FALCONBRIDGE LIMITED (EXPLORATION)

DDH Geochemistry Assessment Report
Annett-Tindale Property (PN 8257)
Browning & Amyot Twps.
NTS 41P/6

Nov. 29, 1995

Dean F. Rogers
Associate Geologist
Falconbridge Ltd.

Nov. 29, 1995

NOTE:

This whole rock and assay geochemistry is to accompany drill logs previously filed by Falconbridge Exploration from the Annett-Tindale properties.

Also, rounding of some sulphide percentages occurred in the plotting of the 1:2000 sections, please refer to the printed logs for the actual logged estimates.

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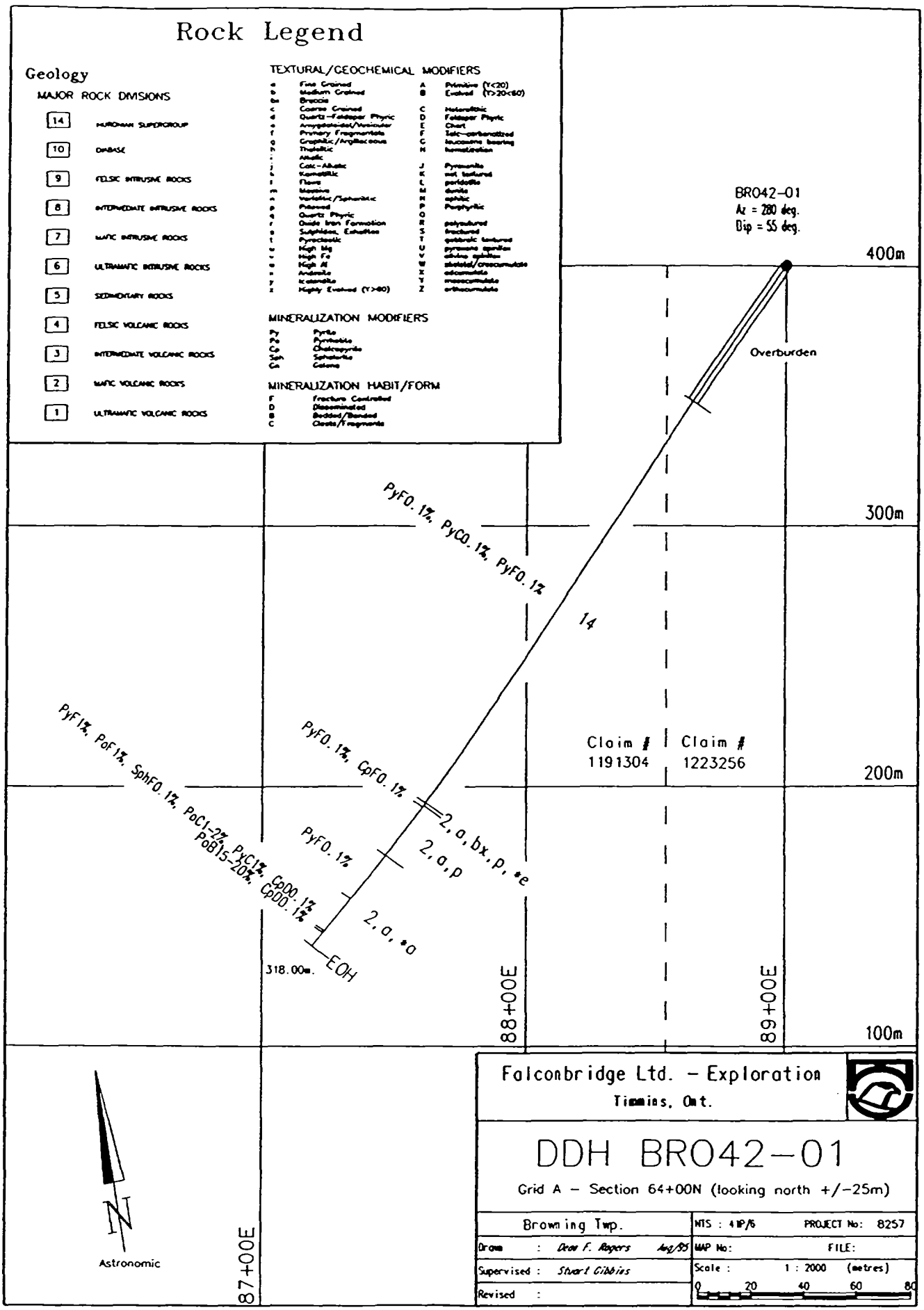

Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
MINERALIZATION MODIFIERS
MINERALIZATION HABIT/FORM
BR042-01
Az = 280 deg.
Dip = 55 deg.
400m
Overburden
300m
PyF0.1%, PyC0.1%, PyF0.1%
14
PyF1%, PoF1%, SphF0.1%, PoC1-2%, PyC1%, PoB1.5-20%, CpD0.1%
PyF0.1%, CpF0.1%
2, a, bx, p, *e
PyF0.1%
2, a, p
2, a, *o
318.00m.
EOH
Claim # 1191304
Claim # 1223256
200m
88+00E
89+00E
100m
87+00E
Astronomic
Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR042-01
Grid A - Section 64+00N (looking north +/-25m)
Browning Twp.
NTS : 41P/6
PROJECT No: 8257
Drawn : Dear F. Rogers Aug/95
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
Revised :
0 20 40 60 80

HOLE NUMBER: BR042-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1223256/1191304
LOCATION: BROWNING TWP.

PLOTTING COORDS GRID: UTM
NORTH: 5246147.00N
EAST: 487314.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 64+ 0N
EAST: 89+ 0E
ELEV: 400.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 318.00M
START DEPTH: 0.00M
FINAL DEPTH: 318.00M

COLLAR ASTRONOMIC AZIMUTH: 280° 0' 0"

GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 07/28/1995
DATE COMPLETED: 08/01/1995
DATE LOGGED: 08/04/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NW & BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 487325mE 5246166mN

COMMENTS : Shining Tree A-T Extension - Target A2, DDH#1,1995
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	280° 0' 0"	-57° 0' 0"	A	DO	test in O.B.
120.00	280° 0' 0"	-56° 0' 0"	A	DO	
180.00	280° 0' 0"	-57° 0' 0"	A	DO	
240.00	280° 0' 0"	-54° 0' 0"	A	DO	
300.00	280° 0' 0"	-52° 0' 0"	A	DO	

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 63.00	«{OB}» Casing Overburden	Mainly sand with large granitic and and volcanic boulders				Difficulty driving casing
63.00 TO 249.00	«14» Huronian Supergroup Cobalt Gp. Gowganda Fm	{63.00-88.85}«5,b,F,*n,<Q» Sedimentary medium grained, wacke, graded bedding, quartzofeldspathic, -arkosic turbidite/wacke sequences from 1-3m in thickness -well sorted, med. grained base fining uphole to clays/silts within each sequence {65.40-66.14}«{FAI}» Fault 71.80-72.14 «5,<CGL>» Sedimentary conglomerate -poorly sorted -rounded to subrounded lithic and granitic clasts {73.70-73.70}«{SO 56°}» Bedding {85.70-85.70}«{SO 79°}» Bedding		-predominantly red-beds in upper 101m indicating hematite alteration 63.00-101.13 «HePM» moderate, pervasive, hematization		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⟪88.85-101.13⟫«S,a,*g,<SLT» Sedimentary fine grained, thinly laminated, siltstone -purplish pink siltstone/argillite with mm scale laminae of coarser quartz rich material -gradational contact with wackes above (over .5m)				
		⟪95.60-95.60⟫«{S0 68°}» Bedding				
		⟪101.13-144.45⟫«S,a,*g,<ARG» Sedimentary fine grained, thinly laminated, mudstone-argillite -mm scale intercalations of qtz/carbonate beds -gray/green in colour		101.13-186.20 «CbFW» weak, fracture/vein controlled, carbonatization		
		⟪108.87-108.87⟫«{S0 75°}» Bedding				
		⟪117.10-117.10⟫«{S0 72°}» Bedding				
		⟪124.00-125.70⟫«{FAI}» Fault -broken/blocky core w/ minor gouge				
		⟪134.30-134.30⟫«{S0 60°}» Bedding				
		⟪144.45-149.40⟫«S,*h,<CGL»» Sedimentary clast supported, conglomerate -poorly sorted, well rounded clasts from .5-10cm -predominantly granitic clasts with 10% mafic pebbles and 1% qtz clasts -uphole contact sharp but irregular				
		⟪149.40-186.20⟫«S,a,*g,<ARG» Sedimentary fine grained, thinly laminated, mudstone-argillite -greenish gray argillite intercalated with mm to 1cm laminae of pink weakly calcareous siltstone -uphole contact sharp and planar				
		⟪149.41-149.41⟫«{S0 58°}contact» Bedding				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		‖156.00-156.00‖«{S0 58°}» Bedding				
		‖168.00-168.00‖«{S0 60°}» Bedding		171.50-238.9 «HeSM»		
		‖181.50-181.50‖«{S0 41°}» Bedding		moderate, spotty, hematization -semi-conformable to bedding		
		‖186.20-201.20‖«5,m,°f,<ARG» Sedimentary massive, thickly laminated, mudstone-argillite ·1% 1-4mm granitic pebbles throughout ·uphole contact marked by .5cm carb vein/bed @ 43° to CA			186.20-187.90 «PyF0.1%,» 0.1% fracture/vein controlled pyrite -euhedral Py in 1-4cm qtz/carb veins	
		‖201.20-219.10‖«5,°h,<CGL» Sedimentary clast supported, conglomerate, ·gradational uphole contact ·less coarse-grained and matrix supported over upper 4m ·lower portion clast supported with cobbles up to 20cm, coarsening downhole -30% volcanic (mafic), remainder granitic, rare felsic volcanic fragments ·At 203.0 and 213.2m there are light gray clasts/dykes/beds of mafic lapilli tuff with black shardy looking clasts up to 1cm and 2-3mm qtz/felsic fragments, contacts are sharp, cross-cutting and sometimes cuspate			201.20-219.10 «PyC0.1%,» 0.1% clasts/fragment of pyrite -v. rare Py clasts	
		‖219.10-238.90‖«5,a,m,<ARG» Sedimentary fine grained, massive, mudstone-argillite ·very similar to above massive argillite but lacks granitic fragments ·uphole contact sharp @62° to CA		219.10-238.90 «CbFW» weak, fracture/vein controlled, carbonatization		
		‖238.90-249.00‖«5,°h,<CGL» Sedimentary clast supported, conglomerate ·subrounded to rounded, poorly sorted ·40% volcanic clasts some showing flow-banding/foliation		238.90-249.00 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	238.90-249.00 «PyF0.1%,» 0.1% fracture/vein controlled pyrite ·associated with qtz/carb veins	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-sharp uphole contact				
		⟪238.91-238.91⟫«{S0 62°}contact» Bedding				
249.00 TO 250.40	«2,a,bx,p,*e» Mafic Volcanic fine grained breccia pillowed autoclastic /hyaloclastite	-upper contact with Huronian broken but does not appear faulted -light creamy green with pinkish/buff matix -angular, disjointed pillow fragments containing shardy fragments in a med. grained tuffaceous matrix -one hyaloclastitic, sheared pillow selvage -silicification may be highlighting fragmental textures ⟪250.40-250.40⟫«{FAI}» Fault -1cm chloritic gouge		alteration breccia? ⟪249.00-250.40⟫«SIPM,CbFW» moderate, pervasive, silicification; weak, fracture/vein controlled, carbonatization	Unmineralized	
250.40 TO 273.98	«2,a,p» Mafic Volcanic fine grained pillowed	Weakly to moderately sheared mafic volcanic -upper contact faulted and strongly sheared -weak brecciated texture due to strong chlorite alteration -dark green to black -selvages are not hyaloclastitic but are strongly chloritic and show chilled pillow margins -granular textured towards base, possibly massive/tuffaceous ⟪250.50-250.50⟫«{S2 45°}» Foliation ⟪251.45-251.55⟫«{FAI}» Fault -chloritic fault gouge ⟪254.90-57.41⟫«{FAI}» Fault -broken/blocky core ⟪266.20-266.20⟫«{S2 18°}» Foliation	⟪250.40-273.98⟫«CbFM,ChPW» moderate, fracture/vein controlled, carbonatization; weak, pervasive, chloritization ⟪250.40-265.50⟫«ChFS» strong, fracture/vein controlled, chloritization	Rare Cpy clots (mm) associated with minor py veinlets in chloritic slips ⟪250.90-251.00⟫«PyF0.1%,CpF0.1%» 0.1% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite	⟪252.00-255.00⟫ «AR07901-WR» ⟪270.00-273.00⟫ «AR07902-WR»
273.98 TO 318.00	«2,a,*a» Mafic Volcanic medium grained tuff	Upper contact semi-arbitrary, but marked by 20cm brecciated interval -fine-med. grained granular ash-tuff unit, moderately sheared with banded texture -rare felsic lapilli increasing downhole, tr. qtz eyes are associated with them?		2 carbonate events, 1st sub-parallel to fol'n, 2nd late stage qtz/carb veining -alteration generally sub-parallel to foliation -pervasive silicification over most of unit	Predominantly Py and Po mineralization increasing downhole -appears to represent transported sulphides which have been remobilized along fol'n -pinkish/purple banding in lower ash tuff may be fine grained Sph	

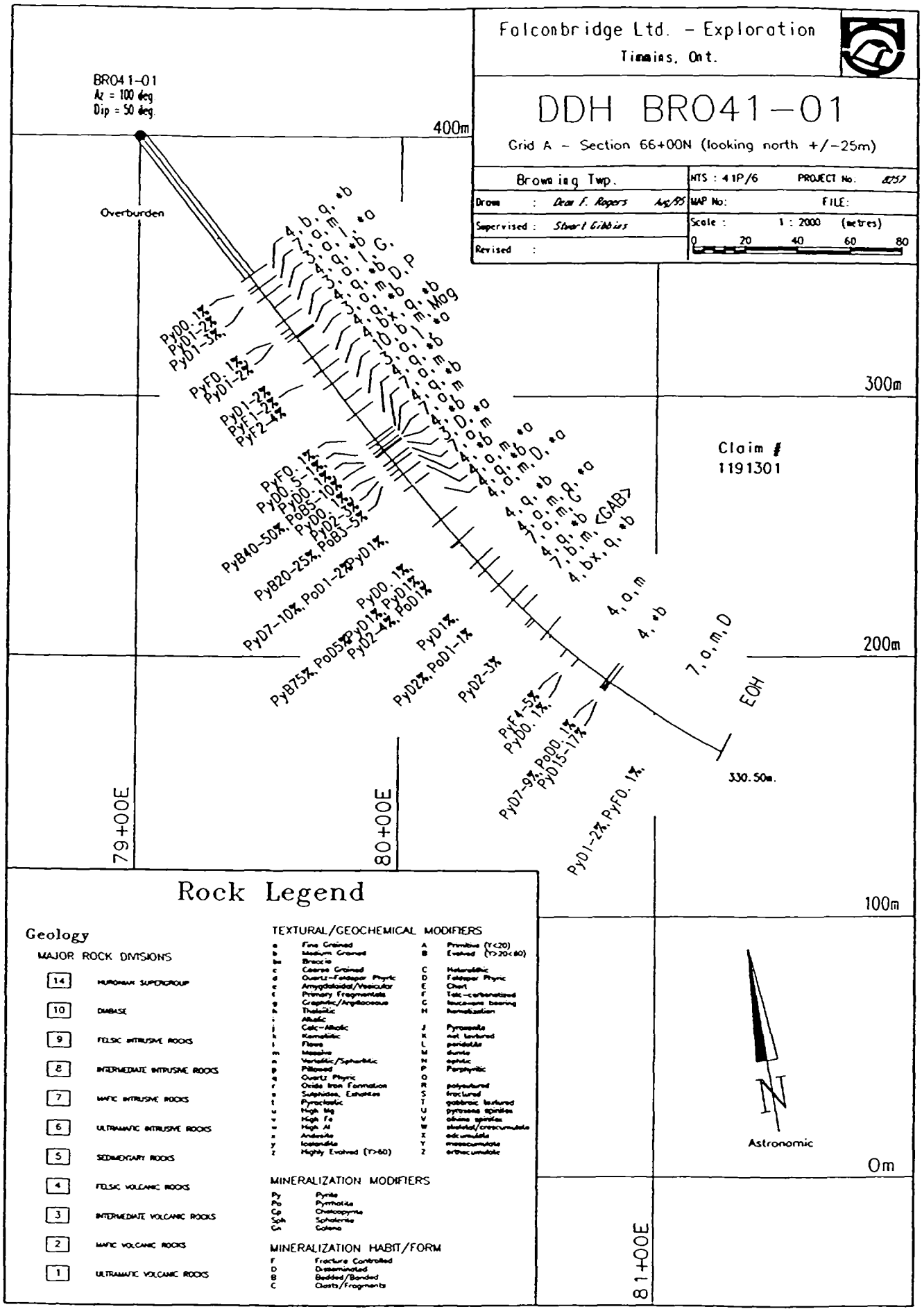
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					associated with sericite alteration	
				([273.98-318.00]•CbFW,ChFW,SiFW• weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, silicification	([273.98-294.97]•PyF0.1%• 0.1% fracture/vein controlled pyrite -fracture controlled to disseminated	
		([279.40-279.40]•{S2 40°}• Foliation -transposed bedding?				
				([280.50-291.00]•SiPM• moderate, pervasive, silicification		
				([289.96-290.16]•SePM• moderate, pervasive, sericitization -buff/tan colour - sericite?		([291.00-294.00] •AR07903-WR•
				([294.97-295.15]•SiPS• strong, pervasive, silicification	([294.97-318.00]•PyF1%,PoF1%,SphF0.1%• 1.0% fracture/vein controlled pyrite; 1.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled sphalerite	
		([296.00-296.40]•2,bx,*e• Mafic Volcanic breccia, autoclastic/hyaloclastite, -hyaloclastite bed, probably transported		([295.15-318.00]•SiPM,SeFM,ChFW• weak, pervasive, silicification; moderate, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization -pinkish brown sericite in bedding parallel bands, strong locally -chlorite intermitant throughout remainder of hole		([300.00-303.00] •AR07904-WR•
		([296.60-297.54]•{FAI}• Fault -broken/blocky core			([294.97-318.00]•PoC1-2%,PyC1%,CpD0.1%• 1.0-2.0% clasts/fragment of pyrrhotite; 0.5% clasts/fragment of pyrite; 0.1% disseminated/blebby chalcopyrite -Cpy as replacement of Po veinlets and clasts (ie. @297.72m)	
		([297.70-297.70]•{S2 19°}• Foliation -transposed bedding?				
		([298.70-298.70]•{S2 30°}• Foliation				
				([310.80-311.60]•CbPS• strong, pervasive, carbonatization -associated with 15-20% Po interval	([310.80-311.60]•PoB15-20%,CpD0.1%• 15.0-20.0% bedded/banded pyrrhotite; 0.1% disseminated/blebby chalcopyrite -contains both Po clots/clasts as well as fine-grained banded and disseminated Po -Cpy occurs as minor replacement of Po -appears to be a boulder/cobble within the unit	([311.05-311.51]) •AR07905-WR•
		([316.10-316.10]•{S2 29°}• Foliation				([315.00-318.00]) •AR07906-WR•

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
118.00	«EOH»					
TO	End-Of-Hole					
118.00						

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07901	252.00	255.00	3.00	39.42	13.07	7.26	15.57	0.64	0.16	15.30	0.26	0.08	0.22	0.01	8.98	100.97	10	24					50	140	550		2,a,p 1HI	162
AR07902	270.00	273.00	3.00	56.49	19.15	2.79	3.50	2.21	3.04	9.02	0.52	0.06	0.11	0.14	3.42	100.30	18	36					165	45	130		2,a,p 3h	238
AR07903	291.00	294.00	3.00	54.98	18.16	1.05	4.20	3.75	3.02	13.17	0.48	0.08	0.13	0.16	4.06	100.07	16	28					155	50	290		2,b,*a 3h	377
AR07904	300.00	303.00	3.00	56.98	16.56	6.05	4.41	1.13	1.42	10.74	0.82	0.10	0.22	0.12	2.42	100.85	14	34					95	65	115		2,b,*a 3h$	191
AR07905	311.05	311.51	0.46	27.09	1.25	16.91	9.82	0.09	0.08	28.64	0.07	0.02	1.45	0.01	13.40	98.81	32	20					65	85	30		2,b,*a 1HI	?
AR07906	315.00	318.00	3.00	49.66	13.47	10.82	6.01	1.10	0.50	14.56	0.62	0.10	0.40	0.16	2.53	99.78	14	60					105	95	100		2,b,*a 2hv$	108

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07901	252.00	255.00	3.00		7	90		100		<5			<3																
AR07902	270.00	273.00	3.00		10	40		100		<5			<3																
AR07903	291.00	294.00	3.00		3	50		100		<5			<3																
AR07904	300.00	303.00	3.00		<2	40		7500		<5			<3																
AR07905	311.05	311.51	0.46		21	<5		3200		<5			<3																
AR07906	315.00	318.00	3.00		3	35		17900		<5			<3																

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM		MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR07901	252.00	255.00	3.00																					10	0.71	0.56	35	67	219
AR07902	270.00	273.00	3.00																					10	0.48	0.15	37	57	20
AR07903	291.00	294.00	3.00																					<10	0.43	0.06	69	80	57
AR07904	300.00	303.00	3.00																					10	0.49	0.37	26	45	58
AR07905	311.05	311.51	0.46																					10	0.45	13.53	3	37	944
AR07906	315.00	318.00	3.00																					<10	0.50	0.80	17	35	86



Rock Legend

Geology

MAJOR ROCK DIVISIONS

14	HURONIAN SUPERGROUP
10	DIABASE
9	FELSIC INTRUSIVE ROCKS
8	INTERMEDIATE INTRUSIVE ROCKS
7	MAFIC INTRUSIVE ROCKS
6	ULTRAMAFIC INTRUSIVE ROCKS
5	SEDIMENTARY ROCKS
4	FELSIC VOLCANIC ROCKS
3	INTERMEDIATE VOLCANIC ROCKS
2	MAFIC VOLCANIC ROCKS
1	ULTRAMAFIC VOLCANIC ROCKS

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained	A	Primitive (Y<20)
b	Medium Grained	B	Evolved (Y>20<60)
c	Breccia		
d	Coarse Grained	C	Metamictic
e	Quartz-Feldspar Phyric	D	Feldspar Phyric
f	Amygdaloidal/Vesicular	E	Chert
g	Primary Fragmentals	F	Talc-carbonatized
h	Graphitic/Argillaceous	G	leucoxene bearing
i	Tholeiitic	H	hematization
j	Alkalic		
k	Calc-Alkalic	J	Pyroxenite
l	Komatiitic	K	ext textured
m	Flows	L	peridotite
n	Massive	M	dunite
o	Variolitic/Spherulitic	N	aphyric
p	Pillowed	O	Porphyritic
q	Quartz Phyric	P	
r	Oxide Iron Formation	Q	polycrystalline
s	Sulphides, Exhalites	R	fractured
t	Pyroclastic	S	gabbroic textured
u	High Mg	T	pyroxene spinifex
v	High Fe	U	olivine spinifex
w	High Al	V	skeletal/orthocumulate
x	Andesite	W	adcumulate
y	Isotropic	X	mesocumulate
z	Highly Evolved (Y>60)	Y	orthocumulate
		Z	

MINERALIZATION MODIFIERS

Py	Pyrite
Po	Pyrrhotite
Cp	Chalcopyrite
Sph	Sphalerite
Gn	Galena

MINERALIZATION HABIT/FORM

F	Fracture Controlled
D	Disseminated
B	Bedded/Banded
C	Clasts/Fragments

HOLE NUMBER: BRO41-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191301
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5246518.00N
EAST: 486364.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 66+ 0N
EAST: 79+ 0E
ELEV: 400.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 330.50M
START DEPTH: 0.00M
FINAL DEPTH: 330.50M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"

GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 08/05/1995
DATE COMPLETED: 08/08/1995
DATE LOGGED: 08/09/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NM and BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486358mE 5246519mN

COMMENTS : Drilled under right Spectacle Lake (DDH #2, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-52° 0' 0"	A	DO	Test in O.B.	-	-	-	-	-	
120.00	100° 0' 0"	-52° 0' 0"	A	DO		-	-	-	-	-	
180.00	100° 0' 0"	-53° 0' 0"	A	DO		-	-	-	-	-	
240.00	100° 0' 0"	-42° 0' 0"	A	DO		-	-	-	-	-	
300.00	100° 0' 0"	-31° 0' 0"	A	DO		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 69.00	«{OB}» Casing Overburden					
69.00 TO 74.70	«4,b,q,*b» Felsic Volcanic medium grained quartz phyric lapilli tuff	Granular, banded/mottled texture -brown/buff colour -1% mm size qtz-eyes -clasts 1-10cm and somewhat vague due to alteration and deformation -rare 1cm massive rhyolite fragments		‖69.00-73.30‖«SeFM,ChFW» moderate, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization -sericitic clasts defined by chloritic veinlets	‖69.00-73.30‖«PyD0.1%» 0.1% disseminated/blebby pyrite	
				69.00-73.30 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification -late qtz/carb veining		
		‖72.10-72.10‖«{S2 35°}» Foliation				‖70.83-73.83‖ «AR07907-WR»
		‖73.30-74.70‖«4,bx» Felsic Volcanic breccia , -probably a tectonic breccia formed from the intrusion of the dyke below -mafic material between fragments		‖73.30-74.70‖«CbPS» strong, pervasive, carbonatization -strongly carbonatized fragments	‖73.30-74.70‖«PyD1-2%» 1.0-2.0% disseminated/blebby pyrite -within rhyolite fragments	
74.70 TO 78.94	«7,a,m» Mafic Intrusive fine grained massive	-uphole contact sheared but sharp and planar -dark green -dyke itself appears fresh and undeformed		74.70-78.94 «CbFW,SiFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, silicification	74.70-78.94 «PyD1-3%,» 1.0-3.0% disseminated/blebby pyrite	
78.94 TO 84.13	«3,a,l,*a,< DAC>» Intermediate Volcanic fine grained flows (banded) tuff dacite	-Uphole contact irregular with strong carbonate veining -granular textured with banding at top and bottom of unit -no qtz eyes		78.94-84.13 «SiFW,CbFW,SiFW» weak, pervasive, silicification; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	Unmineralized	‖80.00-83.00‖ «AR07908-WR»

