	81.10	850.0	580.0	103.0	1.0	10.0	34.0	41.0	17.0	33.0	<1.0	4.0	94 00			
AF00155	81.10	82.10	1600.0	280.0	1900.0	0.5	55.0	8.0	8.0	20.0	20.0	10.0	4.0	10.04			
AF00156	82.10	83.10	1500.0	168.0	230.0	<0.5	15.0	7.0	4.0	19.0	18.0	1.0		14.84			
AF00157	83.10	84.00	1800.0	410.0	405.0	1.0	35 0	7 0	• •	10.0			4.0	42.21			
			· · · · · · · · · ·			A # V	00.V	/	4.V	18.0	22.0	2.0	5.0	50.31			

Hole No. CHEM87-37

SAMPLE NUMBER	FROM	то	BA (ppm	CU ) (ppm	2N ) (ppm)	AG (ppm)	AU (ppb)	CO (ppm)	NI (ppm)	PB (ppm)	AS (ppm)	CD (ppm)	MO (ppm)	CU/(CU+ZN) * 100	ROCK	CODES ALT	MIN
AF00158	84.00	84.50	1400.0	540.0	970.0	1.0	10.0	25.0	34.0	32.0	16.0	7.0	4.0	35.76			
AF00159	84.60	85.60	410.0	77.0	165.0	<0.5	<5.0	25.0	54.0	8.0	<5.0	<1.0	5.0	31.82			
AF00160	98.30	99.30	2500,0	600.0	1000.0	3.5	274.3	14.0	13.0	1116.0	30.0	6.0	2.0	37.50			
AF00161	99.30	99.50	4000.0	28500.0	236100.	78.5	1440.0	19.0	27.0	3700.0	31.0	807.0	95.0	10.77			
AF00162	99.50	99.70	6400.0	4900.0	22900.0	45.3	2262.8	14.0	13.0	4800.0	48.0	148.0	14.0	17.63			
AF00163	99.70	100.70	6300.0	15400.0	9800.0	30.0	445.7	25.0	40.0	473.0	10.0	76.0	20.0	61.11			
AF00164	100.70	101.80	14000.0	33800.0	6200.0	54.9	548.6	58.0	59.0	76.0	<5.0	79.0	17.0	84.50			
AE00165	101.80	102.80	7900.0	12500.0	1300.0	20.0	171.4	14.0	9.0	135.0	13.0	12.0	4.0	90.58			
AF00166	102.80	103.50	9800.0	12800.0	800.0	21.0	68.6	13.0	9.0	38.0	<5.0	8.0	5.0	94.12			
AF00167	103.50	104.30	8800.0	1600.0	700.0	6.4	<68.6	8.0	3.0	695.0	29.0	5.0	3.0	69.57			
AF00168	104.30	105.00	12000.0	2300.0	600.0	2.3	137.1	42.0	17.0	94.0	<5.0	4.0	3.0	79.31			
AF00169	105.00	105.50	31000.0	4800.0	7600.0	7.0	137.1	104.0	64.0	124.0	8.0	94.0	19.0	38.71			
AF00170	105.50	106.00	30000.0	8100.0	300.0	12.0	480.0	70.0	53.0	62.0	<5.0	2.0	13.0	96.43			
AF00171	106.00	106.50	24000.0	16500.0	300.0	26.0	788.6	28.0	20.0	194.0	15.0	3.0	12.0	98.21			
AF00172	106.50	107.10	15000.0	3300.0	200.0	6.0	68.6	73.0	60.0	284.0	<5.0	2.0	16.0	94.29			
AF00173	107.10	108.10	1700.0	600.0	300.0	0.5	68.6	39.0	105.0	125.0	31.0	<1.0	3.0	66.67			

Hole No. CHEM87-37

# APPENDIX C

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ANALYTICAL RESULTS -- MAJOR OXIDES

SAMPLE NUMBER	FROM	то	XS102	XAL203	ZCAO	ZMGO	XNA20	ZK20	XFE203	ZT 102	ZP205	2 MNO	7L0I	รบห	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn
AB15351	7.30	7.40	53.00	16.30	7.05	2.23	3.00	2.63	7.20	0.46	0.34	0.26	7.77	100.24	32.60	17.00	89.00	16.04
AB15352	31.90	32.00	72.60	13.50	2.23	0.83	3.00	2.47	2.09	0.23	0.06	0.06	2.93	100.00	38.69	20.00	25.00	44.44
AB15354	60.50	60.60	70.80	13.60	2.80	0.68	1.06	3.80	2.78	0.23	0.05	0.05	2.93	98.78	53.72	22.00	95.00	18.80
AB15355	72.30	72.40	70.00	13.60	3.31	1.32	1.05	3.43	2.12	0.25	0.06	0.04	3.85	99.03	52.14	28.00	16.00	63.64
AB15356	98.10	98.20	66.10	15.30	3.68	1.37	0.55	4.01	3.53	0.41	0.13	0.05	4.62	99.75	55.98	38.00	24.00	61.29
AB15357	113.20	113.30	42.80	12.40	14.50	4.89	0.71	1.12	8.82	0.53	0.10	0.27	14.08	100.22	28.32	19.00	44.00	30.16
AB15358	121.30	121.40	50.80	16.20	6.09	7.77	4.30	0.32	10.50	0.68	0.11	0.19	3.46	100.42	43.78	24.00	86.00	21.82
AB15360	133.20	133.30	49.40	15.90	8.87	5.28	3.40	0.06	10.00	0.66	0.11	0.23	5.70	99.61	30.32	63.00	73.00	46.32
AB15361	146.10	146.20	71.60	13.70	4.34	0.51	2.36	2.27	2.14	0.25	0.06	0.05	2.70	99.98	29.32	17.00	13.00	56.67
AB15362	148.30	148.40	52.90	17.80	6.50	3.20	1.97	2.00	9.01	0.69	0.14	0.19	5.54	99.94	38.04	135.00	80.00	62.79
AB15363	157.40	157.50	72.00	14.80	0.71	1.69	3.75	2.23	2.21	0.31	0.09	0.04	2.08	99.91	46.78	19.00	61.00	23.75
AB15364	167.50	167.60	73.20	12.20	2.36	1.09	5.71	0.43	2.40	0.27	0.06	0.05	2.31	100.08	15.85	19.00	15.00	55.88
AB15365	169.50	169.60	68.90	13.20	2.04	2.36	2.99	1.48	4.86	0.30	0.07	0.07	3.23	99.50	43.29	57.00	31.00	64.77
AB15366	176.20	176.30	73.50	12.30	2.94	0.55	5.12	1.14	2.13	0.22	0.07	0.04	1.85	99.86	17.33	52.00	20.00	72.22
AB15367	178.20	178.30	49.60	13.30	10.10	6.24	2.70	0.18	11.80	1.76	0.14	0.16	3.85	99.83	33.40	37.00	82.00	31.09
AB15368	195.50	195.60	48.70	12.90	10.00	6.98	2.37	0.34	13.40	1.83	0.16	0.22	2.85	99.75	37.18	228.00	104.00	68.67
AB15369	263.30	263.40	48.40	13.70	10.90	7.24	2.14	0.10	12.50	1.66	0.15	0.18	3.16	100.13	36.02	185.00	91.00	67.03

