GEOLOGICAL, TRENCHING, AND DRILLING REPORT

BABIY/RUST OPTION: RUST 1, 2, 3, and 4 CLAIMS

BET/COMINCO OPTION: BET 1, 2, 3, and 5 CLAIMS

VICTORIA RESOURCES OPTION: BLUFF 1, 2, 4 AND PERCY 1 CLAIMS

RAVEN 1 and 2 CLAIMS

AND

MAC CLAIM

BIRK CREEK PROPERTY

KAMLOOPS MINING DIVISION

BRITISH COLUMBIA COR

NTS 82M/05W

51°25'00", 119°55'00"

FALCONBRIDGE LIMITED CO202-856 HOMER STREET CONTROL VANCOUVER, B.C. CONTROL V6B 2W2

DECEMBER, 1990 A.D. McLAUGHLIN and C.W.P. RUSSELL

Edited and compiled by R. Stewart, February, 1991



SUMMARY

Falconbridge Limited completed a surface and drill exploration program on the Birk Creek Property in 1990. This program was designed to discover a volcanogenic massive sulphide property hosted by the Devonian Eagle Bay Formation. Work included linecutting, gradient array IP, VLF and MAG surveys, trenching, geological mapping along with rock and soil sampling completed between June 19 and November 14, 1990. Eight diamond drill holes, totalling 2377 metres were completed along with downhole Pulse-EM surveys during the program's final phase.

Three mineralized trends were drill tested in 1990 with the following results:

Central Trend

Diamond drill hole BC90-01 tested the trend's northern half and intersected 11.76 metres (drill thickness) grading 0.17% Cu, 0.48% Pb, 1.08% Zn, 11.21 g/t Ag and 0.06 g/t Au. This mineralization is in the Central Trend Unit and is specifically hosted by silicified and sericitic felsic tuff and tuff breccia. Further downsection for 100 metres sporadic massive sulphide bands up to 0.88 metres occur in variably sericitized and chloritized intermediate to felsic volcanic tuff. The best assay intervals are:

0.66% Cu, 4.32% Pb, 8.86% Zn, 25.37 g/t Ag and 0.48 g/t Au over 0.88 metres and 0.59% Cu, 5.47% Pb, 6.33% Zn, 40.11 g/t Ag and 0.34 g/t Au over 1.0 metre.

Strong chloritization and increased copper content suggest these lower zones are more proximal to sulphide vents or are feeder zones to the upper horizon. The entire section is strongly hydrothermally altered with sodium and calcium depletion along with very high Ishikawa Alteration Indices.

Trench FLTR90-01, 230 metres east of drill hole BC90-01, uncovered similarly altered volcanic rock with two narrow massive sulphide intervals grading up to 1.1% Zn, 0.70% Pb, 262 ppm Cu, 8.5 g/t Ag and 33 ppb Au over 1.5 metres.

Drill testing both 200 metres down dip and 500 metres along strike to the southeast intersected similar stratigraphy, but only minor sulphide mineralization and much less alteration. However, drill hole BC90-03, located 1250 metres southeast, intersected 0.92%

Cu, 0.37% Pb, 3.30% Zn, 25.02 g/t Ag and 0.10 g/t Au over 4.28 metres in a felsic volcanic breccia. This mineralization is situated at the top of a 75 metre thick hydrothermal alteration zone marked by sodium depletion and high Ishikawa Alteration Indices.

Birk Creek Trend

Mapping by Falconbridge Limited personnel combined with sampling and relogging previously drilled core has outlined an intermittently mineralized and hydrothermally altered felsic volcanic tuff section intercalated with argillite and limestone up to 1400 metres in length and 25 metres thick. Two or three mineralized horizons are present. The best mineralized interval assayed 0.14% Cu, 0.52% Pb and 1.25% Zn over 2.0 metres from Ducanex drill hole D71-7.Between 1938 and 1940, 234 tonnes in bulk samples from lower Birk Creek yielded 4800 kilograms copper, 13,499 grams silver and 6501 grams gold (Schiarizza and Preto, 1987).

Drill holes BC90-4, BC90-7 and BC90-8 completed by Falconbridge Limited in October, 1990 intersected weak Cu-Pb-Zn mineralization with the best assay interval grading 0.25% Cu, 1.70 % Pb, 2.51% Zn, 7.8 g/t Ag and 106 ppb Au over 0.20 metres (drill hole BC90-07).

Uke and Epiclastic Trends

Previous work on the Epiclastic Trend indicated mineralization is weakly copper enriched. In 1982, Pruessag hole P82-1 intersected 0.43% Cu and 2.4 g/t Ag over 9.3 metres. Falconbridge Limited's drilling and trenching along the Uke and Epiclastic trends did not intersect any significant mineralization.

Reopening the Uke Trench indicated the massive sulphide lens occurs at the contact between hydrothermally altered felsic and intermediate rocks, and plunges gently to the southwest.

A new, strong IP anomaly coincident with high copper and zinc soil values was identified in 1990 southeast of Harper Creek. These anomalies remain to be tested in 1991.

CONCLUSIONS

- Significant volcanogenic massive sulphide horizons have been encountered at depth in the Central Trend within a thick hydrothermally altered volcanic sequence. Both the coarser grained volcanic rocks and the increased copper content in the sulphide intervals suggest proximity to volcanic and sulphide venting, possibly located to the northwest. The plunge of the massive sulphide pod present in the Uke Trench indicates a structural control on the sulphide mineralization that must be considered in further exploration.
- 2) The Pulse EM borehole survey from the Central Trend does not clearly outline offhole responses comparable to the mineralization located, but does suggest a conductive body lying about 50 to 100 metres below the current drilled section. This may be the Uke stratigraphic horizon. These targets are too deep to be detected by the surface geophysical surveys.
- 3) The Birk Creek Trend contains massive pyrite lenses within strongly hydrothermally altered rocks, but only intermittent and weak Cu-Pb-Zn mineralization occurring along two or three horizons.
- 4) Previous drilling at the Uke Trench site has not fully explored the down plunge potential of this zone.
- 5) A new, coincident IP and soil geochemistry anomaly southeast of Harper Creek may be an extension to the Epiclastic or Uke trends.
- Strong deformation throughout the Eagle Bay assemblage has complicated stratigraphic relationships and may have remobilized sulphide lenses to new locations. Despite this deformation, known sulphide lenses are accompanied by "conventional" hydrothermal alteration assemblages which would imply that they are in situ. Conventional volcanogenic massive sulphide deposit exploration techniques should therefore still be successful in locating large, viable deposits.

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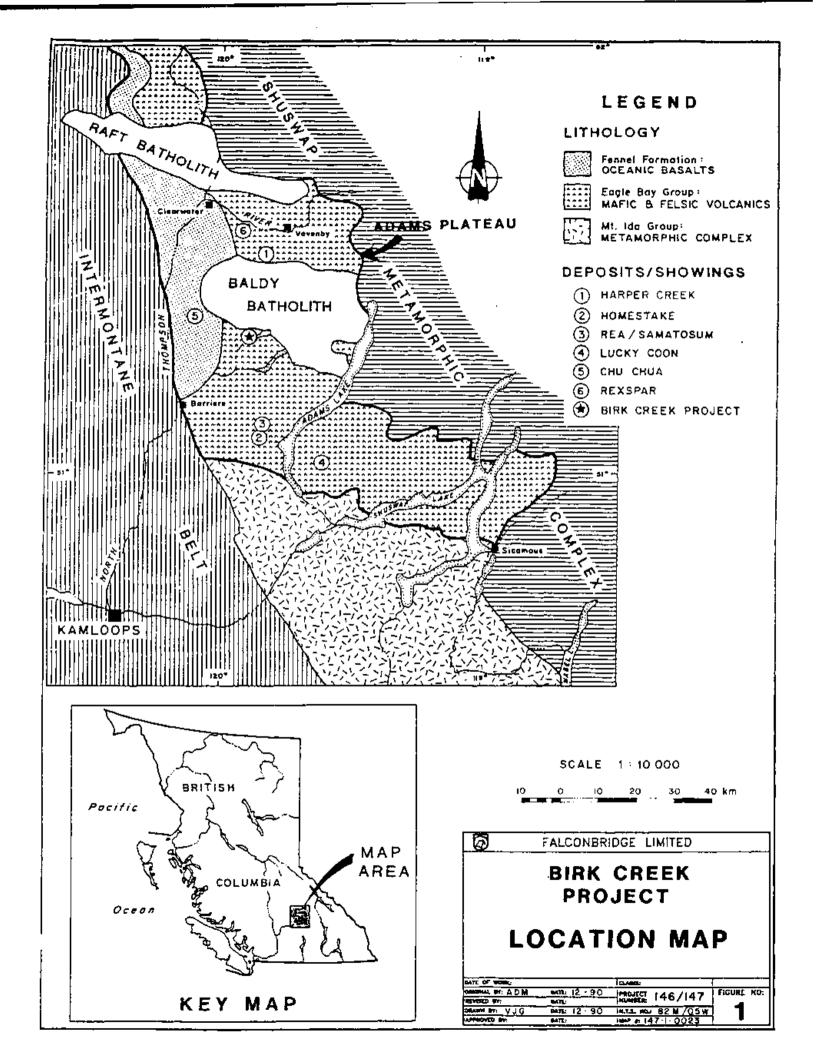
INTRODUCTION

Falconbridge Limited's Birk Creek property includes the Babiy/Rust Option (PN 1145), Victoria Resources Option (PN 1146), Bet/Cominco Option (PN 1147) and MAC Claims (PN 1148). These projects are located about 25 kilometres northeast of Barriere, British Columbia in the Kamloops Mining District (Figure 1) and are centered about 51°25'N, 119°55'W on NTS mapsheet 82M/05.

Access to the property is by provincial roads and private logging roads. Existing logging roads provide good 4 wheel drive access to most areas on the property. To reach the property from Kamloops drive north along the Yellowhead Highway #5 for 63 kilometres to Barriere; turn east on East Barriere Lake Road for 16 kilometres to the North Barriere Lake turnoff. Continue northerly for 9 kilometres to the Mabel Creek logging road which provides access to most of the claims.

All 1990 work on the Birk Creek Project was permitted through Energy, Mines and Petroleum Resources under Annual Work Permit Number: Kam90-1500011-55 Reclamation was bonded under Falconbridge Limited's Reclamation Permit MX-General-5. Timber harvesting was arranged with Tolko Industries Ltd. of Louis Creek, British Columbia. Special conditions under our permits include proper slash disposal, reseeding disturbed areas with crested wheatgrass or playground lawn mix and coordination of activities with loggers and free range ranchers.

Topography varies widely with relief ranging from 640 to 1550 metres above sea level. Terrain is mostly a gentle south facing slope which is cut by the Birk Creek Canyon on the western part of the property. Vegetation ranges from open to dense forests of pine, fir, spruce, and cedar. Timber has been harvested over about half the property. Summers are generally hot and dry with temperatures up to 30° Celsius. Winter snow levels may reach 3 to 5 metres at higher elevations.



CLAIM STATUS

Five claim groups based on ownership comprise the property (Figure 2). Each claim group is summarized below. Expiry dates marked by an asterix are subject to approval of pending assessment reports by the Gold Commissioner.

The MAC claim consists of one 4-post claim totalling 12 units owned by Falconbridge Limited. Assessment work for 1990 was filed under Statement of Work #620 dated December 18, 1990.

<u>CLAIM</u>	<u>UNITS</u>	RECORD NO.	RECORD DATE	EXPIRY DATE
MAC	12	7984	August 17, 1988	August 17, 1993 *

The RAVEN claims which are also owned by Falconbridge Limited comprise two 4-post claims totalling 20 units grouped into the 1990-228 or RAVEN90 group under Statement of Work #621 filed December 18, 1990.

<u>CLAIM</u>	<u>UNITS</u>	RECORD NO.	RECORD DATE	EXPIRY DATE
RAVEN 1	10	8485	May 14, 1988	May 14, 1994 *
RAVEN 2	10	8486	May 19, 1988	May 19, 1994 *

The Babiy/Rust Option acquired from A. Babiy, Kamloops, B.C. comprises four 2-post mineral claims, grouped into the RUST89 group. No assessment work from 1990 was filed.

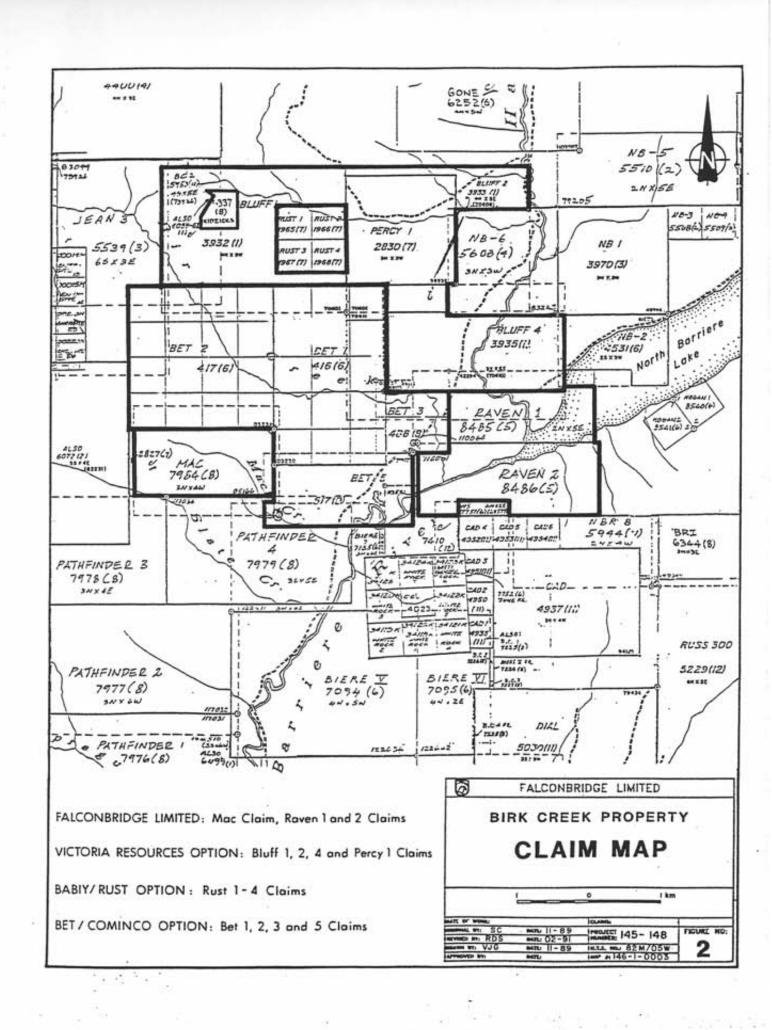
<u>CLAIM</u>	<u>UNITS</u>	RECORD NO.	RECORD DATE	EXPIRY DATE
RUST 1	1	1965	July 27, 1979	July 27, 1999
RUST 2	1	1966	July 27, 1979	July 27, 1999
RUST 3	1	1967	July 27, 1979	July 27, 1999
RUST 4	1	1968	July 27, 1979	July 27, 1999

The claims optioned from Victoria Resources Limited of Vancouver, B.C., include four MGS mineral claims totalling 67 units that were grouped into the VIC90 group under Statement of Work #618 dated December 18, 1990.

<u>CLAIM</u>	UNITS	RECORD NO.	RECORD DATE	EXPIRY DATE
BLUFF 1	20	3932	January 25, 1982	January 25, 2001 *
BLUFF 2	20	3933	January 25, 1982	January 25, 2001 *
BLUFF 4	18	3935	January 22, 1982	January 22, 2001 *
PERCY I	9	2830	July 21, 1980	July 21, 2001 *

The BET claims owned by Cominco Limited include 4 mineral claims totalling 43 units, grouped into the BET90 group under Statement of Work #619 dated December 18, 1990.

<u>CLAIM</u>	<u>UNITS</u>	RECORD NO.	RECORD DATE	EXPIRY DATE
BET 1	15	416	June 14, 1976	June 14, 2001 *
BET 2	16	417	June 14, 1976	June 14, 2001 *
BET 3	4	488	August 30, 1976	August 30, 2001 *
BET 5	8	517	September 23, 1976	September 23, 2001 *



REGIONAL GEOLOGY

Regional studies by Schiarizza and Preto (1987) form the basis for understanding the area's geology and their results are summarized below.

The Adams Lake area is underlain by a structurally complex belt of weakly metamorphosed Palaeozoic marine sedimentary and volcanic rocks known as the Eagle Bay Formation and the Fennel Formation (Figure 1). Shushwap Complex high grade metamorphic rocks flank the area to the east, with the Intermontane Belt sedimentary and volcanic rocks forming the western margin.

The Eagle Bay assemblage is a Cambrian to Late Mississippian volcano-sedimentary succession divided into eight units (Schiarriza and Preto, 1987). This stratigraphy, as presented in Table I, reflects not only the lithologies, but also the area's complex structural history

To the west, the Fennel Formation occurs in fault contact with Eagle Bay rocks. Two structural divisions make up the Fennel Formation which is essentially a mafic volcanic sequence with subordinate chert and rhyolite. The formation is Devonian to Early Pennsylvanian in age, coeval with the upper Eagle Bay.

Both formations are intruded by Cretaceous granite to granodiorite known as the Baldy Batholith and Raft Batholith. Contact metamorphic zones are locally well-developed. Completing the section are late Tertiary porphyry and lamprophyre dykes.

The Palaeozoic rocks were initially deformed by a late Triassic to Jurassic east directed thrust event which brought in the Fennel against Eagle Bay rocks. A subsequent late Jurassic to Cretaceous compressional event developed large southwest verging overturned folds and thrusting concurrent with greenschist to amphibolite metamorphism. The event's complexity resulted in the division of the rocks into four structural slices, each separated by southwest directed thrust faults. The upper three fault slices contain Eagle Bay

units, while the Fennel Formation with some Eagle Bay strata forms the fourth division which underlies the Birk Creek projects.

Later west trending folds and kinks, and rare reverse faults are associated with the Cretaceous plutonic event. Younger, possibly Eocene, north and northeast striking faults, and kink folds occur throughout the area.

TABLE I

EAGLE BAY and FENNEL FORMATIONS

STRATIGRAPHY

FORMATION	AGE	DESCRIPTION
Fennel- Upper Division	Devonian to Permian	Basalt, massive to pillowed
Fennel- Lower Division	Devonian to Permian	Basalt, chert, rhyolite
Eagle Bay- EBP	Mississippian	Phyllite
- EBF	Mississippian to Devonian	Intermediate volcanic rocks
- EBA	Devonian	Intermediate to felsic volcanics
- EBM	Lower Palaeozoic	Greenstone
- EBL	Lower Palaeozoic	Limestone
- EBK	Lower Palaeozoic	Calc-silicates, skarn
- EBS	Lower Palaeozoic	Phyllites and limestone
- EBQ	Lower Cambrian	Phyllites and amphibolite
- EBG	Lower Cambrian	Mafic volcanic and limestone

Economic Mineralization

The Adams Lake area hosts a variety of mineral occurrences. Comments included here have largely been selected from the broader and more comprehensive review by Schiarizza and Preto (1987). Recent exploration has focused on volcanogenic massive sulphides hosted in Devonian-Mississippian felsic to intermediate volcanic rocks (Table II). These deposits are classed as Kuroko type and are characterized by high silver contents along with lead, zinc and copper. Minnova Incorporated's Samatosum Mine, possibly an altered Kuroko type, is the only current producer in the area. Cyprus type massive sulphide mineralization is recognized in both the Fennel and Eagle Bay Formations. The Chu Chua deposit, currently being explored by Minnova is the largest yet found.

TABLE II

VOLCANOGENIC MASSIVE SULPHIDE DEPOSITS

EAGLE BAY and FENNEL FORMATIONS

ADAMS LAKE AREA

DEPOSIT	TYPE	TONNAGE (mt)	Cu %	Рь %	Zn %	Ag g/t	Au g/t
Samatosum	Китоко	0.64	1.2	1.7	3.6	1,035	1.9
Homestake	Kuroko	1.01	0.55	2.5	4.0	200.0	
Rca Gold	Kuroko	0.14	0.7	3.1	3.6	120.0	18.2
Chu Chua	Cyprus	2.0	2.0	-	0.4	-	-

EXPLORATION HISTORY

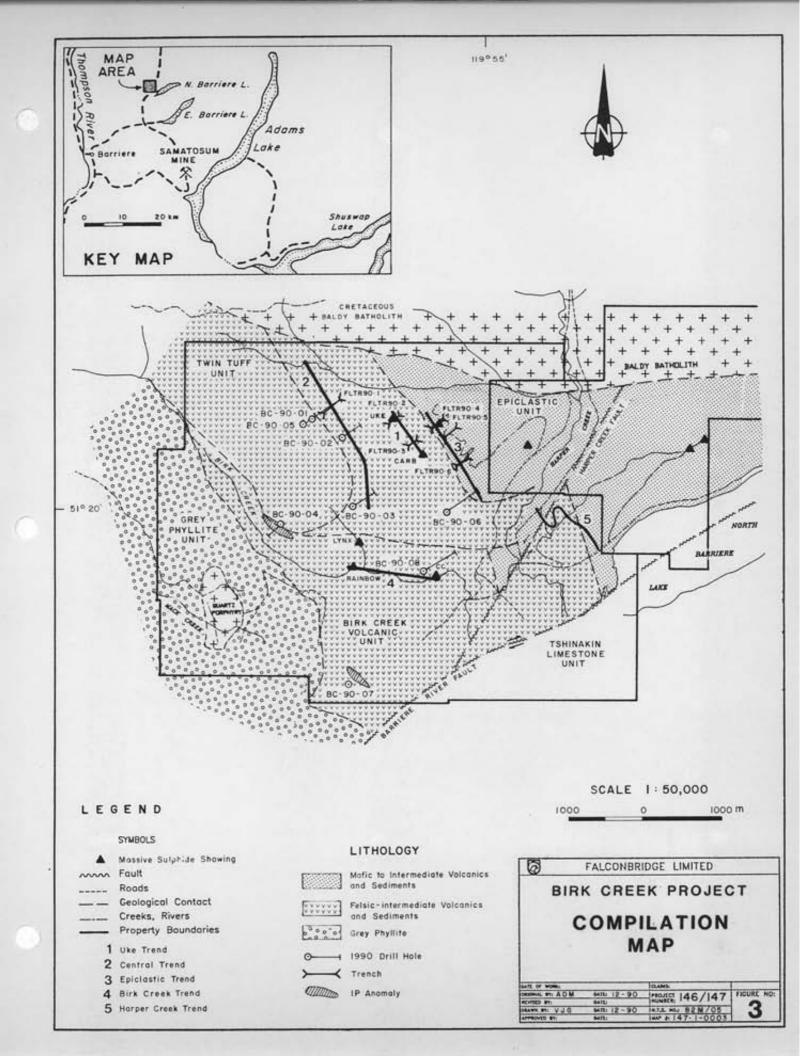
Exploration activity in the area began about 1920 with the excavation of adits and trenches along Birk Creek. Later between 1938 and 1940, 234 tonnes grading 2.0% Cu, 57.0 g/t Ag and 28.0 g/t Au were shipped from the Copper Cliff Showing on lower Birk Creek.

The area remained essentially dormant until 1951-1952 when Kennco tested the Birk Creek showings, with limited geophysics and seven drill holes (550 metres). From 1969 to 1972, Cambridge Mines and Ducanex carried out soil sampling, IP surveys, trenching, mapping and drilling (7 holes, 711 metres). Only minor Cu-Pb-Zn mineralization was found during this program.

Craigmont Mines completed soil geochemical, EM and magnetometer surveys in 1973 on the Babiy/Rust Option. In 1976, Kennco carried out soil and rock geochemical surveys on the Babiy/Rust and Victoria Resources options. Between 1976 and 1978, Cominco mapped the Bet/Cominco Option, completed geochemical and geophysical surveys and drilled 6 holes (500 metres). Semco carried out minor exploration on the Victoria Resources and Babiy/Rust options between 1979 and 1980, Preussag worked on the Babiy/Rust Option from 1982 to 1983 completing mapping, horizontal loop EM surveys and drilling (6 holes, 962 metres).

Noranda carried out a program between 1985 and 1987 on the Victoria Resources Option and Babiy/Rust Option. Geophysical surveys, soil sampling, 2257 metres of trenching, 704 metres in seven diamond drill holes, and thirteen reverse circulation drill holes totalling 1453 metres were completed. This work located a massive sulphide pod in the Uke Trench, but otherwise found only minor base metal mineralization.

In 1989 Falconbridge Limited acquired the Victoria Resources Option and the Babiy/Rust Option, and staked the MAC and RAVEN Claims. Work included gridding, IP, VLF and MAG surveys, geological mapping, and soil sampling. Three mineralized trends were defined; the Epiclastic, Uke and Central Trends presented in Figure 3.



1990 EXPLORATION PROGRAM

In early 1990 Falconbridge Limited optioned the BET 1, 2, 3 and 5 claims from Cominco Limited, Vancouver B.C. These claims were the focus of this year's exploration work conducted between June 19 and September 30. Work consisted of 63.6 kilometres of linecutting, 60.0 kilometres IP, VLF and MAG geophysical surveys and geological mapping, along with rock and soil sampling. Most of the Cominco and Ducanex diamond drill core was located and relogged along with Preussag's P-82-1 (renamed P-82-1A). Work on the previously acquired Victoria Resources and Babiy/Rust options consisted of 700 metres of trenching, geophysical surveys as above, rock sampling and geological mapping, and relogging of four Ducanex drill holes. Minor geological and geophysical surveys were conducted over the MAC and RAVEN claims.

Diamond drilling totaled 2377 metres on the Victoria Resources and Bet/Cominco options carried out between October 1 and November 1, 1990. All drill holes except BC90-04 were surveyed with downhole Pulse EM.

PROPERTY GEOLOGY

This year's surface geological mapping concentrated on the BET claims with some follow up work on claims previously mapped by Clemmer (1989). The mapping was conducted at 1:5,000 scale, but the data is presented on Figure 4 at 1:10,000 to provide a broader overview. Figure 4b presents the stratigraphic column and a property cross-section is on Figure 5.

Outcrop occurs on less than 5 per cent of the property, found mainly along Birk Creek and scattered along old logging roads. Much of the stratigraphy is relatively flat lying or dips parallel to slope giving a poor cross-sectional exposure, along with many heaved outcroppings. A further complication is the strong deformation which has overprinted virtually all primary textures. Often only a few crystals and/or fragments remain in a schistose recrystallized groundmass. Lapilli size material is highly stretched and locally recognizable only as irregular wisps or aggregates. As a result rock names such as quartz crystal tuff or lapilli tuff are used even when the constituent material makes up as little as five per cent thus permitting the division of an otherwise uniform sequence.

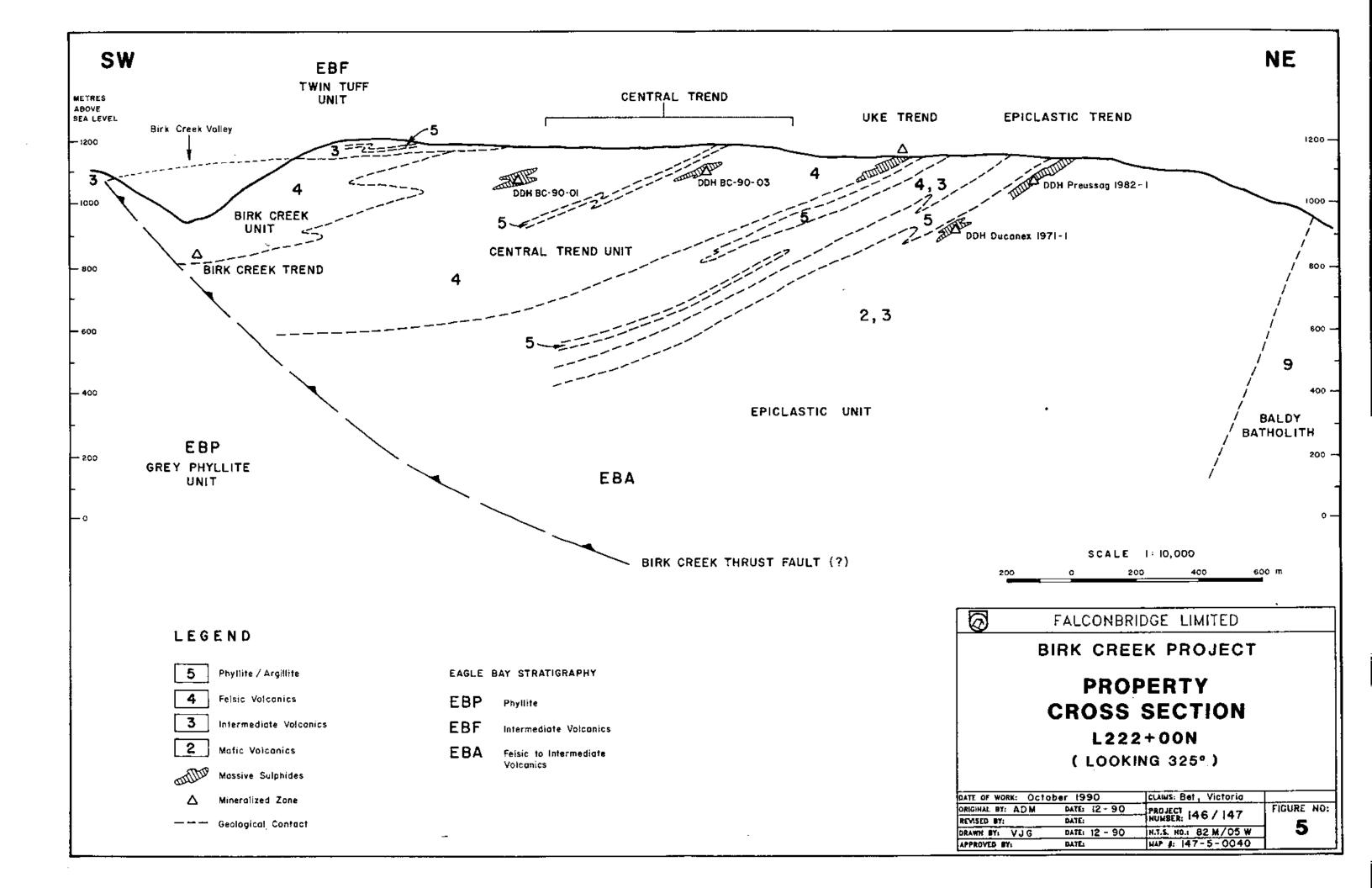
Lithologic names are based primarily on field description with some thin section study. Whole rock lithogeochemistry used for identifying hydrothermal alteration patterns has also been applied for petrologic purposes. Rocks with greater than >60% SiO2 and <0.50% TiO2 were typically named felsic if the colour indices were low. Intermediate volcanic rocksontained between 50 and 60% SiO2 with >0.50% TiO2 while the few mafic rocks present on the property contained less than 50% SiO2 and greater than 1.0% TiO Obviously due to modification of the rock chemistry because of the Baldy Batholith or any VMS alteration assemblages these numerical constraints are a guideline only. Furthermore, the all volcanic rocks appear to be pyroclastics and mainly distal in origin, and therefore much of the lithogeochemistry may be mapping mixed or reworked lithologies. Nonetheless, if the Ishikawa Alteration Index was less than 50, the resultant rock name as calculated by AFM diagrams or the Jensen cation plot was used (RP2000 Reports, Appendix B).

Lithogeochemistry procedures are discussed in the next section and thin section work is presented in Appendix C.

not exposed

Figure 4b: Stratigraphic Column Birk Creek Project

	Falconbridge Stratigraphy	Regional Stratigraphy (Schiarizza & Preto, 1987)
eroded		
VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	Grey Phyllite Unit	Unit EBP
	Twin Tuff Unit	Unit EBF
	Birk Creek Volcanic Unit	Unit EBA
Birk Creek Trend Central	Central Trend Volcanic Unit	Unit EBA
Trend Uke Trend		
Epiclastic Trend	Epiclastic Unit	Unit EBA
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		



Stratigraphy

The property is underlain predominantly by volcanic and lesser sedimentary rocks belonging to the Eagle Bay Assemblage, striking west-northwest and dipping gently to the southwest. Mapping in 1989 by Clemmer divided the stratigraphy into four major conformable units named from oldest to youngest; the Epiclastic Unit, the Upper Volcanic Unit, the Lower Volcanic Unit and the Grey Phyllite Unit. With the addition of the Bet/Cominco Option to the property and further mapping, this stratigraphy has been modified and integrated into the regional stratigraphy developed by Schiarizza and Preto (1987). These informally named units are discussed below from oldest to youngest. Reference is made throughout to their position in the formal stratigraphic column.

Tshinakin Limestone Unit (Unit EBG)

This Cambrian limestone forms massive brown cliffs on the southern edge of the property south of Barriere River. The unit is in fault contact with the younger volcanic and sedimentary rocks by the Barriere River Fault. No significant mineralization or alteration was found in this unit.

Epiclastic Unit (part of Unit EBA)

The Epiclastic Unit underlies the eastern section of the property extending to the Baldy Batholith. Very little of it is exposed on surface so the unit, as defined by Clemmer, is based mainly on drill core and trenches. It is composed of interbedded mafic tuff, andesite to dacite ash and lapilli tuff, and quartz eye rhyolite tuff intercalated with argillite, siltstone and minor chert and limestone. The more mafic intervals are found on the eastern side forming the oldest stratigraphy. Coarse grained "fragmental" beds with siliceous volcanic and sediment clasts in a finer grained groundmass occur throughout the sequence.

Grey calcareous argillite limestone ten to thirty metres thick forms the apparently conformable contact with the overlying Central Trend Volcanic rocks, while the lower section is marked only by quartz-feldspar gneiss (hornfels from volcanic protolith?) exposed occasionally along the margin of the Baldy Batholith. The unit is at least 300 metres thick.

A reinterpretation of the fragmental textures common in this unit suggests that many are of cataclastic origin and do not represent epiclastic material. The thinly bedded and varied lithologies have apparently deformed incompetently and developed assorted tectonites and autobreccias along with multiple thin shear zones. Typically, the harder beds form clasts within a softer malleable groundmass.

Lithogeochemical results indicate a mixture of predominantly calc-alkaline rocks ranging in composition from basalt to rhyolite (Clemmer, 1989).

Central Trend Volcanic Unit (part of Unit EBA)

The Central Trend volcanic rocks conformably overlying the Epiclastic Unit, were formerly named by Clemmer (1989) as the Lower Volcanic Unit. Possibly up to 500 metres thick, the unit is composed of felsic to intermediate quartz crystal ash to lapilli tuff with argillite and minor limestone. In hand specimen the volcanic rocks are typically a grey to green, often with a "phyllitic look", containing scattered quartz eyes and crystals, or lapilli in a sericite to chlorite groundmass. Rare tuff breccia intervals have been intersected in this year's drilling, but due to the deformation their origin remains problematic.

Thin section analysis indicates a fine grained quartz rich groundmass, generally recrystallized, with lesser indistinct lithic (?) fragments, sericite-carbonate-clay, and discontinuous chlorite rich wisps to stringers. Interestingly, field and thin section work suggest the intermediate and felsic units are not that dissimilar, unlike the lithogeochemical data, discussed below, which indicates a clear chemical division. Most are intermediate in composition with a few dacite and even less rhyolite, generally plotting within the calcalkaline field.

Argillite up to fifty metres thick is common in the lower half and is variably graphitic or siliceous.

Birk Creek Volcanic Unit (part of Unit EBA)

This unit is interpreted to conformably overlie the Central Trend Volcanic Unit as observed in drill hole BC90-07 (Figure 21). Here coarser grained quartz crystal tuff of the overlying Birk Creek Volcanic Unit grade into finer grained Central Trend volcanic rocks with minor argillite and, interestingly, a thin sulphide bearing cherty tuff.

Monotonous quartz crystal tuff and local feldspar-quartz crystal tuff comprise most of the section explored so far. Occasional very stretched lapilli with greater than 20:1 length to width ratios are present, but rarely make up more than five per cent of an interval. The felsics have a distinctive "quartz eye" texture although the quartz eye content is generally less than five per cent. Minor intermediate volcanic rock is present towards the base of the unit. Total unit thickness is unknown.

A significant break occurs in the Birk Creek Unit volcanism as exposed along Birk Creek and on the north slope facing the creek. Here a five to ten metre thick intercalated sequence is present containing limestone, calcareous argillite, fine grained intermediate to felsic tuff and minor cherty tuff. Interbedded to laminated pyrite rich sulphide lenses up to three metres thick occur intermittently within the fine grained volcanic rocks. Many of the old workings in this area were following this horizon including; Rainbow, Lynx, Copper Cliff, E and F and possibly the CC Showing.

This unit likely represents a facies change from the fine grained, possibly reworked volcanic rocks of the Central Trend to more proximal coarser grained felsic volcanism. However, the lack of any coarse fragmentals, flow rock or sub-volcanic intrusives suggests the depositional environment is still distal. Much of the lithogeochemical data indicates calcalkaline rhyolites.

Twin Tuff Unit (Unit EBF)

The Twin Tuff Unit is a sequence of intermediate hornblende and feldspar crystal to lithic lapilli tuff at least 200 metres thick. More massive intervals, likely representing flow or subvolcanic intrusive rock to the pyroclastic sections, are abundant in the upper half of

the unit. Overall the unit changes from grey moderately foliated feldspar tuff to massive lapilli tuff and flows upsection. Thin interbedded graphitic argillite are found throughout the section.

Lithogeochemical results indicate the volcanic rocks are predominantly calc-alkaline andesite. Although this unit appears to be the least altered of any on the property, thin section studies from 1989 work indicate strong albitization of unknown origin after the original feldspars.

Regionally the Twin Tuff Unit conformably (?) overlies the underlying units. On this property, however, the Twin Tuff directly overlies the Central Trend Volcanic rocks in the northern half of the property and the Birk Creek Volcanic rocks to the southwest inferring a structural contact. In Falconbridge Limited's drill hole BC90-04 (Figure 14), however, the contact with the Birk Creek Volcanic rocks appears to be transitional over twenty metres.

Grey Phyllite Unit (Unit EBP)

Grey, locally graphitic argillite and siltstone with minor quartzites, make up this unit which outcrops along and to the west of Birk Creek. It is part of Unit EBP, the youngest Eagle Bay stratigraphic unit and regionally conformably overlies the other units. However, in the property area, the contact has been interpreted as a late southwest directed thrust. This is in agreement with Falconbridge Limited's work which indicates the eastern margin of the Grey Phyllite truncates the underlying volcanic stratigraphy. Furthermore, in the southwestern corner of the property, felsic volcanic rocks have been observed in a shallow southwesterly dipping fault contact overlying a thick sequence of grey phyllite.

Falconbridge Limited's drill hole BC90-07 (Figure 21) testing a nearby IP Anomaly intersected 350 metre thick section of Birk Creek Volcanic indicating the thrust fault, if it exists, must be steeper than fifty degrees in this area.

Intrusive Rocks

Granite to granodiorite of the Cretaceous Baldy Batholith intrude the Eagle Bay stratigraphy in the northeast section of the property. Thin granitic dykes and sills are common close to the intrusion. Much of the Epiclastic and Central Trend Volcanic Units lie within the contact aureole of the batholith marked by spotted chlorite-biotite hornfels often with disseminated pyrrhotite.

To the west, on the MAC Claims, the Grey Phyllite Unit is intruded by a foliated quartz feldspar porphyry interpreted by some workers as intrusive rock for overlying volcanic rocks (Schiarizza and Preto). Possibly related is a narrow highly altered felsic intrusive accompanied by multiple centimetre size deformed dykes and sills found in the apparent footwall to the mineralized interval intersected in drill hole BC90-03 (Figure 9) in the Central Trend.

Several fine grained quartz porphyry dykes (?) are present in the northeastern section of the property.

Structure

The property lies within the northwest limb, near the axis, of the overturned southwest verging Slate Creek anticline (Schiarizza and Preto, 1987). Mapping by Falconbridge Limited personnel in 1989 indicated that volcanic and sedimentary rocks form a homoclinal sequence dipping gently to the southwest, but steepening closer to the Baldy Batholith suggesting an antiform (Clemmer, 1989). The dominant fabric present is schistose and is west to west-northwest striking and shallowly dipping. It is defined by smeared or attenuated mineral aggregates commonly sericite and chlorite, quartz eyes or altered feldspars and mafic minerals. Bedding is only rarely preserved and is mainly parallel to the foliation when observed. Occasional graded bedding sequence indicates the stratigraphy is right side up on the property. Several small isoclinal folds have been inferred in argillite by the presence of a strong fabric (bedding?) perpendicular to the schistose texture.

A weakly developed lineation is found throughout generally plunging gently to the southwest. It is most commonly observed in outcroppings with contrasting lithologies such as sulphide layers within volcanic rocks at the Uke Trench. Here the sulphide pod plunges 23 degrees at 250° azimuth.

Numerous faults have been mapped on the property, but with few marker horizons little is known of their geometry and scale. An apparent early east directed thrust has been mapped west of western boundary of the southern half of the Epiclastic Volcanic Unit. It dips subparallel to the stratigraphy and outcrops in only one location, although shear zones present in the 1971 Ducanex drilling to the southeast may represent an extension of the structure.

Many of the massive sulphide intervals in the Central and Uke Trend have sheared margins. It is not clear if this represents the response of varying rock competencies to the compressional deformation with minimal rock movement, or if the sulphide zones have been remobilized or faulted into their present location. According to D.E. Shaw, a structural geologist contracted by Falconbridge Limited, the latter situation is quite possible here.

Both the Barriere River Fault and the Harper Creek Fault are late strike slip faults. The former brings the Tshinakin limestone Unit into contact with the younger units (Schiarriza and Preto), while the latter may have offset the Epiclastic Unit to the north along the east side of Harper Creek. Later strike slip movement along the Birk Creek Fault is also suggested by small scale shearing and fault controlled mineralization and alteration present in the creek area. A few orthogonal lineaments interpreted from the MAG survey may be related.

Lithogeochemistry

A lithogeochemical survey of the volcanic and rarely sedimentary rocks begun in 1989 was completed this year during the geological mapping of the property. The survey was conducted to identify volcanogenic massive sulphide alteration patterns and to assist in the naming of rock types. Representative samples were taken from most outcrops examined and analyzed by Cominco Exploration Laboratories of Vancouver, B.C. for whole rock chemistry and some trace elements. Samples were also collected from the relogged Ducanex, Cominco and Preussag drill core, and from the 1990 Falconbridge Limited trenches. Surface sample locations for both years' surveys are shown on Figure 6 and the results for sodium, calcium, magnesium and the Ishikawa Alteration Index are recorded on Figures 7 and 8. Anomalous values have been defined using standard statistical methods. All results are presented in Appendix B, along with an explanation of the laboratory procedures.

The Epiclastic Unit exhibits strong, but erratic sodium and lessor calcium depletion with values less than 1.0% for each. Magnesium enrichment is also prevalent, but the well developed spotted chlorite hornfels in this area suggests the Baldy Batholith may have introduced some magnesium.

Sodium depletion along with a less pronounced calcium depletion and intermittent magnesium enrichment are characteristic of the altered Central Volcanic Unit. Within the Central and Uke Trends sodium values are less than 1.0% with a significant percentage less than 0.1% NaO. Calcium is commonly less than 1.0% and Ishikawa Alteration Indices are typically greater than ninety.

The Birk Creek Trend is marked by an alteration pattern 1400 metres in strike length consisting of strong sodium depletion and high Ishikawa Alteration Indices. A weak calcium depletion is locally present, but there is little indication of any magnesium enrichment with only a few values greater than 6.0 % Mg. Northwest of the Rainbow Showing only scattered

outcroppings show weak hydrothermal alteration while there is no indication of alteration to the south and east beyond the CC Showing.

Little hydrothermal alteration is indicated from the Twin Tuff Unit. Only apparent barium enrichment in the intermediate volcanic rocks is present, similar to that encountered last year.

ECONOMIC GEOLOGY

Significant syngenetic base metal mineralization occurs within four stratigraphic horizons associated with hydothermally altered felsic to intermediate volcanic rocks of the Epiclastic, Uke, Central and Birk Creek Trends (Figures 3 and 4, Table III). There is a pronounced transition from copper mineralization in the lower more intermediate to mafic Epiclastic Volcanic Unit, to the relatively lead and zinc rich mineralization in the upper felsic volcanic section of the Birk Creek Volcanic Unit. The style of mineralization is similar though with each trend having massive to stringer like mineralization, all showing recrystallization effects.

TABLE III BIRK CREEK PROJECTS MINERALIZED TRENDS				
TREND	ТҮРЕ	HOST ROCK	UNIT	
Birk Creek	Zn Pb	Felsic volcanic rocks, Argillite	Birk Creek	
Central	Cu Pb Zn	Felsic, Intermediate volcanic rocks	Central	
Uke	Cu Pb Zn	Felsic, Intermediate volcanic rocks	Central	
Epiclastic	Cu	Intermediate volcanic rocks	Epiclastic	

Surface rock geochemistry samples from these trends are plotted on Figure 6 and the results are recorded on Figure 9.

Epiclastic Trend

The Epiclastic Trend is a zone of weak copper mineralization striking for 1000 metres and located near the top of the Epiclastic Unit. As defined by Clemmer the trend is marked by high chargeabilities, low apparent resisitivities and anomalous copper soil geochemistry. It is open both along strike and downdip. Work in 1990 included trenching and relogging and sampling of that core recoverable from the 1971 Ducanex diamond drill program. Drill sections are presented on Figures 10 and 11; drill logs and all lithogeochemical results are in Appendices A and B respectively.

Mineralization is found near the top of a fine grained intermediate volcanic tuff underlying a graphitic argillite-siltstone section that marks the top of the Epiclastic Unit. Chalcopyrite with very minor sphalerite and galena generally occur with thinly banded to locally semi-massive bands of pyrite and pyrrhotite. The host volcanic rocks are extensively chloritized and variably silicified. To date, the best interval is 9.3 metres of 0.43% Cu and 2.4 g/t Ag from a semi-massive pyrrhotite lense intersected in a Preussag 1982 drill hole (P-82-1; Clemmer, 1989) in the northern half of the Trend and a 8.53 metres of 0.44% Cu and 0.03% Zn from Ducanex drill hole 1971-1 (140.21-148.74m) drilled to the south.

Lithogeochemical results are erratic with irregular sodium and calcium depletion along with locally strong, but also poorly developed magnesium enrichment.

Uke Trend

The Uke Trend lies at the base of the Central Trend Volcanic Unit. It has been traced intermittently along strike for 850 metres and consists of narrow semi-massive to massive sulphide bands hosted by chloritized and pyritic intermediate and felsic volcanic tuff with local argillite and chert beds (Clemmer). To date the best assay interval is from the Uke Trench uncovered by Noranda which returned 0.62% Cu, 5.27% Pb, 4.15% Zn, 35 g/t Ag and 1.0 g/t Au over 2.00 metres.

Central Trend

This trend was originally defined by Clemmer on the basis of weak lead-zinc mineralization present in the upper half of the Central Trend Volcanic Unit. It was further characterized by high chargeabilities and low resistivities coincident with a lead soil anomaly and intermittent high copper and zinc soil values. Hosted by strongly altered andesitic to dacitic and local rhyolite volcanic tuff it is up to 200 metres thick and at least 1700 metres in strike length. The trend is open along strike and at depth.

Mineralization typically consists of thin centimetre size semi-massive to massive bands of sphalerite, galena, local chalcopyrite, pyrite and occasional pyrrhotite occuring in five and possibly six discrete zones parallel to foliation. Drilling this year (discussed in a later section) along the northwest extension of the Trend suggests the mineralization is becoming higher grade in that direction (Table VI). Prior to this year's drill program the mineralized intervals generally contained 1-2% combined lead and zinc with only minor copper.

Wallrock alteration is marked by strong sodium depletion, weak to moderate calcium depletion and high Ishikawa Alteration Indices throughout the section.

Birk Creek Trend

This mineralized trend has been explored since 1920 with minimal success. Diamond drilling by Falconbridge Limited in 1990, and previously by Preussag, Cominco, Ducanex and Kennco has intersected a series of weakly mineralized intervals up to two metres thick, but very discontinuous along both strike and dip. Much of this drill core was recoverable, and relogged and sampled in 1990: one Preussag drill hole, five of six Cominco drill holes, and both Ducanex drill holes. The Kennco drill core could not be located, so the old logs were used. The data are presented on Figures 12-16 and Table IV records the significant results. Drill logs and geochemical analytical data are in Appendices A and B. Only drill sites for the Preussag and Cominco work were found. The surface rock geochemistry sample location map and results are on Figures 6 and 7.

The main mineralized trend consists of intermittent massive pyrite lenses up to 3.0 metres thick intercalated with intermediate to felsic ash tuff, cherty tuff, calcerous argillite and limestone totalling up to 10 metres thick present within the quartz crystal tuffs of the Birk Creek Volcanic Unit. Exposed predominantly along Birk Creek in the old workings, it appears to form a gently dipping stratiform sheet extending from the Lynx and Copper Cliff Showings to Birk Creek within a one kilometre area. Mineralization consists of irregular aggregates or disseminations to centimetre size bands of sphalerite, chalcopyrite and galena occurring with the pyrite lenses. To the southeast, however, this interbedded sequence is not present and the mineralization is hosted by quartz crystal tuffs (e. g.: CC Showing). Here Cominco and Preussag drilling indicates two weakly mineralized intervals about 60 metres apart (Figures 15 and 16). The upper horizon is hosted by quartz phyric tuff while the lower horizon is found at the contact of the quartz phyric tuff and intermediate ash tuff. Drill testing by Falconbridge Limited's drill hole BC90-08 tested these horizons to the north, but intersected only a single weakly mineralized interval in quartz crystal tuff.

TABLE IV

BIRK CREEK DRILLING AND SHOWINGS

SELECT ASSAY RESULTS

DRILL HOLE	FROM	WIDTH	Cu %	Pb %	Zn %	Ag	Au g/t
/SHOWING	то	(m)	(ppm)	(ppm)	(ppm)	g/t	(ppb)
Lynx	42.98	2.13	0.14	0.52	1.25	-	-
drill hole D-7	45.11						
Lynx	2.13	1,53	0.40	-	5.50	-	-
drill hole K-6	3.66		<u> </u>				
BET 1	127.20	1.00	0.30	0.61	1.40	11.34	0.11
	128.20						
BET 3	121.70	2.20	0.07	0.05	0.08	1.70	0.14
	123.90						
BET 6	8.80	1.60	0.34	0.02	0.17	-	-
	10.40						
	12.20	1.50	0.32	0.33	0.66	-	-
	17.70						
P-82-1A	96.59	2.77	0.13	0.10	0.57	4.20	
	99.36						10
сс	(chip)	0.30	0.34	1.20	3.10	0.50	-
BC90-07	236.36	1.00		,		5.40	-
	237.36		998	8086	9629	İ	244
	247.98	0.20	0.25	1.70	2.51	7.80	
	248.18						106
BC90-08	81.00	1.80				3.30	
	82.80		1835	1863	1510		76

Weakly mineralized pyritic chert and chert breccias located by Cominco drilling (Figure 14, drill holes BET-1 and BET-3) 200 metres to the south are possible equivalents to the Birk Creek Trend.

The lithogeochemical results indicate a hydrothermal alteration zone enveloping the mineralized intervals about 1400 metres in length and 25 metres thick. It is marked by strong sodium depletion and high Ishikawa Alteration Indices. Weak calcium depletion is locally present along with even weaker magnesium enrichment. Overall, the alteration is less developed than the Central Trend.

DIAMOND DRILLING AND TRENCHING

Prior to this year's Falconbridge Limited drilling, all these trends had been explored on surface or with drilling generally less than 100 metres true depth. Thus, this year's program was designed to test the economic potential at depth. Eight drill holes totalling 2377.78 metres were completed by Falconbridge Limited; 1310.97 metres in four drill holes on the Victoria Resources Option and 1066.81 metres in four drill holes on the Cominco Option. Table V provides a summary of this work. Six trenches totalling 700 metres were also excavated to test the Uke and Epiclastic Trends.

Figure 3 presents a compilation of the work completed this year. Drill logs are found in Appendix A while assay, geochemical and lithogeochemical analyses are catalogued in Appendix B. The borehole Pulse EM survey was completed by Scott Geophysical Surveys, Vancouver, B.C. and is in Appendix E. Falconbridge Limited geophysist, Tony Watts, interpreted the results and his conclusions are presented here. The drill results will be discussed in order of importance.

Central Trend

Four drill holes tested the trend this year and two intersected significant Cu-Pb-Zn mineralization. Table VI presents the best results, and the drill sections are on Figures 17-19. Trench FLTR90-01 was excavated over the trend (Figure 20)

In drill hole BC90-01, a broad zone of Cu-Pb-Zn disseminated to massive mineralization about 110 metres thick is present hosted by felsic to intermediate ash to tuff breccia. Five discrete sulphide intervals are present in this zone. The uppermost interval between 133.18 and 144.94 metres (11.76 metres drill thickness) is hosted by ash tuff and tuff breccia. Polymetallic mineralization occurs as disseminations, rimming fragments or as aggregates in the groundmass, and as rare centimetre size bands parallel to foliation. A narrow interval of semi-massive mineralization occurs between 139.32 and 140.0 metres and grades 1.13% Cu, 6.60% Zn, 2.07% Pb, 81.60 g/t Ag and 270 ppb Au. The mineralization has been recrystallized and remobilized with chalcopyrite especially common along fractures.

The lower contact is sheared. Strong sericitization and variable silicification has occurred throughout.

Immediately below, the four lower sulphide intervals occur within a 100 metre thick zone containing sporadic narrow sulphide bands parallel to foliation or locally along fractures. The four largest intervals, as reported in Table VI, are composed of massive pyrite with lesser sphalerite, galena, chalcopyrite, rare bornite and local pyrrhotite. Most sulphide bands have sharp contacts parallel to the foliation with the wallrock which is generally pervasively chloritized over narrow widths along thin quartz or silica stringers. Again all show the effects of shearing and recrystallization with pyrite often forming subeuhedral crystals up to one centimetre in size. In the lower section a 0.19 metre band of massive sphalerite with lesser amounts of the other sulphides is the main contributor to the interval. With depth the mineralization decreases as spotted hornfels increases.

Drill hole BC90-05 tested this zone 200 metres downdip and intersected similar lithologies, but no significant mineralization. To the southeast 500 metres, drill hole BC90-02 also intersected the same stratigraphy, but encountered only weak and erratic sphalerite, galena and rare chalcopyrite. However, 100 metres along strike to the southeast, Falconbridge Limited trench FLTR90-01 uncovered two narrow semi-massive sulphide horizons hosted by fine grained sericitically altered felsic to intermediate tuff (Figure 20). The highest assay returned was 1.19% Zn, 0.75% Pb, 262 ppm Cu, 8.5 g/t Ag and 33 ppb Au over 1.5 metres.

love stored on property near main access road and Birk br.

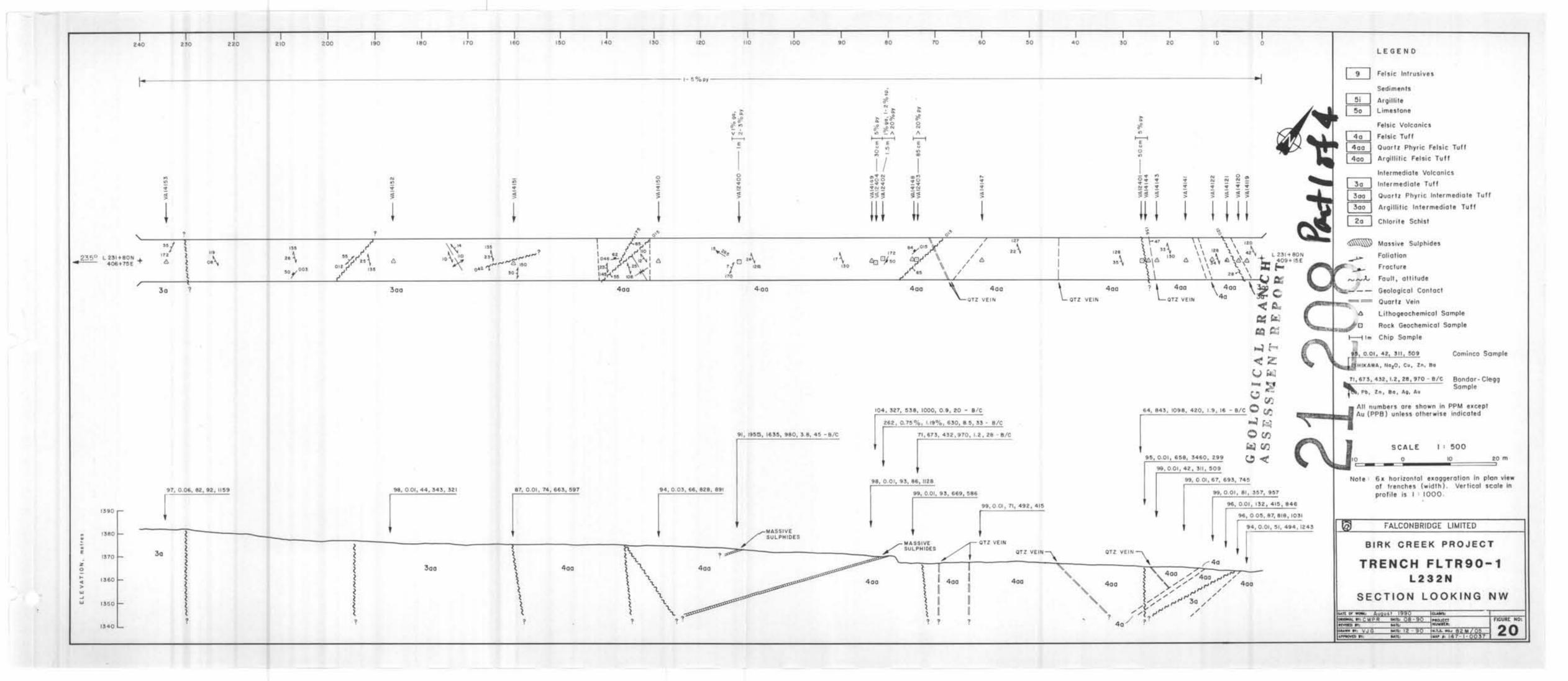


TABLE V

DIAMOND DRILLING DATA - 1990 BIRK CREEK PROJECT

HOLE	CLAIM	UTM N	UTM E	ELEA	GRID COOR	154	DIP	TOTAL	COST	START	COMPLETE	LOGGED BY	MET	WR
80-90-01	BLUFF 1	5691880	296115	1405 2	23270N 40440E	55	-45	306.94	\$18,373.34	10.4.90	10.6.90	A.D. MCLAUGRLIN	84	36
80-90-02	BLUFF 1	5691650	296640	1302 (22790N 40725E	55	-60	236.22	\$12,538.58	10.7.90	10.9.90	M. VANDE GUCHTE	62	18
80-90-03	BET 2	5690730	296680	1175 2	22005N 40275E	55	-55	203.3	\$11,894.34	10.10.90	10.12.90	A.D. MCLAUGHLIN	34	14
BC-90-04	BET 2	5690610	295770	1200 2	22400N 39464E	235	-64	213.06	\$13,731.98	10,13,90	10.16.90	M. VANDE GUCHTE	27	16
BC-90-05	8LUFF 1	5691785	295990	1413 2	23270N 40290E	55	-65	422.76	\$23,080.84	10.16.90	10.21.90	M. VANDE GUCHTE	51	31
BC-90-06	BLUFF 4	5690640	297700	902	21370N 41075E	55	-65	345.05	\$17,956.40	10.22.90	10.25.90	M. VANDE GUCHTE	83	17
BC-90-07	BET 1	5688350	296390	725	20182N 38700E	0	-90	349.61	\$18,473.26	10.25.90	10.28.90	C.W.P. RUSSELL	80	25
BC-90-08	BET 3	5689780	297540	748	20707N 40440E	55	-65	300.84	\$17,788.42	10.28.90	10.31.90	M. VANDE GUCHTE	63	18
TOTAL 199	O PROGRAM:	8 HOLES						2377.78	\$133,837.16				484	175
								COST/m=	\$56.29					

TABLE VI

1990 CENTRAL TREND DRILLING

SUMMARY RESULTS

1				_	,		
DRILL HOLE	FROM TO	WIDT H (m)	Cu % (ppm)	Pb % (ppm)	Zn % (ppm)	Ag g/t	Au g/t (ppb)
BC90-01	133.18 144.94	11.76	0.17	0.48	1.08	11.21	63
	139.32 140.00	0.68	1.13	2.07	6.60	81.60	270
	186.31 187.19	0.88	0.66	4.32	8.68	25.37	0.48
	206.99 207.41	0.42	0.86	7.29	5.12	36.34	0.34
	231.00 231.49	0.49	0.35	1.61	2.70	18.86	0.34
	247.38 248.38	1.00	0.59	5.47	6.33	70.97	0.34
BC90-02	51.50 52.00	0.50	2977	0.87	1.33	40.11	61
BC90-03	20.07 20.42	0.35	0.68	1.78	5.03	36.60	326
	68.15 72.43	4.28	0.92	0.37	3.30	25.02	0.10

Drill hole BC90-03 tested the Central Trend about 1250 metres to the southeast. Interbedded felsic lapilli to dust tuff and argillite are present similar to both Central Trend and Birk Creek Volcanic Units. Significant mineralization is hosted by a sericitized felsic tuff containing 20% angular and fine grained felsic intrusive fragments up to 12 centimetres in size. These are rarely flow banded. Texturally the mineralization occurs similar to that found in the upper section of drill hole-90-01, but the mineralogy is primarily sphalerite and chalcopyrite with minor galena and rare bornite. Alteration appears to be less pronounced with the footwall moderately sericitized and pyritic, and weakly chloritized. The hangingwall is not strongly altered.

Very thin felsic intrusives similar to the fragments are found throughout the footwall for 50 metres. These are strongly foliated and rarely folded or boudinaged indicating a much older age than the nearby Baldy Batholith. Interestingly these are accompanied by sphalerite, chalcopyrite and galena bands along foliation and fractures parallel to foliation.