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FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
84.13 TO 90.58	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-Uphole contact sharp but sheared at ~5° to CA, probably an irregular flow top -similar banded texture as in lapilli-tuff above with slightly more vague clasts -possibly an ash-tuff/massive flow? -3% 2-4mm qtz eyes -buff/tan colour ⟪86.96-86.96⟫«S2 48°» Foliation -transposed bedding?		⟪84.13-90.56⟫«ChFW,SeFM» weak, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization 84.13-90.58 «CbFW,SlFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification -late qtz/carb veining	Unmineralized	⟪86.00-89.00⟫ «AR07909-WR»
90.58 TO 98.04	«3,A,l,G, » Intermediate Volcanic fine grained flows (banded) leucoxene bearing	-dark greenish gray -massive, fine-grained -mm size, soft white spotting (2-3%) -Leucoxene/rock fragments? -weak banded texture defining some clasts? ⟪96.52-96.57⟫«FAlt» Fault -fault gouge		90.58-98.04 «CbFW,SlFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification -late qtz/carb veining ⟪98.58-98.04⟫«SlPW,ChFM» weak, pervasive, silicification; moderate, fracture/vein controlled, chloritization	90.58-94.26 «PyF0.1%,» 0.1% fracture/vein controlled pyrite ⟪94.26-96.52⟫«PyD1-2%» 1.0-2.0% disseminated/blebby pyrite -coarse,recrystallized Py in bedding/fol'n parallel bands and clots -unmineralized below fault	⟪92.00-95.00⟫ «AR07910-WR»
98.04 TO 98.83	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-thin interval of felsic lapilli-tuff -upper contact planar @25° to CA -granular mottled texture -light gray to white		⟪98.04-98.83⟫«CbFM» moderate, fracture/vein controlled, carbonatization -very weakly sericitic?	Unmineralized	
98.83 TO 108.07	«3,a,m,D,P, «DAC»» Intermediate Volcanic fine grained massive	-fairly massive, uniform flow -some coarse-grained intervals suggestive of tuffaceous units (no phenocrysts) -minor leucoxenes -1-2% pink feldspar phenocrysts -dark gray -upper contact marked by 1cm qtz/carb vein		98.83-108.07 «CbFW,SlFW,AbFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization ⟪98.83-108.07⟫«SlPW»	Tr. Py associated with qtz/carb veining	⟪101.00-104.00⟫ «AR07911-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	feldspar phyric porphyritic dacite	-albite/silica? network fracture pattern		weak, pervasive, silicification		
108.07 TO 114.62	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-Similar banded/mottled texture seen in lapilli-tuffs uphole -uphole contact sharp @39° t CA -buff/gray colour -1% massive rhyolite clasts (1cm) -1-2% 1-3mm qtz eyes {113.00-113.00}«{S2 39°}» Foliation		108.07-114.62 «CbFM,SiFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification -late qtz/carb veining {108.07-114.62}«SeFM» moderate, fracture/vein controlled, sericitization	{108.07-108.35}«PyD1-2%» 1.0-2.0% disseminated/blebby pyrite -localized at upper contact -possible Py clasts (<1cm) {114.37-114.62}«PyF1-2%» 1.0-2.0% fracture/vein controlled pyrite -recrystallized in bedding/fol'n parallel bands -localized at lower contact	{110.00-113.00} «AR07912-WR»
114.62 TO 120.66	«4,bx,q,*b» Felsic Volcanic breccia quartz phyric lapilli tuff	-Felsic lapilli-tuff which has been strongly brecciated -probably related to diabase intrusion below -uphole contact gradational -qtz-phyric tuffaceous to massive fragments in a chloritic/mafic matrix -some intermediate (dacititic?) clasts (feldspar porphyritic) -fault zone?		{114.62-120.66}«CbFM,ChFM,TkFM» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, talc -talcose/chloritic slip planes	{114.62-120.66}«PyF2-4%» 2.0-4.0% fracture/vein controlled pyrite -1-2% overall but up to 4-5% locally -disseminated but related to brecciated zones	
120.66 TO 128.84	«10,b,m,Mag» Diabase medium grained massive magnetite	-good chill zones at borders with coarser grained interior				
128.84 TO 135.54	«3,a,l,*a» Intermediat e Volcanic fine grained flows (banded) tuff	-upper contact sharp but irregular -weak purplish banding with granular to massive texture -dark greenish brown {133.50-133.60}«{FAI}» Fault -broken/blocky weakly talcose interval		128.84-135.54 «CbFM,SiFM,SiPM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, silicification	Unmineralized	{131.00-134.00} «AR07913-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
135.54 TO 147.62	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact planar @54° to CA -moderately sheared/banded -5-7% qtz eyes from 2-7mm in size {{146.00-146.00}}«{52 31°}» Foliation		135.54-147.62 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {{135.54-147.62}}«K>FW,SePM» weak, fracture/vein controlled, potassic alteration; moderate, pervasive, sericitization	135.54-147.62 «PyF0.1%,» 0.1% fracture/vein controlled pyrite	{{143.00-146.00}} «AR07914-WR»
147.62 TO 149.33	«7,a,m» Mafic Intrusive fine grained massive	-grayish brown		{{147.62-149.33}}«CbPS,CbFW» strong, pervasive, carbonatization; weak, fracture/vein controlled, carbonatization -fracture controlled carbonatization extends into upper and lower units	147.62-149.33 «PyD0.5-1%,» 0.1-0.5% disseminated/blebby pyrite	
149.33 TO 151.81	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-equivalent unit to that above dyke -possibly a xenolith				
151.81 TO 153.02	«7,a,m» Mafic Intrusive fine grained massive	-uphole contact marked by carb vein, irregular		151.81-153.02 «CbPM,CbFW» moderate, pervasive, carbonatization; weak, fracture/vein controlled, carbonatization	151.81-153.02 «PyD0.1%,» 0.1% disseminated/blebby pyrite	
153.02 TO 153.68	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact sharp and planar at 43° to CA -granular, sheared texture		{{153.02-153.36}}«SiPM» weak, pervasive, silicification {{153.36-153.68}}«ChFM» moderate, fracture/vein controlled, chloritization -associated with massive Py/Po interval	{{153.36-153.68}}«PyB40-50%,PoBS-10%» 40.0-50.0% bedded/banded pyrite; 5.0-10.0% bedded/banded pyrrhotite -coarse recrystallized Py clots in fol'n/bedding parallel bands -fine grained Po interstitial to Py	{{153.36-153.68}} «AR08101-MEX»
153.68 TO 157.95	«3,D,*a» Intermediat e Volcanic feldspar phyric tuff	-uphole contact sharp but irregular with massive Py/Po interval -upper 3m fine grained and massive -lower portion contains pink feldspar phenocrysts/clasts and is med. grained		{{153.68-157.95}}«CbFW,CbPM» weak, fracture/vein controlled, carbonatization; weak, pervasive, carbonatization	Unmineralized	{{155.00-158.00}} «AR07915-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				⟪156.50-157.95⟫«K>FM» moderate, fracture/vein controlled, potassic alteration -some fragments appear to be carbonate and K-spar altered		
		⟪157.90-157.95⟫«{FAI}» Fault -broken core, weakly chloritic/talcose				
157.95 TO 160.06	«?,a,m» Mafic Intrusive fine grained massive	-faulted uphole contact -purplish banded texture -possibly a massive flow/ash tuff		157.95-160.06 «CbFW» weak, fracture/vein controlled, carbonatization -no pervasive calcite as in previous dykes	157.95-160.06 «PyD0.1%,» 0.1% disseminated/blebby pyrite	
160.06 TO 164.76	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact sharp but irregular -banded, mottled texture -granular with rare massive lapilli		160.06-164.76 «CbFW» weak, fracture/vein controlled, carbonatization	⟪160.06-162.33⟫«PyD2-3%» 2.0-3.0% disseminated/blebby pyrite	⟪160.26-161.54⟫ «AR07916-WR»
				⟪160.06-162.33⟫«SePM» moderate, pervasive, sericitization -in weakly mineralized portion		
				⟪162.33-164.76⟫«ChFM» moderate, fracture/vein controlled, chloritization -in more strongly mineralized interval	⟪162.33-164.76⟫«PyB20-25%,PoB3-5%» 20.0-25.0% bedded/banded pyrite, 3.0-5.0% bedded/banded pyrrhotite -locally reaches massive proportions (over 1-2cm intervals) -similar habit to MASS above with coarse Py and fine Po but less concentrated -laminae are semi-connected, possibly conductor	⟪162.33-163.87⟫ «AR08102-MEX»
164.76 TO 170.26	«4,a,m,*a» Felsic Volcanic fine grained massive tuff	-uphole contact gradational? -mottled,granular an weakly banded but lacks even vague clast outlines -buff/tan colour -2-4mm, well rounded dark spotting -possibly a massive flow		⟪164.76-170.26⟫«CbFW,ChFM,SePM» weak, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, chloritization; moderate, pervasive, sericitization -spotted texture most likely chlorite spotting -weakly silicified	Unmineralized	⟪167.00-170.00⟫ «AR07917-WR»
		⟪168.60-168.60⟫«{S2 47°}» Foliation				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
170.26	«4,q,*b»	-uphole contact marked by strongly laminated		170.26-187.42 «CbFW,SiFW»	-2cm Po clast at uphole contact	
TO	Felsic	texture @42° to CA		weak, fracture/vein controlled,	-mineralization is evenly distributed	
187.42	Volcanic	-well defined fragments (<10cm stretched along		carbonatization; weak, fracture/vein	throughout unit except within dyke	‖173.00-175.00‖ «AR07918-WR»
	quartz	fol'n)		controlled, silicification	-Py occurs in coarse grained clots and	
	phyric	-2-3% qtz-eyes within matrix (1-2mm)			bands and appears to be confined to	
	lapilli	-mainly tuffaceous clasts with minor qtz clasts		‖170.26-187.42‖«ChFW,ChPW,SePW»	the matrix of the tuff, clasts within	
	tuff	in a med. grained tuffaceous matrix		weak, fracture/vein controlled,	the unit are barren to weakly	
		-some larger clasts appear spotted similar to		chloritization; weak, pervasive,	pyritized	
		above massive unit		chloritization; weak, pervasive,	-fine grained Po occurs as clasts and	
		-med. gray to buff		sericitization	interstitially to Py	
		-moderately sheared		-Se predominantly within clasts, Ch	-no base metals	
				within matrix and in distinct veins		
					‖170.26-187.42‖«PyD7-10%,PoD1-2%»	
		‖179.00-179.00‖«{S2 41°}» Foliation			7.0-10.0% disseminated/blebby pyrite,	
					1.0-2.0% disseminated/blebby pyrrhotite	
		‖179.39-181.09‖«7,A,m»		179.39-181.09 «CbFS» strong,	179.39-181.09 «PyD1%,»	
		Mafic intrusive		fracture/vein controlled,	1.0% disseminated/blebby pyrite	
		fine grained, massive,		carbonatization	-within dyke	
		-weakly banded, possibly a thin int. tuff		-at upper and lower contacts of dyke		
187.42	«4,A,m,D,*a	-uphole sharp and planar @38° to CA		187.42-197.86 «CbFW,SiFW»	187.42-197.86 «PyD0.1%,»	
TO	»	-buff/tan colour		weak, fracture/vein controlled,	0.1% disseminated/blebby pyrite	
197.86	Felsic	-massive unit similar to that at 164.76-170.26m		carbonatization; weak, fracture/vein		‖191.00-194.00‖ «AR07919-WR»
	Volcanic	-moderately sheared		controlled, silicification		
	fine	-weakly spotted texture				
	grained	-vague, hazy feldspar clots/phenocrysts		‖187.42-197.86‖«SePW,ChFW,ChSW»		
	massive	-rare qtz clasts		moderate, pervasive, sericitization;		
	feldspar	-slightly coarser grained over lowermost 0.5m		moderate, fracture/vein controlled,		
	phyric tuff			chloritization; weak, spotty,		
				chloritization		
				-chloritic spots less abundant but		
				more clearly defined than		
				164.76-170.26m interval		
197.86	«4,q,*b»	-uphole contact broken but not faulted		197.86-209.04 «CbFW,CbFW,SiFW»	-overall similar sulphide habit to	
TO	Felsic	-some qtz/rhyolite lapilli but in general clasts		weak, pervasive, carbonatization;	lapilli-tuff above (170.26-187.42m)	
209.04	Volcanic	are poorly defined		moderate, fracture/vein controlled,	with coarse Py and fine Po within	‖198.38-198.45‖ «AR08103-MEX»
	quartz	-possibly an ash tuff		carbonatization; weak, fracture/vein	matrix	
	phyric	-dark gray		controlled, silicification		
	lapilli	-2-3% mm size qtz eyes		-strong carbonatization in proximity	‖197.86-209.04‖«PyD2-4%,PoD1%»	‖202.74-204.15‖ «AR07920-WR»
	tuff	-unit is cut by banded dykes/flows? which have		to dykes	2.0-4.0% disseminated/blebby pyrite;	
		sharp irregular contacts marked by strong			1.0% disseminated/blebby pyrrhotite	
		carbonate alteration		‖197.86-209.04‖«ChFW,SePW»		‖204.53-206.48‖ «AR07921-WR»
		-unit is very blocky/broken, either from		weak, fracture/vein controlled,		
		intrusives or part of a large fault zone		chloritization; weak, pervasive,		

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				sericitization		
				⟪198.38-198.45⟫«CbPS» strong, pervasive, carbonatization -strong pervasive Cb associated with MASS Fe-sulphide interval	⟪198.38-198.45⟫«PyB75%,PoD5%» 75.0% bedded/banded pyrite; 5.0% disseminated/blebby pyrrhotite -massive Fe-sulphides -Py fine to coarse grained with fine Po interstitially towards bottom of interval -probably a distinct bed	
		199.28-204.53 «?,a,m» Mafic Intrusive fine grained, massive			199.28-204.53 «PyD1%,» 1.0% disseminated/blebby pyrite -within dyke	
		206.48-208.17 «?,a,m» Mafic Intrusive fine grained, massive			206.48-208.17 «PyD1%,» 1.0% disseminated/blebby pyrite -within dyke	
209.04 TO 213.46	«4,a,m,q,*a» Felsic Volcanic fine grained massive quartz phyric tuff	-uphole contact sharp @46° but fragments of this unit appear to be within lapilli-tuff above (tops up?) -granular textured with rare qtz/rhyolite lapilli -buff/tan colour -2% rounded qtz eyes form1-3mm in diameter		209.04-213.46 «CbFM,SiFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ⟪209.04-213.46⟫«ChFM,SePM» moderate, fracture/vein controlled, chloritization; moderate, pervasive, sericitization	Unmineralized	⟪209.80-212.80⟫ «AR07922-MR»
		⟪210.37-210.70⟫«FAI» Fault -broken, talcose core				
213.46 TO 221.29	«?,a,m,G» Mafic Intrusive fine grained massive leucoxene bearing	-both upper and lower contact contain xenoliths of massive rhyolite -dark green and weakly banded -sporadic intervals of soft white spots/clots (leucoxenes)		213.46-221.29 «CbFM,SiFM,K>FM» weak, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration -both contacts (bx'd) are strongly carbonate altered	213.46-221.29 «PyD1%,» 1.0% disseminated/blebby pyrite	
221.29 TO 229.64	«4,q,*b» Felsic Volcanic quartz phyric lapilli	-well defined clasts of sericitic massive rhyolite, lapilli-tuff and qtz clasts -qtz clasts typically <2cm, rhyolite fragments up to 20cm -set in a med. grained chloritic matrix -matrix as well as some clasts are qtz-phyric		221.29-229.64 «CbFM,SiFM,K>FM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration	⟪221.29-229.64⟫«PyD2%,PoD1-1%» 2.0% disseminated/blebby pyrite; 0.5-1.0% disseminated/blebby pyrrhotite -confined primarily to matrix material and within clasts of lapilli-tuff -coarse recrystallized Py with fine Po	

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	tuff	(1-2%, 1-2mm) -dark green to buff -minor mafic wisps are most likely injection dykelets {225.10-225.10}«{S2 46°}» Foliation		{221.29-229.64}«ChPW,SePM» weak, pervasive, chloritization; moderate, pervasive, sericitization -sericitic fragments within a chloritic matrix		
229.64	«?,b,m,«GAB	{229.64-231.28}«{FAI}» Fault				
TO	»»	-broken, ground core				
234.82	Mafic Intrusive medium grained massive gabbro	-semi-lithified				
234.82	«4,bx,q,*b»	-poor fragmental texture but unit is strongly brecciated		234.82-247.84 «CbFW,SiFW,K>FW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration		
TO	Felsic	-granular med. grained material separating more massive portions				
247.84	Volcanic breccia quartz phyric lapilli tuff	-possibly an alteration breccia in a massive rhyolite although some intervals have distinct qtz clasts -greenish black to buff/tan -1% 1-2mm qtz eyes (equant) {240.95-242.00}«{FAI}» Fault -broken/blocky core		{234.82-247.84}«ChFS,SePM» strong, fracture/vein controlled, chloritization; moderate, pervasive, sericitization {242.21-243.06}«SiPS» strong, pervasive, silicification -in strongly bx'd interval	{239.59-240.86}«PyD2-1%» 2.0-3.0% disseminated/blebby pyrite -within a massive interval/clast	
247.84	«4,A,m»	-uphole contact sharp @47° to CA		247.84-277.16 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	247.84-277.16 «PyD0.1%,» 0.1% disseminated/blebby pyrite	
TO	Felsic	-med. gray to tan				
277.16	Volcanic fine grained massive	-massive unit with rare vague clast outlines -autobrecciated? -very rare qtz-eyes, slightly glassy on broken surface {257.88-257.88}«{S2 50°}» Foliation		{247.84-277.16}«SeFW,SePM,ChFM» weak, fracture/vein controlled, sericitization; weak, pervasive, sericitization; moderate, fracture/veincontrolled,	{257.88-263.65}«PyF4-5%» 4.0-5.0% fracture/vein controlled pyrite	{257.00-260.00} «AR07923-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				chloritization	-within chloritic matrix of brecciated/lapilli-tuff? interval	
		⟪260.08-263.65⟫«4,bx,*b» Felsic Volcanic breccia, lapilli tuff, -either thin lapilli-tuff or auto-brecciated interval with 4-5% Py				
		⟪263.65-268.44⟫«4,a,m,D» Felsic Volcanic fine grained, massive, feldspar phyric, -3% hazy to clotty feldspar phenocrysts decreasing towards the lower portion of the interval				
277.16 TO 279.09	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact planar @37° to CA -med. grained unit with <1cm qtz clasts and 1-2cm lapilli of massive rhyolite -tr. qtz eyes -moderately sheared @=60° to CA		⟪277.16-279.09⟫«ChFM,SePM» weak, fracture/vein controlled, chloritization; weak, spotty, sericitization ⟪278.08-279.80⟫«CbFM ,CbPS» moderate, fracture/vein controlled, carbonatization; strong, pervasive, carbonatization -probably related to dyke(s) below	⟪277.16-278.08⟫«PyD7-9%,PoD0.1%» 7.0-9.0% disseminated/blebby pyrite; 0.1% disseminated/blebby pyrrhotite -coarse recryatallized Py within matrix of unit ⟪278.80-279.09⟫«PyD15-17%» 15.0-17.0% disseminated/blebby pyrite -coarse Py as well as fine grained bands/beds	⟪277.16-278.00⟫ «AR08104-MEX» ⟪278.80-279.09⟫ «AR08105-MEX»
279.09 TO 330.50	«7,a,m,D» Mafic Intrusive fine grained massive feldspar phyric	-fine-grained, massive to banded unit -purplish (hematite stained?) bands vary from distinct intervals to vague discontinuous patches -similar to those units logged as 3a(i) in upper portion of hole with intermittent fine and med. grained intervals -no primary flow features -contacts between intervals typically sharp and irregular or carb veined -possibly a dyke complex -some intervals contain large(2-4mm) clotty to euhedral feldspar phenocrysts (1-2% within intervals) (equivalent to porphyritic unit seen on Grid C?)		279.09-330.50 «CbFM,SiFM» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification ⟪285.60-287.00⟫«CbFS,SiFM» strong, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification -large carbonate vein	279.09-330.50 «PyD1-2%,PyF0.1%,» 1.0-2.0% disseminated/blebby pyrite; 0.1% fracture/vein controlled pyrite -fracture controlled associated with carb veinlets/fractures	⟪290.00-293.00⟫ «AR07924-WR»
		⟪303.23-307.64⟫«{FAI}» Fault -strongly broken and qtz/carb veined -blocks of mafic and rhyolitic material		⟪309.60-315.80⟫«EpFM,KsFS» moderate, fracture/vein controlled, epidotization; strong, fracture/vein controlled, potassic alteration -K-spar/epidote fractures with		⟪311.00-314.00⟫ «AR07925-WR»

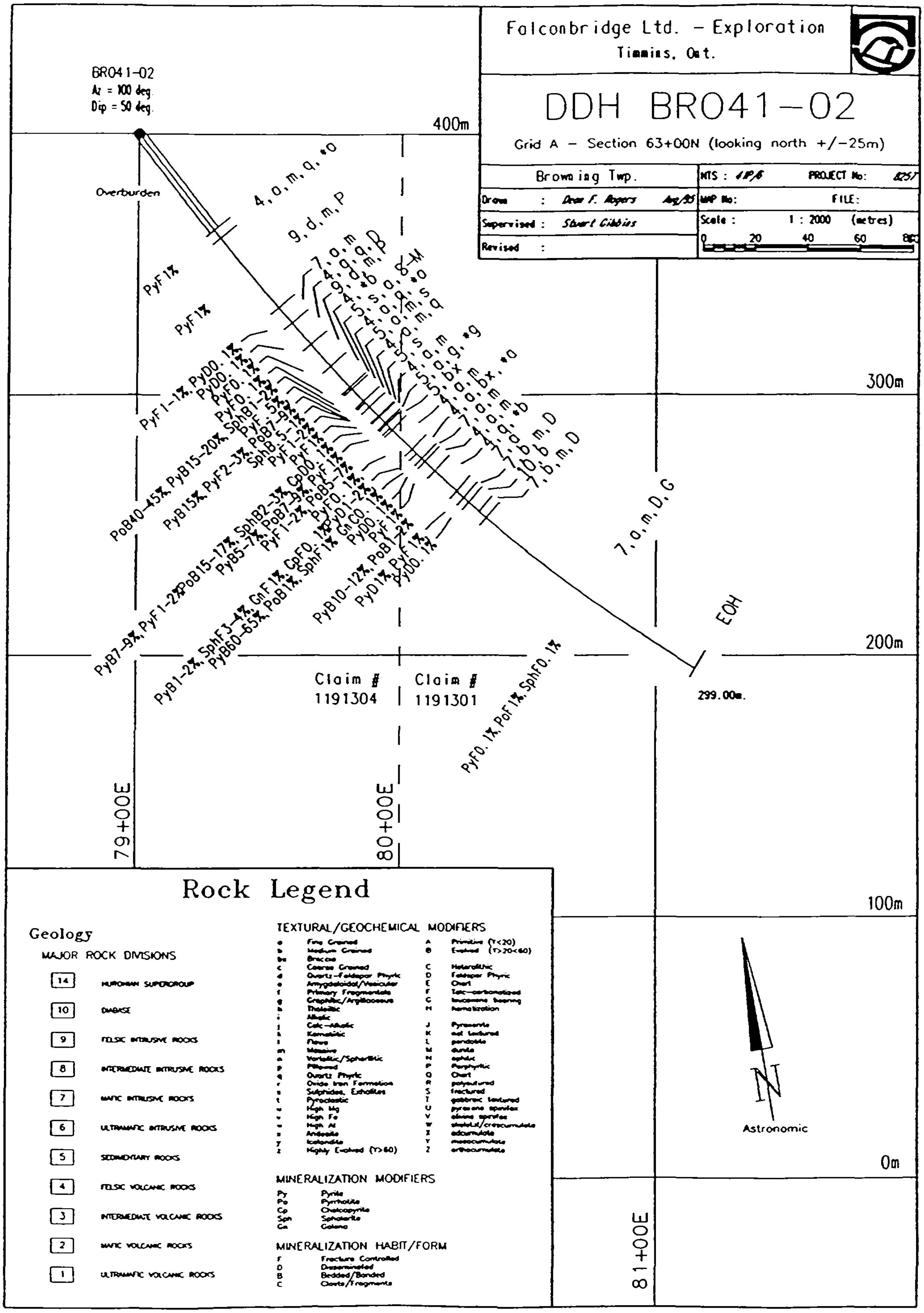
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				pervasive K-spar migrating out from veinlets		
330.50	«EOH»					
TO	End-Of-Hole					
330.50						

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm			
AR08101	153.36	153.68	0.32	518	171	34	0.9	8			79	12	0	30
AR08102	162.33	163.87	1.54	69	75	10	0.4	4			34	0	0	0
AR08103	198.38	198.45	0.07	143	34	17	0.7	17			63	32	0	30
AR08104	277.16	278.00	0.84	96	36	0	0.2	1			22	0	0	10
AR08105	278.80	279.09	0.29	57	2180	17	2.0	20			63	0	0	40

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07907	70.83	73.83	3.00	62.91	14.50	3.58	3.39	1.30	2.24	6.86	0.51	0.08	0.14	0.06	2.84	98.35	20	102					55	55	30		4,b,q,*3h	204
AR07908	80.00	83.00	3.00	48.77	15.12	9.74	9.20	1.30	1.36	10.24	0.81	0.10	0.20	0.08	3.22	100.06	14	40					<5	85	150		3,*a 2hu	122
AR07909	86.00	89.00	3.00	73.63	13.58	1.65	1.48	2.30	2.22	3.02	0.28	0.08	0.07	0.06	2.18	100.48	14	144					10	20	10		4,q,*b 4jA	220
AR07910	92.00	95.00	3.00	67.13	13.77	2.83	2.67	1.78	1.18	6.83	0.30	0.08	0.14	0.05	3.29	99.99	8	114					10	25	25		3,a,*b 4jA	238
AR07911	101.00	104.00	3.00	60.11	16.01	4.65	3.23	5.16	0.98	5.81	0.88	0.28	0.10	0.10	3.32	100.52	10	92					10	85	50		3,a,m,D3j	148
AR07912	110.00	113.00	3.00	72.92	13.26	1.40	1.59	1.07	3.38	2.58	0.23	0.06	0.05	0.05	2.98	99.52	18	128					5	75	<5		4,q,*b 4jA	227
AR07913	131.00	134.00	3.00	49.35	13.90	9.81	6.98	2.97	0.98	9.54	0.80	0.14	0.18	0.06	5.90	100.54	16	100					105	95	90		3,*a 2ju	101
AR07914	143.00	146.00	3.00	71.64	14.32	1.70	1.27	1.50	3.22	3.36	0.34	0.10	0.05	0.07	3.16	100.65	16	138					20	30	<5		4,*b 4jA	223
AR07915	155.00	158.00	3.00	50.28	11.99	9.65	9.58	4.29	0.36	7.93	0.66	0.40	0.17	0.08	5.16	100.47	16	124					85	85	250		3,D,*a 1H	84
AR07916	160.26	161.54	1.28	65.15	15.41	3.29	2.41	3.86	3.64	4.73	0.48	0.14	0.13	0.06	4.51	100.75	16	138					<5	55	20		4,*b 3j$	198
AR07917	167.00	170.00	3.00	68.69	14.64	2.86	2.60	3.79	1.26	3.41	0.29	0.10	0.07	0.07	4.00	98.70	2	110					25	55	15		4,a,m 4jA	298
AR07918	173.00	175.00	2.00	53.57	12.71	2.91	4.08	2.34	0.54	15.52	0.36	0.10	0.48	0.05	7.37	97.99	12	116					30	90	10		4,*b 4jA$	335
AR07919	191.00	194.00	3.00	71.63	15.17	2.93	2.40	3.44	1.48	3.12	0.27	0.10	0.06	0.05	2.74	100.35	<2	118					10	35	30		4,a,m,*4jA	313
AR07920	202.74	204.15	1.41	49.10	14.46	9.43	7.04	3.94	0.50	13.91	0.96	0.10	0.23	0.06	3.56	100.23	18	62					95	105	115		7,a,m 7hu	133
AR07921	204.53	206.48	1.95	63.50	13.91	4.10	3.10	3.30	1.42	7.13	0.37	0.12	0.13	0.07	3.67	98.77	16	108					30	70	<5		4,q,*b 4jA$	204
AR07922	209.80	212.80	3.00	75.65	11.83	1.26	1.40	3.62	2.06	2.03	0.12	0.06	0.04	0.08	2.64	97.72	20	154					<5	25	15		4,a,m 4jB	300
AR07923	257.00	260.00	3.00	72.49	14.29	2.72	1.85	3.83	1.90	2.47	0.26	0.08	0.04	0.07	3.42	100.38	4	94					10	30	30		4,a,m 4jA	262
AR07924	290.00	293.00	3.00	48.21	14.94	10.87	7.23	2.93	0.66	13.09	0.87	0.08	0.23	0.06	3.39	100.51	16	24					95	90	115		7,a,m 7hu	120
AR07925	311.00	314.00	3.00	57.60	14.99	6.18	4.57	3.97	1.70	6.99	0.74	0.38	0.10	0.06	3.26	100.46	16	142					<5	60	35		7,a,m 8j	126