Hole No. CHEM-87-22

SAMPLE NUMBER	FROM	то	%S102	XAL203	ZCAO	ZHGO	ZNA20	ZK20	2FE203	21102	XP205	ZHNO	ZLOI	รบห	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
																		•••••
AB15370	287.40	287.50	43.70	17.70	4.98	7.26	4.46	0.07	12.60	2.27	0.21	0.15	6.93	100.33	43.71	13.00	160.00	7.51
AB15371	308.40	308.50	50.20	17.40	5.59	4.50	4.39	0.78	9.27	0.66	0.26	0.17	6.08	99.30	34.60	146.00	156.00	48.34
AB15372	315.40	315.50	48.90	14.20	11.30	6.51	1.80	0.15	12.70	1.77	0.17	0.19	2.00	99.69	33.70	148.00	90.00	62.18
AB15373	349.60	349.70	48.90	13.60	11.60	6.24	2.09	0.15	10.50	1.50	0.12	0.16	4.93	99.79	31.82	336.00	87.00	79.43
AB15374	369.20	369.30	48.20	17.70	7.69	4.94	3.08	1.30	9.83	0.75	0.18	0.17	6.24	100.08	36.68	287.00	148.00	65.98
AB15375	399.70	399.80	55.80	16.20	4.98	3.85	4.16	1.24	8.07	0.87	0.27	0.16	3.77	99.37	35.77	54.00	59.00	47.79
AB15376	404.60	404.70	70.20	12.90	4.75	0.75	5.28	0.36	3.21	0.34	0.08	0.06	2.16	100.09	9.96	58.00	30.00	65.91
A815377	413.90	414.00	47.80	14.40	11.40	7.06	2.05	0.26	13.10	1.78	0.17	0.20	1.93	100.15	35.24	171.00	95.00	64.29
AB15378	428.60	428.70	48.20	17.80	4.96	7.97	4.34	0.45	11.50	1.08	0.11	0.16	3.39	99.96	47.52	75.00	84.00	47.17
AB15379	438.30	438.40	47.80	14.40	12.50	8.80	1.68	0.55	10.70	0.57	0.13	0.17	2.77	100.07	39.74	78.00	64.00	54.93
AB15380	456.30	456.40	49.60	12.20	12.10	10.30	2.16	0.21	9.68	0.53	0.12	0.17	3.08	100.15	42.43	217.00	61.00	78.06
AB15381	467.20	467.30	50.30	14.30	11.10	8.27	2.98	0.22	9.62	0.60	0.15	0.16	2.39	100.09	37.62	235.00	57.00	80.48

SAMPLE NUMBER	FROM	то	XS 102	ZAL203	ZCAŪ	ZHGO	ZNA20	ZK20	XFE203	ZT 102	XP205	ZMNO	ZLOI	SUM	A.I	. Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
								•••										
AD02401	24.20	24.30	54.00	17.30	7.54	4.41	3.22	0.68	9.14	0.66	0.12	0.18	2.85	100.10	32.1	1 105.00	111.00	48.61
AD02402	51.30	51.40	53.80	17.80	4.79	5.10	4.25	0.84	9.02	0.68	0.12	0.15	3.08	99.63	39.6	5 100.00	111.00	47.39
AD02403	63.70	63.80	53.90	20.20	1.96	5.73	6.60	0.93	5.59	0.93	0.16	0.10	3.54	99.44	44.0	5 43.00	67.00	39.09
AD02404	79.90	80.00	52.10	15.40	5.85	7.50	2.74	0.04	9.81	0.66	0.08	0.19	5.31	99.68	46.7	5 152.00	115.00	56.93
AD02405	85.70	85.80	66.10	16.30	3.15	0.99	3.90	2.01	3.88	0.23	0.13	0.06	2.85	99.60	29.8	5 138.00	38.00	78.41
AD02406	99.40	99.50	70.80	14.50	1.72	1.14	5.88	1.11	2.73	0.29	0.07	0.05	1.93	100.22	22.8	4 99.00	33.00	75.00
AD02407	119.30	119.40	69.00	14.60	2.52	1.40	3.33	3.09	2.82	0.27	0.09	0.07	3.00	100.18	43.4	2 37.00	65.00	36.27
AD02408	131.70	131.80	50.10	20.60	3.64	4.75	4.98	1.67	7.11	0.92	0.16	0.08	5.47	99.48	42.6	9 141.00	47.00	75.00
AD02409	141.00	141.10	72.60	15.10	0.99	1.01	2.96	2.72	1.77	0.35	0.07	0.06	1.93	99.56	48.5	7 51.00	37.00	57.95
AD02410	159.70	159.80	49.30	16.70	4.29	10.10	4.21	0.50	9.45	0.72	0.18	0.18	4.62	100.25	55.5	0 218.00	83.00	72.43
AD02411	173.40	173.50	53.10	15.10	4.94	7.96	3.73	2.36	9.02	0.68	0.17	0.17	2.16	99.39	54.3	4 100.00	83.00	54.64
AD02412	192.70	192.80	43.50	15.80	6.27	10.60	1.29	2.41	13.30	1.02	0.20	0.25	4.47	99.11	63.2	5 163.00	110.00	59.71
AD02413	217.60	217.70	47.10	17.20	5.35	10.40	2.62	2.09	10.10	0.69	0.18	0.19	3.85	99.77	61.0	5 204.00	78.00	72.34
AD02414	223.40	223.50	49.70	17.10	6.41	7.13	2.89	2.95	9.27	0.82	0.23	0.20	2.54	99.24	52.0	1 140.00	97.00	59.07
AD02415	260.30	260.40	49.80	17.50	5.01	6.91	4.25	1.32	10.60	0.89	0.21	0.19	2.70	99.38	47.0	5 230.00	245.00	48.42
AD02416	291.70	291.80	48.90	16.00	7.97	8.30	3.51	0.26	11.20	0.83	0.17	0.21	2.85	100.20	42.7	1 242.00	76.00	76.10