A second semi-massive sulphide horizon is present in this drill hole 44 metres up section. Semi-massive pyrite and pyrrhotite with lesser sphalerite and chalcopyrite 0.19 metres thick is hosted by chloritized felsic tuff.

The overlying felsic tuff immediately below the Twin Tuff is strongly pyritic, but contains only trace base metal mineralization.

Central Trend: Lithogeochemistry

Lithogeochemical data indicates a strong sodium and calcium depletion zone, about 150 metres thick enveloping the mineralized section in drill hole BC90-01. Values are commonly 0.01% Na2O and between 0.20% and 0.50% CaO compared to greater than 1.0% for both in non-mineralized rock. As expected the Ishikawa Alteration Indices are indicative of strong hydrothermal alteration with values greater than eighty throughout the section. The sodium depletion persists downdip to drill hole BC90-05 although weaker, but the other whole rock data does not indicate significant alteration. Up section and along strike in FLTR90-01 the volcanic rocks have also undergone strong sodium and calcium

depletion with values less than 0.7% Na2O and 1.0% CaO; many sodium results are less than 0.01%. Resultant Ishikawa Alteration Indices are also indicative of hydrothermal alteration.

In drill hole BC90-03 the main mineralized interval is located near the top of a 75 metre thick sodium depletion zone. The footwall is marked by very high Ishikawa Alteration Indices accompanied by weak magnesium enrichment and calcium depletion extending for 40 metres.

A lead age date by Colin I. Godwin of the University of British Columbia on a galena sample taken from the massive section in drill hole BC90-01 at 186.45 metres indicates a Devonian age (Appendix C). This is the age of the host volcanic rocks and is also similar to other deposits hosted by the Eagle Bay volcanic rocks.

Central Trend: Borehole Pulse EM Geophysics

A distant 75-100 metre off-hole conductor to the north is indicated corresponding to the upper mineralized zone in BC90-01. It is not clear if this response is related to mineralization along strike to the northwest and not yet tested, or the mineralization intersected up dip by Noranda. In drill hole BC90-03 the mineralization is only weakly discernable from the overlying argillite and there is no off-hole response to it.

Of significant interest is an increasing conductive response occurring in the lower sections of three drill holes, BC90-01, BC90-02 and BC90-05. Falconbridge Limited geophysicst T. Watts, suggests a source 50 to 100 metres below the current tested depth, possibly an extension to the Uke Trend horizon.

Central Trend: Conclusions

The Central Trend appears to becoming more coarser grained both with depth and to the northwest. Concurrently there is a significant increase in the base metal content, which are now becoming more copper rich and massive in occurrence. This suggests a greater proximity to the volcanic source and sulphide venting, likely in the northwest direction. A wide spread hydrothermal alteration event has accompanied the deposition of these syngenetic sulphides.

Birk Creek Trend

Drill hole BC90-08 tested the trend 220 metres north of the CC Showing, and to the south 1.5 kilometres with drill hole BC90-07. Both drill holes tested chargeability highs and apparent resistivity lows with a coincident copper and zinc soil anomaly present in the CC Showing area. The latter drill hole was also designed to test the thickness of the volcanic stratigraphy above the interpreted Birk Creek thrust fault. Drill hole BC90-04 drill tested a strong chargeability anomaly and VLF anomalies occurring near the contact with the Birk Creek Volcanic Unit and the overlying Twin Tuff Unit. Downslope copper and zinc soil anomalies had been outlined by Ducanex in 1971. These drill sections are plotted on Figures 21-23 and significant drill results are presented in Table IV.

Drill hole BC90-08 intersected a thick sequence of moderately sericitized and chloritized felsic to intermediate ash tuff with minor five metre thick argillite interbedds. Below 256.00 metres the section is graphitic argillite with argillaceous felsic ash tuff. A possible extension to Birk Creek Trend mineralization occurs between 81.00 and 82.80 metres where minor sphalerite and galena is hosted by pyritic felsic ash tuff overlying a graphitic argillite. No other significant mineralization was found in the drill hole.

Drill hole BC90-07 intersected coarse grained quartz phyric ash and lapilli tuff grading into fine grained locally argillaceous intermediate tuff of the Central Trend Volcanic Unit (?) at the base. Three weakly mineralized intervals are present in the upper volcanic section including a 0.20 metre thick semi-massive pyrite section hosted by cherty tuff. The other intervals are chert breccias up to 2.65 metres thick containing minor fracture controlled chalcopyrite, sphalerite and galena. The section is moderately altered with sericite, disseminated ankerite and calcite, and locally weak silicification.

There is no evidence of the interpreted underlying Birk Creek thrust fault. Increased fracturing and shearing or disruption of the foliation and bedding patterns were not observed to suggest the thrust is close by. If the thrust exists it must be steeper than 50° in this area not to have been intersected in this drill hole.

Testing the geophysical anomalies north and statigraphically above the Birk Creek Trend, drill hole BC90-04 intersected Twin Tuff feldspar and mafic lithic ash to lapilli tuff conformably overlying quartz phyric ash and lapilli tuff of the Birk Creek Trend. Two graphitic argillite beds are present including the lower thirteen metres. The contact between the two units appears to be transitional with grey-green tuffs grading into grey quartz phyric ash tuff both moderately hornfels. Wallrock alteration is minimal with the development of chlorite, carbonate, sericite and pyrrhotite after the Twin Tuff Unit and sericite with local

carbonate and silica development after the underlying Birk Creek Unit.

Birk Creek Trend: Lithogeochemistry

There is a 150 metre thick sodium depletion zone in drill hole BC90-07 with the three mineralized intervals located in the lower half. The upper forty metres of section is marked by Ishikawa alteration Indices greater than eighty and calcium values less than 1.0% CaO. Results from the other drill holes are not indicative of hydrothermal alteration.

Birk Creek Trend: Borehole Pulse EM Geophysics

There is a strong response in drill hole BC90-08 at about 260.00 metres correlating with a graphitic argillite. The remainder of the survey and that completed in drill hole BC90-07 do not indicate any significant anomalies. Drill hole BC90-04 could not be surveyed due to downhole blockage. It is not clear why the survey is not responding to many of the graphitic argillite intervals.

Birk Creek Trend: Conclusions

Drilling by Falconbridge Limited and previous drilling by others did not intersect the main massive sulphide bearing sedimentary-volcanic sequence, but rather quartz crystal tuff hosted mineralization. This may reflect the thinning of the sedimentary sequence from the Lynx Showing south to Birk Creek and the CC Showing. However, low angle thrust (?) faults mapped at the Rainbow Showing may have truncated the mineralized horizons. D. Shaw, a structural geologist, in reviewing the Birk Creek Trend, suggests late movement along pre-existing fractures concentrated near the Birk Creek fault may have severely disrupted the stratigraphy. This would explain the lack of lithologic continuity present especially in the Lynx area.

A broader hydrothermal alteration to the south is indicated by drill hole BC90-07, but mineralization continues to be weak and associated with distal felsic relatively fine grained volcanic rocks and rare cherty tuff. The IP and VLF surveys appear to be responding to the graphitic argillite present in the Birk Creek Trend with the weakly pyritic volcanic rocks are contributing factor.

Uke Trend

Work this year consisted of re-opening the old Noranda Trench to permit more detailed examination of the zone and trenching along strike 350 metres to the south. The trench maps are presented on Figures 24 and 25, and the geochemical analyses are in Appendix B. The age date report by Colin I. Godwin is in Appendix C.

The Uke massive sulphide zone forms a pod like structure 2 by 3 metres hosted by a larger size pod of strongly chloritized felsic (?) rock plunging 23° at 250° azimuth. Margins of the sulphide pod are highly sheared and dip parallel to regional foliation. The footwall is a moderately chloritized and pyritc intermediate tuff while the hangingwall is a variably silicified, sericitized and pyritc felsic tuff. Two very narrow massive sulphide bands occur in the hangingwall, but appear to have limited strike potential.

Trench FLTR90-03 tested the trend to the south, but did not locate any significant

Several small massive sulphide boulders resembling the mineralization in outcrop.

mineralization in the Uke Trench were found in the till. The trench was only extended for

a short distance due to the "hardpan" and deep overburden.

Lithogeochemical data indicates the volcanic rocks are strongly altered with sodium

and calcium depletion more pronounced in the hangingwall. Magnesium enrichment is also

prevalent, especially in the footwall.

Lead age dating of a massive sulphide sample from the Trench FLTR90-02 indicates

the mineralization is also Devonian in age similar to the Central Trend mineralization and

conformable with the host volcanic rocks.

Uke Trend: Conclusions

The Uke Trend contains only intermittent base metal mineralization. Nonetheless

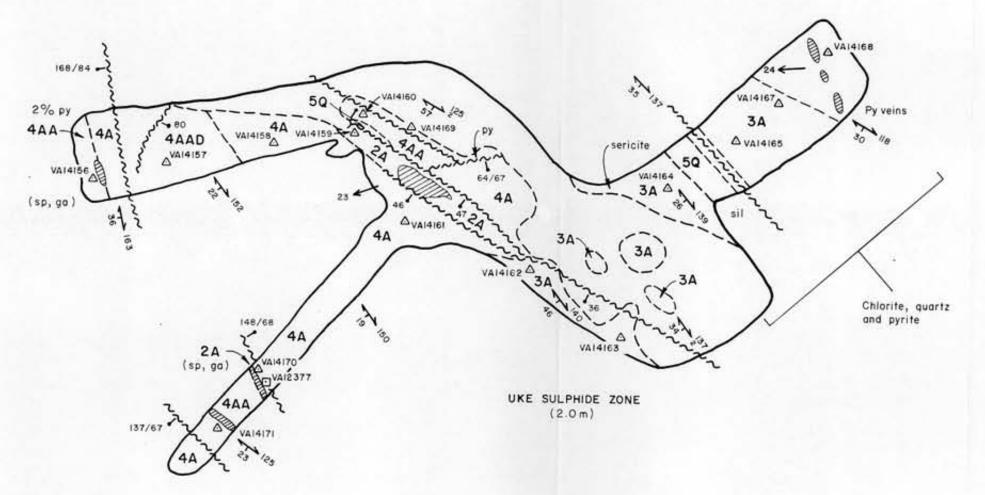
the massive sulphide zone exposed in the Uke Trench contains significant quanities of base

metals and should be tested further. Previous drilling by Noranda has not fully tested the

down plunge potential of the trend. The lithogeochemical data indicate a conventional

hanging and footwall relationship with the sulphide zone suggesting it is in situ.





LEGEND

Chlorite Schist
Intermediate Tuff
Felsic Tuff
Quartz Phyric Tuff
Quartz - Mafic Phyric Tuff
Tuffaceous Sediment
Massive Sulphides
Contact
Fault, attitude
Foliation

LITHOGEOCHEMICAL SAMPLES

SAMPLE NO.	INDEX	NazO wt. %	MgO wt. %	CaO wt. %	L226+00N, 413+50E
VA14156	98	0.06	5.18	0.15	+
VA 14 157	90	0.23	8.17	0.95	
VA 14 158	97	0.09	8.85	0.19	
VA 14 159	91	0.16	18.54	1.86	
VA 14 160	91	0.10	6.11	0.85	
VA 14 161	99	0.01	9.92	0.16	
VA 14 162	98	0.01	8.77	0.20	
VA 14 163	99	0.01	8.21	0.13	
VA 14 16 4	99	0.01	4.59	0.09	ROCK GEOCHEMICAL SAMPLES
VA 14 165	99	0.01	12.87	0.09	
VA 14 167	99	0.04	12.30	0.08	SAMPLE NO. Cu Pb Zn Ba Ag Au
VA 14 168	98	0.01	7.84	0.23	ppm % % ppm ppm ppb
VA 14 169	94	0.01	10.51	0.76	VAI2377 II21 1.64 0.60 330 10.5 30
VA 14 170	93	0.29	14.17	0.75	11VF 0.000/ F.07 4.15 75 /m
VA 14 171	92	0.05	5.09	0.12	OKE 0.62% 5.27 4.15 - 35g/T 1.0g/T

SCALE 1: 200

Lineation

Lithogeochemical Sample

Rock Geochemical Sample

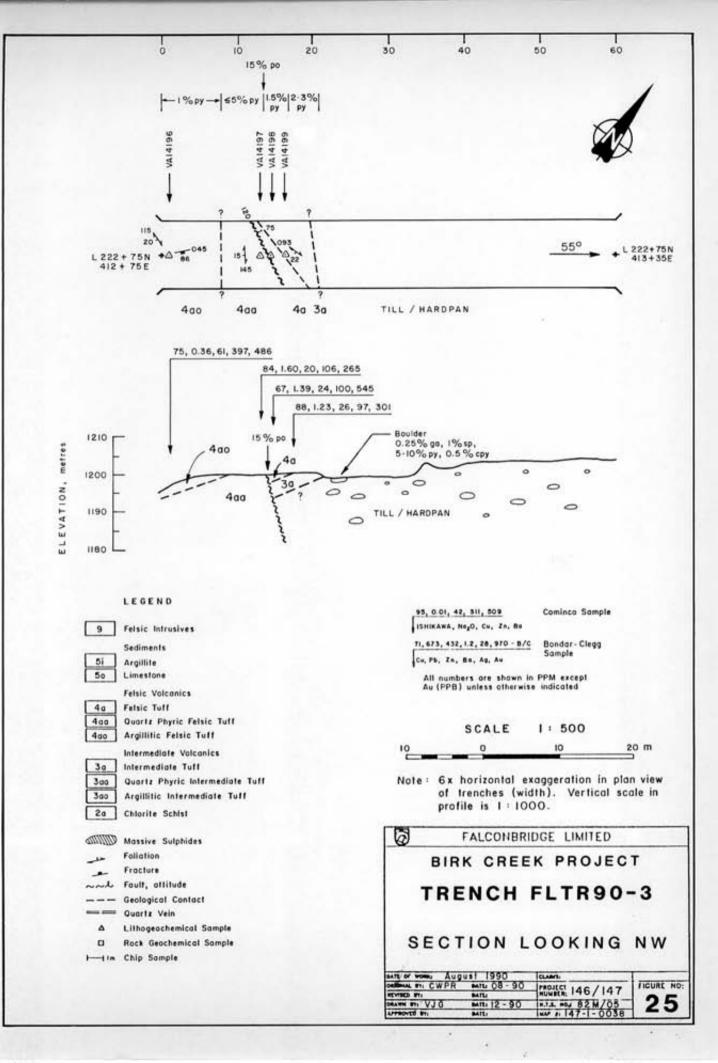
2 0 2 4 6 m

FALCONBRIDGE LIMITED

BIRK CREEK PROJECT

FLTR90-02 L 226-00N

DATE OF WORK:		CLAIUS:	
ORIGINAL BY: ADM	DATE: 10 - 90	PROJECT LAC /147	FIGURE NO:
REVISED BY:	DATE:	NUMBER: 146/147	
DRAWN BY: VJG	DATE: 12 - 90	H.T.S. HO.: 82 M / 05 W	24
APPROVED BY:	DATE:	MAP #: 147-1-0024	1.00



Epiclastic Trend

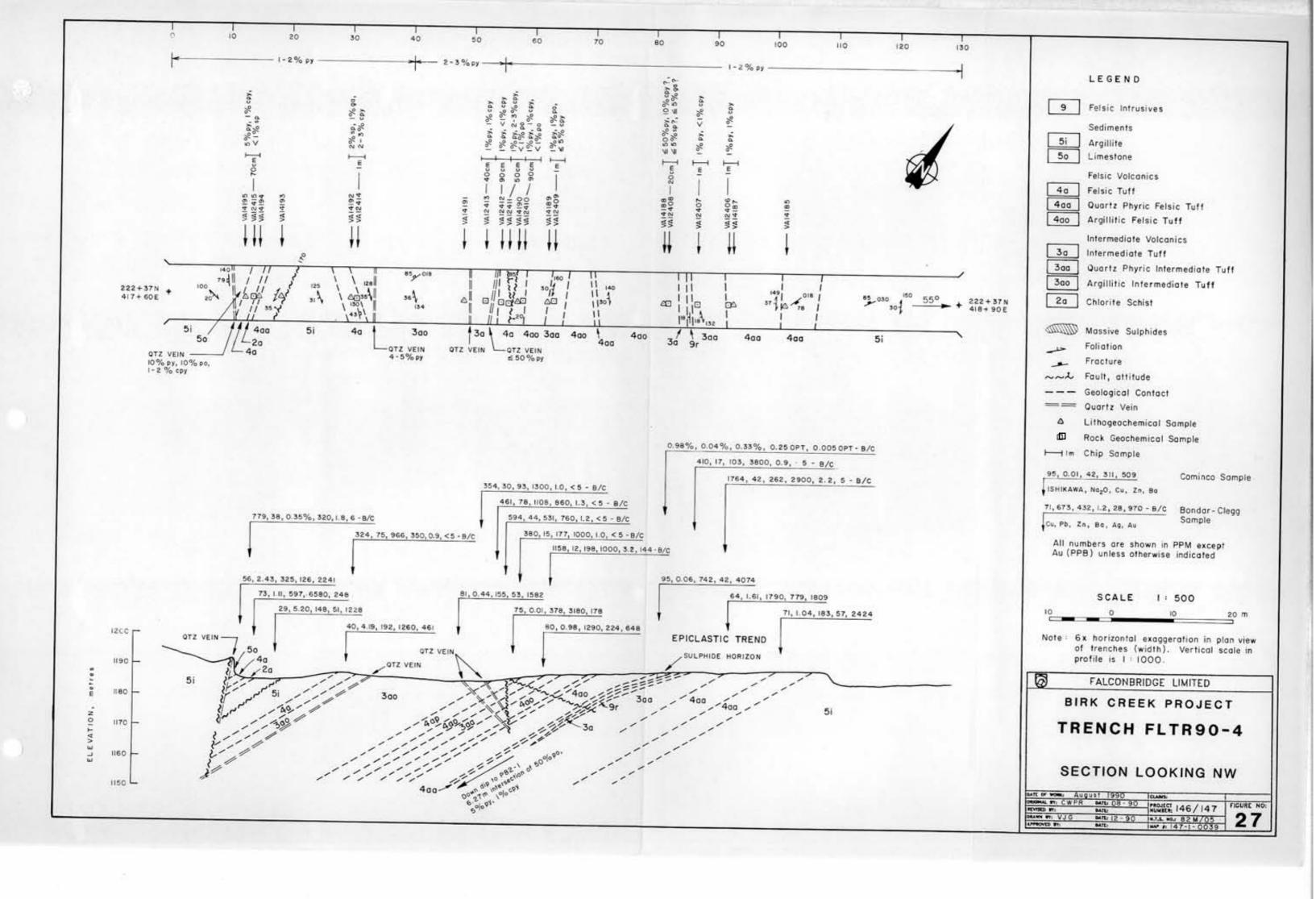
This year Falconbridge Limited tested the southeastern extension of the Trend with one trench and one drill hole, BC90-06 (Figures 26 and 27). Soil sampling was completed over an IP anomaly southeast of Harper Creek overlying the interpreted offset of this trend (Figure 28).

Work this year did not locate any significant mineralization or alteration zones. Trench FLTR90-04, investigating the updip section from the semi-massive pyrrhotite lens discovered by Preussag in 1982, uncovered only a minor semi-massive sulphide pod grading 0.98% Cu, 0.04% Pb and 0.33% Zn hosted by thinnly bedded felsic to intermediated tuff with local argillite and limestone. Trenches FLTR90-05 and FLTR90-06 were unsuccessful due to thick overburden and hardpan.

Falconbridge Limited's drill hole BC90-06 tested the strong IP response coincident with copper and zinc soil anomalies. The drill hole intersected sixty metres of weakly chloritized felsic tuff overlying pyrite and pyrrhotite bearing graphitic argillite. A thick section of weakly altered intermediate to felsic ash tuff intruded by thin felsic dykes likely related to the Baldy Batholith completes the section.

The Epiclastic Trend occurs between 180.00 and 187.00 metres with trace to 0.50% chalcopyrite locally present. The best interval grades 1.28% Cu, 0.01% Pb, 0.04% Zn, 7.3 g/t Ag and 93 ppb Au over 0.90 metres. The overlying graphitic argillite is not mineralized.

Lithogeochemical results indicates only weak hydrothermal alteration from this drill hole.



Epiclastic Trend: Borehole Pulse EM Geophysics

Borehole survey of this drill hole detected a strong response at 180.00 metres located fifteen metres below a ten metre thick graphitic argillite. The magnitude of this anomaly is too large to be located up section to the Ducanex 1971 drill hole and the stronger response from the northwest loop than the southeast loop suggests the source is downsection extending to the northwest. similar to the other borehole surveys not all graphitic argillite section are responding to the survey.

Epiclastic Trend; Soil Geochemistry

Soil samples taken over the Harper Creek IP anomaly were collected from the A horizon, but usually contained a large amount of glacially derived sand material. Acme Labs of Vancouver, B.C. performed the analyses for copper, lead, zinc and silver using ICP on the 165 samples. The results are in Appendix B and are plotted on Figure 28.

There is a well defined copper and zinc anomaly correlating with the IP anomaly. Maximum values are 231 ppm Cu and 1460 ppm Zn, substantially higher than background in this area of apparently thick overburden. A weak lead and silver association is also present.

Epiclastic Trend Conclusions

The Epiclastic Trend contains continuous, but weak copper mineralization. The IP anomalies are responding primarily to the graphitic argillite unit and are not indicating significant mineralization. Only the Pulse EM anomaly lying to the northwest of drill hole BC90-06 is unexplained, but the abundance of argillite in this section suggests it is the likely source. An interpreted extension of this trend to the southeast along Harper Creek is further supported by the copper and zinc soil anomaly, coincident with the IP results.

SURFACE GEOPHYSICS

Delta Geoscience Limited of Vancouver, B.C. completed about 60 line kilometres each of gradient array IP, VLF and MAG surveys over the Birk Creek property between August 9 and September 4, 1990. This survey, mostly carried out over the BET claims, was combined with last year's work by the same contractor with a few stations on each line resurveyed for continuity. Gridlines 200 metres apart were surveyed with 25 metre station separation for the IP Survey and 12.5 metres for the VLF and MAG surveys. The resultant survey maps at 1:5,000 scale and the contractor's report including survey specifications, maps and detailed interpretation is found in Appendix E. Discussed here are the more geologically significant points.

Central Trend

Most of the Central Trend had been surveyed in 1989, but an extension of this trend was detected in 1990 with a coincident chargeability high and an apparent resistivity low centred about Line 224+00N and 404+00E. Falconbridge Limited's drill hole BC90-03 located 400 metres southeast, intersected interbedded graphitic argillite and felsic tuff within sixteen metres of a 4.28 metre thick (drill thickness) banded sulphide horizon. From here the anomaly "joins" with a strong IP response over the Lynx Showing within the Birk Creek Volcanic Unit. Based on the borehole Pulse EM survey it appears the anomaly is due to the argillite which is masking any response from the sulphide horizon.

Birk Creek Trend

The Lynx Showing is marked by a high chargeability and low apparent resistivity results, and VLF anomalies correlating with an graphitic argillite unit possibly up to ten metres thick. Massive pyrite lenses up to one metre thick occur interbedded with the argillite.

Narrow, but strong chargeability responses were detected one kilometre to the north centred on Lines 224+00N/392+00E and 222+00N/392+00E, corresponding with graphitic argillite outlined from mapping and drilling this year (drill hole BC90-04). Interestingly these are flanked to the southeast by an apparent resistivity high overlying outcropping quartz crystal tuff not noticeably different from other areas. A possible buried silicified zone or intrusive is proposed to explain the anomaly which could not be tested with drill hole BC90-04 since it was lost due to a cave-in.

Several weaker chargeability anomalies (<20 msec) again with a low apparent resistivity response are found centred about the CC Showing in the Birk Creek area. Falconbridge Limited's drill hole BC90-08 intersected graphitic argillite with minor disseminated sulphides, similar to previous drilling in the area by Cominco (1977) and Preussag (1982).

Further to the southwest three moderate chargeability anomalies (up to 20 msec) occur within a broader lower response coincident with an apparent resistivity low. This year's drilling over the most southerly peak, drill hole BC90-7, intersected pyritic and minor chalcopyrite, sphalerite and galena hosted by felsic volcanic rocks.

Epiclastic and Uke Trends

These trends were surveyed last year and are characterized by high chargeabilities and low apparent resistivities. To the east 1990 results indicate the Baldy Batholith is marked by a moderate apparent resistivity high.

There is a very strong IP response lying southeast of the Harper Creek Fault, dipping 30 to 40 degrees grid west parallel to stratigraphy. It appears to be a relatively deep source anomaly that is open to the north and south of the Falconbridge Limited claims. It may represent the offset extensions of the Epiclastic and Uke Trends.

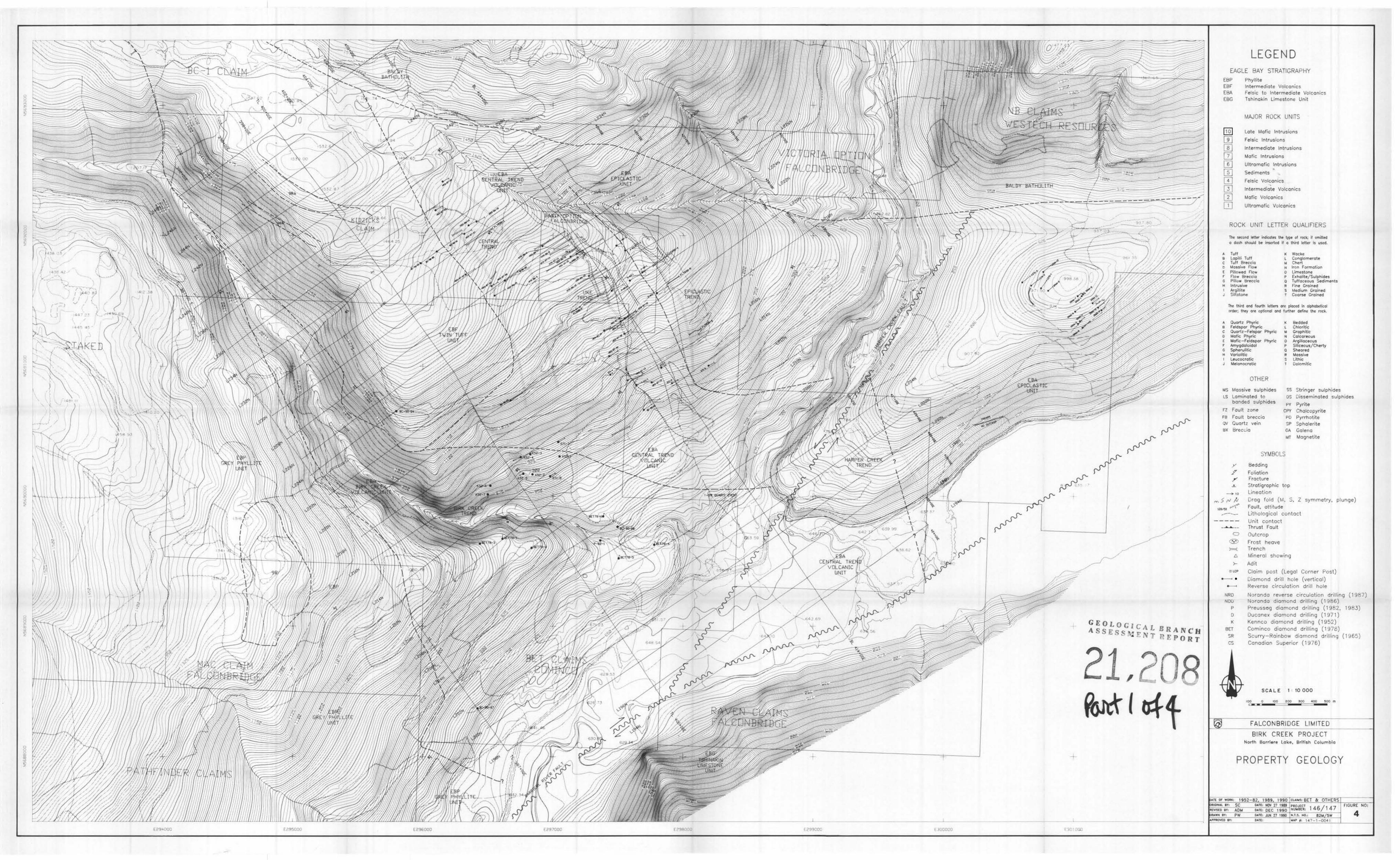
Other Areas

Overall the surveys correlate well with the known geology and especially the apparent resistivity. The volcanic rocks are commonly marked by an apparent resistivity high and moderate chargeability, while the sedimentary rocks, including the Grey Phyllite Unit respond with a pronounced chargeability high and apparent resistivity low. The magnetic data also corresponds well, although it is sensitive to local pyrrhotite rich areas in sedimentary rocks from the Epiclastic Unit. The lower magnetic response close to the Baldy Batholith is likely due to the increased overburden thickness. This is also occurring in the southern section of the property towards Barriere River.

Both the Birk Creek and the Harper Creek Faults show as pronounced magnetic lows. In the former, very weak and short strike length magnetic lows are present perpendicular to the main magnetic lineament. These may represent orthogonal structures related to the Birk Creek Fault.

REFERENCES

- Brandon, M.T., Cowan, D.S. and Vance, J.A. 1988: The Late Cretaceous San Juan Thrust System, San Juan Islands, Washington. The Geological Society of America, Special Paper 221, p. 25.
- Clemmer, S., 1989: Geological Report. Victoria Resources Option: Bluff 1, 2, 4 and Percy 1 Claims and Babiy/Rust Option: RUST 1, 2, 3, 4 Claims, Birk Creek Area, Kamloops Mining Division, NTS 82M/05W.
- Daley, F., 1983: Geological, geophysical and drilling report on the BET Mineral Claims, Kamloops Mining Division, for Cominco Limited.
- ----, 1983: Geological, geophysical and drilling report on the BLUFF 1 Claim Group. Preussag Canada Limited. Mineral Resources Branch Assessment Report 11033.
- Hendrickson, G. A., 1990: Geophysical Report. VLF, Magnetic and Induced Polarization Survey, Birk Creek Property, Barriere, B.C., Kamloops Mining District, 17p.
- Irvine, T. N. and Baragar, W. R. A., 1971: A Guide to the Chemical Classification of the Common Volcanic Rocks, Canadian Journal of Earth Sciences, v. 8, pp. 523-548.
- Price, B. J., 1971: Geological Report. Fennell-Schilling Property and Kern Property, North Barriere Lake, British Columbia, for Ducanex Resources Limited, 10p.
- Schiarizza, P. and Preto, V. A., 1987: Geology of the Adams Plateau Clearwater Vavenby Area, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1987-
- Scott, A., 1990: Logistical Report, Crone Borehole PEM Survey, Birk Creek Property, Barriere Area, British Columbia. Scott Geophysical report for Falconbridge Limited.
- Shevchenko, G., 1988: Summary report on the exploration conducted on the Birk Creek and South Property (Semco and Babiy/Rust Options), from 1985 to 1987 inclusive, Kamloops Mining Division. Noranda Exploration Company Limited.
- Wojdak, P. J., 1977: 1976 geological, geochemical and trenching report on BET 1 to 5 mineral claims. Mineral Resources Branch Assessment Report 6202.
- ----, 1978: Diamond drilling report on the BET Claims. Mineral Resources Branch Assessment Report 6879.



APPENDIX A:

FALCONBRIDGE 1990 SUMMARY AND DRILL LOGS
RELOGS OF COMINCO, DUCANEX AND PREUSSAG DRILLING

DRILL HOLE SUMMARY

DRILL HOLE:

BC-90-01

LOCATION:

Grid: 232+70N/404+40E

Azimuth: 055° Dip: -045° Elevation: 1405 metres

Claim: Bluff 1

DATE:

October 4-6, 1990

TOTAL DEPTH:

306.94m

OBJECTIVE:

Deep Test of Northern Central Trend below strongly sodium depleted fine grained felsic to intermediate volcanics containing weak polymetallic mineralization, previously encountered in Noranda Exploration drilling and trenching. Narrow massive sulphide horizons were located this year in Falconbridge Trench FLTR90-01.

RESULTS:

The volcanic stratigraphy becomes coarser grained including local tuff breccia units, and more felsic in composition downdip. Significant polymetallic mineralization occurs as bands, matrix filling and stringers rimming lithic fragments in a felsic breccia to ash tuff horizon between 133.18-144.94 Total sulphide content in this horizon averages 15% consisting of pyrite, 1-2% sphalerite, 0.5% galena and minor chalcopyrite. Semi-massive bands up to 0.68 metres with 10% polymetallic sulphides occur throughout the sequence. silicified moderately felsics are and The immediate footwall is moderately sericitized. chloritized for 5.0 metres while the hangingwall is moderately pyritic.

Massive polymetallic sulphide bands up to 0.88 metres thick, are also present in the underlying intermediate to felsic volcanics for approximately 100 metres. The host felsics are strongly pyritic and variably silicified and sericitized. The sulphide bands are accompanied by thin chloritic and silicified alteration zones.

The drill hole closed in biotite and chlorite hornfels felsic volcanics with weak pyrrhotite and pyrite.

INTERPRETATION:

The Lower Volcanic Unit underlying the Central Trend is becoming more felsic, thicker (?) and coarser grained with depth. This coupled with the greater variety of lithologic types in this drillhole suggests a much closer volcanic centre than previously recognized. The amount and style of sulphide mineralization are also indicative of more proximal sulphide venting. Source would be downdip or to the northwest.

DRILLHOLE SUMMARY BC-90-01

Interval (m)	Field Description
0.00-9.10	Overburden
9.10-14.35	Intermediate Ash Tuff -minor to 2% pyrite
14.35-20.65	Intermediate Lapilli Tuff -1% pyrite
20.65-30.30	Felsic Ash Tuff -1% pyrite
30.30-55.23	Felsic Dust Tuff -up to 10% pyrite increasing with depth
55.23-64.58	Felsic Ash Tuff -5% pyrite
64.58-67.05	Felsic Feldspar Crystal Lapilli Tuff -3% pyrite
67.05-73.91	Felsic Tuff Breccia -5% pyrite
73.91-90.75	Felsic Quartz Crystal Tuff -5% pyrite, fault lower 1.25m
90.75-94.62	Felsic Lapilli Tuff -cherty tuff fragments,10% pyrite
94.62-97.04	Hornfels Felsic Volcanic -spotted chlorite and biotite, 5% pyrite
97.04-103.25	Felsic Ash Tuff -up to 5% pyrite
103.25-110.00	Felsic Dust Tuff -7 % pyrite, lower contact faulted
110.00-126.07	Felsic Ash Tuff -local lapilli intervals,3-5% pyrite -fault between 122.01-122.28m
126.07-132.40	Felsic Tuff Breccia -sheared,5% pyrite
132.40-133.18	Felsic Ash Tuff -3% pyrite, minor sphalerite -silicified

Summary BC-90-01 Continued

Interval (m) Field Description

- 133.18-144.94 Felsic Tuff Breccia/Felsic Ash Tuff
 -sulphides as stringers to matrix filling and rimming fragments; typically 1-2% sphalerite,
 0.5% galena, minor chalcopyrite and 10% pyrite,
 intervals up to 0.68 m of massive sulphide,
 generally silicified, weakly calcareous and sericitic wallrock
- 144.94-145.80 Felsic Ash Tuff -5% pyrite, sheared
- 145.80-148.90 Felsic Ash Tuff

 -up to 5% pyrite with minor sphalerite,
 chalcopyrite and galena especially with quartz
 veins
- 148.90-163.57 Felsic Quartz Crystal Ash Tuff
 -5% pyrite, minor sphalerite, galena and chalcopyrite
- 163.57-186.31 Felsic Ash Tuff -1 to 5% pyrite
- 186.31-187.19 Massive Sulphide
 -60% pyrite, 5% sphalerite, 0.5% galena and
 minor chalcopyrite in choritic and sericitic
 altered volcanic wallrock
- 187.19-206.99 Intermediate Ash Tuff
 -up to 5% pyrite, 1% sphalerite in upper 0.8m
- 206.99-207.42 Massive Sulphide
 -70% pyrite, 10% sphalerite, 3% galena, 0.5%
 chalcopyrite, in chloritic and sericitic
 altered volcanic wallrock
- 207.42-221.35 Intermediate Ash Tuff
 -moderately chloritized decreasing with depth,
 3-5% pyrite,1% massive sulphide bands to 3cm
- 221.35-230.00 Felsic Ash Tuff
 -4 to 7% pyrite with local polymetallic massive sulphide bands typically to 2cm and rarely to 20cm
- 230.00-247.38 Intermediate Ash Tuff
 -5% pyrite with local polymetallic sulphide
 bands to 2cm

Summary BC-90-01 Continued

Interval (m) Field Description 247.38-253.20 Felsic Lapilli Tuff -10% pyrite with minor polymetallic massive sulphide bands and stringers to 2 cm rarely 19cm, lower contact faulted 253.20-264.34 Felsic Ash Tuff -3% pyrite 258.12-260.68 Mafic Intrusive 264.34-290.83 Hornfels Felsic Ash Tuff -spotted to banded chlorite and biotite hornfels, 3% pyrite with minor pyrrhotite 290.83-293.22 Hornfels Felsic Tuff Breccia -similar hornfels as above, 1% pyrite and pyrrhotite 293.22-306.94 Hornfels Felsic Ash Tuff -similar hornfels as above, 1-2% pyrrhotite and

1.5m with late quartz veins

END OF HOLE

306.94

pyrite, local bleached and silicified zones to

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-02

LOCATION : GRID : 227+90N, 407+25E

AZIMUTH: 55° DIP: 60° ELEVATION: 1302.0 metres

CLAIM NAME : BLUFF 1

DATE: OCTOBER 7-9, 1990

TOTAL DEPTH : 236.22 metres

OBJECTIVE: Test Central Trend felsic volcanics marked by a

broad high chargeability/low resisitivity response

and coincident Cu and 2n soil anomalies.

RESULTS :

Drill hole BC-90-2 collared in argillaceous felsic (dacitic) pyroclastics passing into nonargillaceous dacitic pyroclastics below 66.6 metres to 131.1 metres. The felsic sequence consists of fine to medium grained ash tuff, lapilli tuff and local cherty tuff. Contacts between units are moderate typically gradational. Weak ta sericitization is ubiquitous to this sequence with increasing biotite development (weak) below 55.0 metres to 131.1 metres. Splashes of disseminated and/or fracture controlled sphalerite and galena is common to a depth of approximately 75.0 metres. Variable, locally up to 10%, pyrite contents occur throughout the upper pyroclastic sequence.

The upper felsic sequence grades gradually, over several metres, into variable chlorite-biotite altered (hornfelsed) intermediate to felsic pyroclastics. Original rock type and textures are difficult to decipher with spotty, fracture controlled to pervasive chlorite hornfelsing persisting throughout the units to varying degrees. Pyrite contents are generally less than 2% with

local pyrrhotite mineralization.

INTERPRETATION :

the broad IP response correlates well to the upper mineralized argillaceous dacitic pyroclastics of the central trend felsic volcanics. Disseminated and thin bands of sphalerite-galena mineralization is typical of the felsic volcanics throughout this Central Trend.

Field Description

Field Description
0.00 - 16.20m : CASING
16.30 - 26.70m : ARGILLACEOUS FELSIC ASH TUFF
 trace to 0.5% sphalerite/galena, cherty
tuffite horizon (24.25-24.4m.) with 0.75%
sphalerite and galena.
26.70 - 36.60m : ARGILLACEOUS FELSIC LAPILLI-ASH TUFF
- trace to 0.5% galena and sphalerite
associated with quartz veins.
36.60 - 38.50m : FELSIC ASH TUFF
- trace to 1% fine disseminated pyrite
38.50 - 55.00m : ARGILLACEOUS FELSIC ASH TUFF
- trace to 0.5% sphalerite and galena between 41.5 to 53.6 metres
55.00 - 66.60m : ARGILLACEOUS FELSIC LAPILLI-ASH TUFF
- trace to 2% disseminated pyrite, local
pyritic stringers (61.0-66.6m) with trace to
0.5% sphalerite.
66.60 - 84.50m : FELSIC LAPILLI ASH TUFF
- trace to 2% disseminated pyrite, local
pyritic stringers to 75.5m with trace to 0.5%
sphalerite and galena.
84.50 - 87.50m : CHERTY FELSIC ASH TUFF
- 5% fracture controlled pyrite, trace to 0.2%
galena
87.50 - 97.60m : FELSIC LAPILLI ASH TUFF
 3% disseminated/fracture controlled pyrite
97.60 - 102.75m : CHLORITTIC FELSIC ASH TUFF
 3% disseminated/fracture controlled pyrite
102.75 - 110.30m : INTERMEDIATE ASH TUFF
- 3% disseminated/fracture controlled pyrite
110.30 - 112.10m : FINE GRAINED MAFIC INTRUSION
- magnetic
112.10 - 131.10m : FELSIC ASH TUFF
- 3% disseminated/fracture controlled pyrite 131.10 - 146.85m : HORNFELS FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
131.10 - 146.85m : HORNFELS FELDSPAR PHYRIC INTERMEDIATE ASH TOFF 146.85 - 152.55m : HORNFELS INTERMEDIATE ASH TUFF
152.55 - 157.30m : HORNFELS FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
157.30 - 160.63m : HORNFELS INTERMEDIATE ASH TUFF
160.63 - 163.90m : HORNFELS QUARTZ-FELDSPAR PHYRIC INTERMEDIATE
ASH TUFF
163.90 - 168.30m : HORNFELS INTERMEDIATE ASH TUFF
168.30 - 175.30m : HORNFELS INTERMEDIATE ASH TUFF
175.30 - 198.20m : HORNFELS QUARTZ-FELDSPAR PHYRIC FELSIC ASH
TUFF
198.20 - 214.90m : HORNFELS INTERMEDIATE ASH TUFF
214.90 - 225.90m : HORNFELS QUARTZ-FELDSPAR PHYRIC INTERMEDIATE
ASH TUFF
225.90 - 230.60m : FELSIC ASH TUFF
3% disseminated/fracture controlled pyrite
230.60 - 236.22m : HORNFELS INTERMEDIATE ASH TUFF
236.22 : E.O.H.

DRILL HOLE SUMMARY

DRILL HOLE: BC-90-03

LOCATION: Grid:220+05N/402+75E

Azimuth: 055° Dip: -055°

Claim: Bet 1 Elevation: 1175m

DATE: October 10-12, 1990

TOTAL DEPTH: 203.30m

OBJECTIVE: Test of southern extension of Central Trend volcanics with strong sodium depletion and

high Ishikawa Alteration Indices.

The drill hole intersected approximately 60 metres of felsic ash tuff with interbedded argillite up to 8.0 metres thick. Pyrite is present throughout the sequence, but rarely more than 3%. A narrow band of massive pyrite occurs between 20.10 and 20.29 metres accompanied by minor chalcopyrite, sphalerite and

pyrrhotite.

The ash tuff is underlain by a 60 metre thick sequence of coarser felsic fragmentals containing elongate chloritic lithic lapilli. At the top a coarse felsic breccia is present between 68.15 and 72.45m, containing strongly silicified angular felsic sub-intrusive (?) fragments that are rarely flow banded. Variably sericitic and chloritic altered felsic volcanic forms the matrix to the fragments. The breccia hosts polymetallic sulphide mineralization occurring as stringers, bands and along fractures averaging 4% sphalerite, 1% chalcopyrite, minor galena and bornite, and 7% pyrite with minor pyrrhotite. The footwall lapilli units are moderately pyritic with the occasional narrow stringer or band of massive sulphide, and are weakly chloritized and sericitized. The hangingwall finer grained ash tuff does not appear to especially altered although minor polymetallic mineralization is found near the base. Similar felsic intrusives generally strongly fractured or microfolded cut the volcanic sequence.

The coarse fragmentals grade into fine grained ash to dust tuff that is often argillaceous. Chert is locally present. Near the top a strongly silicified light coloured felsic intrusive is present with highly fractured margins. This intrusive is texturally similar to the breccia fragments hosting the mineralization at the top of the lapilli sequence, but contains only disseminated pyrite and trace galena. The fine grained volcanics are generally unaltered with minor pyrite. The drill hole closed in this sequence.

INTERPRETATION:

The drill hole intersected felsic volcanics similar to the northern half of the Central Trend, but with a more developed coarse fragmental section. Although less obviously altered than the volcanics to the north, this is the best poymetallic intersection yet drilled on the property. This horizon may correlate with that intersected in DDH BC-90-01.

DRILLHOLE SUMMARY

<pre>Interval (m)</pre>	Description	on .
0.00-6.71	Overburde	n
6.70-14.39	Felsic Asi -8.2	n Tuff 0-10.00 Mafic Intrusive
14.39-17.00	Interbedd	ed Argillite and Felsic Tuff
17.00-20.42	-2% -sem pyrrl	ystal Tuff pyrite i-massive pyrite with notite, minor chalcopyrite phalerite between 20.10 and
20.42-23.85	Argillace	ous Felsic Ash Tuff minor pyrite
23.85-38.89		pilli Tuff or pyrite
38.89-44.65		ystal Tuff lt 41.88-42.93m
44.65-52.83	Argillite -gray	phitic
52.83-68.15	sulp	n Tuff pyrite, rare 2cm massive nide band lt 56.20-57.00m
68.15-72.43	-poly and s along intro volcs -mode	eccia ymetallic sulphide bands stringers often rimming or g fractures of felsic usive ? fragments in anic matrix erately sericitized and ly chloritized
68.1	5-69.60	3% sph, 0.5% cpy, minor gl trace bornite, minor po
69.6	0-70.27	5% py 1% sph, 1% cpy, trace gl
70.2	7-72.43	7% py 7% sph, 2% cpy, trace gl trace bornite, 10% py

Summary BC-90-03 Continued

72.43-92.05	Felsic Lapilli Tuff -7% pyrite, minor chalcopyrite and sphalerite, moderately chloritized
92.05-94.42	Chert Tuff Breccia -4% pyrite, weakly sericitized and chloritized
94.42-99.45	Felsic Lapilli Tuff -5% pyrite, weakly sericitized and minor chlorite
99.45-102.90	Felsic Ash Tuff -6% pyrite, minor sphalerite and chalcopyrite
102.90-130.10	Felsic Lapilli Tuff -up to 5% pyrite, minor sphalerite and galena
130.10-138.60	Interbedded Cherty and Dust Tuff -6% pyrite, trace sphalerite and chalcopyrite
138.60-140.82	Felsic Intrusive -5% pyrite and trace galena -local hornfels including lower 0.50 m
140.82-151.57	Felsic Dust tuff -2% pyrite, minor sphalerite -hornfels upper 7.1m
151.27-157.30	Felsic Dust Tuff -1% pyrite, trace galena and sphalerite -moderately chloritized
157.30-166.40	Argillaceous Felsic Dust Tuff -1% pyrite
166.40-174.25	Felsic Ash Tuff -minor pyrite, rare 3cm massive sulphide band
174.25-183.43	Felsic Ash Tuff -less than 1% pyrite -moderately sericitized

summary BC-90-03 Continued

183.43-203.30 Felsic Ash Tuff
-less than 1% pyrite

203.30 END OF HOLE

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-4

LOCATION: GRID: 224+00N, 394+64E

AZIMUTH: 235° DIP: 64° ELEVATION: 1200.0 metres

CLAIM NAME : BET 2

DATE: OCTOBER 13-16, 1990

TOTAL DEPTH : 213.06 metres

OBJECTIVE: Test IP and VLF anomalies over felsic and

intermediate volcanics with downslope Cu and Zn

anomalies.

RESULTS :

Drill hole BC-90-4 collared into a series of variable feldspar/mafic phyric to aphyric intermediate lapilli and ash tuff, to a depth of 77.0 metres. Spotty, chloritic alteration ("hornfelsing") between 77.0 to 81.30 metres marks a downhole change to a dominately felsic pyroclastic succession beginning at 88.30 to 213.06 metres. This thick felsic pyroclastic sequence is only locally interupted by thick bedded, variably graphitic argillite/siltstone horizons between 88.20-98.80m and 199.15-213.06m.

Visible alteration is confined to weak sericite and/or chlorite/carbonate alteration. Sulphide mineralization is sparse with overall pyrite contents generally less than 5% pyrite. Evidence of fining upwards sequences (lapilli to ash tuff) suggests tops are uphole (southwest).

INTERPRETATION :

The sharp IP anomaly is presumably correlative to graphitic argillite between 88.2 and 98.8 metres. A broad VLF response, located downslope, was projected to occur between downhole depths of 140.0 to 235.0 metres. Graphitic argillites located between 199.15 and 213.06 (E.O.H) are interpreted to correspond to the VLF anomaly.

BC-90-4 SUMMARY LOG

0.00 - 15.84m : CASING 15.85 - 22.25m : FELDSPAR-MAFIC PHYRIC INTERMEDIATE LAPILLI-ASH
TUFF -up to 5%, 1-7mm chlorite altered mafic (hornblende) phenocrysts.
22.25 - 24.40m : FELDSPAR PHYRIC INTERMEDIATE LAPILLI-ASH TUFF
24.40 - 27.25m : FELDSPAR-MAFIC PHYRIC INTERMEDIATE LAPILLI-ASH
TUFF
-similar to previous from 15.85 to 22.25m
27.25 - 29.70m : QUARTZ-FELDSPAR PHYRIC FELSIC ASH TUFF
29.70 - 30.65m : FAULT ZONE
30.65 - 41.00m : FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
41.00 - 59.00m : FELDSPAR PHYRIC INTERMEDIATE LAPILLI ASH TUFF 59.00 - 61.40m : PYRRHOTITE-BEARING FELDSPAR PHYRIC INTERMEDIATE
LAPILLI-ASH TUFF
- up to 7%, less than 1cm, disseminated wisps
of pyrrhotite/biotite, trace to 2% pyrite
61.40 - 62.55m : FELDSPAR PHYRIC INTERMEDIATE LAPILLI-ASH TUFF
62.55 - 68.20m : PYRRHOTITE-BEARING FELDSPAR PHYRIC INTERMEDIATE
LAPILLI-ASH TUFF
- similar to previous from 59.0 to 61.4 metres
68.20 - 77.00m : FELDSPAR PHYRIC INTERMEDIATE LAPILLI-ASH TUFF
77.00 - 81.30m : SPOTTY-HORNFELSED INTERMEDIATE/FELSIC ASH TUFF
- spotty chlorite alteration, fracture-
controlled (quartz veined) arsenopyrite (8%)
from 77.0-77.1 metres
81.30 - 88.20m : QUARTZ-FELDSPAR PHYRIC FELSIC ASH TUFF
<pre>- trace to 2% disseminated pyrite 88.20 - 89.20m : GRAPHITIC ARGILLITE</pre>
- graphite on fractures
89.20 - 91.50m : ARGILLACEOUS FELSIC ASH TUFF
- intercalated argillaceous sediment and
argillite fragments
91.50 - 98.80m : GRAPHITIC ARGILLITE
 thick beddded, graphitic
98.80 - 101.80m : ARGILLACEOUS FELSIC ASH TUFF
 interbedded graphitic argillite horizons
101.80 - 115.25m : QUARTZ PHYRIC FELSIC ASH TUFF
- thin chert bands between 102.7-103.65m
115.25 - 119.77m : FELSIC ASH TUFF
<pre>- weakly sericitic, 2-3% disseminated pyrite 119.77 - 124.30m : FELDSPAR PHYRIC FELSIC ASH TUFF</pre>
- weakly sericitic
124.30 - 128.70m : FELSIC ASH TUFF
- weakly sericitic, chlorite rimmed calcareous
spots
128.70 - 130.70m : FELSIC LAPILLI ASH TUFF
-weakly sericitic

130.70 - 139.40m : FELDSPAR PHYRIC FELSIC ASH TUFF -weakly chloritic, chlorite rimmed calcareous alteration spots 139.40 - 150.10m : FELSIC LAPILLI ASH TUFF -weakly chloritic/sericitic 150.10 - 151.50m : FELDSPAR PHYRIC FELSIC ASH TUFF -weakly chloritic, chlorite rimmed calcareous alteration spots 151.50 - 163.30m : FELSIC LAPILLI ASH TUFF - weakly sericitic 163.30 - 166.05m : FELSIC ASH TUFF -weakly sericitic 166.05 - 168.95m : FELSIC LAPILLI ASH TUFF -weakly sericitic 168.95 - 172.90m : FELSIC ASH TUFF -weakly chloritic/sericitic, chlorite rimmed calcareous alteration spots 172.90 - 175.60m : FELSIC LAPILLI ASH TUFF weakly chloritic/sericitic 175.60 - 199.15m : FELSIC ASH TUFF -local, spotty chlorite alteration 199.15 - 200.35m : GRAPHITIC ARGILLITE -thick bedded, graphitic 200.35 - 204.85m : ARGILLACEOUS FELSIC ASH TUFF -trace disseminated sphalerite at 203.90m 204.85 - 206.35m : FELDSPAR PHYRIC FELSIC ASH TUFF 206.35 - 211.60m : ARGILLITE/SILTSTONE -intercalated to finely interbedded, weakly graphitic 211.60 - 213.06m : ARGILLITE

-graphitic, finely interbedded siltstone

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-05

LOCATION: GRID: 232+70N, 402+90E

AZIMUTH: 55° DIP: 65° ELEVATION: 1413 metres

CLAIM NAME : Bluff 1

DATE: OCTOBER 16-21 , 1990

TOTAL DEPTH: 422.76 metres

OBJECTIVE: Two hundred metre downdip test of the

mineralized horizon intersected in BC-90-01 (133.00-145.00m) projected to occur between 200 to

230.0 metres downhole.

RESULTS :

Drill hole BC-90-05 intersected a similar volcanic sequence to that encountered in BC-90-01, however, comparable polymetallic mineralization was not repeated. Correlation between the two drill holes suggests a gently dipping (30 degrees) stratigraphy to the southwest. Pyritic felsic lapilli tuff with interbedded felsic ash units between 203.0-224.64 metres are interpreted to be analogous to the upper mineralized zone (133.0-145.0m) intersected in drill hole BC-90-01.

Weak spotty to pervasive chlorite, biotite, pyrrhotite and/or carbonate alteration (hornfels) occurs through many of the units becoming more intense below 335.0 metres. Effects of this alteration obscured many of the rock textures.

INTERPRETATION :

: A downdip extension of the mineralized horizon intersected in drill hole BC-90-01 is not repeated in drillhole BC-90-05. Massive sulphide mineralization encountered in BC-90-01 may be plunging more to the west (>250 degrees) with only flanking pyritic mineralization encountered in BC-90-50. A possible extension of the mineralization is marked by a pyritic felsic lapilli tuff (203.55-224.64m), but the lithogeochemistry is not supportive.

BC-90-05 SUMMARY LOG

Field Description

				OI OTHA
		3.66		
3.66	_	14.60	:	FELSIC ASH TUFF -local chlorite spots (hornfelsing), trace to
				2% pyrite, trace to 0.5% sphalerite/galena
				between 6.7-7.1 metres
14.60	_	20.06	:	INTERMEDIATE ASH TUFF
				-3-4% pyrite, weakly biotitic
20.06	-	29.10	:	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
				-1-2% pyrite
29.10	-	36.60	:	INTERMEDIATE ASH TUFF
				-weakly hornfelsed (chlorite rimmed carbonate
				spots), local thin cherty tuff horizons, 2%
				pyrite
36.60	-	40.98	:	FELSIC ASH TUFF
				-occasional felsic lapilli, trace to 1% pyrite
40.98	-	60.90	:	INTERMEDIATE ASH TUFF
				-occasional to 7% (locally) lithic fragments,
				weak biotite development, weakly chlorite-
				biotite rimmed calcareous spots below 50.0
				metres
60.90	-	67.10	:	INTERMEDIATE LAPILLI TUFF
				-up to 15% felsic/intermediate lapilli
				fragments, trace to 1% pyrite, weakly
				biotitic, calcareous spots
67.10	_	90.20	:	HORNFELS INTERMEDIATE/FELSIC ASH TUFF
				-chlorite/biotite/calcareous spots (moderate
				to strong hornfelsing), 2% pyrite/pyrrhotite
90.20	_	95.45	;	QUARTZ PHYRIC FELSIC ASH TUFF
				-thin cherty tuffite horizons between 91.5-
				92.10 metres, 7-10% pyrite
95.45	_	99.54	:	QUARTZ PHYRIC FELSIC LAPILLI ASH TUFF
				-sericitic, 3-5% pyrite
99.54	_	101.50	:	QUARTZ PHYRIC FELSIC ASH TUFF
				-sericitic, 3-4% pyrite
101.50	_	117,20	:	QUARTZ PHYRIC FELSIC LAPILLI ASH TUFF
				-up to 7% felsic lapilli fragments, 2-3%
				pyrite, 3-7% calcareous spots below 106.50m.
117.20	_	120.50	:	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
11			٠	-trace to 2% pyrite
120.50	_	125.60	•	HORNFELS INTERMEDIATE/FELSIC ASH TUFF
120.50		123.00	•	-moderate spotty chlorite locally with
				biotite, trace to 3% pyrite/pyrrhotite
125 60	_	156 25		FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
125.00		130.23	•	-weak biotite development and calcareous spots
				locally rimmed by biotite, trace to 1% pyrite,
				thin tuffite horizons between 128.0-133.0
				metres
156 25	_	158 70		QUARTZ VEIN
150.25	_	130.70	•	XOUIVED ANTH

158.70 - 162.55 : HORNFELS FELSIC LAPILLI TUFF -up to 30% chlorite spots to calcareous spots rimmed by chlorite 162.55 - 166.05 : FELSIC ASH TUFF -up to 10% calcareous spot rimmed by chlorite and biotite rimmed towards the lower contact, 1-2% pyrite 166.05 - 166.90 : INTERMEDIATE ASH TUFF -weak biotite development, up to 2% pyrite 166.90 - 173.40 : FELSIC ASH TUFF -up to 7% calcareous spots locally rimmed by biotite, trace to 35 pyrite 173.40 - 175.80 : HORNFELS FELSIC ASH TUFF -moderate spotty chlorite, 2% pyrite 175.80 - 191.10 : FELSIC ASH TUFF -calcareous spots (weak to moderate) locally rimmed by chlorite, 3-5% pyrite 191.10 - 203.55 : FELSIC ASH TUFF -occasional, <lcm felsic fragments, 4-7%</pre> pyrite 203.55 - 224.64 : FELSIC LAPILLI ASH TUFF -up to 7% felsic fragments, discontinuous banded appearance, local thin fine grained ash intervals, up to 7% pyrite 224.64 - 242.75 : FELSIC TUFFACEOUS SEDIMENT -weakly argillaceous, occasional (locally to 7%) felsic fragments, 5-10% pyrite 242.75 - 243.75 : HORNFELS FELSIC LAPILLI ASH TUFF -up to 20% chlorite and chlorite rimmed calcareous spots, 2-3% pyrite 243.75 - 244.80 : FELSIC ASH TUFF -occasional felsic fragments, 2-3% pyrite 244.80 - 246.85 : FELSIC TUFACEOUS SEDIMENT -weakly argillaceous (muddy-brown), siliceous felsic fragments, 3-4% pyrite 246.85 - 261.50 : FELSIC ASH TUFF 2-3% -choritic, weak biotite development, pyrite with local <0.5cm pyrite cubes 261.50 - 275.72 : FELSIC LAPILLI ASH TUFF -weak pervasive biotite, 2-4% pyrite 275.72 - 280.00 : INTERMEDIATE ASH TUFF -up to 12% calcareous spots, trace to 1% pyrite 280.00 - 284.00 : HORNFELS INTERMEDIATE LAPILLI ASH TUFF -moderate spotty chlorite, 2% pyrite 284.00 - 286.25 : INTERMEDIATE ASH TUFF -chloritic, trace pyrite 286.25 - 293.70 : HORNFELS FELSIC LAPILLI ASH TUFF -up to 15% felsic fragments, chlorite spots and up to 7% calcareous spots 293.70 - 304.40 : FELSIC LAPILLI TUFF -up to 10% felsic fragments, local spotty

chlorite, 2% pyrite

304.40 - 335.70 : FELSIC LAPILLI/ASH TUFF -up to 15% felsic fragments with local finer grained sections, 2-4% pyrite 335.70 - 350.30 : HORNFELS FELSIC LAPILLI ASH TUFF -moderate spotty to pervasive chlorite, up to 1% pyrite 350.30 - 375.20 : HORNFELS INTERMEDIATE/FELSIC TUFFACEOUS SEDIMENT -local spotty chlorite and chlorite rimmed calcareous spots (weak), vaguely outlined lithic fragments, trace to 1% pyrite, strongly quartz veined below 370.8 metres 375.20 - 380.20 : FELSIC TUFFACEOUS SEDIMENT -coarsening downhole with up to 15% cherty felsic fragments below 378.9 metres, 2% pyrite 380.20 - 389.50 : INTERMEDIATE ASH TUFF -chloritic with <0.75cm chlorite wisps, 1% pyrite 389.50 - 414.00 : INTERMEDIATE LAPILLI ASH TUFF -chloritic, similar to previous with up to 7% intermediate fragments, up to 10%, <1.0cm chlorite wisps, trace to 1% pyrite/pyrrhotite 414.00 - 416.30 : INTERMEDIATE INTRUSION -massive, fine grained, fine pervasive-spotty chlorite, weakly magnetic, sharp contacts, possible hornfelsed felsic intrusion(?) 416.30 - 422.76 : HORNFELS INTERMEDIATE LAPILLI ASH TUFF -up to 10% intermediate/felsic fragments, chloritic with up to 6%, <0.75cm chlorite

wisps, trace to 1% pyrite

422.76: E.O.H.

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-06

GRID: 213+70N, 410+75E LOCATION :

AZIMUTH : 55° DIP : 65° **ELEVATION**: 902.0 metres

CLAIM NAME : Bluff 1

OCTOBER 22-25, 1990 DATE :

TOTAL DEPTH: 345.05 metres

Test IP anomaly with coincident copper and zinc soil anomalies representing the southern OBJECTIVE :

extension of the Uke and Epiclastic Trends.