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07907	70.83	73.83	3.00		<2	20		300		<5			<3																
AR07908	80.00	83.00	3.00		<2	30		100		<5			<3																
AR07909	86.00	89.00	3.00		7	10		100		<5			<3																
AR07910	92.00	95.00	3.00		3	5		4200		<5			<3																
AR07911	101.00	104.00	3.00		<2	15		100		<5			<3																
AR07912	110.00	113.00	3.00		<2	5		<100		<5			<3																
AR07913	131.00	134.00	3.00		3	30		100		<5			<3																
AR07914	143.00	146.00	3.00		<2	10		100		<5			<3																
AR07915	155.00	158.00	3.00		24	30		<100		<5			<3																
AR07916	160.26	161.54	1.28		10	10		13500		<5			<3																
AR07917	167.00	170.00	3.00		<2	10		<100		<5			<3																
AR07918	173.00	175.00	2.00		3	15		11500		<5			<3																
AR07919	191.00	194.00	3.00		<2	<5		100		<5			<3																
AR07920	202.74	204.15	1.41		<2	45		200		<5			<3																
AR07921	204.53	206.48	1.95		<2	15		13300		<5			<3																
AR07922	209.80	212.80	3.00		<2	<5		100		<5			<3																
AR07923	257.00	260.00	3.00		<2	<5		100		<5			<3																
AR07924	290.00	293.00	3.00		14	40		300		<5			<3																
AR07925	311.00	314.00	3.00		3	25		100		<5			<3																

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM		MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA?
AR07907	70.83	73.83	3.00																					15	0.54	0.25	9	54	42
AR07908	80.00	83.00	3.00																					<10	0.68	0.64	16	49	65
AR07909	86.00	89.00	3.00																					<10	0.54	0.12	7	48	9
AR07910	92.00	95.00	3.00																					10	0.48	0.21	9	46	14
AR07911	101.00	104.00	3.00																					<10	0.57	0.29	15	32	16
AR07912	110.00	113.00	3.00																					<10	0.60	0.11	3	67	70
AR07913	131.00	134.00	3.00																					<10	0.64	0.71	13	38	32
AR07914	143.00	146.00	3.00																					<10	0.47	0.12	4	59	20
AR07915	155.00	158.00	3.00																					<10	0.74	0.80	26	42	20
AR07916	160.26	161.54	1.28																					<10	0.55	0.21	8	59	64
AR07917	167.00	170.00	3.00																					<10	0.65	0.20	6	51	70
AR07918	173.00	175.00	2.00																					<10	0.38	0.23	2	59	265
AR07919	191.00	194.00	3.00																					<10	0.65	0.19	13	54	80
AR07920	202.74	204.15	1.41																					<10	0.55	0.65	16	42	112
AR07921	204.53	206.48	1.95																					<10	0.51	0.29	2	46	54
AR07922	209.80	212.80	3.00																					<10	0.62	0.11	11	65	40
AR07923	257.00	260.00	3.00																					<10	0.64	0.19	16	51	36
AR07924	290.00	293.00	3.00																					<10	0.57	0.73	16	40	97
AR07925	311.00	314.00	3.00																					<10	0.61	0.41	8	38	15



Falconbridge Ltd. – Exploration
Timmins, Ont.
DDH BR041–02
Grid A – Section 63+00N (looking north +/–25m)
Browning Twp.
Drawn : Dean F. Rogers
Supervised : Stuart Gibbins
Revised :
Scale : 1 : 2000 (metres)
0 20 40 60
BR041-02
Az = 100 deg.
Dip = 50 deg.
Overburden
400m
300m
200m
100m
0m
4,a,m,q,*a
9,d,m,P
7,a,m,D
EOH
299.00m.
Claim # 1191304
Claim # 1191301
PyF0.1%,PoF1%,SphF0.1%
79+00E
80+00E
81+00E
Astronomic
N
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cp Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

HOLE NUMBER: BRO41-02

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191301/1191304
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5246222.00N
EAST: 486312.00E
ELEV: 400.00

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"

ALTERNATE COORDS GRID: Grid A
NORTH: 63+ 0N
EAST: 79+ 0E
ELEV: 400.00

GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 299.00M
START DEPTH: 0.00M
FINAL DEPTH: 299.00M

DATE STARTED: 08/09/1995
DATE COMPLETED: 08/12/1995
DATE LOGGED: 08/14/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NW & BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486307mE 5246227mN

COMMENTS : Target A1- 300m south of BRO41-01 (DDH #3,1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-53° 0' 0"	A	DO							
120.00	100° 0' 0"	-47° 0' 0"	A	DO							
180.00	100° 0' 0"	-42° 0' 0"	A	DO							
240.00	100° 0' 0"	-36° 0' 0"	A	DO							

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 47.32	«{OB}» Casing Overburden					
47.32 TO 51.25	«1,a,m,q,*a» Felsic Volcanic fine grained massive quartz phyric tuff	-broken/fractured unit -greenish gray to brown -moderately to strongly sheared @~45° to CA -appears brecciated but this is likely tectonic -2-3% equant qtz-eyes from 1-3mm in diamter {49.48-49.69}«{FAI}» Fault -broken/blocky core {50.89-51.14}«{FAI}» Fault -broken/blocky core		47.32-51.25 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {47.32-51.25}«ChFW,SeFW» moderate, fracture/vein controlled, chloritization; weak, pervasive, sericitization	{47.32-51.25}«PyF1%» 0.5% fracture/vein controlled pyrite -associated with bx'n/carb veining	
51.25 TO 85.95	«9,d,m,P» Felsic Intrusive quartz-feld spar Phyric massive porphyritic	-uphole contact marked by appearance of large qtz phenocrysts -weak chill at uphole contact with smaller and less abundant Qtz/Feld. phens. -strongly porphyritic with large (up to 8mm) rounded qtz eyes (4-5%) and pink to white cloudy to euhedral feldspars (up to 5mm, 10-12%) -brownish gray, fine-grained matrix -undeformed -finer grained towards base -possibly in part extrusive?		51.25-85.95 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {51.25-85.95}«ChFW,SeFW,KsFM» weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization; moderate, fracture/vein controlled, potassic alteration -fracture controlled K-spar alteration extends diffusely away from veinlets {69.70-85.95}«SeFM» moderate, fracture/vein controlled, sericitization {81.90-85.95}«SePM» moderate, pervasive, sericitization	{51.25-85.95}«PyF1%» 0.5% fracture/vein controlled pyrite	{65.00-68.00} «AR07926-WR» {68.00-68.19} «AR08106-MEX» -qtz vein
85.95 TO 93.80	«7,a,m» Mafic Intrusive fine grained massive	-weakly spotted (mm) in some areas (leucoxenes?)		85.95-92.41 «CbFS,SiFM» strong, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification -strong carbonate veining at uphole contact extending into above QFP	85.95-92.41 «PyF1-1%,PyD0.1%,» 0.5-1.0% fracture/vein controlled pyrite; 0.1% disseminated/blebby pyrite -fracture controlled associated with carb veins	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
93.80 TO 104.75	«4,a,q,D» Felsic Volcanic fine grained quartz phyric feldspar phyric	-uphole contact sharp @48° to CA -grayish green -granular on outer surface but broken surface appears massive -1% mm size qtz-eyes -feldspars are hazy/altered -unit is cut by several mafic dykes which have sharp but usually carb veined contacts		-mafic dykes are weakly banded defined by mauve coloured fine hematite staining 93.80-104.75 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	93.80-104.75 «PyD0.1%,» 0.1% disseminated/blebby pyrite -disseminated Py within mafic dykes	
		94.75-95.25 «7,a,m» Mafic Intrusive fine grained, massive		((93.80-104.75))«ChFW» weak, fracture/vein controlled, chloritization		((95.55-98.55)) «AR07927-WR»
		100.68-101.27 «7,a,m» Mafic Intrusive fine grained, massive		((101.29-101.83))«ChFS,SePS» strong, fracture/vein controlled, chloritization; strong, pervasive, sericitization -strongly altered rhyolite clast/interval		
		101.83-103.72 «7,a,m» Mafic Intrusive fine grained, massive				
		104.42-104.60 «7,a,m» Mafic Intrusive fine grained, massive				
104.75 TO 115.98	«9,d,m,P» Felsic Intrusive quartz-feld spar Phyric massive porphyritic	-very similar unit to QFP above (51.25-85.95m) with large rounded qtz eyes and euhedral to clotty feldspar phenocrysts -appears to be a gradational contact within the dyke swarm above between the unit with minor qtz phens and this strongly porphyritic unit -intrusive?, possibly a porphyritic flow/tuff		104.75-115.98 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ((104.75-115.98))«SeFW,SePW» weak, fracture/vein controlled, sericitization; weak, pervasive, sericitization	((104.75-115.98))«PyF0.1%» 0.1% fracture/vein controlled pyrite	
		105.03-105.31 «7,a,m» Mafic Intrusive fine grained, massive				((107.00-110.00)) «AR07928-WR»
115.98 TO 126.89	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact broken but appears sharp at ~40° to CA -mottled texture w/vague sericitic clast outlines -appears massive on broken surface -rare qtz eyes		115.98-126.89 «CbFM,SiFW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ((115.98-126.89))«SeFM,SePS,ChFW» moderate, fracture/vein controlled, sericitization; strong, pervasive,	115.98-126.89 «PyF0.1%,» 0.1% fracture/vein controlled pyrite	((122.00-125.00)) «AR07929-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		((126.35-126.89))«(FAI)» Fault -broken/talcose core		sericitization; weak, fracture/vein controlled, chloritization		
126.89 TO 127.89	«S,m,a,S-M» Sulphide (>40%) fine grained massive sulphide	-upper contact faulted -host difficult to determine, probably an argillite/exhalite? -banded fine-grained Po and Sph with coarser grained Py		((126.89-127.89))«SiFW,CbFW» weak, pervasive, silicification; weak, fracture/vein controlled, carbonatization	Massive sulphides begin at ~127.02m -Po and Sph are fine grained and massive while Py occurs as recrystallized clots/framboids in irregular bands -1-2mm Sph band/bed at base of unit ((127.02-127.89))«PoD40-45%,PyB15-20%,SphB1-2%» 40.0-45.0% bedded/banded pyrrhotite; 15.0-20.0% bedded/banded pyrite; 1.0-2.0% bedded/banded sphalerite	((126.89-127.89)) «AR08107-MEX»
127.89 TO 134.26	«4,a,q,*A» Felsic Volcanic fine grained quartz phyric tuff	-upper contact sharp but irregular -med. gray to green -1-2% qtz eyes, 1-2mm		((127.89-134.26))«ChFW,SeFW» moderate, fracture/vein controlled, chloritization; moderate, pervasive, sericitization 127.89-134.26 «CbFW,SiFW,KsFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration -K-spar seems associated with late qtz/carb veining	127.89-134.26 «PyF.5%,» 0.5% fracture/vein controlled pyrite	((127.89-129.40)) «AR08108-MEX» ((129.40-130.90)) «AR08109-MEX» ((130.90-132.40)) «AR08110-MEX» ((132.40-134.26)) «AR08111-MEX» ((131.00-134.00)) «AR07930-WR»
134.26 TO 137.45	«S,a,m,m» Sedimentary fine grained massive sulphides, exhallites	-upper contact planar @55° to CA -difficult to determine rock type but unit is very siliceous -up to 15% pinkish irregular to subhedral clots are probably garnets		134.26-137.45 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ((136.12-137.45))«CbFS,ChFS»	((134.26-135.15))«PyB15%,PyF2-3%,PoD7-9%» 15.0% bedded/banded pyrite; 2.0-3.0% fracture/vein controlled pyrite; 7.0-9.0% bedded/banded pyrrhotite -irregular bands/fractures of med. grained recrystallized Py surrounded by fine grained Po ((134.26-137.45))«SphB.5-1%» 0.5-1.0% bedded/banded sphalerite -intergrowths within Po? ((135.15-137.45))«PyF1-2%» 1.0-2.0% fracture/vein controlled pyrite	((134.26-135.20)) «AR08112-MEX» ((135.20-136.10)) «AR08113-MEX» ((136.10-137.54)) «AR08114-MEX» ((135.20-136.10)) «AR07931-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				strong, fracture/vein controlled, carbonatization; strong, fracture/vein controlled, chloritization -strong carbonatization/chloritization at base of unit		
137.45 TO 142.21	«4,a,m,q» Felsic Volcanic fine grained massive quartz phyric	-uphole contact obscurred by carbonate veining -massive vitric unit with weak banded texture (flow banding?) -sporadic zones of qtz phens (1mm up to 2%)		137.45-142.21 «CbSW,SiFW» weak, spotty, carbonatization; weak, fracture/vein controlled, silicification [137.45-142.21]«SiPM,SiSW,ChFW» moderate, pervasive, silicification; weak, spotty, silicification; moderate, fracture/vein controlled, chloritization [137.45-142.21]«SeFW» weak, fracture/vein controlled, sericitization	[137.45-142.21]«PyF1%» 0.5% fracture/vein controlled pyrite	[137.45-139.00] «AR08115-MEX» [139.00-140.20] «AR08116-MEX» [140.20-141.50] «AR08117-MEX» [141.50-142.21] «AR08118-MEX» [138.00-141.00] «AR07932-WR»
142.21 TO 142.74	«5,a» Sulphide (>40%)	-uphole contact sharp @46° to CA -unit is strongly altered and mineralized making I.D. of host difficult -7cm bx'd interval at base of unit appears to contain clasts of black argillite		[142.21-142.74]«CbFS,ChFW,ChPW» strong, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, chloritization; weak, pervasive, chloritization	-banded/fol'd? sulphides with distinct bands of med. grained Py surrounded by fine grained Po -Sph occurs within Po and as mm scale wisps/veinlets -Cpy? as minor replacement of Po [142.21-142.74]«PyD7-9%,PyF1-2%» 7.0-9.0% bedded/banded pyrite; 1.0-2.0% fracture/vein controlled pyrite [142.21-142.74]«PoB15-17%,SphB2-3%,CpD0.1%» 15.0-17.0% bedded/banded pyrrhotite; 2.0-3.0% bedded/banded sphalerite; 0.1% disseminated/blebby chalcopyrite	[142.21-142.74] «AR08119-MEX»
142.74 TO 146.01	«4,a,m» Felsic Volcanic fine grained massive	-uphole contact sharp @40° to CA -massive unit with weakly banded/tuffaceous character at it's base -v. weakly qtz-phyric (<1 %, subrounded 1-2mm)		[142.74-146.01]«ChFW,SiFW,ChFW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, fracture/vein controlled, chloritization [142.74-146.01]«SePW,SiSW,SiPW»	Unmineralized?	[142.74-144.23] «AR08120-MEX» [143.00-146.00] «AR07933-WR» [144.23-146.01] «AR08121-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				weak, pervasive, sericitization; moderate, spotty, silicification; weak,pervasive, silicification		
146.01 TO 146.74	«S,A,g,*g» Sedimentary fine grained graphitic/argillaceous thinly laminated	-uphole contact sharp @37° to CA -moderately to strongly conductive black argillite with minor silty interbeds ‖146.44-146.44‖«{S0 56°}» Bedding		‖146.01-146.74‖«SiFW,SiPW» moderate, fracture/vein controlled, silicification; weak, pervasive, silicification	‖146.01-146.74‖«PyB5-7%,PoB7-9%,PyF1%» 5.0-7.0% bedded/banded pyrite; 7.0-9.0% bedded/banded pyrrhotite; 1.0% fracture/vein controlled pyrite -Py an Po beds/laminations -some Py/Po clots/framboids with qtz pressure halos	‖146.01-146.74‖ «AR08122-MEX»
146.74 TO 149.64	«S,bx» Sedimentary breccia	-uphole contact sharp @51° to CA -chaotic/complex unit consisting of reworked? volcanic deposits(debris flows), felsic tuffs and graphitic argillite -contains 1-2% pink garnet? clots -strong carb and qtz veining obscurring primary textures		‖146.74-149.64‖«CbFW,SiFS,SiPW» weak, fracture/vein controlled, carbonatization; strong, fracture/vein controlled, silicification; weak, pervasive, silicification	‖146.74-148.65‖«PyF1-2%,PoB5-7%» 1.0-2.0% fracture/vein controlled pyrite; 5.0-7.0% bedded/banded pyrrhotite -banded and fracture controlled sulphides	‖146.74-148.08‖ «AR08123-MEX»
		147.89-148.08 «S,<RWV>» Sedimentary reworked volcanic debris				‖148.08-148.95‖ «AR08124-MEX»
		148.95-149.64 «?,a,m» Mafic Intrusive fine grained, massive -broken and blocky mafic looking interval with strong qtz veining -possibly a thin mafic dyke				‖148.95-149.64‖ «AR08125-MEX»
149.64 TO 160.36	«A,a,m» Felsic Volcanic fine grained massive	-uphole contact with dyke? broken -light gray to buff -massive unit with some minor tuffaceous/banded intervals -no qtz eyes -weak spotting/lapilli-tuff texture over lower 40cm of unit		149.64-160.36 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ‖149.64-160.36‖«SiPW,SeFW,SePM» moderate, pervasive, silicification; weak, fracture/vein controlled, sericitization; moderate, pervasive, sericitization -pervasive to spotty silicification ‖149.64-160.36‖«ChSW,ChFM»	149.65-160.36 «PyF0.1%,» 0.1% fracture/vein controlled pyrite	‖149.64-151.00‖ «AR08126-MEX» ‖151.00-152.50‖ «AR08127-MEX» ‖152.50-154.00‖ «AR08128-MEX» ‖154.00-155.50‖ «AR08129-MEX» ‖155.00-158.00‖ «AR07934-WR» ‖155.50-157.00‖ «AR08130-MEX» ‖157.00-158.50‖ «AR08131-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				weak, spotty, chloritization; moderate,fracture/vein controlled, chloritization		‖158.50-160.36‖ «AR08132-MEX»
160.36 TO 165.64	«4,a,bx,*a» Felsic Volcanic fine grained breccia tuff	-uphole contact at strongly bx'd zone -dark gray to black -fine grained and fairly massive outside of bx's -possibly a sediment but rare qtz eyes do occur -unit is cut by several mineralized bx zones defined by crackly qtz/carbonate stockworks surrounding angular, cm sized clasts/fragments -margins of these zones are sharp to irregular		‖160.36-160.77‖«SiFS,SiPM,CbFW» strong, fracture/vein controlled, silicification; moderate, pervasive, silicification; weak, fracture/vein controlled, carbonatization	-mineralization occurs in two forms 1)banded/bedded Py/Po within host rock 2)fracture controlled Fe and base-metal sulphides associated with stockwork type cherty breccias	
		‖160.36-160.77‖«4,bx» Felsic Volcanic breccia, -strong silica/carb veining with crackly texture		‖160.36-165.64‖«ChFM,ChPM,SiFM» moderate, fracture/vein controlled, chloritization; weak, pervasive, chloritization; moderate, fracture/vein controlled, silicification	‖160.36-162.82‖«PyB1-2%,SphF3-4%,GnF1%, CpF0.1%» 1.0-2.0% bedded/banded pyrite; 3.0-4.0% fracture/vein controlled sphalerite; 1.0% fracture/vein controlled galena; 0.1% fracture/vein controlled chalcopyrite -within breccias (excluding mafic dykes) -associated with Si veins and stringers -base metals occur within a brownish orangey matrix material which may itself be Sph	‖160.36-160.77‖ «AR08133-MEX» ‖160.77-161.61‖ «AR08134-MEX»
		160.77-161.61 «7,A,m» Mafic Intrusive, fine grained, massive -excellent uphole chill zone, looks like a fining upwards sediment but no bedding				
		‖161.61-162.82‖«4,bx» Felsic Volcanic breccia, -'cherty breccia w/strong mineralization		‖161.61-162.82‖«SiFS,SiPM,CbFW» strong, fracture/vein controlled, silicification; moderate, pervasive, silicification; weak, fracture/vein controlled, carbonatization	160.77-161.61 «PyD1-2%,» 1.0-2.0% disseminated/blebby pyrite ‖162.82-165.64‖«PyD60-65%,PoB1%,SphF1% GnC0.1%» 60.0-65.0% bedded/banded pyrite; 1.0% bedded/banded pyrrhotite; 1.0% fracture/vein controlled sphalerite; 0.1% clasts/fragment of galena -primarily banded Py but with minor base-metal carrying qtz veinlets with similar orangy-brown material as in cherty breccias -60% Py overall but massive fine grained Py beds (>90%) over lower 30cm of unit	‖161.61-162.82‖ «AR08135-MEX» ‖162.82-164.20‖ «AR08136-MEX» ‖164.20-165.64‖ «AR08137-MEX»
165.64 TO 167.31	«7,A,m» Mafic Intrusive fine	-uphole contact at qtz/carb vein -weak uphole chill -brown to med. green		165.64-167.31 «CbFM,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	165.64-167.31 «PyD0.1%» 0.1% disseminated/blebby pyrite	‖165.64-167.31‖ «AR08138-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	grained massive					
167.31 TO 172.51	«4,a,m» Felsic Volcanic fine grained massive	·uphole contact sharp but sheared @65° to CA ·buff/tan waxy colour ·rare qtz eyes ·most of unit is strongly fractured and broken ⟪168.70-168.80⟫«FAI» Fault ·broken, ground core		167.31-172.51 «CbFM,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ⟪167.31-172.51⟫«SePM,ChFM,SiFW» moderate, pervasive, sericitization; moderate, fracture/vein controlled, chloritization; weak, pervasive, silicification ·weak fragmental texture due to strong chlorite veining	⟪167.31-172.51⟫«PyF1%» 1.0% fracture/vein controlled pyrite ·associated with chlorite veinlets	⟪167.31-168.51⟫ «AR08139-MEX» ⟪168.51-169.61⟫ «AR08140-MEX» ⟪169.61-170.76⟫ «AR08141-MEX» ⟪170.76-172.51⟫ «AR08142-MEX»
172.51 TO 184.02	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	·uphole contact weakly bx'd but masked by carb veins ·excellent lapilli-tuff appearance with distinct massive rhyolite clasts in a med. grained tuffaceous matrix ·<1% qtz subhedral qtz eyes in matrix material ·>1cm lapilli become more abundant down-section (Tops Up!) ·moderately sheared ⟪178.82-178.82⟫«S2 65°» Foliation		172.51-184.02 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ⟪172.51-184.02⟫«ChFW,ChPM,SePW» weak, fracture/vein controlled, chloritization; moderate, pervasive, chloritization; weak, pervasive, sericitization ·pervasive Ch within tuffaceous matrix with some sericite altered massive lapillis	⟪172.51-184.02⟫«PyD10-12%,PoB1-2%» 10.0-12.0% bedded/banded pyrite; 1.0-2.0% bedded/banded pyrrhotite ·Py fairly uniformly distributed throughout unit as coarse recrystallized bands ·well bedded Py at 180.4m ·fine po occurs as banded material within spordic carbonate altered intervals	⟪172.51-174.03⟫ «AR08143-MEX» ⟪174.03-175.32⟫ «AR08144-MEX» ⟪175.32-176.80⟫ «AR08145-MEX» ⟪176.00-179.00⟫ «AR07935-WR» ⟪176.80-177.99⟫ «AR08146-MEX» ⟪177.99-179.47⟫ «AR08147-MEX» ⟪179.47-180.65⟫ «AR08148-MEX» ⟪180.65-182.19⟫ «AR08149-MEX» ⟪182.19-183.12⟫ «AR08150-MEX» ⟪183.12-184.02⟫ «AR08151-MEX»
184.02 TO 187.79	«7,a» Mafic Intrusive fine grained (banded)	·uphole contact sheared at carbonate veining ·fine-med. fine grained, greenish brown unit with mottled purplish banding ·moderately sheared @~60 to CA ·lower 10cm of unit has strong lappili-tuff appearance but this may be due to bx'n/alteration?		184.02-190.52 «CbFS,SiFW,HeSM» strong, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, spotty, hematization ·strongly fractured with planar qtz/carbonate veins ·spotty to discontinuous banding of purplish hematite banding	184.02-190.52 «PyD1%,PyF1%,» 0.5% disseminated/blebby pyrite; 0.5% fracture/vein controlled pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
187.79 TO 190.52	«7,b,m,D» Mafic Intrusive medium grained massive feldspar phyric	-uphole contact appears sharp but mottling texture appears to transcend the contact -brownish green, undeformed -unit is very massive with up to 2% pink/white rounded to subhedral feldspar phenocrysts		-marked difference in alteration intensity between porphyritic mafic/diabase and the banded units above and below 187.79-190.52 «CbFW,SiFW,EpFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, epidotization	187.79-190.52 «PyD0.1%» 0.1% disseminated/blebby pyrite	
190.52 TO 195.84	«10,b» Diabase medium grained	-well chilled, irregular margins -very weakly magnetic over some areas -undeformed and fresh looking unit		{190.52-195.84}«CbFW,SiFW,EpFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled,	Unmineralized	
195.84 TO 199.60	«7,b,m,D» Mafic Intrusive medium grained massive feldspar phyric	-uphole contact irregular with diabase chill zone -identical unit to that above diabase with similar alteration and mineralization				
199.60 TO 299.00	«7,a,m,D,G» Mafic Intrusive fine grained massive feldspar phyric leucoxene bearing (banded)	-uphole contact sharp but weakly brecciated -dark green to purplish -unit varies from purplish banded unit seen previously to more massive fine to med. grained intervals -contacts between these are gradational -banded portions are weakly porphyritic, usually with clotty phenocrysts -dark green massive intervals have up to 2% clotty coalesced to subhedral feldspar phenocrysts and upto 3-4% leucoxences		199.60-299.00 «CbFS,SiFM,HeSM» strong, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; moderate, spotty, hematization -small silica? veinlets with diffuse alteration halos {199.60-299.00}«ChFW,SiFW,K>FW» weak, fracture/vein controlled, chloritization; weak, pervasive, silicification; weak, fracture/vein controlled, potassic alteration	{199.60-299.00}«PyF0%,PoF1%,SphF0.1%» 0.1% fracture/vein controlled pyrite; 0.5% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled sphalerite -associated with qtz/carbonate veinlets	
		199.60-209.40 «7,a» Mafic Intrusive fine grained, banded unit				{200.00-203.00} «AR07936-WR»
		{204.58-204.78}«FAI» Fault -broken/blocky core				
		209.40-241.60 «7,a,m,D,G»				{212.00-215.00} «AR07917-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Mafic Intrusive fine grained, massive, feldspar phyric, leucoxene bearing				
		{230.74-231.50}«FAI» Fault -bx'd qtz/carb vein				
		241.60-281.18 «7,a» Mafic Intrusive fine grained, banded unit		{253.80-255.32}«SiPS,BlPW» strong, pervasive, silicification; weak, pervasive, bleaching -uphole border diffuse but downhole is sharp at~90° to CA {263.40-277.19}«SiPS,BlPW» strong, pervasive, silicification; weak, pervasive, bleaching -buff white strongly silicified interval with diffuse boundaries		{248.00-251.00} «AR07938-WR» {269.00-272.00} «AR07939-WR»
		281.18-299.00 «7,a,m,G» Mafic Intrusive fine grained, massive, leucoxene bearing, ~phenocrysts absent?				{290.00-293.00} «AR07940-WR»
299.00 TO 299.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm							
AR08106	68.00	68.19	0.19	341	32	3	0.2	2			10	16	0	10				
AR08107	126.89	127.89	1.00	61	73	41	0.8	6			51	0	0	0				
AR08108	127.89	129.40	1.51	5	27	0	0.1	1			7	0	0	0				
AR08109	129.40	130.90	1.50	4	30	0	0.2	1			6	0	0	0				
AR08110	130.90	132.40	1.50	14	35	0	0.1	1			9	0	0	0				
AR08111	132.40	134.26	1.86	3	21	0	0.1	1			6	0	0	0				
AR08112	134.26	135.20	0.94	45	57	10	0.4	7			42	0	0	0				
AR08113	135.20	136.10	0.90	23	70	0	0.1	1			13	0	0	0				
AR08114	136.10	137.45	1.35	23	36	0	0.2	3			19	0	0	0				
AR08115	137.45	139.00	1.55	16	43	0	0.2	1			34	0	0	0				
AR08116	139.00	140.20	1.20	20	136	0	0.1	53			30	0	0	0				
AR08117	140.20	141.50	1.30	8	27	0	0.1	6			13	0	0	0				
AR08118	141.50	142.21	0.71	5	18	0	0.1	2			12	0	0	0				
AR08119	142.21	142.74	0.53	157	2380	0	0.8	1100			88	0	0	20				
AR08120	142.74	144.23	1.49	4	23	0	0.1	9			10	0	0	0				
AR08121	144.23	146.01	1.78	40	71	0	0.1	8			37	0	0	0				
AR08122	146.01	146.74	0.73	103	271	17	0.6	23			67	0	0	0				
AR08123	146.74	148.08	1.34	47	106	0	0.2	2			27	0	0	0				
AR08124	148.08	148.95	0.87	40	125	7	0.3	1			32	0	0	0				
AR08125	148.95	149.64	0.69	20	99	0	0.2	1			30	0	0	0				
AR08126	149.64	151.00	1.36	15	45	0	0.1	1			24	0	0	0				
AR08127	151.00	152.50	1.50	14	50	0	0.1	3			29	0	0	15				
AR08128	152.50	154.00	1.50	26	67	0	0.1	9			28	0	0	0				
AR08129	154.00	155.50	1.50	27	57	0	0.1	6			26	0	0	0				
AR08130	155.50	157.00	1.50	12	40	0	0.1	1			28	0	0	0				
AR08131	157.00	158.50	1.50	74	50	0	0.6	12			33	0	0	0				
AR08132	158.50	160.36	1.86	4	31	3	0.2	1			30	0	0	15				
AR08133	160.36	160.77	0.41	130	601	0	0.9	134			30	0	0	0				
AR08134	160.77	161.61	0.84	83	532	0	0.6	387			37	0	0	15				
AVE.	161.61	164.20	2.59	125	15662	6	3.0	7305	0	0	0	0	0	0	0	0	0	0
AVE.	161.61	165.64	4.03	122	12485	10	3.0	5652	0	0	0	0	0	0	0	0	0	0
AR08135	161.61	162.82	1.21	238	29100	0	4.7	11200			35	29	0	750				
AR08136	162.82	164.20	1.38	25	3880	10	2.1	3890			47	14	0	110				
AR08137	164.20	165.64	1.44	117	6770	17	1.9	2680			41	49	0	100				
AR08138	165.64	167.31	1.67	147	384	0	0.5	139			115	0	0	30				
AR08139	167.31	168.51	1.20	59	154	0	0.3	55			58	0	0	20				
AR08140	168.51	169.61	1.10	7	76	0	0.2	15			25	0	0	15				
AR08141	169.61	170.76	1.15	28	57	0	0.3	13			33	0	0	0				
AR08142	170.76	172.51	1.75	20	175	3	0.2	47			36	0	0	0				
AR08143	172.51	174.03	1.52	54	290	0	0.6	122			55	0	0	20				
AR08144	174.03	175.32	1.29	23	77	0	0.2	29			30	0	0	20				
AR08145	175.32	176.80	1.48	27	61	0	0.2	9			27	0	0	0				
AR08146	176.80	177.99	1.19	33	76	0	0.3	7			23	0	0	0				
AR08147	177.99	179.47	1.48	30	67	3	0.1	5			24	0	0	0				
AR08148	179.47	180.65	1.18	31	62	0	0.1	9			23	0	0	0				
AR08149	180.65	182.19	1.54	32	69	0	0.2	7			35	0	0	0				
AR08150	182.19	183.12	0.93	28	113	0	0.2	14			32	13	0	0				