SAMPLE NUMBER	FROM	то	ZS 102	XAL203	ZCAO	ZNGO	ZNA20	ZK 20	%FE203	ZT 102	ZP205	ZHNO	ZLOI	SUM	 A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
************						**********						<b>* - * - *</b> * - * * - *			 			
AB21636	13.30	13.40	69.90	14.50	1.00	1.36	4.02	3.06	2.56	0.28	0.07	0.09	2.08	98.92	46.82	25.00	28.00	47.17
A821637	25.10	25.20	69.00	13.60	3.68	1.00	2.48	3.00	1.65	0.24	0.06	0.08	4.08	98.87	39.37	22.00	25.00	46.81
AB21638	38.40	38.50	65.40	12.60	5.28	2.09	1.64	2.13	3.59	0.27	0.07	0.13	5.93	99.13	37.88	32.00	64.00	33.33
AB21639	41.20	41.30	70.30	14.40	3.41	0.31	2.45	2.97	1.64	0.26	0.07	0.13	4.08	100.02	35.89	23.00	17.00	57.50
AB21640	47.00	47.10	59.70	13.60	6.62	2.92	3.20	1.91	4.65	0.36	0.07	0.17	7.00	100.20	32.97	52,00	49.00	51.49
AB21641	57.10	57.20	65.30	14.20	3.66	1.99	4.12	2.15	3.70	0.33	0.07	0.08	4.24	99.84	34.73	67.00	38.00	63.81
AB21642	64.20	64.40	70.40	13.30	3.02	0.90	2.64	2.91	2.08	0.24	0.06	0.09	4.08	99.72	40.23	28.00	34.00	45.16
AB21643	71.10	71.20	66.20	12.10	5.98	1.34	0.70	3.17	3.17	0.25	0.06	0.17	6.85	99.99	40.30	18.00	46.00	28.12
AB21644	88.70	88.80	70.70	13.90	2.74	0.71	2.93	2.63	2.23	0.25	0.07	0.10	3.46	99.72	37.07	39.00	100.00	28.06
AB21645	97.20	97.30	69.20	13.90	3.37	0.49	3.01	2.84	2.19	0.29	0.07	0.10	3.93	99.39	34.29	41.00	126.00	24.55
AB21646	114.50	114.60	71.10	13.60	2.96	0.46	3.48	2.37	1.89	0.25	0.06	0.07	3.39	99.63	30.53	26.00	36.00	41.94
AB21647	128.30	128.40	71.20	13.90	2.35	0.70	2.23	2.81	2.63	0.24	0.06	0.06	3.31	99.49	43.39	23.00	61.00	27.38
AB21648	157.75	157.90	46.20	15.10	10.70	5.74	2.64	0.04	10.10	0.69	0.11	0.23	8.54	100.09	30.23	154.00	80.00	65.81
AB21649	167.30	167.40	68.50	13.30	5.03	1.35	2.53	1.74	2.70	0.29	0.07	0.04	4.39	99.94	29.01	34.00	14.00	70.83
AB21650	181.40	181.50	71.70	14.00	2.17	1.23	4.12	1.65	2.83	0.33	0.08	0.06	1.77	99.94	31.41	38.00	17.00	69.09
A821651	195.60	195.70	70.40	13.40	3.67	0.82	1.57	3.06	1.84	0.24	0.06	0.04	4.00	99.10	42.54	29.00	<10.00	) 152.63
AB21652	205.40	205.50	70.00	15.10	2.51	0.74	4.75	1.75	2.49	0.38	0.10	0.07	1.54	99.43	25.54	39.00	12.00	76.47

Hole No. CHEM87-30

SAMPLE NUMBER	FROM	то	ZS 102	ZAL203	ZCAO	 %MGO	ZNA20	ZK20	ZFE203	ZT 102	xP205	2880		SIIK	A.I.	Cu	Zn	100*Cu/
	***********															(ppm)	(ppm)	(Cu+Zn)
AB21653	213.60	213.70	72.00	14.20	1.65	0.96	4.71	1.51	2.50	0.26	0.06	0.03	1.31	99.09	27.15	51.00	12.00	80.95
AB21654	218.20	218.30	72.60	13.80	2.20	0.97	3.02	2.33	1.96	0.25	0.06	0.02	2.77	99.98	38.73	47.00	17.00	73.44
AB21655	229.80	229.90	51.40	18.30	6.07	4.31	3.85	1.09	10.20	0.72	0.13	0.19	3.23	99.49	35.25	252.00	89.00	73.90
AB21656	232.80	232.90	72.20	13.50	2.15	1.24	4.86	1.52	2.77	0.26	0.06	0.05	1.47	100.08	28.25	40.00	24.00	62.50
AB21657	243.60	243.70	72.10	13.60	2.57	0.31	3.31	2.31	3.03	0.26	0.06	0.07	1.70	99.82	34.67	41:00	25 00	63 13
AB21658	249.30	249.40	53.20	17.10	4.67	6.59	4.35	0.54	9.43	0.71	0.14	0.20	3.23	100 16	44.15	241 00	20.00	02.12
AB21659	264.30	264.40	49.60	17.20	6.09	7.78	2.69	0.98	10.40	0.73	0.13	0.23	A 16	99 99	19,1J	241.00	130.00	66.76
AB21660	339.50	339.70	77 00	11 40	1 95	0 35	· · ·	. 10				V.20	1.10	27.77	49.94	179.00	119.00	59.93
		00717V	//	11.10	1.75	0.35	6.31	0.12	1.50	0.14	0.04	0.04	1.16	100.01	5.38	44.00	34.00	56.41