Drill hole BC-90-06 intersected a 60 metre RESULTS: thick sequence of chloritized felsic tuff followed

a thick section of argillite and lessor interbedded argillaceous intermediate tuff. These sediments are typically pyrite and pyrrhotite bearing with graphite along fractures. Intermediate ash tuff underlies the sediments which in turn are underlain by intermediate and felsic tuffaceous sediments. Thin felsic dykes, likely related to

the Baldy Batholith, are common especially near the

top of the tuffaceous sediment sequence.

Graphitic and iron sulphide bearing sediments INTERPRETATION:

are the main source of the IP anomaly. however, only sporadic copper and zinc

mineralization present in the hole; thus the soil anomaly appears to represents downslope movement

from another source.

BC-90-06 SUMMARY LOG

Field Description

0.00 - 5.00 :	CASING
3.66 - 63.20 :	
3.00	-chloritic, local trace to 0.5% sphalerite-
	galena and pyrite between 43.4 to 62.7 metres
63.20 - 73.40 :	INTERMEDIATE ASH TUFF
	-fine grained, chloritic, trace pyrite
73.40 - 90.20 :	GRAPHITIC ARGILLITE
	-intercalated to interlaminated argillite and
	silt, graphite developed on fractures, 2%
90.20 - 96.15 :	pyrite and pyrrhotite aggregates (cubes)
90.20 - 96.15 :	-weakly argillaceous; light brown, hard
	mineral (sphalerite ?) associated with
	intensely quartz vein sections.
96.15 - 158.40 :	GRAPHITIC ARGILLITE
	-similar to previous from 73.40-90.20 metres
158.40 - 163.95 :	ARGILLACEOUS FELSIC TUFF
	-weakly argillaceous increasing near lower
	contact, up to 7% elongated siliceous felsic
	fragments, 1-2% pyrite and/or pyrrhotite
162.05 172.20 4	aggregates (cubes).
163.95 - 1/3.30 :	GRAPHITIC ARGILLITE -similar to previous from 73.40-90.20 metres,
	1-3% pyrite/pyrrhotite aggregates (cubes)
173.30 - 179.10 :	ARGILLACEOUS INTERMEDIATE LAPILLI ASH TUFF
1,3.10	-weakly argillaceous increasing near lower
	contact, up to 12% elongated siliceous felsic
	fragments, 3-4% pyrrhotite/pyrite, trace
	chalcopyrite at 175.4 metres
179.10 - 195.58 :	INTERMEDIATE ASH TUFF
	-chloritic, thin (<3mm) chloritic stringers,
	trace to 0.5% chalcopyrite between 180.0-187.0
105 50 - 206 25 •	metres INTERMEDIATE LAPILLI ASH TUFF
195.58 - 206.25 :	-up to 10% elongated siliceous felsic
	fragments decreasing downhole, 2%
	pyrite/pyrrhotite
206.25 - 217.80 :	ARGILLACEOUS INTERMEDIATE ASH TUFF
	-2-3% pyrite/pyrrhotite, trace to 0.5%
	chalcopyrite between 207.1-212.4 metres
217.80 - 221.30 :	
	INTERMEDIATE ASH TUFF
	-fine grained, poorly foliated (intrusion ?)
221.30 - 230.85 :	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF
221.30 - 230.85 :	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic
	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic fragments, trace to 1% pyrite
	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic fragments, trace to 1% pyrite ARGILLACEOUS INTERMEDIATE ASH TUFF
	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic fragments, trace to 1% pyrite ARGILLACEOUS INTERMEDIATE ASH TUFF -weakly argillaceous, local pyritic stringers
230.85 - 245.75 :	-fine grained, poorly foliated (intrusion ?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic fragments, trace to 1% pyrite ARGILLACEOUS INTERMEDIATE ASH TUFF
230.85 - 245.75 :	-fine grained, poorly foliated (intrusion?) INTERMEDIATE LAPILLI ASH TUFF -up to 10% elongated siliceous felsic fragments, trace to 1% pyrite ARGILLACEOUS INTERMEDIATE ASH TUFF -weakly argillaceous, local pyritic stringers at 232.6m,238.3m, and between 243.60-245.75m

246.35 - 255.60 : ARGILLACEOUS INTERMEDIATE ASH TUFF -weakly argillaceous, 2-3% pyrite/pyrrhotite with up to 20% pyritic zones between 249.9-250.15m and 250.7-250.85m. 255.60 - 256.40 : FAULT ZONE 256.40 - 272.35 : INTERMEDIATE TUFFACEOUS SEDIMENT -weakly argillaceous, intermediate to felsic fragments decreasing downhole, 3-4% pyrite/pyrrhotite with up to 10% pyrite between 260.4-265.40 metres 272.35 - 274.05 : FELDSPAR PHYRIC FELSIC INTRUSION non-foliated,30% -massive, subrounded feldspars 274.05 - 275.85 : INTERMEDIATE ASH TUFF -trace to 2% pyrite 275.85 - 277.30 : FELDSPAR PHYRIC FELSIC INTRUSION -similar to previous from 272.35-274.05 metres 277.30 - 280.68 : INTERMEDIATE ASH TUFF -trace to 2% pyrite, weak hornfelsing (calcareous spots) below 377.80 metres 280.68 - 282.50 : FELDSPAR PHYRIC FELSIC INTRUSION -massive, non-foliated, 10% mottled feldspars 282.50 - 289.75 : INTERMEDIATE VOLCANIC WACKE intercalated -12% lithic fragments, argillaceous component, 2% pyrite/pyrrhotite aggregates (cubes) 289.75 - 294.20 : FELDSPAR PHYRIC FELSIC INTRUSION -massive, non-foliated, 15% mottled feldspars 294.20 - 295.19 : INTERMEDIATE TUFFACEOUS SEDIMENT -weak pervasive biotite development, trace to 2% pyrite/pyrrhotite 295.19 - 296.18 : FELDSPAR PHYRIC FELSIC INTRUSION -similar to previous from 289.75-294.20 metres 296.18 - 322.15 : INTERMEDIATE TUFACEOUS SEDIMENT -variable argillaceous component, up to 7% 2% lithic fragments, pyrite/pyrrhotite 322.15 - 327.90 : FELSIC TUFFACEOUS SEDIMENT -5% subrounded lithic fragments locally to 10%, trace to 3% pyrite/pyrrhotite, traces fushite 327.90 - 334.20 : INTERMEDIATE TUFFACEOUS SEDIMENT -locally argillaceous, 3-4% pyrite 334.20 - 335.55 : FELSIC TUFFACEOUS SEDIMENT chloritic, up to 10% siliceous -weakly fragments 335.55 - 336.85 : INTERMEDIATE TUFFACEOUS SEDIMENT -trace pyrite, weak biotite development below 336.0 metres 336.85 - 342.00 : FINE GRAINED MAFIC INTRUSION -poorly foliated to massive 342.00 - 345.05 : INTERMEDIATE TUFFACEOUS SEDIMENT -similar to above metres, weak hornfels 345.05: E.O.H.

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-07

LOCATION: GRID: 201+82N, 387+00E

AZIMUTH: 000° DIP: 90°

ELEVATION: 725.0 metres

CLAIM NAME : BET 5

DATE: OCTOBER 25-28, 1990

TOTAL DEPTH: 349.61 metres

OBJECTIVE: 1. Test southwest extension of Birk Creek zone coincident with IP anomaly and Cu-Zn anomaly.

2. Test interpreted northeast dipping thrust fault (Birk Creek Fault) thrusting v o l c a n i c stratigraphy (EBA) over grey phyllite (EBP).

RESULTS :

The drill hole collared into a series of felsic ash tuffs with local lapilli horizons. Occasional thin argillaceous felsic tuff horizons are present. A 0.20 metre thick massive pyrite band occurs between 247.98 to 248.18 metres hosted by felsic ash tuff. Two narrow chert breccia units up to 2.65m in apparent thickness are present containing up to minor chalcopyrite and galena; occurring as disseminations or along fractures. Generally, however, the volcanics are weakly pyritic with only trace chalcopyrite and galena.

The underlying phyllite unit EBP was not intersected indicating the interpreted east dipping thrust fault must be steeper than 50°.

BC-90-7 SUMMARY LOG

Field Description

0.00 - 12.80m : CASING
12.80 - 69.70m : QUARTZ PHYRIC FELSIC ASH TUFF
- 5 - 7% quartz eyes to 2mm
- up to 4% disseminated and fractured
controlled pyrite
- 67.60 - 69.70m: fault zone
- up to 2% disseminated pyrite
69.70 - 73.76m : QUARTZ FELDSPAR PHYRIC FELSIC ASH TUFF - up to 4% feldspar phenocrysts to 1mm
- up to 1% fine disseminated/fracture
controlled pyrite
73.76 - 78.70m : QUARTZ FELDSPAR PHYRIC FELSIC ASH TUFF
 up to 3% disseminated/fracture
controlled/pyrite
78.70 - 82.69m : FELSIC LAPILLI TUFF
up to 10% lapilli to 1cmup to 3% disseminated/fracture controlled
pyrite controlled
82.69 - 87.20m : QUARTZ PHYRIC FELSIC ASH TUFF
- up to 2% disseminated/fracture controlled
pyrite
- 83.23 - 83.62m: felsic lapilli tuff as above
87.20 - 93.57m : QUARTZ FELDSPAR PHYRIC FELSIC ASH TUFF
5% quartz eyes to 2mmup to 3% disseminated/fracture controlled
pyrite controlled
93.57 - 134.70m : QUARTZ PHYRIC FELSIC ASH TUFF
- 2 to 3% disseminated/fracture controlled
pyrite with 5 to 10% locally
- 93.57 - 97.13m: fault zone
- 131.15 - 134.70m: fault zone
<pre>- 1 to 2% disseminated pyrite 134.70 - 137.40m : QUARTZ PHYRIC FELSIC ASH TUFF</pre>
- 2% disseminated/fracture controlled pyrite
- 136.94 - 137.40m : fault zone
137.40 - 146.93m : QUARTZ PHYRIC FELSIC ASH TUFF
- 5 to 10% disseminated/fracture controlled
pyrite, minor chalcopyrite, trace galena
- 145.90 - 146.93m: fault zone
- 5 to 10% disseminated pyrite 146.93 - 156.77m : ARGILLACEOUS FELSIC LAPILLI TUFF
- up to 10% siliceous lapilli to 6cm
- finely laminated/banded black argillaceous
material within the matrix
 up to 10% disseminated/fracture controlled
pyrite locally, minor chalcopyrite and galena

156.77 - 157.55m : CHERT BRECCIA - 10 to 15% semi-massive pyrite locally - up to 1% chalcopyrite, minor galena 157.55 - 159.00m : ARGILLACEOUS FELSIC LAPILLI TUFF - as above 159.00 - 178.10m : QUARTZ PHYRIC FELSIC ASH TUFF - up to 5% disseminated/fracture controlled pyrite with up to 0.5% chalcopyrite over narrow intervals, trace galena - 177.30 - 178.10m: quartz vein with 1% pyrite 178.10 - 182.25m : FELSIC LAPILLI TUFF - 2 to 5% disseminate/fracture controlled pyrite 182.25 - 211.00m : QUARTZ PHYRIC FELSIC ASH TUFF - up to 5% quartz eyes to 2mm - up to 1% disseminated pyrite - 189.35m: 2cm band of semi-massive pyrite with 0.5% chalcopyrite, minor galena 211.00 - 217.90m : FELSIC LAPILLI TUFF - 15% lapilli - up to 2% disseminated pyrite 217.90 - 236.36m : QUARTZ PHYRIC FELSIC ASH TUFF - up to 2-5% disseminated/fracture controlled pyrite, minor galena - 217.90 - 218.67m: fault zone up to 2% disseminated pyrite 236.36 - 240.00m : CHERT BRECCIA - up to 10% semi-massive pyrite locally, minor chalcopyrite and galena 240.00 - 273.65m : ARGILLACEOUS FELSIC ASH TUFF - weakly laminated argillaceous material - up to 1% disseminated/fracture controlled pyrite -247.98-248.18m: massive pyrite - 248.38 - 248.92m: fault zone 273.65 - 304.15m : ARGILLACEOUS FELSIC ASH TUFF argillaceous finely laminated black material - up to 3% disseminated/fracture controlled pyrite - 274.65 - 276.15m: quartz vein, trace galena 304.15 - 310.94m : QUARTZ PHYRIC FELSIC ASH TUFF - up to 10% quartz eyes to 2mm - up to 2% disseminated pyrite, trace chalcopyrite

310.94 - 313.47m : FELSIC LAPILLI TUFF

- up to 10% strongly siliceous lapilli to 5cm

- 1% disseminated pyrite

313.47 - 324.80m : FELSIC ASH TUFF

 up to 2% disseminated/fracture controlled pyrite, decreasing towards bottom of hole

pyrice, decreasing towards poccom or in

- 2% quartz veins with 1-2% pyrite

324.80 - 328.92m : FELSIC LAPILLI TUFF

- up to 10% strongly siliceous lapilli

- up to 2% disseminated/fracture controlled

pyrite

328.92 - 349.61m : FELSIC ASH TUFF

- up to 5% intervals to 25cm of lapilli tuff

with up to 15% strongly siliceous lapilli to

3cm

349.61m : E.O.H

DRILL HOLE SUMMARY

DRILL HOLE : BC-90-08

LOCATION : GRID : 207+07N, 404+40E

AZIMUTH: 55° DIP: 65°

ELEVATION: 748.0 m. CLAIM NAME: Bet 3

DATE: OCTOBER 28-31, 1990

TOTAL DEPTH: 300.84 metres

OBJECTIVE: Test IP anomaly occuring across felsic volcanics

which host the "CC" showing.

RESULTS :

The upper section of BC-90-08 intersected a sequence of variably sericitic and weakly pyritic intermediate and felsic ash tuffs from the collar to 94.20 metres. Three intervals up to 6.0 metres wide are present, containing minor disseminated to irregular mm size bands of sphalerite with trace chalcopyrite and galena along foliation and fractures planes. This sequence is underlain by graphitic argillite from 94.20 to 99.45 metres.

A thick, monotonous sequence of weakly sericitic felsic and intermediate ash tuffs follow to a depth of 255.85 metres. Gradational contacts, trace to 3% pyrite, and weak carbonate alteration are a common feature to these units. Breaks in the pyroclastic deposition is marked by siliceous-cherty fragments over 10 cm.(131.20m) and a thin graphitic argillite horizon (175.83-176.68m). A quartz-feldspar phyric felsic dyke cuts the lower pyroclastic section, parallel to foliation, at 179.35-182.93 metres.

The remaining stratigraphy, 255.85 to 300.84 metres, is comprised of variably sheared, massive to finely laminated, graphitic argillite and lesser interbedded argillaceous felsic ash horizons. Trace to 3% disseminated pyrite and pyrite aggregates (cubes) are common.

INTERPRETATION #

cu-Pb-Zn mineralization is confined to the upper pyroclastic sequence, corresponding to the CC Showing, although a specific horizon is not discernable. The IP anomaly correlates with the mineralized interval and the underlying graphitic argillite unit. Similarly, graphitic argillite at 175.83-176.68m may have contributed to the anomaly. However, those below 255.85 metres presumably lie below the geophysical detection limit of 150 metres.

BC-90-08 SUMMARY LOG

Field Description

	9.14		
9.14 -	12.55	:	FELSIC ASH TUFF
			-broken, blocky core
12.55 -	17.00	:	FELSIC ASH TUFF
			-Light green-grey, chloritic, broken, blocky
			sections: brecciated appearance -
			"cataclastic"
17.00 -	22.47	:	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
			-trace to 2% pyrite
22.47 -	23.62	:	MEDIUM GRAINED FELSIC INTRUSION
			-massive, non-foliated
23.62 -	34.15	:	INTERMEDIATE ASH TUFF
			-trace to 3% pyrite, traces chalcopyrite
34.15 -	53.22	:	FELSIC ASH TUFF
			-sericitic, local pyrite stringers with trace
			to 0.5% sphalerite between 41.4-47.4 metres.
53.22 -	61.20	:	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF
			-sericitic/chloritic, local pyritic stringers
			with traces chalcopyrite
61.20 -	72.32	:	FELSIC ASH TUFF
			-sericitic, pyritic stringers with traces
70.00	00.46		sphalerite/chalcopyrite below 66.0 metres ARGILLACEOUS FELSIC TUFFACEOUS SEDIMENT
/3.32 -	80.46	·	-siliceous-cherty fragments (locally pyritic),
			up to 5% dissemnated pyrite
00 46 -	04 30		FELSIC ASH TUFF
80.46 -	94.20	•	-up to 5% pyrite, traces sphalerite/galena
			over the first 3.0 metres
04.30 -	00.45		GRAPHITIC ARGILLITE
94.20 -	39.43	•	-black-grey, finely laminated to massive
00 45 -	100 45		ARGILLACEOUS FELSIC ASH TUFF
99.45 -	100.45	•	-2% pyrite
100 45	114 05		FELSIC LAPILLI ASH TUFF
100.45 -	114.90	•	-3-7% felsic fragments, local finer grained
			sections, 1-3% pyrite
11/ 95 -	131 20		FELSIC ASH TUFF
114.55	154.20	٠	-trace to 1% pyrite, brecciated-siliceous
			fragments mark lower contact
131 20 -	175.83		INTERMEDIATE ASH TUFF
131.20	1.3.03	•	-1% pyrite; local up to 80 cm strongly
			carbonate altered zones
175.83 -	176.68	•	GRAPHITIC ARGILLITE
1.5.05	2.2722	•	-black, massive to interlaminated/interbedded
			silt
176.68 -	179.35	:	FELSIC ASH TUFF
1,0.00	1,2,30	٠	-trace to 1% pyrite
179.35 -	182.93	:	QUARTZ-FELDSPAR PORPYHRITIC FELSIC INTRUSION
		•	-massive, non-foliated
182.93 -	216.30	:	FELSIC ASH TUFF
		-	-traces pyrite
			· · · F 2

216.30 - 246.00 : FELSIC ASH TUFF -2-4% pyrite 246.00 - 255.85 : ARGILLACEOUS FELSIC ASH TUFF -increasing argillaceous component downhole 255.85 - 263.06 : GRAPHITIC ARGILLITE -black, finely laminated; 3% pyrite 263.06 - 267.16 : ARGILLACEOUS FELSIC ASH TUFF trace to 1% pyrite, poorly foliated "cataclastic- fragmental" texture 267.16 - 277.22 : GRAPHITIC ARGILLITE -massive, numerous broken-blocky highly fractured sections, 2-3% pyrite 277.22 - 293.50 : ARGILLACEOUS FELDSPAR PHYRIC FELSIC ASH TUFF -2-38 pyrite, variable - up to 20% argillaceous component, rare siliceous cherty fragments 293.50 - 300.84 : GRAPHITIC ARGILLITE -black, massive, broken-blocky highly fractured core

E.O.H.

300.84 :

FALCOMBRIDGE LTO DIAMOND ORILL LOG Property : BIRK CREEK (1990)

Hote # : BC-90-01 Township: KAMLOOPS Lot : Ri Level : SURFACE Collar coordinate Reference frame :	nge: Claim # :BLUFF 1 Section: 232+70N Loca	: BURNASH ENTERPRISES tion : Latitude: 5691880.00 N Departure: 296115.00 E Elevation: 1405.00	Date started :10/ 4/1990 Date completed:10/ 6/1990 Azimuth: 55° 0/ 0° Dip: -45° 0' 0° Length: 306.94 M	
	Surveyed by: SPERRY-SU	N		
Deviation tests :	Depth	Dip Azimuth		
-	93.57 142.34 188.06 284.07 306.93	M -53-45' 0" 54- 0' 0 M -56-15' 0" 51-30' 0 M -59-30' 0" 54- 0' 0	37 36 3 8	
Remarks :	Water flow : Cimented :			Plugged: Core size: NG

Logged by : A.D. MCLAUGHLIN

Date logged:10/ 6/1990

Hole # : BC-90-01

FALCONBRIDGE LTD

Hole # : 8C-90-01

PAGE: 2

FRON (H)	TQ (H)	DESCRIPTION	Sampl.	FROM	го	Leng. (M)	CU PPM	PB PPM	ZN PPN	BA PPH	AG PPM	AU PPB	AS PPM	#I PPM	Cu/2n RAT10	
0.00	9.10	OVERBURDEN O/B													_ 	[
9.10	14.35	INTERMEDIATE ASH TUFF 3A Dark-light green strong to moderately felsic, fine-grained to ephanitic, 0-5% chloritic lithic fragments elongated to 5mm, in an atterwated green sericite-chlorite matrix showing weak banding.														
		Mineralization & Alteration: No sulphides. 1-15% ankerite crystals to Imm Locally in quartz veins, <1% quartz veins, weakly weathered. At 11.3m: 70degs CAB. The lower 20cm, gradually becoming silfcrows.						;								:
		12.03-12.46m 4AC Felsic Crystal Tuff Very light green to madium green, strongly folioted. 15% feldsar crystal aggregates <2m, <1% quartz eyes, 5% dark grey wisps (fragments?) in aphanitic siliceous weakly sericitic metrix. Foliation 65 degrees parallel to contacts.														
.		Mineralization & Alteration: 2% pyrite, minor galena, moderately weathered.]		
		12.03-14.35m Dacitic Tuff Oark grey, very fine-grained, strongly to moderately foliated/bended, 5-15% white eggregates, up to 10% chlorite. Strong (5-15%) chlorite eggregates (hornfels) in a sericite weak siliceous matrix. 1-2% pyrite, week chlorite, weak silicification, rare 15cm bleeched intervals.								:						
14.35	20,65	INTERMEDIATE LAPILLI TUFF 38 Grey-green, strongly foliated, 25-5% (decrease with depth) light grey-green felsic lithic fragments elongated to Zom thick, some 2x1cm. In chlorite-sericite ground mess with 15% possible feldspar aggregates and 53% chlorite wisps. Foliation 58degs @ 17m.				:									i	
		Mineralization & Alteration:	•		1]	

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FALCOMBRIDGE LTD

Hole # : 80-90-01

FROM (M)	TO (H)	DESCRIPTION	Sempi.	FROM	TO	Leng. (N)	CU PPM	P8 PPM	ZH PPH	BA PPM	AG PPM	AU PPB	AS PPH	NI PPM	Cu/2n RATIO	
		<1% pyrite, weak chlorite, weak hornfels, unit becoming fine-grained with depth, local disseminated ankerite. <1% calcite and chalcopyrite in veins.														
		17.7-17.98m; CHERTY TUFF Light green-grey. Quartz veins, 25% very fine grained purple bands and along fractures as more coarse grained, fractures perpendicular to foliation at 62 degs with fragmented quartz veins often form envelopes with pyrite.												:		
20.65	25.97	TUFFACEOUS SEDIMENT 40 Medium grey,fine grained,moderately foliated. 20% quartz crystais to 0.25m in fine grained locally equigranular in sericitic volcanic metrix. 20% chlorite clots to 2mm (hornfels).		:												
		Rineralization & Alteration: Roderately chloritic and weakly siliceous, 1% quantz veins to 27cm (at base),2% disseminated pyrite.									i					
25.97	30.30	TUFFACEOUS SEDIMENTS (MORNFELS) 30 Similar to above except up to 40% chlorite clots to 3mm in aphanitic sericitic to weakly siliceous groundmass. Lower contact gradational.									İ		i			
		Mineralization & Alteration 1% pyrite, Local ankerite.							:				,			
30.30	33.60	INTERNEDIATE DUST TUFF JA Yery light grey, moderately foliated, aphanitic, 14% quantz crystals <0.25m. 1-15% feint light green aggregates, possible fragments with stringers to Jam of sericite-chlorite, in aphanitic sericite weakly siliceous matrix, cataclastic tex with depth as fragments?														
		Mineralization & Alteration: <1% pyrite, local ankerite, minor mariposite. 31.3m: 7Ddegs CAB. 32.4m: 60degs CAB, cateclastic breccia.				:		,								
33.60	40.96	INTERMEDIATE TUFF (HORNFELS) 3A			}	,					})	ŀ	

FALCONBRIDGE LTD

Hate # : BC-90-01

FRON (H)	TO (N)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPM	PB PPM	2N PPM	äA PPM	AG PPM	ALI PPB	AS PPM	NI. PPM	Cu/Zn : RATIO	
		Light-medium green, coarse grained, weak to strongly foliated. Up to 25% biorite-chlorite eggregates to Zema becoming disseminated to bands in lower unit, <1% quartz eyes <0.25m in aphanitic sericite very weakly siliceous matrix. Mineralization & Alteration: 1-2% pyrite disseminated, strong to very weak silicification, 1% quartz veins. 39.0m: 60degs CAB. Locally no textures when hornfels strong. 36.65-37.9m: 70% quartz veins composed of breccia and/or boudinage meterial, 1% pyrite, chlorite to light green sericite alterated wailrock, fractured in lower 40cm.														
40.96	50.73	TUFFACEOUS SEDIMENTS/INTERMEDIATE DUST TUFF 30/3A Light-medium grey, generally bended, fine-grained to aphanitic, strongly foliated to wavy,(cremulated). 1-2% quartz eyes <1mm (increase in size and parcent with depth). 0-5% white aggrengates (feldspars)? Locally light grey more siliceous bands to tcm. 41.6m: 71degs CAB. 43.1m: 82degs CAB. 43.25-44.18m: Contorted wavy 30-90% locally kinking fold nose with minor chlorite hornfels. 44.5m: 55degs CAB. 47.0m: 70degs CAB.	VA14501 VA14502 VA14503 VA14504	40.96 43.00 45.00 47.00	43.60 45.60 47.00 48.97	2.04 2.00 2.80 1.97	26 18 43 31	10 15 14 18	68 47 89 32	670 890 710 540	0.5 0.5 0.5 0.5	13 46 20 19	36 35 52 69	14 11 23 17	27.66 27.69 32.58 49.21	
		Mineralization & Alteration: Up to 10% pyrite finely stretched to elongated wispa, minor maniposite, 0-5% disseminated ankerite-calcite. Weak muscovite-chlorite hornfels with pyrite stringers, locally ZX quantz veins to 3cm often wavy or boudined. 47.42-base: Matrix very fine grained to aphanitic. Possible reworked material with less banded pyrite. 49.74-50.73: 80% quantz veins. Fractured, broken core at 10 degs to 30 degs at contacts.				:			-		I				:	
50.73	55.23	INTERMEDIATE DUST TUFF 3A Medium to dark grey, banded, locally light grey to minor quartz eyes <0.25m, 0-10% dark grey	;													

FALCOMBRIDGE LTD

Hole # : 80-90-01

ROM M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	ÇLI PPM	PB PPM	ZN PPM	BA PPM	AG PPM	ALI PP8	AS PPM	NI PPH	Cu/Zn RATIO	
		wisps to 3mm in sericite metrix, local thin banded intrusive, possible sediments? Foliation 7Zdegs at 50.97-51.23 sediments?														
		Mineralization & Alteration: Up to 15% pyrite - very fine grained as above weak carbonate locally, 0-5% ankerite. 51.5-51.8m: quartz vein, mariposite along lower contact. 52.10-54.05m: quartz vein, fractured core on upper contact at 30 degs, lower contact at 20 degs, strongly foliated, footwall wavy.						:								
5.23	64.58	INTERMEDIATE ASH TUFF 3A Hedium grey, fine-grained, strongly foliated, massive bedded. 20% quartz crystals to eyes <0.25rm locally 0.5m. 15% sericite-muscovite wisps in aggregates to stringers. <10cm-flattened fragments/pumice? in aphanitic to fine-grained matrix, foliation: 59.6m: 71degs CAB.											:			
		Nineralization & Alteration: Moderate carbonate, 0-5% ankerite-calcite disseminated, 5% pyrite disseminated to stringers, often with mica <1% quartz eyes, quartz-calcite microveins. 10-30 deg, parallel to folistion. Lower contact gradational. Unit possible lapilli.				:										
4.58	67.05	INTERMEDIATE LAPILL! TUFF 38 Redium grey, massive badded, strongly foliated, <2% rarely siongated, angular quartz eyes <1mm, 0-15% fetdspar crystals sub-angular to 1mm grading out with depth with 25% lapilli felsic lithic fragments, round to elongated <2cm increasing with depth. Indistinct in upper half, feldspar crystals often form bends (Lapilli?).														
		Nimeralization & Alteration: <3% pyrite, locally weak carbonate. 0-5% ankerite, especially in upper half.				:								}		
67.05	73.91	INTERMEDIATE TUFF BRECCIA 3C Medium grey, fine-grained, weakly foliated, 5%]		1				İ]		

FALCOMBRIDGE LTD

Hole # : 80-90-01

FROM (M)	TO (M)	OESCRIPTION	Sampl.	FROM	ΤĎ	Leng. (H)	CJ. PPM	PB P PM	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPM	K [PPN	Cu/Zn RATIO	
		chlorite wisps, 1-3% quartz eyes round to elongsted <pre></pre>														
	:	73.00- 73.91 FAULT ZOME Gouge and rubble,calcareous CAB 0-10' fractures														
73.91	90.75	QUARTZ PHYRIC INTERMEDIATE ASM TUFF 3AA Medium grey,massive bedded,moderately foliated,medium grained, 5-15% brown-green Lithic fragments as Mispa to aggregates to 3mm,5-15% quartz crystals and eyes to 0.5mm in fine grained sericitic matrix. Unit becoming bended with depth, 5% light green bands 2cm thick -posssible lapitli												į	i	
		Mineralization & Alteration: 5% disseminated pyrite, weakly silicified and calcareous.														
		89.54- 90.75 FAULT ZONE Gouge and rubble with contorted foliation, brecolated quartz veins,moderately sericitic CAB 45-60' foliation				:										ļ
90.75	94.62	CHERTY TUFF BRECCIA 4AP Light to medium grey, fine grained, thinty bedded, strongly foliated. 10% cherty tuff elongate fragments to 2cm thick in sericitic to weakly siliceous matrix. Structure Wasy to kinked foliation CAB 781 foliation @ 91.3m	VA14505 VA14506	90.75 92.29	92,29 94,09	1.54 1.80	31 31	17 16	133 19	1100 1100	0.5 0.5	55 58	74 59	9 8	18.90 62.00	

FALCOMBRIDGE LTD

Hote # : 8C-90-01

FROM (H)	OT (M)	DESCRIPTION	Sampl.	FROM	то	Leng. (H)	CU PPM	₽ 8 P₽#	ZH PPN	BA PPM	AG PPK	ALI PPB	AS PPM	N] PPM	Cu/Zn RATIO	·
		Ninerelization & Alteration 10% disseminated to 1mm bands pyrite in metrix and fragments, weak blue-grey sericitization,60% quartz veins to 15cm in lower 58cm à 70°,50°														
94.62	97,04	FELSIC ASH TUFF (MORNFELS) 4A Dark grey,medium grained,massive bedded,weakly foliated,25% biotite aggregates and wisps to 3mm in fine grained siliceous-sericitic matrix.								:						
		Structure: Moderately fractured @ CAB 10-20*														
:		Mineralization & Alteration: 5% pyrite rarely as Zcm pods with quartz veins														
97.04	103.25	INTERMEDIATE ASM TUFF 3A Medium grey, fine grained, massive bedded, moderately foliated, 1% quartz eyes to 0.5mm, 2% feldspar in sericitic to weekly siliceous matrix. Indistinct banding with depth.			:		:				:				:	
•		Mineralization & Alteration 5-7% pyrite, weak patchy to bands to 5cm silicified zones, moderate light brown clay alteration aggregates. Upper 64m mainly fractured quartz veins														
		Structure: CAB 71' foliation 2 99.0m									÷					
103.25	110.00	INTERMEDIATE ASH/DUST TUFF 3A Light to medium grey, 1-2 cm bands, strongly foliated, minor quartz crystals and eyes, 1% Lithic fregments to 1mm in sericitic matrix. Week hornfels with 10% muscovite aggregates.	VA14507 VA14508 VA14509	103.25 105.25 107.25	105.25 107.25 109.20	2.00 2.00 1.95	26 23 22	17 17 21	25 43 18	810 880 1100	0.7 1.3 0.6	550 300 137	117 99 56	4 6	50.98 34.85 55.00	
		Structure: Rare contorted foliation, increasing fractures with depth 2 20', lower contect sheared CAB 78' pyrite band 2 105.1m, 75-80' foliation														
	i	Mineralization & Alteration: 7% pyrite with 3cm semi-massive bands parallel to											1			
															•	

FALCONBRIDGE LTD

Hole # : 8C-90-0

FROM (H)	07 (M)	DESCRIPTION	Sampl.	FRON	10	Leng. (H)	CU PPM	PB PPM	ŽM PPM	BA PPM :	AG PPM	UA 899	AS PPM	NI PPM	Cu/2n RAT10	
		foliation, calcite microveins common parallel to foliation and 2 20.														
110.00	116.63	INTERMEDIATE ASM TUFF 3A Grey to brown, fine grained, strongly foliated, 2% lithic fregments to 0.5mm in sericitic matrix					:									
		Structure: CAB 63° foliation @ 112.3m and 69° @ 115.8m, local fracture zones 5-15cm @ 50-60°														
i		Kinerelization & Alteration: 3% pyrite, 1% boudined and brecciated quartz weins.	:									:				
116.63	122.28	INTERMEDIATE ASH TUFF 3A Strongly altered and sheared, light brown to grey, bended to possible lepilli unit, 60% red-brown altered aggregates and bands to 3cm in sericitic-chloritic metrix.							:							
.		Structure: Unit is increasingly sheared with depth with gouge, CAB 62' foliation @ 117.5m,45' fractures													!	
		Mineralization & Alteration: Strongly saricitic with chlorite.														
		117.53- 117.93 FAULT ZONE			:											
		121.01- 122.28 FAULT ZONE CAB fractures ⊋ 0-10',40' CAB foliation 67' ⊉ 121.5m														
122.28	126.07	INTERMEDIATE ASH TUFF 3A Medium grey, ine greined, moderately folisted, messive bedded, 1% quartz crystals and eyes to 0.5mm, up to 5% lithic fragments to 1mm in saricitic matrix, possible indistinct lapilii.														
		Structure: CAB 70° foliation @ 125.2m Fault gouge @ 123.15-123.3m and 123.90-124.06m												ļ		

FALCOMBRIDGE LTD

Hole # : 80-90-01

PAGE: 9

FROM (N)	TQ (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPH	NI PPM	Cu/2n RATIO	
126.07	132.40	with contorted foliation. Mineralization & Alteration: 3% pyrite, minor chicopyrite between 123.30-125.50m along fractures with chlorite, moderately chloritized as stringers to aggregates, weakly calcareous. INTERMEDIATE LAPILLI TUFF 38 Light to medium grey, messive bedded, moderately foliated, 60% siliceous felsic fragments to 2cm, round-elongate in similar felsic matrix with 1-3% quartz crystals and eyes to 0.5cm, fragments	VA14510 VA14511 VA14512	126.07 128.00 130.00	128_00 130_00 132_40	1.93 2.00 2.40	77 33 27	49 165 359	359 710 684	810 970 750	0.6 0.7 0.9	44 62 18	86 72 83	544	17.66 4.44 3.80	
132.40	133.18	less common in unit centre. Structure: Fragments possible cataclastic in origin. CAB 75' foliation @ 131.5m Mineralization & Alteration: 5% pyrite, minor sphalerite increasing with depth, minor calcite veins parallel foliation, minor chlorite along fractures. FELSIC ASH TUFF AAP	va14513	132.40	135.18	0.78	520	738	1285	780	1.6	34	126	5	28.81	
132.40	133.16	Light grey, aphenitic to very fine grained. Structure: Cataclastic fragmented texture CAB 80' foliation, rare gouge @ 55' Mineralization & Alteration: 3-5% pyrite increasing with depth, minor sphalerite, moderately silicified, weakly chloritic and calcareous,		132.40		V. V	,,,,		7.2.2							
133.18	144_94	felsic ask Tuff/Tuff Breccia 44/40 Light to medium grey, fine grained to aphanitic, massive to moderately foliated, up to 60% felsic fragments in similar felsic matrix. Fragments round-elongate to irregular indistinct shaped, generally less than 5cm locally to 10cm, up to 1% quartz crystals and eyes, 1-5% lithic wisps and fragments to 1pm in siliceous to sericitic matrix.														

:

FALCONBRIDGE LTD

FROM (N)	10 (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	CU PPM	PB PPN	ZM PP M	BA PPM	AG PPM	ALI PPB	AS PPM	N I PPM	Cu/Zn RAT LO	
		Structure: Local contorted foliation, moderately fractured a 0-10' 40-50' and parallel to foliation. Thin gouge along fractures and foliation locally. CAS foliation 80' a 134.1m,79' a 138.7m,72' a 143.7m CAS sulphide bands 78' a 134.5m,81' a 139.1m, 74' a 144.0m Mineralization & Alteration: Disseminated to 20cm bands semi-massive sulphide mineralization parallel to foliation, rimming fragments and as matrix fill, generally appears recrystallized with irregular shaped aggregates to 1cm, mainly pyrite, sphalerite with lesser chalcopyrite and galena, also along fractures-especially chalcopyrite a 10-20' subperpondicular to foliation. Moderately silicified, strongly sericitized with clay and tale, local chlorite as irregular patches or along fractures commonly with chalcopyrite														
		133.18- 136.13 FELSIC TUFF BRECCIA 10% pyrite, 2% sphalerite, 1% galena, minor chalcopyrite, local semi-massive intervals to 15cm with 15% pyrite, 5% sphalerite Mineralization & Alteration: Strong blue-grey sericite,	AYE, VA14514 VA14515 VA14516	133.18 133.18 134.52 135.77	144.94 134.52 135.77 136.13	11.76 1.34 1.25 0.36	0.172 0.273 0.283 0.023	0.479 1.02% 0.60% 0.11%	1.081 1.24% 0.94% 0.08%	0.090 0.10% 0.08% 0.08%	11.2 17.1 8.9 2.1	0.061 0.103 0.103 0.034	a '	-	15.79 17.88 22.95 20.00	
		weakly calcereous 136.13- 137.82 FELSIC ASH TUFF Mottled green to grey 7-2% pyrite and up to 1% sphalerite, rarely as 1cm bends, minor chalcopyrite all decreasing with depth. Strong pervasive chloritization becoming stringers below 137.23m	VA14517	136, 13	137.82	1.69	0.06%	0.37%	0.53X	0.09%	3.1	0.034	-		10_17	

81RK CREEK (1990)

FALCOMBRIDGE LTD

Hole # : 80-90-01

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (M)	CJ PPM	PB PPM	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPM	HÎ P PH	Cu/2n RATIO	
		137.82- 139.32 FELSIC LAPILLI TUFF Fregments to Zom, siliceous to sericitic with depth (green to blue-grey). SX pyrite, I% sphalerite, 0.5% galena, minor chaicopyrite, generally disseminated, but bends to 3cm in lower 20cm 138.8-138.60 Mafic Intrusive Black, fine grained, calcareous, 2% pyrite, CAB 62' contacts	VA14518	137.82	139.32	1.50	0.05%	0.37%	0.97%	0.12%	10.3	0.034			4.90	
	:	139.32- 140.00 FELSIC ASH TUFF Apple green to grey with depth, minor quartz veins to 4cm with coarse grained sulphides, contorted foliation at basa 40% pyrite, 4% sphalerite, 1% galena, 0.5% chalcopyrite in semi-massive bands to 20cm including 139.67-139.87m (pyrite band with sphalerite at base).	VA14519	139.32	140.00	0.68	1.13%	2.07%	6.60%	0.03%	51.6	0.240	•	•	14.62	
		140.00- 141.91 FELSIC ASH TUFF Breccia texture in upper half grading to massive with depth, frequents allicaous to chert tuff, moderately blue-grey sericite, turquoise misps in centre, minor quartz veins, pods 4% pyrite, 0.5% sphalerite, minor galena.	VA14520	140.00	141.91	1.91	0.06%	0.22%	0.56%	0.09%	3.4	0.034	-	,	9.68	
		141.91- 143.85 FELSIC ASH TUFF Light green, 1-5% quartz crystmls to 0.5mm, moderately chloritic, weakly calcareous, increasing shearing with depth, CAB 73'-contact, 1% pyrite, trace chalcopyrite.	va14521	141.91	143.85	1.94	0.05%	0.02%	0,10%	0.08%	1	0.034	• • • • • • • • • • • • • • • • • • •		33.33	

FALCOMBRIDGE LTD

Hole # : 80-90-01

FROM (M)	ÓŤ (M)	DESCRIPTION	Sampi.	FROM	το	Leng. (M)	CU PPH	PB PPM	ZN PPM	BA PPM	AG PPM	AU PP8	AS PPM	NI PPM	Cu/2n RATIO	
		143.85- 144.94 FELSIC TUFF BRECCIA Fragments to 3cm,strong cataclestic textures. 7% pyrite, < 1% sphalerite, minor chelcopyrite and galena. 144.53-144.94 Fault, brecciated wallrock and quartz veins with gouge, CAB 40' upper contect	VA14522	143.85	144_94	1.09	0.13%	0.39%	1.60%	0.10%	11.3	0.034	•	,	7.51	
144.94	148,90	FELSIC ASH TUFF 4A Medium grey to green-grey with depth, massive bedded, strongly foliated, up to ZX quartz crystals and eyes to 0.5mm, 0-5% grey-green wisps to stringers in sericitic matrix.	VA14523 VA14524 VA14525	144.94 145.80 147.30	145.80 147.30 148.90	0.86 1.50 1.60	159 69 861	253 367 0.42%	213 405 0.53X	820 950 890	1.2 ¹ 1 15.6	58 58 50	214 135 74	5 6	42,74 14,56 13,98	
		Structure Sheared upper 85cm, gouge at base (CAB 45') with CAB 60-70' foliation. CAB 79' quartz vein with sulphide band 148.90m Mineralization & Alteration											:			
		Moderately silicified, moderately blue-grey sericitized in upper helf. Unit becoming less mitered with depth. Minor chaicopyrite, sphalerite, galena and 5% pyrite, 1% quartz veins with increased sulphides along fractures and perimetres.				:								:		
148.90	163.57	OUARTZ PHYRIC FELSIC ASH TUFF 4AA Medium grey, messive bedded, fine-grained, atrongly foliated, 5% quantz crystals and eyes to 0.5mm, 5% possible feldspor to 1mm in sericitic matrix, local light green bands to 15cm-possible lapilli.	VA14526 VA14527 VA14528	148.90 151.00 153.00	151.00 153.00 155.00	2.10 2.00 2.00	40 102 70	422 1493 8.36%	652 2492 1411	970 1100 1100	0.9 1.3 2.4	6 47 27	70 135 121	5 5 8	5.78 3.93 4.73	i
		Structure CA8 68' foliation a 150.1m and 72' a 154.9m Mineralization & Alteration 5% pyrite with local marrow intervals to 10%, minor chalcopyrite, sphalerite, galena, rarely to 5mm bands parallel foliation, weakly				:										
		5 5mm bands parallel foliation, weakly sericitized, thin chlorite stringers with				:							:		:	

FALCONBRIDGE LTD

Hole # : 8C-90-01

FROM (N)	T0 (M)	DESCRIPTION	Sampl.	FROM	ŦΩ	Leng. (M)	CU PPM	PB PPM	ZN PPM	RA PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RAT LO	
	:	sulphides. 154.88- 155.50 QUARTZ VEIN 1% galene, minor sphalerite along fractures, lower contact 2 421	VA14529	155.00	156.80	1,80	99	0.91%	553	790	6.5	29	97	9	15.18	•
		156.80- 161.73 QUARTZ VEIN STOCKWORK 60% quartz veins to 0.99m wide, thim chlorite melvages, rare galene and sphalerite CAB 40-50', 10' veins	VA14530 VA14531 VA14532 VA14533	156.80 157.79 158.74 160.38	157.79 158.74 160.38 161.73	0.99 0.95 1,64 1,35	17 52 103 167	793 365 2534 0.53%	1797 581 645 0.36%	10 840 260 440	0.6 0.5 1.7 3.4	3 16 6	7 126 31 109	3 9 6 5	0.94 8.21 13.77 4.43	
ĺ	ŀ	33 33 3 3 3 3 3 3 3 3	VA14534	161.73	163.57	1.84	61	686	1101	820	8.0	17	120	7	5.25	
163.57	165.60	FELSIC ASM TUFF 4A Light grey, massive bedded, strongly foliated. 1-5% chloritic wisps, <1% quartx crystals end eyes to 0.25mm in fine-grained to ophonitic sericitic to siliceous matrix. Possible lapilli in lower 1m	VA14535	163.57	165.60	2.03	79	1388	1431	970	1.3	35	192	7	5.23	
		Structure CAB 72' foliation # 164.3m CAB 70-75' quartz veins parallel foliation Mineralization # Alteration 3% pyrite, minor galerus and sphalerite with quartz veins to 5cm between 165.85-163.91 and		:												
165.60	186.31	164.3m. Weakly sericitized and silicified FELSIC ASM TUFF 4A Hedium grey, measive bedded, strongly foliated 0-5% quartz crystels and eyes to 0.25mm, 0-3% grey (ithic wisps, 0-10% chloritic sericitic eggregates to 0.5mm in fine grained sericitic matrix. Structure CAB foliation 72' 2 169.2m,71' 2 177.8m, 70' 2 183.9m,78' 2 185.4m 181,70-182.30m fracture zone, minor gouge, CAB 20' and 50'	VA14536 VA14537 VA14538 VA14539 VA14540 VA14541 VA14542 VA14543 VA14544 VA14543	165.60 167.60 169.60 171.60 173.60 177.60 177.60 181.60 183.60	167.60 169.60 171.60 173.60 175.60 177.60 179.60 181.60 183.60	2.00 2.09 2.09 2.09 2.00 2.00 2.00 2.00	121 46 175 42 47 38 40 26 27 355	1001 1775 904 609 501 540 146 569 853 941	1695 374 865 269 988 789 592 2351 632 1206	780 950 740 800 980 950 640 710 760	1.1 0.7 1.1 0.9 0.9 0.9 0.8 0.8	51 38 27 16 8 29 8 8 8	98 108 130 148 86 110 113 150 129	5 7 8 11 14 10 10 10 10 8	6.66 10.95 16.83 13.50 4.54 4.59 6.33 1.09 4.10 22.74	
		Mineralization & Alteration						:								

FALCONBRIDGE LTD

Hole # : BC-90-01

	a, minor sphalerite, galena and trace							PPM	PPM	PPH	PPB	PPH	PPM	RATIO	
CAB 0-20 Weakly s and chlo depth.	rite, rarely to 2cm bands, tz veins to 2cm parallel foliation or 'with minor pyrite, sphalerite, galena ariciticized, locally weakly calcareous ritic along fractures increasing with														
130.12	FAULT ZONE Gouge and fractured core # 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite								:						
70% sulp recrysta altered	hide, coarse grained to 2cm, sheared and llized in chloritic, quartz and sericitic intermediate volcanic (?),massive to	VA14546	186.31	187.19	0.88	0.66X	4.32X	6.68%	0.01%	25.4g/t	480	1056] 3	7.07	1
CAB fali Minerali 60% pyri	ation 65' zation & Alteration te, 10% sphalerite, 5% galena, and minor						i		:				:		
Medium g bedded, 10-20% f 0,5mm, S crystals sericiti Structur Fracture Fracture calcite CAB foll	reen, fine grained, massive moderately to strongly foliated. eldspar crystals and aggregates to % chloritic wisps to 1mm, minor quartz and eyes to 1mm in fine grained c matrix. e d core upper 70cm 2 55' zone 199.10-200.50m, 30' and 70', and chlorite along fractures ation 62' 2 196.5m,71' 2 203.5m	VA14547 VA14549 VA14559 VA14551 VA14553 VA14553 VA14554 VA14555 VA14555 VA14555	187.19 187.74 189.80 191.75 193.75 197.75 197.75 201.00 202.56 203.30	187.74 189.80 191.75 193.75 195.75 197.75 199.75 201.00 202.56 203.30 205.18	0.55 2.06 1.95 2.00 2.00 2.00 2.00 1.25 1.56 0.74 1.88	0.45% 0.04% 231 38 46 25 289 32 94 91 73	5.14% 0.30% 1529 805 495 1390 5400 301 2016 1427 740	2.80% 0.49% 1484 516 593 668 6100 466 1498 2390 1091	0.05X 500 440 300 430 460 420 460 710 610 400	26.7g/t 2.1 2.5 2.1 0.8 1.3 3.3 0.6 1.4 1.1 0.9	343 34 6 5 6 12 14 6 8	477 163 111 93 77 64 126 148 92 116 105	544446665	13.85 7.55 13.47 6.86 7.20 3.61 4.52 6.43 5.91 3.67 6.27	1
	and chlo depth. 186.12- 7.19 MASSIVE 70% sulp recrysta altered weakly f Scm Structur CAB foli Minerali 60% pyrichalcopy 6.99 FELSIC A Medium g bedded, 10-20% f 0.5mm, 5 crystals sericiti Structur Fracture Fracture CAB foli CAB sulp	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Gouge and fractured core 2 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite MASSIVE SULPHIDE 4mm 70% sulphide, coarse grained to 2cm, sheared and recrystallized in chloritic, quartz and sericitic alterned intermediate volcanic (2), massive to weakly foliated, lower contact gradational over 5cm Structure CAB foliation 65' Mineralization & Alteration 60% pyrite, 10% sphalerite, 5% gelena, and minor chalcopyrite, trace maniposite	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Gouge and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystaltized in chloritic, quartz and sericitic altered intermediate volcanic (?),messive to weakly foliated, lower contact gradational over 5cm Structure CAB foliation 65' Mineralization & Alteration 60% pyrite, 10% sphalerite, 5% galena, and minor chalcopyrite, trace maniposite FELSIC ASH TUFF 4Ads Medium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% feldspar crystala and aggregates to 0.5mm, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm in fine grained val4550 val4551 val4552 sericitic matrix. Structure Fracture core upper 70cm a 55' Fracture zone 199.10-200.50m, 30' and 70', calcite and chlorite along fractures CAB foliation 62' a 196.5m,71' a 203.3m CAB sulphide bands 70' 194.73m,20' 198.86m, 74' a	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Gouge and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystaltized in chloritic, quartz and sericitic altered intermediate volcanic (?),messive to neakly foliated, lower contact gradational over Scm Structure CAB foliation 65' Mineralization & Alteration 60% pyrite, 10% sphalerite, 5% galena, and minor chalcopyrite, trace maniposite 5.99 FELSIC ASH TUFF 4Ads Medium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% feldspar crystals and aggregates to 0.5mm, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm in fine grained yal4550 191.75 Structure Fractured core upper 70cm a 55' Fractured core upper 70cm a 55' Fractured core upper 70cm a 55' Fracture zone 199.10-200.50m, 30' and 70', calcite and chlorite along fractures CAB foliation 62' a 196.5m,71' a 203.3m CAB sulphide bands 70' 194.73m,20' 198.86m, 74' a	and chloritic along fractures increasing with depth. 186.12-186.31 FAULT ZONE Gouge and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystallized in chloritic, quartz and sericitic altered intermediate volcanic (??, massive to wenkly foliated, lower contact gradational over 5cm Structure CAB foliation & Alteration 60% pyrite, 10% sphalerite, 5% galena, and minor chalcopyrite, trace mariposite FELSIC ASH TUFF 4Ads Medium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% feldspar crystals and aggregates to 10.5mm, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm, minor quartz val4550 191.75 195.75 crystals and eyes to 1mm in fine grained sericitic matrix. Structure Fractured core upper 70cm a 55' Fracturez zone 199.10-280.50m, 30' and 70', calcite and chlorite along fractures CAB foliation 62' a 196.3m,71' a 203.3m CAB sulphide bands 70' 194.73m,20' 198.86m, 74' a	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Gouge and fractured core a d0-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystaltized in chloritic, quartz and sericitic altered intermediate volcanic (2),messive to weakly foliated, lower contact gradational over 5cm Structure CAB foliation 65' Mineralization & Alteration 60% pyrite, 10% sphalerite, 5% gelens, and minor chalcopyrite, trace maniposite 5.99 FELSIC ASH TUFF 4Ads Medium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% feldspar crystals and aggregates to 0.5mm, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm in fine grained sericitic matrix. Structure Fractured core upper 70cm a 55' Fracture zone 199.10-200.50m, 30' and 70', calcite and chlorite along fractures CAB foliation 62' a 196.3m, 71' a 203.3m CAB sulphide bends 70' 194.73m, 20' 198.86m, 74' a	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Gouge and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystallized in chloritic, quartz and sericitic altered intermediate volcanic (?), massive to weaktly foliated, lower contact gradational over 5cm Structure CAB foliation 65' Mineralization & Alteration 60% pyrite, 10% spholerite, 5% galena, and minor chalcopyrite, 10% spholerite, 5% galena, and minor chalcopyrite, trace meniposite 6.99 FELSIC ASH TUFF 4Ads Hedium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% felded and aggregates to 10-50% felded and aggregates to 10-50m, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm in fine grained sericitic matrix. 10-50 calcite and chlorite along fractures CAB foliation 62' a 196.3m, 71' a 203.3m CAB sulphide bands 70' 194.73-a,20' 198.86m, 74' a	and chloritic along fractures increasing with depth. 186.12-186.31 FAULT ZONE Gouge and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to 2cm, sheared and recrystaltized in chloritic, quartz and sericitic altered intermediate volcanic (?), massive to sensity foliated, lower contact gradational over Structure CAB foliation & Alteration 60% pyrite, 10% sphalerite, 5% galena, and minor chalcopyrite, trace mariposite 5.99 FELSIC ASH TUFF 4Ads Medium green, fine grained, massive bedded, moderately to atrongly foliated. 10-20% feldspar crystals and aggregates to 0.5mm, 5% chloritic wisps to 1mm, minor quartz crystals and eyes to 1mm incre quartz crystals and eyes to 1mm incre quartz sericitic matrix. Structure Fractured core upper 70cm a 55' Fractured core upper 70cm	### Add ### Adds ### Adds ### Adds ### Add ###	### Adds	### 186.12- 186.31 ### FAULT ZONE Gouge and fractured core a 60-70' CAS, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite #### PUS sulphide, coarse grained to 2cm, sheared and recrystaltized in chloritic, camera end sericitic altered intermediate volcanic (2), massive to seakly foliated, lower contact gradational over Structure CAS foliation & Alteration 600 pyrite, 100 sphalerite, 5% galena, and alnor chalcopyrite, trace mariposite ###################################	and chloritiz along fractures increasing with depth. 186.12-186.31 FAULT ZONE Gouge and fractured core a 60-70' CA8, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4ms 70% sulphide, coarse grained to Zon, sheared and recrystalized in chloritic, quartz and sericitic altered intermediate volcanic (?),messive to weakly foliated, lower contact gradational over Scm Structure CA8 foliation 65' Mimeralization & Alteration 60% pyrite, 10% sphalerite, 5% galene, and minor chatcopyrite, trace mariposite Medium green, fine grained, massive bedded, moderately to strongly foliated. 10-20% feldspar crystals and aggregates to 10.5ms, 5% chloritic wisps to 1mm, sinor quartz crystals and eyes to 1mm infine grained sericitic matrix. Structure Fracturez core 199.10-200.50m, 301 and 70', calcite and chlorited along fractures CA8 foliation 62' a 196.5ms, 71' a 203.3m CA8 sulptide bands 70' 194.75a, 201 198.6ms, 74' a 201.50m, 70' 194.75a, 70' 197.75 20' 198.75 70' 197.75 20' 199.75 70' 10.75 71' 1203.3m CA8 sulptide bands 70' 194.75a, 20' 190.00' 10.8ms, 71' a 203.3m CA8 sulptide bands 70' 194.75a, 20' 190.00' 10.8ms, 71' a 203.3m CA8 sulptide bands 70' 194.75a, 20' 190.00' 10.8ms, 71' a 203.3m CA8 sulptide bands 70' 194.75a, 20' 198.6ms, 74' a	and chloritic along fractures increasing with depth. 186.12- 186.31 FAULT ZONE Googe and fractured core a 60-70' CAB, increasing pervasive chloritization with depth, pyrite and trace chalcopyrite 7.19 MASSIVE SULPHIDE 4me 70% sulphide, coarse grained to Zom, sheared and recrystaltized in chloritic, quartz and sericitic altered intermediate volcanic (7), massive to weakly foliared, lower contact gradational over Sem Structure CAB foliation & Alteration 60% pyrite, 10% sphalerite, 5% galena, and alnor chalcopyrite, trace maniposite Mediua green, fine grained, massive Wal4548 Mediua green, fine grained, massive Wal4549 Wal4559 W	### and chloritic along fractures increasing with depth. ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.12- 186.31 ### 186.32 ### 186.36 ### 186.31 ### 186.32 ### 186.36 ### 186.31 ### 186.32 ### 186.36 ### 186.31 ### 186.32 ### 186.	### and chloritic along fractures increasing with depth. ### 186.12- 186.31 ### 186.12- 186.32 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.31 ### 186.32 ### 186.33 ###

FALCONGRIDGE LTD

Mole # : 8C-90-01

FRON (N)	TO (M)	DESCRIPTION	Şempi.	FROM	TO	Leng. (H)	CU PPM	PB PPM	ZN PPN	BA PPN	AG PPM	AU PPB	AS PPN	N L PPH	Cu/Zn RATIO	
		Mineralization & Alteration 3-5% pyrite with up to 1% combined sphalerite, galens and minor chalcopyrite in semi-messive bands to 40cm, generally to 2cm, minor pyrrhotite with depth, increasing sulphides and thickness of bends with depth. Moderately chloritized as pervasive to irregular stringers with sulphide bands, weakly calcareous and minor calcite microvelins penallel foliation, 1% quartz veins generally to 8cm, often boudinaged and/or folded parallel foliation, with chlorite selvages and coarse grained sulphides along mangine or fractures. 187.19-191.75m semi-massive sulphide bands to 4cm 191.75-202.56m semi-messive sulphide bands to 4cm 202.56-206,99m semi-massive sulphide bands to 40cm 205.18- 205.58	VA14558	205.18	206.35	1.17	1051	1.45%	1.94%	110	6.8	97	439	5	5.14	
		SEMI-MASSIVE SULPHIDES 25% pyrite with some pyrrhotite, 4% sphalerite, 1% galena and minor chalcopyrite, local massive bands to 4cm 205.58~ 206.22								:						
	:	INTERMEDIATE ASM TUFF 5% massive sulphide bends to 4cm, mainly pyrite and sphelerite, lesser galena, minor chalcopyrite 206.22- 206.35														
206.99	207.41	MASSIVE SULPHIDES 60% pyrite with some pyrrhotite, 5% sphalerite, 2% gelene, minor chalcopyrite, breccisted MASSIVE SULPHIDES 4ms 70% pyrite with pyrrhotite, 10% aphalerite, 3% palene, 0.5% chalcopyrite in strongly chloritized and weakly sericitized intermediate volcanic (?).	YA14559 YA14560	206.35 206.99	206.99 207.41	0.64 0.42	294 0.86%	507 7.29%	925 5.12%	490 0.01%	0.8 36.3g/t	, 6 343	92	 4 3	24.12 14.38	