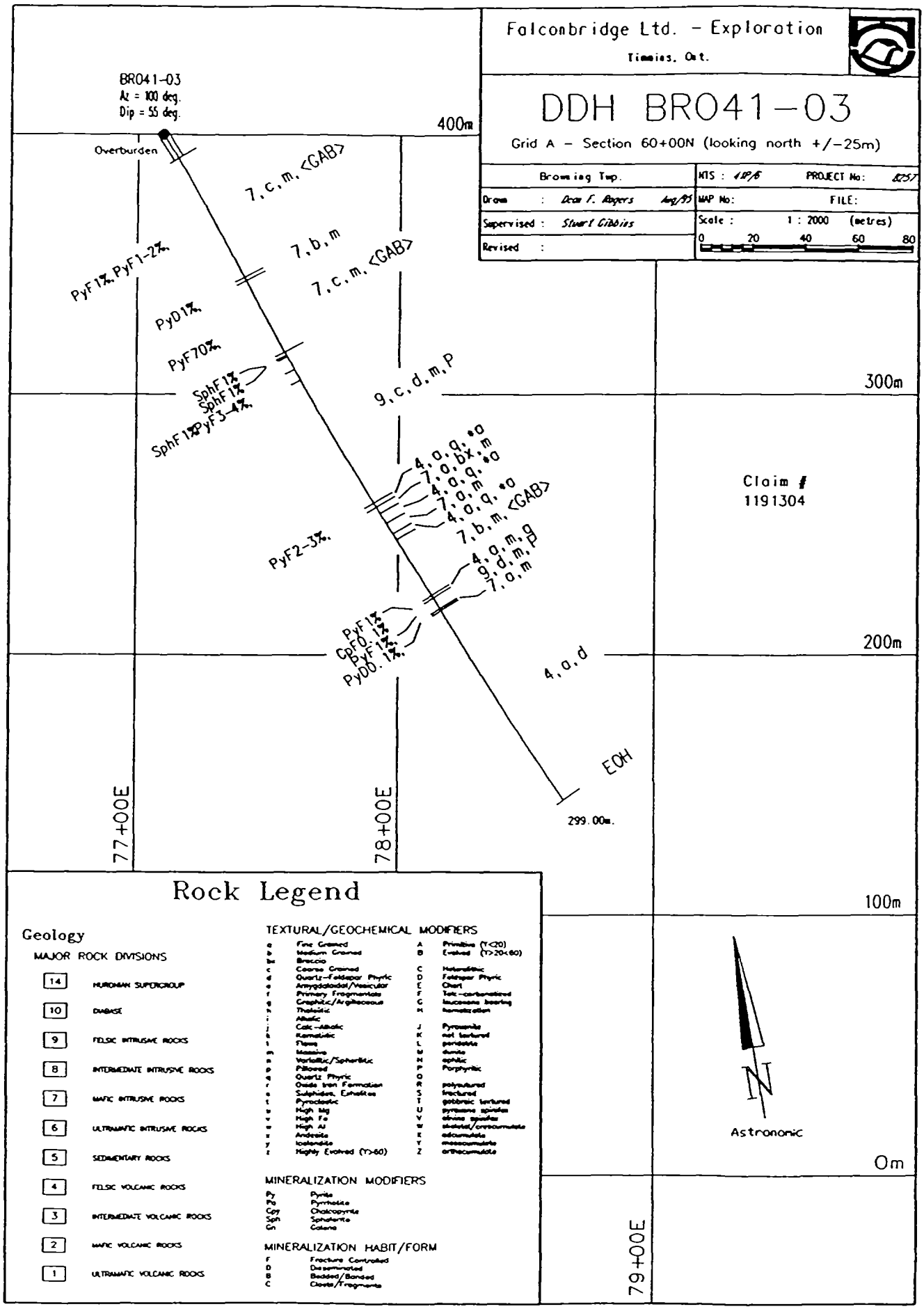
Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm			
AR08151	183.12	184.02	0.90	50	100	0	0.2	9			55	11	0	0

HOLE NUMBER : BRO41-02 GEOCHEMICAL ASSAY DATE: 08/11/1995

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07926	65.00	68.00	3.00	69.91	15.13	1.92	1.04	5.15	1.38	3.40	0.39	0.12	0.04	0.08	2.19	100.66	18	162					15	40	<5		9,d,m,P9jA	179
AR07927	95.55	98.55	3.00	66.65	15.21	2.32	1.96	1.57	3.08	3.52	0.36	0.10	0.11	0.06	3.26	98.14	12	114					20	35	10		4,a,q,D4jA	218
AR07928	107.00	110.00	3.00	68.12	13.77	1.98	1.84	2.93	2.08	3.50	0.37	0.10	0.07	0.06	3.07	97.72	12	132					5	20	20		9,d,P 9jA	200
AR07929	122.00	125.00	3.00	68.36	13.38	3.28	3.21	2.18	1.54	4.04	0.44	0.14	0.11	0.07	3.39	100.07	18	112					15	35	15		4,*b 4jA	191
AR07930	131.00	134.00	3.00	76.30	11.98	0.50	0.88	0.77	2.86	2.01	0.13	0.06	0.05	0.09	2.48	98.03	24	156					<5	15	5		4,q,*a 4jA	290
AR07931	135.20	136.10	0.90	50.76	12.03	3.93	5.53	0.26	0.58	19.99	0.41	0.10	1.05	0.04	5.48	100.12	22	144					<5	70	<5		5 5	252
AR07932	138.00	141.00	3.00	70.25	13.94	3.28	2.47	1.41	1.76	3.85	0.24	0.10	0.13	0.09	2.21	99.63	10	126					10	40	35		4,a,m,q4jA	216
AR07933	143.00	146.00	3.00	72.27	12.47	2.49	2.49	1.13	1.72	3.64	0.19	0.08	0.10	0.13	2.15	98.74	16	122					<5	55	<5		4,a,m 4jA	234
AR07934	155.00	158.00	3.00	67.18	14.57	2.19	2.43	1.55	1.94	3.48	0.29	0.10	0.05	0.07	3.75	97.56	6	96					30	25	25		4,a,m 4jA	255
AR07935	176.00	179.00	3.00	65.24	14.99	3.36	2.88	1.37	1.76	6.95	0.48	0.14	0.15	0.12	3.37	100.68	10	120					15	85	<5		4,q,*b 4jA$	231
AR07936	200.00	203.00	3.00	47.81	15.88	7.78	6.68	2.58	0.84	11.79	0.91	0.10	0.18	0.08	4.49	99.03	20	50					115	65	115		7,a,D 7hu	142
AR07937	212.00	215.00	3.00	47.61	14.85	9.86	7.95	2.46	0.22	14.46	0.89	0.10	0.21	0.06	2.19	100.79	20	40					110	80	110		7,a,m,D7hu	118
AR07938	248.00	251.00	3.00	49.18	15.23	9.58	5.59	0.74	1.82	12.62	0.89	0.08	0.20	0.09	4.98	100.93	18	50					120	105	115		7,a 7hu	125
AR07939	269.00	272.00	3.00	67.71	13.31	4.64	2.43	2.26	1.52	4.69	0.31	0.10	0.10	0.10	3.30	100.37	6	98					15	30	60		7,a 9jA	158
AR07940	290.00	293.00	3.00	49.26	13.87	8.80	6.06	3.37	0.18	14.32	1.11	0.10	0.38	0.05	2.69	100.74	26	40					160	455	85		7,a,m,G7hv	107

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07926	65.00	68.00	3.00		3	10		200		<5			<3																
AR07927	95.55	98.55	3.00			10		700																					
AR07928	107.00	110.00	3.00			<5		<100																					
AR07929	122.00	125.00	3.00			20		100																					
AR07930	131.00	134.00	3.00			<5		100																					
AR07931	135.20	136.10	0.90			<5		2400																					
AR07932	138.00	141.00	3.00			15		300																					
AR07933	143.00	146.00	3.00			<5		6400																					
AR07934	155.00	158.00	3.00			10		100																					
AR07935	176.00	179.00	3.00			15		19300																					
AR07936	200.00	203.00	3.00			40		200																					
AR07937	212.00	215.00	3.00			50		900																					
AR07938	248.00	251.00	3.00			50		300																					
AR07939	269.00	272.00	3.00			10		<100																					
AR07940	290.00	293.00	3.00			50		700																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM		MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR07926	65.00	68.00	3.00																					10	0.42	0.13	5	26	8
AR07927	95.55	98.55	3.00																						0.57	0.15	5	56	22
AR07928	107.00	110.00	3.00																						0.56	0.14	11	45	7
AR07929	122.00	125.00	3.00																						0.66	0.25	5	47	16
AR07930	131.00	134.00	3.00																						0.51	0.04	6	75	19
AR07931	135.20	136.10	0.90																						0.40	0.33	1	59	269
AR07932	138.00	141.00	3.00																						0.60	0.24	14	47	28
AR07933	143.00	146.00	3.00																						0.62	0.20	2	54	43
AR07934	155.00	158.00	3.00																						0.63	0.15	10	54	16
AR07935	176.00	179.00	3.00																						0.50	0.22	2	50	62
AR07936	200.00	203.00	3.00																						0.57	0.49	17	42	25
AR07937	212.00	215.00	3.00																						0.57	0.66	14	40	33
AR07938	248.00	251.00	3.00																						0.51	0.63	21	42	142
AR07939	269.00	272.00	3.00																						0.55	0.35	25	36	13
AR07940	290.00	293.00	3.00																						0.50	0.63	14	33	115



Rock Legend

Geology

MAJOR ROCK DIVISIONS

14	HURONIAN SUPERGROUP
10	DIABASE
9	FELSIC INTRUSIVE ROCKS
8	INTERMEDIATE INTRUSIVE ROCKS
7	MAFIC INTRUSIVE ROCKS
6	ULTRAMAFIC INTRUSIVE ROCKS
5	SEDIMENTARY ROCKS
4	FELSIC VOLCANIC ROCKS
3	INTERMEDIATE VOLCANIC ROCKS
2	MAFIC VOLCANIC ROCKS
1	ULTRAMAFIC VOLCANIC ROCKS

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained	A	Primitive (Y<20)
b	Medium Grained	B	Evolved (Y>20<60)
c	Breccia	C	Heterolithic
d	Coarse Grained	D	Feldspar Phyric
e	Quartz-Feldspar Phyric	E	Chert
f	Amygdaloidal/Vesicular	F	Talc-carbonatized
g	Primary Fragmentals	G	Siliceous bearing
h	Graphitic/Argillaceous	H	Hematization
i	Thalleiitic	I	
j	Alkalic	J	Pyroxenite
k	Calc-alkalic	K	not factored
l	Komatiitic	L	peridotite
m	Tholeiitic	M	dunite
n	Massive	N	aphitic
o	Variolitic/Spherulitic	O	Porphyritic
p	Pillowed	P	
q	Quartz Phyric	Q	polyaxtured
r	Oxide Iron Formation	R	fractured
s	Sulphides, Exhalites	S	gabbroic textured
t	Pyroclastic	T	pyroxene spinifex
u	High Mg	U	olivine spinifex
v	High Fe	V	skeletal/orthocumulate
w	High Al	W	adcumulate
x	Andesite	X	mesocumulate
y	Isotenite	Y	orthocumulate
z	Highly Evolved (Y>60)	Z	

MINERALIZATION MODIFIERS

py Pyrite
po Pyrrhotite
cp Chalcopyrite
sph Sphalerite
gn Galena

MINERALIZATION HABIT/FORM

f Fracture Controlled
d Disseminated
b Bedded/Banded
c Clasts/Fragments

HOLE NUMBER: BRO41-03

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191304
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5245960.00N
EAST: 486072.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 60+ 0N
EAST: 77+10E
ELEV: 400.00

COLLAR DIP: -55° 0' 0°
LENGTH OF THE HOLE: 299.00M
START DEPTH: 0.00M
FINAL DEPTH: 299.00M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0°

GRID ASTRONOMIC AZIMUTH: 10° 0' 0°

DATE STARTED: 08/13/1995
DATE COMPLETED: 08/16/1995
DATE LOGGED: 08/17/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: BW & NW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486068mE 5245961mN

COMMENTS : Follow-up to 41-02 intersection (DDH #4, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0°	-66° 0' 0°	A	DO		-	-	-	-	-	
120.00	100° 0' 0°	-59° 0' 0°	A	DO		-	-	-	-	-	
180.00	100° 0' 0°	-57° 0' 0°	A	DO		-	-	-	-	-	
240.00	100° 0' 0°	-58° 0' 0°	A	DO		-	-	-	-	-	
299.00	100° 0' 0°	-55° 0' 0°	A	DO		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 11.00	«{OB}» Casing Overburden					
11.00 TO 63.48	«?,c,m,«GAB »» Mafic Intrusive coarse grained massive gabbro	-coarse grained gabbroic texture -largely undeformed except in shear zones below ⟪11.00-12.70⟫«{FAI}» Fault -broken core, with poor recovery ⟪38.06-40.40⟫«{FAI}» Fault -fine grained shear zone with excellent sigmoidal fol'n patterns -fol'n varies from 34° to 59° to CA ⟪40.40-40.79⟫«{FAI}» Fault -broken core in brecciated qtz/carb vein ⟪40.79-42.37⟫«{FAI}» Fault -shear zone similar to that 38.06-40.40m ⟪59.60-60.38⟫«{FAI}» Fault -shear zone @5-45° to CA (sigmoidal)		11.00-63.48 «CbFW,SiFW,ChFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization -very minor K-spar alteration associated with some qtz/carb/chlorite veins 40.14-40.40 «SiFW,SeFW,ChFW» weak, pervasive, silicification; weak, pervasive, sericitization; moderate, fracture/vein controlled, chloritization -small altered interval within shear zone	11.00-63.48 «PyF1%,» 0.5% fracture/vein controlled pyrite -associated with carbonate veinlets 40.40-40.79 «PyF1-2%,» 1.0-2.0% fracture/vein controlled pyrite -within fault	⟪32.00-35.00⟫ «AR07941-WR»
63.48 TO 64.92	«?,b,m» Mafic Intrusive medium grained massive	-uphole contact sharp and irregular -mafic dyke -appears that dyke has cut gabbro (no chill on gabbro)		63.48-64.92 «CbFW,SiFW,K>SM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, spotty, potassic alteration -mottled/fracture controlled K-spar at base of unit	63.48-64.92 «PyD1%,» 0.5% disseminated/blebby pyrite	
64.92 TO 96.11	«?,c,m,«GAB »» Mafic Intrusive coarse grained massive gabbro	-uphole contact sharp and irregular -similar textures, alteration and mineralization to above gabbro but lacks shear zones -excellent downhole chill zone over ~3m			93.40-93.60 «PyF70%,» 70.0% fracture/vein controlled pyrite -2cm coarse Py vein @48° to CA	
96.11 TO 163.19	«9,c,d,m,F» Felsic Intrusive coarse grained	-uphole contact sharp but irregular with gabbro above -med. brown to buff -unit is strongly broken but this is likely mechanical breakage along chlorite fractures		-overall unit is rather fresh looking with weak pervasive silicification and weak fracture controlled chlorite -unit is cut by several diffuse buff/white zones with diffuse borders	-unaltered areas are unmineralized (PyF0.1-0.5%) -some alteration zones contain Sph as well as the orangey brown mineral seen in the silicification bx's in	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	quartz-feld spar Phyric massive porphyritic	-up to 25% euhedral to subrounded 1-7mm white feldspar phenocrysts outside of alteration zones -1% rounded qtz eyes from 2-3mm -matrix is fine-med. grained -within alteration zones feldspar phens. become hazy to nonexistant and qtz eyes become more prominant and have a bluish tint		as described below 96.11-163.19 «ChFW,SiPW,ChFW» weak, fracture/vein controlled, carbonatization; weak, pervasive, silicification; weak, fracture/vein controlled, chloritization {97.32-97.55}«SiPS,ChFS» strong, pervasive, silicification; strong, fracture/vein controlled, chloritization {97.74-98.18}«SiPS,ChFS» strong, pervasive, silicification; strong, fracture/vein controlled, chloritization {103.61-108.41}«SiPS,ChFS,SeFW» strong, pervasive, silicification; strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization -milky white, strong alteration zone	hole BRO41-02 (honey Sph?) -mineralization is confined to chloritic fractures and surrounding blue qtz eyes {97.32-97.55}«SphF1%» 1.0% fracture/vein controlled sphalerite {97.74-98.18}«SphF1%» 1.0% fracture/vein controlled sphalerite {103.61-108.41}«SphF1%» 1.0% fracture/vein controlled sphalerite	{100.00-103.00} «AR07942-WR»
	{108.75-109.25}«{S2 40°}» Foliation -0.5m shear zone? w/lack of feldspars, qtz eyes more visible			108.75-109.25 «SePM,ChFM» moderate, pervasive, sericitization; moderate, fracture/vein controlled, chloritization -within shear zone		{104.00-107.00} «AR07943-WR»
	{118.81-119.11}«{FAI}» Fault -broken, ground core			{116.76-117.82}«SiPM,ChFM» moderate, pervasive, silicification; moderate, fracture/vein controlled, chloritization		
	{123.14-124.85}«{FAI}» Fault -60cm bull qtz vein -wall rock on either sided is bleached, brecciated and fine grained (feldspar poor)			123.14-124.85 «ChFW,SiFS,SiFW» weak, fracture/vein controlled, chloritization; strong, fracture/vein controlled, silicification; weak, pervasive, silicification -associated with fault/qtz vein	123.14-124.85 «PyF1-4%,» 1.0-4.0% fracture/vein controlled pyrite -within qtz vein/fault	
	{128.97-129.41}«{FAI}» Fault -thin qtz/carb vein (1-5cm) similar to that above at ~5-10° to CA			144.00-151.00 «K>FW» weak, fracture/vein controlled, potassic alteration		{134.00-137.00} «AR07944-WR»
	138.37-138.65 «?,a,m»					

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Mafic Intrusive fine grained, massive		-very weak, associated with qtz/chlorite veinlets		
		138.91-139.71 «7,a,m» Mafic Intrusive fine grained, massive				
163.19 TO 165.03	«4,a,q,*a» Felsic Volcanic fine grained quartz phyric tuff	-uphole contact sharp but slightly wavy -greenish brown -moderately deformed -contains blocks? of above porphyry with very sharp angular to rounded edges at ~163.6m -porphyry may be in part extrusive? -<1% mm size equant qtz eyes		163.19-165.03 «CbFM,SiFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {{163.19-165.03}}«ChFS,SePM» strong, fracture/vein controlled, chloritization; moderate, pervasive, sericitization	163.19-165.03 «PyF2-3%,» 2.0-3.0% fracture/vein controlled pyrite -associated with carbonate and chloritic fractures	
165.03 TO 167.91	«7,a,bx,m» Mafic Intrusive fine grained breccia massive	-contacts almost parallel to CA -strongly brecciated veined -intact intervals appear greenish brown and massive		{{165.03-167.91}}«CbFS,CbPS,SiFM» strong, fracture/vein controlled, carbonatization; strong, pervasive, carbonatization; moderate, fracture/vein controlled, silicification {{165.03-167.91}}«ChFM» moderate, fracture/vein controlled, chloritization	{{165.03-167.91}}«PyF7-9%,PoF1-2%,CpF0.1% » 7.0-9.0% fracture/vein controlled pyrite; 1.0-2.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled chalcopyrite -Py concentrated near upper contact with Po and minor Cpy more towards base of unit	{{165.05-166.68}} «AR08152-MEX» {{166.68-167.89}} «AR08153-MEX»
167.91 TO 172.32	«4,a,q,*a» Felsic Volcanic fine grained quartz phyric tuff	-similar unit to felsic tuff above but strongly veined near upper contact with dyke				
172.32 TO 176.94	«7,a,m» Mafic Intrusive fine grained massive			-similar bx'n/veining near lower contact but unmineralized		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
176.94 TO 179.59	«4,a,q,*a» Felsic Volcanic fine grained quartz phyric tuff	-uphole contact at qtz/carb veining -some feldspar porphyritic intervals but otherwise similar to felsic tuffs above -possibly some vague outlines of lapilli {178.10-178.10}«{S2 35°}» Foliation		{176.94-179.59}«SePW,ChFW» weak, pervasive, sericitization; moderate, fracture/vein controlled, chloritization	Unmineralized	
179.59 TO 204.88	«7,b,m,«GAB »» Mafic Intrusive medium grained massive gabbro	-uphole contact sharp and irregular with excellent chill zones at top and bottom of unit		179.59-204.88 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	Unmineralized	
204.88 TO 206.13	«4,a,m,q» Felsic Volcanic fine grained massive quartz phyric	-uphole contact sharp and planar @26° to CA -greenish gray -very weakly feldspar-phyric -2-3% rounded to equant qtz eyes generally less than 2mm-very weak fabric -unit is considerably broken and blocky along chloritic fractures -as in rhyolitic unit uphole there are clasts/blocks of feldspar porphyry within the unit over the lowermost 10cm -clasts have sharp, rounded to cuspate borders and are either clasts of a porphyritic flow, injections of intrusive material or are tectonically emplaced		204.88-206.13 «CbFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {204.88-206.13}«ChFM,SiPW,SeFW» moderate, fracture/vein controlled, chloritization; weak, pervasive, silicification; weak, fracture/vein controlled, sericitization	{204.88-206.13}«PyF1%» 0.5% fracture/vein controlled pyrite {206.00-206.13}«CpF0.1%» 0.1% fracture/vein controlled chalcopyrite -spatially associated with porphyry clasts? at bottom of unit	{204.88-206.00} «AR07945-WR»
206.13 TO 210.95	«9,d,m,P» Felsic Intrusive quartz-feldspar Phyric massive porphyritic	-uphole contact is sharp but blocks of the unit occur in the overlying rhyolite? -up to 15% feldspar and 2% qtz phens -feldspars are from 1-5mm and are clotty to euhedral in form -qtz phens are 1-2mm in size and rounded to ovoid -med.brown to greenish gray -appears undeformed apart from slightly elongate qtz phens		206.13-210.95 «CbFW,SiFW,SeFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, sericitization	206.13-210.95 «PyF1%,» 1.0% fracture/vein controlled pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
210.95 TO 211.87	«7,a,m» Mafic Intrusive fine grained massive	-contacts sharp and planar -mafic dyke cutting porphyry -dark green			210.95-211.87 «PyD0.1%,» 0.1% disseminated/blebby pyrite	
211.87 TO 299.00	«4,a,d» Felsic Volcanic fine grained quartz-feldspar Phyric	-uphole contact sharp but irregular with dyke, rafting of the rhyolite at the contact has occurred -dark gray to black -weakly to moderately sheared @~40° to CA -granular texture but appears massive on fresh, broken surface -some minor intervals appear to contain <1cm clasts/fragments (ie. 218.76) but this is likely due to shearing along chloritic slip planes, they are seen in only more strongly altered sections and are frequently associated with chlorite spotting (spherulites/variolites?) -from 211.87 to 237.29m hazy feldspar phens are irregularly distributed and have diffuse, hazy outlines, locally up to 7-9% -strongly altered zones are feldspar free -blue tinted qtz eyes are evenly distibuted (1-2%) and are <1mm in size with subhedral to equant form -from 237.29-299.00 feldspar phens become more distinct and uniformly distributed except in sericite alteration bands where they are absent, qtz eyes in this interval are less abundant (<1%) and have a bluish tint -strong fabric development in lower portion of hole defined by stretched feldspar phenocrysts @33° to CA		-unit is pervasively chlorite altered in upper portion with banded zones of pervasive sericite alteration in the lower portion -outside of the zones outlined below, areas of similar alteration occur but they are sporadic and ill-defined -feldspar phenocrysts appear fresh in unaltered zones but become diffuse to absent in more strongly altered areas 211.87-299.00 «CbFM,SiFM» weak, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification	{{211.87-299.00}}«PyF0.1%,PoF0.1%,CpD0.1% 0.1% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite; 0.1% disseminated/blebby chalcopyrite -very trace Cpy specks associated with Po veinlets (ie. 3222.7m)	
		221.92-222.24 «7,a,m» Mafic Intrusive fine grained, massive 223.69-224.33 «7,a,m» Mafic Intrusive fine grained, massive 230.51-232.65 «7,a,m» Mafic Intrusive		{{211.87-237.29}}«ChFM,SeFM,ChSM» moderate, pervasive, chloritization; weak, pervasive, sericitization; weak, spotty, chloritization -pervasive Ch throughout entire unit, Se occurs in distinct bands intermitantly, usually associated with chloritic spotting (spherulites?)		{{215.00-218.00}} «AR07946-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		fine grained, massive		([211.87-237.29])«ChFM,SeFM» moderate, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization -in intervals of pervasive sericite alteration ·above alteration zones end roughly when feldspar phens become more prominant		
		248.35-248.58 «?,a,m» Mafic Intrusive fine grained, massive		([254.72-299.00])«SeFM,ChFM» moderate, pervasive, sericitization; weak, fracture/vein controlled, chloritization		([248.00-251.00]) «AR07947-WR»
		256.85-257.24 «?,a,m» Mafic Intrusive fine grained, massive		·alteration occurs in poorly defined bands and patches which are light greenish brown		([269.00-272.00]) «AR07948-WR»
		261.11-261.89 «?,a,m» Mafic Intrusive fine grained, massive		·feldspars are hazy to absent in areas of stronger alteration ·sericitization appears to be becoming more abundant towards the lowermost portion of the hole		
		265.00-266.31 «?,a,m» Mafic Intrusive fine grained, massive		([256.00-266.31])«CbPS» strong, pervasive, carbonatization ·within mafic dyke		([296.00-299.00]) «AR07949-WR»
299.00 TO 299.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08152	165.05	166.68	1.63	442	63	579	2.8	3			56
AR08153	166.68	167.89	1.21	29	51	10	0.3	3			27