SAMPLE NUMBER	FROM	то	ZS 102	ZAL203	ZCAO	ZHGO	ZNA20	XK20	%7E203	ZT 102	XP205	ZMNO	ZLOI	SUM	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
							<b>.</b> .											
AB21661	21.90	22.00	65.50	14.40	3.48	1.66	3.51	2.47	4.21	0.34	0.07	0.09	4.39	100.12	37.14	61.00	38.00	61.62
AB21662	32.10	32.20	61.90	15.90	3.96	2.11	3.54	2.36	4.79	0.26	0.18	0.14	5.00	100.14	37.34	73.00	169.00	30.17
AB21663	43.70	43.80	70.20	13.60	2.55	0.91	3.17	2.74	2.05	0.25	0.06	0.09	3.85	99.47	38.95	27.00	64.00	29.67
AB21664	55.20	55.30	70.80	14.20	2.03	0.92	3.77	2.66	1.83	0.26	0.06	0.06	3.39	99.98	38.17	36.00	30.00	54.55
AB21665	66.40	66.60	72.00	13.90	1.75	1.03	4.52	1.57	2.24	0.30	0.07	0.06	2.46	99.90	29.31	40.00	42.00	48.78
AB21666	72.70	72.80	70.60	11.90	4.32	1.21	3.38	1.57	1.95	0.27	0.07	0.10	4.70	99.97	26.53	55.00	18.00	75.34
AB21667	84.70	84.80	67.00	13.80	4.22	1.17	2.35	2.55	3.33	0.30	0.08	0.10	4.77	99.67	36.15	54.00	44.00	55.10
AB21668	93.40	93.50	68.70	14.40	4.05	0.88	1.97	2.87	2.20	0.31	0.07	0.04	4.62	100.11	38.38	29.00	14.00	67.44
AB21669	105.00	105.10	47.90	16.90	9.99	4.03	2.51	0.49	11.00	0.78	0.14	0.26	6.16	100.16	26.56	231.00	103.00	69.16
AB21670	114.70	114.80	57.50	13.90	7.45	3.18	1.47	2.49	5.23	0.43	0.12	0.25	8.08	100.10	38.86	61.00	93.00	39.61
AB21671	129.10	129.20	69.50	13.40	4.61	0.76	0.79	3.47	2.28	0.27	0.06	0.04	4.95	100.03	43.93	38.00	<10.00	
AB21672	141.30	141.40	70.70	15.60	1.87	0.84	3.33	3.12	1.70	0.37	0.13	0.04	1.77	99.47	43.23	53.00	10.00	84.13
AB21673	156.90	157.00	72.10	14.90	1.10	1.20	4.40	2.09	2.26	0.36	0.10	0.05	1.54	100.10	37.43	31.00	23.00	57.41
AB21674	174.50	174.60	69.50	14.60	3.08	1.11	3.53	2.23	2.10	0.27	0.06	0.03	2.54	99.05	33.57	49.00	17.00	74.24
AB21675	184.60	184.70	53.20	16.50	6.98	4.21	4.02	0.57	9.23	0.66	0.13	0.17	4.31	99.98	30.29	397.00	60.00	86.87
AB21676	192.80	192.90	72.40	13.80	2.59	1.17	4.92	1.53	1.81	0.26	0.06	0.05	1.47	100.06	26.44	59.00	18.00	76.62
AB21677	199.30	199.40	48.10	16.40	6.69	5.02	2.58	2.01	10.90	0.70	0.11	0.23	6.85	99.59	43.13	101.00	104.00	49.27

Hole No. CHEM87-32

CAMPIE						*******						****							
NUMBER	FROM	TO	XS 102	XAL203	ZCAO	2HG0	ZNA20	XK20	XFE203	<b>ZT</b> 102	ZP205	ZHNO	% Z L O I	SUN	· .	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
																<b> </b>			
AB21678	213.40	213.50	73.20	13.90	2.94	0.87	2.16	2.68	2.40	0.25	0.06	0.06	1.77	100.19		41.52	29.00	23.00	55.77
AB21679	218.80	218.90	71.70	13.40	2.20	0.83	2.09	3.19	2.83	0.30	0.07	0.07	2.39	99.07		48.38	35.00	16.00	68.63
AB21680	228.80	228.90	51.20	16.10	4.86	6.91	2.85	1.14	9.14	0.67	0.12	0.24	6.93	100.06		50.77	74.00	154.00	32.46
AB21681	258.20	258.30	71.00	13.70	3.01	1.04	5.25	1.22	1.56	0.26	0.09	0.03	3.16	100.32		21.48	32.00	12.00	72.73
AB21682	273.40	273.50	44.40	12.80	8.25	6.55	1.93	0.55	13.00	1.87	0.17	0.17	10.08	99.77		41.09	348.00	112.00	75.65
AB21683	281.00	281.10	71.90	14.00	2.08	0.51	4.87	2.40	1.73	0.26	0.09	0.03	2.23	100.10		29.51	43.00	36.00	54.43
AB21684	286.40	286.50	45.40	12.60	10.30	5.15	2.35	0.37	10.80	1.47	0.15	0.19	11.00	99.77		30.38	243.00	99.00	71.05
AB21685	300.00	300.10	54.40	17.90	2.95	3.60	2.29	1.71	8.32	0.89	0.21	0.09	6.47	98.83		50.33	126.00	136.00	48.09
AB21686	318.30	318.40	53.60	17.20	2.33	3.46	2.42	1.85	10.30	0.90	0.22	0.10	6.85	99.23		52.78	126.00	144.00	46.67
AB21687	427.20	427.30	74.80	15.70	0.91	0.62	0.94	3.09	1.18	0.35	0.12	0.01	2.46	100.18		66.73	34.00	17.00	66.67
AB21688	434.10	434.20	44.30	11.80	11.70	8.86	0.33	0.05	9.99	0.68	0.15	0.11	10.31	98.28		42.55	170.00	237.00	41.77
AB21689	456.90	457.10	49.10	14.30	11.40	6.55	1.59	0.19	12.90	1.73	0.17	0.20	2.16	100.29		34.16	242.00	96.00	71.60

SAMPLE NUMBER	FROM	то	ZS 102	ZAL203	%CAO	ZMGO	%NA20	ZK20	ZFE203	ZT 102	XP205	ZHNO	ZLOI	SUM	• • • • •	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
	· · · · ·						****												
AD02454	10.60	10.70	71.00	12.40	3.63	0.61	5.65	0.92	2.01	0.28	0.07	0.10	3.16	99.83		14.15	57.00	31.00	64.77
AD02455	16.30	16.40	55.30	16.90	5.43	2.60	2.26	2.91	6.94	0.47	0.35	0.17	6.16	99.49		41.74	42.00	106.00	28.38
AD02456	20.80	20.90	73.90	13.50	1.49	0.65	5.74	1.19	1.66	0.29	0.03	0.05	1.77	100.32		20.29	37.00	27.00	57.81
AD02457	30.00	30.10	68.70	13.60	3.99	1.45	2.29	2.38	2.46	0.26	0.06	0.04	4.77	100.00		37.88	36.00	18.00	66.67
AD02458	44.40	44.50	72.30	13.20	1.34	1.32	5.10	1.19	3.07	0.24	0.06	0.06	2.23	100.11		28.04	35.00	24.00	59.32
AD02459	54.20	54.30	66.50	14.40	4.45	1.38	0.78	3.68	2.75	0.29	0.07	0.03	5.54	99.87		49.17	35.00	12.00	74.47
AD02460	64.50	64.60	69.00	14.90	3.47	2.57	3.00	2.47	2.44	0.32	0.08	0.04	1.70	99.99		43.79	26.00	16.00	61.90
AD02461	72.60	72.70	51.80	16.80	8.54	5.38	2.75	0.44	10.80	0.76	0.13	0.17	2.85	100.42		34.02	47.00	61.00	43.52
AD02462	79.70	79.80	72.70	13.90	2.65	0.66	4.01	2.41	2.65	0.26	0.06	0.04	0.85	100.09		31.55	34.00	17.00	66.67
AD02463	88.40	88.50	50.70	17.20	5.69	7.15	4.11	0.93	10.60	0.68	0.09	0.21	2.93	100.29		45.19	16.00	83.00	16.16
AD02464	98.20	98.30	48.80	16.70	6.84	7.38	2.92	1.01	12.10	0.76	0.14	0.25	3.46	100.36		46.23	51.00	98.00	34.23
AD02465	108.70	108.80	51.90	18.00	6.29	4.37	5.70	0.36	9.20	0.72	0.14	0.25	2.46	99.39		28.29	277.00	650.00	29.88
AD02466	124.40	124.50	56.00	17.50	4.21	4.58	6.00	1.12	7.76	0.68	0.12	0.16	2.00	100.13		35.83	179.00	134.00	57 19
AD02467	136.80	136.90	55.30	17.80	4.34	4.39	6.84	0.46	7.39	0.66	0.11	0.16	2.08	99.53		30.26	98.00	101.00	49.25
AD02468	143.30	143.40	47.90	14.20	10.20	6.45	1.44	0.29	13.60	1.87	0 18	0.20	3 08	14 PP		36 67	253 00	119 00	69.10
AD02469	153.60	153.70	54.80	16.90	7.35	3.71	4.36	0.80	8.07	0.62	0.12	0.16	2.77	99.66		27 81	381.00	110.00	00.19
AD02470	154.90	155.00	70.60	13.80	2.51	1.09	5.04	1,99	3.02	0.29	0.06	0.06	1.39	99.85		27.01	40.00	77.00	50 70
	-															20.77	30.00	27 · 70	J.J / V.