FALCOMBRIDGE LTD

Hole # : BC-90-D1

TG (H)	DESCRIPTION	Sampi.	FROM	TO	Leng. (H)	CU PPN	PB PPM	ZN PPN	BA PPM	AG PPM	AU PPB	AS PPH	ML PPM	Cu/Zn RATIO	
	CAB 66' lower contact Footwall chloritized for 20cm				·								į		
221.35	FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5mm,minor quartz crystais and eyes to 1mm in chloritic matrix. 10% felsic tuff intervals to 3.0m thick increasing with depth.	VA14561	207.41	209.40 :	1.99	334	2356	2565	640	1.8	6	86	6	11.52	
	Structure CAB foliation 60° 2 211.2m,63° 2 221.2m														
	Mineralization & Alteration Noderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly calcareous with microveins parallel foliation. Neak hornfels with 3% spotted muscovite-biorite aggregates. 5-7%pyrite, minor pyrrhotite, minor sphalerite, galeau, chalcopyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands @ 214.52m (2cm), 214.81m (2cm), 216.43m (3cm), 218.81m (3cm) 214.34-214.30 brecciated quartz veins										:				•
	209.30- 212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in sericitic fine grained metrix	VA14562 VA14563	209.40 211.40	211.40 212.87	2.00 1.47	278 325	2613 0.54%	2175 0.50%	920 720	1.6 3.1	6	93 113	7	11.33 6.10	
	Moderately chloritized	VA14564 VA14565 VA14566 VA14457	212.87 214.42 216.51 219.05	214.42 216.51 219.05 221.59	1.55 2.09 2.54 2.54	433 297 1355 151	0.58% 2513 0.66% 1942	0.79% 0.40% 0.62% 2433	740 810 850 870	3.3 1.6 3.4 1.2	59 8 57 17	412 225 738 195	5 4 4 3	5,20 6,91 17,94 5,84	:
222.56	FELSIC ASK TUFF 4A Light grey, fine grained, massive bedded, strongly foliated, 1% quertz crystals and eyes in sericitic metrix.	VA14458	221.59	222.56	0.97	134	1941	1899	1100	0.9	39	150	5	6.59	
	221.35	CAB 66' lower contact Footwall chloritized for 20cm 221.35 FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5mm,minor quartz crystals and eyes to 1mm in chloritic matrix. 10% felsic tuff intervals to 3.0m thick increasing with depth. Structure CAB foliation 60' a 211.8m,63' a 221.2m Mineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly calcareous with microverins parallel foliation. Weak hornfels with 3% spotted muscovite-biorite aggregates. 5-7%pyrite, minor pyrrhotite, minor sphalerite, galenu, chalcopyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands a 234.52m (2cm), 214.81m (2cm), 216.43m (3cm), 218.81m (3cm) 214.34-214.30 brecciated quartz veins 209.30- 212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in saricitic fine grained matrix Moderately chloritized	CAB 66' Lower contact footwall chloritized for 20cm 221.33 FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5mm,minor quantiz crystals and eyes to lam in chloritic matrix. 10% felsic tuff intervals to 3.0m thick increasing with depth. Structure CAB foliation 60' a 211.8m,63' a 221.2m Mineralization & Atteration Noderately chloritized as thin stringers along foliation and as aggregates in matrix, weptly calcareous with microveins parallel foliation. Neak hornfels with 3% spotted muscowite-bictice aggregates. 5-7%pyrite, minor pyrrhotite, minor sphalerite, galenu, chalcopyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands a 244.52m (2cm), 214.81m (2cm), 216.43m (3cm), 218.81m (3cm) 214.14-214.30 brecciated quartz veins 209.30- 212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in acricitic fine grained matrix Moderately chloritized VA14563 VA14565 VA14565 VA14565 VA14565 VA14565 VA14565 VA14566 VA14457 VA14458	CAB 66' Lower contact Footwall chloritized for 20cm 221.35 FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5mm,minor quartz crystals and eyes to lam in chloritic matrix. 10% felsic tuff intervals to 3.0m thick increasing with depth. Structure CAB foliation 60' a 211.8m,63' a 221.2m Mineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly calcareous with microveins parallel foliation. Week hornfels with 3% spotted muscovite-bidrite aggregates. 5-7Kpyrite, minor pyrrhotite, minor sphelerite, galenu, chalcopyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands a 214.52m (2cm), 214.81m (2cm), 216.43m (3cm) 214.14-214.30 brecciated quartz veins 209.30- 212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in sericitic fine grained matrix Moderately chloritized VA14562 VA14563 211.40 VA14564 VA14565 VA14565 VA14567 VA14568 VA14567 VA14568 VA14567 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568 VA14568	CAB 66' Lower contact footwall chloritized for 20cm 221.35 FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5mm,minor quartz crystate and eyes to lam in chloritic matrix. 10% felsic tuff intervats to 3.0m thick increasing with depth. Structure CAB foliation 60' a 211.8m,63' a 221.2m Mineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weakly raicareous with microveins parallel foliation. Weak hornfels with 3% spotted muscovite-biorite aggregates. 5-7%pyrite, minor pyrrhotite, minor sphalerite, galerus, halcopyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands a 214.52m (2cm), 214.81m (3cm) 214.14-214.30 brecciated quartz veins 209.30-212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2cm, in sericitic fine grained matrix Moderately chloritized VA14564 VA14565 VA14565 VA1457 VA14565 VA1457 VA14566 216.51 219.05 VA1457 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59 VA1458 221.59	CAB 66' lower contact footwall chloritized for 20cm PELSIC ASH TUFF 4A Hedium green, fine grained, massive bedded, moderately to strongly foliated. 5-10X chloritic fragments to 0.5mm,minor quartz crystals and eyes to 1mm in chloritic matrix. 10X felsic tuff intervals to 3.0m thick increasing with depth. Structure CAB foliation 60' 2 211.8m,63' 2 221.2m Hineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly calcareous with microveries parallel foliation, leak hornfels with 3X spotted muscovite-biotite aggregates. 5-7Xpyrite, infore pyrhotite, minor sphalerite, galera, chalcopyrite in bands to 3cm, 7x pyrite in lower 4.5m. Sulphide bands 2 214.52m (2cm), 214.81m (2cm), 216.43m (3cm), 218.81m (3cm) 214.14-214.30 Secciated quartz veins 209.30- 212.30 FELSIC ASH TUFF Light greenygrey, strongly foliated, 1% quartz eyes to 2mm in saricitic fine grained matrix Hoderately chloritized VA14562 211.40 212.87 214.42 215.51 219.05 221.59 222.56 FELSIC ASK TUFF Light grained, massive bedded, strongly foliated, 1% quartz crystals and eyes in	CAB 66' lower contact Footwall chloritized for 20cm FELSIC ASH TUFF 4A Medium green, fine grained, messive bedded, moderately to strongly foliated, 5-10% chloritic fragments to 0.5mm, minor quartz crystals and eyes to 1mm in chloritic matrix. 10% felsic tuff intervals to 3.0m chick increasing with depth. Structure CAM foliation Moderately chloritized as thin stringers along foliation and as aggregates is matrix, weekly calcareous with microveries parallel foliation. Week hornfels with 3% spotted muscovite-bieritize aggregates. 5-7kyrite, minor pyrrhotite, minor sphalerite, galeng, chalcopyrite in bands to 3cm, 7x pyrite in lower 4.5m. Sulphide bends a 214.52m (2cm), 214.61m (2cm), 216.43m (3cm), 218.81m (3cm) 214.14-214.30 Drecciated quartz veins 209.30- 212.30 FELSIC ASH TUFF Light greenygrey, strongly foliated, 1% quartz eyes to 2mm in asricitic fine grained metrix Moderately chloritized VA14562 209.40 211.40 2.00 278 VA14563 211.40 212.87 1.47 325 VA14565 214.42 216.51 2.09 297 VA14566 216.51 219.05 2.54 VA1457 219.05 22.55 VA1457 219.05 22.	CAB 66' Lower contact footwalt chloritized for 20cm FELSIC ASK TUFF 6A Medium green, fine grained, measive bedded, moderately to strongly foliated. 5-10% chloritic fragments to 0.5cm,minor quartz crystate and eyes to 1mm in chloritic metrix. 10% fetsic tuff intervals to 3.0m chlck increasing with depth. Structure CAB foliation 60' a 211.6m,63' a 221.2m Mineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly raicareous with microveries parallel fuliation. Heak hornfals with 3% spotted macsovita-biorite aggregates. 5-7Repyrite, minor pyrrhorite, minor sphelerite, galera, chalcocyrite in bands to 3cm, 7% pyrite in lower 4.5m. Sulphide bands a 214.52m (2cm), 214.51m (2cm), 216.43m (3cm), 216.33m (3cm), 216.36.30m) 214.14-214.30 brecotated quartz verins 209.30-212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in saricitic fine grained metrix Moderately chloritized VA14565 214.62 215.51 210.02 222.56 FELSIC ASH TUFF 4A Light grey, fine grained, measive bedded, strongly foliated, 1% quartz crystals and eyes in	CAS 66' lower contact Footwalt chloritized for 20cm PELSIC ASH TUFF 6A Meditum green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloricic fragments to 0.5mm,minor guartz crystats and eyes to lash in chloritic metrix. 10% felsic tuff intervets to 3.5m chick increasing with depth. Structure LAM foliation 60' a 211.8m,63' a 221.2m Hineralization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates. 5-7Reyvite, minor pyrhotite, minor sphalerite, galena, chalcopyrite in bands to 3cm, 78 pyrite in lower 4.5m. Sulphide bands a 234.52m (2cm), 214.61m (2cm), 216.43m (3cm), 218.8m (3cm) 214.14-214.30 breceiated quartz veins 209.30-212.30 FELSIC ASH TUFF Light green/grey, strongly foliated, 1% quartz eyes to 2mm in sanicitic fine grained metrix Moderately chloritized VA14565 211.40 212.87 VA14565 212.87 VA14565 212.87 VA14565 212.87 VA14565 213.51 220.9 277 2813 0.58% 0.79% VA14565 212.87 VA14565 221.90 222.56 0.97 134 1941 1899	CAB 66' Lower contact footwall chlorized for 20cm FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10% chloricitic fragments to 0.5em,minor quantic crystate and eyes to lem in chloricic matrix. 10% felsic tuff intervals to 3.0m thick increasing with depth. Structure CAB foliation 60' a 211.8m,63' a 221.2m Minoratization & Alteration Moderately chloritized as thin stringers along foliation and as aggregates in matrix, weekly calcareous with minoreversa parallel foliation. Heak horriels with 3% spotted mancovite-biartic aggregates. S-7Reyrite, minor pyrhotite, minor sphalerite, galera, chalcagoryite in bands to 3cm, 7x pyrite in local-2.8m, 216.5m (3cm), 216	CAB 66' Lower contact footwall childritized for 20cm Z21.35 FELSIC ASH TUFF 4A Medium green, fine grained, massive bedded, moderately to strongly foliated. 5-10X childritic fragments to 0.5em, minor quartz crystate and eyes to 1m in childritis matrix. 10X felsic tuff intervats to 3.0m childritic fragments to 3.0m childritic footward for a 211.6m, 63' a 221.2m Mineralization & Alteration Moderately childritized as thin stringers along foliation and an aggregates in matrix, weakly raicareous with microverins parallel foliation. Weak hornfals with 3X spotted masocovine-bioritize aggregates. S. Topyrite, in lower 4.5m. Sulchido bands 214.52m (20m), 216.45m (2cm), 216.45m (2cm), 216.45m (3cm),	CAB 66' Lower contact footwall chloritized for 20cm PPN PPN PPN PPN PPN PPN PPN PPN PPN PP	CAS 66' Lower contact footwall thioritized for 20cm Z21.33 FELSIC ASH TUFF 4A Medium green, fine grained, measive bedded, modification and in a contact contact footwall thioritized for 20cm Medium green, fine grained, measive bedded, modification footwall footw	CAS 66' Lover contact footwall chloritized for 20cm Z21.33 FELSIC ASH TUFF 4A Medium green, fine grained, measive bedded, moderately chloritized to 15-10X Medium green, fine grained, measive bedded, moderately chloritized as thin stringers along foliation Structure AN Homeralization 4 Attention Moderately chloritized as thin stringers along foliation and as apprograte in matrix, weekly calcarenous with microverins parallel foliation. Week hornfels with 33 spotted muscovite-bioritize agregates. Sign, 74 pryite in lower 4-lim. Sign, 74 pryite in lower 4-lim. Sign, 216.43c (25m), 216.81m (25m), 216.81m (25m), 216.43c (25m), 216.81m (25m), 216.43c (25m), 216.81m (25m) Z16.14-214.30 brecriated quartz veins 209.50 - 212.30 FELSIC ASH TUFF Anderately chloritized VA16562 211.40 212.87 1.47 325 0.54X 0.50X 720 3.1 0 113 7 VA16563 211.40 212.87 1.47 325 0.54X 0.50X 720 3.1 0 113 7 VA16564 212.87 214.42 1.55 433 0.58X 0.79X 740 3.3 59 412 5 VA16565 215.01 219.00 2.21.50 0.22X 0.20X 0.21 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.4	CAS 66f lower contact focused to find a find

FALCONBRIDGE LTD

Hole # : 80-90-01

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FRON	ΤΩ	Leng. (M)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPH	MI PPM	Cu/Zn RATIO	
		Structure CAB sulphide band 70' @ 221.9m Mineralization & Alteration 7% pyrite, weakly sericitic and calcaracus.														
222.56	224.80	FELSIC ASH fuff 4A Medium grey to brown, fine grained, massive bedded, strongly foliated, 5% chlorite-sericite aggregates to 1mm, 15% mica stringers and aggregates in sericitic metrix.	VA14459	222.56	224.80	2.24	134	1704	2073	1100	1	36	172	4	6.07	
		Mineralization & Alteration 4% pyrite, weakly chloritized increasing with depth.						:	:				:			
224.60	230.00 	FELSIC ASH/DUST TUFF 4A Light grey, fine grained to aphanitic, massive bedded, strongly foliated. 1% quantz crystals and eyes to 0.5mm, 5% white eggregates (feldsper ?) in siliceous-sericitic metrix. Weak hornfels with up to 10% mica wisps to stringers parallel foliation.	VA14460 VA14461 VA14462	224.80 226.00 228.00	226,00 228,00 230,00	1,20 2,00 2,00	183 105 216	1343 1043 2575	1758 1476 2178	1100 990 980	1 0.6 1.3	48 56 57	154 212 251	5 5 5	9.43 6.64 9.02	<u> </u>
		Structure CAB 71° foliation a 228.2m Minerelization & Alteration 5% pyrite to rare ion bands with chlorite and quarts, weakly chloritic and calcareous.			:						į				•	
230.00	247.38	FELSIC ASM TUFF 4A Medium green/grey, fine grained, massive bedded, weakly folisted. 5%chlorite wisps to 0.5mm, minor quartz in sericitic-chloritic matrix.	VA14567	230.00	231.00	1.00	332	0.33%	0.37%	740	2.3	5 2	235	10	8.23	
		Structure CAB sulphide bands 66' @ 231.10m, 81' @ 236.69m, 61' @ 241.70m								: :			:			
		Mineralization & Alteration 5% pyrite, 0.5% sphalerite, minor galena and												1		

FALCOMBRIDGE LTD

Hole # : 80-90-81

FROM (M)	10 (M)	DESCRIPTION	Sempl.	FROM	10	Leng. (M)	CU PPN	PB P PN	ZN PPM	BA PPM	AG PPN	AU PPB	AS PPH	N E PPM	Cu/Zn RATIO	
		chalcopyrite in semi-massive bands to 6cm, generally less than 5mm. Moderately chloritized, local light grey bleached intervals with more felsic zones. 236.69-236.75m Massive sulphide 238.26-236.48m Multiple semi-massive bands to 6cm 241.65-241.74m Sami-massive sulphide with pyrite and chalcopyrite and minor galema and sphalerite, abrupt change to sphalerite rich in lower half.														
		231.00- 231.49 FELSIC ASM TUFF Light grey, fine grained, siliceous 10% pyrite, 3% sphalerite, 1% galena, minor chalcopyrite in semi-massive bands to 4cm. Moderately chloritized as stringers and aggregates, 1% quartz	VA14568	231.00	231.49	0.49	0.35x	1.61%	2.70%	0.05%	18.9g/t	686	2000	8	11.48	i.
		veins 232.83- 233.90 FAULT ZOME Gouge and fractured core @ 30-40',70' with chlorite and	VA145 89	231.49	233,90	2.41	592	0.47%	0.63%	770	3	66	211	5	8.59	į
:		minor calcite	VA14570 - VA14571 VA14572 VA14573 VA14574 VA14575	233,90 236,56 238,48 241,25 242,62 245,18	236,56 238,48 241,25 242,62 245,18 247,38	2.66 1.92 2.77 1.37 2.56 2.20	380 807 257 883 62 248	0.32% 1.28% 2057 1.04% 1285 2297	0.34X 1.41X 2351 1.71X 1365 2092	660 600 760 650 780 830	1.9 6.1 1.6 4.7 1 2.1	88 188 82 76 54	573 1563 310 248 202 159	6 5 5 4 4 4	10.05 5.41 9.85 4.91 4.34 10.60	
247.38	253.20	FELSIC ASH TUFF 4A Light-medium grey, massive bedded, moderately foliated. 1% quartz crystals and eyes to 0.5mm, minor chlorite-sericite wisps to 1mmm in cutaclustic altered matrix with 40% fragments to 2cm. Weak hornfels with biotice wisps and spots, often rimming shear fragments Structure	VA14576	247.35	248.38	1.00	5900	54700	63300	600	71	34	368	6	8.53	
	!	Sheared, fractured with thin gouge common parallel foliation and 40-50 CAB, local contorted foliation. CAB 761 sulphide band														

FALCONBRIDGE LTD

Hole # : 8C-90-01

PAGE: 19

FROH (M)	TO (H)	DESCRIPTION	Sampl.	FROM	το	Leng. (N)	CU PPM	PB PPM	ZN PPH	RA PPM	AG PPM	AU PPB	AS PPM	KI PPM	Cu/2n RATIO	
253.20	264.34	### Attention and Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention ### Attention #### Attention #### Attention #### Attention #### Attention #### Attention #### Attention ####################################	VA14577 VA14578	248.38 249.53	249.53 251.51	1.15	270 98	2790 772	0.50% 895	1100 1100	2.4	106 64	219 125	\$ 13	5.12 9.87	
		Structure Week cateclastic texture. CAB 72' foliation a 255.10m Mineralization & Alteration 3% pyrite, moderately sericitic increasing with depth, moderately calcareous, microveins light yellow clay-silica parallel foliation. 258.12- 260.68 MAFIC INTRUSIVE Oark green, 25% chloritic hornblende crystals to 2mm in fine grained groundmass, magnetic. Blesched child margins to 20cm. Contacts a 72' CAB														
264.34	290.83	FELSIC ASH TUFF (HORNFELS) 4A Bended to mottled grey to grey/brown, strongly foliated, 0-5% quanta crystals and eyes to lown, 40% chiorite-muscovite-biotite "ragged" porphyoblasts to 2mm, often elongate to irregular														

FALCONBRIDGE LTD

Hole # : BC-90-01

FROM (N)	(M)	DESCRIPTION	Sampl.	FROM	то	Leng. (M)	CU PPH	PB PPN	ZN PPH	8A PP#	AG PPM	AU PPB	AS PPN	NI PPM	Cu/Zn RATIO	
	·	stringers forming crude gneissic foliation locally. Magnetic 275.20-282.37m chlorite clots to 6mm														
		Structure CAB foliation 60' a 264.7m,70' a 269.8m,78' a 284.3m, locally wavy.														
		Mineralization & Alteration 3% pyrite, minor pyrhotite-increasing with depth. Weak sericitic and calcareous 286.85-287.94m quartz stockworks, veins to 2cm, bleached light green and silicified waltrock. CAB 20' veins. 290.20-290.83m quartz stockworks and brecciated fragments in strongly sericito wallrock. ZX pyrhotite and pyrite										:				
		268.96- 270.92 FELSIC DUST TUFF Light grey to green, banded								į						
		279.30- 250.10 FAULT ZOME Mainly fractured core, minor gouge CAB 70-80' fractures											:			
290.83	293.22	FELSIC TUFF BRECCIA (HORNFELS) 4C Light grey, mottled, strongly foliated, 70% felsic Lithic fragments to 4cm, poorly sorted, in felsic sericitic matrix.	i								:					
		Structure CAB foliation 76' a 292.4m CAB lower contact gouge 38'														
		Mineralization & Alteration Minor pyrrhotite and pyrite, weakly calcareous, minor quartz microveins.	i													:
293.22	306.94	FELSIC ASH TUFF 4A Medium grey/green, mottled,strongly foliated, 5% feldspar aggregates to 0.5mm, minor quartz myes and rare felsic lapilli to 2cm in saricitic-siliceous metrix. Moderately hornfels with 20% chlorite clots to 5mm and as stingers parallel foliation.												:		

FALCONBRIDGE LTD

Hale # : 80-90-01

FRON (M)	TO (N)	DESCRIPTION	Sampl.	FROM	fo	Leng. (H)	CU PPHI	PØ PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPN	NE PPM	Cu/2n RAT10	
		Structure Minor gouge and fractures @ 0-20*, CAB foliation 80* 298.1m Mineralization & Alteration Minor pyrhotite and pyrite, 2% quartz-calcite veins with thin chlorite selvages 298.67-299.50m Quartz veins and pods,bleached and carbonatized light brown wallrock altering previously brecciated intreval (latest event). 299.50-303.85m Strongly calcareous with disseminated crystals and microveins. 303.85-304.80m Bleached and silicified, light green saussaurite after chlorite closs, icm wide light brown quartz vain running length of interval (CAB 0*).														
306.94		End of hole Total amount of samples= 84 Total length sampled = 142,74M					·						:			i

HOLE NUME	BER: BC-9	0-01											GEOCHEN	. SHEET							_				Di	ATE: 26	february.	-1991
Sample	From (M)	To (M)	Length (H)	5102 ut%	TiO2 Wt%	AL203	Fe203 Ht%	NgO wt%	CaQ ut%	Na2O sw	₩t% K20	P205 ut%	Mn0 Mt%	Rb ppm	Sr paper	y ppm	Zr pp=	N i ppps	Be ppm	Cu ppm	Zn pps		Cu/Zn Ratio		ISHLKA A.I.	ALUM A.I.	ACHK A.1.	
V809651 V809652 V809653 V809654 V809655	16.00 24.00 42.00 59.00 68.00	19.00 27.00 45.00 62.00 71.00	3.00 3.00 3.00	60.09 49.80 53.85 59.83 60.38	0.49 0.61 0.58 0.46 0.54	15.75 19.62 18.84 14.89 17.20	6.02 5.36 7.89 5.92 4.62	5.16 4.39 3.61 2.68 2.72	3.55 5.70 1.96 4.39 3.79	3.22 2.58 3.04 0.32 3.15	1.50 4.05 3.56 3.61 2.19	0.06 0.08 0.07 0.06 0.08	0.07 0.08 0.05 0.09 0.06	32.0 88.0 78.0 84.0 47.0	118 217 169 177 220	20 20 20 20 20 20	90 136 111 93 110	20 20 20 20 20	428 976 983 729 729	20 62 20 20 20	61 72 94 131 43	4.34 7,36 6.35 7.38 5.02	20 62 20 20 20	0.2 0.3 0.3 4.1 0.1	50 59 57 41	190 159 220 179 188	1.2 1.0 1.5 1.2 1.2	
VB09656 VB09657 VB09658 VB09659 VB09823	81.00 90.75 105.00 117.00 120.00	84.00 93.75 108.00 120.00 122.00	3.00 3.00 3.00	58.40 62.27 53.45 61.25 56.83		20.04 17.56 19.62 16.42 15.85	5.59 6.43 9.20 5.33 7.75	2.89 0.85 1.69 5.07 5.70	1.46 0.95 1.81 1.55 1.26	5.09 0.45 1.35 0.67 0.25	2.14 4.65 4.37 3.57 3.22	0.09 0.07 0.06 0.07 0.06	0.03 0.02 0.03 0.11 0.11	45.0 107.0 113.0 80.0 81.0	133 94 210 119 98	20 20 20 20 20 20	104 93 111 89 98	20 20 20 20 20 20	866 1269 1141 1077 1004	20 24 31 20 81	52 53 52 101 1 55 0	3.95 6.07 7,71 5.56 7.01	20 24 31 20 81	0.1 1.2 0.4 1.5 62.0	43 80 66 80 86	231 290 261 284 335	1.5 2.3 1.9 2.1 2.6	
VB09824 VB09825 VB09660 VB09826 VB09661	131.00	125.00 128.00 131.00 132.40 136.13		52.39 58.18 58.13 57.82 72.53	0.61 0.50 0.56 0.56 0.37	17.25 18.03	10.05 7.88 7.77 6.69 5.97	5.83 7.44 6.23 6.35 0.35	0.45 0.51 0.30 0.42 0.46	0.13 0.01 0.10 0.01 0.01	3.52 2.55 3.26 3.62 2.95	0.07 0.07 0.07 0.06 0.04	0.11 0.13 0.10 0.11 0.03	87.0 69.0 78.0 98.0 94.0	68 40 49 32 42	20 20 20 20 20 20	123 92 73 89 75	20 20 20 20 20 20	1103 794 908 925 953	1910 56 50 24 1340	195 116 544 508 5800	6.51 6.07 6.58 5.97 4.44	1910 56 50 24 1340	15.0 116.0 54.4 508.0 5800.0	94 95 96 96 88	471 538 471 445 326	4.0 4.5 4.1 3.8 2.8	
V809662 V809827 V809663 V809828 V809829		143.85 147.00 148.90 152.00 155.00	1.90 3.10	66.36 69.41 63.91 59.72 60.10	0.45 0.42 0.46 0.52 0.52	14.30 13.23 15.32 16.08 17.11	6.64 5.59 6.51 7.36 7.22	4.39 1.12 4.60 6.36 5.03	0.52 0.98 0.69 0.49 0.30	0.01 0.01 0.01 0.01 0.01	2.56 3.20 2.97 2.66 3.45	0.06 0.04 0.07 0.07 0.06	0.14 0.06 0.15 0.19 0.10	68.0 98.0 87.0 88.0 103.0	42 51 51 37 36	20 20 20 20 20	69 80 73 93 89	20 20 20 20 20	887 1042 1055 1112 1217	228 55 34 59 54	247 57 180 1740 886	4.66 5.53 5.41 6.06 5.71		247.0 57.0 180.0 1740.0 886.0	93 81 92 95 96	463 316 417 479 455	3.8 2.5 3.4 4.0 4.0	
VB09664 VB09830 VB09831 VB09832 VB09833	176,00 180,00 183,00	176.00 180.00 183.00 186.31 190.00	4.00 3.00 3.31	61.40 58.63 64.15 63.58 56.25	0.47 0.44 0.44 0.47		6.38 7.47 6.23 6.72 9.60	5.08 7.44 6.19 5.76 10.51	0.65 0.61 0.48 0.62 0.25	0.06 0.01 0.01 0.01 0.01	3.55 2.58 2.42 2.46 1.12	0.06 0.05 0.04 0.06 0.06	0.17 0.23 0.17 0.20 0.31	710.0 90.0 82.0 72.0 42.0	53 27 22 23 20	20 20 20 20 20 20	75 79 80 86 80	20 20 20 20 20 20	1134 842 785 822 365	31 38 26 330 410	607 735 518 1110 2700	5.50 6.17 5.28 5.60 6.23	330	101.2 735.0 518.0 1110.0 2700.0	92 94 95 93 98	392 476 491 467 1059	3.3 3.9 4.1 3.8 8.7	
VB09834 VB09835 VB09665 VB09666 V809667	190.00 192.00 195.00 213.00 233.00	192.00 195.00 198.00 216.00 236.00	3.00 3.00 3.00	65.93 67.26 65.05 57.14 66.97	0.43 0.41 0.43 0.48 0.41	13,04 12,09 12,18 14,83 12,93	6.35 6.20 7.07 9.13 6.53	6.88 7.73 8.85 7.79 6.25	0.27 0.20 0.24 1.37 0.20	0.01 0.01 0.01 0.01 0.01	1,93 1,29 1,05 1,91 1,97	0.06 0.06 0.05 0.07 0.05	0.25 0.24 0.26 0.38 0.19	57.0 43.0 32.0 61.0 58.0	20 20 20 36 32	20 20 20 20 20	76 70 64 89 78	20 20 20 20 20	626 444 345 688 696	21 20 20 176 105	188 225 374 3490 845	4.65 4.54 4.66 6.08 4.51	176	188,0 225,0 374,0 3490,0 845,0	97 98 98 68 98	590 806 937 451 593	5.0 6.8 7.7 3.2 5.1	
VB09668 VB09669 VB09670 VB09671 VB09672	249.00 254.00 273.00 290.83 303.00	252.00 257.00 276.00 293.22 306.00	3.00 3.00 2.39	63.17 62.41 55.02 65.03 58.68	0.46 0.39 0.43		6.58 6.03 6.12 4.60 5.37	4,17 3,56 5,66 3,86 3,19	0.51 0.99 5.53 1,57 6.92	0.27 0.09 0.22 2.90 0.63	3.77 3.66 3.62 2.41 3.23	0.07 0.06 0.06 0.06 0.06	0.11 0.07 0.23 0.05 0.10	103.0 105.0 94.0 81.0 82.0	49 79 108 112 172	20 20 20 20 20	94 81 83 83 94	20 20 20 20 20	1265 1266 1234 735 459	77 47 41 23 27	150 169 177 65 47	5.49 6.99 6.21 3.37 6.16	77 47 41 23 27	5.6 18.8 8.1 0.2 0.8	91 87 62 56 46	338 317 163 227 141	2.6 2.6 1.1 1.5 0.9	

HOLE MUNBER: 8C-90-D1

PAGE: 1 GEOCHEM. SKEET

FALCONBRIDGE LTD DIANOND GRILL LOG Property : BIRK CREEK (1990)

Hole # : BC-90-02 Township: KAMLOOPS Lot :	Zone # : CENTRAL Range: Claim # :8!UF	F 1	BURWASH ENTERPRIS	Date started :10/	
Level : SURFACE	Section: 227+90M	Locatio	en z		
Collar coordi	Station: 407+25	E D	Latitude: 5691650 eperture: 296640).00 W Dip : -(60° 0' 0"
Reference frame			levation: 1302.	.00 Length:	236.22 N
	Surveyed	by: SPERRY-SUM			
Deviation tests :		Depth	Dip	Azimuth	
		90.52 M 142.34 M 191.10 M 218.54 M	-62* 0' 0* -64*30* 0* -61* 0* 0* -66*30* 0*	53" 0' 0" 58" 0' 0" 58" 0' 0"	
Remarks :	Water flow : Cimented :	ı	l I		Plugged: Core size: MG
	Çimentes :				COI E 3125: FM

Logged by : M. VANDE GUCHTE

Date logged:10/ 9/1990

Hole # : BC-90-02

FALCOMBRIDGE LTD

Hole # : 80-90-02

FROM (M)	TD (M)	DESCRIPTION	Sampl.	FROM	τo	Leng. (M)	₩	PB PPN	ZN PPH	BA PPM	AG PPH	AU PPS	AS PPM	H1 PPM	Cu/Zn RATIO	
0.00	16.20	OVERBURDEN D/B														
16.20	26.70	ARGILLACEOUS FELSIC ASH TUFF 4AD Fine to medium grained, medium to light grey-green. Trace to 1%, <pre>// Am quartz phenocrysts, locally concentrated to 3%. Occasional, 1-2%, less than 3cm elongated chert felsic fragments orientated parallel to foliation. Weakly chloritic-sericitic matrix with up to 5% intercalated argillaceous component and locally up to 15% as depicted by darker bands. Strongly argillaceous between 24.0-25.0 metres (increasing downhole).</pre>	VA14579 VA14580 VA14583 VA14583 VA14584 VA14584 VA14586 VA14586 VA14588 VA14588 VA14588	16.20 17.00 18.00 19.00 20.00 21.00 22.00 23.00 24.00 25.00 25.50	17.60 18.00 19.00 20.00 21.00 22.00 23.00 24.00 25.00 25.50 26.70	0.80 1.00 1.00 1.00 1.00 1.00 1.00 1.00	896 488 348 219 185 107 58 127 209 449 126	8100 1165 1305 752 1300 321 637 330 566 5200	4100 1509 1214 2123 1740 559 1474 586 1177 4400 302	810 770 820 830 820 970 840 850 750	6.9 2 1.9 1.4 2 1.1 1.1 1.5 5.8 1.2	34 32 23 26 16 44 29 12 29 33 22	81 111 63 55 66 54 37 49 80 112 47	10 11 9 12 20 14 22 31 28	17.93 24.44 22.28 9.35 9.61 16.07 5.63 17.81 15.08 9.26 29.44	
		25.25-25.30 : CHERTY FELSIC TUFFITE Fine grained, light grey, hard, with trace to 0.5% aphalarite/galena and 1-2% pyrite along upper contacts. Sharp contacts at 70 degrees to core axis.												,		
		MINERALIZATION & ALTERATION: Trace to 2% fracture controlled and disseminated pyrite with occasional up to 0.5 cm pyrite aggregates (cubes). Trace to 0.25% sphalerite and galema at 16.3m, 16.8m, 17.7m, 19.6m, 20.0m, 20.3m, 22.0m, 2.3m, 25.25m,														
		Weak to moderate pervasive sericitization														
		STRUCTURE: Faults: Z3.3m: Foult slip with gouge at 35 degrees CA8 Z4.3m: Foult slip with gouge at 40 degrees CA8 Z4.5m: 5 cm fault with gouge at 40 degrees CA8 Z4.5m: 5 cm fault with gouge at 83 degrees CA8 Z6.3m: Fault slip with gouge at 50 degrees CA8			:				:							
		Foliations: 19.0m: 70 degrees CAB 23.0m: 75 degrees CAB 26.0m: 80 degrees CAB						:								
26.70	36.60	WEAKLY ARGILLACEOUS FELSIC LAPILLI-ASH TUFF 480 Fine to medium grained, medium to light grey-green, dacitic lapilli ash tuff. Up to 25% alongated felsic fragments	VA14590 VA14591 VA14592 VA14593	26.70 27.50 28.50 29.50	27.50 28.50 29.50 30.50	0.80 1.00 1.00 1.00	426 398 296 184	729 1026 638 294	684 1071 589 313	870 960 1100 1200	2.4 2.7 1.9 1.2	26 21 23 28	91 56 72 72	7 4 6 6	38.38 27.09 33.45 37.02	
			İ													

FROM (N)	OT (M)	DESCRIPTION	Sempl.	FROM	10	Leng (H)	CU PP#	PB PPN	ZM PPM	BA PPM	AG PPN	AU B99	AS PPM	H L PPH	Cu/Zn RAT10	
		stretched parallel to foliation imparting a streak, discontinuous banded apearance. Poorly visible frament outlines. Traces to 1%, <imm &="" (gradational)="" -="" 0.25%="" 1="" 2-3%="" 3%="" 30.7-31.2m="" 30.7-31.2m:="" 37.0m:="" 5%,="" 72="" aggregates.="" along="" alteration:="" and="" argillaceous="" cab<="" chlorite.="" chloritic="" cm="" component.="" contect.="" controlled="" defined="" degrees="" disameinated="" flooding="" foliation="" fracture="" from="" galena,="" intercelated="" local="" locally="" lower="" margins.="" matrix="" mineralization="" moderately="" phenocrysts.="" poorly="" pyrite="" pyrite,="" quartz="" sericitic="" sphalerite.="" stronger,="" strongly="" structure:="" td="" to="" trace="" up="" upper="" vein="" veined="" veins="" weak="" wispy="" with=""><td>VA14594 VA14595 VA14596 VA14597 VA14599 VA14599</td><td>30.50 31.50 32.50 33.50 34.50 35.50</td><td>31.50 32.50 33.50 34.50 35.50 36.60</td><td>1.00 1.00 1.00 1.00 1.00 1.00 1.10</td><td>1368 400 131 101 150 108</td><td>2900 1683 427 275 965 289</td><td>2922 2485 736 1073 786 461</td><td>780 930 1100 1100 960</td><td>7.1 3.6 1.3 1.1 2.1 1.3</td><td>32 41 16 14 24 19</td><td>81 - 139 36 - 41 52 - 41</td><td>666786</td><td>31.89 13.86 15.11 8.60 16.03 18.98</td><td></td></imm>	VA14594 VA14595 VA14596 VA14597 VA14599 VA14599	30.50 31.50 32.50 33.50 34.50 35.50	31.50 32.50 33.50 34.50 35.50 36.60	1.00 1.00 1.00 1.00 1.00 1.00 1.10	1368 400 131 101 150 108	2900 1683 427 275 965 289	2922 2485 736 1073 786 461	780 930 1100 1100 960	7.1 3.6 1.3 1.1 2.1 1.3	32 41 16 14 24 19	81 - 139 36 - 41 52 - 41	666786	31.89 13.86 15.11 8.60 16.03 18.98	
36.60	38.50	FINE GRAIMED FELSIC ASM TUFF 4A Fine grained, medium to light grey "dacitic" ash tuff. Occasional, up to 1.5 cm, elongated cherty felsic fregments stretched parallel to foliation with up to 15% fregments over the last 0.5 metre. Weekly chloritic, traces wispy chlorite. Trace to 1% fine disseminated pyrite. MINERALIZATION & ALTERATION: 36.6-38.5: Weak to moderate pervasive senicitization.	VA14600 VA14601	36_60 37_70	37.70 38.50	1.10 0.80	144 88	338 219	434 501	980 960	1.6 1.1	22 23	55 48	7 8	24.91 14.94	
38.50	55.00	STRUCTURE: Foliation 37.0m: 72 degrees CAB. WEAKLY ARGILLACEOUS FELSIC ASH TUFF 4AO Medium grained to locally finer grained, medium to light grey-green mash tuff. Local streaky	VA14602 VA14603 VA14604	38.50 39.50 40.50	39.50 40.50 41.50	1.00 1.00 1.00	85 84 108	92 715 833	349 1680 2353	890 940 960	1 1.1 1.2	26 14 16	52 33 38	9 8 : 9	19.59 4.76 4.39	

FALCOMBRIDGE LTD

Hole # : BC-90-02

FROM (M)	10 (M)	DESCRIPTION	Sampl.	FROM	†D	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU 898	AS PPM	NI PPN	CU/Zn RATIO	
55.00	66.60	(cross-cutting foi(ation). ARGILLACEOUS FELSIC LAPILLI TUFF 480 Similar to previous from 26.7-36.8m. Fine to medium grained, medium to light grey-green/brown "dacitic" lapilli-ash tuff. Variably colour banded appearance of highly stratched lapilli fragments para(lel to foliation. Up to 25% stretched "dacitic" to ryhollic lapilli. Fragment outlines poorly defined with overall mottled-banded appearance. Sericitic/chloritic matrix with minor intercalated argillaceous component and up to 1% chlorite wisps. Rare, up to 2%, <1.5mm quartz phenocryst's. Trace - 3% fine disseminated/fracture controlled (wispy) pyrite increasing down hole. Occasional, less than 2cm wide pyrite bands or "stringers" with local chlorite developed along pyritic zones. Weak to very weak biotite development commonly associated with pyrite "wisps" (discontinuous fracture- filling pyrite).	VA14618 VA14619 VA14620 VA14621 VA14623 VA14623 VA14625 VA14626	55.00 56.50 58.00 59.50 61.00 62.00 63.00 64.50 65.50	56.50 58.00 59.50 61.00 62.00 63.00 64.50 66.60	1.50 1.50 1.50 1.50 1.00 1.00 1.00 1.00	80 77 71 114 74 599 141 101	1270 736 461 698 482 3700 362 320	1253 674 762 954 1402 483 3800 1337	1200 1100 1100 1200 1200 1200 1200 1300	1.5 1.3 0.9 1 1.2 0.9 3.9 1 1.2	32 26 30 28 39 12 60 38 33	87 55 97 82 213 54 138 60 121	555657755	6.00 10.25 8.52 10.67 5.01 10.89 3.58 14.10 7.02	
65.60	84.50	MINERALIZATION 4 ALTERATION 61.8-61.9m: Pyritic "stringers" 6% pyrite, trace - 0.25% sphalerite/traces chlorite. 63.2-63.3m: Pyritic "stringer" - 5-10% pyrite, trace - 0.25% sphalerite. 65.9m: Zem pyrite "stringer" (7% pyrite, trace sphalerite). Weak pervasive sericitization, local fracture controlled carbonate alteration. STRUCTURE Foliation: 57.0m: 64 degrees CA8. 63.0m: 75 degrees CA9. 66.0m: 74 degrees CA8. FELSIC LAPILLI - ASH TUFF 48	VA14627	66.60	68.00	1,40	63	490	654	1200	1.3	36	127	6	8.79	
60.50	84.30	Similar to previous without argillaceous component. Light to medium grey, brown, banded appearance. Up to 30%, <5cm falsic fregments strongly stretched parallel to foliation. Banded appearance - suggestive of lapilli with	VA14628 VA14629 VA14630 VA14631 VA14632	68.00 69.00 70.00 70.50 71,50	69.00 70.00 70.50 71.50 72.00	1.00 1.00 0.50 1.00 0.50	48 52 129 96 160	343 405 4700 894 1463	422 631 10400 743 3100	1200 1200 1200 1200 1200	1.1 1.2 8 1.6 2.5	37 49 88 88 75	119 163 275 2000 234	5 6 5	10.21 7.61 1,23 11,44 5,49	

FALCONBRIDGE LTD

Hote # : 8C-90-02 PAGE: 6

FROM (N)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (K)	EZJ PSPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	NL PPN	Cu/Zn RAT10	
		fragment outlines commonly obscured in the matrix. Locally up to 5-7% pyritic bands or "stringers" to 0.25% sphalerite/galena associated with "stringers" zones. Overall up to 3% fine disseminated and fracture controlled pyrite. Pyrite along fractures are often discontinuous and wispy in appearance. Traces to 1% biotite is often associated with pyritic wisps. Mineralization & Alteration: 66.6-84.5m; Weak pervasive sericitization. 70.65-70.75m; S% pyrite, trace = 0.25% sphalerite/galena. 71.6-72.0m; 2-3% pyrite, trace = 0.25% sphalerite/galena. 75.5m; 0.5cm pyrite stringer (2-3% py, trace = 0.25% galena/sphalerite.	VA14633 VA14634 VA14635 VA14636 VA14636 VA14637	72.00 73.00 74.00 75.00 75.00 76.00	73.00 74.00 75.00 76.00 77.00	1.00 1.00 1.00 1.00 1.00	41 26 24 122 83	317 224 230 1047 717	434 209 420 1486 1255	1300 1400 1400 1300 1300	1 0.9 0.8 1.5 1.4	56 46 47 56 290	158 133 134 123 2000	55554	8.63 11,06 5.41 7.59 6.20	
84.50	87.50	Fine GRAINED CHERTY FELSIC ASM TUFF 4AP Medium to light grey, fine grained, slight brecciated appearance. Moderate to well daveloped foliation. Up to 5% fine grained disseminated and fracture controlled pyrite, with trace fine grained galena. Local quartz atringers with pyrite from 85.5m to 86.3m. MIMERALIZATION & ALIGRATION: Meak pervasive sericitization. Foliation: 85.0m: 80degs CAB.														
87. 50	97.60	FELSIC LAPILLI - ASH TUFF 48 Similar to previous from 66.6-84.5m. Medium to light grey. Medium fine grained "dacitic" lapilli tuff. Up to 20% strongly stretched felsic fragments. Streaky discontinuous banded appearance with mottled fragment outlines. Up to 3% fine disseminated and fracture controlled pyrite. Pyrite along foliation fractures are often discontinuous giving a wispy appearance. MINERALIZATION & ALTERATION: Weak parvasive sericitization. Local fracture controlled carbonatization.						:								

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Hole # : BC-90-02

FROM (M)	TO (H)	DESCRIPTION	Sempt.	FROM	то	Leng. (H)	CJ PPH	PB PPM	ZK PPM	BA PPM	AG PPM	AU PP8	AS PPM	MI PPM	Cu/Zn RATIO	
97.60	102.75	STRUCTURE Foliation: 97.0m: 68 degrees CAB. Fault: 92.8-93.0m: with fouit gouge at 40 degrees CAB crosscutting foliation. 95.6m: Fault slip & 40 degrees CAB crosscutting foliation. CHLORITIC FELSIC ASH TUFF 4A Fine to medium grained, medium to light grey-green decitic ash tuff. Occassional, up to 3%, <2mm quartz phenocrysts. Weak sericitic/chloritic metrix with meak brownish, wispy biotite development. Trace to 3% fine disseminated/fracture controlled pyrite. Pyrite along frectures (micro-fractures) is often discontinuous and resembles pyritic visps. Moderate to well developed foliation.														
	i	MINERALIZATION & ALTERATION: 97.6-102.75m: Meak pervasive sericitization. 97.6-102.75m: Meak fracture controlled carbonatization. STRUCTURE Foliation:			- :						:		i	:		
102.75	110.30	V8.0m: 68 degrees GAB. INTERMEDIATE ASH TUFF 3A Fine grained, medium green-grey andesitic ash tuff with minor intercalated angillaceous component, tending to be concentrated in local darker bands. Up to 4%, <2cm strongly stretched quartz and/or quartz-carbonate clots (fragments?), and local leas than i.5cm, dark green chloritic fragments (fiammer). Yrace to 3% fine disseminated pyrite from 107.2-107.6m. Moderately chloritic - weekly sericitic fine grained matrix. Moderate to well developed foiistion.	VA14638 VA14639 VA14640	107,90 107,80 109,80	107,86 109,06 110,36	0.80 1,20 1.30	114 67 49	607 461 156	249 682 220	540 890 1200	4.2 1.5 1	207 56 45	166 40 36	455	31.40 5.95 18.22	
	1	MINERALIZATION & ALTERATION: 107.2-110.3m; up to 20% fine grained pyrite within a quartz-carbonate-chlorite attered												E		

FALCONBRIDGE LTD

Hote # : BC-90-02

FROM (M)	TD (M)	DESCRIPTION	Sampl.	FRON	τo	Leng. (M)	CV PPH	PB PPM	ZN PP#	BA PPM	AG PPM	AU PPB	AS PPM	NI PPH	Cu/Zn RATIO	
		zone 108.5-108.8m: thin, < 1 cm pyrite bands 102.75-110.3m: Weak pervasive sericitization. 102.75-110.3m: Weak fracture controlled carbonatization. 107.0-110.9m: Patchy, intense quartz - certonate chlorite alteration. STRUTURE Foliation: 104.0m: 67 degrees CAB. 106.6m: 75 degrees CAB.														
110.30	112.10	fine GRAINED MARIC INTRUSION 7R Oark green. Moderately magnetic with traces to 1% magnetite. Wesk fracture controlled/spotty (carbonate knots) carbonate. Massive, non-foliated with sharp upper and lower contacts at 38 and 52 degrees to core axis.													:	
	131,10	INTERMEDIATE ASH TUFF 3A Medium to light gray-green, medium to fine grained "endesitic-dacitic" ash tuff. Trace to 10%, less than 2cm felsic fragments, increasing downhole, occasional quartz phyric felsic fragments. Fine to medium grained sericitic/chloritic matrix with up to 7%, <1mm mottled feldspars and occasional, <3mm quartz phenocrysts. Locally, weak chlorite developed along feldspar rims, along micro fractures and as chiorite wimps. Fracture controlled quartz-carbonate and quartz-carbonate clots over the initial 3-4m. Up to 3% fine grained disseminated and fracture-controlled pyrite. Numerous discontinuous pyritic fractures (unspy appearance) becomes increasingly mottled (no distinct textures) towards the lower contact. Lesk, wimpy biotite development. Minor (<10cm) fine grained, dark green mafic intrusions (dykiets) at 118.4m, 119.1m, 119.4m.														
		MINERALIZATION & ALTERATION: 112.1-131.0m: Weak pervasive sericitization. 112.1-116.1m: Weak fracture controlled/pervasive chloritization. 112.1-116.3m: Weak fracture controlled carbonatization.											:		:	t:

FALCOMBRIDGE LTD

Hole # : BC-90-02

FROM (M)	10 (M)	DESCRIPTION	Sampt.	FROM	70	Leng. (N)	CU PPM	PB PPM	ZN PPM	BA PPN	AG PPH	AU PP8	AS PPH	N1 PPM	Cu/Zn RATIO		
		STRUTURE Foliations: 114.9m: 75 degrees CAB. 121.0m: 73 degrees CAB. 125.0m: 70 degrees CAB. 130.2m: 60 degrees CAB.															
131.10	145.85	HORMFELSED INTERMEDIATE FELDSPAR PHYRIC ASH TUFF 3 Mottled, spotty appearance, medium green-grey, medium to coarse grained. Up to 12%, 1-6mm (average 2mm) chloritic spots (altered feldspars?). Remmant, (2-3%, <2mm) evidence of feldspars with chloritic rims. Rare, up to 1% locally, <3mm quartz phenocrysts. Overall, massive-moderately well foliated with no distinguishable primary taxtures due to hornfelsing. Traces pyrite with local pyrhotite at 134.5m, 142.34m. Fine grained, dark green, magnetic, thin hornfelsed mafic dyklets (<20cm) at 134.35-135.15m, 140.0-140.1m. MINERALIZATION & ALTERATION:	 AB 		1		1	1	I	1	I	•	1	I	1	1	
•		Ronnfelsing - spotty to fracture controlled chloritization. STRUTURE Foliation: 139.0m: 62 degrees CAB. 145.0m: 68 degrees CAB.															
146.85	152.55	HORNFELSED INTERMEDIATE ASM TUFF 3A Similar to previous but lacks sporty chlorite except as local patches from 148.35-148.5m, 149.05-150.2m, Overell, medium green-grey, fine to medium greined hornfelsed asm tuff. Up to 5%, <zmm &="" (quartz-combonate="" (some="" -="" 0.5%="" 148.45m.="" 150.55-151.0="" alteration)="" alteration:="" and="" at="" bleached="" bornfelsed:="" boudinaged)="" chloritic="" controlled<="" disseminated="" distinct="" feldspar="" foliated.="" fracture="" from="" massive="" matrix.="" metres.="" mineralization="" minor="" moderate="" moderately="" mottled="" patch="" phenocryst.="" poorly="" pyrhotite="" pyrite="" quartz="" stringers="" td="" to="" trace="" traces="" visible="" weak="" weak-moderately="" well="" with=""><td></td><td></td><td></td><td>:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></zmm>				:											

FALCONBRIDGE LTD

Hole # : 80-90-02

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng (M)	. 44 E	PB PPM	ZM PPM	BA PPH	AG PPH	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO		
152.55	157.30	chloritization. STRUTURE Foliations: 154.0m: 73 degrees CAB. HORNFELSED INTERMEDIATE FELDSPAR PHYRIC ASH TUFF 3	AB 1				·····					ı	:: 1	1		1	
		Similar to previous from 131.0-146.85m. Mottled, spotty appearance, medium green-grey, medium to coarse grained. Probable intermediate feldspan phyric ash tuff. Up to 15%, 16mm (average 2mm) chioritic spots. Minor quartz stringers and boudinaged quartx stringer (clots). Trace pyrrhotite and pyrite with quartz stringers.	,	:	'		, !			•	•	,	,	•			
		NIMERLIZATION & ALTERATION: Normfelsed - spatty to fracture controlled chloritization.			1										i		
157.30	160.63	NORMFELSED INTERMEDIATE ASH TUFF 3A Fine to medium grained, medium graen/gray, probable intermediate ash tuff. Chloritic matrix with chlorite development along micro fractures. Traces pyrite usually as cubes. Minor quantz stringers.			i.										:		
		MINERALIZATION & ALTERATION: Hornfelsed: moderate fracture-controlled chloritization.		•													
		STRUTURE Foliations: 160.0m: 70 degrees CAB.		!	!						 						
160.63	163.90	HORMFELSED QUARTZ-FELOSPAR PHYRIC INTERMEDIATE 3AC ASM TUFF Medium to coarse grained, medium green-grey probable intermediate Lapilli ash tuff. Up to 10%, 1-3mm quartz phenocrysts and 1-5%, <1.5mm chiorite altered feldaper phenocryst. Less than 8% Lapilli fragments. Evidence of fragments are vaguely outlined in medium grained enhoritic matrix. Massive to poorly developed foliation. Traces pyrite. Minor (<2%) quartz cerbonate stringers crosscutting foliation.										1 				' 	

FALCONBRIDGE LTD

Hole # : BC-90-02

FROM (M)	TD (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU: PPB	AS PPM	NI PPN	Cu/Zn RATIO	
		Hornfelsed: weak to moderate pervasive chioritization.											-		:	
163.90	168,30	HORNFELSED INTERMEDIATE ASH TUFF 3A Medium grained chloritic matrix, medium - dark green probable intermediate ash tuff. Trace - 2% <2mm quartz phenocrysts and up to 5%, <1mm remnant feldspar phenocrysts. Occasional up to 3cm chloritic fragments. Traces pyrite. Minor (<1%) quartz-carbonate stringers. Massive appearance, poor to moderately well developed foliation. Mineralization & Alteration:														
		Mineralization & Alteration: Mornfelsed: moderate pervasive chloritization.														
168.30	175.30	HORNFELSED INTERMEDIATE ASH TUFF 3A Similar to previous from 160,63-163.9m with local spotty texture. Medium grained, medium grey-green, chloritic matrix. Up to 5%, <3mm grey-green, chloritic matrix. Up to 5%, <3mm quertz phenocrysts and up to 7%, <1mm partially altered (chlorite) feldsper phenocrysts. Weak evidence of less than 2cm, strongly scretched felsic fragments. Spotty hornfelsing over the first metre. Trace pyrite overall with local quartz veins/stringers over the last 2.5 metres. MINERALIZATION & ALTERATION: Hornfelsing: moderate pervasive-spotty chloritization. 174.1-174.2m: quartz vein with 3-4% pyrite/pyrrhotite and 0.3% sphalerite. 174.5-174.6m: qtz vein with 2% pyrite-trace pyrrhotite.														
		STRUTURE Foliations: 169.0m: 67 degrees CAH.														
175.30	198.20	QUARTZ-FELDSPAR PHYRIC FELSIC ASK TUFF 3AC Variobly chloritized felsic man tuff. Medium green-grey (chloritic) to a light grey-greenish tinge over less chlorite altered horizons from 181.97-184.3m, 196.4-197.92m. Gradational alteration change over several centimaters. Up to 10%, 1-3em quartz phenocrysts throughout and 5-10% less than 1mm weak to moderately eltered														

FALCONBRIDGE LTD

Hole # : 80-90-02

PAGE: 12

FRON (M)	TC (M)	DÉSCRIPTION	Sampi.	FROM	10	Leng. (M)	CU PPM	PB PPN	ZN PPN	BA PPM	AG PPH	AU PPB	AS PPM	N E PPN	Cu/2n RATIO	
		(chlorite) feldsper phenocrysts. Overall weak to moderately chloritic fine grained matrix. Less than 2% quartz and/or carbonate stringers — locally boudinaged. Trace to 1% fine disseminated pyrite with local tubes (2-3mm). Overall massive unit with poor to moderately well developed foliation.														·
		MINERALIZATION & ALTERATION 175.3-181.97m: weak to moderate pervasive chloritization. 184.3-196.4m: weak to moderate pervasive chloritization. 197.92-198.2m: weak spotty - pervasive chloritization.														
		STRUTURE Foliation: 176.0m: 75 degrees CAB. 185.2m: 82 degrees CAB. 191.0m: 75 degrees CAB. 195.8m: 75 degrees CAB.														
1 98.2 0	214,90	MORNFELSED - SPOTTY INTERMEDIATE ASH TUFF 3A Chlorite altered (hornfelsed) "dacitic" ash tuff. Medium grained, medium to light green-grey. Overall spotty, discontinuous banded appearance with no distinctive primary textures. Meak to moderate chloritic matrix with local poorly developed chlorite stringers and spotty chlorite developed. Weak to moderately well developed foliation. Up to 1% quartz - carbonate stringers throughout. Traces - 1% fine disseminated pyrite.														
		MINERALIZATION & ALTERATION: Weak to moderate pervasive chloritization. STRUTUAE Foliations: 203.Dm: 79 degrees CAB. 210.Dm: 76 degrees CAB.														
214.90	225,90	HORNFELSED GUARTZ - PHYRIC INTERMEDIATE ASH TUFF 3. Variably chloritic, fine grained, medium green to light green-grey, with brownish tinge andesitio/decitic ash tuff. Up to 7%, 4mm quartz	<u>.</u> ,	 	 1 	 	I	 	1	 	1		1	 1	 	

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FALCONBRIDGE LTD

Hole # : BC-90-02

FROM (M)	TO (M)	DESCRIPTION	Sampi.	FROM	10	Leng. (H)	ED CO	P8 PPM	ZN PPM	BA PPM	AG : PPM	AU PPB	AS PPN	HI PPH	Cu/Zn Q1TAR	
		phenocrysts (quartz eyes), 3-5%,														

FALCOMBRIDGE LTD

Hole # : BC-90-02

FROM (M)	TO (H)	DESCRIPTION	Sampl.	FROM	Τū	Leng (X)	CU PPM	PB . PP M	ŽN P PM	BA PPM	AG PPM	AU PPB	AS PPM	NE PPH	Cu/2n RATIO	
		Total emount of samples= 62 Total length sampled = 64.10M				!										i
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HOLE MANBER: BC-90-02

GEOCHEN. SHEET

DATE: 26-February-1991

Sample	From (N)	To (M)	Length (M)	Sio2 ut%	T102	M1X	Fe203 vt%	MgO wt%	CaO wt%	N#20 #t	K20 wt%	P205 wtX	HnO utX	Rb ppm	Sr ppn	У Р	Zr ppm	M) ppm	84 ppm	Ppn Cu	Zn ppm	LO1 wtX	Cu/2n Retio	Zn/He Retio		ALUM A.I.	ACNK A.1.
VB09676	19.00	22.00	3.00	63.77	0.44	14.37	8.39	5.16	0.62	0.01	2.32	0.06	0.15	56.0	31	21	85	20	890	145	534	4.82	145	534.0	92	487	3.9
V809677	27.00	30.00	3.00	70.32	0.41	14.04	5.64	2.54	0.38	0.02	2.91	0.04	0,09	79.0	39	20	78	20	1257	172	376	3.67	172	188.0	93	424	3,6
VB09678	36.60	38.50	1.90	65.75	0.43	14.79	7.33	4.17	0.39	0.01	2.72	0.05	0.15	76.0	33	20	92	20	1120	105	427	4,30	105	427.0	95	474	4.0
VB09679	38.50	41.50	3.00	66.62	0.46	15.49	6.03	3.73	0.61	0.09	3.08	0.05	0.13	88.0	46	20	85	20	1175	61	806	3,96	61	89.6	91	410	3.4
VB09680	55.00	58.00	3.00	62.27	0.50	16.29	6,30	4.66	2.41	0.13	3.25	0.06	0.29	90.0	58	26	66	20	1230	40	683	3.98	40	52.5	76	281	2.0
V809681	67,00	70.00	3.00	55.81	6.44	14,66	9.64	4.66	3.72	0.09	3,18	0.06	0.26	77.0	65	20	71	20	1250	54	1030	6.30	54	114.4	67	210	1.4
V809682	84.50	87.50		55.35	0.61	18.29	6.70	8.55	1.15	0.07	2.94	0.08	0.12	78.0	60	20	95	20	1333	27	204	6.40	27	29.1	90	440	3.4
V809683	91.00	94.00	3.00	58.77	0.52		7.29	5.66	1.78	0.08	3.25	0,08	0.11	80.0	64	20	90	20	1251	23	121	5.78	23	15.1	83	319	2.4
VB09684	98.00	101.00		64.43	0.41	15.58	5.43	4.50	3.74	0.14	3,11	0.05	0.15	77.0	100	20	94	20	1139	23	164	2.59	23	11,7	66	223	1.5
VB09685	104.00	107.00	3.00	64.12	0.41	15.17	5.54	4.07	3.14	1.96	2.30	0.05	0.15	53,0	95	20	92	50	1118	69	260	3.22	69	1.3	56	205	1.3
VB09686	118,00	121.00	3.00	65.18	0.38	15.28	4.87	3.62	2.90	2.69	2.09	0.05	0.09	61.0	99	20	105	20	942	24	100	3.10	24	0.4	51	199	1.3
VB09687	138,00	141.00	3.00	61.01	0.42	15.61	5.54	3.10	4.51	2.62	2.82	0.05	0.11	75.0	130	50	82	50	961	37	48	4.17	37	0.2	45	157	1.0
VB09688	160.70	163.70	3,90	58.06	0.42	15.01	5.53	2.85	6.16	1.08	2.56	0.05	0.09	66.0	143	50	89	20	751	63	52	7,75	63	0.5	43	153	1.0
VB09689	182.00	184.00		53.97	0.43	15.45	4.98	2.85	6.34	0.01	2.13	0.06	0.10	59.0	139	20	61	50	334	20	32	13.35	20	32.0	44	182	1.1
VB09690	191.00	194.00	3.00	59.68	0.42	15,39	5.45	2.62	5.66	1.16	3.47	0.05	0.05	96.0	164	20	97	20	522	56	39	5.61	56	0.3	47	150	1.0
VB09691	203.00	208.00	3.00	60.42	0.42	15.49	5.20	2.63	4.79	1.52	2.54	0.06	0.07	66.0	136	20	88	20	581	20	42	6.83	20	0.3	45	175	1.1
VB09692	220.00	223.00	3.00	60.23	0.40	15.31	5.51	2.91	5.24	0.96	2.71	0.05	0.09	68.0	123	20	91	20	539	20	41	6.39	20	0.4	48	172	1.1
V809693	226.00		3.00	62.94	0.47		5.84	3.61	2.58	0.64	1.76	0.06	0.08	79.0	109	20	93	20	814	21	40	5,13	21	0.6	63	309	2.0

GEOCHEM. SHEET

FALCONBRIDGE LTD DIAMOND DRILL LOG Property : BIRK CREEK (1990)

	Hole #: 8C-90-03 Township: KANLOOPS Lot : Range:	Claim # :BET 1	Contractor : SURWASH ENTERPO	RISES Date started :10/10/1990 Date completed:10/12/1990	
	Levet : SURFACE Sec	tion: 220+05N	Location :		
	Coller coordinate :	Line : 220+05 k Station: 402+75 E	Latitude: 5690; Departure: 296; Elevation: 11;	680.00 E Dip : -55° 0' 0'	
		Surveyed by	y: SPERRY-SUN		
-	Deviation tests :	_	Depth Dip	Azimuth	
			93.50 M -57°30° 0° 137.16 M -62° 0° 0° 203.30 M -67°30° 0°	53° 0' 0" 48° 0' 0"	
•					
Remarks :		er flow: mented:			Plugged: Core size: NG

