

FALCONBRIDGE LTD
DIAMOND DRILL LOG
Property : 15220

Hole # : SP-90-02 Zone # : 20 Contractor : New Valley Drilling Co. Date started : 7/ 4/1990
Township: Lot : 12H/01 Concession: Claim # :LIC.2636 Date completed: 7/11/1990

Level : Section: Location :
Collar coordinate : Line : 35+90 S Latitude: 5444100.00 N Azimuth: 125° 0' 0"
Reference frame : Station: 9+90 W Departure: 556520.00 E Dip : -45° 0' 0"
Elevation: 0.00 Length : 197.51 M

Surveyed by:

Deviation tests :

Depth	Dip	Azimuth
95.40 M	-43° 0' 0"	122° 0' 0"
125.88 M	-42° 0' 0"	
195.99 M	-43° 0' 0"	125° 0' 0"

NOTE: ALL CORE
STORED AT Falconbridge
Warehouse in
Gander.

Remarks : Casing left in hole.

Water flow :
Cimented :

Plugged:
Core size: H U

Logged by : D. BUTLER

Date logged: 7/12/1990

Hole # : SP-90-02

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
0.00	17.18	OVERBURDEN									
17.18	32.50	HEMATIZED BASALT - contains pervasive calcite (10 to 15%) as stringers and infilling fractures; hematite occurs along fractures and as stringers throughout 2 to 5% of the core; moderately to weakly chloritic; blocky core; lower contact is faulted; zones of brecciation are common; foliation is well developed. 17.68- 17.74 Cherty fragments faulted at 46° to core axis 23.38- 23.40 Zone of hematization at 48° to core axis. 23.80- 24.80 Zone of hematized basalt with brecciation; hematite along fractures. 25.70 Flow contact at 40 to 50° to core axis. 25.98- 25.99 Band of pyrite and silica at 55° to core axis; minor black chlorite. 28.75 Foliation at 55° to core axis. 30.10- 32.50 Fault zone at 60° to core axis; contains rubbly basalt.									
32.50	54.00	NON-HEMATIZED BASALT - pervasive calcite (5-10%) stringers; moderate chloritization; local pyritic zones; foliation locally is moderately developed. 34.47- 34.49 Cherty, siliceous zone at 68° to core axis. 34.93- 35.01 Cherty, siliceous zone at 72° to core									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPH	PB PPH	ZN PPH	AG PPH
54.00	83.50	axis.									
		39.50 Flow contact at 62° to core axis.									
		41.20- 41.30 Silica/calcite zone at 65° to core axis; contains 2 to 4% pyrite as stringers and disseminations.									
		42.39- 43.30 Zone of broken core.									
		43.66 Flow/dyke contact at 63° to core axis.									
		48.20 Foliation at 67° to core axis.									
		51.76- 51.77 Flow contact at 56° to core axis; broken and fragmented cherty silica.									
		CHLORITIZED BASALT; 5 to 7% pyrite; zones with 0.5 to 1% chalcopyrite.									
		54.97- 55.04 Flow contact at 58° to core axis.									
			NF02461	56.00	57.00	1.00	<5	62	6	294	<0.2
			NF02462	57.00	58.00	1.00	<5	240	8	1730	<0.2
			NF02463	58.00	59.00	1.00	15	610	8	2930	0.2
			NF02464	59.00	60.00	1.00	<5	240	17	848	<0.2
			NF02465	60.00	61.00	1.00	13	1500	14	1870	<0.2
		59.78- 60.11 Zone with approximately 20% pyrite as narrow irregular stringers.									
		60.30 Foliation at 45° to core axis.									
		60.60- 61.40 Zone of sheared, extremely chloritic basalt with fragments of chert and calcite; 8 to 10% pyrite and 1% chalcopyrite; pyrite occurs as disseminations and stringers parallel to	NF02467	61.00	62.00	1.00	<5	460	37	735	<0.2