SAMPLE NUMBER	FROM	TO	ZS 102	ZAL203	ZCAO	ZHGO	ZNA20	2K20	%FE203	<b>XT 102</b>	ZP205	ZMNO	ZLO I	SUM	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
									****									
AD02471	165.20	165.30	51.20	17.90	6.98	5.97	4.42	0.94	8.83	0.72	0.13	0.26	2.70	100.05	37.	4 126.00	125.00	50.20
AD02472	169.30	169.40	69.90	11.90	6.45	1.26	2.59	0.86	4.64	0.30	0.10	0.14	1.93	100.07	19.	0 32.00	321.00	> 9.07
AD02473	180.40	180.50	53.10	17.50	4.08	6.58	5.19	0.82	8.54	0.73	0.13	0.20	2.93	99.80	44.	157.00	138.00	) 53.22
AD02474	192.20	192.30	62.30	17.30	7.65	1.08	2.04	1.99	4.79	0.24	0.15	0.14	2.23	99.91	24.	06 79.00	43.00	64.75
AD02475	199.90	200.00	49.10	13.30	11.50	6.20	1.10	0.12	13.60	1.90	0.19	0.21	2.31	99.53	33.	10 249.00	115.00	68.4]
AD02476	208.30	208.40	73.70	12.00	3.15	0.72	0.72	3.16	2.63	0.28	0.06	0.08	3.31	99.81	50.	06 35.00	38.0	47.95
AD02477	215.70	215.80	73.20	13.50	1.92	0.70	1.96	3.14	1.98	0.25	0.06	0.07	2.54	99.22	50.	39 36.00	30.00	54.55
AD02478	217.80	217.90	74.30	13.40	1.40	0.67	0.62	3.62	2.47	0.29	0.07	0.06	2.54	99.44	67.	99 60.00	34.0	63.83
AD02479	223.60	223.70	72.90	14.70	0.62	0.81	2.60	3.39	1.94	0.30	0.07	0.04	1.35	99.12	56.	50 37.00	54.00	) 40.60
AD02637	230.50	230.60	65.90	15.20	2.46	2.06	1.42	3.62	3.48	0.24	0.06	0.07	4.31	98.82	59.	41 21.00	45.0	31.8:
AD02638	239.30	239.40	75.80	12.60	1.35	0.37	6.09	0.84	0.89	0.20	0.06	0.02	1.47	99.69	13.	9 28.00	16.00	) 63.64
AD02639	246.40	246.50	70.70	14.70	1.52	0.88	4.25	2.80	2.16	0.24	0.06	0.04	2.08	99.43	38.	94 16.00	21.0	) 43.24
AD02640	248.40	248.50	76.20	13.00	0.36	1.28	3.29	2.40	1.35	0.20	0.05	0.02	1.54	99.69	50.	20 19.00	16.00	54.25
AD02641	251.10	251.20	69.60	13.40	2.29	2.35	2.62	2.71	0.99	0.22	0.06	0.02	4.39	98.65	50.	75 25.00	10.0	0 71.4:
AD02642	264.40	264.50	73.20	12.90	2.33	0.30	3.17	3.44	1.33	0.20	0.05	0.03	2.39	99.34	40.	18 17.00	27.00	) 38.64
AD02643	269.40	269.50	47.80	18.60	5.25	4.91	4.42	0.29	12.60	0.87	0.41	0.18	3.54	98.87	34.	97 128.00	103.0	0 55.41
AD02644	280.70	280.80	47.90	13.30	9.17	5.33	1.88	0.19	15.30	2.42	0.21	0.22	3.08	99.00	33.	31 333.00	122.00	) 73.19

Hole No. CHEM87-33

SAMPLE NUMBER	FROM	то	ZS I 02	XAL203	ZCAO	ZHGO	ZNA20	ZK20	ZFE203	XI 102	XP205	ZMNO	%LOI	SUM	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
																		·
AD02645	304.30	304.40	48.50	13.40	9.62	4.73	2.06	0.34	15.30	2.45	0.22	0.22	1.93	98.77	30.27	335.00	116.00	74.28
AD02646	329.60	329.70	48.50	13.30	10.50	6.28	1.94	0.18	13.60	1.88	0.16	0.21	2.85	99.40	34.18	308.00	89.00	77.58
AD02647	339.20	339.30	68.20	13.50	3.26	0.89	3.86	2.54	3.35	0.33	0.07	0.08	3.08	99.16	32.51	29.00	34.00	46.03
AD02648	347.20	347.30	54.30	17.30	5.46	1.39	6.27	1.01	8.21	1.06	0.37	0.16	3.54	99.07	16.99	86.00	80.00	51.81
AD02649	359.30	359.40	47.60	14.30	11.90	7.92	1.81	0.41	11.20	1.29	0.11	0.18	2.39	99.01	37.97	88.00	68.00	56.41
AD02650	404.40	404.50	48.00	14.60	11.30	7.93	2.12	0.44	10.60	1.15	0.11	0.16	2.62	99.03	38.41	110.00	62.00	63.95