Logged by : A. D. MCLAUGHLIN

Date logged:10/12/1990

Hole # : 8C-90-03

FALCOMBRIDGE LTD

Hale # : BC-90-03

(H)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	PP#	PB PPM	ŽN PPM	BA PPM	AG PPM	AU PPB	ZA M4q	N I PPM	Cu/Zn RAT JO	
6.71	OVERBURGEN C/B														
14.39	FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Minor quartz eyes to 1mm, locally to 10% white maggergates or wisps (feldspar?) to 2mm, possible lapill with chlorite wisps to stringers 5mm thick parallel foliation in sericitic metrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive.												:		
	Structure: Frectured and rubbly core parallel to foliation common. CAB - Foliation 45' a 6.80m CAB - Foliation 60's 11.40m														
	8.20- 10.00 INTERMEDIATE INTRUSIVE Medium green-grey, fine grained, equigranular. Moderately foliated, 10% green mefic crystalm in light grey feldspar rich groundmess.			;			:								
•	Mineralization & Alteration: Noderately weathered,minor pyrite MR Unit possible flow rock.										ı				
:	13.60- 14.20 FAULT ZONE Sheer foliation @ CAB 58. Chiorite stringers,3% pyrite and pyrrhotite.														
17,00	ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and felsic tuff, 40% dark grey argillite bands to stringers with 60% light grey felsic ash-dust tuff as elongate fragments to beds 1x3cm, 0-5% quantz eyes, <1mm, 2% mice					;									
	14.39	FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Minor quartz eyes to 1mm, locally to 10% white magacrates or wisps (feldspar?) to 2mm, possible lapilli with chlorite wisps to stringers 5mm thick parallel foliation in sericitic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common, CAB - Foliation 45' a 6.80m CAB - Foliation 60'a 11.40m 8.20- 10.00 INTERNEDIATE JHTRUSIVE Medium green-grey, fine grained, equignenular. Moderately foliated, 10% green medic crystalm in light grey feldspar rich groundmess. Mineralization & Alteration: Noderately weathered,minor pyrite NB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Sheer foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrchotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and felsic tuff. 40% dark grey argillite bends to atringers with 60% light grey felsic ash-dust tuff as elongate fregments	FELSIC ASH TUFF 4A Medium brown, fine grained, massive bedded, strongly foliated, strongly weathered. Minor quartz eyes to lum, locally to 10% white magargates or wisps (feldspar?) to 2mm, possible lapilli with chlorite wisps to stringers Sum thick parellel foliation in sericitic metrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and mubbly core parallel to foliation common, CAB - Foliation 45' # 6.80m CAB - Foliation 60'# 11.40m 8.20- 10.00 INTERMEDIATE IMTRUSIVE Medium green-grey, fine grained, equigranular. Moderately foliated, 10% green medic crystals in light grey feldspar rich groundmass. Mineralization & Alteration: Moderately weathered,minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Sheer foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrrhotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and felsic tuff. 40% dark grey argillite bends to atringers with 60% light grey felsic ash-dust tuff as elongate fregments	FELSIC ASH TUFF 4A Madium brown, fine grained, massive bedded, strongly foliated, strongly weathered. Minor quartz eyes to 1mm, locally to 10% white magargates or wisps (feldspar?) to 2mm, possible lapitli with chlorite wisps to stringers Smm thick parallel foliation in sericitic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common. CAB - Foliation 45' a 6.80m CAB - Foliation 60's 11.40m 8.20- 10.00 INTERMEDIATE JHTRUSIVE Hedium green-grey, fine grained, equigranular. Moderately foliated, 10% green mafic crystalm in light grey feldspar rich groundmass. Mineralization & Alteration: Noderately weathered, minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Shear foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrrhotite. ARGILLITE/FELSIC TUFF 51/AA Light to dark grey, thinly banded, fine grained. Sheared argillite bands to atringers with 60% light grey felsic ash-dust tuff as elongate fragments	FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Minor quartz eyes to imm, locally to 10% white magargates or wisps (feldspar?) to 2mm, possible tapilli with chlorite wisps to stringers Simm thick parellel foliation in sericitic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Freatured and nubbly core parallel to foliation common, CAB - Foliation 45' a 6.80m CAB - Foliation 45' a 6.80m CAB - Foliation 45' a 6.80m CAB - Foliation 45' a 6.80m CAB - Foliation 45' a 6.80m CAB - Foliation 50's 11.40m 8.20- 10.00 INTERMEDIATE IMTRUSIVE Medium green-grey, fine grained, equignanular. Moderately foliated, 10% green medio crystalm in light grey feldspar rich groundmess. Mineralization & Alteration: Moderately weathered, minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Shear foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrchotites. 17.00 ARGILLITE/FEUSIC TUFF 51/AA Light to dark grey, thinly banded, fine grained. Sheared argillite bands to stringers with 60% light grey fesic ash-dust tuff as elongate fragments	FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Minor querte yees to limm, locally to 10% white magargates or wisps (feldspar?) to 2mm, possible lapility with chlorite wisps to stringers Smm thick parallel foliation in sericitic metrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common, CAS - Foliation 45' a 6,80m CAB - Foliation 45' a 6,80m CAB - Foliation 60'a 11.40m 8.20- 10.00 INTERMEDIATE JHTRUSIVE Medius green-grey, fine grained, equigranular. Moderately foliated, 10% green medic crystals in light grey feldspar rich groundmass. Mineralization & Alteration: Moderately weathered,minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Shear foliation il CAS 58. Chlorite stringers, 3% pyrite and pyrchotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and felsic tuff, 40% dark grey angillite bands to stringers with 60% light grey felsic sab-dust tuff as elongate fromements	FELSIC ASH TUFF 4A Madium brown, fine grained, massive bedded, strongly foliated, strongly weathered. Minor quartz eyes to imm, locally to 10% white magargates or wisps (feldspar?) to 2mm, possible lapitli with chlorite wisps to stringers Smm thick parallel foliation in sericitic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankeriter, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common. CAB - Foliation 45: 3 6.80m CAB - Foliation 45: 3 6.80m CAB - Foliation 45: 3 6.80m CAB - Foliation 45: 3 6.80m CAB - Foliation 50: 3 11.40m 8.20- 10.00 INTERNEDIATE JMTRUSIVE Medium green grey, fine grained, equigramular. Moderately foliated, 10% green medic crystals in light grey feldspar rich groundmass. Mineralization & Alteration: Moderately weathered,minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Sheer foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrrhotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and felsic tuff. 40% dark grey argillite bands to atringers with 60% Light grey felsic sab-dust tuff so elongate fregments	fELSIC ASM TUFF 4A Medium brown, fine grained, measure bedded, strongly foliated, strongly weathered. Minor quartz eyes to imm, locally to 10% white magarates or wisps (feldspar?) to Zmm, possible lapilli with chlorite wisps to stringers Smm thick parallel foliation in sericitic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common. CAB - Foliation 45° a 6.80m CAB - Foliation 45° a 6.80m CAB - Foliation 45° a 6.80m CAB - Foliation 45° a 11.40m 8.20- 10.00 INTERNEDIATE JHTRUSIVE Medium green-grey, fine grained, equigeanular. Redorately toliated, 10% green medio crystalm in light grey feldspar rich groundmass. Mineralization & Alteration: Noderately weathered,minor pyrite MB Unit possible flow rock. 13.60- 14.20 Shear foliation & CAB 58. Chiorite stringers, 3% pyrite and pyrrhotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheared argillite and falsic tuff, 40% dark grey argillite bands to atringers with 60% light grey falsic sub-dust tuff as elongate fragments	74.39 FELSIC ASH TUFF 4A Madium brown, fine grained, massive bedded, strongly foliated, strongly weathered. Hinor quartz eves to lime, locally to 10% white segerates or wisps (feldspar?) to Zwa, possible lapitli with chlorite wisps to stringers Simm thick parallel foliation is sericitic metrix. Mineralization 4 Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and nubbly core parallel to foliation common. CAS - Foliation 43° a 6.80m CAS - Foliation 50° and 50° an	14.39 FELSIC ASH TUFF 4A Madium brown, fine grained, massive bedded, strongly foliated, strongly weathered. Minor quartz eyes to lime, locally to 10% white magersates or misps (feldspar?) to Zha, possible lapilli with chlorite wisps to stringers Sime thick parsitel foliation in serictic matrix. Mineralization 4 Alteration: Strong rust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation common, CAS - Foliation 43° a 6.80m CAS - Foliation 43° a 6.80m CAS - Foliation 60° all.40m 8.20- 10.00 INTERMEDIATE INTRUSIVE Medius green-grey, fine grained, equigranular. Moderately foliated, 10% green medicaper rich groundmass. Mineralization & Alteration: Noderately weathered,minor pyrite NS Unit possible flow rock. 13.60- 14.20 FAUL ZONE Sheer Foliation al CAS 58. Chiorite stringers,3% pyrite and pyrrhotite. 77.00 ABGILLITE/FELSIC TUFF 51/AA Light to dark grey, thinly banded, fine grained. Sheared argillite and felsio tuff. 40% dark grey argillite bands to atringers with 60% (1ght grey felsio she-dust tuff to se clongate fragments	14.39 FELSIC ASH TUFF 4A Medium brown, fine grained, measaive bedded, strongly foliated, strongly weathered. Minor quartz eyes to lims, locally to 10% white magargates or wisos (feldapar?) to Zums, possible lapilli with chlorite wisps to stringers Som thick parallel foliation in sericitic matrix. Mineralization & Alteration: Strong crust along foliation and disseminated after ankerite?, locally pervasive. Structure: Fractured and rubbly core parallel to foliation aby a 6.80m CAB - Foliation 60° a 1.60m CAB - Foliation 60° a 1.60m B.20- 10.00 INTERNEDIATE INTRUSIVE Medium green-grey, fine grained, squigranular, Moderately foliated, 10% green mediu crystals in Light grey feldspar rich groundmess. Mineralization & Alteration: Moderately weathered,minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZONE Shear foliation & CAB 58. Chlorite stringers, 3% pyrite and pyrrhotite. 17.00 ARGILLITE/FELSIC TUFF 51/4A Light to dark grey, thinly banded, fine grained. Sheard argillite and felsic tuff. ACM, dark grey argillite bands to atringers with 60% (ight grey argillite bands to atringers with 60% (ight grey argillite bands to atringers with 60% (ight grey felsics shoulast tuff see clongate frequents	14.39 FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Minor quartz eyes to lim, locally to 10% white magergates or visigs (feldspare?) to Zim, possible lapilli with chlorite wisps to stringers Sim thick parallel foliation in sericitic matrix. Mimeralization & Alteration: Strong rust along foliation and disseminated after ankeritet, locally pervasive. Structure: Frentured and rubbly core parallel to foliation common, CAB - Foliation 60'p 11.40m 8.20- 10.00 INTERMEDIATE JUTRUSIVE Medium greengrey, firm grained, equigarantar, Medicately foliated, gragners medic cretal on light trey feldspar rich groundmass. Mimeralization & Alteration: Moderately weathered,minor pyrite MS Unit possible flow rock. 15.60- 14.20 FAULT ZONE Shear foliation a CAB 58. Chlorite stringers, 3% pyrite and pyrrhotits. 17.00 ABBILLITE/FELSIC TUFF SI/AA Light to dark grey, thinly banded, fine grained, Sheared argillite and felsic tuff. 40% dark grey argillite bands to atringers with 60% Light grey fastic sarb-dust tuff as elongate fregments	14.39 FELSIC ASH TUFF 4A Medium brown, fine grained, messive bedded, strongly foliated, strongly weathered. Rinor quartz eyes to imm, locally to 10% white magnerates or wisso (feldspart) to 2mm, possible lapiti with chlorite wisps to stringers Sime whick parelled foliation in sericitic matrix. Mineralization & Alteration: Strong reat along foliation and disseminated after ankeriter, locally pervasive. Structure: Fractured and mubbly core parallel to foliation common. CAS - foliation 53 = 6.80m CAS - foliation 63 = 6.80m CAS - foliation 63 = 6.80m CAS - foliation 63 = 6.80m CAS - foliation solia illustrative Medium greengrey, fine grained, equigramular, Medorately foliated in light grey feldspar rish groundmass. Rineralization & Alteration: Moderately weathered, minor pyrite MS Unit possible flow rock. 13.60 - 14.20 FAULT ZONE Sheer foliation & CAS SS. Chiorite stringers, 3% pyrite and pyrrholite. 17.00 AMSILITE/SELIST UFF 51/AA Light to dark grey, thinly banded, fine grained, spread argititite and felsic tuff. 40% dark grey argititite bands to stringers used.	FELSIC ASH TUFF (A Medium brown, fine grained, measive bedded, strongly foliated, strongly weathered. Minor quartz eyes to imm, localty to 10% white eggermates on visuage feldipart) to 2mm, pasable that the felding feldipart) to 2mm, pasable that the felding feldipart) to 2mm, pasable that the felding feldipart) to 2mm, pasable that the felding feldipart) to 2mm, pasable that the felding feldipart is referred. Mineralization 4 Alteration: Strong runa along foliation and disseminated after ankeriter, localty pervasive. Structure: Frequency and inably core parallel to foliation common. CAB - Foliation 35: a 6.80m CAB - Foliation 30: a 1.40m 8.20- 10.00 INTERMEDIATE INTRUSIVE Medium green-grey, fine grained, equippemoliate Medicated crystals in light grey feldsper rich groundmess. Mineralization 4 Alteration: Moderately weathered, minor pyrite MB Unit possible flow rock. 13.60- 14.20 FAULT ZOME Sheer foliation B CAB 58. Chiorite stringers, 3% pyrite and pyrchotite. 17.00 AMBILITE/FERSIC TUPF. 51/AA Light to deak grey, thinly banded, fine grained. Sheer days little and feliate turff, 4.0% dark grey angilittle bends to attringers with 60% Light grey refsic sab-value turff as a longer fragments	FELSIC ASH TUFF 4A Medicum brown, fine grained, measure bedded, strongly foliated, strongly weathered. Hinor quartic eyes to lim, locally to 10% white magaratics of visings (feldspart) to Dam, possible tagettal the final to Dam, possible tagettal the final to Dam, possible tagettal the final to inserictic matrix. Mineralization & Alteration: Strong rust along foliation and disseminated after ankerie?, locally pervasive. Structure: Insectured and rabbly core parallel to foliation common. CAB - Foliation 451 a 6.80m CAB - Foliation 451 a 6.80m CAB - Foliation 451 a 6.80m CAB - Foliation 451 a 6.80m CAB - Foliation 451 a 6.80m CAB - Indiation 451 a 6.80m CAB - Indi

FALCOMBRIDGE LTO

Hole # : BC-90-03

FROM (M) TO (M) DESCRIPTION Sampl. FROM (M) TO (M) Long. (D) PB ZN (M) BA (M) AG (M) AU (M) (PM) <	AS PPM		Cu/Zn RAT10	
fulses 0.25em sin sericitic-silicrous felsic metrix, angillite most common in unit centre. 16.43-14.49e: Cherry Tuff Mineralization & Alteration: 16.63-14.49e: Cherry Tuff Mineralization & Alteration: 16.63-14.49e: Cherry Tuff Mineralization & Alteration: 17.00 20.42 (in lower 50cm, 3X quart veries in lower 50cm with minor galetes and sphalarite. Structure: 18.60	90 284	0 20 30	4.33	

FALCONBRIDGE LTD

Hate # : BC-90-03

FRON (H)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPM	AG P PH	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	L
		Mineralization & Alteration: Semi-messive sulphides with pyorhotite, pyoite, minor calcopyrite, sphalerite. Strongly chloritized hangingwall for 5cm and fotuall for 13cm.														
20.42	23.85	FELSIC ASK-DUST TUFF 4AR Light grey to dark gray. Strongly banded light grey felsic dust to ash tuff in siliceous to sericitic metrix, 0-10% quartz crystals generally <0.5mm, argillite occurs as stringers to bends or metrix to felsic fragments, possible cherty tuff bands or fragments to 3cm in lower 20cm.	VA14453	20.42	21.92	1.50	187	395	1764	860	1	50	103	46	9.58	
		Mineralization & Alteration: 1-2% pyrite,20% pervasive limonite altered zones to 48cm, 1% quantz vains to 5cm often fractured.		'												
		Structure: Strongly careclastic texture CAB - foliation 66' @ 20.70m CAB - foliation 55' @ 23.30m														
23.85	35.89	FELSIC LAPILLI TUFF 48 Light grey, massively bedded, strong foliated 1-10% 2cm thick quertz crystal phyric felsic lapilli fragments, 5-15% chlorite-sericite elongate aggregates to 10mm, 2% quertz crystals <1mm in fine grained aphanitic siliceous-sericitic matrix, mainly felsic ash tuff in lower 3m (gradational).														
:		Mineralization & Alteration: 0.5% disseminated wispy pyrite, weak sericite. 10% disseminated ankerite crystals to imm. 15% pervasive limonite zones to 60cm, locally extending from fractures, common in broken and rubble core. 24.7-25.2m: Quartz vein, rusty, sericita altered wallrock fragments. Bleached and sericitized sericitized wallrock for 30cm. 31.6-37.2: Weak spotted chlorite hornfels and along fractures.														

FALCOMBRIDGE LTD

Hole # : 8C-90-03

PAGE: 5

FROM (H)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (M)	CU PPM	PB PPM	ZM	BA PPN	AG PPM	AU PP8	AS PPM	N] PPM	Cu/Zn RATIO	
38.89	44.65	Structure: CAS - foliation 60' 2 26.2m CAS - foliation 59' 2 33.5m Broken core common with Limonite. GUARTZ PHYRIC FELSIC ASM TUFF 4AA Light grey to brown-green. Massive bedded, strong foliation. 5-20% round-elongate, quartz eyes <1mm, rarely 4mm, in fine grained-aphantic sericitic-siliceous matrix. 41,35-41,43m Cherty Tuff			15											
•		Nineralization & Alteration: Strong pervasive Limonite alteration with chlorite wisps, stringers and after fragments, approximately 80% of unit. Structure: Strong cataclastic texture with up to 40% fragments in fine grained groundmass. LAB-foliation 55° à 43.2m. CAB-foliation 67° à 44.3m. Broken core, minor gouge commonly with Limonite and chlorite altered zones.														
44.65	52.83	ARGILLITE 5IM Dark grey,strongly foliated. 40% light grey siliceous felsic dust-ash tuff round-elongate and angular fragments to 2cm wide, in argillite groundmass, rare band of felsic tuff to 30cm. Mineralization & Alteration: Minor pyrrhotite, pyrite, strongly graphitic, 1% quartz veina and pods, weak sericite after larger felsic fragments. 50.66-50.84mm Semi-massive pyrrhotite with quartz veins, siliceous wallrock. Structure:	VA14454 VA14455 VA14456 VA14366	44.65 46.65 48.65 50.65	46.65 48.65 50.65 52.83	2.00 2.00 2.00 2.18	140 : 87 : 72 : 294	132 57 30 141	370 230 179 333	1190 850 990 740	0.9 0.6 0.4 1.3	8 7 3 13	3 14 27 309	42 45 50 60	27.45 27.44 28.69 46.89	

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FALCONBRIDGE LTD

Hote # : BC-90-03

FROM (M)	TO (N)	DESCRIPTION	Sempl.	FROM	τα	Leng. (N)	CU P PM	PB PPM	ZN PPM	BA PPM	AG PPN	AU BPB	AS PPM	NI PPM	Cu/Zn RATIO	
52.63	68.15	INTERMEDIATE ASM LAPILLI TUFF 3A Medium green, coarse grained, massive bedded. Strongly foliated, 5-20% alongate chlorite aggregates 46mm locally to 10mm, 1% quartz eyes <tam: aphanitic="" fine="" grained="" in="" matrix.<="" sericitic="" siliceous="" td="" to="" weak=""><td>VA14367 VA14368</td><td>52.83 55.00</td><td>55.00 57.00</td><td>2.17 2.00</td><td>439 121</td><td>682 88</td><td>1691 1129</td><td>940 780</td><td>3.7 0.7</td><td>30 21</td><td>18 ¹ 25</td><td>6 7</td><td>20.61 9.68</td><td></td></tam:>	VA14367 VA14368	52.83 55.00	55.00 57.00	2.17 2.00	439 121	682 88	1691 1129	940 780	3.7 0.7	30 21	18 ¹ 25	6 7	20.61 9.68	
•		Mineralization & Alteration: Minor messive sulphide bands with sphalerite, chalcopyrite and galens to 2cm penallel foliation, 3% pyrrhotite, minor pyrite, Moderately sericitic, 10% disseminated enkerite, 52.85m: 2cm massive sulphides with silicified and bleached white hangingwall, silicified footwall. 53.19m: 1cm massive sulphides off set by fracture & CAB 20'. 57.0-57.66m:weak chlorite sported hornfels. 62.05m:calcopyrite, pyrrhotite, along fracture 63.67-68.15m:increased pyrite to 7% with depth as irregular bands <1cm, weakly silicified and moderately sericitized, minor sphalerite and catcpyrite & 66.17m in pyrite band, 68.09m: calcopyrite stringer. Structure: Fractures with pyrrhotite & CAB 10-20'.														
		CAB-pyrite band 64' 8 66.17m. CAB-foliation 63' 2 62.9m. CAB-micro isoclainal fold 50' 2 66.06m. 65.65-66.95m: contarted foliation and local gouge, possible fold. CAB- Lower contact 65', fractured.				ļ										
		CAB Pyrite band 64' @ 66.17m. 56.20- 57.00 FAULT ZOME					:	:								
:	,	Gouge,strong limonitic alteration and in hangingwall for 1.5m with frectures.	VA14369 VA14370	57.00 59.00	59.00 61.00	2.00 2.00	142 85	140 113	526 357	880 970	0.7 0.9	23 26	37 36		21.26 19.23	

FALCONGRIDGE LTD

Bole # : BC-90-03

PAGE: 7

FRON (M)	TO (H)	DESCRIPTION	Sampl.	FROM	то	Leng. (H)	CU , PPH	PB PPM	2N . PPM	9A PPM	AĞ PPM	AU PPB	AS PPM	NI PPN	Cu/Zn RATIO	
		FAULT ZONE Gouge & CAB 30° and 70°. Strong limonitic alteration with local gouge for 58cm in hangingwell. FELSIC TUFF BRECCIA 4Cla Medium grey to very light grey. Messive to moderately foliated, 50% very light grey silluffied engular felsic intrusive (?) frequents to 16 cm with minor quartz eyes, in siliceous to sericitic felsic metrix. Frequents most common above 69.60m and below 70.27m where increasing with depth, flow banded frequent 270.40m. 69.60-70.27m felsic Tuff, minor frequents grading into silicified Tuff. Mineralization Z Alteration: Sulphides occur as bands and stringers to 2cm rimming frequents, locally as matrix filling, disgeminated and along fractures. Pyrite generally recrystallized/blebs to 5mm - often anguler; calcopyrite and bornite most common along fractures. Chalcopyrite and sphalefite along fractures, weak chlorite wisps, local dark grey patchwork alteration in matrix consisting of chlorite-sericite-clay (?), 1% quartz stringers especially in lower half. Sulphide Percentages: 68.15-69.6m: 3% sphalerite, 0.5% calcopyrite, minor galena, 5% pyrite, rare pyrrhotite, minor bornite. 69.6-70.27m: 1% sphalerite, 1% calcopyrite,	VA14371 VA14372 VA14363 VA14361 VA14362 VA14363 VA14364 VA14365	61.00 63.67 65.67 69.15 68.97 69.37 69.37 70.27 72.00	63.67 65.67 68.15 69.97 69.37 69.95 70.27 72.43											
	:	bornite.														

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FALCOMBRIDGE LTD

Hole # : 80-90-03

FROM (N)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng.	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPH	AU PPB	AS PPM	N I PPM	Cu/Zn RAT10	
		CAB-folletion 72'a 70.2m. CAB-55-70'quartz stringers. CAB-sulphide bands 90'8 66.2m,52'a 69.1m, 67'a 72.42m CAB-fractures with chalcopyrite stringers 40 to 50' and 20'														
72.43	92.05	FELSIC LAPILLI TUFF 48 Medium grey, massive bedded, strongly foliated. 20% chlorific elongate to wispy iapilli fragments typically 20x1mm rarely to 30x5mm, D-3% quantz crystals <1em,5% possible feldsper aggregates in sericitic to weakly chloritic matrix, Very light grey felsic fragments similar to above unit in upper 84cm and 5cm brecciated layer at 78.56m. Weakly developed normal graded bedding.	VA14374 VA14375 VA14376	72.43 75.00 77.00	75.00 77.00 79.00	2,57 2,00 2,00	971 348 220	491 188 46	1992 307 256	710 740 790	3.5 1.7 0.8	50 37 33	108 71 84	666	32.77 53.13 46.22	
•		Mineralization & Alteration: 7% pyrite generally recrystallized as eggregates or wisps and stringers around lapilite fragments, minor sphalerite, calcopyrite in upper 30cm and with thin quartz veins. 74.18-74.3m Silicified wallrock with minor sphalerite and chalcopyrite. Week limonite with chlorite alteration zones up to 10cm often occurring with fractured or sheared interval. Week sericite and chlorite along fractures. 79.00-87.91m: 3-5% pyrite.														
		Structure CAB-foliation 78'2 74.60m CAB-foliation 75'2 78.7m. 79.15-79.65m: fractured zone, local thin gouge at gouge at 20-30', moderate limonite and chlorite alteration. 80.8-82.9m: Intermittent fracture zones mainly 2 70-80', 0-20', Limonite and week chlorite. CAB Chert Bed 69' 2 91.45m								:						
		88.39- 88.76 CHERTY TUFF Hedlum grey-green,measive bedded,strongly foliated. 1% quartz crystals and fragments in										i i				

FALCOMBRIDGE LTD

Hole # : 80-90-03

FRON (M)	TO (H)	DESCRIPTION	Sampl.	FROM	то	Leng. (H)	ÇU PPM	PB PPM	ZN PPM	BA 9PN	AG PPH	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
		cherty volcanic matrix. Mineralization & Alteration: 7% pyrite, as disseminations to 1000 bands,minor sphalerite and calcopyrite rarely as 1000 bands, moderate chlorite, 40% quartz veins in strongly chloritized footwall for 0.580 @ CAS 60-90' Structure: CAS foliation 68'														
92.05	94.42	brecois disseminated and fracture CHERT TUFF BRECCIA 4CM Light green-grey,mossive bedded,strongly folisted, 40% light grey cherty tuff round-elongate fragments commonly to 2cm wide, 3% quartz crystals to 1mm,7% chloritic elongate lapilli fragments 10x2mm in sericitic matrix. Anguler fragments of white siliceous felsic intrusive as above with minor sphalerite.	VA14377 VA14378	92.05 93.00	93.00 94.42	0.95 1.42	20 126	53 77	239 171	730 910	0.5 9.7	28 37	72 74	8.	7.72 42.42	
:	:	Mineralization & Alteration 4% pyrite,minor sphalerite. Wask sericite,chlorite. Structure: CAB-foliation 69' 8 92.80m		i			:							:	:	
94,42	99,45	FELSIC LAPILLI TUFF 48 Light grey-green, massive bedded, strongly foliated, 1-3% round-elongate and angular quartz eyes to 2mm, 5-15% white indistinct aggregates feldspar (7) to 0.5mm,5-10% chloritic wispy lapilli fregments (10x1mm) in sericitic matrix. Mineralization & Alteration: 5% disseminated to stringer pyrite,2% quartz veins to 5cm parallel foliation, weakly sericitic and minor chlorite.	VA14379 VA14380 VA14381	94.42 96.42 98.42	96.42 98.42 99.45	2.00 2.00 1.03	110 97 149	54 62 94	246 283 281	760 680 580	0.8 1 0.9	25 1 31 18	59 65 40	5 6 5	30.90 25.53 34.65	

FALCONBRIDGE LTD

Hote # : 80-90-03

FROM (H)	TO (N)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	CU PPM	PB PPM	ZH PPM	BA PPM	AG (AU PPB	AS PPH	HI PPM	Cu/Zn RATIO	
		Structure: CAB-foliation 65: @ 97.10m				·						•				
99,45	102.90	FELSIC ASM TUFF 4A Light grey-green, massive bedded, strongly foliated. 1% quartz eyes and crystals to lem,5% chioritic wisps generally to 6em occasionally lapilli size in sericitic metrix. 99.67-99.71m: Wavy boudinged band of very light silicified felsic intrusive (?) rock,similar to above mineralized horizon, partially replaced (?) by quartz 5-10mm pyrite bands along contacts. 100.28-100.91m:5% silicaous felsic intrusive bands as above occuring as dykes to 1cm thick. 102.72-102.8m: Felsic intrusive.	VA14382 VA14383	99.45 101.45	101.45 102.90	2.00 1.45	293 616	259 144	1238 553	480 720	2.5 1.7	47 36	94 61	5-4	19.14 52.69	
•		Mineralization & Alteration: 6% disseminated to stringer pyrite,minor sphalerite and chalcopyrite,matlel foliation and with fractures especially with felsic intrusives. Weak sericite and chlorite stringers along fractures,but more than upper unit. 100.28-100.91m 5% pyrite, minor sphalerite 102.72-102.80m 10% disseminated to fracture controlled pyrite,calcopyrite,sphalerite.														
		Structure: CAB-foliation 62* a 99.71m														
102,90	130,10	FELSIC LAPILLI TUFF 48 Light green-grey, massive bedded, strongly folioted, 10-20% dark green wavy chloritic wisps to lapilli fregments 20%2mm,minor quartz eyes in sericite to locally weakly chlorite matrix. Up to 0.5% felsic intrusive bends or pods to 5cm, often folded parallel to foliotion. Local poorty developed graded bedding with increase in lapilli size and % with depth. Mineralization 4 Alteration:														
		3-5X pyrite, disseminated to atringers up to 2cm, common along fractures in felsic intrusive with minor sphelorite and galens up to 2% over 5cm intervals in intrusives.														

FALCONBRIDGE LTD

Hole # : BC-90-03

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FROM (N)	TQ (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (M)	CU PPM	P9 PPM	ZM PPM	BA PPH	AG PPN	AU B99	AS PPM	NI PPH	Cu/Zn RAT10	
		Week sericite and chlorite, moderately limonitic and chloritic in fracture zones extending from fractures and foliation, local vuggy especially with quartz veins. Minor spotted chlorite hornfels zones. 106.33-106.30m Silicified zone with stringer sphalerite, pyrite, Smm sphalerite band at 106.56m. 124.93-125.29m Feisic Intrusive bend to 1cm folded with minor minor chalcopyrite, sphalerite 123.40-130, 10m Moderate spotted chlorite hornfels with increased shearing.														
		Structure: Felsic intrusives wavy to folded and boudined,locally offset by fractures a CAB 30-40' CAB-foliation 70' a 106.33m CAB-foliation 70' a 127.30m CAB-Lower contact 70'														
		folded and boudined felsic intrusives. Common														
•	·	110.19- 110.40 FAULY ZONE Gouge peratlet fallecton 2 69'														
		111.10- 111.50 FAULT ZDNE Broken core and local gouge.											:			
		120.10- 120.50 FAULT ZOME CA8-foliation 70' @ 127.30m														
130.10	138.60	FELSIC ASK TUFF/DUST TUFF 4AR Light grey, strongly foliated with claticlastic brecois,0-5% chloritic wisps to 0.5mm,1% quarts eyes to 1mm in sericitic to chloritic matrix.	VA14384 VA14385 VA14386 VA14387	130.10 132.10 134.10 136.10	132.10 134.10 136.10 138.60	2.00 2.00 2.00 2.50	276 295 598 352	154 48 26 839	408 573 61 2664	710 720 910 800	1.8 1.4 1.4 3	37 49 67 36	56 45 47 52	53 28 37 40	40.35 33.99 90.74 11.67	
		Mineralization & Alteration: 6% disseminated to stringer pyrite, trace catcopyrite, sphalerite mainty with felsic intrusives. Minor quartz verna with sulphides. Spotted hornfels in upper 2.50m and lower 0.50m.														

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FALCOMBRIDGE LTD

Hole # : 8C-90-03

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPM	PB PPN	ZN PPM	BA PPM	AG PPM	A2 PP8	AS PPM	N1 PPM	CU/Zn RATIO	
		Structure: CAB-foliation 71' @ 131.60m. CAB-foliation 76' @ 135.30m.														
138.60	140.82	FELSIC INTRUSIVE 9RR Very light grey-green with weak mottled texture, fine grained porphyritic, 5% quartz crystals and eyes <1mm 40% very light grey indistinct as frag- ments? to 1cm - possible alteration in siliceous aphanitic light grey groundmess.														
		Mineralization & Alteration: 5% disseminated pyrite, trace galeno, 1% quartz FELSIC INTRUSIVE Light grean/grey with weak mottled texture, fine grained and porphyritic, 5% quartz crystals to 1mm in siliceous groundmass.													i	
		Mineralization & Alteration: 5% disseminated pyrite,minor galena,1% quartz veins with narrow bleached margina,weak epidote clots after feldspar (?),indistinct grey mottled bleaching.														
	:	Structure: CAB 50-60' fractured core especially along margins.														
140.82	151.57	FELSIC ASH/DUST TUFF 4AR Light gray,strongly foliated. Minor quartz eyes to lamm,0-5% chlorite wisps to lamm in aphanatic sericitic matrix. Indistinct grey banding.														
		Mineralization & Alteration: 2% disseminated to 1cm bands pyrite,minor sphalerite,trace chalcopyrite up to 5% ankerite disseminations, rare narrow quartz veins parallel foliation with sulphides. Moderately bleached and sericitized. Sported chlorite hornfels in upper 7.1 metres	:		:											
		sported chieffe normets in upper 7.1 metres abruptly decreasing below 147.90m. 149.14-149.86m 10% fine grained pyrite as wisps to bands.														
		Structure: CAB-foliation 67' # 143.80m CAB-foliation 75' # 148.30m]													

FALCONBRIDGE LTD

Hole # : 80-90-03

PAGE: 13

FROM (N)	TQ (M)	DESCRIPTION	Sampl.	FRON	то	Leng. (H)	CJ PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	N L PPM	Cu/Zn RATIO	
		CAS-foliation 74' 8 150.05m 142.05m 4cm gouge 142.60m 5cm gouge with contorted foliation Local 20cm fracture zones with minor gouge. CAS Lower contact 74' sheared with gouge.											:			
151,57	157.30	FELSIC ASH TUFF/DUST TUFF 4AR Light to medium grey, weak to moderate foliation, similar to above, except less foliated and more altered.														
		Mineralization & Alteration: 1% pyrite decreases with depth, trace sphalarite, galena. Moderate chlorite with spotted hornfels and occassional pervasively week sericite. 5-15% ankerite aggregate to 4mm.														
		Structure: CAS - foliation 72' & 155.8m. Lower contact claticistic breceis with silicified fragments in sericitic - chloritic matrix 73'.														
		FELSIC DUST TUFF	•	1												
157.30	166.40	FELSIC ASH/DUST TUFF 4AR Hedium green/grey,thinnly bedded,strongly foliated. 1-5% chlorite wisps and aggregates to 1mm,minor quartz eyes in sericitic matrix.			:					:	;					
		Mineralization & Alteration: 1% pyrite,10% disseminated ankerite. Weak sericite and chlorite elong foliation.													:	
		Structure: CAB-foliation 75' 9 164.40m. CAB-foliation 70' 9 165.30m. CAB-lower contact 81'.													į	
	:	157.60- 159.40 FAULT ZONE Common gouge and contorted foliation,CAS 301,70-801.				:										
166.40	174.25	FELSIC ASK TUFF 4A Gray/presn,fine grained,massive bedded,moderately														

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FALCOMBRIDGE LTD

Hole # : BC-90-03

PAGE: 14

FROM (H)	TQ (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (N)	CU PPM	PB PPM	ZN PPH	8.A PPM	AG PPM	AU PPB	AS PPM	N I PP#4	CW/Zn RATIO	
		foliated. Up to 3% quartz to 0.5mm,5-10% chlorite wisps and aggregates to 0.5mm,25% feldsper (?) to 0.5mm in sericitic metrix. 172,90-173.52m felsic Lapilli Tuff														
		Mineral(zation & Alteration: Minor pyrite, rare 3cm sulphide band @ 170.27m with sphalerite, 1-5% ankerite, Weskly sericitic and calcerous.														
		Structure: CAB-sulphide band 661 & 170.30m CAB-foliation 757 & 172.90m											:			
174.25	183.40	FELSIC ASH TUFF 4A Light gray, fine grained, moderately foliated. Similar to above unit except more grey colour and minor felsic lepilli fragments. Lower contact gradational over 20cm.														
		Mineralization & Alteration: 1% pyrite. Up to 15% ankerite disseminations Moderately sericitic. 181.68-182,50m 7% pyrite as wisps to thin bands.														
		Structure: CA8-foliation 79' à 182,10m														
183.40	203.30	FELSIC ASH TUFF 4A Light to medium green, memsive bedded, moderately foliated. 1% quartz to 1mm, 1-5% chlorite wisps to aggregates to 1mm, possible lapitli lithic fragments of host rock in sericite aphanitic metrix.														
		Mineralization & Alteration: Less than 1% pyrite, rare 1cm semi-massive sulphide band, minor quartz vein to 8cm parallel foliation. Strong enkerite alteration with 25% crystals to 2mm, weak sericitization and intermittent light green bleaching decreasing with depth.														
		Structure: CAB-pyrite bend 72' 183.95m CAB-foliation 77' a 189.60m CAB-foliation 74' a 198.30m														

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FALCONBRIDGE LTD

Hole # : 80-90-03

PAGE: 15

FROM (H)	TO (H)	DESCRIPTION	Sampl.	FROM	10	Leng. (N)	PPM S3	P# PPM	ZN PPN	BA PPM	AG PPM	AU PPB	AS PPH	M[PPM	Cu/Zn RATIO	
203.30		End of hale														
		Total amount of samples ≈ 34 Total length sampled ≈ 57.05K]	ļ '								•				
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DATE: 26-February-1991

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HOLE MUMBER: BC-90-03

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Sample	Fram (M)	Ta (M)	Length (H)	\$102 ht%	TiOZ etX	A1203	FeZO3 ut%	MgQ wt%	CaO wtX	Ma20 Mt	K20 MT%	P205 ut%	MnO wt%	Rb ppm	Sr ppm	р ри У	Zr ppm	Ņi ppm	B4. ppm	Çu ppm	bibu) Su	LO1 Mt%		Zn/Ne Ratio	ISHIKA A.I.	ALUM A.I.	ACNK A.I.	
VB09694	17.00	20.00	3.00	22.37	0,20	4.75	3.10	0.90	36.70	0.03	1.25	0.05	0.24	38.0	805	38	117	20	170	150	154	29.43	150	51.3	6	13	0.1	
V809695	29.00	32.00	3.00	52.63	0.44	13.76	6.05	4.25	6.17	1.35	1.83	0.06	0.12	56.0	154	50	80	50	739	20	68	12.92	20	0.5	45	147	0.9	
VB09816	58.00	60.00	2.00	63.71	0.54	16.39	5.03	2.72	1.59	0.14	3.70	0.07	0.05	111.0	79	20	100	20	1248	54	120	5.51	54	8.6	79	302	2.3	
V809696	60.00	63.00	3.00	65.15	0.56	16.49	3.44	3.07	1.78	0.25	3.70	0.08	0.07	101.0	74	20	99	20	1219	23	158	5.57	23	6.3	77	288	2.2	
V809817	63.00	65,00	2.00	64.47	0.55	15.88	4.77	2.58	1,50	0.16	3,62	0.07	0.05	109.0	78	20	67	20	1178	86	590	5.35	86	37.4	79	301	2.3	
VB09818	65.00	68.14	3.14	67.28	0.50	14.46	4.34	2.11	1.49	0.10	3,43	0.06	0.06	109.0	72	20	89	20	1142	560	514	5.03	560	51.4	78	288	2.2	
VB09819	72.43	74.00	1,57	56.84	0.42	12.47	6.14	4.98	4.35	0.01	2.58	0.06	0.18	70.0	84	20	86	20	730	1080	11000	7.69	1050	****	63	160	1.2	
V809820	74.00	76.00	2.00	62,47	0.49	14.04	7.12	4.66	1.55	0.01	2.55	0.06	0.07	74.0	58	20	82	20	735	211	307	5.88	211	307.0	82	342	2.5	
VB09697	76.00	79.00	3.00	61.74	0.52		6.17	4.92	1.82	0.08	2.96	0.08	80.0	63.0	76	20	90	20	843	80	165	6.16	80	20.6	81	322	2.4	
VB09821	79.00	B1.00	2.00	59.74	0.55	15.91	7.64	5,33	1.03	0.01	2.79	80.0	80.0	83.0	50	20	99	20	810	174	179	5.64	174	179.0	89	415	3.2	
VB09822	81,00	83.00	2.00	63.02	0.52	15.39	7,41	4.34	0.85	0.01	2.87	0.07	0.07	72.0	54	20	93	20	848	122	248	5.09	122	248.0	89	413	3.3	
VB09698	95.00	98.00	3.00	63.58	0.50	14.57	6.24	6.78	0.52	0.02	2.32	0.07	0.09	64.0	42	20	77	20	711	74	123	5.20	74	61.5	94	509	4.2	
VB09699	114.00	117.00	3.00	61.04	0.48	14.16	6.73	5.72	1.86	0.05	2.72	0.07	0.13	66.0	67	20	103	20	648	73	918	6.97	73	163.6	82	306	2.2	
VB09700			3.00	69.76	0.49	9.64	8.42	1,36	1.11	0.07	2.44	0.07	0.08	65.0	53	25	180	21	644	390	869	6.61	390	124.1	76	266	2.0	
V809701			2.22	67.60	0.28	15.03	3.56	0.56	1.36	7.94	0.23	0.09	0.05	20.0	283	20	207	20	82	20	20	3.51	20	0.0	8	158	1.0	
V809702	148,00	151.00	3.00	60.22	0.43	15.79	4.36	2.45	3.36	1.97	3.21	0.05	0.09	96.0	96	20	93	20	1091	20	88	7.11	20	0.5	52	185	1.2	
V809703		156.00	3.00	58.33	0.42	15.05	5.14	5.79	2.18	0.75	2.86	0.05	0.12	90.0	8Z	20	77	50	867	63	340	9.58	63	4.5	75	260	1.8	
VB09704	160.00	163.00	3,00	61.65		15.36	4.10	4.05	3.02	2.53	2.09	0.06	0.12	55.0	86	20	84	20	639	20	66	6.66	20	0.3	53	201	1.3	
VB09705	158,00	171.00	3,00	60.97	0.47		5.03	6,69	1.24	1.19	2.08	0.06	0.07	62.0	67	23	86	20	557	28	171	6.93	28	1.4	78	341	2.4	
VB09706	177.00		3.00	58.83	0,47	15.92		4.33	2.90	0.44	3.21	0.06	0.09	84.0	85	21	97	20	918	55	46	7.49	22	1.1	69	243	1.7	
VB09707	191.00	194.00	3.00	55.60	0.37	13.98	5.20	3.31	5.99	2.09	1.92	0.04	0.08	54.0	137	20	88	20	473	32	34	11,34	32	0.2	39	140	0.9	

FALCONBRIDGE LYD DIAMOND ORILL LOG Property : BIRK CREEK (1990)

	Mole # : 8C-90-04 Township: KAMLOOPS Lot : Range	Zone #: CENTRAL claim #:8ET 2		BURWASH ENTERPRI	ISES	Date started :10/13/1990 Date completed:10/16/1990	
	Level : SURFACE	Section: 224+00H	Locatio	on;			
	Collar coordinate :	Line : 224+00 M Station: 394+64 E	1	Latitude: 569061 Departure: 29577	70.00 E	Azimuth: 235° 0° 0° 0ip : -64° 0° 0°	
	Reference frame :			Elevation: 1200	0.00	Length : 213.06 M	
		. Surveyed b			_		
1	Deviation tests :	_	Depth	Dip	Azimuth		
			93.57 M 148.40 M 213.00 M	-71" 0" 0" -76" 0" 0" -79"30" 0"	236" 0' 0" 218" 0' 0" 208" 0' 0"		
•							
:							
Remarks :			ı	1	l		
		Mater flow: Cimented :					Plugged: Core size: #9

Logged by : M. VANDE GUCKTE

Date logged:10/17/1990

Hole # : 80-90-04

FALCOMBRIDGE LTD

Hole # : BC-90-04

FRON (K)	TO {M}	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	CLI PPM	PB PPM	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPM	HI MAS	Cu/Zn RAT10	
0.00	15.84	CVERBURDEN O/B														
15.84	22,25	FELDSPAR-MAFIC PHYRIC INTERMEDIATE LAPILLI ASM 38E TUFF Medium to light green-grey, fine grained-weakly chloritic matrix. 7-10%, <3cm feldspar phenocrysts and up to \$%, 1-7cm chlorite altered mafic (hornblende) phenocrysts. 5-10% feldspar phyric/aphyric intermediate lapitii fregments and leaser, up to 1cm chlorite altered fregments. Fragments have similar composition to the matrix and stretched perallel to foliation. Moderately well developed foliation. Occasional, <1mm pyrite cube.	1	1	1	 	1	!	1	1	1	1	1	ı		
	24.10	Mineralization & Alteration: Spotty chloritization - centered on mafic phenocrysts. Local, weakly sousuritized feldspar phenocrysts. Structure: CAS - foliation 48° st 20.0 metres				}										
22.25	24.40	FELDSPAR PHYRIC INTERMEDIATE LAPILLI ASH TUFF 3BB Medium to (ight green-grey, dmoitic lapilli ash tuff. 5-7%, <2mm, partially saussurftized feldspar phenocryst. Up to 8%, feldspar phyric/aphyric intermediate and felsic lapilli fragments stretched parallel to foliation. Ninor, rusty (oxidized) quartz stringers. Occasional, <1mm disseminated pyrite cubes, overall nil sulphides. Moderately well developed foliation.														;
		Mineralization & Alteration: Spotty sericite (saussuritized) feldspars, locally only (week). Structure: CAS - foliation 55' 2 23.0m.	ı								!					
24.40	27.25	CAB - fault 45' 2 24.4m. FELDSPAR - MAFIC PHYRIC INTERMEDIATE LAPILLI - 388 ASH TUFF	,t	 -	ļ,	 -	ı		ı	ı	ļ,	 - -	 -	1	ı	.1
		Similar to previous from 15.84-22.25m.														

FALCOMERIDGE LTD

Hole # : 80-90-04

FROM (M)	TO (N)	DESCRIPTION	Sampl.	FROM	ΤΩ	Leng. (M)	망	PB. PPM	ZX PPK	BA PPM	AG PPR	AU PP8	AS PPM	NI MAN	Cu/Zn RATIO	
		Structure: CAB - folistion 58° a 26.5m.														
27.25	29.70	QUARTZ - FELDSPAR PHYRIC FELSIC ASH TUFF 4AC Light grey with greenish tinge, fine grained weakly sericitic matrix. Up to 15%, <3mm weakly sericite altered to unaltered feldspar phenocrysts and up to 5%, <1-2mm quartz phenocrysts. Rare, 1-2% feldspar phyric felsic lapilli fragments with similar composition as matrix. Poor to moderately well developed foliation, gradational upper contact (over 20cm). Oxidized, rusty fractures at 29.1-29.15m, 29.3-29.35m. Structure: CAB - foliation 55' à 27.5m.														
29.70	30.65	FAULT ZONE FZ Broken, blocky highly fractured intermediate (decitic) ash tuff and fault gouge. Fault orientation not clear, but estimated to be at +/- 75' CAB. 25cm lost core.					:									
		Structure: CAB - fault +/- 751.														
30.65	41.00	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF 3AB Medium green-grey, fine grained ash tuff. Up to 12%, 1-3mm feldspar phenocrysts decreasing in size and concentration below 32.3 metres. Occasional, up to 4%, <2mm quartz phenocrysts. Local up to 3%, less than Zom intermediate tapilli fragments with similar composition to matrix. Trace, fine disseminated pyrite. Minor, cross-cutting (foliation) quartz/quartz - carbonate stringers. Gradational lower contact, over several meters into coarser intermediate lapilli tuff unit. Mineralization & Alteration: Wesk sericite development (locally) centered on feldspar phenocrysts. Structure:														

FALCOMBRIDGE LYD

Hole # : BC-90-04

FROM (M)	TD (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	ES PPM	PB PPM	2H PPM	BA PPM	AG PP M	AU PPB	A5 PPM	NÎ PPM	Cu/2n RATIO	
		CAB - foliation 65' B 32.6m. 33.2-33.4m: Broken, blocky core. 33.7-33.8m: Broken, blocky core.					·	·								
41.90	59.00	FELDSPAR PHYRIC INTERMEDIATE LAPILLI ASM TUFF 388 Medium green-grey, fine grained lapilli - ash tuff. Up to 10%, quartz and/or feldspar phyric to aphyric intermediate fragments and lesser felsic lapilli. Fragments are vaguely outlined and strongly alongsted-stretched penallel to foliation. Fragments beome locally concentrated over small (<20cm) intervels at 53.95m, 54.15m. Fine-medium grained chloritic matrix with up to 10%, <1.5mm partially sericite altered feldspar phenocrysts. Occasional, up to 2%, <2mm quartz phenocrysts. Traces fine disseminated pyrite with local <2mm pyrite cubes. Moderately to well developed foliation with minor cross-cutting quartz-carbonate stringers over approximately the first 3.0 metres.														
•		Mineralization & Alteration: Heak - spotty sericite - locally centered on feldspars.														
		Structure: CAB - foliation 55' & 45.0m. CAB - foliation 65' & 51.0m. CAB - foliation 67' & 56.0m.									•					
59,00	61.40	PYRRHOTITE - BEARING FELDSPAR PHYRIC INTERNEDIATE LAPILLE ASH TUFF Medium green-grey, medium to fine grained Lapilli ash tuff, Up to 10%, <2mm partial altered (sericite) feldspar phenocrysts. Up to 5% scattered feldspar phyric intermediate Lapilli fregments with similar composition to metrix. Fine to medium grained, weakly chloritic metrix. Medium to coarse grained (up to 0.8cm) biotite/pyrrhotite wisps disseminated throughout the unit. Medium to dark - brown. Trace to 0.5% disseminated pyrite with occasional, <5mm pyrite cubes. Moderately well developed foliation.	388]	1	1		I			1	1	•	l	ı	I	

FALCONBRIDGE LTD

Hole # : 8C-90-04

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	CU PPH	PB PPM	ZXI PPM	BA PPM	AG PPN	AU PP8	AS PPH	NI PPH	Cu/Zn RATIO		
61.40	62.55	Mineralization & Alteration: Weak-spotty sericite centered on feldspers. Frace to 1% disseminated pyrchotite-biotite. 1% fracture controlled (quartz-carb stringer) arsenopyrite? (fine grained - metallic, silvery mineral). FELDSPAR PHYRIC INTERMEDIATE LAPILLI - ASH TUFF 384	a 1											_	1	1	
		Medium green-grey, fine grained lapilli ash tuff. Up to 10%, <pre>c2mm feldspar phenocrysts.</pre> Occasional, up to 3%, <pre>c2mm quartz phenocrysts.</pre> Fine grained, weakly chloritic matrix with up to 10% strongly stretched intermediate to felsic lapilli fragments. Similar, but more siliceous in composition than the matrix. Trace, fine disseminated pyrite. Moderately well developed foliation. Similar to previous from 61.0-59.9m.					•			,							
•		Mineralization & Alteration: Wil, Structure: CAB - foliation 72' @ 62.0m.								:				:			
62.55	68.20	PYRRHOTITE - BEARING FELDSPAR PHYRIC INTERMEDIATE LAPILLI ASM TUFF Similar to previous from 59.0-61.4m. Medium green-grey, fine to medium grained lapilli asm tuff. Up to 10%, <2mm partially sericite altered (locally) feldspar phenocrysts and rare up to 2%, <2mm quartz phenocrysts. 7-10% intermediate (dactife) tepilli fragments, strongly stretched parallel to foliation. Majority of fragments are stightly lighter than the matrix. Fine - medium grained weekly chloritic matrix. Up to 7% fine to medium grained (up to 1cm), wisps of biotite/pyrrhotite disseminated throughout. Meak to locally moderately magnetic. Trace to 1% fine disseminated pyrite with local, <3mm pyrite cubes. Moderately well developed foliation.	 388 1	E		1	1		I	I			i	1	1		

FALCOMBRIDGE LTO

Hole # : 8C-90-04

FRON (H)	TO (#)	DESCRIPTION	Sampl.	FROM	to :	Leng. (M)	44 2	PB PPM	ZM PPM	BA PPN	AG PPM	AU PPB	AS PPM	N] PPM	Cu/Zn RATIO	
68.20	77-00	FELDSPAR PHYRIC INTERMEDIATE LAPILL! ASH TUFF 3B8 Medium to light green-gray, fine grained intermediate lapilli ash tuff. Up to 10%, <1.5mm feldspar phenocryst partially altered to sericite and occasions!, <3%, 1-2mm quartz phenocryst. Lighter, gray, feldspar phyric felsic bands (lapilli fragments-?) occur throughout approximately 15% of the unit. Fragment outlines are faint, discontinuous to continuous bands (possible interbedded felsic horizons ?) ranging from <1cm to 10cm wide. Trace to 1% fine disseminated pyrite, and trace disseminated pyrite, and trace disseminated pyrite, and trace disseminated pyrite, and trace sisseminated pyrite, and trace Structure controlled pyrhotite/biotite over last metra. Moderately well foliated. Structure: CAB - foliation 65' @ 72.3m.	VA14641	76.80	77.30	0,50	13	26	69	620	B.4	48	2000	5	15.85	
77.00	81.30	SPOTTY HORNFELSED FELSIC ASH TUFF 4A Medium - light grey-green, spotty decitic ash tuff, Up to 15%, 1-3am pyrchotite/biotite (spots) development with local up to 5%, 1-3am chlorite spots, Locally magnetic, fine to medium grained, weakly chloritic, mottled matrix, Poor to moderately well developed foliation, with overall more massive appearance. Minor quartz-carbonate veins/stringers. Trace to 1% fine disseminated pyrite with occasional <2mm pyrite cubes. Mineralization & Alteration:														
B1.30	88.20	Sporty hornfelsing with sporty pyrrhotite. Weak to moderate biotite - chlorite development. 77.0-77.1m: 5% fracture controlled (quantz vein) arsempyrite. QUART2 - FELDSPAR PHYRIC FELSIC ASH TUFF 6AC Hedium to Light grey, fine grained "dacitic" ash tuff. Up to 10%, (3mm quantz phenocrysts and up to 7%, <1.5mm sericite eltered feldspar phenocrysts. Fine to medium grained weekly	VA14642 VA14643	83.00 87.20	84.00 88.20	1.00	31 40	4	50 29	1500 2700	0.5 0.5	3 3		7 5	38.27 57.97	

FALCONBRIDGE LTD

Hole # : 80-90-04

FROM (M)	10 (N)	DESCRIPTION	Sampi.	FROM	TO	Leng. (N)	CU . PPM :	PB PPM	ZM PPM	BA PPM	AG PPH	AU PPB	AS PPM	N (PPM	Cu/Zn RATIO	
		sericitic - chlorite metrix. Trace to 1% fine disseminated and fracture controlled pyrite and local, up to 1% disseminated/fracture controlled pyrrhotite. Trace frecture controlled (<0.5%) arsenopyrite at 83.54 metres. Bleached fine grained appearance from upper contact to 83.05m with local (<2%) biotite/pyrrhotite spots - locally magnetic. Local, intercalated argillaceous component over the last approximately 1,5 metres. Weak to moderately well developed foliation. Kineralization & Alteration: 51.3-63.05m: Bleached, fine grained, weak pervesive sericite alteration. 53.05-68.2m: Weak spotty sericitization - centered on feldspers. Structure: CAB - foliation 70° & 84.5m.														
88.20	89.20	82.3m: Fault slip with gouge at 72' CAB. GRAPHITIC ARGILLITE SIM Black, graphitic argillite with intercolated to interbedded silty horizons. Minor quartz-derbonate stringers. 2-3% fine grained pyrite aggregates and along fractures. Sharp bedding contacts at +/-70 CAB Struture: CAB - bedding 70' # 88.2m	VA14544	88.20	89.20	1.00	49	11	59	1900	0.6	10	33	43	45.37	
89.20	91.50	CAB - bedding 71' @ 89.2m 88.35- 88.50 ARGILLACEOUS FELSIC TUFF Similar to previous, 3% disseminated pyrite. ARGILLACEOUS QUARTZ PHYRIC FELSIC TUFF 4AAO Medium to light grey, medium to fine grasined felsic tuff with increasing sediment component and argillite fragments downhole. Up to 10%, 1-3mm (average 1.5mm) quartz phenocrysts. Local (<2%) argillite fragments (<2cm) towards the lower contact. Two, thin (<2cm) argillite beds	VA14645 VA14646	59,20 90.35	90.35 91.50	1.15 1.15	36 83	20 14	31 86	1700 2500	0.5 0.7	3 3	18 9	10 15	53.73 49,11	

FALCOMBRIDGE LTD

Hole # : 80-90-04

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	C); PPH	28 PPM	ZN PPM	BA PP#	AG PPM	AU PP8	AS PPH	NI PPM	Cu/Zn RATIO	
		at 90.45m and 90.55m, with sharp contacts at $+/-80^{\circ}$ CAB.														
		Structure: CAB - bedding 80° a 90,45m,														
91.50	98.80	GRAPHITIC ARGILLITE SIM Black, graphitic argillite with interbedded to finely interlaminated silt horizons. Moderate to well developed graphitic component on fractures. 2-4% fine disseminated pyrite and pyrite aggregates with local <3mm pyritic cubes. Minor quartz/carbonate stringers. Several up to 30cm fine grained argillaceous felsic tuff horizons from 92.2-92.5m, 93.1-93.3m, 95.86-96.0m.	VA14647 VA14649 VA14650 VA14651 VA14652 VA14653	91.50 92.50 93.50 94.50 95.40 96.40 97.40	92,50 93,50 94,50 95,50 96,50 97,50 98,80	1,00 1,00 1,00 1,00 1,10 1,10 1,40	56 43 41 55 50 35 63	13 11 55 71 37 37 49	299 228 491 1073 490 301 302	2500 1700 1900 1500 2000 1400 2000	0.7 0.4 0.6 0.9 0.6 0.4	6 32 21 17 3 12	27 31 46 48 24 22 23	41 39 94 61 36 42 43	15.77 15.87 7.71 4.88 9.26 10.42 17.26	
		Mineralization & Alteration: Weak fracture controlled carbonate. Structure: 91.5-98.8m; Nigh fracture density with local broken, blocky - highly fractured core sections. CAB - bedding 75' @ 92.5m. CAB - bedding 55' @ 95.7m. CAB - bedding 55' @ 96.7m.														
98.80	191.80	ARGILLACEOUS FELSIC ASM TUFF 4AO Madium to light grey, fine grained argillaceous tuff with local interbedded to intertaminated graphitic argillite/ailtatone from 99.55-99.75m, 100.8-100.95m, 101.3-101.6m, 101.7-101.8m. Up to 10%, intercalted argillaceous sediment with local argillite fragments. 2-3% fine disseminated pyrite aggregates and pyrite cubes. Gradational upper contact (increasing argillite component) with generally sharp contacts of interbedded argillite horizons.	VA14654 VA14655 VA14656	98.80 100.10 101.00	100.10 101.00 101.80	1.30 0.90 0.80	84 53 46	31 16 21	154 115 153	2800 2100 1800	0.8 0.5 0.5	50 to 50	9 13 15	17 27 29	35.29 31.55 23.12	
		Structure: CAS - bedding 68' # 99,55m. CAS - bedding 75' # 99,75m. CAS - bedding 64' # 101.5m. CAS - bedding 66' # 101.5m. CAS - bedding 66' # 101.5m. CAS - bedding 75' # 101.5m. CAS - bedding 75' # 101.5m.														

FALCONBRIDGE LTD

Hole # : 80-90-04

FROM (N)	TO (M)	DESCRIPTION	Sempi.	FROM	ŤO	Lang. (H)	CJ PPH	PB PPM	ZXI PP N	BA PPM	AG PPN	LIA 898	AS PPM	N.I.	Cu/Zn RATIO	
101.80	115.25	CHARTZ PHYRIC FELSIC ASM TUFF 4AA Medium to light grey, fine to medium grained "dacitie" ash tuff. Up to 10%, 1-3em quartz phenocrysts (average 1.5mm). Fine grained matrix with local darker bends of intercelated argillite or chlorite alteration from 104.7-105.0m, and 108.6-109.2m. Cherty bands (1-2cm wide) between 102.7m & 103.65m. Occasional lapilli-size intermediate and felsic fragments are noted below approximately 107.0m, but tend to be concentrated between 111.7m and 113.1m. Trace 4% disseminated pyrite maggregates with local pyrite cubes. 1-2% disseminated to fracture controlled pyrnhotite with cross-cutting foliation, pyrnhotite/pyrite filled fractures (1%) from 107.75-113.1m. Structure: CAB - foliation 65	VA14657	101.80	103.30	1,50	31	11	64	2000	0.4	3	8	2	32.63	
115.25	119.77	FELSIC ASN TUFF 4A Medium grained "dacitic" crystal ash tuff. 5-7%, <1.5mm quartz crystals and up to 10%, <1.5mm variably altered feldspan crystal. Locally altered phenocrysts (feldspars?) are rimmed by fine chlorite and appear to be replaced by fine grained carbonate-sericite +/- pyrnhotite. Altered phenocrysts are up to 2mm and impart a local spotty texture to the unit. 2-3% disseminated gyrite and pyrite aggregates. Moderately well foliated. Meak intercalated argillaceous component imparting a darker colour to the rock. Structure: CAB - foliation 62' 9 116.25m,														

FALCONBRIDGE LTD

Hole # : BC-90+04

FRON (M)	TO (M)	DESCRIPTION	Sampi.	FRON	TO	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPN	AG PPH	AU PPB	AS PPM	H1 PPM	Cu/2n RATIO	
119.77	124.30	FELDSPAR - PHYRIC FELSIC LAPILLI ASM TUFF 488 Light grey-green, fine grained weakly sericitic lapilli ash tuff. 7-10%, <2cm feldspar phyric/aphyric felsic fragments stretched parallel to foliation. 5-6%, <2mm feldspar phenocrysts (crystals). Weak pervanive sericite-decreasing downhole towards lower contact. 1-2% fine disseminated pyrite aggregates. Moderately well foliated. Mineralization & Alteration: Weak pervasive sericite decreasing downhole. Structure:														
124.30	128.70	Broken, highly fractured core over the first 3m. FELSIC ASM TUFF 4A Hedium to light gray, fine grained ash tuff. Up to 5%, <1mm feldspar phenocrysts and up to 8% (locally) <2mm altered phenocrysts (feldspars?) with fine chloritic rims and weskly carbonate eltered centres. Trace to 1%, <1mm quartz phenocrysts. Rare, up to 2%, <1.5cm fine grained felsic fragments strongly stretched parallel to foliation. Trace to 2%, fine disseminated and fracture controlled pyrite									:					
128.70	130.70	with local, <2-3mm pyrite aggregates. Poor to moderately foliated - more massive appearance. Poorly defined upper contact over */- 20 cm as defined by fragment content. FELSIC LAPILLI ASK TUFF 4B			ar.	:	:				:					
120.70	130.40	Similar to pravious from 119.77-124.3m. Medium to light grey, fine to medium grained "dacitic" lepilli ash tuff. 7-10%, «4cm, fine grained feldspar phyric/aphyric felsic fragments stretched parallel to foliation. Up to 7%, «1mm partially altered (saussuritized) feldspar phenocrysts. Trace to 2% disseminated pyrite and pyrite aggregates (cubes). Noderately well developed foliation. Mineralization & Alteration: Yeak pervasive sericite, particularly on				:										

FALCONBRIDGE LTD

Hale # : 80-90-04

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (H)	CU PPM	PB PPM	ZN PPM	BA PPH	AG PPH	AU PPB	AS PPM	N1 PPK	Cu/Zn RATIO	
130.7¢	139.40	Structure: CA8 - folistion 58° à 129.0m. FELDSPAR - PHYRIC FELSIC ASK TUFF 4AB Medium grey, medium to fine grained "docitic" ash tuff. Up to 10%, <2mm Heakly saussuritized - mottled feldspar phenocrysts. Up to 10%, <2mm danker (green), mottled, Heakly chlorite/carbonate altered "phenocrysts" or alteration spots (similar in size to feldspars). Trace 3%, <1cm elongated lithic (felsic) fragments. Medium grey, fine grained Heakly thloritic mottix. Trace to 2% fine disseminated pyrite and pyrite aggregates to 4mm. Moderately Heil foliated. Structure: CA8 - foliation 70° à 131.7m. CA8 - foliation 70° à 136.5m. 132.65- 133.15 FELSIC LAPILLI TUFF Up to 20%, 1-2cm, elongated														
139.40	150,10	felsic fragments and lesser sediment (argillite) fragments. Fine grained light grey matrix. FELSIC LAPILLI ASH TUFF 48 Medium to light grey, fine grained lithic lepilli ash tuff. Up to 15%, <1-4cm (everage Zcm) elongated felsic fragments and occasional, up to 2 om elongated sediment (argillite) fragments. Overall, fragments increase in size downhole. Medium to light grey, fine grained, weakly chionitic/sericitic matrix with fine (<1mm) mottled feldspar crystals. Trace 2% fine disseminated pyrite and pyrite aggregates (<2,5mm) with local fine grained fracture controlled pyrite towards the lower contact. Moderately wall developed foliation with minor quartz-carbonate stringers. Mineralization & Alteration: Weak pervasive sericitization.														