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPH	PB PPH	ZN PPH	AG PPH
		foliation.									
			NF02468	62.00	63.00	1.00	<5	118	5	1440	<0.2
		64.80	NF02469	63.00	64.00	1.00	<5	134	<1	2470	<0.2
		Foliation at 55° to core axis.									
		65.15- 65.43									
		Zone with approximately 15% pyrite occurring as 0.5 cm bands at irregular orientations.									
		66.50- 67.02									
		Zone of stringer pyrite parallel to foliation at 50° to core axis.									
		68.80- 69.10									
		Zone of cherty banding at 55° to core axis; 2 to 4% pyrite stringers parallel to foliation.									
		69.21- 69.30									
		Zone of cherty banding at 55° to core axis; 5 to 7% pyrite stringers parallel to foliation.									
		70.72- 70.84									
		Siliceous / cherty zone of basalt at 50 to 55° to core axis.									
		72.75- 72.83									
		Zone of quartz-epidote alteration.									
		73.98									
		alcoppyrite stringer at 50 to 60° to core axis.									
		74.44- 74.80									
		Zone with fragmented basalt; numerous quartz stringers (0.5 to 1 cm) at 60 to 65° to core axis.									
		75.64- 75.77									
		Zone of epidote alteration at low angle to core axis.									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPH	PB PPH	ZN PPH	AG PPH
83.50	97.73	79.61 Flow contact at 50° to core axis.									
		80.90- 81.01 Zone of epidote alteration with quartz veining at 70 to 75° to core axis.									
		81.55- 81.60 Low angle fracture with slickensides at 8 to 10° to core axis; hematitic staining along chloritic surface.									
		83.30- 83.34 Cherty-epidote zone at 55° to core axis; contains 4 to 6% disseminated pyrite.									
		EXTREMELY CHLORITIZED BASALT - 5 to 10% pyrite; zones with 1 to 2% chalcopyrite.									
		84.17- 84.50 Zone of very chloritic, broken core.									
		86.20- 86.26 Low angle fracture with chlorite-hematite; slickensides at 8 to 10° to core axis.									
		87.50 Narrow pyrite stringers at 25° to core axis.									
		90.83- 92.20 Zone of extreme chloritization; approximately 20% pyrite + 1 to 2% chalcopyrite concentrated at 91.00 m; sulphides occur primarily as stringers (up to 1 cm) at 10 to 20° to core axis; contains green-grey, fragmented cherty silica.	NF02470 NF02471	90.00 90.83	90.83 92.00	0.83 1.17	<5 7	169 8100	<1 9	365 18900	<0.2 6.42
		90.97- 91.15 Zone of sulphide mineralization; approximately 30% pyrite + 5% chalcopyrite; near the bottom of the zone pyrite disseminations are at 55°									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
		to core axis.									
		95.13	NF02472	92.00	93.00	1.00	<5	390	<1	3050	0.6
		Flow contact at 55° to core axis									
			NF02477	96.00	96.30	0.30	<5	250	2	184	<0.2
		96.33- 96.86	NF02478	96.30	97.00	0.70	33	7400	14	8290	4.9
		Zone of extremely chloritic basalt with 10 to 15% pyrite + up to 1% chalcopyrite; local fragmented cherty silica.									
97.73	100.75	MAFIC DYKE - fine-grained; moderate chloritic alteration; epidotization is weak to moderate; contains 1% disseminated pyrite.									
100.75	114.49	MODERATELY CHLORITIZED BASALT.									
		100.80									
		Foliation at 54° to core axis.									
		101.75									
		Flow contact at 47° to core axis.									
		102.54- 103.80									
		Zone of shearing at 35 to 40° to core axis; chloritic, broken sections.									
		104.50- 104.66									
		Silica-cherty-epidote zone; banded at 42° to core axis.									
		104.66- 105.40									
		Zone of tuffaceous mafic sediment at 40° to core axis.									
		105.82- 105.88									
		Epidote vein at high angle to core axis.									
		107.35- 107.42									
		Zone of "blotchy" silica-chlorite.									
		107.45- 107.82									
		Chlorite-epidote vein at 20° to core axis; 1 to 2% pyrite.									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
		109.03- 109.07 Band of dark grey, cherty silica at 50° to core axis.									
		109.71- 109.92 Zone of epidote veining (>10cm).									
		110.82- 110.93 Zone of cherty silica banding at 58° to core axis; contains calcite-quartz.									
		111.40- 111.51 Epidote-quartz veining at 70 to 75° to core axis.									
		111.98 Flow (?) contact at 45° to core axis.									
		113.12- 113.13 Hematite-filled fracture at 20° to core axis.									
		114.30- 114.45 Zone of cherty stringer/bands at 45 to 50° to core axis.									
114.49	116.80	MAFIC DYKE; fine-grained; epidote-calcite stringers; low angle shearing at lower contact.									
116.80	118.00	MODERATELY CHLORITIC SHEARED BASALT; shearing at 20° to core axis; contains quartz-calcite stringers.									
118.00	130.55	MODERATELY CHLORITIZED BASALT.									
		118.30 foliation at 40° to core axis.									
		118.80- 119.00 Zone of quartz-epidote veining at 75 to 80° to core axis.									
		119.60- 120.20 Zone with cherty silica bands at 50 to 55° to core axis.									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
		121.77- 124.36 Zone of broken/blocky core; extremely chloritic.									
		124.85 Flow (?) contact at 55° to core axis.									
		125.67- 125.76 Zones of quartz-epidote veining at 70 to 75° to core axis.									
		126.68- 126.90 Zone of epidote alteration.									
		127.50- 127.70 Zone of quartz veining at 75° to core axis; minor calcite.									
		128.56 Foliation at 50° to core axis.									
		129.67- 130.55 Zone of silicified mafic volcanic.									
130.55	134.80	EXTREMELY CHLORITIZED AND SHEARED BASALT; calcite stringers and patches; minor hematite staining along shear planes; weakly to moderately foliated; foliation generally at 55° to core axis.									
134.80	145.74	MODERATELY CHLORITIZED BASALT - 1% pyrite mineralization.									
		136.34- 136.85 Zone of disrupted chloritized basalt.									
		137.25 Foliation at 55 to 60° to core axis.									
		139.10 Foliation at 60° to core axis.									
		140.02- 140.03 Pyrite blotch.									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPH	PB PPH	ZN PPH	AG PPH
		140.85 Flow (?) contact at 60° to core axis.									
		141.00- 141.30 Zone with cherty silica bands at 65 to 70° to core axis; 1% pyrite as micro-stringers.									
		141.01- 167.00 Basalt contains approximately 1 to 2% pyrite throughout + minor chalcopyrite.									
		142.20- 142.50 Zone of cherty silica bands at 65° to core axis; contains 2 to 3% pyrite.									
145.74	146.13	GRANITIC-LOOKING, HEMATIZED, SILICEOUS INTRUSIVE - contact at 50° to core axis; stringer pyrite at margins.									
146.13	187.00	MODERATELY CHLORITIZED BASALT - 1 to 2% pyrite mineralization.									
		147.08- 147.10 Calcite-quartz stringers at 80° to core axis.									
		148.60 Foliation at 65 to 70° to core axis.									
		150.46- 150.55 Zone of disrupted silica and chlorite banding with 2 to 5% stringer pyrite.									
		152.45- 154.81 Pyritic section - bands up to 1.5 cm at 60° to core axis; 5 to 7% pyrite throughout; minor chalcopyrite at 153.70.	NF02473	152.00	153.00	1.00	<5	690	28	471	<0.2
		152.50- 152.57 Pyrite band at 68° to core axis.	NF02474	153.00	154.00	1.00	<5	1800	<1	160	<0.2
			NF02475	154.00	155.00	1.00	<5	340	46	235	<0.2
			NF02476	155.00	156.00	1.00	<5	210	<1	136	<0.2
		155.50									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
		Pyrite stringer oriented at 75 to 80° to core axis.									
		158.67- 158.70 Zone of calcite amygdules; pillows indicating top is uphole(?).									
		159.50- 159.61 Zone of calcite amygdules; pillows indicate top is uphole(?).									
		161.15- 161.20 Bands of pink-grey chert (?) at 70° to core axis.									
			NF02479	162.00	163.00	1.00	<5	340	<1	1680	<0.2
			NF02480	163.00	164.00	1.00	<5	400	<1	2030	<0.2
		163.90- 164.68 Zone with calcite bands at 62° to core axis; contains 5 to 7% pyrite + 0.5% chalcopryrite.	NF02481	164.00	165.00	1.00	<5	1600	<1	928	0.3
		164.49- 164.50 Quartz stringer with 2% chalcopryrite blebs.									
		167.08- 167.20 Calcite-chlorite stringers/bands at 60° to core axis.									
		168.45- 168.55 Calcite vein at 45° to core axis.									
		170.15 Foliation at 50° to core axis.									
		172.50- 172.67 Fracture at 10° to core axis; calcite-filled.									
		175.60 Calcite bands at 75° to core axis.									
		180.15- 180.20 Zone of cherty silica bands (distorted) at 55 to 60° to core axis; 1 to 2%									