HOLE NUMBER : BRO41-03

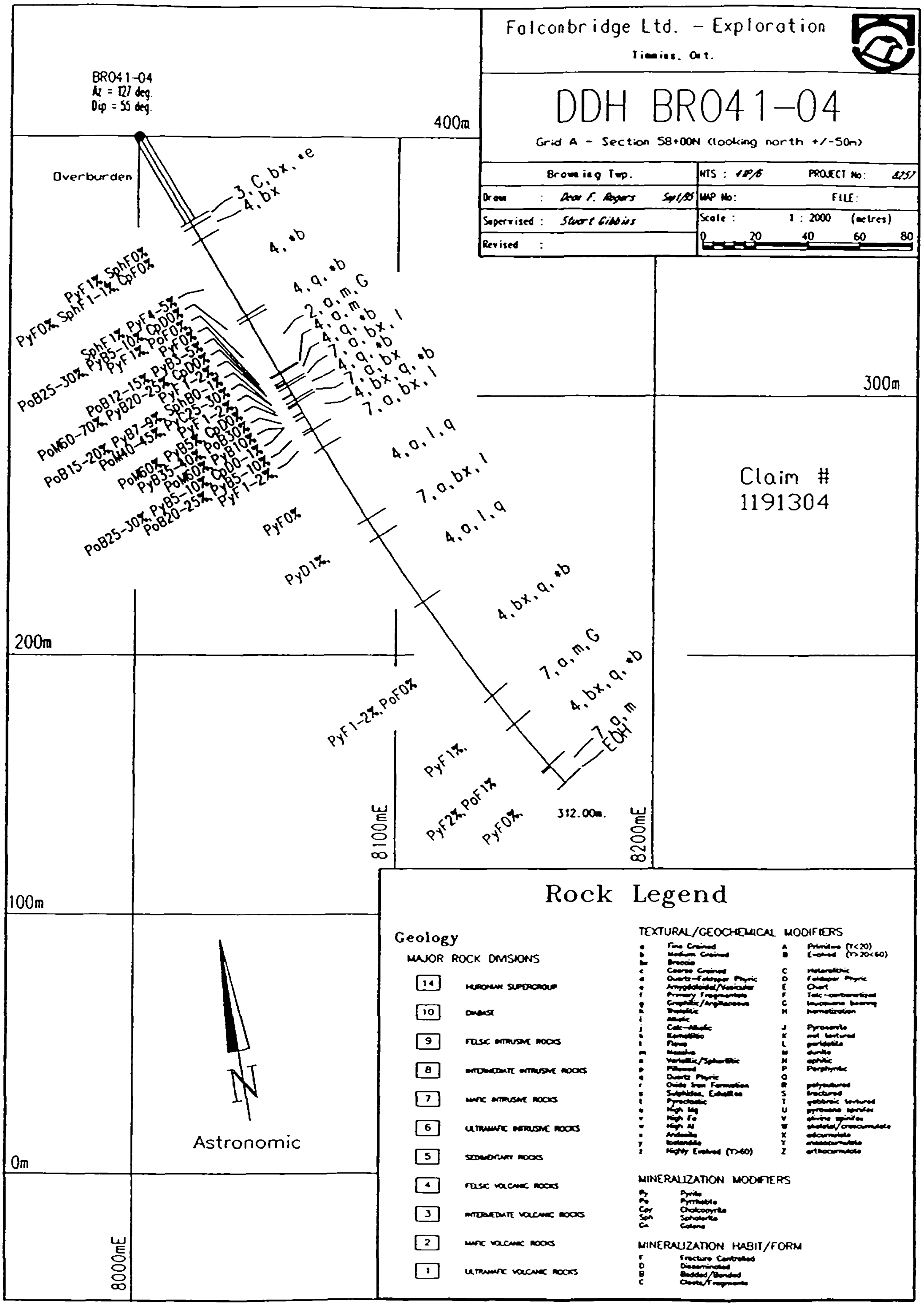
GEOCHEMICAL ASSAY

DATE: 08/11/1995

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07941	32.00	35.00	3.00	45.17	12.40	11.71	14.80	1.22	0.46	9.99	0.32	0.04	0.17	0.14	3.71	99.99	<2	10					80	65	340		7,c,m,<6H	93
AR07942	100.00	103.00	3.00	68.19	15.24	3.47	2.38	5.91	0.66	2.62	0.37	0.04	0.05	0.11	1.95	100.89	10	114					20	30	25		9,d 9jA	152
AR07943	104.00	107.00	3.00	68.85	16.04	1.66	0.73	7.31	0.90	1.03	0.28	0.04	0.02	0.09	1.53	98.39	2	108					15	5	10		9,d 9jA	161
AR07944	134.00	137.00	3.00	68.30	15.37	2.16	1.92	7.54	0.20	2.50	0.37	0.16	0.05	0.08	0.27	98.84	10	114					35	15	25		9,d 9jA	155
AR07945	204.88	206.00	1.12	71.89	12.43	2.58	1.62	3.97	1.22	3.46	0.18	0.06	0.05	0.09	2.24	99.70	16	108					315	30	35		4,a,m,q4jA	160
AR07946	215.00	218.00	3.00	66.35	15.30	2.54	2.29	1.15	3.16	4.62	0.36	0.10	0.08	0.06	2.12	98.07	8	118					105	35	<5		4,a,d 4jA	223
AR07947	248.00	251.00	3.00	66.45	15.29	2.92	3.01	4.22	1.54	3.89	0.39	0.10	0.09	0.09	1.19	99.11	14	104					20	35	15		4,a,d 4jA	176
AR07948	269.00	272.00	3.00	67.51	15.65	5.04	2.46	1.91	1.68	3.54	0.37	0.12	0.06	0.12	2.46	100.78	8	122					15	45	10		4,a,d 4jA	181
AR07949	296.00	299.00	3.00	68.23	14.58	4.41	2.18	1.92	2.30	3.11	0.37	0.10	0.06	0.09	3.31	100.56	10	98					15	45	50		4,a,d 4jA	169

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07941	32.00	35.00	3.00			55		<100																					
AR07942	100.00	103.00	3.00			10		100																					
AR07943	104.00	107.00	3.00			<5		<100																					
AR07944	134.00	137.00	3.00			10		100																					
AR07945	204.88	206.00	1.12			10		100																					
AR07946	215.00	218.00	3.00			10		<100																					
AR07947	248.00	251.00	3.00			15		<100																					
AR07948	269.00	272.00	3.00			10		<100																					
AR07949	296.00	299.00	3.00			10		100																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR07941	32.00	35.00	3.00																					0.78	0.94	23	54	53
AR07942	100.00	103.00	3.00																					0.69	0.23	11	24	5
AR07943	104.00	107.00	3.00																					0.63	0.10	14	15	1
AR07944	134.00	137.00	3.00																					0.65	0.14	13	18	2
AR07945	204.88	206.00	1.12																					0.53	0.21	22	30	8
AR07946	215.00	218.00	3.00																					0.54	0.17	2	40	30
AR07947	248.00	251.00	3.00																					0.65	0.19	5	39	8
AR07948	269.00	272.00	3.00																					0.62	0.32	4	37	24
AR07949	296.00	299.00	3.00																					0.63	0.30	23	41	21



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR041-04
Grid A - Section 58+00N (looking north +/-50m)
Browning Twp.
NTS : 42P/6
PROJECT No:
Drawn : Dean F. Rogers
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
0 20 40 60 80
Revised :
BR041-04
Az = 127 deg.
Dip = 55 deg.
Overburden
400m
300m
200m
100m
0m
8000mE
8100mE
8200mE
Claim # 1191304
312.00m.
EOH
Astronomic
N
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cpy Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

HOLE NUMBER: BR041-04

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191304
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5245752.00N
EAST: 486330.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 58+40N
EAST: 80+ 0E
ELEV: 400.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 312.00M
START DEPTH: 0.00M
FINAL DEPTH: 312.00M

COLLAR ASTRONOMIC AZIMUTH: 127° 0' 0"
GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 08/17/1995
DATE COMPLETED: 09/01/1995
DATE LOGGED: 09/02/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NQ & BQ left in hole
CORE STORAGE: Timmins
UTM COORD.: 485327mE 5245752mN

COMMENTS : Short conductor east of intersection (DDH #5,1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	127° 0' 0"	-55° 0' 0"	A	DO		.	-	-	.	.	
120.00	127° 0' 0"	-57° 0' 0"	A	DO	very poor etch	.	-	-	.	.	
180.00	127° 0' 0"	-56° 0' 0"	A	DO		.	-	-	.	.	
240.00	127° 0' 0"	-49° 0' 0"	A	DO		.	-	-	.	.	
293.00	127° 0' 0"	-45° 0' 0"	A	DO		.	-	-	.	.	

Dean Rogers

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 40.00	«{OB}» Casing Overburden					
40.00 TO 42.18	«3,C,bx,*e» Heterolithic Volcanic breccia autoclastic /hyaloclastite	-med. green to buff -appears felsic but lack of qtz eyes and textures suggests a mafic composition -unit consists of crackly textured hyaloclastite? with <1cm angular to cuspate fragments -textures largely affected by later alteration -flow-banding in some larger fragments -appears to be soft sediment infilling of some fractures (ie. @40.52m) -no qtz-eyes but unit appears fairly siliceous		-alteration is predominantly fracture controlled but chlorite sometimes occurs as distinct angular patches and some clasts are pervasively altered {40.00-42.18}«CbFM ,ChFM,SeFW» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization {40.00-42.18}«SePW» weak, pervasive, sericitization	{40.00-42.18}«PyF1%,SphF0.1%» 0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled sphalerite	{40.00-42.00} «AR07950-WR»
42.18 TO 48.45	«4,bx» Felsic Volcanic breccia	-upper contact somewhat arbitrary but marked by 1cm wide sedimentary? band @25° to CA -unit appears to be more of an alteration breccia than a primary one -minor hyaloclastitic intervals -clasts are irregular,subrounded and defined by fracture controlled alteration -clasts vary in size from <1 to 5cm -no qtz eyes 43.06-43.79 «4,D» Felsic Volcanic feldspar phyric -7-9% euhedral, green feldspar phenocrysts		{42.18-48.45}«CbFS ,ChFS,SeFW» strong, fracture/vein controlled, carbonatization; strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization -altertion defining brecciated texture {42.18-48.45}«SePM» moderate, pervasive, sericitization -within individual fragments	{42.18-48.45}«PyF0.1%,SphF0.5-1%,CpF0 0.1%» fracture/vein controlled pyrite; 0.5-1.0% fracture/vein controlled sphalerite; 0.1% fracture/vein controlled chalcopyrite -base metals associated with carb/chlorite veining	{44.00-47.00} «AR07951-WR» {44.20-45.20} «AR08154-MEX» {45.20-46.20} «AR08155-MEX» {46.20-47.70} «AR08156-MEX»
48.45 TO 83.77	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact gradational with above unit -greenish brown -moderately to strongly sheared -some well defined lapilli but most are small rounded clasts defined by shearing and chloritic veinlets -minor intervals throughout unit appear similar to alteration bx's above -from ~75-76m unit is speckled with 1-2% 1mm sized pinkish garnet? clots		-chlorite veining occurs throughout unit as does pervasive sericite alteration within clasts -alteration bx's similar to above unit occur sporadically where fracture controlled Ch,Cb and Se alteration are strong (ie.@55.61-56.05) 48.45-83.77 «CbFW,SiFW» weak, fracture/vein controlled,	-mineralization occurs both within late qtz/carb veins as well as in fol'n parallel bands and in alteration bx zones -both Py and Sph appear recrystallized {48.45-83.77}«SphF1%,PyF4-5%» 1.0% fracture/vein controlled sphalerite; 4.0-5.0% fracture/vein	{55.60-57.10} «AR08157-MEX» {57.10-58.60} «AR08158-MEX» {58.60-60.10} «AR08159-MEX» {60.10-61.60} «AR08160-MEX» {62.00-65.00} «AR07952-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-lower 1m is strongly chlorite altered and cut by a thin mafic dyke -flow banding visible in some less disrupted portions {51.91-51.99}«S,a,<ARG>» Sedimentary fine grained, mudstone-argillite, -limey green sediment with 1-3mm angular clasts -lower contact sharp and planar at fault -upper contact sharp but irregular {51.99-52.00}«{FAI}» Fault -ground,pastey core {65.80-65.80}«{S2 63°}» Foliation		carbonatization; weak, fracture/vein controlled, silicification {48.45-83.77}«ChFS ,SeFM,SePW» strong, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization; weak, pervasive, sericitization	controlled pyrite	{74.00-77.00} «AR07953-WR»
83.77 TO 85.55	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact sharp and marked by appearance of qtz eyes and massive sulphides -strong mineralization obscurring primary textures -qtz eyes (1%) are small (<1mm to 2mm) and have bluish tint -some 2-3mm clasts of massive rhyolite visible but unit is mainly granular textured -some intervals appear very similar to above unit		{83.77-85.55}«ChFS ,CbFM» strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization -material interstitial to sulphides is strongly chloritic with calcite veinlets rimming some sulphide clots	-overall unit consists of 30-40% Fe-sulphides but contains massive (>70%) sulphides over short 5-10cm intervals (ie. 83.77-83.88m, 84.97-85.06m) -Po is generally fine grained and surrounds coarse grained, recrystallized Py cubes/clots -Cp occurs as minor blebs replacing? Po -where visible, sulphides surround small rhyolite lapilli {83.77-85.55} «PoB25-30%,PyB5-10%,CpD0.1«25.0-30.0% bedded/banded pyrrhotite; 5.0-10.0% bedded/banded pyrite; 0.1% disseminated/blebby chalcopyrite	{83.77-84.57} «AR08161-MEX» {84.57-85.55} «AR08181-MEX»
85.55 TO 110.01	«2,a,m,G» Mafic Volcanic fine grained massive leucoxene bearing	-uphole contact sharp and planar @~55° to CA -dark green -unit is very massive but varies considerably and frequently in grain size from fine to medium -contact between intervals of different grain size are sharp to gradational -unit contains some angular mafic clasts -leucoxenes scattered throughout unit -no primary flow features but some intervals appear banded similar to that seen in previous		-lower portion of unit has a faint brecciated texture due to carb veining/bleaching? -some qtz/carb vein show wide (2-3cm) alteration haloes {85.55-110.01}«ChFM ,CbFM,SiFW» moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization; weak,	85.55-110.01 «PyF1%,PoF0.1%,» 1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite -generally associated with qtz/carb veining	{89.00-92.00} «AR07954-WR» {101.00-104.00} «AR07955-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		holes -possibly a series of nested dykes?		fracture/vein controlled, silicification		
		⟪99.20-99.71⟫«{FAI}» Fault -broken, blocky core				
		⟪99.71-104.55⟫«7,b,D,P» Mafic Intrusive medium grained, feldspar phyric, porphyritic, -upper contact faulted, lower contact sharp 330° to CA -2-3% euhedral to clotty feldspar phenocrysts sometimes coalesced into large glommerocrysts 2-3cm in diameter				
110.01 TO 110.67	«4,a,m» Felsic Volcanic fine grained massive	-uphole contact irregular -pale greenish gray -brecciated texture due to fracture controled alteration -vitric/silicified flow -very weakly qtz-phyric		⟪110.01-110.67⟫«ChFM ,SeFM,SiPW» moderate, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization; weak, pervasive, silicification	⟪110.01-110.67⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite	⟪110.01-110.67⟫ «AR08162-MEX»
110.67 TO 115.30	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact sharp but irregular -dark green to black -1-2% qtz eyes 1-2mm in diamter -massive to flow banded lapilli in a granular chloritic and sulphidic matrix -moderately fol'd -most clast outlines are vague but some show excellent angular to subrounded shapes (1-2cm)		⟪110.67-115.30⟫«ChFS ,CbFW» strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization -strongly chloritized matrix material -carbonate associated with strongly mineralized intervals	⟪110.67-115.30⟫«PoM12-15%,PyM3-5%» 12.0-15.0% bedded/banded pyrrhotite; 3.0-5.0% bedded/banded pyrite -overall the unit contains ~15% Fe-sulphides (outside of massive interval) which occur within the matrix surrounding qtz eyes and lapilli	⟪110.67-112.12⟫ «AR08161-MEX» ⟪112.12-113.64⟫ «AR08164-MEX» ⟪113.64-115.30⟫ «AR08165-MEX»
		⟪115.00-115.00⟫«{S2 25°}» Foliation			⟪113.75-114.69⟫«PoM60-70%,PyM20-25%,CpD 0.1%» 60.0-70.0% massive pyrrhotite; 20.0-25.0% bedded/banded pyrite; 0.1% disseminated/blebby chalcopyrite -massive Fe-sulphide interval consisting of fine-med grained Po with bands of coarse Py cubes/clots -very minor Cpy bleb within Po	
115.30 TO 117.44	«7,a,bx,l» Mafic Intrusive fine	-uphole contact gradational with blocks of rhyolite within mafic material -dark green with lighter white to brown banding -very mottled unit probably due to incorporation		115.30-116.44 «CbFM,ChPW» moderate, fracture/vein controlled, carbonatization; weak, pervasive, chloritization	115.30-116.44 «PyF1-2%,» 1.0-2.0% fracture/vein controlled pyrite -associated with carb veining and	⟪116.20-116.20⟫ «AR08166-MEX» ⟪116.20-117.44⟫ «AR08167-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	grained breccia flows (banded)	of felsic material (ie. some banding may be blocks of ryholite)			spatially associated with mottled textured intervals (incorporation of sulphidic rhyolite?)	
117.44 TO 122.46	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact sharp but irregular -dark green to gray -weakly fol'd -brecciated texture may be due to strong chlorite alteration but some clasts of more massive rhyolite do appear to be primary -qtz eyes (1%) are found in chloritic matrix of the unit -minor irregular patches of mafic looking material {119.53-119.53}«FAI» Fault -ground fault gouge		{116.44-122.46}«ChFS ,SePM,CbFM» strong, fracture/vein controlled, chloritization; weak, pervasive, sericitization; weak, fracture/vein controlled, carbonatization -strong chlorite alteration in matrix with minor pervasive sericite within some massive clasts	{116.44-122.46}«PoB15-20%,PyB7-9%,SphB0 .1-0.5%» 15.0-20.0% bedded/banded pyrrhotite; 7.0-9.0% bedded/banded pyrite; 0.1-0.5%bedded/banded sphalerite -overall slightly higher % of sulphides than above lapilli-tuff but very similar looking textures -fine grained Po with coarser Py clots within matrix of unit -Py more abundant than Po at base of unit with slightly higher % of sulphides than upper portions -some Py veinlets occur which cross-cut earlier sulphides and fol'n (remobilized?) {119.90-120.09}«PoM40-45%,PyB25-30%» 40.0-45.0% massive pyrrhotite; 25.0-30.0% clasts/fragment of pyrite -massive interval similar to above MASS -gangue constists of qtz-eyes/clasts -semi-massive sulphide zones (40-50%) extend 10-15cm both above and below interval	{117.44-119.00} «AR08168-MEX» {119.00-120.50} «AR08169-MEX» {120.50-122.46} «AR08170-MEX»
122.46 TO 123.63	«7,a,bx» Mafic Intrusive fine grained breccia	-similar to above banded dyke with mottled texture giving a brecciated appearance -dark green outside of alteration -contacts sheared and strongly altered		{122.46-123.63}«CbFM ,CbPM» moderate, fracture/vein controlled, carbonatization; moderate, pervasive, carbonatization -carbonate altered dyke	122.46-123.63 «PyF1-2%,» 1.0-2.0% fracture/vein controlled pyrite -concentrated at upper and lower contacts	{122.46-123.63} «AR08171-MEX»
123.63 TO 136.50	«4,bx,q,*b» Felsic Volcanic breccia quartz phyric lapilli tuff	-dark green to gray -complex unit consisting predominantly of felsic lapilli tuffs similar to those uphole, but also massive rhyolite and banded mafic-looking material -qtz phenocrysts differentiate lapilli tuff units but these are very irregular with ill-defined contacts		{123.63-136.50}«ChFS ,ChPM,CbFM» strong, fracture/vein controlled, chloritization; weak, pervasive, chloritization; weak, fracture/vein controlled, carbonatization -dominantly chlorite alteration within matrix of lapilli tuff intervals	{123.63-136.50}«PoB25-30%,PyB5-10%,CpD0 .1-0.5%» 25.0-30.0% bedded/banded pyrrhotite; 5.0-10.0% bedded/banded pyrite, 0.1-0.5% disseminated/blebby chalcopyrite -overall Po occurs as fine grained clots/bands within matrix of felsic	{123.63-124.86} «AR08172-MEX» {124.86-126.50} «AR08173-MEX» {126.50-128.40} «AR08174-MEX» {128.40-129.95} «AR08175-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-strongly sheared and brecciated locally with mottled to banded textures -pinkinsh garnets? scattered throughout unit but mostly within mafic material -strongly mineralized			lapilli-tuffs? -Py as bands of coarse, recrystallized clots/cubes	((129.95-131.34)) «AR08176-MEX» ((131.34-132.70)) «AR08177-MEX» ((132.70-134.50)) «AR08178-MEX»
		124.80-127.01 «4,a,m,q» Felsic Volcanic fine grained, massive, quartz phyric,			((124.24-124.48))«PoM60%,PyB5%,CpD0.1%» 60.0% massive pyrrhotite; 5.0% bedded/banded pyrite; 0.1% disseminated/blebby chalcopyrite	((133.50-136.50)) «AR07956-WR» ((134.50-135.50)) «AR08179-MEX»
		128.39-129.95 «7,a,l,m» Mafic Intrusive fine grained, flows (banded), massive,			((128.07-128.39))«PyB35-40%,PoB30%» 35.0-40.0% bedded/banded pyrite; 30.0% bedded/banded pyrrhotite ((129.95-130.15))«PoM60%,PyB10%» 60.0% massive pyrrhotite; 10.0% bedded/banded pyrite -above two MASS intervals cut by mafic dyke ((135.30-136.37))«PoB20-25%,PyB5-10%» 20.0-25.0% bedded/banded pyrrhotite; 5.0-10.0% bedded/banded pyrite -semi-massive interval	((135.50-136.50)) «AR08180-MEX»
136.50 TO 144.74	«7,a,bx,l» Mafic Intrusive fine grained breccia flows (banded)	-similar to above banded dykes with minor felsic patches/xenoliths -strong mottled texture with disjointed clasts showing various orientations of banding -alteration breccia? or primary flow-top breccia?		136.50-144.74 «ChFW,SiFW,ChPW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, chloritization	136.50-144.74 «PyF1-2%,» 1.0-2.0% fracture/vein controlled pyrite	((142.00-145.00)) «AR07957-WR»
144.74 TO 178.17	«4,a,l,q» Felsic Volcanic fine grained flows (banded) quartz phyric	-upper 1-2m fine grained and lacking qtz phenocrysts -brownish green to buff -3-7% large 3-5mm rounded qtz phenocrysts -granular textures in some areas may be tuffaceous portions -banded texture is likely primary flow banding modfied by fol'n which is mod. to strong -some very minor intervals of mafic looking breccia -minor autobrecciation indicated by disjointed blocks		((144.74-178.17))«SePM ,SiPH,ChFW» moderate, pervasive, sericitization; moderate, pervasive, silicification; weak, fracture/vein controlled, chloritization -alteration is strong locally over diffuse patches -strongly silicified zones are bleached white	((144.74-178.17))«PyF0.1%» -.1% fracture/vein controlled pyrite -very weakly mineralized	((149.00-152.00)) «AR07958-WR» ((170.00-173.00)) «AR07959-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⟪158.80-158.80⟫«{S2 37°}» Foliation				
		⟪174.56-175.20⟫«{FAI}» Fault -broken, talcose core				
178.17 TO 186.39	«7,a,bx,l» Mafic Intrusive fine grained breccia flows (banded)	-similar to above brecciated mafics -1-2% pink garnet clots? -weakly feldspar phyric -banded texture outside of brecciated zones -minor patches/blocks of rhyolitic material -strongly broken core, probably a fault zone		178.17-186.39 «CbFM,SiFM,SePM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, sericitization -sericitized within rhyolitic areas	178.17-186.39 «PyD1%,» 1.0% disseminated/blebby pyrite	⟪182.00-185.00⟫ «AR07960-WR»
186.39 TO 218.05	«4,a,l,q» Felsic Volcanic fine grained flows (banded) quartz phyric	-similar to above rhyolite with 3-7mm qtz mega-crysts -well-banded highlighted by fol'n -weakly fragmental texture defined by chloritic bands ⟪206.00-206.00⟫«{S2 34°}» Foliation		⟪186.39-218.05⟫«SePM ,SeFM,ChFM» moderate, pervasive, sericitization; moderate, fracture/vein controlled, sericitization; moderate, fracture/vein controlled, chloritization -pale green euhedral x-stals are likely sericitized feldspars (epidote?)	-unmineralized, tr. fracture controlled Py	⟪188.00-191.00⟫ «AR07961-WR» ⟪212.00-215.00⟫ «AR07962-WR»
218.05 TO 265.46	«4,bx,q,*b» Felsic Volcanic breccia quartz phyric lapilli tuff	-unit consists of lapilli tuffs similar to those in the mineralized intervals above -purplish brown in colour -3% 1-3mm rounded to subhedral qtz phenocrysts -strong granular texture -some larger blocks appear disjointed/brecciated -unit is cut by several mafic dykes/intervals listed below -mafics typically have banded (flow?) margins with more massive, fine to med. fine grained interiors and are weakly feldspar-phyric 124.40-124.76 «7,a,l,m» Mafic Intrusive fine grained, flows (banded), massive, 232.57-234.09 «7,a,l,m» Mafic Intrusive fine grained, flows (banded), massive,		-alteration below for felsic portions only -mafic intervals are qtz/carb veined and possibly weakly chloritized ⟪218.05-265.46⟫«ChFM ,SeFM,SiFM» weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization; weak, pervasive, silicification -alteration is generally weak except for some strongly bleached (silicified) patches -dark colour may indicate pervasive chloritization 218.05-265.46 «CbFM,SiFM,HeFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak,	⟪218.05-265.46⟫«PyF1-2%,PoF0.1%» 1.0-2.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite -weakly mineralized compare to above lapilli-tuffs	⟪227.00-230.00⟫ «AR07963-WR» ⟪257.00-260.00⟫ «AR07964-WR»