FALCOMBRIDGE LTD

Hole # : BC-90-04

FROM (M)	10 (M)	DESCRIPTION	Sampl.	FROM	10	Leng.	ΩJ.	PB PPN	ZN PPH	BA PPM	AG PPN	AU PP8	AS PPM	NI PPM	Cu/Zn RATIO	
:		139.4-140.0m: Bleached, local quartz veins. Weak - moderately sericitic. Structure: CAB - foliation 60' 2 140.5m. CAB - foliation 53' 2 145.5m.														
150.10	151.50	CAB - foliation 58' & 149.5m. CAB - bedding 65' & 150.1m. FELDSPAR PHYRIC FELSIC ASH TUFF 4AB Similar to previous from 130.7-139.4m. Sharp										•				
ļ		upper contect and gradational lower contact. Light grey, medium to fine grained "decitic" ash tuff. Up to 10%, <2mm, mottled-veriably saussuritized feldsper phenocrysts. Occasional, <1cm lithic (felsic) fragment. Medium to fine grained, weakly chloritic matrix. Trace - 1% fine disseminated pyrite and local, up to 8mm pyrite aggregates (cubes). Moderately well developed foliation. Minor carbonate on fractured surfaces.											,			
151.50	163.30	FELSIC LAPILLI ASH TUFF 48 Similar to previous from 139.4-150.1m with a slight increase of lithic fragments size downhole. Medium to light grey, fine grained, decitic lapilli ash tuff. 10-15%, up to 4cm (average <2cm) elongated felsic lapilli fragments and occasional darker andesitic or argillite lapilli. Fragments are occasionally rimmed by pyrite (eg. 156.85m). Fine grained, light grey, weakly sericitic matrix with up to 7%, <1mm mottled (saussuritized) feldspar crystais. Occasional, up to 5%, <2mm quartz phenocrysts. Trace to 2% fine disseminated pyrite and up to 3mm, pyrite aggregates - locally elongated			:										!	
		(pyrite wisps). Trace pyrrhotite. Moderately well foliated, Guartz vein from 156.6-156.65M cross-cutting foliation at 551 CAB. Mineralization & Alteration: Weak pervasive sericitization.	:				i									

FALCOMBRIDGE LTD

Hole # : BC-90-04

FROM (N)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPH	PB PPM	ZN PPH	BA PPM	AG PPN	¥9.	AS PPM	NI PPM	Eu/Zn RATIO	
163.30	166.05	CAB - foliation 65' à 156.0m. CAB - foliation 65' à 160.0m. CAB - foliation 58' à 163.0m. FELSIC ASH TUFF 4A														
		Medium to light grey-greenish grey, fire grained decitic ash tuff. Up to 8%, <1.5mm, mottled feldspar crystals and occasional up to 3%, <1.5mm quartz crystals. Several up to 10cm, fine grained, light grey felsic ash tuff bands (dust tuff?) parallel to foliation at 163.6-163.65m, 164.75-164.8m, and 165.52-165.42m. Trace 2% fine grained disseminated pyrite with local up to 3mm pyrite/pyr/hotite aggregates. Moderately well foliated with broken, blocky core from 163.3-163.4m (upper contact) and 164.9-165.0m. A fragmented/breccisted texture (cataclastic) below the latter section from 165.0-165.2m. Mineralization & Alteration:														
		Week pervesive sericitization. Structure: CAB - foliation 62' 9 164.3m. CAB - bedding 58' 9 164.8m (?).		;												
166.05	168.95	FELSIC LAPILLI ASH TOFF 4R Medium to light grey, fine grained "dacitic" lapilli ash tuff. Up to 15% elongated felsic intermediate fragments with local up to 4cm fine grained falsic bends (possible fragments). Fine grained matrix with up to 10%, <1mm mottled (saussuritized) feldspar crystals. Trace 3% disseminated/fracture controlled pyrite and local fracture controlled pyrrhotite. Moderately well foliated.														
		Mineralization & Alteration: Weak pervesive sericitization. Structure: CAB - foliation 65' @ 167.3m.														
168.95	172.90	FELSIC ASH TUFF 4A														

FALCONBRIDGE LTD

Hote # : 80-90-04

FROM (K)	TO (M)	DESCRIPTION	Sampi.	FROM	fo	Leng. (H)	CU PPM	PB PPM	ZN PPM	AB Med	AG PPM	AU PPB	AS PPM	NE PPM	CU/ZB RAT (O	
		Medium to light grey-greenish tinge, fine grained ash tuff. Fine grained, weakly chloritic matrix with up to 10%, <1.5mm mottled feldspars crystals and occasional, <1.5mm broken quartz crystals. Darker, fine grained chlorite(?) wisps occur throughout with weak chlorite development observed on fractures and on microfractures cross-cutting foliation. Trace to ZX fine disseminated pyrite and occasional, <5mm fine grained pyrite and occasional, <5mm fine grained pyrite aggregates. Moderately well foliated. Mineralization & Alteration: Wesk fracture controlled chlorits.														
172.90	175.60	CAB - foliation 60° a 170.0m. FELSIC LAPILLI ASH TUFF 4B Medium to light grey-greenish tinge, fine grained decitic lapilli tuff. Up to 15% (variable) elongated felsic lapilli fregments stretched parallel to foliation. Several, 2-3cm fine grained felsic bands (fragments?) from 173.4-173.9 metres oriented parallel to foliation (+/- 57' CAB). Fine grained, weakly sericitic/chloritic metrix with up to 8%, <1.0mm mottled feldspar crystals and occasional, <1.5mm broken quartz crystals. Trace to 2% fine disseminated pyrite and trace to 1% disseminated pyrite and trace to 1% disseminated pyrite. Moderately well foliated.		9 9 9 9 9 9									:			
175.60	199.15	Mineralization & Alteration: Weak pervasive sericitization. Structure: CAB - foliation 58' 174.3m. FELSIC ASH TUFF 4A Medium to light grey, fine grained decitic ash tuff. Overall, fine grained, weakly sericitic matrix with up to 7%, <1mm mottled (seussuritized) feldspar crystals and	VA14658	198.15	199,15	1.00	23	10	75	1500	0.1	3	7	5	23.47	

FALCOMBRIDGE LTD

Hole # : BC-90-04

FROM (N)	TO (H)	DESCRIPTION	Sampl.	FROM	то	Leng. (N)	CJ PPM	PB PPM	ŽN PPM	BA PPN	AG PPM	AU PPB	AS PPH	NI Med	Cu/Zn RATIO	
		occasional, up to ZX, sm quartz phenocrysts. Up to 3%, <!cm elongated lithic (felaic) fragments scattered throughout the unit, but locally concentrated (20%) from 196,4-196,8m. Several thin finer grained ash tuff horizons over the first 8.0 metres from 175.7-175,82m, 176.0-176,4m, 176.45-176,5m, 178.15-178,2m, 180.7-180.85m, 183.4-183.45m, 183.6-183.66m. Sections of spotty "hornfelsing" throughout unit (see alteration) becoming more intense downhole. Spotty alteration characterized by up to 3mm dark green-brown spots of chlorite-calcite +/- pyrhotite/pyrite. Spots are weakly to moderately calcerous. Meak intercalated argilleceous component over the last meter from 198.15-199.15m. Overell, trace to 2% fine disseminated pyrite with local up to 3mm pyrite aggregates. Trace to 1% disseminated pyrhotite locally throughout. Poor to moderately well foliated. Hassive quartz vein from 186,6-186.8m cross-cutting foliation at 25° CAB.</td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>														
		Mineralization & Alteration: Weak pervasive saricitization. 175.7-179.3m: Weak spotty "hornfels" alteration. 180.0-180.65m: Weak aporty "hornfels" alteration. 190.05-192.12m: Strong spotty "hornfels" alteration. alteration.		:						:					i	
		Structure: CAB - foliation 62' @ 181.0m, CAB - foliation 65' @ 185.5m, CAB - foliation 65' @ 188.0m, CAB - foliation 65' @ 183.5m, CAB - foliation 55' @ 198.3m,				:				i						
		196.85-196.95mr Fault with gouge at 82' CAB. 187.9mr Fault slip at 48' CAB. 198.9mr Fault slip with gouge at 48' CAB.														j
199.15	200.35	ARGILLITE 51M Dark grey-black intercalated silt and argillite with argillite component increasing downhole to Lower contact. Weakly graphitic slong fractures. 2% disseminated pyrite.	VA14659	199.15	200.35	1.20	27	15	129	1000	0,2	3	11	7	17.31	
			1					L		-	L	l			l	

FALCOMBRIDGE LTD

Holm # : BC-90-04

FROM (N)	TO (H)	DESCRIPTION	Sempl.	FROM	10	Leng. (M)	CU PPM	PB PPM	2N PPM	BA PP#	AG PPM	AU PP8	AS PPH	N] PPM	Cu/Zn RATIO	
200.35	204.85	ARGILLACEOUS FELSIC LAPILLE ASH TUFF 480 Medium grey, medium grained dacitic tapilli ash tuff. 12-15%, up to 4cm (overage 1-2cm) elongated felsic-frequents and lesser sediment (argillite) fragments. Fragments decrease in concentration downhole. 2% disseminated pyrite. Trace disseminated sphalerite at 203.9m. Moderately well foliated.	VA14660 VA14661 VA14662 VA14663	200.35 201.50 202.65 203.80	201.50 202,65 203.80 204.85	1.15 1,15 1.15 1.15 1.05	25 25 29 21	12 14 15 14	42 48 62 36	1500 1200 1100 1400	0.1 8.2 0.1 0.2	3 3 31	3678	2 2 3 3	37.31 34.25 31.87 36.84	
		Structure: CAS - foliation 56' H 203.0m, CAS - foliation 58' H 204.6m, 200.8-201.05: Broken, blocky core with fault gouge, orientation at */- 80' CAB.														
204.85	206.35	FELDSPAR PHYRIC FELSIC ASM TUFF 4A8 Medium to light grey, fine grained dacitic ash. 7%, <2mm, nottled (sausauritized) feldspar phenocryst. 2%, <3mm darker spots (phenocrysts?) rimmed by sericite over the first 20-30cm. Fine grained, aphanitic matrix with gradational lower contact over +/- 20cm. Trace 1% disseminated pyrita. Poorly foliated.	VA14664	204.85	206.35	1.50	22	9	57	1600	a.1	3	3	1	27.85	•
206.35	211.60	SILISIONE/ARGILLITE 51,53 Intercalated, interlaminated to interbedded silt and argillite. Medium to dark grey-black, weakly banded appearance. Overbil fragmental/sheared texture (wavy foliation) with local up to 3cm sediment fragments. 3% disseminated pyrite.	VA14665 VA14666 VA14667	206.35 208.10 209.85	208.10 209.85 211.60	1.方 1.方 1.方	28 25 29	16 7 6	76 77 66	1400 1100 1100	0.2 0.1 0.3	3	3 3 3	6 7	26.92 24.51 30.53	
	:	Structure: CAB - bedding 65' 0 206.4m, CAB - bedding 55' 0 208.6m. CAB - bedding 65' 0 211.6m. CAB - fault 65' 0 206.37m.														
211.60	213,06	ARGILLITE 5: Oark grey-block intercalated argillite/silt with massive, graphitic argillite beds from 211.6-211.85m and 212.5-212.85m, 3-4% disseminated pyrite.	VA14668	211.60	213.06	1.46	24	11	107	980	0.3	3	6	12	18.32	
213.06		End of hole														

FALCONBRIDGE LTD

Hole # : BC-90-04

FROM (N)	TO (H)	DESCRIPTION	Sampl.	FROM	70	Leng. (N)	면 PPM	PB PPM	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPH	NI PPK	Cu/Zn RATIO	
		Total amount of samples= 28 Total length sampled = 32.81M														
														:		
	[!					
	:											:				
			:													
							:									
					[1]					

HOLE MUMBER: 8C-90-04

GEOCHEM. SHEET

DATE: 26-February-1991

Sasple	From (M)	To (N)	Length (N)	SiOZ Wt%	T102 vt%	A1203	F4203 ut%	MgQ Ht%	CaO wt%	US&N TW	K20	P205 Nt%	MnO X1u	Rb ppm	Sr ppm	bkw , A	Zr ppm	ni ppm	Ba ppm	Çu ppm	žn ppm	LOI MTX		Zn/He Retio		ALUM A.I.	ACHK A.I.	
VB09709	18,00	21.00	3.00	59.46	0.48	17.20	5.64	2.96	1.29	8.32	0.33	0.06	80.0	21.0	222	20	83	20	359	20	63	3.81	50	0.1	24	163	1.0	
VB09710	34,00	37.00	3.00	54.46	0.60	18.51	7.83	4.69	1.75	7.02	0.55	0.05	0.10	23.0	295	20	87	20	3034	40	63	4.64	40	0.1	37	199	1.2	
VB09711	50.00	53.00	3.00	55.04	0.58		8.10	4.55	1.97	7.11	0.55	0.13	0.13	21.0	230	20	82	20	2297	22	88	3.68	22	0.1	36	189	1.2	
VB09712	64.00	67.00	3.00	59.57	0.56		6.52	3.91	1.45	7.36	0.44	0.07	0.09	20.0	177	20	101	20	612	22	78	3.14	22	0,1	33	184	1,1	
VB09713	73.00		3.00	59.83		17.48		2.96	1.73	8.04	0.33	0.08	0.09	20.0	191	20	102	20	578	20	66	3.12	20	0.1	25	173	1.0	
VB09714	78.00	81.00	3.00	59.52	0.52	16.68	5.58	3.70	1.71	6.75	1.23	0.06	0.08	54.0	215	20	109	20	888	20	29	3.68	20	0.1	37	172	1.1	
VB09715	61.30	83.05	1.75	56.53	0.66	15.79	5.46	2.08	4.42	4.30	2.25	0.26	0.12	67.0	437	20	155	50	1311	24	61	7.61	24	0.1	33	144	0.9	
VB09716	84.00	87.00	3.00	54.69	0.44	14.95	5.46	1.49	6.39	5.25	1.74	0.06	0.15	49.0	274	20	84	20	1510	25	42	7,59	25	0.1	22	112	0.7	
VB09717	108,00		3.00	54.80	0.55	16.95	4.54	1.50	5.73	4.06	3.17	0.08	0.13	101.0	246	23	184	20	2134	24	45	7.83	24	0.1	32	131	0.8	
V809718			3.00	65.03	0.44	14.44	4.73	1,79	2.21	1.24	3.93	0.09	0.10	163.0	101	37	228	20	1644	24	55	4.92	24	0.4	62	196	1.4	
v809719	144.00	147.00	3.00	63.62	0.47	14.32	4.36	1.68	3.23	2.14	3.46	0.10	0.10	143.0	158	39	229	20	1662	Z1	57	5.37	21	0.3	49	162	1.1	
v809720	155.00	158.00	3.00	64.40	0.47	14.96	4.63	1.87	2,28	1.09	4.11	0.08	0.09	170.0	144	41	235	20	1945	20	48	5.15	20	0.4	64	200	1.4	
V809721	169.00	172.00	3.00	63.79	0.48	15.45	4.82	2.17	2.02	1.02	4.17	0.08	0.08	171.0	99	43	235	20	1674	30	49	5.00	30	0.5	68	214	1.6	
VB09722	180.00	163.00	3.00	64.85	0.45	14.70	4.59	2.21	1,91	0.99	3.90	0.07	0.07	158.0	102	43	227	20	1651	26	57	5.63	26	0.6	68	216	1.6	
VB09723	190.05	192.10	2.05	66.18	0.54	15.53	4.55	2.64	1.19	1.41	3.80	0.10	0.06	153.0	95	26	241	20	1614	27	90	3.76	27	0.6	71	243	1.8	
																											_	
VB09724	201.50	204,50	3.00	61.95	0.52	15.97	4.21	2.49	2.29	1,72	3.61	0,11	0.07	145.0	95	37	250	20	1558	24	44	6.37	24	0.3	60	210	1.5	

FALCONSRIDGE LTD DIAMOND DRILL LOG Property : BIRK CREEK (1990)

	Note #: BC-90-05 Township: XAMLOOPS Lot : Range: Level : SURFACE Coller coordinate : Reference frame :		1 Locatio	SURMASH ENTERPRI on : Latitude: 569178 Departure: 29599 Elevation: 1413	5.00 N 0.00 E	Date started :10/16/1990 Date completed:10/21/1990 Azimuth: 55* 0* 0* Dip : -65* 0* 0* Length : 422.76 M	
		Surveyed by	y: SPERRY-SUM				
	Deviation tests :	_	Depth	Dip	Azimuth	<u></u>	
			96.80 N 215.50 N 276.45 M 337.41 N 428.85 M	-70*30* 0* -70*30* 0* -71* 0* 0* -70*30* 0* -71* 0* 0*	56° 0° 0° 57° 0° 0° 59° 0° 0° 56° 0° 0°		!
							l
				:			
				i			
Remarks :		Mater flow : Cimented :					Plugged: Core size: NO

Logged by : M. VANDE GUCHTE

Date logged:10/22/1990

Hole # : HC-90-05

FALCONSRIDGE LTD

Hole # : BC-90-05

FROM (M)	TO (H)	DESCRIPTION	Sampl.	FROM	TO.	Leng. (H)	CU PPM	P8 PPM	ZN PP(4	BA PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
0.00	3.66	OVERBURDEN O/B														
3.66	14.60	FELSIC ASR TUFF 4A Light grey, fine grained, cherty ash tuff with medium grey-green spotty to pervasive chiorite altered zones from 3.66-7.40m, 8.50-11.7m and 15.9-14.6m (gradational contects). Light grey fine grained bends and occasional up to 3%, <2cm falsic lapilli occur within darker eltered zones. Noderately well developed foliation to messive in altered horizons. Up to 2%, fine disseminated/ fracture controlled pyrite with local semi messive - messive pyrite (fracture controlled-quartz vein) from 8.20-8.4 metres extending along edge of core to 8.7m.	VA14669 VA14670 VA14671	6.50 8.00 9.00	5,00 9,00 10,00	1.50 1.00 1.00	12 · 9 · 24	1414 32 13	719 35 75	260 370 970	1.2 0.6 0.4	10 13 10	37 33 21	6 13 5	1.64 20.45 24.24	
		Hineralization & Alteration: 3.66-7.4m: Fine spotty (<1mm) pervasive chloritic spots. 8.5-11.7m: Fine, spotty (<1.5mm)-pervasive chloritic spots,			;							:		:		
•		13.9-14.6m: Spotty (<2mm) chloritic alteration. 6.7-7.1m: 10% fracture controlled pyrite, trace- 1% galena, traces to 0.5% sphalerite. 8.2-8.4m: Semi messive to massive pyrite with quertz extending along edge of core to 8.7m.											; ;			
		Structure: 12.3m: foliation 82° CAB.			•					:	,]				
14.60	20.06	INTERMEDIATE ASH TUFF 3A Medium to dark green, fine grained chloritic ash tuff. Faint brownish tinge (locally) associated with weak biotite development. 3-4% fine dissen- inated/fracture controlled pyrite. Sporty chloritic alteration over the first 0.75m. Poorly foliated. Minor quartz-carbonate stringers. *Possible mafic to low silics intermediate ash or sediment.														
20.06	29.10	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF 3AB Medium grey-green, fine grained, weakly chloritic		!	:			:	,							:

FALCONBRIDGE LTD

Hol⊕ # : BC-90-05

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FROM (M)	10 (H)	DESCRIPTIOM	Şembpl.	FROM	TO	Leng	CU PPN	PB PPN	ZN PPM	BA PPN	AG PPM	AI) PPB	AS PPM	MI PPM	Cu/Zn RATIO	
		ash tuff. Up to 8%, <2mm, variably altered (seusserautized) feldspar phenocryst. Feldspar phenocrysts are rounded to angular (occassionally rhombhedral), partially replaced by carbonate and rimmed by chiorite (wesk). Occassional, <2%, up to 1mm quartz crystals. 1-2% quartz-carbonate stringers, cross-cutting and parallel to a poorly developed foliation. 1-2% fine disseminated/fracture controlled pyrite. Gradational, foulted lower contact.														
		Mineralization & Alteretion: Weak spotty chloritization. Weak spotty carbonatization. Structure: 28.5-28.8m: Broken, blocky core with fault														
29.10	36.60	gouge. INTERMEDIATE ASH TUFF 3A Medium grey-green, fine grained, weakly chloritic intermediate-dacitic ash tuff with local fine grained, light grey felsic to cherty felsic tuff horizons from 29.35-29.55m, 23.0-33.4m, 35.55-35.7m. Up to 3%, <2mm quartz phenocrysts			İ	:							E			
		and 2-3%, <pre>class or or or or or or or or or or or or or</pre>									:					
		29.35-29.55m: Light grey, fine grained felsic sh tuff. Sheared lower contact at 50' CAB. 33.0-33.4m: Light grey, fine grained cherty, pyritic (5%) felsic sah tuff. Gradational lower contact, sharp upper content at 84' CAB.	!	:						:						

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FALCONBRIDGE LTD

Hote # : BC-90-05

FRON (H)	TO (M)	DESCRIPTION	Sampi.	FROM	TO	Leng. (M)	CU PPM	PB PPM	ZM PP M	BA PPM	AG PPM	AU 1 PPB -	AS PPM	N1 PPN	Cu/Zn RATIO	
		35.55-35.7m: Light gray, fine grained cherty felsic tuff. 3% fracture controlled pyrite. Gradational fragmental, pyritic lower contact (15cm) with sharp upper contact at 84° CAB.														
İ		Structure: Foliation: 2 29.4m, 80° CAB.														
		29.55m: fault slip 50' CAB. 36.im: fault zone with gouge at 25' CAB.														
		Bedding: 33.0m : 84' CA8. 33.55m : 84' CA8.														
36.60	40.98	FELSIC ASH TUFF 4A Medium to light grey-green, fine grained "dacitic" ash tuff. 2-3%, <2mm quartz phenocrysts. 2-3%, <1cm felsic lapilli - tend to be locally concentrated over small intervals and sparsely scattered throughout. Weakly sericitic increasing to moderte below 38.8m. Weak fracture controlled chlorite development. Poor to moderately well foliated. 2-3% quartz-carbonate veins and stringers. Trace - 1% fine disseminated pyrite.													:	
	:	Mineralization & Alteration: 36.6-38.8m: Weak pervasive sericite. 38.8-40.98m: Moderate pervasive sericite,										:				
		Structure: 39,95-40.0m: Fault with gouge 2 80° CAB.														
40.98	60.90	INTERMEDIATE ASM TUPF 3A Medium grey-green, fine to medium grained intermediate ash tuff with several interbedded intermediate lapilli tuffs, felsic lapilli tuff and felsic ash tuff horizons. Up to 3%, <2mm quartz phenocrysts. Docasional, up to 1cm, elongated lithic (felsic) fragments scattered throughout the unit. Fine-medium grained, weakly chloritic matrix with weak, local biotite														

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Hole # : 8C-90-05

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FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (N)	HAN 22	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
		development becoming increasingly more evident downhole (generally weak) towards the lower contact. Weak fracture controlled carbonate alteration and on weakly chlorite-biotite rismed calcareous spots (*Imm) below +/- 50m to the lower contact. Poor to moderately well foliated, minor <zx 1%="" controlled="" disseminated="" fire="" fracture="" local,="" pyrite="" pyrite.<="" quarz-carbonate="" stringers.="" td="" trace="" with="" zx=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></zx>														
		43.95-44.76m: Felsic tapilli tuff with up to 15%, 1-4cm elongated felsic ash and cherty fragments. 7% disseminated pyrite. 45.4-46.0m: Intermediate tapilli ash tuff - 5-7% elongated felsic and lesser intermediate tapilli. 47.25-47.85m: Intermediate tapilli tuff with up to 15% elongated felsic and intermediate tapilli. 4-5% disseminated pyrite. 48.15-48.9m: Intermediate tapilli ash tuff - up to 5%, <1.5cm elongated felsic / intermediate tapilli. 57.2-57.3m: Felsic ash tuff - 7-8%, <2cm elongated felsic/intermediate tapilli, weak to moderate biotite development. 2-3% pyrite. Unit appears to fine uphole.													,	
	:	Mineralization & Alteration: Weak fracture controlled carbonatization. Weak spotty biotization. Structure: Foliation at: 41.7m - 80' CA8. 49.2m - 83' CA8. 59.2m - 80' CA8.			:		;									1
		Faults: 41.9-42.1m: Broken, blochy core with local fault gouge, no drientation. 48.6m: fault slip 78' CAB. 50.6m: fault slip 82' CAB. 45.4m: fault slips at 66' CAB.			:						-					
60.90	67.10	INTERMEDIATE LAPILLI TUFF 38 Medium gray-green, medium to coarse grained,														

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Hote # : 8C-90-05

FROM (H)	TO (M)	DESCREPTION	Sampl.	FROM	TO	Leng.: (H)	CU PPM	PS. PPM	ZN PPM	BA PPH	AG PPH	AU PPB	AS PPM	NE PPN	Cu/Zn RATIO	
		lithic lapitli tuff. Up to 15% (locally - ever. 5-7%), «Acm elongated felsic/intermediate tapitli. Medium to fine grained, weakly chloritic matrix with brown, spotty biotite and chlorite/biotite rimmed calcareous spots developing below approximately 63.6m. Trace - 1% fine disseminated to locally fracture controlled pyrite. Poorly developed foliation with minor paralleling and cross-cutting. Quertz-carbonate stringers (fracture filling). Mineralization & Alteration: Weak-moderate spotty biotization. Weak fracture controlled carbonatization.														
67.10	90.20	SPOTTY MORNFELSED INTERMEDIATE/FELSIC VOLCAMIC 3, Light to medium grey with green, green/brown spots throughout, Probable intermediate near contact becoming dacitic (felsic) towards the lower contact. Remnant fragmental texture is evident with up to 4cm Lapitli, lower majority of texture is obliterated by spotty alteration. Fine grained, banded quartz veined ash tuff (felsic) from 79.95-80.25m with no chloritic spots. Alteration consists of chloritic/bottitic/calcareous spotty alteration of subrounded to patchy-like spots which range in size from cimm to 8mm. Concentrations vary from 10-30% and show a decrease ever the last 1.5 metres. Up to 2% disseminated/fracture controlled pyrite and up to 2% disseminated pyrrhotite above 79.95m to upper contact.	I	i i	I	I	.1		1	1	1	I	l		1	
90.20	95.45	infineralization & Alteration: Strong spotty chloritization (hornfelsing). GUARIZ PHYRIC ffLSIC ASH TUFF 4AA Medium to grey, fine grained, pyritic dacitic ash tuff, Up to 5%, <2mm quartz phenocrysts. Occassional, 2%, <1cm elongated felsic fragments. Several, non-pyritic cherty tuffits horizons (<3cm) at 91.58m, 91.77m, 91.75m, 91.88m, and 92.1m which parallel foliation at +/- 70° CAB. 7-10% fine grained disseminated and discontinuous fracture controlled pyrite. Moderately well	VA14672 VA14673 VA14675 VA14675	90.20 91.50 92.50 93.90	91.50 92.50 93.90 95.54	1.30 1.00 1.40 1.64	29 25 10 6	12 24 21 21	78 168 9 3	820 870 690 170	0.4 0.5 0.4 0.4	47 56 36 39	38 85 38 12	23 10 4	27.10 12.95 52.63 66.67	

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Note # : BC-90-05

FROM (H)	07 (M)	DESCRIPTION	Sampl.	FROM	τo	Leng. (M)	MA CO	P8 PPM	2N PPM	BA PPN	AG PPM	AU PPB	AS PPM	NI PPH	Cu/Zn RAT10	
		foliated. Quartz vein from 93.5-94.95m with up to 20% quartz veining over 1.5m above 93.5m and over 1.0m below 94.95m. Mineralization & Alteration: Hoderate pervasive sericitization. Structure: Foliation at: 91.0m - 68' CAS. 93.6m - 58' CAS. Bedding at: 91.1m - 68' CAS.													:	
95.45	99.54	91.58m - 70° CAB. DUARTZ PHYRIC FELSIC LAPILLI ASH TUFF 4BA Medium to tight grey, medium grained decitic lapilli sat tuff. 6-7%, <1.5cm elongated felsic lapilli. 3-4%, <1.5cm elongated felsic lapilli. 3-6%, <1.5cm elongated felsic lapilli. 3-6%, <1.5cm elongated foliation Hineralization & Alteration: Week pervasive sericitization.	VA14676 VA14677 VA14678 VA14679	95.54 96.50 97.50 98.50	96.50 97.50 98.50 99.54	0.96 1.00 1.00 1.04	13 38 39 34	24 12 15 20	9 56 62 52	470 920 690 490	0.4 0.5 0.4 0.4	98 144 59 97	19 22 22 23 30	7 7 6 7	59.09 40.43 38.61 39.53	
99.54	101.50	Structure: Foliation at: 98.5m - 75' CAB. QUARTZ PHYRIC FELSIC ASH TUFF 4AA Medium to light gray, fine grained decitic ash. 5%, <1.0mm subrounded-elongated quartz phenocrysts, Local up to 3%, <1mm feldspar phenocrysts partially carbonate altered. 3-4%	VA14680 VA14681	99.54 100.50	: 100.50 101.50	0.96 1.00	42 20	24 16	65 74	710 530	0.6 0.5	104 83	73 : 56	9	39.25 21.26	
		Fine disseminated pyrite. Poor-moderately well developed foliation. Mineralization & Alteration: Weak pervasive sericitization. Structure: Foliation et: 100.7m - 681 CAB.														

FALCOMBRIDGE LTD

Moie # : 8C-90-05

FROM (M)	TG (M)	DESCRIPTION	Sampl.	FROM	to	Leng. (H)	CU PPPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPH	NI PPM	Cu/2n RAT10	
101.50	117,20	Othertz Phyric Felsic Lapilli TUFF 48A Medium to tight grey, medium - coarse grained decitic lepilli ash or coarser grained ash tuff (reworked?). Up to 7%, <2cm elongated felsic iapilli with overall poorly defined fregment outlines, Overall, fragmental - discontinuous bended appearance. Up to 5%, <1.5mm stretched flattened to subrounded quartz phenocrysts. Variable 3-7%, <1.5mm white (weakly calcareous) subrounded to subangular - mottled feldspan phenocrysts (hornfelsing spots ?) below 106.5m. 2-3% fine disseminated, locally fracture controlled pyrite. Poor to moderately well foliated. Weak fracture- filling quartz carbonate stringers. Mineralization & Alteration: 101.5-117.2m: Weak pervasive sericitization. 106.5-117.2m: Weak spotty carbonatization to weak fracture controlled carbonatization. Structure:														
		Foliation st: 103.0m - 69' CAB. 111.0m - 75' CAB. 115.5m - 77' CAB. Fault: 108.7m: fault slip with gouge at 30' CAB.	;					:								
117.20	120.50	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF 3A8 Medium to light grey-green, medium to fine grained intermediate to dacitic ash tuff. 3-5%, <1.5mm mottled feldspar phenocrysts and occassionel, up to 2%, less then imm quartz crystals. Weakly chloritic, medium grained metrix with a slightly bended appearance within less chloritic zones. Trace - 2% disseminated pyrite and local <1% pyrrhotite. Poorly foliated. Winor fracture-filling carbonate-quartz. Mineralization & Alteration: Weak pervasive chloritization Weak fracture controlled carbonatization.														

FALCOMBRIDGE LTD

Hate # : 80-90-05

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	TO (M)	DESCRIPTION	Sampl.	FROM	то	Leng. (N)	CU PPHI	PB PPM	ZN PPH	8A PPM	AG PPH	AU PPB	AS PPH	NI PPN	Cu/Zn RATIO	
120.50 12	25.60	MORNFELSED INTERMEDIATE/FELSIC ASH TUFF 3A, 4A Medium to light grey-green, spotted green "hornfelsed" intermediate or felsic ash and lapilli ash tuff. 3-5%, <1mm quartz crystal and 3%, <1mm feldspare. Docasional, poorly outline felsic lapilli suggesting possible lapilli ash tuff with all original texture obliterated due to spotty alteration. Variable, up to 15%, <1cm, subrounded/patchy chlorite spots, locally with biotite. Up to 2% fine disseminated pyrite and local, <1% pyrrhotite. Now foliation. Mineralization & Alteration: Moderate spotty chloritization. Structure: Faults: 123.0-123.6m: Broken, block core, quartz veined with local gouge zones approximate														
125,60 15	56.25	orientation at 30° CA8. FELDSPAR PHYRIC INTERMEDIATE ASH TUFF 3AB Medium to light grey-green, fine grained intermediate ash tuff. 5-6%, <2mm subnounced-subangular mottled feldspar phenocrysts. Occassional, up to 2%, <1mm quantz phenocrysts. Fine grained, weakly chloritic matrix and weak biotite development towards the lower contact. Trace - 1% fine disseminated pyrite with quarz-carbonate pyritic band (6-7%) at 135.3-135.35 metres. Poorly developed folation to massive with minor quantz-carbonate veins and stringers. Weakly calcareous subnounced to angular (rhombhedral shaped) crystals or feldspar phenocrysts (7) locally rismed (increasing downhole) by biotite below approximately 134.0m. Alteration spots are locally concentrated (<10%) but become more evident downhole. Several fine grained, light-medium grey, thin felsic "dust" tuff horizons over the upper 8.0 metres from 128.45-128.52m, 128.72-128.75m, 132.4-132.45m, 132.48-132.53m, 132.58-132.65m,														

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FALCOMBRIDGE LTD

Hole # : 8C-90-05

FROM (M)	T0 (M)	DESCRIPTION	Sampl.	FROM	to .	Leng. (M)	CU PPH :	PB PPM	2H PPN	BA PPM	AG PPM	ALI PPB	AS PPM	NI PPM	Cu/Zn RATIO	
		tuffaceous sediment, fine grained, wavy-banded appearance, weakly foliated.													İ	
		Structure: 8edding et: 128.5m - 83' CAB. 132.6m - 82' CAB.									:					
		Foliation at: 130.2m - 76' CAB.														
156.25	158.70	OWARTZ VEIN GV White, mossive, nil sulphides, wavy uneven contacts at +/- 83° CAB.														
		Mineralization & Alteration: Moderate spotty chloritization.														
158.70	162.55	HORNFELSED FELSIC LAPILLI TUFF 48 Medium to dark green - grey, green spotted felsic (?) lapilli tuff. Up to 30% chloritic spots and white calcareous spots rimmed by chlorite. Up to 10% elongated felsic fragments evident over the last metre.														
		159,4-160.1 m : quartz vein.														
	 	Structure: Faults: 161.4-162.1m: Highly fractured core, numerous fault slips. Approximate orientation at 30-35' CAB.														
162.55	166.05	FELSIC ASH TUFF 4A Hedium to light grey-green, weakly chloritic sub- tuff. Up to 10%, <2mm, mattled, subangular-subrounded calcaneous apots locally rismed by chlorite with brown biotite rises towards the lower contect. Weakly chloritic, fine grained matrix. 1-2% disseminated pyrite. Poorly foliated with minor cross-cutting quanta carbonate stringers.												:		
		Mineralization & Alteration: Weak-moderate spotty carbonate alteration.		:												

FALCONBRIDGE LTD

Nole # : BC-90-05

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (N)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPS	AS PPM	NI PPM	Çu/Zn RAT10	
166,05	166.90	INTERMEDIATE ASH TUFF 3A Medium-dark green, fine grained chloritic intermediate ash tuff. Weak biotite development. Up to 2% fine disseminated pyrite. Poorly developed foliation.														
166.90	173.40	FELSIC ASH TUFF 4A Medium to light grey, weakly chloritic "dacitic" ash tuff. 2-3%, <imm "spots"="" 172.2m="" 3%="" 7%,="" <1.5mm="" and="" appearance="" banded="" below="" biotite.="" boudinaged.<="" by="" calcareous="" chlorite.="" chloritic="" controlled="" dark="" developed="" disseminated="" fine="" foliation.="" fracture="" grained,="" green="" in="" increase="" intensity="" light-darker="" locally="" metrix.="" minor="" partially="" phenocrysts.="" poorly="" pyrite.="" quartz="" quartz-carbonate="" rimmed="" size="" spots="" stringers,="" subrounded-subangular="" td="" to="" unit.="" up="" vague,="" weakly="" yariable,=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>į</td><td></td><td></td><td></td><td></td></imm>										į				
		Minerelization & Alteration: 166.9-172.2m: Weak spotty carbonatization. 172.2-173.4m: Moderate spotty carbonatization.		,												
173.40	175.80	HORMFELSED FELSIC ASH TUFF 4A Medium green-grey, spotty green/brown, fine grained felsic (?) ash tuff. Up to 1.5mm chloritic spots throughout imparting a fine grained appearance (closely spaced spots, fine). Fracture-filling carbonate (stringers) bleaching surrounding rock - up to 0.5cm on both sides of stringer. Intensely bleached zores from 173.95-174.05m, and 174.6-175.Dm. Up to 2% fine disseminated and fracture controlled pyrite.														
		Mineralization & Alteration: Moderate spotty chloritization. Moderate fracture-controlled carbonatization.	'										:			
175.80	191,10	FELSIC ASH TUFF 4A Medium to light grey-greenish tinge, pyritic "dacitic" ash tuff. Up to 3%, <1.5mm quartz phenocrysts. Weak banded texture (compositional variation) throughout unit. Weak to moderate spotty carbonate alteration with white, calcareous, subangular-subrounded mottled spots													i	•

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Hole # : 80-90-05

FROH (N)	OT (M)	DESCRIPTION	Sampl.	FROM	τo	Leng. (H)	CU PPM	PS PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPN	N I PPM	Cu/2n RATIO	
		Locally/partially rimmed by chlorite in moderately altered zones. Up to 3-5% fine disseminated pyrite and local up to 6% fracture controlled pyrite. Poorly developed to non-foliated. Moderate pervasive biotite from 177.1-177.4 metres with weak biotite development occurring locally throughout the unit.														
		Mineralization & Alteration: 175.8-181.2m: Weak spotty carbonatization. 181.2-189.0m: Moderate spotty carbonatization and weak fracture controlled chloritization. 189.0-191.1m: Weak spotty carbonatization.								:						
		Structure: Foliation at: 176.58m - 80' GAB.												;		
191,10	203.55	FELSIC ASM TUFF 4A Medium to light grey, fine grained "dacitic" ash tuff. Up to 3%, <1.5mm stretched/subrounded quartz phenocrysts. Weakly, fine banded appearance-compositional variation. Occasional, 1-2%, <1cm, poorly outlined felsic fragments. 4-7% fine disseminated to locally fracture controlled pyrits. Poorly developed foliation with minor quartz-carbonate stringers and along microfractures.	VA14682	202.50	203,55	1.05	42	26	78	820	0.6	60	53	7	35.59	
		Mineralization & Alteration: Weak pervasive sericite.														1
203.55	224.64	FELSIC LAPILLI ASM TUFF 48 Medium-light grey, medium grained, pyritic decite. Up to 7%, <3cm fetaic tapilli elongated parallel to foliation. Fragment outlines are generally vague with overall, discontinuous banded (weak) nature suggesting fragmental unit or reworked tuff. Medium grained, weakly sericitic matrix with local finer grained ash intervals, generally thin horizons. Up to 7% fine disseminated pyrite. Moderately well developed foliation with minor quartz-carbonate stringers.	VA14683 VA14684 VA14685 VA14686 VA14688 VA14689 VA14699 VA14699 VA14693 VA14693 VA14694	203.55 205.00 205.50 207.00 208.50 210.80 211.50 213.00 214.20 215.40 217.00 218.50	205.00 205.50 207.00 208.50 210.00 211.50 213.00 214.20 215.40 217.00 218.50 220.60	1.45 0.50 1.50 1.50 1.50 1.50 1.20 1.60 1.50	44 33 30 29 42 72 21 19 35 48 101 105	11 8 11 12 13 14 66 240 170 129 98 174	46 33 23 467 79 40 104 141 152 134	810 880 870 820 830 1200 1200 1200 1400 1500	0.4 0.3 0.4 0.5 0.6 0.6 0.6	49 32 28 6 6 24 52 31 32 57 91	81 55 60 51 54 88 51 37 59 65 75	65 45 45 71 111 112 8	48.89 50.00 56.60 46.03 38.53 47.68 34.43 15.45 19.89 25.53 39.92 43.93	

FALCONBRIDGE LTD

Hole # : 80-90-05

FROM (H)	TO (H)	DESCRIPTION	Smapl.	FROM	to	Leng. (XI)	CLI PPM	PR PPM	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPM	IK MPM	Cu/Zn RAT10	
		205.15-205.25m: Cherty felsic tuff sharp contacts at 82° CAB. 213.0-215.4m: Fine grained, pyritic (5%) felsic ash tuff. Quartz vein from 213.85-214.05m with trace galena. 221.1-223.0m: Quartz veined (80%) with traces galene and 4% fine disseminated pyrite. Mineralization & Alteration: Weak pervesive sericitization.	VA14695 VA14696 VA14697 VA14698	220.00 221.10 222.00 223.00	221.10 222.00 223.00 224.64	1.10 8.90 1.00 1.64	64 18 58 59	243 327 361 56	133 155 229 226	1200 560 1300 1200	0.7 0.5 0.7 0,4	35 11 43 45	74 41 87 84	17 8 11 7	32,49 10,40 20,21 20,70	
		Structure: Foliations at: 208.4m - 58' CA8. 213.0m - 68' CA8. 214.6m - 36' CA8. 220.5m - 55' CA8.														
		Faults at: 204.1m - 72' CAB. 224.4-72' CAB. 224.4-724.64m: Fault zone with gouge. Approximate orientation at 50' CAB. Bedding at: 204.15m - 82' CAB.														İ
224.64	242.75	FELSIC TUFFACEOUS SEDIMENT 40 Medium to light grey, fine grained, pyritic, reworked "dactice" ash tuff with local coarser, fragmental horizons. S-10% fine disseminated pyrite. Occassional, up to 2%, 41.5mm, angular to elongated quartz crystals. Fine grained, weakly argiliaceous (muddy) - brown to dark grey intercalated sediment component. Occassional, <icm ("hornfellsing")="" 226.8-227.3m="" 230.4-232.2m="" 231.5-232.2m.="" 239.5-240.23m.="" 7-10%="" and="" calcareous="" chlorite="" concentrated="" developed,="" elongated="" fe(sic="" folistion.<="" fragments="" from="" locally="" occur="" poorly="" rimmed="" spots="" td="" throughout="" uneven="" wavy="" with=""><td>VA14699 VA14700 VA14701 VA14702 VA14703 VA14706 VA14706 VA14707 VA14708 VA14709 VA14709</td><td>224.64 226.00 227.50 229.00 230.40 232.20 233.50 235.00 236.50 239.50 241.00</td><td>226.00 227.50 229.00 230.40 232.20 233.50 235.00 236.50 238.00 241.00 242.75</td><td>1.36 1.50 1.50 1.40 1.80 1.30 1.50 1.50 1.50</td><td>135 144 114 188 230 844 2541 1981 1373 95 176</td><td>318 188 107 160 133 132 392 413 442 77 94 59</td><td>749 489 99 147 298 185 200 225 254 268 202 233</td><td>1500 1600 1900 1500 1200 1300 1600 1500 1700 1100 1200</td><td>1.7 1.4 1.9 1.4 2.1 7.2 8.4 1.4 1.4</td><td>63 77 81 114 89 110 136 146 145 58 89</td><td>109 104 109 127 156 130 174 198 148 86 92 87</td><td>67 8 14 11 13 15 21 17 13 8 9</td><td>15.27 22.75 53.52 56.12 43.56 62.02 92.70 89.80 84.28 26.17 46.56 29.39</td><td></td></icm>	VA14699 VA14700 VA14701 VA14702 VA14703 VA14706 VA14706 VA14707 VA14708 VA14709 VA14709	224.64 226.00 227.50 229.00 230.40 232.20 233.50 235.00 236.50 239.50 241.00	226.00 227.50 229.00 230.40 232.20 233.50 235.00 236.50 238.00 241.00 242.75	1.36 1.50 1.50 1.40 1.80 1.30 1.50 1.50 1.50	135 144 114 188 230 844 2541 1981 1373 95 176	318 188 107 160 133 132 392 413 442 77 94 59	749 489 99 147 298 185 200 225 254 268 202 233	1500 1600 1900 1500 1200 1300 1600 1500 1700 1100 1200	1.7 1.4 1.9 1.4 2.1 7.2 8.4 1.4 1.4	63 77 81 114 89 110 136 146 145 58 89	109 104 109 127 156 130 174 198 148 86 92 87	67 8 14 11 13 15 21 17 13 8 9	15.27 22.75 53.52 56.12 43.56 62.02 92.70 89.80 84.28 26.17 46.56 29.39	
		Mineralization 2 Alteration: Alteration - Unknown 226.8-227.3m: Moderate spotty chlorite/carbonate														

FALCONBRIDGE LTD

Hole # : BC-90-05

FROM (H)	(M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	CU PPH	PB PPM	ZN PPM	BA PPN	AG PPN	AU PPB	AS PPM	NÎ PPM	Cu/2n RATIO	
		alteration. 231.5-232.2m: Moderate spotty chlorite/carbonata alteration.				·· -										
		Structure: Foliation at: 228.Dm - 58' CAB. 236.Om - 62' CAB.									:					
242.75	243.75	FELSIC LAPILLE ASH TUFF 48 Medium to light grey, spotted (green) "hornfeland" lapilli ash tuff. Up to 20%, 2-3mm mottled green/white calcareous spots (chlorite rimmed to chloritic spots). Vague fragment outlines up to 2.5cm. 2-3% disseminated pyrite.	VA14711	242.75	243.75	1.00	25	12	144	1000	0.4	48]	171	4.	14.79	
		Mineralization & Alteration: Moderate spotty chloritization.														•
243,75	244.80	FELSIC ASH TUFF 4A Hedium to light grey, fine grained dacitic ash tuff. 2%, <1.5mm quertz, angular-subrounded quartz crystals. Week, fine bonded oppearance with occassional elongated felsic fragments. Light brown/banded colouration (ankerite) over lower 15cm. 2-3% fine disseminated pyrite.	VA14712	243.75	244.80	1.05	24	13	103	950	0.4	49	169	3	18.90	
		Mineralization & Alteration: Weak fracture-controlled carbonatization.								i						
:		Structure: Foliation st: 244.6m - 65° CAB.														
244,80	246.85	FELSIC TUFFACEOUS SEDIMENTS 40 Redium grey, fine grained, muddy tuffaceous sediments. 2-3%, simm broken/engular to subrounded quartz crystala. 2-3%, <1.5cm elongated felsic fragments locally concentrated within the unit. Fine grained/weskly angillaceous (muddy-brownish) metrix. 3-4% fine disseminated pyrite. Poor to moderately well developed foliation. Sharp lower contact.	VA14713 VA14714	244.80 245.80	245.80 246.85	1.00 1.05	67 59	118 91	627 124	1600 1500	1.1	149 186	214 131	11 15	9.65 32.24	
		Mineralization & Alteration:												1		
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FALCONBRIDGE LTD

Male # : 80-90-05

PAGE: 15

FROM (M)	TD (M)	DESCRIPTION	Sampl.	FROM	70	Leng. (M)	PP#I	PS PPM	ZN PP4	8A PPM	AG PPM	AU PPB	AS P PN	NI PPM	Cu/2n RAT10	
		Alteration - unknown. Structure: Bedding at: 246.85m - 81' CA8.	UL42 745	2/4 05	7/9 00	1 15	45	17	117	940	• 4	15	133	4	11.72	
246.85	261_50	FELSIC ASH TUFF 4A Haddum to tight brownish-grey decific ash tuff becoming chlorite-biotite mitered below 252.4 metres. Mottlad, weak (fine) banded appearance with vague, probable fragment outlines. Up to 3%, <2cm elongated felsic fragments over the first 2.0 metres occurring sponedically (<1%) below this point. 2-3%, <1mm, mottled, subrounded quartz crystals. Weakly chloritic, fine to medium grained matrix. Weak, fine grained, pervasive biotite development throughout the unit and rimming <1mm calcareous crystals (?) below 260.0 metres. 2-3% fine disaeminated pyrite and local up to 0.5cm pyrite aggregates (cubes). Poorly developed folition with minor quartz and/or carbonate stringers. 252.15-252.4m : Fine grained, muchly felsic tuffaceous sediments similar to previous from 244.8-246.85 metres. Weakly brecciated and quartz veined below lower contact (15cm). Gradational upper contect, over about 5cm (tope up?). Nineralization & Alteration 246.85-252.40m : Weak to moderate spotty/pervasive biotite 252.40-261.50m : Weak to moderate spotty/pervasive biotite 252.40-261.50m : Weak to moderate spotty/pervasive biotite 252.40-261.50m : Weak to moderate spotty/pervasive biotite 252.40-261.50m : Weak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite 252.40-261.50m : Seak to moderate spotty/pervasive biotite	VA14715	246.65	248.00	1.15	15	17	113	840	0.4	15	133	4	11.72	

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FALCONGRIDGE LTD

Hote # : BC-90-05

FROM (M)	TQ (M)	DESCRIPTION	Sampl,	FROM	10	Leng. (M)	CU PPM	PB PPM	ZM PPM	ELA PPH	AG PPM	AU PPB	AS PPM	HI PPN	Cu/Zn RATIO	
261.50	275.72	262.0m - fault slip at 50° CAB FELSIC LAPILLI ASH TUFF 48 Medius to light grey, fine grained dacitic lapiti ash tuff (possible intermediate?). Up to 15%, <2cm fetsic lapiti elongated parallel to foliation. Fragments impart a discontinuous, fine banded appearance. 3-6%, <1.5mm subrounded to elongated quartz phenocrysts/crystels. 2-4% fine disseminated pyrite. Weak to moderately well developed foliation with weak/local fracture-filling (stringers) quartz-carbonate. Fine grained, light brown pervasiva (weak) biotite development throughout the unit. Mineralization & Alteration: Weak prevasive biotization. Weak fracture controlled cerbonatization.														
275.72 280.00	280.00	266.0m - 73' CAB. 273.5m - 76' CAB. 273.5m - 76' CAB. INTERMEDIATE ASH TUFF 3A Hedium to dark green, chloritic intermediate msh tuff. 2-3%, <1.0mm subrounded quartz phenocryst. Fine grained, moderately chloritic matrix with up to 12%, <1mm calcareous "apots" partially rimmed to replaced by chlorite. Trace - 1% fine disseminated pyrite. Poorly developed foliation, gradational upper and lower contacts. Hineralization & Alteration: Noderate pervasive/spotty chloritization. INTERMEDIATE LAPILLI ASH TUFF 38 Medium to dark green-grey, spotty green "hornfelsed" lapilli tuff. Up to 15%, <2cm elongated mottled folsic fragments. Medium to						•								
		fine grained chloritic matrix. 2% disseminated pyrite. Poorly developed foliation with overall mottled appearance. Mineralization & Alteration:									i		:			!

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Mole # : BC-90-05

FRON (H)	TQ (M)	DESCRIPTION	Sampl.	FROM	TÖ	Leng. (M)	ES ES	PB PPM	2N PPM	BA PPN	AG PPM	84	AS PPM	NI PPK	CU/ZN OITAR	
284.90	286.25	Moderate spotty chloritization. INTERMEDIATE ASH TUFF 3A Medium grey-green, medium to fine grained ash tuff. Occasefonal up to 3%, <icm &="" (crystals).="" 2-3%,="" <1.5mm="" alteration:="" chloritic="" chloritization.<="" disseminated="" elongated="" felsic="" fine="" foliated.="" fragments.="" grained="" matrix.="" medium="" mineralization="" pervasive="" phenocrysts="" poorly="" pyrite.="" quartz="" td="" to="" trace="" week=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></icm>														
286.25	293.78	FELSIC LAPILLI ASK TUFF 48 Medium to light grey-sporty green "hornfelsed" dacitic lapilli tuff. Bp to 15%, <3cm elongated-mottled felsic fregments imparting a discontinuous banded appearance. Variable up to 10%, <5mm chlorite spots/petches with up to 7%, <0.75mm calcareous spots. Poorly foliated. Trace fine disseminated pyrite. Mineralization & Alteration: Moderate sporty chloritization. Structure: Foliation st: 291.6m - 75' CAB.														
293.70	304.40	FELSIC LAPILLI TUFF 48 Medium to light grey, mottled lapilli ash tuff (reworked?) with spotty chiorite "hornfelsing" from 294.2-294.4m and 297.8-303.2m (weak-<2X spots). Variable, up to 10%, <2cm alongated mottled felsic lapilli imparting a discontinuous, streaky appearance. Trace to 2%, <1.5mm quartz crystels. Fine to medium grained, weakly chloritic metrix with local, <1mm calcareous spots. Up to 2% disseminated pyrite. Poorly foliated to massive. Mineralization & Alteration: 294.2-294.4m; Weak spotty chlorite. 297.8-303.2m; Weak spotty chlorite.														

FALCOMBRIDGE LTD

Hole # : BC-90-05

FROM (M)	TO (M)	DESCRIPTION	Şawpl,	FROM	TO	Leng. (N)	EU PPM	PB PPM	ZN PP#	BA PPM	AG PPN	AU PPB	AS PPM	NI PPM	Cu/2n RATIO	
304.40	335.70	FELSIC LAPILLI/ASH TUFF 48, 4A Reworked Lapilli ash and ash tuffs with variable fine to coarser felsic material. Variable up to 15%, <3cm, elongated-mottled felsic fragments. Fine to medium grained, weakly sericitic (miceceous) matrix with traces light brown (biotite?), trace to 4%, <2mm quartz phenocryst and crystals. 2-3% fine disseminated pyrite, with local up to 4% fracture controlled pyrite. Overall, mottled, discontinous - streaky banded appearance with poorty defined contacts between coarse and finer felsic horizons with finer grained horizons from 312.0-313.2m, 314.6-316.2m, and 330.2-330.5m. Poor to moderately well foliated. Mineralization & Alteration: Week pervasive sericite, 329.5-330.15m; Weak spotty chiorite. Structure: Foliation at: 320.0m - 65' CAB. 332.5m - 67' CAB.														
		Faulta at: 317.5-317.7m: Fault zone at +/- 60' CAB. 321.0-321.9m: Fracture core, local fault gouge. Approximate orientation at 20-25' CAB. 331.3-331.4m: Fault with gouge at 25' CAB.	:					:								
335.70	350.30	HORMFELSED FELSIC LAPILLI ASH TUFF 4B Medium grey-spotty green, mottled-streaky appearance, intermediate to felsic(7) in composition. Veguely outlined felsic to intermediate fragments suggesting lapilli ash with local finer grained - ash horizons from 344.0-344.7m and 345.2-345.5m (possible tuffaceous sediments). Up to 15% chlorite rimmed calcareous spots ("hornfelsing"). All textural feature other than vague fragment outlines are absent.														:
		Mineralization & Alteration: Moderate spotty pervasive chlorite (hornfalsed).														