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Hole No. CHEM87-33

SAMPLE NUMBER	FROM	TO	XS102	ZAL203	ZCAO	ZMGO	ZNA20	XK20	ZFE203	XT 102	XP205	ZHNO	7L01	รบห	 A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
						•									 			
AB21901	8.30	. 8.40	50.00	17.20	6.60	2.91	2.18	2.98	9.10	0.74	0.13	0.17	7.85	99.86	40.15	695.00	77.00	90.03
AB21902	14.10	14.20	67.10	12.40	5.31	1.21	1.79	2.29	3.24	0.27	0.07	0.14	6.00	99.82	33.02	53.00	36.00	59.55
AB21903	25.50	25.60	68.40	17.00	1.45	0.46	4.49	2.83	2.09	0.38	0.07	0.05	2.54	99.76	35.64	43.00	27.00	61.43
AB21904	43.80	43.95	66.20	14.30	4.73	1.44	3.76	1.25	3.18	0.31	0.07	0.05	4.85	100.14	24.06	48.00	<10.00	
AB21905	51.30	51.45	69.30	13.40	4.03	0.98	2.37	2.23	2.88	0.35	0.10	0.04	4.47	100.15	33.40	35.00	10.00	77.73
AB21906	59.70	59.85	70.00	14.20	2.97	1.21	3.47	1.98	2.52	0.26	0.07	0.04	3.23	99.95	33.13	31.00	16.00	65.96
AB21907	70.30	70.40	69.70	13.90	3.50	1.16	2,56	2,31	2.28	0.27	0.07	0.03	4.54	100.32	36.41	63.00	<10.00	
AB21908	74.70	74.80	43.00	15.80	8.79	8.54	1.52	0.08	12.20	0.79	0.21	0.22	9.00	100.15	45.54	31.00	86.00	26.50
AB21909	86.70	86.80	70.90	13.50	2.78	1.33	2.79	2.30	2.48	0.26	0.06	0,03	3.62	100.05	39.46	31.00	16.00	65.96
AB21910	92.60	92.75	72.70	12.80	2.14	0.93	4.50	1.46	2.08	0.24	0.06	0.04	2.54	99.49	26.47	38.00	<10.00	
AB21911	95.40	95.60	71.70	13.50	1.68	1.46	3.76	1.96	2.83	0.26	0.06	0.05	2.54	99.80	38.60	20.00	16.00	55.56
AB21912	106.50	106.60	48.00	14.00	10.60	6.40	1.97	0.21	13.30	1.90	0.18	0.20	2.31	99.07	34.46	263.00	116.00	69.39
AB21913	118.40	118.50	73.00	13.80	2.12	0.47	5.29	1.99	2.43	0.33	0.07	0.07	0.77	100.34	24.92	44.00	24.00	64.71
AB21914	126.60	128.75	71.70	13.90	1.72	0.85	5.80	1.30	2.87	0.33	0.07	0.08	0.93	99.55	22.23	37.00	23.00	61.67
AB21915	134.60	134.75	72.20	13.60	2.63	0.90	5.33	1.21	2.84	0.31	0.06	0.07	1.24	100.39	20.95	56.00	25.00	69.14
AB21916	146.85	146.95	74.50	13.10	1.62	0.77	5.74	0.86	2.21	0.30	0.06	0.05	0.93	100.14	10 12	38.00	21.00	64.41
AB21917	154.50	154.60	43.40	18.70	11.40	5.47	1.23	0.46	14.00	0.92		0.32	4.00	100.05	31.95	51.00	125.00	28.98

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#### DIAMOND DRILL CORE LITHOGEOCHEMICAL RECORD (MAJOR ELEMENTS)

SAMPLE NUMBER	FROM	то	XS 102	XAL203	ZCAO	ZMGO	ZNA20	ZK 20	XFE203	ZT 102	ZP205	ZHNO	ZLOI	รบห	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
		• 48 - 48 - 48 - 48 - 48 - 48 - 48 - 48		• • • • • • • • • • • • • • • • • • •							•							
AB21918	163.50	163.60	70.60	14.90	1.35	1.44	2.51	3.95	2.56	0.34	0.07	0.04	1.54	99.30	58.27	34.00	24.00	58.62
AB21919	185.50	185.60	54.20	16.90	6.35	4.89	4.96	0.77	7.64	0.68	0.18	0.20	2.93	99.70	33.35	181.00	234.00	43.61
AB21920	201.50	201.60	50.60	15.90	7.94	7.58	3.59	0.65	9.87	0.67	0.12	0.24	2.23	99.39	41.65	129.00	134.00	49.05
AB21921	206.50	206.60	52.80	16.50	7.09	5.35	1.02	2.25	11.30	0.69	0.20	0.25	2.70	100.15	48.38	196.00	107.00	64.69
AB21922	218.40	219.50	49.40	16.80	9.37	4.89	0.73	0.80	12.90	0.70	0.14	0.28	3.70	99.71	36.04	329.00	140.00	70.15
AB21923	224.50	224.60	74.50	13.00	2.01	1.03	3.30	2.10	1.88	0.31	0.07	0.05	1.77	100.02	37.09	18.00	18.00	50.00
AB21924	233.30	233.40	51.00	17.00	6.38	5.26	2.68	1.12	10.30	0.71	0.11	0.20	5.09	99.84	41.32	27.00	110.00	19.71
AB21925	242.10	242.20	68.10	13.30	3.15	2.35	2.16	2.53	4.41	0.29	0.08	0.09	3.23	99.69	47.89	44.00	49.00	47.31
AB21926	264.65	264.80	54.70	17.10	8.41	2.97	2.99	0.37	8.93	0.66	0.13	0.18	3.62	100.06	22.66	142.00	98.00	59.17
AB21927	356.80	356.95	48.00	13.80	10.30	6.39	2.31	0.31	12.70	1.73	0.16	0.19	3.54	99.43	34.70	260.00	103.00	71.63
AB21928	380.70	380.80	44.20	13.80	7.02	11.40	1.73	1.46	12.30	1.63	0.22	0.38	4.16	98.30	59.51	47.00	401.00	10.49
AB21929	384.30	384.40	41.00	7.78	8.25	22.60	0.23	0.19	11.80	1.14	0.27	0.19	6.08	99.53	72.88	7.50	100.00	6.98