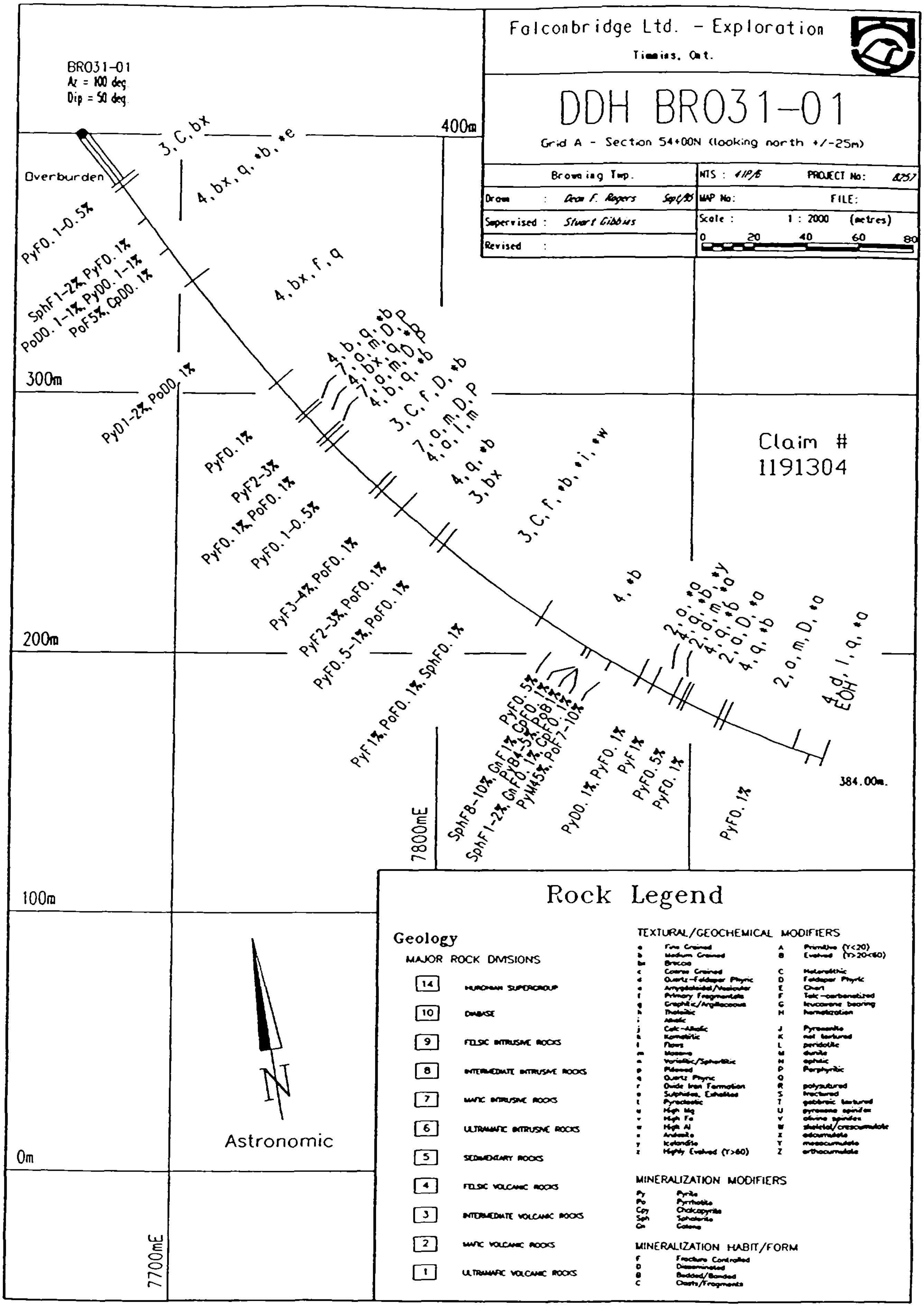
FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				pervasive, hematization		
		234.27-235.14 «7,a,m»		-pupliah colour due to hematization?		
		Mafic Intrusive				
		fine grained, massive,				
		⟪244.00-244.37⟫«FAI» Fault				
		-broken, blocky core				
265.46	«7,a,m,G»	-upper contact sharp but irregular and blocky		265.46-280.14 «CbFW,SiFW,HeFW»	265.46-280.14 «PyF0.5%,»	⟪275.00-278.00⟫ «AR07965-HR»
TO	Mafic	-block of rhyolite lapilli tuff @266m		weak, fracture/vein controlled,	0.5% fracture/vein controlled pyrite	
280.14	Intrusive	-fine to med. fine grained		carbonatization; weak, fracture/vein		
	fine	-dark gray to green		controlled, silicification; weak,		
	grained	-weakly banded/fol'd		fracture/vein controlled, hematization		
	massive	-speckled with minute leucoxenes				
	leucoxene	-weakly feldspar-phyric				
	bearing					
280.14	«4,bx,q,*b»	-remainder of hole consists of alternating felsic		⟪280.14-302.34⟫«ChFW ,SiFW»	⟪280.14-302.14⟫«PyF2%,PoF1%»	
TO	Felsic	lapilli tuffs similar to those uphole cut by		weak, fracture/vein controlled,	2.0% fracture/vein controlled pyrite;	
302.34	Volcanic	several mafic dykes/intervals listed below		chloritization; weak, pervasive,	1.0% fracture/vein controlled	
	breccia	-mafic typically have flow-banded/fol'd borders,		silicification	pyrrhotite	
	quartz	are fine to med. fine grained and are weakly		-similar alteration to above tuffs		
	phyric	feldspar-phyric		except in dykes which are weakly		
	lapilli			qtz/carb veined		
	tuff	285.46-288.10 «7,a,m»				
		Mafic Intrusive				
		fine grained, massive,				
		294.24-301.35 «7,a,m»				
		Mafic Intrusive				
		fine grained, massive,				
302.34	«7,a,m»	-massive mafic similar to above		302.34-312.00 «CbFW,SiFW,HeFW»	302.34-312.00 «PyF0.1%,»	
TO	Mafic	-strongly banded at upper contact with weak bx'n		weak, fracture/vein controlled,	0.1% fracture/vein controlled pyrite	
312.00	Intrusive			carbonatization; weak, fracture/vein		
	fine			controlled, silicification; weak,		
	grained			fracture/vein controlled, hematization		
	massive					
312.00	«EOH»					
TO	End-Of-Hole					
312.00						

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08154	44.20	45.20	1.00	26	486	0	0.3	210			21
AR08155	45.20	46.20	1.00	11	29	0	0.3	2			19
AR08156	46.20	47.70	1.50	12	164	17	0.1	41			17
AR08157	55.60	57.10	1.50	21	407	0	0.2	80			15
AR08158	57.10	58.60	1.50	38	924	0	0.4	221			23
AR08159	58.60	60.10	1.50	34	830	0	0.6	382			26
AR08160	60.10	61.60	1.50	40	546	0	0.6	210			36
AR08161	83.77	84.57	0.80	701	44	17	0.7	1			38
AR08181	84.57	85.57	1.00	427	47	21	0.5	1			43
AR08162	110.01	110.67	0.66	8	126	0	0.3	75			6
AR08163	110.67	112.12	1.45	70	108	24	2.2	28			44
AR08164	112.12	113.64	1.52	48	50	21	1.7	3			32
AR08165	113.64	115.27	1.63	142	25	27	2.5	1			70
AR08166	115.27	116.20	0.93	22	36	0	1.3	5			18
AR08167	116.20	117.44	1.24	11	55	0	0.8	14			10
AR08168	117.44	119.00	1.56	109	39	24	1.8	1			28
AR08169	119.00	120.50	1.50	120	367	41	2.6	68			30
AR08170	120.50	122.42	1.92	56	66	14	1.2	15			24
AR08171	122.42	123.63	1.21	11	78	0	0.4	11			10
AR08172	123.63	124.86	1.23	105	51	14	0.9	3			31
AR08173	124.86	126.50	1.64	11	45	0	0.3	1			21
AR08174	126.50	128.40	1.90	62	50	0	0.6	1			69
AR08175	128.40	129.95	1.55	15	48	3	0.2	1			14
AR08176	129.95	131.34	1.39	67	46	10	0.5	1			49
AR08177	131.34	132.70	1.36	56	39	0	0.5	1			33
AR08178	132.70	134.50	1.80	41	55	0	0.2	1			33
AR08179	134.50	135.50	1.00	147	50	0	0.4	1			32
AR08180	135.50	136.50	1.00	679	41	0	1.2	1			61

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07950	40.00	42.00	2.00	64.84	14.39	4.61	2.76	1.42	2.08	5.63	0.54	0.14	0.14	0.12	3.37	99.93	16	140					15	25	35		4,bx,*eJj	177
AR07951	44.00	47.00	3.00	63.49	12.08	8.43	3.50	1.04	1.14	5.12	0.48	0.12	0.17	0.09	4.83	100.39	16	150					15	40	25		4,bx 3j	114
AR07952	62.00	65.00	3.00	65.79	13.81	2.69	2.60	0.94	1.84	5.51	0.47	0.12	0.15	0.03	3.78	97.70	18	136					25	340	45		4,*b 4jA$	252
AR07953	74.00	77.00	3.00	65.70	14.29	3.43	3.16	0.91	1.86	6.64	0.51	0.16	0.22	0.16	2.88	99.75	18	140					40	205	40		4,*b 3j$	230
AR07954	89.00	92.00	3.00	50.51	14.81	7.40	5.09	2.11	0.48	15.11	1.62	0.14	0.22	0.06	1.39	98.88	32	98					85	115	95		7,a,m 7hv	148
AR07955	101.00	104.00	3.00	58.82	13.89	6.11	3.86	5.08	0.34	7.07	0.74	0.32	0.09	0.06	2.82	99.14	18	136					25	70	50		7,b,D,P8j	120
AR07956	133.50	136.50	3.00	60.90	14.37	4.03	3.32	1.96	1.04	10.55	0.40	0.12	0.24	0.19	3.17	100.10	16	102					20	105	25		4,bx,q,4jA$	204
AR07957	142.00	145.00	3.00	51.01	17.49	6.57	4.85	1.79	0.86	12.60	1.60	0.16	0.29	0.13	3.46	100.67	24	100					65	100	190		7,a,bx,7hv	190
AR07958	149.00	152.00	3.00	75.74	12.35	2.42	1.49	1.74	1.86	2.72	0.25	0.08	0.07	0.04	2.08	100.81	14	148					15	25	35		4,a,l,q4jA	205
AR07959	170.00	173.00	3.00	70.72	14.92	1.17	1.85	2.35	2.50	4.31	0.47	0.12	0.07	0.06	2.25	100.73	20	166					5	40	35		4,a,l,q4jB	248
AR07960	182.00	185.00	3.00	54.14	13.50	6.48	7.06	1.40	1.72	10.01	0.83	0.36	0.25	0.14	3.01	98.75	12	104					40	225	130		7,a,bx,7jyB	141
AR07961	188.00	191.00	3.00	75.23	13.17	1.44	1.63	1.22	2.70	2.93	0.27	0.08	0.06	0.09	1.91	100.63	20	146					20	40	35		4,a,l,q4jB	246
AR07962	212.00	215.00	3.00	75.81	13.27	0.75	1.14	1.50	2.64	2.96	0.24	0.10	0.05	0.06	1.92	100.38	16	140					15	30	<5		4,a,l,q4jA	271
AR07963	227.00	230.00	3.00	73.29	13.80	0.74	1.79	1.16	1.86	5.12	0.51	0.10	0.08	0.09	1.71	100.16	22	164					80	125	25		4,bx,q,3j	367
AR07964	257.00	260.00	3.00	73.91	12.00	0.54	2.12	1.28	2.32	6.09	0.46	0.10	0.08	0.09	2.07	100.95	16	138					70	100	40		4,bx,q,4jA	290
AR07965	275.00	278.00	3.00	56.64	12.69	6.98	8.13	3.98	1.12	7.90	0.81	0.40	0.13	0.09	2.00	100.76	12	118					50	95	135		7,a,m 7jyB	105

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07950	40.00	42.00	2.00			20		100																					
AR07951	44.00	47.00	3.00			10		<100																					
AR07952	62.00	65.00	3.00			20		14000																					
AR07953	74.00	77.00	3.00			25		5300																					
AR07954	89.00	92.00	3.00			50		3300																					
AR07955	101.00	104.00	3.00			20		700																					
AR07956	133.50	136.50	3.00			25		25000																					
AR07957	142.00	145.00	3.00			65		4200																					
AR07958	149.00	152.00	3.00			5		<100																					
AR07959	170.00	173.00	3.00			5		100																					
AR07960	182.00	185.00	3.00			40		100																					
AR07961	188.00	191.00	3.00			5		<100																					
AR07962	212.00	215.00	3.00			<5		200																					
AR07963	227.00	230.00	3.00			15		1900																					
AR07964	257.00	260.00	3.00			15		2300																					
AR07965	275.00	278.00	3.00			35		100																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR07950	40.00	42.00	2.00																					0.54	0.32	13	45	18
AR07951	44.00	47.00	3.00																					0.62	0.70	7	33	38
AR07952	62.00	65.00	3.00																					0.53	0.19	17	55	362
AR07953	74.00	77.00	3.00																					0.53	0.24	13	54	225
AR07954	89.00	92.00	3.00																					0.44	0.50	19	37	55
AR07955	101.00	104.00	3.00																					0.57	0.44	13	27	14
AR07956	133.50	136.50	3.00																					0.43	0.28	8	42	54
AR07957	142.00	145.00	3.00																					0.48	0.38	39	41	56
AR07958	149.00	152.00	3.00																					0.57	0.20	23	45	14
AR07959	170.00	173.00	3.00																					0.50	0.08	19	55	17
AR07960	182.00	185.00	3.00																					0.63	0.48	18	53	161
AR07961	188.00	191.00	3.00																					0.57	0.11	21	62	33
AR07962	212.00	215.00	3.00																					0.48	0.06	4	63	20
AR07963	227.00	230.00	3.00																					0.45	0.05	14	66	108
AR07964	257.00	260.00	3.00																					0.45	0.05	19	71	78
AR07965	275.00	278.00	3.00																					0.71	0.55	17	46	24



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR031-01
Grid A - Section 54+00N (looking north +/-25m)
Browning Twp.
NTS : 41P/6
PROJECT No: 8257
Drawn : Dean F. Rogers Sept/95
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
0 20 40 60 80
Revised :
BR031-01
Az = 100 deg
Dip = 50 deg
Overburden
400m
300m
200m
100m
0m
7800mE
7700mE
3,C,bx
4,bx,q,*b,*e
4,bx,f,q
PyF0.1-0.5%
SphF1-2%,PyF0.1%
PoD0.1-1%,PyD0.1-1%
PoF5%,CpD0.1%
PyD1-2%,PoD0.1%
4,b,q,*b,P
7,o,m,D,*B
4,bx,q,D
7,o,m,D,*b
4,b,q,*b
3,C,f,D,*b
7,o,m,D,P
4,o,l,m
4,q,*b
3,bx
3,C,f,*b,*i,*w
PyF0.1%
PyF2-3%
PyF0.1%,PoF0.1%
PyF0.1-0.5%
PyF3-4%,PoF0.1%
PyF2-3%,PoF0.1%
PyF0.5-1%,PoF0.1%
PyF1%,PoF0.1%,SphF0.1%
Claim # 1191304
4,*b
2,o,*o
4,q,*b,*y
2,o,m,*o
4,q,D,*o
2,o,*b
4,q,*b
2,o,m,D,*o
4,d,l,q,*o
EOH
384.00m.
PyF0.5%
SphFB-10%,GnF1%,CpF0.1%
SphF1-2%,GnF0.1%,PyB4-5%,PoB1%
PyM45%,CpF0.1%
PoF7-10%
PyD0.1%,PyF0.1%
PyF1%
PyF0.5%
PyF0.1%
PyF0.1%
Astronomic
N
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
a Fine Grained
b Medium Grained
bx Breccia
c Coarse Grained
d Quartz-Feldspar Phyric
e Amygdaloidal/Vesicular
f Primary Fragmentals
g Graphitic/Argillaceous
h Tholeiitic
i Alkalic
j Calc-Alkalic
k Komatiitic
l Flows
m Massive
n Variolitic/Spherulitic
p Pillowed
q Quartz Phyric
r Oxide Iron Formation
s Sulphides, Exhalites
t Pyroclastic
u High Mg
v High Fe
w High Al
x Andesite
y Icelandite
z Highly Evolved (Y>60)
A Primitive (Y<20)
B Evolved (Y>20<60)
C Heterolithic
D Feldspar Phyric
E Chert
F Talc-carbonatized
G leucoxene bearing
H hematization
J Pyroxenite
K not textured
L peridotite
M dunite
N aphyric
P Porphyritic
R polysutured
S fractured
T gabbroic textured
U pyroxene spinifex
V olivine spinifex
W skeletal/crescumulate
X adcumulate
Y mesocumulate
Z orthocumulate
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cpy Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

HOLE NUMBER: BR011-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191304
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5245378.00N
EAST: 485919.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 54+ 0N
EAST: 76+60E
ELEV: 400.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 384.00M
START DEPTH: 0.00M
FINAL DEPTH: 384.00M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"

GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 09/02/1995
DATE COMPLETED: 09/07/1995
DATE LOGGED: 09/08/1900

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: BW & NW left in hole
CORE STORAGE: Timmins
UTM COORD.: 485914mE 5245376mN

COMMENTS : extension of long conductor to north (DDH #6,1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-52° 0' 0"	A	DO		.	-	-	.	.	
120.00	100° 0' 0"	-51° 0' 0"	A	DO		.	-	-	.	.	
180.00	100° 0' 0"	-42° 0' 0"	A	DO		.	-	-	.	.	
240.00	100° 0' 0"	-35° 0' 0"	A	DO		.	-	-	.	.	
300.00	100° 0' 0"	-29° 0' 0"	A	DO		.	-	-	.	.	
360.00	100° 0' 0"	-22° 0' 0"	A	DO		.	-	-	.	.	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 24.00	«{OB}» Casing Overburden					
24.00 TO 26.30	«3,C,bx» Heterolithic Volcanic breccia	-dark green to purplish -unit consists of fine grained mafic volcanic with intervals of mafic andfelsic breccia -matrix of breccias is strongly chloritic -clasts are angular to fluidal/wispy looking -upper 40cm broken and blocky		⟪24.00-26.30⟫«CbFM» moderate, fracture/vein controlled, carbonatization -alteration confined to brecciated area	⟪24.00-26.30⟫«PyF0.5%,PoF0.5%» 0.5% fracture/vein controlled pyrite; 0.5% fracture/vein controlled pyrrhotite -Po occurs within matrix of breccias and is crosscut by Py	
26.30 TO 72.40	«4,bx,q,*b,*e» Felsic Volcanic breccia quartz phyric lapilli tuff autoclastic /hyaloclastite	-upper contact gradational -dark green to gray -unit consists of mottled textured felsic lapilli tuffs intercalated with 0.2-2.0m breccia intervals -more intact lapilli tuffs contain vague to distinct clasts of massive to tuffaceous rhyolite in a granular matrix -breccia zones contain angular to rounded felsic fragments in a strongly chloritic, hyaloclastitic? matrix -more massive clasts are qtz-phyric with subangular to rounded qtz eyes, some of which appear elongate and may be amygdules -dislocated flow banding in some felsic clasts -probably represent flow tops with poor tops uphole indications -bx's sometimes distinct (listed below) but often have ill-defined, gradational boundaries -minor (1%) mafic clasts -pinkish clots (garnets?) occur sporadically in zones/bands throughout unit ⟪46.00-47.34⟫«4,bx,f,*e» Felsic Volcanic breccia, primary fragmentals, autoclastic/hyaloclastite, ⟪48.00-48.16⟫«4,bx,f,*e» Felsic Volcanic breccia, primary fragmentals, autoclastic/hyaloclastite, ⟪52.30-52.53⟫«{FAI}» Fault -broken, talcose core		-strong mottled texture due to alteration (Si & Se) -matrix to tuffs and breccias is strongly chloritic and weakly Cb veined ⟪26.30-72.40⟫«SeFM ,ChFW,SiPW» moderate, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization; weak, pervasive, silicification -alteration within lapilli tuffs and fragments -Se occurs as both fractures/bands as well as weakly pervasive throughout core	⟪26.30-72.40⟫«PoD0.1-1%,PyD0.1-1%» 0.1-1.0% disseminated/blebby pyrrhotite; 0.1-1.0% disseminated/blebby pyrite -disseminated within matrix material and as hairline strigers throughout unit ⟪41.69-41.83⟫«SphF1-2%,PyF0.1%» 1.0-2.0% fracture/vein controlled sphalerite; 0.1% fracture/vein controlled pyrite -within mm size carb veinlets ⟪56.35-56.45⟫«PoF5%,CpD0.1%» 5.0% fracture/vein controlled pyrrhotite; 0.1% disseminated/blebby chalcopyrite -mineralized clast with Cp blebs within stringery Po -v. tr Cp visible within other minor Po	⟪33.00-16.00⟫ «AR07966-WR» ⟪54.00-57.00⟫ «AR07967-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		59.39-60.23 «?,a,m» Mafic Intrusive fine grained, massive, -possibly a thin flow -similar to mafic at top of hole but with sharp, irregular contacts				
		((67.98-68.73))«2,bx,f,*m» Mafic Volcanic breccia, primary fragmentals, autoclastic/hyaloclastite, -appears to contain predominantly mafic material				
		((71.50-72.40))«{FAI}» Fault -broken blocky core with strong Cb,Si and K-spar veining				
72.40 TO 123.50	«4,bx,f,q» Felsic Volcanic breccia primary fragmentals quartz phyric	-upper contact at fault -pale green to gray -blocky breccia with subrounded to very angular blocks of altered massive rhyolite, lapilli-tuffs and qtz clasts -fragments range from <1cm to >20cmin size -some lapilli-tuff intervals appear to be discreet blocks (ie) lapilli within units are truncated by massive blocks| while others appear to be individual tuffaceous units -crude gradational contacts between some blocky breccias and lapilli-tuffs give suggestion of tops down-hole while some other s are undefinable (goodfining down-hole sequence from 114-11.68m) -lapilli tuffs more well sorted than chaotic blocky breccias -qtz phens (2-4%) more abundant in finer matrix but also within some massive, flow-banded fragments (rare elongate qtz-eyes may be amgdules) -hyaloclastitic? crackly textured matrix		((72.40-123.50))«SePS ,SIPM,ChFS» strong, pervasive, sericitization; moderate, pervasive, silicification; strong, fracture/vein controlled, chloritization -Se both pervasively within clasts as well as finer matrix -fracture controlled and spotted chlorite -strongly altered, mottled texture 72.40-123.50 «SIFW,CbFW» weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, carbonatization	((72.40-123.50))«PyD1-2%,PoD0.1%» 1.0-2.0% disseminated/blebby pyrite; 0.1% disseminated/blebby pyrrhotite -fine Py dusting generally surrounding larger clasts with minor coarser grained Py clots	((78.00-81.00)) «AR07968-WR» ((96.00-99.00)) «AR07969-WR» ((117.00-120.00)) «AR07970-WR»
		108.25-108.65 «2,a,m» Mafic Volcanic fine grained, massive, -mafic block/dyke?				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		109.27-110.46 «2,a,m» Mafic Volcanic fine grained, massive, -mafic block/dyke?				
123.50 TO 139.15	«4,b,q,*b» Felsic Volcanic medium grained quartz phyric lapilli tuff	-upper contact sharp and marked by 20cm band of pink garnet clots -dark greenish gray -weakly fol'd -very granular textured unit with ~20% massive irregular rhyolite and qtz clasts -3-5% equant to rounded qtz-eyes (some amygdules?) -weakly brecciated toward base of unit where clasts increase in size and abundance (tops up?)		⟪123.50-133.00⟫«ChFW ,SeFW» weak, fracture/vein controlled, chloritization; weak, pervasive, sericitization -some sericitic rhyolite clasts ⟪133.00-139.15⟫«ChSW ,SeFW,CbFW» weak, spotty, chloritization; weak, fracture/vein controlled, sericitization; weak, fracture/vein controlled, carbonatization -slightly stronger alteration in brecciated zone at base	⟪123.50-139.15⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite	⟪129.00-132.00⟫ «AR07971-WR»
139.15 TO 140.70	«7,a,m,D,P» Mafic Intrusive fine grained massive feldspar phyric porphyritic	-sharp, irregular contacts -1-2% clotty white feldspar clots		139.15-140.70 «CbFW,SlFW,K>FW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration		
140.70 TO 151.10	«4,bx,q,*b» Felsic Volcanic breccia quartz phyric lapilli tuff	-similar unit to breccia at base of lapilli tuff above with stronger alteration/mineralization ⟪148.50-148.50⟫«⟨S2 28°⟩» Foliation		⟪140.70-151.10⟫«ChFW ,SeFW,SlFW» moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization; weak, fracture/vein controlled, silicification 140.70-151.10 «CbFW,CbFW,K>FW» moderate, fracture/vein controlled, carbonatization; weak, pervasive, carbonatization; weak, fracture/vein controlled, potassic alteration -likely related to dyke intrusions	⟪140.70-151.10⟫«PyF2-3%» 2.0-3.0% fracture/vein controlled pyrite -coarse Py in clots/veinlets	⟪144.00-147.00⟫ «AR07972-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
151.10 TO 152.85	«7,a,m,D,P» Mafic Intrusive fine grained massive feldspar phyric porphyritic	-identical to porphyritic dyke above				
152.85 TO 155.90	«4,b,q,*b» Felsic Volcanic medium grained quartz phyric lapilli tuff	-similar unit to that from 123.5-139.15m -strongly qtz-phyric (1-5%) -qtz-eyes are 1-2mm and equant to subrounded -coarser grained with larger clasts and qtz eyes from 153.58m to end of unit -autobrecciated zone at base		⟨152.85-155.90⟩«CbFW ,ChFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, chloritization; weak, pervasive, silicification ⟨151.58-155.90⟩«SeFM» moderate, fracture/vein controlled, sericitization	⟨152.85-155.90⟩«PyF0.1%,PoF0.1%» 0.1% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite -associated with late qtz veinlets	
155.90 TO 178.97	«3,C,f,D,*b» Heterolithic Volcanic primary fragmentals feldspar phyric lapilli tuff	-gradational (mixed) uphole contact -unit consist of ill-defined fragments of sericitized massive rhyolite in a feldspar porphyritic, mafic? matrix -textures somewhat obscurred by alteration -matrix is purplish brown and fairly hard with euhedral to clotty greenish white phenocryts (7-9%) -possibly all rhyolitic chloritized material but no qtz-eyes -rhyolite clasts are ill-defined and fairly soft, possibly strongly sericitized mafic material with complete feldspar destruction		-sericitic felsic clasts with chlorite spotting possibly infilling amygdules -matrix may be composed of pervasively chloritized material (hard but no qtz eyes) ⟨155.90-178.97⟩«SePS ,ChSW,ChPM» strong, pervasive, sericitization; weak, spotty, chloritization; moderate, pervasive, chloritization ⟨155.90-178.97⟩«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	⟨155.90-178.97⟩«PyF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrite	⟨162.00-165.00⟩ «AR07973-WR» ⟨167.00-168.00⟩ «AR07974-WR» -sericitic interval (felsic vs. mafic?)
178.97 TO 181.56	«7,a,m,D,P» Mafic Intrusive fine grained massive feldspar phyric porphyritic	-similar to above porphyritic dykes with sharp, irregular contacts				