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Hole # : BC-90-05

Structure: Folistion at: 338.0m - 74' CAB. 347.0m - 64' CAB. 347.0m - 64' CAB. 350.0m - 60' CAB. Faults: 340.6-340.7m: Fault slips at 74' CAB. 341.0-341.8m: Frecture core with numerous fault slips. Veriable orientations from 50-63' CAB. 350.30 375.20 HORNFELSED INTERHEDIATE/FELSIC TUFFACEGUS 30, 49 SEDIMENTS Variably hornfelsed intercalated intermediate/ felsic tuffaceous sediments, mottled-strenky to fine grained appearance. Medium to light grey/green/brown, fine to coarse grained, reworked intermediate felsic pyroclastic debris, no distinct units. Vague, elongated	Foliation at: 338.0m - 74' CAB. 347.0m - 64' CAB. 350.0m - 60' CAB. Faults: 340.6-340.7m: Fault slips at 74' CAB, 341.0-341.6m: Frecture core with numerous fault slips. Variable orientations from 50-63' CAB. 350.30 375.20 HORNFELSED INTERMEDIATE/FELSIC TUFFACEOUS 30, 40 SEDIMENTS Variably hornfalsed intercalated intermediate/ felsic tuffaceous sediments, mottled-streaky to fine grained appearance. Medium to light grey/green/brown, fine to coarse grained, reworked intermediate felsic pyroclastic debris,	FROM (H)	TQ (H)	DÉSCRIPTION	Sampi.	FROM	fo	Leng. (M)	CU PPM	PB PPN	ZN PPM	BA PPN	AG PPH	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
throughout unit. Weakly chlorite matrix with local development of chlorite to chlorite nimmed calcercous spots and weak, medium brown, fine grained biotite(?) throughout. Trace to 1% fine disseminated pyrite with up to 3-4% fine disseminated to fracture controlled pyrite below 370.8m. Up to 50% quartz veins below 370.8m. Mineralization & Alteration: Weak spotty chlorite (hornfelsing) to visibly unaltered. Structure:	352.7m - 66' CAB. 362.0m - 69' CAB. 369.0m - 70' CAB. Faulta: 375.1-375.2m: Fault zone at 38' GAB. Fold: Posaible fold hinge from 374.4 (-65'CAB) to 374.6		375.20	Foliation at: 338.0m - 74' CAB. 347.0m - 64' CAB. 350.0m - 60' CAB. Faults: 340.6-340.7m: Fault slips at 74' CAB. 341.0-341.8m: Fracture core with numerous fault slips. Variable orientations from 50-63' CAB. HORNFELSED INTERMEDIATE/FELSIC TUFFACEOUS 30, 40 SEDIMENTS Variably hornfelsed intercalated intermediate/ felsic tuffaceous sediments, mottled-streaky to fine grained appearance. Medium to light grey/green/brown, fine to coarse grained, newarked intermediate felsic pyroclastic debris, no distinct units. Vague, elongated intermediate/felsic fragments scattered throughout unit. Veakly chloritic matrix with local development of chlorite to chlorite nimmed calceneous spots and teak, medium brown, fine grained biotite(?) throughout. Trace to 1% fine disseminated pyrite with up to 3-4% fine disseminated to fracture controlled pyrite below 370.8m. Up to 50% quartz veins below 370.8m. Mineralization & Alteration: Weak spotty chlorite (hornfelsing) to visibly unaltered. Structure: Foliation at: 352.7m - 66' CAB. 362.0m - 69' CAB. 369.0m - 70' CAB. Faults: 375.1-375.2m: Fault zone at 38' CAB. Fold:														

FALCONORIDGE LTD

Hole # : 80-90-05

FROM (H)	TO (H)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PPH	PB	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
375.20	380.20	(44° CAB). FELSIC TUFFACEOUS SEDIMENTS 40 Medium to light grey, cherty felsic tuffaceous sediments. Up to 4%, <2mm angular-subangular quartz phenocrysts over the first 3.6m with up to 15%, <4cm cherty felaic felaic fragments below 378.9m. 2% disseminated pyrite with up to 3cm pyritic (30%) bends between 377.0-378.0m, and at 378.7m. Moderately well foliated. Hineralization 2 Alteration: 378.0-378.6m: Week spotty chlorite (hornfelsed)	VA14716 VA14717 VA14718 VA14719	375.20 377.00 378.00 379.00	377.00 378.00 379.00 380.20	1.80 1.00 1.00 1.20	21 48 17 14	18 38 29 27	41 133 104 48	420 260 280 280	1 1 0-4 0.3	34 46 6 6	28 70 3 8	5 12 5 5	33.87 26.52 14.05 22.58	
380.20	389.50	INTERMEDIATE ASH TUFF 3A Medium to dark green, medium to fine grained chloritic "hornfelaed" intermediate ash tuff. Local up to 4%, <2cm elongated intermediate and lesser felsic fragments. Generally fine to medium grained, chloritic matrix with faint darker, fine grained, <0.75cm chloritic wisps. Local, mottled to discontinuous - stresky banded appearance. Trace 1% disseminated pyrite. Local quartz phyric felsic horizons from 386.55-386.65m, 386.8-389.6m. Contact pre poorly defined. Poorly foliated, poorly defined tower contact. Possible reworked unit.						:								i :
389.50	414.00	Ninerelization & Alteration: Week to moderate pervasive chloritization. Week to moderate fracture-controlled carbonatization. Structure: Foliation at: 381.5m - 76' CAB. 389.0m - 72' CAB. INTERMEDIATE LAPILLI ASH TUFF 3B Hedium to dark green/grey-brownish tinge, medium grained, chloritic lapilli tuff. Similar to previous unit but appears to have higher concentration of fragments. 5-7%, <2cm, elongated intermediate and lesser felalc fragments. Generally medium grained, chloritic metrix with up to 10%, <1.0cm darker green, chloritic wispe. Discontinuous, banded-streaky														

FALCONBRIDGE LTD

Hole # : BC-90-05

FROM (M)	TO (M)	DESCRIPTION	Sempl.	FROM	то	Leng.	CU PPM	98 PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPN	NI PPM	Cu/Zn RATIO	
		appearance. Several, finer grained (ash) sections, similar to previous unit, from 396.7-398.3m and 401.15-404.6m. Fine grained, massive-foliated mafic dyke st 389.6-389.7m. Weakly magnetic. Trace-1% disseminated pyrite with trace to 1% pyrchotite. Poorly developed foliation. Mineralization & Alteration: Hoderate pervasive chloritization. Weak to moderate fracture-controlled cerbonatization. Structure: Foliations at: 398.0m - 79° CAB. 400.5m - 59° CAB. 406.7m - 54° CAB. Faults at: 395.7-396.7m: Highly fractured core. Orientation unknown.														
+ 414.00	416.30	400.0-400.4m: Highly fractured core. Approximate orientation at -39° CAB. INTERMEDIATE INTRUSION 7R Fine grained, medium green, fine pervasive-spotty chlorite. Hornfelsed felsic(?) intrusion. Weak to moderately magnetic. Massive, with sharp-wavy upper and lower contacts at 75° and 46° CAB.				:										
416_30	422.76	INTERNEDIATE LAPILLI ASH TUFF 38 Similar to previous from 389.5-414.0m. Medium to dork green, medium grained lapilli tuff, Up to 10%, <2cm elongated intermediate/felsic fragments. Discontinuous, streaky banded appearance. Medium grained, chloritic mefics with up to 6%, <0.75cm chlorite wigsz. Olscontinuous streaky banded appearance. Moderate, fracture controlled to pervasive carbonate quartz (stringers rimmed by chlorite) over the first 1.5m with 1% fracture controlled/ disseminated pyrrhotite. Trace 1% pyrite. Nineralization & Alteration: Weak to moderate pervasive chloritization. Weak to moderate fracture controlled carbonatization.													,	

FALCONSRIDGE LTD

Hole # : 8C-90-05

PAGE: 22

FROM (M)	10 (M)	DESCRIPTION	Sampl.	FROM	ат	Leng. (H)	CU PPM	P8 PPM	ZN PP#	BA PPM	AG PPM	AU PPS	AS PPM	N3 PPM	Cu/Zn RATTO	
		Structure: Folistion mt: 417.5m - 65' CAB, 422.0m - 62' CAB.														
422.76		End of hole														
		Total amount of samples = 51 Total length sampled = 65.30M													1	
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GEOCHEM. SHEET DATE: 26-February-1991 HOLE NUMBER: 8C-90-05

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Sample	From (M)	To (H)	Length (M)	S102 Wt%	TiO2 wt%	A1203 Ht%	Fe203 ut%	NgO utX	CeO wt%	Na20 Mt	K20 4t%	P205 ut%	HnO Ht%	Rib pipan	Sr ppm	bba A	Žr ppm	Mil Pipe	bbu 8a	Cu ppm	2n ppm				ISHIKA A.I.	ALUM A.J.	AÇNK A.I.	
V809726	7.00	10.00	3.00	56.86	0.54	15.71	5.42	3.53	5.44	3.20	2.72	0.07	0.07	76.0	168	20	112	20	888	25	59	6.30	25	0.2	42	138	0.9	
VB09727	23,00	26,00	3.00	55.05	0.51	15.35	7.44	4.77	4.94	2.39	1.89	0.07	0.10	45.0	131	20	85	20	678	24	77	7.39	24	0.3	46	166	1.0	
VB09728	37.00	40.00	3.00	57.13		14.57	4.44	1,44	8.27	0.65	3.40	0.06	0.11	72.0	159	20	84	20	664	20	31	8.72	20	0.5	35	118	0.7	
VB09729	50.00	53.00	3.00	60.68		15.52	5.87	4.38	3.92	2.55	1.72	0.07	0.07	32.0	101	20	85	20	401	29	46	5.09	29	0.2	49	190	1.2	
VB09730	63.00	66.00	3.00	59.54	0.49	16.31	6.11	4.58	3.86	2.58	2.02	0.06	0.10	49.0	114	50	72	20	642	20	56	4.48	20	0.2	51	193	1.2	
VB09731	72.00	75.00	3.00	57.12	0.54	17.92	7.12	5.04	2.38	3.90	1.90	0.07	0.09	45.0	146	20	105	20	632	28	82	4.08	28	0.2	53	219	1.4	
VB09732	91,50	94.50	3.00	61.52	0.52	17.87	6.92	0.54	0.72	3.75	3.18	0.05	0.02	72.0	152	20	107	20	914	22	106	5.23	22	0.3	45	234	1.6	
VB09733	99.50	101.50	2.00	53.03	0.56	18.61	6.67	3.03	3,90	3.52	3.17	0.05	0.08	65.0	170	20	103	20	662	21	59	6,36	21	0.2	46	176	1.1	
VB09734	109.00	112.00	3.00	57.93	0.51	16.66	6.17	4.91	2.82	2.44	2.42	0.07	0.10	38.0	100	20	83	20	808	24	125	5.73	24	0.5	58	217	1.4	
V809735	121.00	124.00	3.00	57.38	0.52	17.79	5.86	4.29	2.33	5.31	1.27	0.08	0.09	35.0	164	27	138	20	443	20	71	5.29	20	0,1	42	200	1.2	
V809736	135.00	138.00	3.00	58.58	0.57	17.71	5.52	4.14	3.60	3,19	1.78	0.09	0.07	40.0	157	20	124	20	713	20	35	4.58	20	0.1	47	207	1.3	
v809737	150.00		3.00	58.83		16.69	6.58	5.35	4,79	1.79	1.07	0.08	0.08	22.0	258	21	109	20	401	20	55	4.21	20	0.3	49	218	1.3	
VB09738		171.00	3.00	58.44		17.04	5.11	3.51	5.68	1.76	1.96	0,08	0.06	57.0	267	20	89	20	655	32	42	5.17	32	0.2	42	181	1,1	
VB09739		185.00	3.00	56.33		17.08	6.44	3.93	6.56	1,78	1.81	0.07	0.08	47.0	235	20	105	20	667	39	62	5.61	39	0.4	41	168	1.0	
V809740	196,00	199.00	3.00	58.63	0.52	19.26	6.78	1.64	1.94	0.97	3.81	0.06	0.04	94.0	168	\$0	99	20	1281	33	83	6.19	33	0.9	65	287	2.1	
VB09741	207.00	210.00	3.00	61.04	0.50	15.15	6.22	2.91	4.00	0.30	3.82	0.07	0.11	97.0	145	20	93	20	916	32	49	5.29	32	1.6	61	187	1.3	
VB09742			3.00	45.30	0.64			1.54	0.58	0.44	5.37	0.07	0.04	143.0	100	20	84	20	1759	1250	104	10.47	1250	2.4	87	318	2.7	
VB09743	248.00		3.00	57,40	0.65		6.44	6.86	2.65	0.27	3.60	0.09	0.15	96.0	116	20	109	50	918	20	80	5.11	20	3.0	78	261	1.9	
VB09744	256,00		3,00	57,40		16,40		5.19	5.59	0.74	2.90	0.09	0.12	85.0	172	20	102	50	663	27	74	4.33	27	1.0	56	178	1,1	
VB09745	267.00		3.00	57.42	0.63			4.19	3.09	0.73	3.28	0.08	0.11	82.0	176	20	98	20	872	28	124	6,15	28	1.7	66	236	1.6	
V809746	284.00	284 25	2.25	56.69	n 58	15.42	6,11	3.32	6.49	1.62	2.61	0.08	0.11	59.0	161	20	111	20	565	22	46	5.82	22	0.3	41	147	0.9	
V809747	295.00		2.50	55.42		15.47	4,86	3.27	6.36	0.70	3.33	0.07	0.16	80.0	144	ZO	108	20	722	20	38	8.41	20	0.5	48	149	1.0	
V809748	309.00		3.00	59.20		15.38	7.02	3.84	3.32	0.33	3.57	0.07	0.10	90.0	92	20	91	20	923	58	589	5.60		17.9	67	213	1.5	
V809749			3.00	61.10		15.18	6.30	2.62	2.69	0.11	4.07	0.05	0.18	97.0	88	20	103	20	1189	65	536	6.33		48.7	71	221	1.6	
VB09750		340.00	3.00	60.68		15.79		3.95	3.00	0.33	3.73	0.05	0.10	92.0	118	20	79	20	1051	41	135	4.92		4.1	70	224	1.6	
VB09751	750 En	352,50	2.00	61.39	0.42	14 12	3.66	2.75	4.73	2.04	3.54	0.05	0.06	84.0	198	20	94	20	947	20	25	4.87	20	0.1	48	156	1.0	
VB09752			3.00	58.79		16.77	4.89	2.50	5.01	1.85	3.82	0.06	0.09	98.0	144	20	85	20	884	31	43	5.44		0.2	48	157	1,0	
VB09753	382.00		3.00	61.91		15.18		2.65	6.24	1.34	2.62	0.05	8.10	65.0	217	20	96	20	391	20	94	4.94		0.7	41	169	0.9	
V809754	393.00		3.00	60.72		14.48	5.25	3.58	6.32	1.20	2.40	0.05	0.11	64.0	227	20	90	20	261	20	34	5.08		0.3	44	146	0.9	
VB09755		410.00	3.00	52.21		16.14		4,09	7.82	1.02	3.62	0.05	0.16	96.0	192	20	72	20	403	20	34	8.38		0.3	47	130	8.0	
1307137	+01.00	410.00		i													-	-4										
VB09756	418.00	421.00	3.00	57.22	0.39	14.83	5.46	3.55	6.92	0.23	3.77	0,05	0.11	107.0	200	20	88	20	505	20	30	7.44	20	1.3	51	136	9.0	

HOLE NUMBER: BC-90-05

GEOCHEM. SHEET

FALCONBRIDGE LTD DIAMOND DRILL LOG Property : BIRK CREEK (1990)

To To	ole # : BC-90-06 ownship: KANLOOPS ot : Range			BURWASH ENTERPRI		Date started :10/22/1990 Date completed:10/25/1990	
L.	evel : SURFACE	Section: 213+70N	Locati	on:			
	Collar coordinate :	Line : 213+70 W Station: 410+75 E	+	Latitude: 569064 Departure: 29770	00.00 E	Azimuth: 55° 0' 6" Dip: -65° 0' 0"	
	Reference frame ;			Elevation: 902	2.00	Length : 345.05 M	
		Surveyed by	: SPERRY-SUM	_	_		
D ₁	evistion tests :	_	Depth	Dip	Azimuth		
			93.57 M 154.53 M 218.54 M 345.00 M	-67* 0' 0" -67* 0' 0" -67* 0' 0" -68* 0' 0"	49"30" 0" 54"30" 0" 54" 0" 0"		
Remerks :							
	·	Water flow : Cimented :					Pługged; Coré size: HG

Logged by : M. VANDE GUCHTE

Date logged:10/29/1990

Kole # : 80-90-06

FALCOMBRIDGE LTD

Hole # : 8C-90-06

5.00 OVERBURDEN O/B 5.00 FIRSTCTUFF data Medium to light green-grey, fine grained felsic-decitic ash tuff with several cherty and argilitic horizons. Fine grained, weakly electrotic early control of the several cherty and argilitic horizons. Fine grained, weakly electrotic early concerns sericite development, decreasing downtole to +/- 62.5m. Weak to locally work point into the control of the	FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	τα	Leng. (H)	CU PPM	PB PPM	ZN PPM	8A PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/žn RATIO	
Medium to Light green-grey, fine grained felicic decitic sat tuff with several cherty and argillite horizons. Fine grained, weakly chiertic metrix with local up to 3%, classes to chertic metrix with local up to 3%, classes to cally moderate saricite development, decreasing downwise to 1/-62.5%. Weak to moderately well developed, locally wavy foliation. Traces to 0.5% fine disseminated pyrite union Constituted to 1.5m fine grained pyrite closes. Light green-green, cherty beach from (with trace sphalerite/galema/pyrite). 10.2-10.3m: Black, weakly graphitic argillite, sharp contacts at 52 CAS. Cherty below lower contact to 10.3m. fine grained, fieldspare porphyrite; sharp uneven contacts. 62.3-63.2m: Black, weakly graphitic argillite, where juper-contact, gradational lower contact to 10.5% sphalerite, sharp uneven contacts. 62.3-63.2m: Black, weakly argiltice-cous intermediate Liff. Minoralization & Alferation Trace to 0.5% sphalerite/galema/pyrite at63.4m, 50.15-50.30m, 53.05m, 61.20m, 62.59-62.65m. 5.0-62.00m: Weak fracture controlled corromatization. Structure: Foliation at: 10.0m - 74 CAB, 31.0m - 68 CAB, 33.0m - 69 CAB, 31.0m - 69 CAB, 85.75m - 73 CAB, 67.3m - 74 CAB, 85.75m - 73 CAB, 67.3m - 74 CAB, 85.75m - 73 CAB, 85.85m - 74 CAB, 85.75m - 73 CAB, 85.75m - 73 CAB, 85.75m - 74 CAB, 85.75m - 74 CAB, 85.75m - 74 CAB, 85.75m - 74 CAB, 85.75	0,00	5.00	OVERBURDEN O/B								_						
10.2m - 52' CAB.	5.00	63.20	Medium to light green-grey, fine grained felsic-dacitic ash tuff with several cherty and argillite horizons. Fine grained, weakly chloritic matrix with local up to 3%, <1.5mm elongated to subrounded quartz crystals. Weak to locally moderate sericite development, decreasing downhole to +/- 62.5m. Weak to moderately well developed, locally wavy foliation. Traces to 0.5% fine disseminated pyrite with occasional up to 1.5cm fine grained pyrite cubes. Light grey-green, cherty bands from 8.2- 8.25m, 9.3-9.37m, 9.4-9.43m, 10.3-10.5m, 50.15-50.3m (with trace sphalenite/galens/pyrite). 10.2-10.3m: Black, weakly graphitic argillife, sharp contacts at 82° CAB. Cherty below lower contact to 10.5m. 13.6-14.1m: Feisic Intrusion - fine grained, feldspar porphyritic, sharp uneven contacts. 62.3-63.2m: Black, weakly graphitic argillite, sharp usper contact, gradational lower contact (over 10-15cm) of weakly argillaceous intermediate tuff. Mineralization & Alteration: Trace to 0.5% sphalerite/galena/pyrite at43.4m, 50.15-50.30m, 53.05m, 61.22m, 62.59-62.63m. 5.0-62.90m: Weak pervasive sericitization. 5.0-63.20m: Weak fracture controlled carbonatization. Structure: Foliation at: 10.0m - 76° CAB. 38.0m - 70° CAB. 33.0m - 70° CAB. 38.0m - 70° CAB. 33.0m - 70° CAB. 37.5m - 75° CAB.														

FALCOMBRIDGE LTD

Hole # : 80-90-06

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	то	Leng. (M)	PPN PPN	PB PPH	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	NI PPH	Cu/Zn RATIO	
		Faults: 5.8-5.83m: Fault w/gouge at 65' CAB. 8.3-8.5m: Blocky core with gouge. 26.8-27.2m: Broken, blocky core. 29.26-29.3m: Fault w/gouge at 79' CAB. 44.15-44.65m: Broken, highly fractured core.											:			
5.00	73.40	FELSIC TUFF 4AL Medium to light green-grey, fine grained felsic-decitic ash ruff with several cherty and argillite horizons. Fine grained, weakly chloritic matrix with local up to 3%, <1.5mm elongated to subrounded quartz crystals. Meak to locally moderate sericite development, decreasing downhole to 4/-62.5m. Neak to moderately well developed, locally wavy foliation. Traces to 0.5% fine disseminated pyrite with occassional up to 1.5mm fine grained pyrite cubes. Traces - 0.5% fracture controlled sphelerite/gatena/pyrite at 43.4m, 50.15-50.30m, 53.05m, 61.22m, 62.59-62.63m. Light grey-green, cherty bands from 8.2-8.25m, 9.3-9.37m, 9.4-9.45m, 10.3-10.5m, 50.15-50.3m (sphalerite/gatena/pyrita). 10.2-10.3m: Black, weakly graphitic argillite, sharp contects at 82° CAB. Charty below lower contact to 10.5m. 13.6-14.1m: Felsic Intrusion - fine grained, feldspar porphyritic, sharp uneven contacts. 62.3-63.2m: Black, weakly graphitic argillite, sharp upper contact, gradational lower contact (over 10-15cm) of weakly argillaceous intermediate tuff. Mineralization & Alteration: 5.0-62.9m: Weak pervagive sericitization. 5.0-73.4m: Weak fracture controlled carbonatization.	VA14720 VA14721 VA14722 VA14723 VA14724 VA14725 VA14726 VA14728 VA14729	8.00 9.00 10.00 10.50 49.00 50.50 60.80 61.80 62.80	9.88 10.00 10.50 11.50 50.00 50.50 51.50 61.80 62.80 63.30	1.00 1.00 0.50 1.00 0.50 1.00 1.00 0.50	29 24 4 2 2 40 15 16 126 57	14 17 52 75 91 800 24 114 708 46	90 87 48 67 89 6091 133 357 1198 424	850 920 630 540 240 360 190 430	0.3 0.4 0.1 0.3 0.9 0.2 0.4	16 9 12 3 36 15 6 13 12	61 19 8 8 54 5 13 102	357 20.50 212 25 45	24.37 21.62 7.69 2.90 0.65 10.14 4.29 9.52 11.85	
;		72.24-73.4m: Up to 10%, <1.5mm subrounded to angular (rhombhedral shaped) calcareous spots. Structure: Foliation mt: 10.0m - 76' CAB. 21.0m - 68' CAB. 33.0m - 70' CAB. 38.0m - 70' CAB. 43.0m - 70' CAB. 47.5m - 74' CAB.				:										

FALCOMBRIDGE LTD

Hole # : BC-90-06

PAGE: 4

FROM (M)	(M)	DESCRIPTION	Sampl.	FROM	то	Leng. (M)	CU PPM	PB PPM	ZN PPM	8A PPM	AG PPH	AU PPB	AS PPM	NI PPN	Cu/Zn RATIO	
		57.5m - 75' CAB. 66.0m - 78' CAB. Bedding at: 10.2m - 82' CAB. Faults: 5.8-5.83m: Fault M/gouge at 65' CAB. 8.3-8.5m: Blocky core with gouge. 26.8-27.2m: Broken, blocky core. 29.28-29.3m: Fault M/gouge at 79' CAB. 44.15-44.65m: Broken, highly frectured core.														
63.20	73.40	70.9-72.24m: Broken, highly fracture core. INTERMEDIATE ASH TUFF 3A Medium green-grey, fine grained, chloritic ash tuff. Occasional, up to 3%, 42mm subrounded quartz crystals. Fine grained weakly chloritic-sericitic matrix. Trace to 0.5% fine grained disseminated pyrite and local, up to 1,5cm fine grained pyrite aggregates or cubes. Hoderately Well, locally contorted foliation. Mineralization & Alteration	VA14730 VA14731	63.30 72.50	64.30 73.40	1.00 0.90	7 29	20 1	158 73	120 350	0.6 0.1	6	32 22	11 13	4.24 28.43	
•		Weak fracture controlled carbonatization Structure: Foliation at: 66.0m : 78' CAB Faults: 70.90-72.24m : Broken,Blocky highly fractured core	:												:	
73.40	90.20	GRAPHITIC ARGILLITE 51M Carbonstized interculated to inter laminated argillite & siltstone (or tuffaceous sediments). Black to light grey, contorted, disrupted banded appearance with fracture controlled to pervasive (moderate-strong) carbonate alteration and minor quartz veins throughout. Trace 2% pyrite with occasional, up to 1.0cm fine grained pyrite cubes. 1-2%, up to 1.5cm fine grained pyrchotite aggregates (engular shapes). Mineralization & Alteration:	VA14732 VA14733 VA14734 VA14735 VA14736 VA14737 VA14738	73.40 74.00 75.50 77.00 78.50 88.50 89.50	74,00 75,50 77,00 78,50 80,00 89,50 90,20	0.60 1.50 1.50 1.50 1.50 1.00 0.70	62 57 49 37 43 56 56	10 11 14 7 9 11 14	92 68 76 75 61 37 63	560 420 340 370 360 460 470	0.1 0.1 0.1 0.3 0.1 0.1		16 16 7 8 8 22 29	41 34 28 26 25 34 32	40.26 45.60 39.20 33.04 41.35 60.22 47.06	
73.40	90.20	Carbonatized interculated to inter laminated argillite & siltstone (or tuffaceous sediments). Black to light grey, contorted, disrupted banded appearance with fracture controlled to pervasive (moderate-strong) carbonate alteration and minor quartz veins throughout. Trace 2% pyrite with pocasional, up to 1.0cm fine grained pyrite cubes. 1-2%, up to 1.5cm fine grained pyrchotite aggregates (engular shapes).	VA14733 VA14734 VA14735 VA14736 VA14737	74.06 75.50 77.00 78.50 88.50	75,50 77,00 78,50 80,00 89,50	1.50 1.50 1.50 1.50 1.50	49 37 43 56	11 14 7 9	76 75 61 37	420 340 370 360 460	0.1 0.1 0.1 0.1 0.1	3 3 3 3	16 7 8 8		34 28 26 25 34	34 45.60 28 39.20 26 33.04 25 41.35 34 60.22

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FALCONBRIDGE LTD

Hole # : BC-90-06

PAGE: 5

FROM (H)	†0 (H)	DESCRIPTION	Sampl.	FROM	70	Leng (M)	S	PB PPN	ZN PPH	BA P PM	AG PPHI	AU PP8	AS PPN	NI Men	Cu/Zn RATIO	
90.20	96.15	Moderate - strong pervasive carbonate. Structure: Foliation at: 75.2m - 78' CAB. 87.0m - 78' CAB. 87.0m - 78' CAB. Faults: 76.4-77.4m: Fault zone approximate orientation 80' CAB. 79.0-79.1m: Fault zone - 78' CAB. FELSIC ASH TUFF 4A Heddium to light grey, fine grained, weakly argillaceous dacitic ash tuff. Strongly quartz veined (80%) from 91.3-93.7m with quartz stringers above and below this interval. Light brown, hard mineral (alteration?) within the felsic tuff accompanies intensely quartz veined sections. Trace 1% disseminated pyrite with up to 1% fracture controlled pyrrhotite, Gradational lower contact over about 20cm. Mineralization & Alteration: Meak pervasive carbonatization. Strong fracture controlled silicification. Structure: Foliation at: 95.5m - 73' CAB.	VA14739 VA14740 VA14741 VA14742 VA14743 VA14744	90.20 91.05 92.00 93.50 94.50 96.00	91.05 92.00 93.50 94.50 96.50	0.85 0.95 1.50 1.50 2.50	114 97 53 48 114 75	42 64 57 100 32 13	69 50 14 40 53 45	700 30 10 330 640 500	0.2 0.9 0.5 0.9 0.1	p1 p2 p2 p2 p3 p3 p3	24 9 7 18 30	40 29 37 37 32 33	62,30 65.99 79,10 54.55 68.26 62.50	
96_15	158.40	GRAPHITIC ARGILLITÉ SIM Similar to previous from 73.4-90.2 metres. Cerbonotized intercalated to finely interbadded argillite and siltstone (or tuffaceous sediments). Weak to moderately graphitic on fractures. Black to light grey, contorted, disrupted banded appearance with local up to 3cm "cataclastic" fragments. Moderate to strong fracture controlled to pervesive carbonate alteration, local quartz-carbonate veins/stringers throughout with strongly quartz veined sections from 135.17-135.48m, 137.5-138.0m, 140.2-140.55m, 143.4-144.2m, and 145.36-145.6m. Trace 2% fine disseminated/	VA14745 VA14746 VA14747 VA14748 VA14749 VA14301 VA14302 VA14303 VA14304 VA14305 VA14306 VA14308	96.50 97.50 99.00 100.50 135.00 136.50 138.50 140.80 141.84 141.40 144.20	97.50 97.00 100.50 136.50 137.50 138.50 140.80 141.60 141.84 143.40 144.20	1.00 1.50 1.50 1.50 1.50 1.00 1.00 1.30 1.00 0.24 1.56 0.80	48 48 14 53 36 57 70 70 70 240 107	12 65 77 10 7 10 9 5 7 8 11 3 3 13	35 153 70 64 37 88 82 47 20 135 40 49 26	320 300 480 370 140 450 320 320 440 400 560 100 590	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1		16 7 9 6 3 7 39 16 11 28 33 23	25 34 33 11 40 23 37 24 46 547 89 248 40	57.83 28.17 52.70 42.86 27.45 37.59 62.07 54.81 66.10 75.27 34.15 78.84 83.04	

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FALCOMBRIDGE LTD

Hote # : 80-90-06

FROM (H)	TO (N)	DESCRIPTION	Sampl.	FROM	10	Leng. (M)	CU PPM	PB PPN	ZN PPM	BA PPM	AG PPH	AU PPS	AS PPM	N1 PPN	Cu/Zn RATIO	
		fracture controlled pyrite and 5%, up to lom fine grained pyrite cubes or eggregates. 1-2% fracture controlled pyrrhotite and 3-5%, up to los fine grained pyrrhotite eggregates throughout unit. 150.05-151.7m: dominately silty horizon with interestated engillite. 154.6-157.5m: up to 15%, <3cm, light grey, alongsted silty tuffaceous fragments. 152.95-154.64m: silty - tuffaceous sediments, medium to light green-grey. Mineralization & Alteration: Moderate-strong pervasive carbonate. Structure: Foliation at: 104.0m - 68' CAB. 109.0m - 78' CAB. 115.5m - 80' CAB. 123.6m - 68'CAB. 123.6m - 68'CAB. 123.6m - 68'CAB. 133.5m - 65' CAB. 133.5m - 65' CAB. 151.0m - 73' CAB. 151.0m - 75' CAB. 158.0m - 70' CAB.	VA14300 VA14310 VA14311 VA14512 VA14313 VA14314 VA14315 VA14316 VA14317 VA14318	145.20 146.70 148.20 149.80 151.30 152.95 154.62 155.62 157.00 158.25	146.70 148.20 149.80 151.30 152.95 154.62 155.62 157.00 158.25 159.20	1.50 1.50 1.60 1.65 1.67 1.07 1.38 1.25 0.95	59 49 66 39 64 26 108 61 59	6 9 6 8 32 7 9 5 3 3	43 54 72 41 55 121 92 61 43 54	420 440 420 210 460 30 780 700 700 670	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	5 14 14 15 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	18 15 16 9 3 13 17 11 10 11	32 31 36 34 148 77 42 67 49	57.84 47.57 47.88.75 53.78 17.69 54.00 51.59 58.65 52.21	
158.40	163.95	faults: 101.4-101.8m: Broken, highly fractured core. 108.4-108.7m: Broken, highly fractured core, graphitic, approximate orientation at 75' CAB. 119.1-120.1m: Broken, highly fracture core, graphitic, approximate orientation at 78' CAB. 126.0-126.1m: Graphitic shear at 50' CAB. 130.7-130.8m: Fault with gouge, graphitic at 60' CAB. 137.4-137.5m: Fault with gouge graphitic, at -65' CAB. ARGILLACEGUS FELSIC TUFFACEOUS SEDIMENTS. 400 Nedium green-grey/brown, fine grained, fragmental tuffaceous sediments. Up to 7%, <2cm elongated	VA14319 VA14320 VA14321	159,20 160,20 161,27	160,20 161,27 162,20	1.00 1.07 0.93	67 50 148	1 3 84	45 101 41	600 750 660	0.1 0.1 1.9	3 3 3 3	8 9 12	26 36 41	59.29 33.11 78.31	

FALCOMBRIDGE LTD

Note # : BC-90-06

FROM (M)	(M)	DESCRIPTION	Sempl.	FROM	TD	Leng. (N)	CU PPM	PB PPM	ZM PPM	BA PPK	AG PPM	AU PPB	AS PPN	HI PPN	Cu/Zn RATIO	
		siliceous/cherty/sericitic felsic fragments. fine grained, weekly argillaceous matrix increasing below 162,4m to lower contact. Moderately well foliated with local streaky discontinuous banded appearance. 1-2% pyrite and/or pyrrhotite cubes.	VA14322	162.20	163.95	1.75	67	9	61	660	0.1	3	42	36	52.34	
:		159.2-159.6m: Fine grained, quartz-phyric felsic dyke. Hassive, nonfoliated, uneven contacts. Up to 6%, <2mm subrounded quartz phenocrysts. 161.1-161.27m: Fine grained, felsic dyke similar to previous. 161.27-161.6m: Quartz veined (80%) with light brown mineral (sphalerite?), 2-3% fracture controlled pyrite/pyrrhotite. 162.2-162.38m: Quartz carbonate veined argillaceous horizon.									:					
		Rineralization & Alteration: Weak pervasive sericitization. Structure: Foliation_st:	į							:						
163.95	173.30	160.0m - 70' CAB. 162.75m - 73' CAB. GRAPHITIC ARGILLITE 5IM Weak to moderately carbonatized, black-medium grey intercelated to finely interbedded argillite/silstone (tuffaceous sediments?). Similar to previous argillite zones. Discontinuous, streaky, contorted bended appearance. Moderately well foliated, Up to 3% fracture controlled pyrrhotite/pyrite with up to 4%, <1.5cm fine grained pyrrhotite aggregates.	VA14323 VA14324	163.95 172.30	165.00 173.30	1.05 1.00	51 128	9 26	110 1 143	710 770	0.1	3	36 39	37 39	31.68 47.23	
		Mineralization & Alteration: Weak - moderate fracture controlled carbonatization. Structure: Faults: 170.72-170.75m: Fault zone at 80° CAB. 171.0-171.05m: Fault zone at 85° CAB.														
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FALCONBRIDGE LTD

Hote # : BC-90-06

FRÓM (M)	TO (M)	DESCRIPTION	Sampi.	FROM	TO	Leng. (N)	CU PPM	P8 PPM	ZN PPN	BA PPM	AG PPM	AU PPB	AS PPM	RI PPM	Cu/2n RATIO	
173.30	179.10	ARGILLACEOUS INTERMEDIATE LAPILLE ASM TUFF 380 Medium to dark grey, medium grained "dacitic" tuff or reworked tuffaceous sediments (?). 8-12X <3cm elongated cherty fragments. Intercalated profite (15%) increasing below 176.8m to lower contact. 3-4% fracture controlled pyrrhotite, 3% disseminated and fracture controlled pyrite, trace chalcopyrite at 175.4m. Moderately well foliated, with about 5% boudinaged quartz-carbonate veins/stringers. Gradational contacts over approximately 20cm. Discontinuous streaky bended appearance.	VA14325 VA14326 VA14327 VA14328 VA14329 VA14330	173.30 174.30 175.30 175.20 177.20 178.20	174.30 175.30 176.20 177.20 178.20 179.10	1.00 1.00 0.90 1.00 1.00 0.90	127 213 275 346 76 332	20 8 9 12 5 3	112 109 127 115 101 106	780 780 850 770 830 570	0.1 0.1 0.1 0.1 0.1 0.1	33333	201 441 150 58 18 10	38 37 44 31 42 29	53.14 66.15 68.41 75.05 42.94 75.80	
•		Mineralization & Alteretion: Weak fracture controlled carbonate. Structure: Folation at: 175.8m - 76' CAB. Fault at: 176.95-178.15m: Fault zone with fault gouge at 75' CAB.														
179.10	195.58	INTERMEDIATE ASM TUFF 3A Redium green, fine grained ash tuff. Weak to moderately chloritic, fine grained matrix with thin, <2-5mm chlorite stringers (7). Variable, up to 10% fracture controlled pyrite/pyrchotite with local, trace to 0.5% chatcopyrite at 180.5m, 180.3m, 182.25m, 184.7m, 184.7m, and between 186.5-186.95m. Moderately well developed foliation, minor quartz carbonate veins/stringers with pyrchotite/pyrite. Saveral fine grained, unfoliated-massive, <10cm intermediate/mafic dykes over the first 2.0 metres. Mineralization & Alteration: Meak to moderate fracture controlled	VA14331 VA14332 VA14333 VA14334 VA14335 VA14335	179.10 180.10 181.10 182.10 182.50 186.10	180. 10 181. 10 182. 10 182. 50 183. 50 187. 10	1.00 1.00 1.00 0.40 1.00 1.00	894 708 397 1696 150 12800	7 9 1 137 2 100	97 92 90 97 74 400	400 750 1000 420 1400 860	0.3 0.3 0.1 2 0.1 7.3	55 595 95	9 14 17 52 11 24	20 35 56 93 43 75	90.21 88.50 77.33 94.59 66.96 96.97	
		chloritization. Structure: foliation st:														

FALCONBRIDGE LTD

Hale # : 80-90-06

FROM (M)	70 (M)	DESCREPTION	Sampl.	FROM	то	Leng.	CU: PPM	PB PPN	ZN PPM	BA PPN	AG PPN	AU PPS	A5 PPM	NI PPH	CU/Zn RATIO	
195.58	206.25	181.7m - 77' CAB. 190.5m - 75' CAB. INTERMEDIATE LAPILLI ASM TUFF 38 Medium green-grey, medium grained lapilli-ash tuff with local finer grained ash horizons. Up to 10%, <2cm elongated siliceous felsic fragments decreasing downhole with fine-medium grained ash (occssfonal fragments) over the last meter. Gradational lower and upper contacts. Moderately well foliated. 2% fine disseminated/fracture controlled pyrite/pyrrhotite. 200.3-200.45m: Fine grained mafic dyke, massive, nonfoliated. Mineralization & Alteration: Wesk fracture controlled carbonatization.														
206.25	217.80	Structure: Foliation at: 197.0m - 65' CAB. 204.5m - 80' CAB. Fault at: 199.8-199.9m: Fault zone 50' CAB. ARGILLACEOUS INTERMEDIATE ASH TUFF 3AO Medium green, fine grained ash with weak intercelated argillaceous component darkening the unit to a local, streaky dark green. Occasional, up to 2% (locally); «Zom elongated intermediate/fitsic fragments. 2-3% fracture controlled-disseminated pyrite/pyrrhotite with traces to 0.5% chalcopyrite at 207.1m, 207.5m, 208.0m, 209.05m, 210.2m, 210.4m, 210.6m, 210.7m, and 212.4m. Moderately well foliated. 210.65-212.27m: Quartz Phyric Intermediate Ash Tuff, 3-5%, 1-4mm subrounded quartz phenocrysts. Mineralization & Alteration: Weak fracture controlled carbonatization.	VA14337 VA14338 VA14339 VA14340 VA14341 VA14342	207.00 208.00 209.00 210.00 211.00 212.00	208.00 209.00 210.00 211.00 212.00 213.00	1.00 1.00 1.00 1.00 1.00 1.00	1382 400 548 2910 301 2487	1 3 1 19 28 8	51 49 62 145 56 68	1500 1700 1400 650 1500 630	0.4 0.1 0.3 0.3 1.9	3 3 31 3 6	14 13 16 80 37 69	45 47 71 63 5 19	96.44 89.94 95.25 54.31 97.34	

FALCONBRIDGE LTD

Hole # : BC-90-06

FROM (H)	TO (M)	DESCRIPTION	Sampl.	FROK	TO	Leng. (N)	ÇU PPM	PG. PPM	ZM PPH	SA P PH	AG PPH	AU PPB	AS PPM	NI PPM	Çu/Zn RAT10	
		Structure: Foliation at: 207.4m - 62º CAB. 215.0m - 73º CAB.														
217.80	221.30	INTERMEDIATE ASH TUFF 3A Hedium green, fine grained ash or possible inter- mediate/maflo intrusion (2). Fine grained, poorly foliated to massive. 1-2% disseminated/frecture controlled pyrite with traces chalcopyrite at 218.7m. Minor quartz- carbonate veins/stringers.														
		Mineralization & Alteration: Weak fracture controlled carbonatization. Structure:			:			i								
		Foliation at: 219,0m - 78' CAB.														
221.30 •	230.85	INTERMEDIATE LAPILLI ASH TUFF 3B Medium green, medium grained lapitli ash tuff with local finer grained sections. Gradational contacts with sharp upper contact-marked by lapitli fragments. Up to 10%, «6em (average lcm) alongated siliceous felsic fragments. Fine to medium grained chloritic matrix. Traces 1% disseminated/fracture controlled pyrite. Weak to moderately well foliated, with minor (2-3%) quartz carbonate veins/stringers.									:					
		Mineralization & Alteration: Weak fracture controlled carbonatization.														
		Structure: Foliation st: 224.0m - 64' CAB, 229.8m - 71' CAB.													;	
230.85	245.75	ARGILLACEOUS INTERNEDIATE ASH TUFF 380 Medium to dark green, fine grained intermediate ash tuff with local lapilli fragments below 239.0-243.0 metres. Fine grained, chloritic	VA14343 VA14344	243.60 244.70	244.70 245,70	1.10	1065 362	19 4	112 161	60 100	1.1 0.1	37 3	182 55	88. 196	90.48 69.22	:

FALCOMBRIDGE LTD

Hole # : 80-90-06

FROM (M)	TO (M)	DESCRIPTION	Sempl.	FROM	то	Leng.	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS - PPN -	MI PPM	Cu/Zn RATIO	
		matrix with 10-15% intercalated argillaceous component. 3-5%, <3cm (avg. 1.5cm) elongated siliceous fe(sic fragments between 239.0 and 243.0m. Week to moderately well foliated with minor (boudinaged) quartz veins/stringers. Trace to 2% disseminated pyrite with local pyritic sections. Nineralization & Alteration: 232.6m: 2cm pyritic (50%) stringer. 232.6m: 2cm pyritic (50%) stringer. 236.8-237.0m: 40% pyrite, traces chalcopyrite associated with quartz stringers. 238.3m: 3cm pyritic (20%) stringer. 243.6-245.75m: Local up to 7% fracture controlled disseminated pyrite/pyrrhot(te, trace chalcopyrite, local pyrite (35%) "stringer" mineralization with quartz veining. Structure: Foliation at: 232.0m - 80° CAB. 239.0m - 80° CAB.														
245.75	246.35	245.0m - 85' CAB. FELDSPAR PRYRIC FELSIC IMTRUSION 9RB Medium to light grey/brown. Massive, nonfoliated. Up to 30%, 1-3cm, white, subrounded feldspars. 2-3% carbonate stringers (fracture- filling). Sharp upper & lower contacts at 65' & 75' CAB. Mineralization & Alteration: Weak fracture controlled carbonatization.	:													
246.35	255.60	ARGILLACEOUS INTERMEDIATE ASM TUFF 3AO Similar to previous from 230.85-245.75m. Medium to dark green, fine grained weekly argillaceous intermediate ash tuff. Fine grained, weak to moderate chloritic matrix with fine interculated argillaceous component (*10%) imparting a streaky dark green colour. Occasional, <2cm elongated siliceous felsic fragments towards the lower contact. 2-3% disseminated/fracture controlled	VA14345 VA14346 VA14347	248.93 249.70 250.20	249.70 250.20 251.00	0.77 0.50 0.80	461 1586 440	15 16 6	178 242 353	120 80 120	0.3 1.9 0.3	3 51 3	61 219 86	53 52 49	72.14 86.76 55.49	

FALCONBRIDGE LTD

Hole # : BC-90-06

FROM (M)	TQ (M)	DESCRIPTION	Sampl.	FROM	το	Leng. (N)	CU . PPM	PB PPM	ZN PP#	BA PPN	AG PPN	AU PPB	AS PPN .	NI PPN	Cu/Zn RATIO	
		pyrite and lesser pyrhotite with local up to 20% pyritic zones from 249.9-250.15m (trace chalcopyrite) and 250.7-250.85m. Poorly developed foliation.														
		Mineralization & Alteration: Week fracture controlled carbonatization.										:				
		Structure: Foliation at: 253.7m - 73' CAB.														
255.60	256.40	FAULT 20ME F2 Broken blocky - highly fractured intermediate "azh7" tuff with local fault gouge.														
256.40	272.35	INTERMEDIATE TUFFACEOUS SEDIMENTS (ASH TUFF) 30 Medium to dark green, fine grained tuffaceous sediments. Up to 6%, <3cm elongated siliceous felsic fragments and lesser intermediate fragments decreasing downhole to 265.2 metres (slightly brecciated appearance). Dominately medium brown/green volcamic sediment, and occasional sicm lithic clast below 265.2m. Weakly argillaceous (dark green/block) intervals decreasing downhole. 3-6% disseminated pyrite/pyrrhotite with local up to 10% pyrite between 260.4-265.4 metres. Poorly developed foliation with contorted, Many bended appearance below 265.2m. Minor quantz veins/stringens.	VA14348 VA14349 VA14350 VA14351 VA14352	260.40 261.40 262.40 263.40 264.40	261,40 262,40 263,40 264,40 265,40	1.00 1.00 1.00 1.00 1.00	1083 553 802 581 752	23 10 10 5 7	124 145 136 93 182	110 150 100 140 140	1,4 6,3 1,1 0,8 1	67 22 44 10 10	278 125 107 60 78	47 45 49 61 104	89.73 79.23 85.50 86.20 80.51	
		Mineralization & Alteration: Weak fracture controlled carbonatization. Structure: Foliation at: 270.5m - 75' CAS.														
272,35	274.05	FELDSPAR PRYRIC FELSIC INTRUSION 9RB Medium to light grey, massive, nonfoliated, sharp upper/lower contacts at 70° CAS. 30-35%, 1-4mm (avg. 2mm) subrounded, white feldspars. Light grey, fine grained, pyritic (4%) bleached intermediate sediment intervals (block-size fragments) from 272.9-273.3 matres and along edge of core to 273.65 metres.														Į.

FALCONBRIDGE LTD

Hole # : 80-90-06

FROM (M)	(M)	DESCRIPTION	Sampt.	FROM	10	Leng.	CJ PPM	PB PPM	ZM PPM	BA PPM	AG PPN	AU PPB	AS PPM	NI PPM	CLL/Zn RATIO	
274.05	275.85	INTERMEDIATE ASH TUFF 3A Medium to Light green/brown, fine grained, weakly banded appearance. Occasional, <3cm elongated siliceous fragments. Trace 2% disseminated pyrite. Moderately well foliated, minor quartz- carbonate vains/stringers. Mineralization & Alteration:														
		Week fracture controlled carbonatization. Structure: Foliation at: 274.6m ~ 75' CAB.														
275.85	277.30	FELDSPAR PHYRIC FELSIC INTRUSION ORB Similar to previous from 272,35-274.05 metres. Sharp upper end lower contacts at 72' CAB.														
277.30	280.68	INTERMEDIATE ASM TUFF 3A Medium green/grey/browm, fine grained, weakly banded appearance. Trace to 2% fine disseminated, locally fracture controlled pyrite. 2 to 4%, 43cm elongated siliceous felsic fragments balow 279.6m. Moderately well foliated, with minor quartz stringers. Up to 8%, <tmm "hornfelsing"="" 377.8m.<="" below="" calcareous="" spots="" subrounded-subanqular="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tmm>														
		Mineralization & Alteration: Weak aporty carbonatization.											İ			
	:	Structure: Foliation st: 260.2m - 70° CAB.	! !													
280.68	282,50	FELDSPAR PHYRIC FELSIC INTRUSION 9RB Similar to previous from 272.35-274.05m. Up to 10%, <3mm, white-mottled feldspars. Massive, nonfoliated with sharp upper/lower contacts at 75' and 90' CAB. Nil sulphides.														
282.50	289.75	INTERMEDIATE VOLCANIC WACKE 3K Medium grey/green/black, fine grained, streeky discontinuous bended appearance. Up to 12%, <3cm elongated lithic (intermediate-falsic) fragments. Medium brown/black matrix with intercalated angillaceous component. 1-2% disseminated to								į						

FALCOMBRIDGE LTD

Hole # : BC-90-06

FROM (M)	(M)	DESCRIPTION	Sampl.	FROM	το	Leng. (M)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPN	NI PPN	Cu/Zn RATIO	
		aggregates of fine grained pyrite/pyrrhotite. Moderately well developed foliation with minor quartz-carbonate stringers.														
		Mineralization & Alteration: Unknown.														
289,75	294.20	FELDSPAR PHYRIC FELSIC INTRUSION 9RB Similar to pravious from 280.66-282.5m. Medium grey, fine grained, massive-nonfoliated. Up to 15%, <3mm, mottled white feldspars.								:						
		292.0-292.36m; Intermediate tuffaceous sediments, weak to moderate biotite development. 292.36-293.0m; Quartz veined. Sharp upper/lower contacts at 78° CA8.	i	:						į						
294.20	295.19	INTERNEDIATE TUFFACEOUS SEDIMENTS 30 Medium green/grey/brown, medium to fine grained, weak streaky, discontinuous banded appearance (elongated fragments?). Weak blotite development to moderate biotite development along intrusive contacts. Trace to 2% fine disseminated/locally fracture controlled pyrite/pyrhotite. Poorly developed foliation.														
		Mineralization & Alteration: Weak pervasive biotization.														
295.19	296.18	FELDSPAR PHYRIC FELSIC INTRUSION 988 Similar to previous from 289.75-294.2 metres.														
296.18	322.15	INTERNEDIATE TUFFACEOUS SEDIMENTS/MACKES 30/3K Medium to light green/grey, medium to firm grained, week uneven to streaky bended appearence. Variable (<10%) intercelated argillaceous component 1-3%, <2cm alongated lithic (intermediate to felsic) fragments locally throughout with up to 7% lithic fragments from 307.68-308.3 metres. Trace to 2% disseminated pyrite/pyrrhot(ta. Fractured core (fault zone) from 317.7-319.0 metres with estaclastic-brecciated appearance above, through and below the fault zone. Overall, poor to moderately well foliated												:		

FALCOMBRIDGE LTD

Hole # : BC-90-06

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (M)	ÇU PPM	PR PPM	ZM PPM	BA PPM	AG PPN	AU PPB	AS PPM	NI PPK	Çu/Zn RATIO	
:		stringers below 309.9m. Mineralization & Alteration: 296.18-308.48m: Unknown. 308.48-309.9m: Weak spotty chloritization ("Mornfelsing"). 309.8-322.15m: Weak fracture controlled carbonatization.														
322.15	327.90	FELSIC TUFFACEOUS SEDIMENTS/MACKE 40/4K Light grey-green/brown, dacitic tuffaceous sediments. Up to 5%, <2.5cm elongated-subrounded lithic fregments and local up to 10% elongated lithic fregments from 322.6-323.4m, 323.7-325.0m, Local parvasive light brown colour (sericite?) increasing downhole (weak to moderate) within finer grained sections. Trace 3% disseminated/ fracture controlled pyrite/pyrrhotite with traces fuchsite. Poorly developed foliation with up to 5% quartz-carbonate veins/stringers (often boudinaged) throughout the unit. Mineralization & Alteration: Weak fracture controlled carbonate. Structure: Foliation at: 323.3m - 75' CAB.														
327.90	334.20	INTERMEDIATE TUFFACEOUS SEDIMENTS 30 Medium to light grey/green, fine grained, locally argillaceous intermediate to felsic tuffaceous sedimenta. Fine grained, streaky discontinuous banded appearance. 3-4X disseminated/fracture controlled pyrite with up to 30%, fracture controlled pyrite from 331.2-331.25m. Poorly developed foliation. 328.3-338.65m: Section similar to previous unit (lower section) faulted lower contact at 40° CAS. Mineralization & Alteration: 329.4-330.4m: Weak spotty chloritization "hornfelsing".														

FALCONBRIDGE LTD

Hoie # : BC-90-06

FROM (H)	07 (H)	DESCRIPTION	Sampi.	FROM	tó	Leng. (M)	CU PPN	PB PPN	ZM PPM	BA PPN	AG PPM	ALI PPB	AS PPM	NS PPK	Cu/Zn RATIO	
534.20	335.55	Foliation at: 328.Dm - 67' CAB. 332.Dm - 67' CAB. 332.Dm - 78' CAB. Fault at: 338.6-338.65mc Fault slips at 40' CAB. FELSIC TUFFACEOUS SEDIMENTS 40 Light grey/green, fine grained, weakly chloritic (?) decitic sediments. Up to 10%, <1cm elongated subrounded silicaous fragments. Gradational upper contect, poorly foliated. Trace disseminated pyrite. Mineralization & Alteration:														
335.55	336.85	Week fracture controlled carbonate. Structure: Fault at: 334.9-335.2m: Fault slips at 40-25' CAB. INTERMEDIATE TUFFACEOUS SEDIMENTS 30 Medium green, weak brownish tinge, fine grained tuffaceous sediments. Very fine grained over the first 30cm. Poorly foliated, Trace fine disseminated pyrite. Meak biotite development below 336.0m.														
336.85	342.00	Mineralization & Alteration: Weak fracture controlled carbonate. 336.0-336.85mz Weak pervasive biotization. FINE GRAINED MAFIC INTRUSION 7R Dark green, fine grained mafic tuffaceous sediments. Local evidence of siliceous elongated fragments. Poorly foliated to massive in eppearance (intrusion?). Nil sulphides.							:							
342.00	345.05	Mineralization & Alteration: Weak fracture controlled carbonate. INTERHEDIATE TUFFACEOUS SEDIMENTS 30 Similar to previous from 335.55-336.85m. Medium green, slight brownish tinge, fine grained. Meak to moderate biotite/chlorite developed from upper contact to 344.05m. Mil sulphides. Poorly foliated.										: 				

FALCONBRIDGE LTD

Hole # : 8C-90-06

PAGE: 17

FROM (H)	(N)	DESCRIPTION	Sempt.	FROM	TO	Leng. (H)	DJ. PPM	PB PPH	ZN PPN	BA PPM	AG PPH	AU 228	AS PPM	NI PPM	Cu/2n RATIO	
		Mineralization & Alteration: 342.0-344.05m: Weak pervasive biotization.														
345.05		End of hate														
		Total amount of samples= 83 Total length sampled = 87,87K														
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HOLE NUMBER: 90-90-06 GEOCHEM, SHEET DATE: 26-February-1991

Sample	From (H)	To (M)	Length (M)	\$102 #1%	1102 ut%	205 AL 204	Fe203 ut%	MgD wt%	CaO etX	Na20 ut	K20 bt%	P205 Nt%	MHO Mt%	Rb ppm	Sr ppm	pps.	Zr ppm	N i ppm	8a ppm	Cu ppm	Zn ppm			Zn/Ma Retio		ALUM A.I.	ACKK A.I.	
V809757 V809758 V809759 V809760	12.00 35.00 54.00 67.00	15.00 38.00 57.00 70.00	3.00 3.00 3.00 3.00	65.69 68.44 68.15 53.24	0.39 0.39 0.41 0.87	14.07 14.65 15.12	4.48 3.95 4.23 5.68	7.32 5.01 3.90 7.13	0.87 0.78 0.68 4.31	0.81 2.01 2.43 2.78	1,85 1,83 2,06 0,60	0.08 0.05 0.19	0,13 0.08 0.08 0.13	53.0 54.0 73.0 20.0	66 58 70 139	27 33 31 20	199 226 218 138	20 20 20 20	611 502 449 303	20 20 40 20	28 23 46 57	4.90 3.73 3.36 7.31	20 20 40 20	0.4 0.1 0.2 0.2	85 71 66 52	391 305 283 197	2.8 2.1 2.0 1.2	
V809761 V809762 V809763 V809764 V809765 V809766		215.00 221.00	3.00 3.00 3.00 3.00 3.00 3.00	53.97 51.79 41.29 50.47 50.67 40.66	3.86 2.67 2.62 1.10 4.08	13.61 9.66 16.94 14.87	13.41 11.98	3.40 4.17 8.58 4.94 6.56 10.51	3.35 10.09 2.75 3.14 2.61	0.01 2.89 0.01 3.99 2.03 0.92	4.31 0.60 0.01 0.82 0.42 0.52	0.09 0.65 0.52 1.19 0.27 1.04	0.16 0.22 0.27 0.15 0.18 0.22	26.0 20.0 25.0 20.0 20.0	140 229 141 113 93	30 25 32 20 37	173 295 249 387 97 326	39 133 201 20 20 20	720 63 604 404 567	62 272 185 249 348 218	71 129 49 51 82	7.87 3.86 8.50 3.86 5.21 6.62	62 272 185 249 348 218	0.3 129.0 0.1 0.3 0.9	57 43 46 46 57 76	157 199 96 224 266 408	1.0 1.2 0.5 1.4 1.6 2.4	
VB09767 VB09768 VB09769 VB09770 VB09771	245.75 251.00 266.00 277.50 302.00	246.35 254.00 269.00 280.50	0.60 3.00 3.00 3.00 3.00	64.49 43.78 37.55 36.88 37,40	0.34 2.98 2.28	16.21 13.12 12.35 12.81	3.37 14.27 11.90 10.48	0.94 8.18 8.04 6.41 8.54	3.34 4.90 8.27 9.39 9.25	1.75 0.85 0.51 3.30 1.54	2.76 0.58 0.67 0.64 0.19	0.10 0.69 0.49 0.74 0.56	0.08 0.26 0.25 0.24 0.26	89.0 20.0 27.0 37.0 20.0	349 150 177 337 241	20 23 20 30 20	260 257 149 291 224	20 71 142 47 81	1458 680 1023 160 96	20 312 216 44 195	48 151 157	6.04 8.58 15.40 13.79 14.67	20 312 216 44 105	0.3 1.8 3.1 0.2 1.1	42 60 50 36 45	207 208 131 96 107	1.4 1.2 0.7 0.6 0.6	
VB09772 VB09773	325.50 337.00	327.50 340.00	2.00 3.00	36.43 41.61	3.02 3.52		12,92 11,28	8.60 6.75	7.34 7.90	0.32 2.81	0.69 0.19	0.60 0.84	0.28 0.26	20.0 20.0	194 226	27 32	246 369	76 47	616 212	107 42	159 40	13.35 8.78	107 42	5.0 0.1	55 39	147 1 34	8.0 8.0	

HOLE HUMBER: BC-90-06

FALCOMBRIDGE LTD DIAMOND DRILL LOG Property : BIRK CREEK (1990)

Note # : BC-90-07 Zone # : BIRK CK. Contractor : BURMASH ENTERPRISES Date started :10/25/1990 Township: KANLDOPS Pare completed: 10/25/1990 Lot Range: Claim # :8ET 5 Level : SURFACE Section: 201+828 Location : Line : 201+82 M Station: 387+00 E Collar coordinate : Latitude: 5688350.00 N Azimuth: 0' 0' 0" Departure: 296390.00 E Dip : -90° 0° 0° Length : 349.61 M Reference frame : Elevation: 725.00 Surveyed by: SPERRY-SUM Deviation tests : Dip Depth Azimuth 96.62 N -89° 0' 8* 102* 01 0* -88" 0" 0" 102* 01 0* 168.25 M 230.73 M -87" O' O" 92" O' O" 82" 0' 0" 72" 0' 0" 288.65 M -87" O' O" -861301 OH 346.56 M Remarks : Water flow : Plugged: Cimented : Core size: NO

Logged by : C. RUSSELL

Date logged: 10/29/1990

Hole # : EC-90-07

FALCONBRIDGE LTD

Hole # : BC-90-07

PAGE: 2

FROM (M)	TQ (M)	DESCRIPTION	Sempi.	FROM	ΤO	Leng. (M)	CU PPM	PB PPM	ZN PPM	BA PPN	AG PPM	AU PPB	AS PPH	N] PPM	Cu/Zh RATIO	
0.00	12.80	OVERBURDEN O/B														
12.80	69.70	CUARTZ PHYRIC FELSIC ASH TUFF 4AA Light to medium grey, aphenitic matrix, cremulated foliation. 5-7% quartz eyes to 2mm within a light grey to silver/white sericite matrix. 32.5-67.6m: Increase in quartz eyes, 10% to 5mm, rare to 1cm. 34.34-36.46m: Very blocky core. 62.75-67.06m: Quartz vaining, Stockwork appearance, very broken core. 1% disseminated pyrite. 68.89 - 69.33m: Finely banded/laminated black argillaceous materiat. Mineralization & Alteration: 2-4% pyrite, disseminated & along foliation planes. Weakly to moderately siliceous locally. <1% quartz veins to 1cm parallel and cross-cutting foliation. Structure: Foliations at: 16.85m - 75 CAB. 37.75m - 65 CAB. 62.5m - 70 CAB.														
69,70	73.76	OUARTZ FELOSPAR PHYRIC FELSIC ASH TUFF 4AC Light to medium grey fine grained to aphenitic matrix. Up to 4% 1-2mm tan altered feldspar phenocrysts. 5% poorly defined very light grey to duit white claste? to 2cm (possible cataclastic breccia?). 72.3-73.15m; Multiple quartz veins, largest is 25cm across, some very broken up with poor recovery. No visible sulphides. Kineralization & Alteration: 1% fine grained disagminated pyrite, rare as clots, usually along foliation planes. Neek to moderate light grey sericite. <1% quartz veins to 0.5cm. 72.3-73.15m; Weakly chloritic in wall rock.							,							

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FALCONBRIDGE LTD

Hote # : 80-90-07

FROM (M)	TO (N)	DESCRIPTION	Sempt.	FROM	το	Leng. (M)	9 PPM	PB PPM	ZN PPM	BA PPN	AG PPK	UA BPS	AS PPM	NI PPM	Cu/Zn RATIO	
		Structure: Foliation at: 70.4m - 70° CAB. 80.0m - 85° CAB.														
73.76	78.70	QUARTZ FELDSPAR PHYRIC FELSIC ASH TUFF 4AC Medium greenimh/grey, fine grained to aphanitic, well foliated. Up to 7% quartz eyes to Zmm, up to 4% feldspar phenocrysts to Zmm all within a light grey sericite matrix. Gradational contact.														
		Mineralization & Alteration: Up to 2-3% fine grained stringer to disseminated pyrite <2mm.														
		Structure: Foliation at: 74.0m - 35' CAB.	:													
		Cremulation cleavage at: 74.0m - 10° CAB.														
78.7 0	82.69	FELSIC LAPILLI TUFF 4BA Medium greenish grey, fine grained to aphanitic sericitic matrix. 5-10% lapillis to 1cm by 5cm. 1% 1-2mm tan eltered feldsper phenocrysts, lower contact gradational.														
		Mineralization & Alteration: 2-3% fine grained stringer to disseminated pyrite.														
		Structure: Foliation at: 51.2m - 70' CAB.														
52.69 ·	87.20	OUARTZ PHYRIC FELSIC ASH TUFF 4AA As above unit (73.76-78.7m). 63.23-63.62m: Felsic lapilli tuff (as above). Gradational contacts. Lower 1m shows quartz eyes to 1mm. Gradational contact.												=		
		Mineralization & Alteration: 2-3% disseminated to stringer pyrite. <1% quartz												!		
											ı					I

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Hole # : BC-90-07

(M) PPM PPM PPM PPM PPM PPM PPM PPM PPM P	PPM PPM	Cu/Zn RATIO	
Veins to 0.5cm paratlet to foliation. Structure: St	481 203 5212 132 109 468 555 48 52 48 548 548 548 551 551 551 552 553 554 661 555 554 661 555 554 661 555 554 661 555 554 661 555 661 661 661 661 661 661 661 661	38.71 29.46 20.00 12.24 18.00 27.27 36.51 32.47 21.52 28.48 42.73	

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Hale # : 8C-90-07

PAGE: 5

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	то	Leng. (H)	CU PPM	PB. PPM	ZN PPM	BA PPM	AG PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
	:	100.7m: Shear at 15' CAB. 102.7m: Foliation - 80' CAB, 102.84-103.0m: Fault zone, 110.72m: 0.5cm fault gouge 70' CAB, 128.5-129.27m: Fault zone, 130.15-130.3m: Fault zone, 132.68-134.7m: Fault zone,														
134.70	137.40	QUARTZ PHYRIC FELSIC ASM TUFF 4AA Light to medium grey fine grained, well foliated. 5% quartz eyes to 2-3mm in a silver grey sericitic metrix. 1-2% pyrite, disseminated and along foliation planes.														
		Mineralization & Alteration: Moderate to strong sericite. Structure: 136.94-137.4m: Fault zone. 1-2% disseminated fracture controlled pyrite.														
137.40	146.93	QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light to medium grey, fine grained, well foliated. 5% quartz eyes to 2mm in a silver/grey sericitic matrix. Yague outlines of possible lapillis (although poorly defined) towards bottom of unit.	VA12439 VA12640 VA12661 VA12462 VA12463 VA12464	137.40 138.90 140.40 141.90 143.40 144.90	138.90 140.40 141.90 143.40 144.90	1.50 1.50 1.50 1.50 1.50	19 23 88 84 75 44	33 66 660 222 445 234	37 147 1175 215 332 719	520 560 600 550 620 600	0.5 0.5 1.5 1 1.1 0.9	29 60 63 71 57 66	62 127 154 149 141	235454	33.93 13.53 6.97 28.09 18.43 5.77	
		Mineralization & Alteration: 2-4% pyrite, disseminated and along foliation planes. 5-10% locally, minor chalcopyrite, trace galena. Moderate sericite.	VA12445	146.40	147,90	1,50	87	272	377	590	1	62	170	5	18.75	
		Structure 145.90 - 146.93m: Fault zone. Fault parallels core exis.														
146.93	156.77	ARGILLACEOUS FELSIC LAPILLI TUFF 480 Medium to dark grey, fine grained to aphenitic, well foliated matrix with up to 10% argillaceous material, 5-10% lepillia, Lapillia are strongly siliceous & may be ms large as 6cm long by 1.5cm wide.	VA12446 VA12447 VA12448 VA12449 VA12450 VA12451	147,90 149,40 150,90 152,40 153,90 155,40	149,40 150,90 152,40 153,90 155,40 156,77	1,50 1,50 1,50 1,50 1,50 1,37	52 34 190 45 58 92	287 73 525 170 739 119	329 72 961 362 890 126	580 610 600 590 580 620	1 0.6 1.4 0.7 2.1 0.6	52 43 54 90 63 78	141 99 191 226 215 241	5 4 4 3 4 3	13.65 32.08 16.51 11.06 6.12 42.20	:
								:				;				