FROM (M)	TO (M)	DESCRIPTION	Sampl.	FROM	TO	Leng. (M)	AU PPB	CU PPM	PB PPH	ZN PPM	AG PPH
		pyrite.									
		181.10- 181.20 Zone of cherty silica bands at 50° to core axis; 1 to 2% pyrite.									
		184.00- 184.02 Chert band at 60° to core axis.									
		186.90 Foliation at 60 to 65° to core axis.									
187.00	193.95	WEAK TO MODERATELY CHLORITIC BASALT.	NF02482	188.00	189.00	1.00	<5	500	2	478	<0.2
		188.25- 188.40 Zone of brecciated basalt with narrow calcite and sulphide stringers.	NF02483	189.00	190.00	1.00	<5	440	<1	500	<0.2
			NF02484	190.00	191.00	1.00	<5	470	90	580	<0.2
			NF02485	191.00	191.50	0.50	<5	220	10	635	<0.2
		191.32- 191.34 Pyrite bands at 50° to core axis.									
		193.94- 193.95 Contact at 38° to core axis.									
193.95	197.51	MAFIC DYKE (?) - small amygdules (?) throughout; non-mineralized.									
197.51		End of hole									
		Total amount of samples= 24 Total length sampled = 22.50M									

HOLE NUMBER: SP-90-02

GEOCHEM. SHEET

Sample	From (M)	To (M)	Length (M)	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	MnO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	CR PPM	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NF02359	20.00	23.00	3.00																			
NF02360	50.00	53.00	3.00																			
NF02361	80.00	83.00	3.00																			
NF02362	110.00	113.00	3.00																			
NF02363	140.00	143.00	3.00																			
NF02364	170.00	173.00	3.00																			
NF02365	194.00	197.00	3.00																			