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
181.56 TO 191.74	«4,a,1,m» Felsic Volcanic fine grained flows (banded) massive	-pale greenish gray -flow-banded (foli'n?) texture @~40° to CA -fairly massive vitric rhyolite with vague fragmental texture defined by chloritic veilets/bands and Fe-sulphides -no phenocrysts visible		‖181.56-191.74‖«SePW ,ChSW,ChFW» weak, pervasive, sericitization; weak, spotty, chloritization; weak, fracture/vein controlled, chloritization -chlorite spotting filling amygdules? ‖181.56-191.74‖«SiPW ,CbFW,SiFW» weak, pervasive, silicification; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	‖181.56-191.74‖«PyF3-4%,PoF0.1%» 3.0-4.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite -fine grained, associated with chloritic stringers defining vague fragmental texture	‖183.00-186.00‖ «AR07975-WR»
191.74 TO 209.19	«4,q,°b» Felsic Volcanic quartz phyric lapilli tuff	-contact somewhat arbitrary, marked by appearance of well defined clasts -buff to purplish green -heterogeneous unit consisting of lapilli-tuffs with minor intervals of more massive rhyolite and mafic looking material similar to JC unit above -qtz phens are rare but do occur within felsic clasts and matrix -rare feldspar phenocrysts -mottled textured in some areas ‖193.30-193.30‖«┤S2 44°├» Foliation 200.91-201.61 «2,°a» Mafic Volcanic tuff.		‖191.74-209.19‖«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification ‖191.74-209.19‖«ChFW ,SiFW,SePW» weak, fracture/vein controlled, chloritization; weak, pervasive, silicification; weak, pervasive, sericitization -some felsic clasts pervasively sericitized and silicified -weakly to moderately choritic matrix	‖191.74-209.19‖«PyF2-3%,PoF0.1%» 2.0-3.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite -stringery habit within chloritic matrix of unit	‖195.00-198.00‖ «AR07976-WR»
209.19 TO 213.01	«3,bx» Intermediate Volcanic breccia	-uphole contact sharp and planar @36° to CA -carbonate breccia -mottled to banded to fragmental textures -strong carbonate alteration surrounding angular to fluidal clasts of deep green mafic mateial -banded (veined?) intervals show dislocation and in-situ brecciation -delicate contorted/banded carbonate textures @210m -minor fragments of sericitized rhyolite up to 5cm in diameter		‖209.19-213.01‖«CbFS ,CbPW,ChPW» strong, fracture/vein controlled, carbonatization; weak, pervasive, carbonatization; moderate, pervasive, chloritization -mottled pervasive to veined/bx'd carbonate alteration -chloritized mafic material/clats	‖209.19-213.01‖«PyF0.5-1%,PoF0.1%» 0.5-1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
213.01 TO 260.60	«1,C,f,*b,* 1,*w» Heterolithic Volcanic primary fragmentals lapilli tuff matrix supported frag. (fol>maf)	-semi-gradational contact with breccia above -weak fol'n defined by elongation of smaller clasts -'white fragment breccia' found in central portion of property -massive felsic clasts (1-10cm) in a deep green, chloritic, mafic matrix -smaller clasts are distinct and subrounded while larger ones are ill defined with altered margins -smaller 1cm clasts tend to occur in distinct intervals but no clear grading is present -larger blocks occur sporadically -some clasts auto-brecciated -2-4% pink garnets (1-2mm) are euhedral to clotty and peppered throughout unit -difficult to tell clasts from alteration in places -strongly bx'd toward base of unit (alteration?) ⟪222.00-222.00⟫«{S2 38°}» Foliation		-matrix of unit is moderately chloritic -felsic clasts are weakly sericitized some with creamy (silicified?) rims -creamy siliceous stockwork/mottling over some intervals ⟪213.01-260.60⟫«ChPM ,SePM,SiFM» moderate, pervasive, chloritization; weak, pervasive, sericitization; moderate, fracture/vein controlled, silicification ⟪213.01-260.60⟫«CbFM» weak, fracture/vein controlled, carbonatization	⟪213.01-260.60⟫«PyF1%,PoF0.1%,SphF0.1%» 1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled sphalerite	⟪216.00-219.00⟫ «AR07977-WR» ⟪243.90-243.99⟫ «AR07978-WR» -matrix material ⟪247.48-247.61⟫ «AR07979-WR» -felsic clast
260.60 TO 305.64	«1,*b» Felsic Volcanic lapilli tuff	-gradational contact over 4-6m marked by decrease in mafic material and brecciation -difficult to ID, some good lapilli tuff intervals but also contains green chloritic bands similar to matrix of above unit -occasional banded to spotted texture due to alteration/bx'n? -felsic material is massive and has rare qtz eyes -minor intervals/band of 1-2mm pink garnets (up to 5-7%) -fairly massive with strong chlorite banding towards base		-sericitic rhyolite clasts set in a chloritic matrix -mottled to bx'd texture due to creamy (siliceous?) alteration -cut by mineralized qtz/carb veinlets showing mottled alteration halos ⟪260.60-305.60⟫«CbFM ,SiFM,ChFM» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; moderate, fracture/vein controlled, chloritization ⟪260.60-305.60⟫«SePM ,ChPM» moderate, pervasive, sericitization; moderate, pervasive, chloritization	-mineralization confined to distinct lapilli-tuff units and within qtz/carb veins lower in the unit ⟪260.60-281.70⟫«PyF0.5%» 0.5% fracture/vein controlled pyrite -weakly mineralized over upper 20m ⟪281.69-283.93⟫«PyB4-5%,PoB1%» 4.0-5.0% bedded/banded pyrite; 1.0% bedded/banded pyrrhotite -Fe-sulphides surrounding lapilli in base-metal bearing interval ⟪281.70-282.05⟫«SphF8-10%,GnF1%,CpF0.1% » 8.0-10.0% fracture/vein controlled sphalerite; 1.0% fracture/vein controlled galena; 0.1% fracture/vein controlled chalcopyrite -Sph occurs both in matrix surrounding clasts and within qtz/carb veins cutting them -Gn within interior of Sph veinlets	⟪270.00-273.00⟫ «AR07980-WR» ⟪280.37-281.69⟫ «AR08182-MEX» ⟪281.69-282.25⟫ «AR08183-MEX» ⟪282.25-283.97⟫ «AR08184» ⟪283.97-285.50⟫ «AR08185-MEX» ⟪285.50-287.00⟫ «AR08186-MEX» ⟪287.00-288.50⟫ «AR08187-MEX» ⟪288.50-290.00⟫ «AR08188-MEX» ⟪290.00-291.30⟫ «AR08189-MEX» ⟪291.00-294.00⟫ «AR07981-WR» ⟪291.30-292.80⟫ «AR08190-MEX» ⟪292.80-293.90⟫ «AR08191-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					-tr Cp within qtz/carb veins	([293.90-295.40]) «AR08192-MEX»
						([295.40-296.80]) «AR08193-MEX»
					([282.05-283.93])«SphF1-2%,GnF0.1%,CpF0.1%»1.0-2.0% fracture/vein controlled sphalerite; 0.1% fracture/vein controlled galena; 0.1% fracture/vein controlled chalcopyrite	([296.80-298.20]) «AR08194-MEX»
						([298.20-299.50]) «AR08195-MEX»
					-similar habit as above interval but less abundant	([299.50-301.00]) «AR08196-MEX»
						([301.00-302.30]) «AR08197-MEX»
					([283.93-305.60])«PyB1-2%,PoB0.1%» 1.0-2.0% bedded/banded pyrite; 0.1% bedded/banded pyrrhotite -surrounding lapilli as above	
					([283.93-305.60])«SphF0.1%,PoF1%,CpF0.1%» 0.1% fracture/vein controlled sphalerite; 1.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled chalcopyrite -within irregular stockworks of creamy qtz/carb veining	
					([292.88-293.01])«PyM45%,PoF7-10%» 45.0% massive pyrite; 7.0-10.0% fracture/vein controlled pyrrhotite -short interval of semi-massive Fe-sulpides within lapilli-tuff -conductive over it's length but very small	
305.64 TO 311.84	«2,a.*a» Mafic Volcanic fine grained tuff	-dark grayish green -contact arbitrary, some strongly siliceous material at top of unit -grainy textured with yellowish white needles/lathes along fol'n -short interval of rounded to sub-rounded fragments @308.2m -minor garnet spotting		([306.60-311.84])«ChFW ,SiFW,CbFW» weak, pervasive, chloritization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, carbonatization	([305.40-311.84])«PyD0.1%,PyF0.1%» 0.1% disseminated/blebby pyrite; 0.1% fracture/vein controlled pyrite -fine Py disseminated throughout unit and also associated with minor qtz/carb veins	
311.84 TO 321.32	«4,q.*b.*y» Felsic Volcanic quartz phyric	-uphole contact sharp but irregular -unit consist of up to 25% rounded qtz x-stals from 1-3mm in diameter and larger rhyolitic clasts -minor mafic fragments		([311.84-321.32])«SeFW ,ChFW,SiFW» weak, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled,	([311.84-321.32])«PyF1%» 1.0% fracture/vein controlled pyrite	-alternating felsic and mafic tuffs identical to lower portion of BRO41-04
						([312.00-315.00]) «AR07982-WT»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	lapilli tuff crystal tuff	-some rounded qtz x-stals may be amygdules -matrix is med. grained and chloritic -well sorted but no grading definable (frags <2cm) -possibly reworked		silicification		
		⟪313.30-313.50⟫«FAI» Fault -broken, blocky core				
		⟪314.60-314.80⟫«FAI» Fault -broken, blocky core				
		⟪318.39-319.21⟫«2,A,*A,*e» Mafic Volcanic fine grained, tuff, autoclastic/hyaloclastite, -similar mafic tuff to above -black chloritic wisps may represent altered glassy rock fragments? -lower 20cm consists of shardy/bx'd hyaloclastite? set in a fine-grained, creamy pale green (argillic) matrix -cops downhole (low)				
321.32 TO 325.07	«2,A,m,*A» Mafic Volcanic fine grained massive tuff	-uphole contact sharp and planar @48° to CA -similar looking to mafic tuff above -lacks chlorite wisps but some rock fragments are ⟪324.20-324.20⟫«S2 57°» Foliation		⟪321.32-325.07⟫«ChFW ,SiFW,CbFW» weak, pervasive, chloritization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, carbonatization ⟪321.32-325.07⟫«K»FW ,EpFW» weak, fracture/vein controlled, potassic alteration; weak, fracture/vein controlled, epidotization	-unmineralized	
325.07 TO 326.53	«1,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact sharp and planar @47° to CA -similar to above crystal-tuff but with larger proportion of lithic clasts -some fluidal,sigmoidal rhyolite clasts (welding?)		⟪325.07-326.53⟫«ChFW ,SeFW» moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization ⟪325.07-326.53⟫«K»FW ,SiFW,CbFW» weak, fracture/vein controlled, potassic alteration; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, carbonatization	⟪325.07-326.53⟫«PyF0.5%» 0.5% fracture/vein controlled pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
326.53 TO 341.14	«2,a,D,*a» Mafic Volcanic fine grained feldspar phyric tuff	-uphole contact sharp and planar @49° to CA -slightly coarser grained than upper mafic tuffs -1-2% clotty to broken feldspar phenocrysts some of which are strongly K-spar altered 338.06-340.60 «7,a,m» Mafic Intrusive fine grained, massive, -apparent chills on upper and lower contacts but unit is very siliceous with conchoidal fracture pattern -possibly an exhalite/chert bed? -in-situ bx'n with .5cm angular clasts 3338.3m		⟪326.03-341.14⟫«EpFM ,K>FS,ChSM» moderate, fracture/vein controlled, epidotization; strong, fracture/vein controlled, potassic alteration; moderate, spotty, chloritization -epidote/K-spar veilets are irregular with K-spar replacement of feldspar phenocrysts around veinlets -chlorite spots are larger and more diffuse than those in mafic tuff above ⟪326.53-341.14⟫«SiPW» weak, pervasive, silicification	⟪326.53-341.14⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite	⟪327.00-330.00⟫ «AR07983-WR» ⟪338.06-340.60⟫ «AR07984 WR»
341.14 TO 343.70	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-both up and downhole contacts gradational -similar to above felsic lapilli-tuff -possibly reworked				⟪341.20-343.70⟫ «AR07985-WR»
343.70 TO 372.00	«2,a,m,D,*a » Mafic Volcanic fine grained massive feldspar phyric tuff	-upper contact sharp and planar @51° to CA -dark green, fine-med.fine grained -unit is fairly massive with some rock fragments greater than 1cm but composed primarily of <1mm rock fragments and feldspar x-stals -rounded QFP clasts @358.7m -contains several short intervals of aphanitic ash-tuff? -large garnet porphyroblasts (up to 1cm) from ~370-372m ⟪344.90-345.00⟫«|FAI|» Fault -broken core ⟪363.32-363.38⟫«S,A.E.«EXH»» Sedimentary fine grained, chert, chert/exhalite, -dense, black siliceous chert with sharp contacts ⟪371.73-371.90⟫«2,f,*e» Mafic Volcanic		343.70-372.00 «CbFM,SiFW,ChPW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, chloritization ⟪343.70-372.00⟫«EpFS ,K>FM,SiPW» strong, fracture/vein controlled, epidotization; moderate, fracture/vein controlled, potassic alteration; weak, pervasive, silicification -very irregular thin veinlets -K-spar extends from veins and alters feldspar phenocrysts/crystals	⟪343.70-378.62⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite -very weakly mineralized	⟪345.00-348.00⟫ «AR07986-WR» ⟪360.00-363.00⟫ «AR07987-WR» ⟪363.32-363.38⟫ «AR08198-MEX»

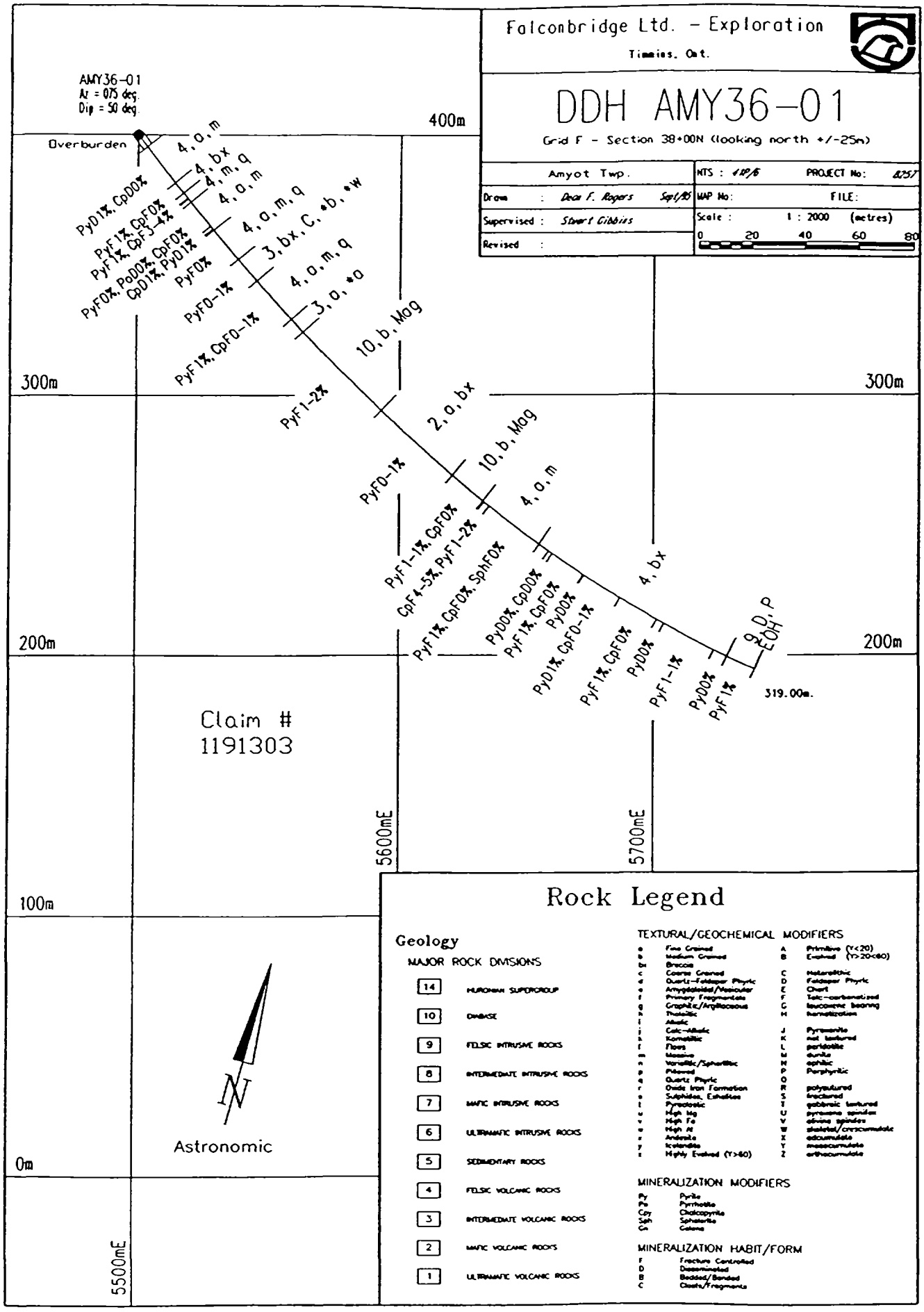
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		primary fragmentals, autoclastic/hyaloclastite, -angular to subrounded clasts (<1cm) in a pale green matrix (in-situ bx'd?) -tops downhole?				
372.00 TO 384.00	«4,d,l,q,*a» Felsic Volcanic quartz-feldspar Phyric flows (banded) quartz phyric tuff	-uphole contact broken -med gray, weakly fol'd -granular unit with white bands of qtz-feldspar rich material -consists of small fragments and qtzphenocrysts/crystals all less than 1mm -several mafic tuff interals @372.39-372.63m,373.64-374.61m,376.30-376.42m which have sharp contacts sometimes disconformable to banding		([372.00-384.00]«EpFW,K>FW,HeFW» weak, fracture/vein controlled, epidotization; weak, fracture/vein controlled, potassic alteration; weak, fracture/vein controlled, hematization ([372.00-384.00]«CbFW ,SiFW,SiPW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, silicification	-unmineralized	([375.00-378.00] «AR07988-WR»
		([380.00-380.28]«4,f,*e» Felsic Volcanic primary fragmentals, autoclastic/hyaloclastite, -anglar clasts of felsic and matic material in a limey fine limey green matrix similar to that uphole -K-spar altred phenocrysts immediately below interval				
384.00 TO 384.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08182	280.37	281.69	1.32	131	857	10	0.7	48			103
AR08183	281.69	282.25	0.56	542	52200	58	9.6	9950			163
AR08184	282.25	283.97	1.72	366	3270	113	3.3	301			160
AR08185	283.97	285.50	1.53	206	93	3	0.4	1			106
AR08186	285.50	287.00	1.50	184	467	0	0.5	44			112
AR08187	287.00	288.50	1.50	34	254	0	0.2	1			45
AR08188	288.50	290.00	1.50	65	52	0	0.1	1			74
AR08189	290.00	291.30	1.30	77	73	0	0.1	1			83
AR08190	291.30	292.80	1.50	91	53	0	0.2	1			110
AR08191	292.80	293.90	1.10	97	66	27	0.3	1			117
AR08192	293.90	295.40	1.50	145	51	3	0.1	1			127
AR08193	295.40	296.80	1.40	120	38	0	0.1	1			118
AR08194	296.80	298.20	1.40	154	41	0	0.2	1			102
AR08195	298.20	299.50	1.30	145	88	0	0.2	1			119
AR08196	299.50	301.00	1.50	116	48	0	0.1	1			129
AR08197	301.00	302.30	1.30	200	59	3	0.2	1			155
AR08198	363.32	363.38	0.06	127	95	7	0.1	1			45

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07966	33.00	36.00	3.00	73.69	12.13	1.26	1.16	1.57	2.92	2.94	0.21	0.06	0.06	0.11	2.05	98.04	18	124					25	405	50		4,q,*b 4jA	211
AR07967	54.00	57.00	3.00	71.35	11.97	2.81	1.24	1.29	2.90	2.97	0.19	0.04	0.07	0.16	2.73	97.58	52	214					10	75	15		4,bx,q,4hB	171
AR07968	78.00	81.00	3.00	68.74	13.52	3.08	0.97	4.10	1.84	1.93	0.25	0.04	0.05	0.07	2.98	97.51	18	124					20	25	5		4,bx,q 4jA	150
AR07969	96.00	99.00	3.00	73.54	11.95	1.09	0.82	2.31	2.72	3.00	0.20	0.06	0.04	0.11	2.47	98.19	18	128					65	65	25		4,bx,q 4jAS	195
AR07970	117.00	120.00	3.00	73.25	13.17	1.54	0.72	2.67	2.76	2.04	0.28	0.08	0.06	0.05	1.95	98.53	18	124					15	20	20		4,bx,q 4jA	189
AR07971	129.00	132.00	3.00	76.20	12.99	0.39	0.66	0.37	3.84	1.09	0.18	0.06	0.02	0.05	2.00	97.79	20	132					<5	25	15		4,b,q,*4jB	282
AR07972	144.00	147.00	3.00	75.68	11.24	1.62	1.42	0.61	3.22	2.11	0.23	0.06	0.06	0.10	1.80	98.05	16	136					<5	25	5		4,bx,q,4jA	206
AR07973	162.00	165.00	3.00	66.74	15.75	4.18	1.60	0.90	3.10	5.10	0.46	0.12	0.16	0.10	2.48	100.59	22	108					10	40	<5		3,C,f,D4hB	193
AR07974	167.00	168.00	1.00	71.25	14.78	2.40	1.17	1.04	3.26	3.66	0.41	0.08	0.08	0.11	2.76	100.87	12	128					10	50	30		3,C,f,D4jAS	221
AR07975	183.00	186.00	3.00	66.59	17.52	0.80	0.97	0.74	4.32	3.61	0.53	0.16	0.02	0.12	3.59	98.85	2	124					<5	20	10		4,a,1,m3jS	299
AR07976	195.00	198.00	3.00	66.34	14.65	4.74	2.46	0.47	1.38	4.18	0.43	0.14	0.07	0.15	3.21	98.07	10	134					<5	25	10		4,q,*b 4jAS	222
AR07977	216.00	219.00	3.00	68.27	16.67	5.09	4.15	1.55	0.80	9.77	0.45	0.14	0.42	0.09	2.96	100.26	12	118					20	60	30		3,C,f,*4jA	224
AR07978	243.90	243.99	0.09	47.19	8.67	10.78	8.96	0.29	0.12	21.97	0.27	0.10	1.05	0.03	1.22	100.61	14	102					15	60	40		3,C,f,*1HS	77
AR07979	247.48	247.61	0.13	70.05	18.28	3.25	0.56	0.48	1.76	1.85	0.60	0.18	0.09	0.13	1.40	98.52	24	202					5	5	35		3,C,f,*3j	333
AR07980	270.00	273.00	3.00	71.36	14.77	4.61	2.19	0.42	0.62	3.40	0.51	0.16	0.08	0.13	2.00	100.11	18	138					5	35	50		4,*b 3j	261
AR07981	291.00	294.00	3.00	59.72	15.40	5.01	4.19	0.55	0.92	9.10	0.65	0.10	0.18	0.12	3.59	99.40	14	84					25	100	60		4,*b 3jS	218
AR07982	312.00	315.00	3.00	70.18	13.76	0.37	1.61	0.80	2.56	5.36	0.48	0.10	0.07	0.09	2.40	97.69	18	164					30	60	45		4,q,*b,4jA	369
AR07983	327.00	330.00	3.00	61.10	16.08	5.23	3.48	3.97	1.78	5.89	0.72	0.24	0.13	0.08	2.28	100.92	10	98					30	55	55		2,*a 3j	145
AR07984	338.06	340.60	2.54	49.79	14.14	7.57	6.05	2.79	2.44	14.25	1.11	0.14	0.25	0.05	2.27	100.79	28	92					155	205	75		7,a,m 7hv	110
AR07985	341.20	343.70	2.50	75.87	11.81	0.46	1.52	0.67	3.10	4.28	0.48	0.10	0.05	0.09	2.22	100.56	16	168					35	45	40		4,q,*b 4jA	279
AR07986	345.00	348.00	3.00	58.95	13.81	6.21	4.98	4.54	1.08	6.62	0.76	0.34	0.11	0.06	1.83	99.23	8	94					280	65	95		2,*a 3j	117
AR07987	360.00	363.00	3.00	57.46	15.48	6.97	4.78	4.81	1.18	6.86	0.77	0.32	0.10	0.05	1.69	100.41	10	98					65	40	100		2,D,*a 3j	119
AR07988	375.00	378.00	3.00	74.65	13.28	1.69	0.89	3.67	1.74	2.92	0.27	0.10	0.03	0.10	1.28	100.53	8	94					20	20	15		4,*a 4jA	187

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SR PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07966	33.00	36.00	3.00			10		3900																					
AR07967	54.00	57.00	3.00			25		<100																					
AR07968	78.00	81.00	3.00			5		300																					
AR07969	96.00	99.00	3.00			10		12000																					
AR07970	117.00	120.00	3.00			<5		<100																					
AR07971	129.00	132.00	3.00			<5		100																					
AR07972	144.00	147.00	3.00			5		300																					
AR07973	162.00	165.00	3.00			30		2800																					
AR07974	167.00	168.00	1.00			10		12300																					
AR07975	183.00	186.00	3.00			15		21500																					
AR07976	195.00	198.00	3.00			20		13400																					
AR07977	216.00	219.00	3.00			20		2000																					
AR07978	243.90	243.99	0.09			20		6100																					
AR07979	247.48	247.61	0.13			10		100																					
AR07980	270.00	273.00	3.00			15		<100																					
AR07981	291.00	294.00	3.00			25		9300																					
AR07982	312.00	315.00	3.00			20		1300																					
AR07983	327.00	330.00	3.00			20		<100																					
AR07984	338.06	340.60	2.54			50		1400																					
AR07985	341.20	343.70	2.50			25		600																					
AR07986	345.00	348.00	3.00			25		<100																					
AR07987	360.00	363.00	3.00			25		<100																					
AR07988	375.00	378.00	3.00			15		300																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR07966	33.00	36.00	3.00																					0.48	0.10	43	59	258
AR07967	54.00	57.00	3.00																					0.50	0.23	12	50	58
AR07968	78.00	81.00	3.00																					0.54	0.23	5	28	6
AR07969	96.00	99.00	3.00																					0.39	0.09	30	51	28
AR07970	117.00	120.00	3.00																					0.46	0.12	28	45	7
AR07971	129.00	132.00	3.00																					0.59	0.03	23	86	68
AR07972	144.00	147.00	3.00																					0.62	0.14	4	68	41
AR07973	162.00	165.00	3.00																					0.43	0.27	3	48	44
AR07974	167.00	168.00	1.00																					0.43	0.16	26	56	48
AR07975	183.00	186.00	3.00																					0.39	0.05	10	77	27
AR07976	195.00	198.00	3.00																					0.58	0.32	4	42	53
AR07977	216.00	219.00	3.00																					0.50	0.31	7	43	19
AR07978	243.90	243.99	0.09																					0.49	1.24	4	45	207
AR07979	247.48	247.61	0.13																					0.42	0.18	63	38	10
AR07980	270.00	273.00	3.00																					0.61	0.31	23	36	83
AR07981	291.00	294.00	3.00																					0.52	0.33	14	48	182
AR07982	312.00	315.00	3.00																					0.42	0.03	28	78	75
AR07983	327.00	330.00	3.00																					0.58	0.33	16	36	14
AR07984	338.06	340.60	2.54																					0.50	0.54	12	45	73
AR07985	341.20	343.70	2.50																					0.46	0.04	26	80	67
AR07986	345.00	348.00	3.00																					0.64	0.45	19	36	14
AR07987	360.00	363.00	3.00																					0.62	0.45	21	34	8
AR07988	375.00	378.00	3.00																					0.42	0.13	17	33	5


Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH AMY36-01
Grid F - Section 38+00N (looking north +/-25m)
Amyot Twp.
NTS : 41P/6
PROJECT No: 8257
Drawn : Dean F. Rogers Sept/95
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
Revised :
0 20 40 60 80
AMY36-01
Az = 075 deg.
Dip = 50 deg.
Overburden
400m
300m
200m
100m
0m
5500mE
5600mE
5700mE
4, a, m
4, bx
4, m, q
4, a, m
4, a, m, q
3, bx, C, *b, *W
4, a, m, q
3, a, *a
10, b, Mag
2, a, bx
10, b, Mag
4, a, m
4, bx
9, D, P
EOH
319.00m.
PyD1%, CpD0%
PyF1%, CpF0%
PyF1%, CpF3-4%
PyF0%, PoD0%, CpF0%
CpD1%, PyD1%
PyF0%
PyF0-1%
PyF1%, CpF0-1%
PyF1-2%
PyF0-1%
PyF1-1%, CpF0%
CpF4-5%, PyF1-2%
PyF1%, CpF0%, SphF0%
PyD0%, CpD0%
PyF1%, CpF0%
PyD0%
PyD1%, CpF0-1%
PyF1%, CpF0%
PyD0%
PyF1-1%
PyD0%
PyF1%
Claim #
1191303
Astronomic
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
Fine Grained
Medium Grained
Breccia
Coarse Grained
Quartz-Feldspar Phyric
Amygdaloidal/Vesicular
Primary Fragmentals
Graphitic/Argillaceous
Pisolitic
Alkalic
Calc-Alkalic
Komatiitic
Flows
Massive
Varioliic/Spherulitic
Pillowed
Quartz Phyric
Oxide Iron Formation
Sulphides, Exhalites
Pyroclastic
High Mg
High Fe
High Al
Andesite
Komatiite
Highly Evolved (Y>60)
A Primitive (Y<20)
B Evolved (Y>20<60)
C Metamorphic
D Feldspar Phyric
E Chert
F Talc-carbonatized
G Isochemic bearing
H Hematization
J Pyroxenite
K/L not textured
M peridotite
N dunite
O gabbro
P Porphyritic
Q polysutured
R fractured
S gabbroic textured
T pyroxene spinifex
U olivine spinifex
V skeletal/cryptocrystalline
W adcumulate
X mesocumulate
Y orthocumulate
Z
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cp Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