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FALCONBRIDGE LTD

Hale # : 80-90-07

f0 (M)	DESCRIPTION	Sampi.	FROM	το	Leng. (M)	CU PPM	PB PPN	ZH PPM	BA PPM	AG PPN	AU PPB	AS PPH	NI PPN	Cu/Zn RATIO	
	Mineralization & Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% chalcopyrite, minor galana. Weak to moderate sericite along fractures.									•					
	Structure: Foliation at: 147.7m - 85-90' CAB.														İ
157.55	CHERT BRECGIA 4CP sa Very light grey to medium grey chert cleats within a silver/grey sericitic matrix. Clasts are angular, up to 5-6cm in size with somewhat fuzzy outlines.	VA12452	156.77	157.55	0.78	270	2777	4992	260	6.2	222	360	4	5.13	
	Mineralization & Alteration: 10-15% disseminated and along foliation planes, locally semi-massive pyrite in matrix around clasts. Up to 0.5% chelcopyrite, 0.25% galens. Trace pyrite within clasts. Later white quartx veins intrude unit with trace pyrite.							:							
159.00	ARGILLACEOUS FELSIC LAPILLI TUFF 480 Medium to dark grey, fine grained to aphanitic, well foliated, with up to 10% argillaceous material. 5-10% lapillis, strongly siliceous.	VA12453	157.55	159.05	1,50	31	201	283	590	0.6	80	211	4	9.87	
	Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galens.														
	Structure: Foliation et: 158.5m - 90' CAB.														
178.10	QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light grey, fine grained, well foliated. Up to 5% quartz eyes to 2mm, rare to 4mm within an attenuated sericitic matrix. Guartz eyes come and go. 168-12-172-29m; Medium grey unit, less felsic then surrounding unit. Rare quartz eyes to 1mm in a weak sericitic matrix. 173.4-177.3m; 1-2% poorly defined impillis.	VA12454 VA12455 VA12456 VA12457 VA12458 VA12459 VA12460 VA12461 VA12462	159.05 160.55 162.05 163.55 163.55 166.55 172.30 173.80 175.30	160.55 162.05 163.55 165.05 166.55 166.55 173.80 175.30	1.50 1.50 1.50 1.50 1.50 1.50 1.50	21 13 16 14 32 17 12 40 30	71 34 126 49 773 115 81 225 144	128 54 108 70 681 110 91 195 403	660 720 630 670 650 620 650 720 640	0.5 0.2 0.4 0.4 1.1 0.5 0.4 0.5	49 33 41 24 69 26 38 48	155 77 89 51 134 63 83 100	444334425	14.09 19.40 12.90 16.67 4.49 13.39 11.65 17.02 6.93	
	157.55	Hineralization & Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% chalcopyrite, minor galams. Weak to moderate sericite along fractures. Structure: Foliation at: 147.7% - 85-90° CAB. 157.55 CHERT BRECCIA 4CP sa. Very light grey to medium grey chert clasts within a silver/grey sericitic matrix. Claste are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, locally semi-massive pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.25% galene. Trace pyrite within clasts. Later white quartx veins intrude unit with trace pyrite. ARGILLACEOUS FELSIC LAPILLI TUFF 4BO Medium to dark grey, fine grained to aphanitic, well foliated, with up to 10% argillaceous material. 5-10% lapillis, strongly siliceous. Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galems. Structure: Foliation at: 155.5m - 90° CAB. 178.10 QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light grey, fine grained, well foliated. Up to 5% quartz eyes to 2mm, rare to 4mm within an attenuated sericitic matrix. Quartz eyes come and go. 168.12-172.29m: Medium grey unit, less felsic then surrounding unit. Rare quartz eyes to 1mm in a meak sericitic matrix.	Mineralization & Alteration: Up to 5-10% pyrite, disaeminated and along foliation planes. Up to 0.5% chalcopyrite, minor galens. Weak to moderate sericite along fractures. Structure: Foliation at: 147.7m - 85-90' CAB. 157.55 CMERT BRECCIA 4CP sa Very Light grey to medium grey chert clasts within a silver/grey sericitic matrix. Clasts are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, locally semi-massive pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.25% galene. Trace pyrite within clasts. Later white quartx veins intrude unit with trace pyrite. 159.00 ARGILLACEOUS FELSIC LAPILLI TUFF 480 Medium to dark grey, fine grained to aphanitic, well foliated, with up to 10% argillaceous material. 5-10% lapillis, strongly siliceous. Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor palens. Structure: Foliation at: 158.5m - 90' CAB. 178.10 QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light grey, fine grained, sell foliated. Up to 5% quartz syes to 2mm, rere to 4mm within an attenuated sericitic matrix. Quartz eyes come and 90. 168.12-172.29m: Medium grey unit, less felsic then surrounding unit, Rare quartz eyes to 1mm in a weak sericitic matrix. August 2 eyes to 1mm in a weak sericitic matrix.	Mineralization & Alteration: Up to 5-10% pyrite, disaminated and along foliation planes. Up to 0.5% chelcopyrite, minor galema. Weak to moderate sericite slong fractures. Structure: Foliation at: 167,7m - 85-90° CAB. 157.55 CHERT BRECCIA 4CP surely light grey to medium grey chert clasts within a silver/grey sericitic matrix. Clasts are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, locally semi-massive pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.25% galene. Trace pyrite within clasts. Later white quartz veins intrude unit with thace pyrite. 159.00 ARGILLACEOUS FELSIC LAPILLI TUFF 4B0 Medium to dark grey, fine grained to aphanitic, well foliated, with up to 10% argillaceous. Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galens. Structure: Foliation at: 158.5m - 90° CAB. 178.10 QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light grey, fine grained, well foliated. Up to 5x quartz eyes to 3mm, rare to 4mm within an attemuated sericitic matrix. Quartz eyes come and go. 168.12-172.29m; Medium grey unit, less felsic then surrounding unit, Rare quartz eyes to 1mm in a weak sericitic matrix. 7412450 173.80	Hineralization 2 Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% chalcopyrite, minor galana. Weak to moderate sericite along fractures. Structure: Foliation at: 147.7m = 85-90' CAB. 157.55 CHERT BRECCIA ACP ss Very Light gray to medium gray chert cleats within a silver/gray sericitic matrix. Claste are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, locally semi-massive pyrite in matrix around clasts, Up to 0.5% chalcopyrite, 0.25% galena. Trace pyrite within clasts. Later white quartx veins intrude unit with trace pyrite. 159.00 ARGILLACEOUS FELSIC LAPILLI TUFF 48D Medium to dark gray, fine grained to aphanitic, well foliated, with up to 10% argillaceous material. 5-10% lapillis, strongly siliceous. Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galenu. Structure: foliation at: 158.5m > 90' CAB. 178.10 CHUARTZ PHYRIC FELSIC ASH TUFF 4AA Light gray, fine grained, well foliated. Up to Sk quarts eyes to 2mm, rare to 4mm within an attenuated sericitic matrix. Quartz eyes come and go. 160.12-172.29m: Medium gray unit, less fetsic than surrounding unit, Rare quartz eyes to 1mm a make sericitic matrix. 173.80 173.30 173.30 173.30 173.30	Hineralization & Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% chalcopyrite, minor galena. Weak to moderate sericite along fractures: Structure: Foliation at: 167,7a - 85-90' CAB. 157.55 CHERT BRECCIA 4CP survey light grey to medium grey chert clasts within a silver/grey sericitic matrix. Clasts are angular, up to 5-6cm in size with somehat fuzzy outlines. Hineralization & Alteration: 10-15% disseminated and along foliation planes, locality semi-massive pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.25% galene. Trace pyrite within clasts. Later white quartz veins intrude unit with trace pyrite. 159.00 ARGILLACEOUS FELSIC LAPILLI TUFF 4B0 Hedium to dark grey, fine grained to aphanitic, well foliated, with up to 10% argillaceous material. 5-10% Lapillis, storogly siliceous. Hinaralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galens. Structure: Foliation at: 178.10 QUARTZ PHYRIC FELSIC ASH TUFF 4AA Light grey, fine grained, well foliated. Up to 5% quarts eyes to 2mm, rare to 6mm within an attenuated sericitic matrix. Quartz eyes come and go. 106.12-172.29m: Hedium grey unit, less felsic then surrounding unit, near equartz eyes to 1mm in a weak sericitic matrix. VA12457 VA12459 (6.55) 1.50 166.55 1.50 1 1.50 1 1.50	Mineralization & Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% choloopyrite, minor galens. Weak to moderate sericite along fractures: Structure: Foliation at: 147,7s = 85-90* CAB. CRERT BRECCIA ACP os Vary light grey to medium grey chart clasts within a silver/grey sericitic matrix. Clasts are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, locality semi-massive pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.25% galene. Trace pyrite within clasts. Later white quantz veins intrude unit with trace pyrite quantz veins intrude unit with trace pyrite, and the complex of	Mineralization & Atteration: Up to 5-10% pyrite, disseminated and along foliation planes, Up to 0.5% chalcopyrite, minor galama. Weak to moderate sericite along fractures. Structure: Foliation at: 17.78 - 85-90 CAB. 157.55 CHERT BRECCIA ACP se Very Light grey to medium grey chert clasts within a silver/grey sericitic matrix. Clasta are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: 10-15% disseminated and along foliation planes, loosity seei within clasts. Later white quartz veins intrude unit with thece pyrite. 159.00 ARGILLAGOUS FELSIC LAPILLI TUFF ABO Medium to dark grey, fine grained to aphanicic, well foliated, with up to 10% argillaceous material. 5-10% lapillis, strongly siliceous. Mineralization & Alteration: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor paterus. Structure: Foliation at: 158.50 - 90 CAB. 178.10 QUARTZ PURRIC FELSIC ASH TUFF AAA Light grey, fine grained, well foliated. Up to 5% quartz eyes to 2mm, rare to 6mm within an attenuated sericitic matrix. Quartz eyes come and go. 160.12-172.20m: Medium grey unit, less felsic then surrounding unit. Rare quartz eyes to 1mm unit with 178.30 150. 150. 171.50 171.50	Mineralization & Alteration: Up to 5-10% pyrite, dissenfinated and along foliation planes. Up to 0.5% chalcopyrite, minor galena. Neak to moderate sericite along fractures. Structure: Foliation at: 147,7m - 85-90' CAB. CHERT BRECCIA ACP sis. Within a silver/arey sericitic matrix. Clasts are angular, up to 5-6cm in size with somewhat fuzzy outlines. Mineralization & Alteration: Unior 15% dissenfinated and along foliation planes, locally semi-emastly pyrite in matrix around clasts. Up to 0.5% chalcopyrite, 0.2% galena. Trace pyrite within clasts. Later white quartz veins intrude unit with those pyrites. Mineralization & Alteration: Signal of the clast of the	Hineralization & Alteration: Up to 5-10% typite, disaminated and along foliation planes. Up to 0.5% chalcopyrite, minor galena. Weak to moderate sericite along fractures: Structure: Foliation at: 187.78 - 85-90 LAB. 157.55 CHERT BRECCIA Acp ss Vary light grey to medium grey chart clasts within a silver/grey sericitic matria. Clasts are ampular, up to 5-dom in size with somewhat fuzzy outlines. Hineralization & Alteration: 10-15% disaminated and along foliation planes, locality seei-massive pyrite in matrix around clasts. Up to 0.5% chiacopyrite, 0.25% galene. Trace pyrite within clasts. Later white quentz veins intrude unit with trace pyrite. Later white quentz veins intrude unit with trace pyrite. 159.00 AMCILLACOUS FELSIC LAPILLI TUFF 4AD Experimentally foliation planes, up to 0.5% chalcopyrite, minor galena. Structure: Foliation et: 5-10% pyrite, disseminated and along foliation planes, up to 0.5% chalcopyrite, minor galena. Structure: Foliation et: 159.50 GUARTZ PHYRIC FELSIC ASH TUFF 4AA Lipid grey, fine grained, well foliated. Up to 5% quartz eyes to 2ms, rare to 4ms within an articular expension of the property of the control of th	Hineralization & Alteration: Up to 5-10% pyrite, disseminated and along foliation planes. Up to 0.5% chalcopyrite, minor galess. We to moderate sericite along fractures.	Name	Rineralization & Alteration: Up to 5-10% pyrite, dissenivated and along foliation planes. Up to 0.5% choicopyrite, minor galerus. Neak to enderste sericite slows FPR PR PR PR PR PR PR P	Ninemailization & Alteration: Up to 5-10% pyrite, disaselimated and along foi intion planes. Up to 0.5% chalcopyrite, minor gains. Veak to moderate sericite along fractures: Structures: Foliation at: 147.76 - 85-90* CAB. Up to 5-10% pyrite, disaselimated and along foi intion planes. Up to 0.5% chalcopyrite, minor gains. VA12652 156.77 157.55 0.78 270 2777 4992 260 6.2 222 360 4 157.55	Mineralization & Alteration:

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Hole # : BC-90-07

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FROM (M)	f0 (N)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CU PP#	PB PPM	ZSI PPH	BA PP#	AG PPK	UA BPS	AS PPM	N1 PPM	Cu/Zn RAT10	
		Mineralization & Alteration: 1-2% pyrite, disseminated and along foliation planes, locally to 5%, trace chalcopyrite & galena. Weak chlorite wisps. 168.12-177.29m: Up to 0.5% disseminated pyrite, 177.3-178.1m: Quartz veins. Up to 1% disseminated pyrite.	VA12463	176.80	178.30	1.50	47	494	254	680	1.4	11	46	3	15.61	
		Structure: Foliation at: 63.0m - 70' CAB. 169.0m - 90' CAB. 176.0m - 60' CAB.														ļ
178.10	182.25	FELSIC LAPILLI TUFF 48 Light to medium grey, fine grained, moderately foliated. 10% lapillis in a weak to moderate sericitic matrix. Lapillis are moderately to strongly siliceous.	VA12464 VA12465 VA12466	178.30 179.60 181.30	179.80 181.30 182.80	1.50 1,50 1,50	34 112 21	123 632 73	320 1079 260	720 750 730	0.5 0.9 0.6	31 59 33	64 172 76	3	9.60 9.40 7.47	
		Mineralization & Alteration: Up to 3% pyrite, disseminated and along foliation planes, locally to 5%, trace galena.								:			i			
		Structure: Foliation at: 180.4m - 50' CAB.														
182.25	211.00	QUARTZ PHYRIC FELSIC ASH TUFF GAA Medium grey, fine grained, moderately foliated. 189.35m: 2cm band of semi-massive pyrite with 0.5% chalcopyrite, minor galena. Up to 5% quartz eyes to 2mm, rare to 4mm within an attenuated sericitic matrix.	VA12467 VA12468	187.30 185.80	185.80 190.30	1,50 1,50	332 332	242 1366	543 2665	680 740	0.5 1.1	28 45	70 106	3	11.27 11.08	
:		Mineralization & Alteration: Up to 1% disseminated pyrite, rarely along foliation planes to 2%, trace galene. 207.65m: 12cm quartz vein.										:	!			
		Structure: Foliation et: 199.Tm - 90' CAB. 202.2m - 85' CAB.											:			
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Hole # : BC-90-07

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Lang. (M)	CU PPM	PS PPM	ZN PPM	BA PPN	AG PPN	AU PPB	AS PPM	NI PPM	CU/Zn RATIO	
211.00	217.90	207.77m - small shear. FELSIC LAPILLI TUFF 48A Medium grey, coarser grained than prior unit, moderately foliated. 1-2% quartz eyes to 2-3mm. 10-15% possible lapillis/clasts, very stratched from 2-4cm (average 2cm). Lapillis moderately to strongly siliceous. Mineralization & Alteration: Up to 3% pyrite, disseminated and elong foliation planes, rare locally to 5% with trace galena.	VA12469 VA12470 VA12471	212.30 213.80 215.30	213.80 215.30 216.90	1.50 1.50 1.60	28 112 51	108 458 196	252 786 654	570 480 490	0.4 0.7 0.6	44 50 55	93 122 137	354	10.00 12.47 7.23	
217.90	236.36	Structure: Foliation at: 80*-90* CAB OLARTZ PMYRIC FELSIC ASH TUFF 4AA Redium grey, fine grained, moderately foliated. 1-2% quantz eyes to 2mm within an attenuated sericitic matrix. Occasional (1%) possible very stretched lapillis/clasts. Mineralization & Alteration: Up to 2% pyrite, disseminated and along foliation planes, locally to 5%. Trace to minor galeno occurs with these blasts of pyrite. 220.23-220.48m: Quantz vein. Top 50* CAB bottom 90* CAB.	VA12472 VA12473	233,20 234,70	234.70 236.36	1.50 1.66	10 12	1 29	113 126	470 490	0.3 0.2	3	12 39	33	8.13 8.70	
236.36	240.00	Structure: 217.90 - 218.97m: Fault zone. Foliation at: 221.0m - 85 CAB. CHERT BRECCIA 4CP ss Very light grey to medium grey thert clasts all within a light grey sericitic matrix with up to 2% quartz eyes to 3-4mm. Clasts are subemputar to subrounded with sharp outlines. 238.1-240.0m: Clasts decrease in size towards the bottom of the unit (tops up?). Sharp upper contact, gradational lower contact showing swirled textures of black argillaceous? material and chert, possible fault contact?	VA12474 VA12475 VA12476 VA12477	236.36 237.36 238.36 239.36	237.36 239.36 239.36 240.00	1,00 1,00 1,00 0,64	998 69 40 18	8086 805 203 1	9629 1751 683 115	330 490 710 820	5.4 1.3 0.5 0.4	154 107 40 18	266 199 95 58	4 2 3 4	9.39 3.79 5.53 13.53	

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Hole # : 8C-90-07

FROM (N)	TO (N)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	CU PPM	PB PPM	ZN PPM	BA PPM	AG PPH	AU PPB	AS PPH	MI PPN	Cu/Zn RATIO	
240.00	273,65	Mineralization & Alteration: Up to 15% pyrite, disseminated and along foliation planes around clasts with up to 0.5% chalcopyrite & 0.25% galena. 1% disseminated pyrite within occasional clast. ARGILLACEOUS FELSIC ASH TUFF 4AAD Hedium to dark grey, weakly laminated argilloceous unterial, intercalated with felsic sen tuff, well foliated. 2-3% quantz eyes/clasts to 3-4mm. 2-3% possible feldspar crystals to tum, often clustered. Sharp bottom contact.	VA12478 VA12419 VA12479 VA12480 VA12481	240.00 240.34 241.41 242.41 247.60	240.34 241.41 242.41 243.91 247.98	0.34 1.07 1.00 1.50 0.36	8 12 11 13 21	1 1 1 65 160	105 17 64 131 312	760 10 600 590 620	0.5 0.1 0.1 0.3 0.4	222	32 3 19 36 67	3 6 2 2 3	7.08 41.38 14.67 9.03 6.31	
		Mineralization & Alteration: Up to 1% pyrite, disseminated and along foliation planes, locally to 3%. 240.34-241.41m: Quartz vein. Top 90° CA8, bottom 80° CA8. No visible sulphides. Structure: 250.0m - 90° CAB. 248.38-248.92m: Fault zone. 1% disseminated pyrite.														
•		247.98- 248.18 FELSIC ASH TUFF 20 cm of massive pyrite.	VA 12420	247.98	248.15	0.20	2115	6681	14971	90	7.8	106	244	5	12.38	
273.65	304.15	FELSIC ASH TUFF 4AO Medfum to dark grey laminated/banded fine grained, Rare to 1% quartz eyes to 2mm. Possible 1-2% lapillis towards bottom of unit, very sttenuated. Mineralization & Alteration: Up to 3% pyrite, disseminated and along foliation planes, 5% locally. 274.65-276.15m: Quartz vein. Trace galena. Top contact 50° CAB, bottom 75° CAB. Up to 1% quartz veins, less than icm wide throughout. Structure:	VA12421 VA12422 VA12483 VA12483 VA12485 VA12485 VA12486 VA12487 VA12487 VA12490 VA12490 VA12491 VA12491 VA12492 VA12493 VA12492	248.18 249.68 273.65 274.65 277.65 277.65 282.15 283.65 282.15 284.65 288.15 289.65 291.15	249.68 251.18 274.65 276.15 277.65 279.15 280.65 282.15 283.65 285.15 286.65 289.65 291.15 294.15	1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50	26 50 421 103 138 120 52 75 31 21 12 20 15 19 25	157 215 201 1904 174 259 136 554 2126 526 88 1 1 1	130 370 252 1102 486 762 331 1137 3322 548 202 55 63 65 56	570 570 750 130 860 800 800 750 660 650 570	0.4 0.3 0.8 2.3 1.1 1.2 1.4 3.8 2 1.2 1.4 1.6 1.6	3 3 3 27 3 38 49 54 53 130 63 40 135 108 53 60	35 13 103 120 285 92 110 77 1026 539 139 69 1627 821 1096	3376656655446555	16.67 11.90 14.86 17.49 15.33 26.61 4.37 2.21 5.35 9.42 16.00 28.99 21.13 21.84 30.86	

FALCOMBRIDGE LTD

Hole # : 8C-90-07

PAGE: 10

FROM (M)	TO (H)	DESCRIPTION	Sampl.	FROM	70	Leng. (H)	CJ PPM	РВ РР М	ZN PPM	EA PPM	AG :	AU PPB	AS PPN	NI PPM	CU/Zn RATEO	
		274.0m: 80-85' CAB.	VA12496	294.15	295.65	1.50	24	t	96	570	2.3	56	527	6	50,00	
			VA12497 VA12498 VA12699 VA12500 VA12623	295.65 297.15 298.65 300,15 301.65	297.15 298.65 300.15 301.65 303.15	1.50 1.50 1.50 1.50 1.50	16 32 56 32 19	1 1 1 1	82 131 95 71 69	580 570 600 600 590	1.3 2.6 1.4 0.7 0.4	31 51 24 3	175 111 62 24 30	5 6 4 4	16.33 19.63 37.09 31.07 21.59	
304.15	310.94	QUARTZ PHYRIC FELSIC ASM TUFF 4AA Light to medium grey, fine grained to aphanitic, well foliated. Up to 10% quartz myes to 2mm within a moderately sericitic matrix. 5% light tan possible feldspar crystals to 1mm.														
	•	Mineralization & Alteration: Up to 1% pyrite, disseminated and along foliation planes, trace chalcopyrite.										:				
		Structure: Foliation at: 307.0m - 90° CAB.														
310.94	313.47	FELSIC LAPILLI TUFF 4BA Light to medium grey, fine grained, well foliated. 5-10% lapillis to 4-5cm, very stretched out. Lapillis are strongly siliceous. Up to 3% quartz eyes to Zmm in moderate sericitic matrix.														
		Mineralization & Alteration: Up to 1% pyrite, disseminated and along foliation planes.													!	
		Structure: foliation at: 313.2m - 85-90' CAB.														
313.47	324,80	FELSIC ASK TUFF 4A Medium grey, fine grained, moderately foliated. Up to 1% quantz eyes to 2mm, rare to 4mm.														
		Mineralization & Alteration: Up to 2% pyrite, disseminated and along foliation planes. Up to 1% quartz veins to 2cm with up to 1% disseminated pyrite. Moderately chioritic.						i						:		
324.80	328.92	FELSIC LAPILLI TUFF 48			[

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FALCOMBRIDGE LTD

Hole # : BC-90-07

PAGE; 11

FROM (H)	TO (M)	DESCRIPTION	Sampl.	FROM	то	Leng.	CU PPM	P8 PPM	2N PPM	BA PP M	AG PPM	AU PP9	AS PPM	MI PPM	Cu/Zn RATIO	
		Medium grey, fine grained, well foliated matrix with up to 1% quartz eyes, rare to 4mm. 5-10% lapillis to 4-5cm, very attenuated/stretched. Lapillia atrongly silicaous. Mineralization & Alteration: Up to 2% pyrite, disseminated and along foliation														
		planes. Structure: Foliation at: 328.5m - 80-85' CA8.			:				:							
328.92	349.61	FELSIC ASM TUFF 4A Medium grey, fine grained, well foliated. Up to 1% quartz eyem, Occamional (up to 5%) intervals to 20-25cm lapitli tuff with lapitlis to 3cm. Up to 15% lapitlis in these intervals (eg: 338.7-338.85m). Lapitlis strongly siliceous. 5-10% possible feldspar crystals to low. Sharp lower contact, gradational upper contact suggesting tops up.								•						
•		Mineralization & Alteration: Up to 2% pyrite, disseminated and along foliation planes, appears to decrease downhole.													1 .	
		Structure: Foliation at: 338.9m - 85-90' CAB.									i				:	
349.61		End of hole Total amount of samples= 80 Total length sampled = 114,14M														
					:											

NOLE NUMBER: BC-90-07

GEOCHEM. SHEET

DATE: 26-February-1991

Sample	From (M)	To (M)	Length (M)	SiQ2	TiO2	A1203	Fe203 ut%	MgD Wt%	CaO ut%	Na2O ut	K20 mt%	P205 9t%	Hn0 et%	Pb ppm	\$r ppm	Dice.	Zr ppm	N i pipin	Be ppm	Çu Cu	2n ppm	LO1 Mt%	Cu/2n Retio	Zn/Na Ratio		ALUM A.I.	ACHK A. I.	
V809674 V809774 V809675 V809775 V809776	13,00 30,00 59,00 70,00 74,00	16.00 33.00 62.00 73.00 77.00	3.00 3.00 3.00 3.00 3.00	65,37 63,63 62,26 64,39 63,12	0.38 0.38 0.36 0.40 0.45	14.61 15.29	4.64 3.32 2.76 3.72 4.25	0.29 0.96 0.70 1.43 1.36	3.43 5.42 5.60 2.67 2.24	1.20 2.03 0.15 0.91 0.99	2.17 2.49 3.81 2.99 3.15	0.06 0.06 0.05 0.06 0.06	0.01 0.03 0.04 0.07 0.07	69.0 64.0 122.0 85.0 102.0	251 125 211 198 195	20 20 20 20 20	112 91 121 113 109	20 20 20 20 20 20	785 1095 1270 1005 947	20 20 20 20 20 23	84 36 86 47 51	4.90 6.13 7.19 6.64 6.39	20 20 20 20 23	0.7 0.2 5.7 0.5 0.5	35 32 44 55 58	231 149 160 246 274	1.5 0.9 1.1 1.7 1.9	
V809777 V809778 V809779 V809780 V809781	79.00 84.00 88.00 110.00 134.70	82,00 87,00 91,00 113,00 137,40	3.00 3.00 3.00 3.00 2.70	64.69 55.91 56.53 72.19 67.18	0.41 0.37 0.36 0.37 0.35	15.17 14.36 14.07	4.85 6.60 6.39 4.53 4.19	1.38 3.14 3.38 0.45 1.20	2.16 4.66 4.67 0.38 1.74	0.73 0.37 0.30 0.03 0.01	3.10 3.24 3.21 3.71 3.97	0,05 0.05 0.05 0.04 0.05	0,08 0.16 0.16 0.01 0.07	89.0 92.0 98.0 116.0 129.0	151 127 116 43 60	20 20 20 20 20	103 103 94 77 88	20 20 20 20 20	803 707 680 509 522	20 20 24 32 20	40 62 59 95 41	5.81 8.85 9.27 4.34 5.45	20 20 24 32 20	0.6 1.7 2.0 31.7 41.0	61 56 57 91 75	264 183 176 342 255	1.9 1.2 1.2 3.0 2.0	
VB09782 VB09783 VB09784 VB09785 VB09786	157.60 161.00	152.00 159.00	3.00 3.00 1.40 3.00 3.00	67.91 68.97 71.12 68.31 66.78	0.41 0.31 0.35	14.88 15.69 13.15 14.50 14.35	5.86 4.44 6.16 4.94 5.07	0.46 0.52 0.42 1.54 2.11	0.48 0.34 0.23 1.25 1.49	0.01 0.01 0.06 0.02 0.01	4.03 4.16 3.45 3.60 3.63	0.04 0.06 0.04 0.04 0.04	0.01 0.01 0.01 0.07 0.07	128.0 137.0 104.0 111.0 120.0	43 50 39 59 74	20 20 20 20 20 23	84 94 94 76 81	20 20 20 20 20	633 655 641 719 773	38 31 51 20 22	155 58 381 54 166	5.24 4.55 4.92 4.96 5.50	38 31 51 20 22	155.0 58.0 63.5 27.0 166.0	90 93 93 80 79	329 348 352 298 280	2.8 3.1 3.1 2.3 2.2	
VB09787 VB09788 VB09789 VB09790 VB09791	212.00 228.00 253.00	206,00 215,00 231,00 256,00 289,00	3.00 3.00 3.00 3.00 3.00	62,80 61,99 64,57 60,37 60,83	0.36 0.31 0.37 0.34 0.43	12.74 14.92 14.02	5.23 6.62 5.63 4.58 4.31	5.47 3.51 3.16 2.85 2.08	2.17 2.96 1.62 6.07 4.05	0.01 0.01 10.0 1.12 60.0	2,70 2,98 3,36 2,33 3,87	0.06 0.05 0.05 0.05 0.06	0.16 0.18 0.08 0.13 0.18	81.0 92.0 114.0 77.0 101.0	52 75 80 111 97	20 20 20 20 20	70 63 73 100 102	20 20 20 20 20	506 482 542 471 608	25 43 46 20 20	106 244 71 29 57	6.38 7.38 5.70 7.38 6.25	25 43 46 20 20	106.0 244.0 71.0 0.3 9.5	79 69 80 42 59	295 214 299 147 187	2.1 1.5 2.3 0.9 1.3	
V809792 V809793 V809794 V809795 V809796	310.94 318.00 325.00	309.00 313.47 321.00 328.00 342.00	3.00 2.53 3.00 3.00 3.00	60.27 61.43 59.62 63.16 57.48	0.43 0.44 0.45 0.42 0.46	15.43 15.04	4.62 4.84 5.25 4.80 5.45	2.33 2.01 2.36 2.01 2.46	5.92 5.01 5.41 4.19 6.05	0.54 0.44 1.58 0.63 3.13	2.96 3.14 2.44 3.09 1.96	0.07 0.06 0.06 0.06 0.07	0.11 0.09 0.10 0.09 0.10	84.0 84.0 77.0 86.0 56.0	147 145 146 139 184	20 20 20 20 20	111 98 105 91 116	20 20 20 20 20 20	609 681 563 681 642	22 20 21 27 40	35 46 36 53 49	6.59 5.56 7.15 6.01 6.99	22 20 21 27 40	0.7 1.1 0.2 0.8 0.2	45 49 41 51 33	159 177 164 190 139	1.0 1.2 1.0 1.3 0.9	

FALCONBRIDGE LTD DIAMOND DRILL LOG Property: BIRK CREEK (1990)

	Hole # : 80-90-08 Township: KAMLOOPS Lot : Range		Contractor :	BURWASH ENTERPRI	ISES	Date started :10/28/1990 Date completed:10/31/1990	
	Level : SURFACE	Section: 207+07N	Locatio	on :			
	Coller coordinate : Reference frame :	Line : 207+07 N Station: 404+40 E		Latitude: 568978 Departure: 29754 Elevation: 748	40.00 E	Azimuth: 55° 0' 0" 0ip: -65° 0' 0" Length: 300.84 #	
		Surveyed by	: SPERRY-SUM				
	Deviation tests :		Depth	Dip	Azimuth		
		_	87.50 м 215.50 м 279.50 м	-64* 0' 0" -68*30' 0" -70*15+ 0"	54° 0' 0" 59° 0' 0" 59° 0' 0"	•	
			;		:		
Remarks :		Nater flow : Cimented :			I		P(Lygged: Core size: NO

Logged by : N. VANDE GUCHTE

Date Logged:11/ 1/1990

Hole # : BC-90-08

FALCOMBRIDGE LTD

Note # : 80-90-08

PAGE: 2

FROH (M)	TO (M)	DESCRIPTION	Sampl.	fROM	τo	Leng. (H)	CU PPH	PB PPM	ZN PPH	BA PPM	AG PPH	AU PPB	AS PPM	N1 PPM	Cu/Zn RATIO	
0.00	9.14	OVÉRBURDÉN O/8							:							
9.14	12.55	FELSIC ASH TUFF 4A Light grey, fine grained felsic ash tuff. 2-3%, <2mm, subrounded quartt phenocrysts. Fine grained, weak to moderately sericitic matrix. Fractured core with local broken/blocky (rubble) sections. Quartz vein (5cm) marks lower contact with 40-50% pyrite band from 12.52-12.55m. Trace 2% fine disseminated and fracture controlled pyrite overall.														
		Mineralization & Alteration: Weak pervasiva sericitization.	İ		i											
12.55	17.00	CHLORITIC FELSIC ASH TUFF 4AL Light grey-green, cherty dacitic ash tuff. 2-3%, <3mm, feldsper phenocrysts. Fine grained, weak to moderately chloritic/sericitic matrix. Fractured core throughout with local broken, highly fractured sections - brecciated "cataclastic" appearance throughout unit. Intercalated ergillaceous component (<10%) from 12.6-13.0m, 15.1-15.3m. Trace 2% fine disseminated/frecture controlled pyrite.			3 4											i !
- 1		Mineralization & Alteration: Weak pervasive sericitization.														
17.00	22.47	FELDSPAR PHYRIC INTERMEDIATE ASM TUFF 388 Medium green, fine grained sah tuif. Up to 7%, <3mm, light brown-white, mottled feldspar phenocrysts decreasing in size and concentration downhole. Fine grained, chloritic-weakly sericitic motrix. Trace 2% fine disseminated/fracture controlled pyrite. Moderately well folisted with quartz veined sections from 18.8-18.9m, 19.4-19.5m, 20.2-20.7m, 21.68-21.74m.			;											
		Mineralization 4 Alteration: Weak pervasive sericte.			1				į							
		Structure: foliation at:												ļ		

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FALCOMBRIDGE LTD

Hole # : BC-90-08

PAGE: 3

FROM (H)	TD (M)	DESCRIPTION	Sampl.	FROM	to	Leng. (N)	CU PPH	28 PPM	ZN PPH	BA PPN	AG PPM	AU PPB	AS PPM	N3 PPH	Cu/Zn RATIO	
		18.0m - 66º CAB. 21.4m - 52º CAB.														
22.47	23.62	MEDIUM GRAINED FELSIC INTRUSION 9S Nedfum to light grey/green, medium grained felsic intermediate "dacitic" intrusion. Traces fine disseminated pyrite. Sharp upper/lower contacts at 75' CAB. (broken, blocky lower contact over 5cm).												:	•	
23.62	34.15	INTERMEDIATE ASM TUFF 3A Medium green/grey, fine grained ash tuff. 2-3%, clmm, light brown/white mottled feldspar crystals. Trace to 3% fracture controlled/disseminated pyrite with local, traces chalcopyrite (25.4m, 30.7m, 30.84m) and trace galena/chalcopyrite (quartz vein) et 30.62m. Fine grained, chloritic-weakly sericitic matrix, Moderately well developed folistion with 1-2% quartz veins/stringers.	:													
	i	Mineralization & Alteration: Weak pervasive sericitization.			:							:	:			
		Structure: Foliation at: 25.2m - 50' CAB. 32.5m - 65' CAB.														
		Faults at: 28.3m: Fault slip at 73' CAB.			· 											
34.15	53.22	FELSIC ASH TUFF 4A Medium to light green/grey to locally light grey, sericitic/chloritic felsic ash tuff. Occassional up to 3%, <2mm subrounded quartz phenocrysts. Fine grained, chloritic - moderately sericitic metrix with local moderate to strongly sericitic zones from approximately 39,95-40.1m, 40.45-40.85m, 41.4-41.6m, 42.15-42.25m, 43.65-44.35m, and 44.75-46.0m. Trace 3% fine disseminated and fracture controlled pyrite with local, pyritic "stringers" (up to 20% pyrite) and trace 0.5% sphalerite from	VA14388 VA14389 VA14391 VA14391 VA14392 VA14393 VA14394 VA14395	39.95 41.00 42.00 42.80 43.80 44.80 45.80 46.80	41.00 42.00 42.80 43.80 44.80 45.80 46.80 47.60	1.05 1.00 0,80 1.00 1.00 1.00 1.00 0.80	469 297 670 133 1035 115 193 171	518 265 382 98 837 140 128 132	1267 707 701 197 1906 229 236 344	860 800 880 1000 1100 1100 980	2.7 1.2 1.7 0.8 7.6 1.1 1.1	34 33 39 36 60 41 36 35	52 106 67 63 166 105 73 67	44554545	27.02 29.58 48.87 40.30 35.19 33.43 44.99 33.20	

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FALCONBRIDGE LTD

Hole # : 80-90-08

FROM (N)	TO (M)	DESCRIPTION	Sampl.	FROM	FO	Leng. (M)	CU PP#I	PB PPM	ZN: PPM	BA PPM	AG PPM	AU PPB	AS PPH	NI PPM	Cu/Zn RATIO	
		43.4-47.4 matres. Well developed foliation with minor quartz veins/stringers towards the lower contact. Nineralization & Alterstion: Moderate to strongly sercitic. Trace to 0.5% sphalerite with pyritic stringers particularily batween 41.4% and 47.4m, Structure: Foliation at: 38.2m - 65' CA8. 41.0m - 76' CA8. 45.0m - 75' CA8.														
53.22	61.20	FELDSPAR PHYRIC INTERMEDIATE ASH TUFF 3AB Medium green/gray, fine grained ash tuff. Up to 4%, <2mm, mottled, light brown/white subrounded-rounded feldspar phenocrysts. Fine grained weak to moderately chloritic/sericitic matrix. Trace to 3% fine disseminated/fracture controlled pyrite with 3-5cm local pyritic "stringers" (50% pyrite) at 56.2m, 56.4m, 56.9m, 59.8m, and 60.4m containing traces chalcopyrite. Moderately well developed foliation with 25% quartz veins over the last metre.	VA14396 VA14397 VA14398 VA14399 VA14400	56.00 57.00 58.00 59.00 60.00	57.00 58.00 59.00 60.00 61.00	1.00 1.00 1.00 1.00 1.00	479 207 107 275 243	161 23 28 40 38	539 224 179 261 229	650 660 750 740 640	1.5 0.5 0.6 0.7 0.7	43 19 11 35 40	101 45 50 60 78	44456	47.05 48.03 37.41 51.31 51.48	
61.20	72.32	Mineralization & Alteration: Week to moderate pervasive sericitization. Structure: foliation at: 54.0m - 68° CAB. 59.0m - 62° CAB. FELSIC ASH TUFF 4A Medium to light grey/green, fine grained "daction" ash tuff. Fine grained, moderately sericite matrix (sericite content increasing slightly downhole). 2-5% fine fracture controlled pyrite (increasing below 66.0m) with local, 1-2cm pyritic "stringers" (20-30% pyrite) below 66.0m with traces chalcopyrite/sphsierite.	9A14401 9A14402 9A14403 9A14404 9A14405 9A14406 9A14407	65.80 66.30 67.00 68.00 69.19 70.30 71.30	66.30 67.00 68.00 69.19 70.30 71.30 72.32	0.50 0.70 1.00 1.19 1.11 1.00 1.02	317 125 160 180 180 224 142	47 40 38 55 30 82 34	118 214 288 317 203 309 117	1200 910 900 1000 1000 1100 1200	0.8 0.7 0.6 0.7 0.5 0.9	46 27 27 3 12 38 29	143 71 81 81 29 94 98	5450545	72.87 36.87 35.71 36.22 42.13 42.03 54.83	

FALCONBRIDGE LTD

Role # : 8C-90-08

PAGE: 5

FROM TO (H)	DESCRIPTION	Sampi.	FROM	to	Leng. (M)	ĆU PPM	PB PPM	ZN PPM	BA PPM	AG PPM	AU 898	AS PPM	NI PPM	Cu/Zn RATIO	
72.32 80.46	Moderate to well developed foliation. Mineralization & Alteration; Moderate pervasive sericitization. Structure: Foliation st: 62.3m - 72' CAB. 69.0m - 70' CAB. 71.8m - 71' CAB. Faults at: 64.4m: foult -20' CAB. 66.05m: fault slip at 80' CAB. ARGILLACEOUS FELSIC TUFFACEOUS SEDIMENTS 400 Medium to dark grey, medium to coarse grained, argillaceous felsic tuffaceous sediment. Up to 15%, 1-4cm subrounded/rounded to elongated siliceous-cherty fragments and several cherty-siliceous pyritic fragments. 5-15% intercalated to fine, wavy discontinuous "interclainated" argillaceous, pyritic-cherty fragmental horizon from 72.9-74.66m. 4-5%, disseminated/fracture controlled pyrite with local, up to 0.75cm fine grained pyrite segregates (cubes). Moderately well foliated. Mineralization & Alteration: 72.9-74.66m: Meak to moderate pervasive sericitization. 72.9-74.66m: 15% disseminated pyrite, traces of sphalarite. 79.7m: trace sphalarite associated with boudinaged quartz vein. Structure: Foliation at: 75.0m - 84' CAB. 78.0m - 72' CAB. 78.0m - 72' CAB. 78.0m - 72' CAB. 78.0m - 72' CAB. Faults at:	VA14408 VA14410 VA14411 VA14413 VA14415 VA14416 VA14417 VA14418	72.32 72.93 73.50 74.00 74.70 75.70 77.70 78.70 80.45	72.93 75.50 74.00 74.70 75.70 79.70 80.45 81.00	0.61 0.57 0.50 0.70 1.00 1.00 1.00 0.75	277 217 392 217 84 252 571 453 179	78 159 399 148 33 26 23 25 45 61 64	1458 326 1957 315 183 197 766 1752 1773	790 940 660 530 740 750 650 1000 1400	0.8 1.1 1.9 0.5 0.6 0.7 1.1 1.1 0.6	60 46 54 24 8 3 18 10 15 37	72 124 170 87 118 95 49 26 36 44 89	52 34 35 52 46 43 47 40 42 45	15.97 39.96 16.69 40.79 31.44 56.59 74.35 40.16 20.54	

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FALCONSRIDGE LTD

Note # : BC-90-08

FROM (H)	TO (M)	DESCRIPTION	Sempl.	FROM	ťΰ	Leng. (M)	ĆU PPM	PB PPM	ZN PPM	BA PPN	AG PPN	AU PPB	AS PPH	N L SPM	Cu/Zn RATIO	
		72.8-72.9m: Broken, blocky core with fault gouge. Approximate orientation at 75: CAB.														
80.46	93.65	FELSIC ASH TUFF 4A Medium to light grey, fine grained dacitic ash tuff. Fine grained, weak to moderately sericitic matrix. Occasaional up to 3%, <1.5mm quartz phenocrysts. Up to 5% fracture controlled/disseminated pyrite to approximately 82.5m with traces sphalerite/galena from 81.1-81.4m and traces sphalerite from 82.2-82.8m. Trace 2% pyrite below 82.8m with up to 3% pyrite cubes from 93.2m to lower contact. Sphalerite atringer (1mm) at 92.6m. Kineralization & Alteration: Weak to moderate pervasive sericitization. Structure: foliation at: 81.6m - 80° CAB. 86.1m - 72° CAB. 90.5m - 72° CAB. 93.6m - 75° CAB.	VA14419 VA14420 VA14421 VA14422 VA14423	81.00 81.50 82.20 82.80 93.50	81.50 82.20 82.80 83.80 94.20	0.50 0.70 0.60 1.00 0.70	2424 185 2077 88 157	4937 263 1121 108 200	5950 858 4578 337 1033	1100 1300 1300 1300 640	4.6 1.1 4.8 0.6 1.6	94 75 91 27 24	247 206 197 62 73	6 6 5 5 5 27 .	28.95 17.73 31.19 20.71 13.19	
93.85	99.45	GRAPHITIC ARGILLITE 51M Medium dark grey/black. Intercalated to finely interbedded angillice/siltstone with up to 30%, 1-4cm (avg. 2cm) silteous/cherty and siltstone fragments and lesser angillite fragments. 3-5%, up to 1cm fine grained pyrite aggregates (cubes). Moderate to well foliated, reworked (?), with foliations parallel to bedding. Mineralization & Alteration: Unknown. Structure: Bedding at: 96.3m - 71' CAB. 98.0m - 78' CAB. Faults at: 99.4m: Fault alip at 75' CAB.	VA14424 VA14425 VA14426 VA14427 VA14428	94.20 95.20 96.20 97.20 98.20	95.20 96.20 97.20 98.20 99.45	1.00 1.00 1.00 1.00 1.00	43 69 65 68 72	22 16 22 15 12	73 105 107 145 151	410 710 540 670 600	0.5 0.4 0.6 0.5 0.4	93356	31 31 51 46 64	21 33 29 49 77	37.07 39.66 37.79 31.92 32.29	

FALCOMBRIDGE LTD

Hote # : 80-90-0

FROM (N)	TO (M)	DESCRIPTION	Sampl.	FROM	ΤO	Leng. (H)	CLI PPN	28 PPH	ZN PPM	BA PPH	AG PPM	AU PP8	AS PPH	N E PPM	Cu/Zn RATIO	
99.45	100.45	ARGILLACEOUS FELSIC ASH TUFF 4AO Medium-dark grey, fine grained. Up to 35% intercalated argillaceous component decreasing dountole to 100.45%. 1-2% fine grained pyrite and oceastonal, up to 0.5cm pyrite aggregates. Moderately to well foliated with 3-5% quartz carbonate veins/stringers (boudinaged). Mineralization & Atteration: Unknown. Structure: Foliation at: 99.7m - 70° CAB.	VA14429	99.45	100.45	1.00	31	114	171	550	0.5	2	38	30	15.35	
100.45	114.95	FELSIC LAPILLI ASH TUFF 48 Medium to light grey, fine to medium grained Medicine's sh tuff. Weak discontinuous strenky banded appearance suggestive of elongated fragments with a similar composition to the matrix (vague evidence). Fragment content estimated at 3-7% decreasing downhole, with local finer grained ash sections. Fine grained, weakly serficitie, locally argillaceous (weak-very weak) matrix. 1-3% fracture controlled/fine disseminated pyrite decreasing downhole with trace sphalarite at 100.55m. Moderately to well developed foliation.														
		107.8-108.4m; Argillaceous felsic tuff with less then 1cm wide argillite bands. Mineralization & Alteration: Weak pervasive sericitization. Structure:	,	•						:	ł	:				l I
		Foliation at: 102.9m - 70° CAB. 112.5m - 67° CAB. Bedding at: 108.1m - 69° CAB.														
114.95	131.20	FELSIC ASH TUFF 4A Light grey/green, fine grained "dacitic" ash														

FALCONBRIDGE LTD

Mole # : 80-90-08

PAGE: 8

FROM (N)	TD (M)	DESCRIPTION	Sampl.	FROM	τō	Leng. (M)	CU PPM	PB PPM	ZN PPM	8A PPM	AG PPM	AU PP8	AS PPN	NI PPH	Cu/Zn RATIO	
131.20	(H)	tuff. Fine grained weakty chtoritic/sericitic matrix. Trace to 1% fine disseminated pyrite with local (0.5cm pyrite aggregates. Moderate to well developed foliation. 131.1-131.2m: Brecciated, angular to subangular charty/siliteous fragments marking lower contact, no feulting. Mineralization & Alteration: Unknown. Structure: Foliation at: 117.0m - 70' CAB. 120.0m - 65' CAB. 120.0m - 65' CAB. 130.3m - 69' CAB. 130.3m - 69' CAB. INTERMEDIATE ASM TUFF 3A Medium to light green/grey, fine grained intermediate (andesitic to decitic) ash tuff. Fine grained, variable chloritic (weak to moderate) matrix, gradational between andesitic-decitic compositions. Increasingly decitic towards the lower contact. Traces to 1% fine disseminated pyrite. Moderately well foliated. 137.15-137.95m: Strong quartz-carbonate alteration zone. Trace 0.25% sphalerite, traces chalcopyrite with pyrite. Mineralization & Alteration: Weak fracture controlled carbonate asteration. 153.3-153.55m: Strong carbonate asteration. 154.6-156.7m: Strong carbonate alteration. 156.45-166.87m: Strong carbonate alteration. 157.15c. Strong carbonate alteration. 158.15m - 66' CAB. 140.0m - 71' CAB. 146.2m - 73' CAB.	VA14430	137.15	137.95	0.80	1108 :	335 °	3224	10	2.2	PPB 64	PPN	PPH 3	25.58	
			<u> </u>												l	1

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FALCONBRIDGE LID

Hote # : 80-90-08

FROM (N)	OT (M)	DESCRIPTION	Sampi.	FROM	TO	Leng. (H)	C)	PB PPM	ZH PPH	BA PPM	AG (PPM	AU PPB	AS PPM	NI PPM	Cu/Zn RATIO	
		152-1m - 73' CAB. 157.6m - 67' CAB. 163.5m - 72' CAB. 168.0m - 70' CAB.	•	-												
175.83	176.68	GRAPHITIC ARGILLITE SIM Black, measive with interbedded/interlaminated silts/tuffaceous sediments over the first 30cm. 1-2% fine grained fracture controlled pyrite with up to 1cm(sq.) pyrite aggregates.			•								-			
		Structure: Bedding at: 175.83m - 77' CAB. 176.68m - 75' CAB.			į											
176.68	179.35	FELSIC ASM TUFF 4A Medium to light green/grey, fine grained chloritic/"decitic" ash tuff. Fine grained, weak to moderately chloritic matrix. 3-7%, <1mm, mottled feldsper crystels occouring locally only. Trace to 1% disseminated pyrite. Moderate well developed foliation.														·
		Mineralization & Alteration: Weak fracture controlled carbonatization.						!								
		Structure: Foliation st: 177.Gm - 76' CAB.										,				
179.35	182.93	QUART2 FELDSPAR PORPHYRITIC FELSIC INTRUSION 9RC Medium grey, massive nonfoliated. Up to 10%, 1-3mm, subrounded quartz phenocrysts and up to 10%, <2mm, mottled feldspars. Sherp contacts at 70' and 75' CAB.														
182.93	216.30	FELSIC ASM TUFF 4A Medium to light grey/green, fine grained "dacitic" ash tuff. Occassional up to 3%, <2mm quartz phenocrysts. Rare siliceous lapillis. Fine grained weakly chloritic/sericitic matrix. Local traces - fine disseminated pyrite. Moderately well foliated with minor quartz-carbonate stringers. Broken, blocky,	:													į

FALCOMBRIDGE LTD

Hote # : 8C-90-08

FROM TO (M)	DESCRIPTION	Sampl.	FROM	ΤQ	Leng. (M)	CU PPN	РВ РР М	ZN PPM	BA PPN	AG PPH	AU PPB	AS PPR	N (PPN	Cu/Zn RATIO	
	fractured core over the last 0.75m. Mineralization & Alteration: Unknown. Structure: Foliations at: 185.0m - 75' CAB. 191.3m - 72' CAB. 194.0m - 69' CAB. 194.0m - 60' CAB. 200.2m - 72' CAB. 206.0m - 50' CAB. 210.0m - 68' CAB. 215.0m - 70' CAB. Fault at: 201.73-201.78m: Fault slip at 70' CAB. FELSIC ASH TUFF 6A Light grey/green, fine grained ash tuff, similar to previous unit but slightly less chloritic - lighter (ryho-dactic). Occassional up to 3%, <1mm quartz crystals. Fine grained, very weakly chloritic/weakly sericitic matrix. 2-4% fine grained, facture controlled pyrite and local up to 3mm pyrite apgregates. Moderate to well developed folistion with minor quartz-carbonate veins/stringers. Mineralization & Alteration: Unknown. Structure: Foliations at: 223.0m - 67' CAB. 228.5m - 65' CAB. 223.0m - 73' CAB. 224.0.0m - 71' CAB. 244.5m - 72' CAB. Faults at: 216.3-216.7m: Blocky core at approximately 63' CAB.														

FALCONBRIDGE LTD

Hole # : 8C-90-08

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	10	Leng. (H)	CJ: PPM	РВ РРМ	ZN PPM	BA PPH	AG PPM	AU PP9	AS PPM	MI PPM	Cu/2n RATIO	
246,00	255.85	ARGILLACEOUS FELSIC ASH TUFF 4AO Nedium to dark grey, fine grained argillaceous ash tuff. Occassional, 1-2X, <imm &="" -="" 249.0m="" 2x="" 2x,="" 5x,="" 78'="" <2cm="" <icm="" aggregates="" alteration:="" argillaceous="" at:="" cab.<="" carbonate="" component="" contact="" contorted="" crystals.="" developed,="" disseminated="" downhole.="" felsic="" foliation.="" foliations="" fragments.="" gradational="" increasing="" local="" locally="" mineralization="" minor="" noderacely="" pyrite="" quartz="" sediment="" stringers.="" structure:="" td="" throughout.="" to="" traces="" tuffaceous="" unknown.="" up="" upper="" well="" with=""><td>VA14431</td><td>255.00</td><td>255.85</td><td>0.85</td><td>41</td><td>10</td><td>138</td><td>540</td><td>1</td><td>11</td><td>24</td><td>7</td><td>22.91</td><td></td></imm>	VA14431	255.00	255.85	0.85	41	10	138	540	1	11	24	7	22.91	
255.85	263.06	252.5m - 67' CAB. Faults at: 255.85-256.05m: Graphitic, quartz veined. Shear zone at 55' CAB. GRAPHITIC ARGILLITE SIM Black, graphitic, fine wavy-contorted laminations. Faulted upper and lower contact (graphitic sheers over 20-30cm) penalleling foliation at */- 75' CAB. Broken, highly fracture core from 256.9-257.17m. Mineralization & Alteration: Weak fracture-controlled carbonatization. Structure: Foliation at:	VA14432 VA14433 VA14635 VA14635 VA14436	255.85 257.00 258.50 260.00 261.50	257.60 258.50 260.00 261.50 263.66	1,15 1,50 1,50 1,50 1,56	64 61 57 48 47	40 50 17 35 96	257 1056 197 290 225	390 500 500 480 320	1.3 2.1 1.4 1.8 2.3	3 20 28 28 28	30 30 36 66 51	76 108 65 86 86	19.94 5.46 22.44 14.20 17.25	
263.06	267,16	258.3m - 73' CAB. Faults at: 255.85-256.05m: Graphitic fault +/- 75' CAB. 262.8-263.06m: Graphitic fault +/- 75' CAB. ARGILLACEOUS FELSIC ASH TUFF 4AO Medium to light grey, fine grained "dacitic" ash tuff. Strongly quantz veined, particularily between 263.5-264.6m. Fine grianed, weak to	VA14437	263.06	263.80	0.74	19	11	85	550	0.6	8	14	9	18.27	

FALCONORIDGE LTD

Hole # : 8C-90-08

FROM (M)	TO (M)	DÉSCRIPFION	Sampl.	FROM	το	Leng. (M)	CU PPM	PB PPM	2H P₽M	BA PPM	AG PPM	AU PPB	AS PPM	NI PPN	Cu/Zn RAT10	
267.16	277.22	locally moderate angillaceous matrix. Trace 1% pyrite. Poorly foliated with local "cataclastic-fragmental" texture. Mineralization & Alteration: Moderate fracture controlled silicification. Structure: Foults at: 263.96-264.05m: Fault, orientation unknown. GRAPHITIC ARGILLITE SIN Black, graphitic angillite with numerous, broken-blocky highly fractured sections. Contorted, way, finally (aminated. 2-3%, up to lom pyrite aggregates/fracture controlled. Strongly quartz varied between 274.86-276.3m (highly fractured). Sharp lower contact at 65' CAB. Mineralization & Alteration: Weak fracture controlled carbonatization.	VA16438 VA16439 VA16640 VA16441	272.00 275.50 274.86 276.30	273.50 274.86 276.30 277.22	1.50 1.36 1.44 0.92	51 53 22 38	54 67 132 30	433 347 308 285	380 400 140 340	1.3 1.6 1	7777	44 47 32 55	87 80 40 73	10.54 13.25 6.67 11.76	
277.22	293.50	Structure: Foults et: 267.16-267.7m: Broken, blocky highly fractured core. 269.14-269.7m: Broken, blocky highly fractured core. 270.1-270.3m: Broken, blocky highly fractured core. 272.4-270.8m: Fault zone at 68' CAB. 274.86-276.3m: Broken, highly fracture core, numerous faults ranging from 30-70' CAB. ARGILLACEOUS FELDSPAR PHYRIC FELSIC ASH TUFF 4ABO Hedium gray, medium to fine grained "decitic" tuff. Variable, up to 8%, 1-2mm mottled feldspar phenocrysts. Hedium to fine grained, sericitic matrix with variable argillaceous component from <5% to 20%. Rere siliceous/cherty fragments with several argillite fragments over the last 1.5m. 2-3% fine grained fractured controlled pyrite with up to 50% disseminates/fracture controlled pyrite from 277.7-277.95m. Well foliated with minor, boudinaged quantz (carbonate)	YA16443 VA16444 VA16445 VA16445	277.22 277.70 277.95 292.50	277.70 277.95 278.95 293.50	0.48 0.25 1.00 1.00	32 42 15 32	10 46 15 14	148 63 56 156	410 280 510 320	0.7 2.5 0.6 0.7	3 3 63	23 91 13 14	9 5 4	17.78 40.00 21.13 17.02	

FALCONBRIDGE LTD

Hole # : 8C-90-0

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FROM (M)	TO (H)	DESCRIPTION	Sampl,	FROM	10	Leng.	M44	P8 PP#	ZM PPM	BA PPM	AG PPM	AU PPB	AS PPM	N L PPM	Cu/Zn RATIO	
293,50	300.84	veins/stringers. 289.0-293.5m: Up to 20%, 1-4mm, mottled spots of possible feldspars or "hornfelsing". Mo reaction with MCL. Wineralization & Alteration: Weak to moderate pervasive sericitization decreasing downhole. Structure: Foliation at: 278.0m - 55' CA8. 282.5m - 50' CA8. 282.5m - 50' CA8. 283.5m - 50' CA8. CRAPHITIC ARGILLITE 5:M Similar to previous from 267.16-277.22m. Black, graphitic numerous broken, blocky highly fractured sections. 2-3% disseminated pyrite and pyrite aggregates. Finely laminated to massive.	VA14446 VA14447 VA14448 VA14449 VA14450	293.50 294.50 296.00 297.50 299.00	294.50 296.00 297.50 299.00 300.84	1.00 1.50 1.50 1.50 1.84	40 40 66 45 48	23 13 25 29 26	136 172 144 660 294	230 240 450 320 220	0.9 0.8 1.5 1.5	33 3 8 6	61 43 46 53 38	74. 81 71 102 63	22.73 22.17 31.43 6.38 14.04	
300.84		276.45-276.55m: Graphitic shear at 67° DAB. End of hole Total amount of samples= 63 Total length sampled = 62.49M														

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HOLE HUMBER: BC-90-08 GEOCHEM. SHEET DATE: 26-February-1991

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Sample	From (N)	To (N)	Length (M)	SiO2	TiQ2	A1203 Wt%	Fe203 wt%	MgD HT%	PEX.	HaZO Wt	K20 ut%	P2OS WEX	Mm0 wt%	Rb ppm	\$r pp#	ppm Y	2r ppm	Ni PPM	Ba. ppm	Cu Cu	žn ppm	LOI ut%		Zn/Ne : Ratio		ALLM A.I.	ACNK A.I.	
V809798 V809799 V809800 V809801 V809802	18.00 28.00 43.50 55.00 64.00	21.00 31.00 46.50 58.00 67,00	3.00 3.00 3.00 3.00 3.00	55.04 59.83 67.46 62.28 63.15		14.75	7.65	7.22 6.82 2.26 6.26 4.07	0.47 0.38 1.00 0.33 1.26	1.82 0.61 0.07 0.13 0.22	2.80 2.23 3.83 2.50 2.65	0.07 0.08 0.06 0.07 0.07	0.11 9.08 9.05 9.11 0.11	99.0 63.0 121.0 76.0 79.0	70 40 72 41 64	20 20 20 20 20	110 86 67 87 89	20 20 20 20 20 20	590 643 1171 750 920	697 206 133 125 262	338 164 302 127 1620	6.57 6.20 4.67 5.11 5.88	697 206 133 125 262	1.9 2.7 43.1 9.8 73.6	81 90 85 95 82	339 458 312 524 333	2.5 3.6 2.5 4.4 2.5	
V809803 V809804 V809805 VB09806 VB09807		78.00 90.00 107.00 124.00 143.00	3.00 3.00 3.00 3.00 3.00	61.21 58.65 54.81 55.00 \$8.01		15.22	5.27 7.28 6.77	5.57 3.91 6.14 8.68 6.35	1.23 3.87 3.24 2.21 3.58	0.18 1.52 0.07 2.75 1.95	2.07 2.68 2.99 1.34 1.94	0.13 0.07 0.17 0.08 0.07	0.13 0.15 0.15 0.06 0.07	63.0 81.0 77.0 31.0 54.0	65 104 87 84 122	20 20 20 20 20 20	118 94 123 97 98	34 20 20 20 20	779 881 1051 584 1097	167 20 22 20 37	113 42 55 23 23	5.51 7.56 6.59 5.98 6.03	167 20 22 20 37	6.3 0.3 7.9 0.1 0.1	84 55 73 67 60	424 189 257 270 202	3.1 1.2 1.8 1.7 1.3	
V809808 V809809 V809810 V809811 V809812	179.50	182.50 196.00 215.00	3.00 3.00 3.00 3.00 3.00	60.61 68.90 58.28 59.37 56.81	0.47 0.23 0.47 0.44 0.44	15,19	2.18 5.76 5.66	5.30 0.62 3.71 3.12 3.03	2.47 2.31 4.07 5.12 5.92	1.70 4.29 3.00 1.92 0.97	3.15 2.71 2.22 2.33 3.03	9.07 9.07 9.06 9.06 9.06	0.05 0.05 0.06 0.09 0.10	86.0 127.0 75.0 58.0 76.0	108 525 143 146 154	20 20 20 20 20	100 132 98 102 88	20 20 20 20 20	1525 1329 684 556 704	20 20 20 20 20 20	20 20 31 28 32		20 20 20 20 20 20	0.1 0.1 0.2	67 34 46 44 47	215 163 174 161 154	1.5 1.1 1.1 1.0 1.0	
V809813 V809814 V809815	237.00 251.00 279.50	254.00	3.00 3.00 3.00	57.74 58.74 56.56	0.42 0.43 0.62	14.49	5.84	2,49 4,80 8,38	6,56 3,91 1,64	1.02 0.52 0.56	2.63 2.51 1.90	0.06 0.06 0.07	0.09 0.07 0.09	71.0 72.0 64.0	157 116 111	20 20 20	77 91 110	20 20 20	301 457 344	20 20 20	20 34 20	6.35 7.88 7.23	20 20 20	0.2 0.7 0.4	40 62 82	141 209 405	0,9 1,4 2,8	