Hole No. CHEM87-34

SAMPLE NUMBER	FROM	TO	XS102	ZAL203	XCA0	ZKGO	ZNA20	ZK20	%FE203	ZT 102	ZP205	ZMNO	ZLOI	SUM	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
	<b>****</b> ********************************					********												*-
AD02480	16.80	16.90	69.30	13.10	4.64	0.58	2.65	2.66	2.07	0.24	0.06	0.05	4.39	99.74	30.73	32.00	28.00	53.33
AU02481	21.30	21.40	45.00	17.00	6.77	6.09	4.49	0.30	11.20	0.91	0.14	0.20	6.85	98.95	36.20	255.00	103.00	71.23
AD02482	40.30	40.40	70.10	14.20	2.39	0.82	3.08	3.27	2.33	0.26	0.06	0.07	2.85	99.43	42.78	36.00	38.00	48.65
AD02483	53.20	53.30	69.60	14.60	2.86	1.54	2.05	3.19	2.48	0.25	0.06	0.06	2.62	99.31	49.03	37.00	36.00	50.68
AD02484	70.20	70.30	69.40	14.90	2.64	1.03	2.43	3.64	1.92	0.27	9.06	0.06	3.54	99.79	47.9	5 25.00	27.00	48.08
AD02485	85.50	85.60	70.50	12.80	3.72	0.98	2.51	2.63	1.79	0.22	0.05	0.09	4.24	99.53	36.69	23.00	26.00	46.94
AD02486	95.30	95.40	70.10	14.80	0.92	2.10	2.66	2.76	3.25	0.26	0.06	0.05	2.70	99.66	57.58	49.00	64.00	43.36
AD02487	105.10	105.20	73.90	10.80	3.59	1.05	3.35	1.41	1.68	0.19	0.05	0.08	3.46	99.56	26.17	34.00	24.00	58.63
AD02488	110.20	110.30	77.10	12.00	0.41	1.81	3.38	1.73	1.26	0.22	0.05	0.03	1.70	99.69	48.29	24.00	25.00	49.98
AD02489	124.80	124.90	66.10	13.70	4.00	1.52	5.90	1.25	3.13	0.30	0.07	0.09	3.93	99.99	21.86	105.00	35.00	75.00
AD02490	137.40	137.50	71.30	13.30	2.47	0.98	2.87	2.64	2.15	0.23	0.06	0.04	3.93	99.97	40.40	46.00	33.00	58.23
AD02491	157.60	157.70	51.20	18.10	5.46	3.78	3.78	0.92	8.97	0.53	0.23	0.16	6.39	99.52	33.72	47.00	86.00	35.34
AD02492	169.50	169.60	68.90	13.00	2.98	1.40	3.93	1.97	2.68	0.24	0.05	0.10	4.77	100.03	32.78	44.00	35.00	55.70
AD02493	177.80	177.90	65.00	14.70	3.17	1.61	3.43	2.72	3.11	0.34	0.08	0.09	5.54	99.79	39.62	63.00	47.00	57.27
AD02494	187.00	187.10	70.50	13.60	1.98	0.80	4.43	2.08	2.36	0.24	0.06	0.08	3.46	99.59	31.00	31.00	37.00	45.59
AD02495	196.30	196.40	70.90	13.30	2.00	0.84	4.49	1.95	2.25	0.24	0.06	0.07	3.31	99.41	30.06	43.00	30.00	58.90
AD02496	206.10	206.20	68.60	13.00	3.46	0.99	3.51	2.37	2.69	0.23	0.05	0.11	4.85	99.86	32.53	40.00	46.00	46.51

Hole No. CHEM87-35

SAMPLE NUMBER	FROM	то	ZS 102	XAL203	ZCAO	ZXGO	ZNA20	ZK20	ZFE203	XT 102	%P205	ZMNO	ZLOI	รบห	A.I.	Cu (ppm)	Zn (ppm)	100*Cu/ (Cu+Zn)
							*****											T
AD02497	219.80	219.90	72.10	13.60	2.07	0.59	3.45	2.47	2.12	0.25	0.06	0.05	3.08	99.84	35.66	36.00	19.00	65.45
AD02498	227.70	227.80	61.80	16.60	3.54	1.25	3.07	3.09	5.36	0.26	0.18	0.11	4.77	100.03	39.63	38.00	83.00	31.40
AD02499	230.60	230.70	64.10	17.00	2.17	1.15	3.33	3.06	4.58	0.27	0.19	0.09	3.77	99.71	43.36	39.00	96.00	28.89
AD02500	262.40	262.50	72.40	11.10	3.58	1.30	2.65	1.73	2.90	0.27	0.08	0.11	3.77	99.89	32.72	48.00	128.00	27.27
AD02601	282.70	282.80	50.60	20.80	4.47	4.67	3.72	1.01	9.00	0.73	0.54	0.07	4.16	99.77	40.95	33.00	61.00	35.11
AU02602	283.80	283.90	70.50	14.40	4.33	0.51	2.56	2.07	1.81	0.33	0.10	0.03	3.39	100.03	27.24	29.00	<10.00	) 152.63
AD02603	287.10	287.20	46.50	15.70	9.82	4.74	2.59	0.93	9.06	0.70	0.13	0.14	9.54	99.85	31.36	27.00	64.00	29.67
AD02606	295.70	295.80	64.20	15.20	5.40	1.51	5.56	0.48	4.48	0.38	0,11	0.08	2.77	100.17	15.37	19.00	14.00	57.58
AD02604	296.80	296.90	67.30	14.10	4.05	1.40	5.40	0.82	3.37	0.37	0.10	0.07	2.85	99.83	19.02	23.00	13.00	63.89
AD02605	307.40	307.50	66.00	14.60	4.05	1.35	2.41	2.62	3.44	0.43	0.10	0.04	4.77	99.81	38.06	30.00	16.00	) 65.22
AD02607	319.40	319.50	71.70	13.00	3.74	0.82	1.99	2.18	2.09	0.23	0.05	0.04	3.85	99.69	34.36	28.00	16.00	63.64
AD02608	332.50	332.60	70.10	13.40	3.51	1.41	1.93	2.48	2.68	0.25	0.07	0.05	4.08	99.96	41.69	34.00	14 00	20.83
AD02609	337.20	337.30	67.50	14.10	4.29	1.09	2.05	2.99	3.54	0.35	0.10	0.05	3.16	99.22	39.16	25.00	15.00	62 50
AD02610	341.20	341.30	51.80	16.80	8.12	4.79	2.87	1.25	9.49	0.63	0.12	0.16	4.24	100.27	35 47	37 00	48.00	43 53
AD02611	345.40	345.50	71.90	13.50	2.76	1.40	4.12	1.52	2.82	0.25	0.06	0.04	1.47	99.84	20.00	47.00	22.00	13.33
AD02612	350.80	350.90	52.90	16.80	6.76	5.13	3.53	0.91	9.80	0.65	0.13	0.15	2.46	99.22	27.00	47.00	45 00	00.14
AD02613	358.60	358.70	53.10	17.10	4.81	6.64	5.89	0.32	8.63	0.66	0.12	0.14	2.54	99,95	30.77	37.00	173 00	7J.12
															37.41	290.00	1/2.00	63.43

Hole No. CHEM87-35

SAMPLE NUMBER	FROM	то	<b>XS 102</b>	ZAL203	%CAO	ZKGO	ZNA20	<b>X</b> K20	ZFE203	<b>XT</b> 102	XP205	ZHNO	XLO I	SUM	A.I.	Cu (ppm)	Zn (ppm)	 100*Cu (Cu+Zn
											************				<b>**</b> **********************************			
AB21930	17.10	17.30	71.00	14.70	2.41	0.96	3.76	1.94	2.65	0.35	0.07	0.11	1.62	99.57	31.97	52.00	371.00	12.29
AB21931	27.80	27.90	49.00	14.50	10.90	6.12	1.58	0.32	12.80	1.82	0.17	0.19	2.70	100.10	34.04	204.00	106.00	65.81
AB21932	38.60	38.70	72.70	13.70	1.11	0.62	4.53	1.89	2.75	0.33	0.06	0.07	1.70	99.46	30.80	25.00	24.00	51.02
AB21933	51.20	51.30	69.20	15.10	2.85	0.83	3.59	<u>.</u> 2.74	2.53	0.36	0.07	0.06	1.85	99.18	35.66	37.00	27.00	57.81
AB21934	56.30	56.40	49.00	14.00	10.80	6.22	2.16	0.24	12.60	1.78	0.17	0.20	2.16	99.33	33.26	208.00	97.00	68.20
AB21935	64.40	64.50	74.40	12.20	2.59	0.28	4.31	1.80	2.23	0.28	0.08	0.04	1.39	99.60	23.16	125.00	<10.00	
AB21936	82.40	82.50	44.50	13.10	10.30	15.60	0:53	0.47	10.10	0.42	0.07	0.19	4.31	99.59	59.74	147.00	77.00	65.62
AB21937	86.90	87.00	70.10	14.30	2.36	1.92	0.92	4.00	2.38	0.34	0.08	0.06	3.39	99.85	64.35	33.00	28.00	54.10
AB21938	91.60	91.70	74.80	12.80	1.63	1.26	2.63	2.68	1.11	0.29	0.06	0.04	1.47	98.77	48.05	24.00	14.00	63.16
AB21939	114.90	115.00	67.50	15.60	2.73	1.36	4.38	1.75	4.28	0.45	0.13	0.12	1.62	99.92	30.43	64.00	48.00	57.14
AB21940	128.80	128.90	72.10	13.90	2.25	1.45	4.33	1.48	2.88	0.29	0.07	0.06	1.47	100.28	30.81	32.00	35.00	47.76
AB21941	138.80	138.90	69.90	14.90	2.65	1.14	5.01	1.27	3.37	0.36	0.09	0.07	1.39	100.15	23.93	32.00	34.00	48.48
AB21942	143.30	143.40	53.20	17.10	7.72	3.85	1.77	1.71	8.24	0.63	0.12	0.21	5.16	99.71	36.94	188.00	119.00	61.24
AB21943	162.20	162.40	48.40	13.50	10.50	6.46	2.32	0.45	12.30	1.67	0.16	0.19	3.46	99.41	35.02	260.00	90.00	74.29
AB21944	173.30	173.40	49.10	15.80	3.37	9.95	3.63	1.65	9.39	0.73	0.19	0.18	5.77	99.76	62.37	20.00	77.00	60.91
AB21945	237.95	238.15	46.20	11.90	11.30	8.74	1.80	0.21	13.60	1.65	0.15	0.21	2.93	98.69	40.59	73.00	93.00	43.98

Hole No. CHEM87-36




30 msec	LEGEND	
20 msec		
IO msec		
	NANAIMO GROUP	
	6c Argillite	
	6b Greywacke	
	6a Conglomerate	
1+00.5	INTRUSIVE BOCK	
	50 Peridotite	
	Eb Matte ell	
	SD Matic sill	
600	5a Gabbro	
	SICKER GROUP	
	4b Cherty black argillite and siltstone with minor	
	greywacke	
	4a Brown greywacke	
	3b Felsic tuff	
	3a Felsic flow	
	2b Intermediate tuff	
	2a Intermediate flow	
	1c Mixed mafic tuffaceous sediments	
	1b Mafic tuff	
	1a Mafic flow	
	indife flow	
500	SYMBOLS	
	cpy chalcopyrite SP sphalerite	
	ga galena qe quartz eves	
	hb hornblende ep epidote	
	bedding	
	► foliation	
	foult	
	iault	
	younging direction	
	*AB19951,65 Whole rock sample, Ishikawa index >60	
	geochemical/assay sample	
	K rocks with komatiitic compositions	
400	u unconformity	
	geological contact (inferred)	
	active tuff	
	significant sulphides (>2% >10% total)	
	GEOLOGICAL PRANOT	
	ASSESSMENT REPORT	
300		
	0 20 40 60 80 m	
	SCALE: 1:1,000	
	FALGUNDRIDGE LTD.	
	CHEMAINUS JOINT VENTURE	
	Vancouver Island British Columbia	
	i and a roll for any britten obtained	
	SECTION 24 + ODE	
	SECTION 34 TOUE	
	(looking west)	
	DDH CHEM87-22	
	DUTI OTLINIOT 22	
200		
	DATE DE WORK, JUN 1987 PROJECT NO.	
	DATE OF WORK: JULY, 1987 PROJECT NO: FIG. ND.:	
1+00 N	DRAWN BY: VJG 110 5	
	DATE: Sept. 9, 1987 N.T.S. NO.: 92B/13	







30 msec			
20 msec	6c Argillite	JP	
10 msec	6b Greywacke		
	6a Conglomerate		
	INTRUSIVE ROCK		
	5c Peridotite		
	5b Mafic sill		
	5a Gabbro		
	SICKER GROU	Ρ	
1+00 N	4b Cherty black a greywacke	argillite and siltstone w	vith minor
	4a Brown greywa	cke	
	3b Felsic tuff		*
	3a Felsic flow		×
600	20 Intermediate t	uff	
	1c Mixed mafic to	uffaceous sediments	5
	1b Mafic tuff		
	1a Mafic flow		-
	SI	MBOLS	
	py pyrite	po pyrrho	otite
	cpy chalcopy ga galena	rite sp sphal ge guartz	erite z eyes
	hb hornblend	le ep epido	te
	~		
	foliation		
500	fault		Shite in 1
Contraction in the second state of the second state	🕂 younging dir	rection	
	•ABIB951,65 Whole rock sample, Ishikawa index >60		
	K rocks with komatilitic compositions u unconformity geological contact (inferred)		
	active tuff	and (interred)	
	significant sulp	ohides (>2%, >10% total	)
	GEOI	OGICAL BRA	NCH
400	ASSE	SSMENT REP	ORI
+00			$\cap$
	LU, /LU		$\mathbf{U}$
	0 20 40 60 80 m		
	SLALE.	1. 1,000	
	FALCON	BRIDGE LTD.	
	TAEGONDRIDGE ETD.		
	CHEMAINUS JOINT VENTURE Vancouver Island, British Columbia SECTION 40 + 00E (looking west) DDH. CHEM87-31		
300 —			
	WORK BY: JP		
	DATE OF WORK: July, 1987	PROJECT NO:	FIG. NO.:
1+00 N	DRAWN BY: VJG	110	8
	DATE: Sept. 9, 1987	N.T.S. NO.: 928/13	