HOLE NUMBER: AMY36-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191303
LOCATION: Amyot Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5244697.00N
EAST: 484761.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid F
NORTH: 38+ 0N
EAST: 55+ 0E
ELEV: 400.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 319.00M
START DEPTH: 0.00M
FINAL DEPTH: 319.00M

COLLAR ASTRONOMIC AZIMUTH: 75° 0' 0"

GRID ASTRONOMIC AZIMUTH: 345° 0' 0"

DATE STARTED: 09/08/1995
DATE COMPLETED: 09/11/1995
DATE LOGGED: 09/11/1995

COLLAR SURVEY: NO
ROD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: left in hole
CORE STORAGE: Timmins
UTM COORD.: 484761mE 5244699mN

COMMENTS : Grid F Conductor (DDH #7, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-51° 0' 0"	A	DO	
120.00	100° 0' 0"	-48° 0' 0"	A	DO	
180.00	100° 0' 0"	-38° 0' 0"	A	DO	
240.00	100° 0' 0"	-33° 0' 0"	A	DO	

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments

Dean Rogers

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.00	«{OB}» Casing Overburden					
6.00 TO 23.72	«4,a,m» Felsic Volcanic fine grained massive	-deep green aphanitic unit -colour suggests mafic but textures and hardness suggest chloritized rhyolite -minor brecciated intervals -from 19.10m to end of unit there is a strong mottling texture with beige to white 'alteration' surrounding irregular relict chloritic spots 1-2cm across -possibly sericite within mottling but it is likely devitrification of a glassy flow		⟪6.00-23.72⟫«ChPM,SiPM,SePM» moderate, pervasive, chloritization; weak, pervasive, silicification; weak, pervasive, sericitization ⟪6.00-23.72⟫«CbFM ,SiFW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	⟪6.00-23.72⟫«PyD0.5%,CpD0.1%» 0.5% disseminated/blebby pyrite; 0.1% disseminated/blebby chalcopyrite	⟪11.00-14.00⟫ «AR07989-WR» ⟪20.00-23.00⟫ «AR07990-WR»
23.72 TO 28.88	«4,bx» Felsic Volcanic breccia	-uphole contact irregular -similar looking to above unit but with fragmental character defined by strong chlorite alteration -clasts angular to sub-rounded from 2-10cm in diameter -devitrification (mottling) textures similar to above -rare feldspar phenocrysts		⟪23.72-28.88⟫«ChFS,SeFW,ChPM» strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization; moderate, pervasive, chloritization ⟪23.72-28.88⟫«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	⟪23.72-28.88⟫«PyF0.5%,CpF0.1%» 0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite -Cpy within qtz/carb vein @28.38m	
28.88 TO 33.32	«4,m,q» Felsic Volcanic massive quartz phyric	-uphole contact appears sharp but obscurred by mottled devitification -strongly qtz-phyric (15% overall but locally up to 30%) -qtz phens are rounded to subhedral, some of which may be amygdules -possibly a crystal tuff -granular textured but no clear fragmental textures in upper portion -moderately brecciated over lower 1m (lapilli-tuff?) ⟪31.55-31.76⟫«4,q,*b» Felsic Volcanic quartz phyric, lapilli tuff, -distinct lapilli-tuff interval with qtz/rhyolite clasts in a chloritic, Cu-rich matrix		⟪28.88-33.32⟫«ChPM ,ChFM,SeFW» moderate, pervasive, chloritization; moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization ⟪28.88-33.32⟫«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	-overall unit is weakly mineralized except within lapilli-tuff interval which has up to 4% Cpy stringers within the chloritic matrix ⟪31.35-31.77⟫«PyF1%,CpF3-4%» 1.0% fracture/vein controlled pyrite; 3.0-4.0% fracture/vein controlled chalcopyrite	⟪29.00-32.00⟫ «AR07991-WR» ⟪31.00-32.00⟫ «AR08199-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
33.32 TO 47.29	«4,a,m» Felsic Volcanic fine grained massive	-uphole contact sharp and irregular -mixed unit o massive devitrified rhyolite, breccias and qtz-phyric rhyolite -majority of unit similar to massive devitrified unit above with irregular remnant chloritic patches surrounded by buff-white, sericitic mottling -breccias noted below contain angular blocks with disjointed banding in a chloritic matrix -qtz-phyric (2%, <1mm) from 45.28-47.29m ⟪38.00-38.84⟫«4,bx» Felsic Volcanic breccia, ⟪44.81-45.28⟫«4,bx,q» Felsic Volcanic breccia, quartz phyric,		⟪33.32-47.29⟫«ChFS ,ChPM,SeFM» strong, fracture/vein controlled, chloritization; moderate, pervasive, chloritization; weak, fracture/vein controlled, sericitization -unit also has minor qtz/carb veins	⟪33.32-47.29⟫«PyF0.1%,PoD0.1%,CpF0.1%» 0.1% fracture/vein controlled pyrite; 0.1% disseminated/blebby pyrrhotite; 0.1% fracture/vein controlled chalcopyrite ⟪45.28-46.56⟫«CpD0.5%,PyD1%» 0.5% disseminated/blebby chalcopyrite; 1.0% disseminated/blebby pyrite -disseminated mineralization below bx zone	⟪35.00-38.00⟫ «AR07992-WR» ⟪45.28-46.28⟫ «AR08200-MEX» ⟪46.28-47.29⟫ «AR08251-MEX»
47.29 TO 61.80	«4,a,m,q» Felsic Volcanic fine grained massive quartz phyric	-uphole contact sharp and planar @51° to CA -strongly altered massive unit -1-2% equant qtz-eyes 1-2mm in diameter -brecciated textures inplaces due to strong chlorite veining · ⟪51.30-51.63⟫«2,bx,*b» Mafic Volcanic breccia, lapilli tuff, -mafic/intermediate interflow tuff marking flow contact -upper contact irregular with rhyolite which shows devitrification and fragmentation -lower contact extremely sharp with rhyolite below -strongly chloritic -1.5-2.0m below this discreet interval the unit is a chaotic mixture of diffuse felsic and mafic (chloritic material)		-intense alteration changes from primarily sericite above mafic tuff to K-feldspar below ⟪47.29-61.80⟫«ChFW ,SiFW,SiPM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, pervasive, silicification ⟪47.29-53.00⟫«SePS ,ChFS,SeFM» strong, pervasive, sericitization; strong, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization ⟪53.00-61.80⟫«KxPS ,ChFS,SeFM» strong, pervasive, potassic alteration; strong, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, sericitization	⟪47.29-61.80⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite -associated with chloritic veining	⟪48.00-51.00⟫ «AR07993-WR» ⟪57.00-60.00⟫ «AR07994-WR»
61.80 TO 72.62	«3,bx,C,*b,*w» Intermediate Volcanic breccia	-fragmental to tuffaceous unit consisting of ash-lapilli tuffs with angular clasts of K-feldspar altered massive rhyolite -probably analagous to shorter interflow unit in massive rhyolite above		-rhyolite clasts altered as massive units above and below ⟪61.80-72.62⟫«CbFW ,SiFW,ChPM» weak, fracture/vein controlled,	⟪61.80-72.62⟫«PyF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrite -associated with chlorite alteration	⟪62.00-65.00⟫ «AR07995-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	heterolithi c lapilli tuff frag. (fel>maf)	71.35-71.98 «4,m,q,*d» Felsic Volcanic massive, quartz phyric, block/xenolith, -K-spar and chlorite altered		carbonatization; weak, fracture/vein controlled, silicification; moderate, pervasive, chloritization -also weak fracture controlled epidote		
72.62 TO 92.27	«4,a,m,q» Felsic Volcanic fine grained massive quartz phyric	-uphole contact sharp but below large rhyolite blocks sit in mafic unit immediately above contact -strongly K-altered massive unit similar qtz-porphyritic unit above -possibly weak flow-banding but masked by alteration ‖81.59-84.90‖«3,C,*a» Heterolithic Volcanic tuff, -interflow unit with blocks of rhyolitic material ‖85.30-86.00‖«{FAI}» Fault -broken, blocky core		‖72.62-92.47‖«CbFW ,SiSS,SiPM» weak, fracture/vein controlled, carbonatization; strong, spotty, silicification; weak, pervasive, silicification -wide bull qtz veins (2-5cm with internal chloritic veining) ‖72.62-92.27‖«K>PS ,ChFS,K>FM» strong, pervasive, potassic alteration; strong, fracture/vein controlled, chloritization; moderate, fracture/vein controlled, potassic alteration	‖72.62-92.27‖«PyF1%,CpF0.1-0.5» 1.0% fracture/vein controlled pyrite; 0.1-0.5% fracture/vein controlled chalcopyrite -coarse clots of Py and Cpy within qtz and chlorite veins	‖74.00-77.00‖ «AR07996-WR»
92.27 TO 98.91	«3,a,*a» Intermediat e Volcanic fine grained tuff	-uphole contact sheared and altered @~21° to CA -med. grayish green -intermediate? tuff with mino fragmental interbeds (ie. 94.44-94.53m) and felsic lapilli -some massive intervals may be blocks of rhyolitic/dacitic material		-some clasts and qtz/carb veins show strong K-feldspar alteration -diffucult to tell if these are K-spar veins or rims of altered felsic clasts ‖92.27-98.91‖«CbFW ,SiFW,ChFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, fracture/vein controlled, chloritization	-unmineralized	
98.91 TO 141.06	«10,b,Mag» Diabase medium grained magnetite	-uphole contact sharp with chill over upper 5-6m -weakly magnetic over most of unit -med. grained with 'leopard spotting' texture 113.53-119.07 «4,a,d,m,*d» Felsic Volcanic fine grained, quartz-feldspar Phyric, massive, block/xenolith, -large block/raft of rhyolite within diabase		-possibly weak fracture controlled K-spar alteration (difficult to tell from hematite?) ‖98.91-141.06‖«CbFW ,SiFW,HeFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, fracture/vein controlled, hematization	‖98.91-141.06‖«PyF1-2%» 1.0-2.0% fracture/vein controlled pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-sharp contacts -strongly K-feldspar and chlorite altered as above rhyolites but contains 1-2% euhedral white feldspar phenocrysts				
141.06 TO 178.35	«2,a,bx» Mafic Volcanic fine grained breccia	-upper contact semi-arbitrary, marked by non-magnetism and start of fragmental/brecciated textures -dark grayish green -unit contains intermitant 5-10cm intervals of fragmental/brecciated material -possibly in-situ brecciated akin to that lower in hole -also contains hard silicious intervals which are either silicified patches of blocks of rhyolite -conacts of these intervals are sharp to gradational ⟪144.25-146.12⟫«2,bx,f,*e» Mafic Volcanic breccia, primary fragmentals, autoclastic/hyaloclastite. -flow-top bx with mino hyaloclastitic? component -textures primarily parallel to CA -bx'n at top of interval suggest down-hole tops (coarser bx) ⟪178.16-178.35⟫«{FA1}» Fault -broken,ground,pastey core		-some minor carbonate veins primarily Fe carbonate (chalky white and soft) ⟪141.06-178.35⟫«CbFM ,SiFM,K>FM» weak, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration ⟪141.06-178.35⟫«SiFM ,K>FM,ChFM» moderate, pervasive, silicification; weak, pervasive, potassic alteration; weak, fracture/vein controlled, chloritization -chloritic fractures within fragmental intervals	⟪141.06-178.35⟫«PyF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrite -within chloritic qtz/carb vein	⟪149.00-152.00⟫ «AR07997-WR»
178.35 TO 193.82	«10,b,Mag» Diabase medium grained magnetite	-uphole contact at fault -core is strongly broken and blocky, probably a fault zone (talcose/chloritic slips) -as above, some hard silicious intervals may be blocks of rhyolite or silicification -minor in-situ brecciation (ie. @185.5m) ⟪192.70-193.82⟫«{FA1}» Fault -broken/blocky core		⟪178.35-193.82⟫«CbFM ,SiFM,HeSW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, spotty, hematization -pinkish spots either hematite or K-altered feldspars -minor Fe-carbonate	⟪178.35-193.82⟫«PyF0.5-1%,CpF0.1%» 0.5-1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite	⟪188.00-191.00⟫ «AR07998-WR»
193.82 TO 221.74	«4,a,m» Felsic Volcanic fine grained massive	-uphole contact at fault -massive from 193.82-196.70m and 219.71-221.74m -from 196.7-219.71m unit contains minor brecciated intervals and strong mottled texture (devitrification) as seen in upper portions of hole		-mottled texture consists of remnant chloritic spots in a beige/buff alteration (devitrification?) -some Fe-carb veining (late) -two silica events 1)early-dark gray veining 2)late-milky white veins	⟪194.40-197.00⟫«CpF4-5%,PyF1-2%» 4.0-5.0% fracture/vein controlled chalcopyrite; 1.0-2.0% fracture/vein controlled pyrite -Cu stringers associated with thin qtz/chlorite veinlets	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-beige/buff 'alteration' surrounding irregular chloritic spots -dark, chloritic colour but texture suggests a felsic precursor -QFP blocks/dykes at 207.35-207.71m and 218.51-219.11m {200.18-202.22}«2,A,e,m» Mafic Volcanic fine grained, amygdaloidal/vesicular, massive, -brown mafic volcanic with 1-2% Fe-carb/calcite filled Amygdules		-K-spar veins appear late and cut mineralized chloritic stringers but a weak pervasive K-feldspar may be earlier {193.82-221.74}«CbFW ,SiFW,K>FW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration {193.82-221.74}«ChFM ,ChPM,K>PW» moderate, fracture/vein controlled, chloritization; moderate, pervasive, chloritization; weak, pervasive, potassic alteration	{197.00-221.74}«PyF0.5%,CpF0.1%,SphF0.1 » 0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite; 0.1% fracture/vein controlled sphalerite -Cu-stringers die out quickly by 180.5m -tr. base metals for remainder of unit -some Cu appears remobilized into qtz/carb veinlets (ie.@205.10m)	
221.74 TO 307.63	«4,bx» Felsic Volcanic breccia	-composite unit consisting mainly of felsic flows and tuffs with minor mafic tuffs as outlined below -unit is cut by several heterolithic 'pseudo-tachylitic' breccias, larger intervals listed below as BX'S but many smaller irregular breccia veinlets occur -breccias are composed of small (<1cm) angular to rounded clasts of variable lithologies (felsic/mafic/sedimentary) set in a fine grained, black matrix -some clasts are mineralized (Py,Cpy,Sph) and some breccias containrounded Py nodules -contacts with host rocks are sharp and irregular to jagged -little correlation between host rocks and clast lithology -probably represent explosion breccias (ie Sudbury Breccias) {221.74-224.60}«2,*a» Mafic Volcanic tuff, {224.60-226.30}«4,m» Felsic Volcanic massive, -hyaloclastite band @226.14m		{221.74-224.60}«ChPS ,ChFM,HeFW» strong, pervasive, chloritization; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, hematization {224.60-226.30}«K>PS ,CbFM,SiFW» strong, pervasive, potassic alteration; moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {226.30-228.10}«ChPS ,CbFM,SiFW» strong, pervasive, chloritization; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {228.10-242.74}«SeFW ,ChFS» weak, fracture/vein controlled, sericitization; strong, fracture/vein controlled, chloritization {243.05-259.60}«ChPS» strong, pervasive, chloritization {259.60-276.46}«SeFM ,ChFM,CbFW» moderate, fracture/vein controlled,	{226.30-228.10}«PyD0.1%,CpD0.1%» 0.1% disseminated/blebby pyrite; 0.1% disseminated/blebby chalcopyrite {228.10-242.74}«PyF1%,CpF0.1%» 1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite {242.74-243.05}«PyD0.1%» 0.1% disseminated/blebby pyrite -Py nodules {243.05-259.60}«PyD1%,CpF0.1-0.5%» 1.0% disseminated/blebby pyrite; 0.1-0.5% fracture/vein controlled chalcopyrite {259.60-276.46}«PyF0.5%,CpF0.1%» 0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite {276.46-279.67}«PyD0.1%» 0.1% disseminated/blebby pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				sericitization; moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization ‖276.46-279.67‖«ChPM» moderate, pervasive, chloritization ‖279.67-302.00‖«ChFM ,ChPW» moderate, fracture/vein controlled, chloritization; weak, pervasive, chloritization ‖302.00-307.63‖«ChFW» weak, fracture/vein controlled, chloritization	‖279.67-302.00‖«PyF0.5-1%» 0.5-1.0% fracture/vein controlled pyrite ‖302.00-307.63‖«PyD0.1%» 0.1% disseminated/blebby pyrite	
		‖226.30-228.10‖«2,*b,<RHV>» Mafic Volcanic lapilli tuff, reworked volcanic Debris. -cut by mafic dyke -argillite at downhole contact				
		‖228.10-228.11‖«{FAI}» Fault -pasty core				
		‖228.11-242.74‖«4,bx,*b» Felsic Volcanic breccia, lapilli tuff, -variable textures, massive,breccias and tuffs -weakly feldspar-phyric -BX'S @ 228.48-228.58m,230.76-230.91m, 234.62-234.78,237.1				
		‖242.74-243.05‖«5,<HCK>,<RW» Sedimentary graywacke, reworked volcanic Debris. -tuffaceous to sedimentary -weak downhole fining				
		‖243.05-259.60‖«2,*a» Mafic Volcanic tuff, -biotite rich, possibly a lampropyre -muscovite/qtz pegmatite? at 269.2-269.3m -BX'S a 244.55-245.11m,249.50-249.90m				
		‖259.60-276.46‖«4,bx,*b» Felsic Volcanic breccia, lapilli tuff, -BX'S at 261.30-263.10m,263.87-264.30m				
		‖276.46-279.67‖«2,A,m» Mafic Volcanic fine grained, massive, -massive unit with downhol tops indicated by contacts with felsics above and below				
		‖279.67-302.00‖«4,bx,*b» Felsic Volcanic				

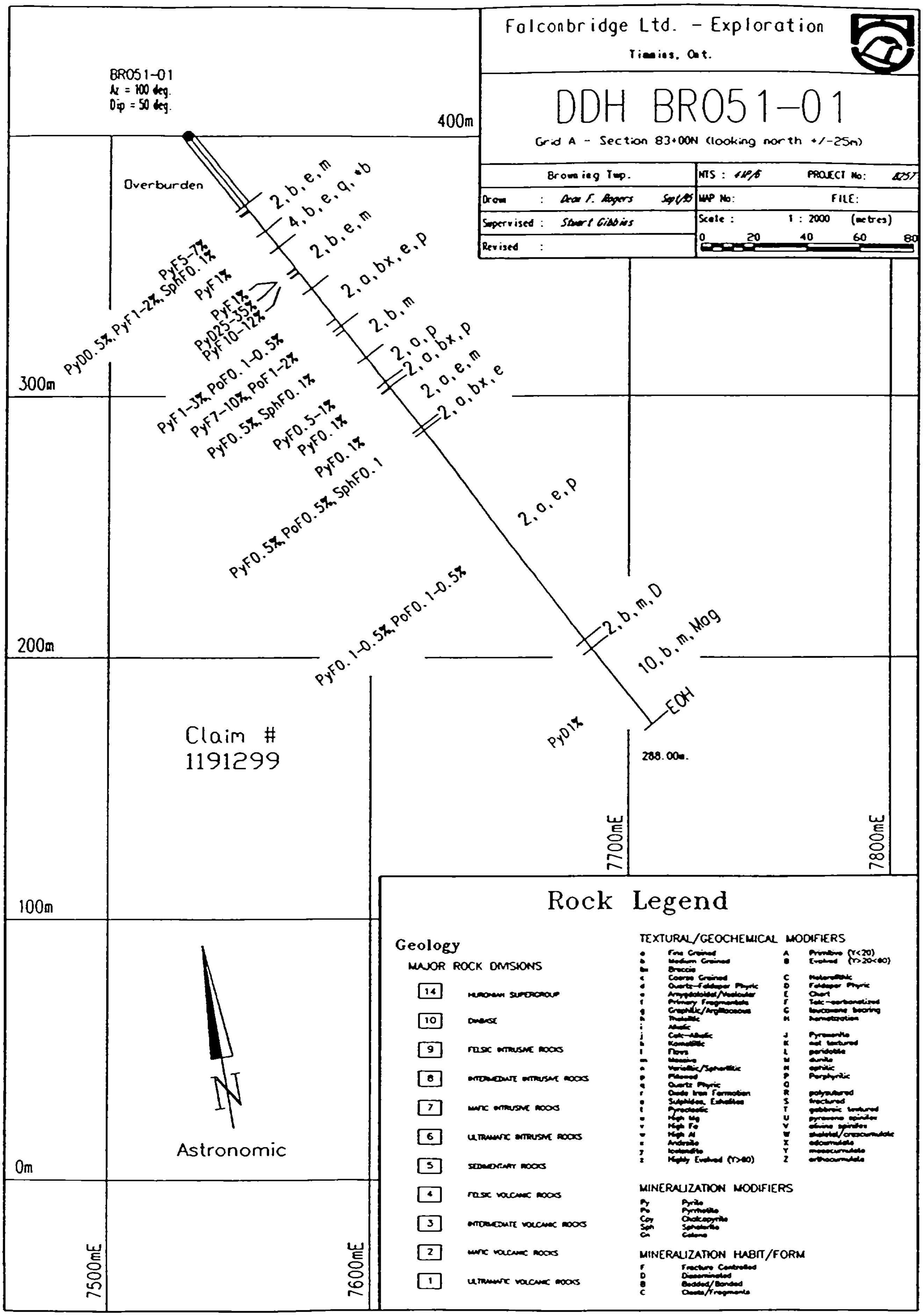
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		breccia, lapilli tuff, -massive over lower 5-6m with minor devitrification textures -BX'S at 280.10-280.20m,282.16-282.82m, 288.89-289.25m,295.				
		⟦302.00-307.61⟧«4,*a,<RHV» Felsic Volcanic tuff, reworked volcanic Debris, -in-situ bx'd wit chlori tic fractures -weak downhole fining -BX'S at 306.56-306.67m,307.41-307.53m				
307.61 TO 319.00	«9,D,P» Felsic Intrusive feldspar phyric porphyritic	-uphole contact at BX -»75% angular to euhedral feldspar phenocrysts -possibly explosive -rare qtz phenocrysts 316.11-316.17 «5,a,<ARG»» Sedimentary fine grained, mudstone-argillite, -sedimentary? or Argillic alteration		⟦307.61-319.00⟧«ChFW ,EpSW» weak, fracture/vein controlled, chloritization; weak, spotty, epidotization -green epidote crystals	⟦307.61-319.00⟧«PyF1%» 1.0% fracture/vein controlled pyrite	
319.00 TO 319.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08199	31.00	32.00	1.00	2700	54	17	0.6	4			10
AR08200	45.28	46.28	1.00	284	84	27	0.1	1			24
AR08251	46.28	47.28	1.00	1050	91	21	0.3	1			29
AR08252	194.40	195.40	1.00	8020	36	72	0.8	57			17
AR08253	195.40	196.80	1.40	3200	18	34	0.3	18			12
AR08254	196.80	198.30	1.50	1150	33	0	0.1	1			16
AR08255	198.30	199.80	1.50	258	53	3	0.2	1			19
AR08256	254.00	255.50	1.50	81	35	0	0.1	1			12
AR08257	255.50	257.00	1.50	31	38	0	0.2	1			16
AR08258	257.00	258.50	1.50	32	37	0	0.2	6			29
AR08259	261.30	262.80	1.50	104	56	0	0.2	19			36
AR08260	282.16	282.36	0.20	69	170	0	0.3	15			35

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR07989	11.00	14.00	3.00	63.63	17.23	1.70	2.94	3.13	3.12	5.28	0.53	0.12	0.08	0.09	3.05	100.80	12	136					25	65	25		4,a,m 3j	217
AR07990	20.00	23.00	3.00	63.57	17.00	1.50	4.04	1.69	3.28	4.59	0.52	0.12	0.07	0.06	4.21	100.58	12	122					20	45	25		4,a,m 3j	263
AR07991	29.00	32.00	3.00	74.53	12.64	0.47	2.91	0.99	2.34	3.55	0.21	0.06	0.04	0.08	2.70	100.45	16	164					60	55	15		4,a,q 4jA	333
AR07992	35.00	38.00	3.00	63.86	17.08	0.50	4.40	1.43	3.26	5.45	0.49	0.08	0.06	0.06	3.76	100.37	10	74					150	75	40		4,a,m 3j	329
AR07993	48.00	51.00	3.00	72.13	15.20	0.74	0.65	3.75	2.70	1.45	0.03	0.08	0.02	0.08	1.49	98.22	10	52					30	25	20		4,a,m,q4hA	211
AR07994	57.00	60.00	3.00	75.03	13.55	0.80	0.53	5.39	1.46	1.38	0.03	0.06	0.02	0.08	1.19	99.44	6	34					20	15	20		4,a,m,q4jA	177
AR07995	62.00	65.00	3.00	61.73	15.98	2.63	4.34	3.39	1.54	6.46	0.47	0.12	0.12	0.14	2.91	99.68	12	110					10	75	55		3,C,bx,4jA	211
AR07996	74.00	77.00	3.00	74.79	13.62	1.09	0.79	5.04	1.60	2.08	0.04	0.06	0.03	0.13	1.38	100.53	12	46					495	20	40		4,a,m,q4hA	174
AR07997	149.00	152.00	3.00	62.25	16.12	1.07	4.70	5.44	1.46	5.94	0.46	0.12	0.09	0.04	3.08	100.70	12	96					10	70	50		2,a,bx 4jA	202
AR07998	188.00	191.00	3.00	47.71	14.06	4.53	6.89	3.20	0.96	15.37	1.17	0.14	0.22	0.03	6.59	100.84	28	112					135	285	65		10,b,Ma7hv	162
AR07999	206.00	209.00	3.00	64.22	15.81	0.45	4.95	2.02	3.32	5.58	0.30	0.08	0.09	0.09	3.41	100.24	4	64					30	75	50		4,a,m 4jA	273
AR08000	223.00	224.00	1.00	48.98	13.71	4.73	8.77	3.59	1.90	14.13	1.15	0.12	0.21	0.03	5.60	99.90	28	72					160	200	50		2,*a 2hu$	190
AR08001	227.00	228.00	1.00	45.61	15.51	3.64	9.86	3.90	1.84	13.27	0.87	0.10	0.22	0.05	7.16	100.96	12	50					315	185	100		2,*a 2hu$	185
AR08002	239.00	242.00	3.00	67.84	14.22	2.34	2.02	3.95	2.92	4.17	0.41	0.18	0.07	0.10	2.40	100.52	16	146					85	35	10		4,m 4jAS	154
AR08003	244.55	245.00	0.45	61.25	10.90	5.61	3.05	1.84	2.56	5.58	0.36	0.16	0.11	0.06	6.10	97.51	30	98					60	45	65		3,C,bx 4hB	109
AR08004	245.00	248.00	3.00	70.14	12.62	0.47	3.51	0.29	3.38	4.91	0.39	0.10	0.06	0.08	2.95	98.82	18	188					55	75	20		2,*a 4jA	305
AR08005	266.00	269.00	3.00	69.68	12.46	2.04	2.70	1.48	2.60	5.07	0.45	0.12	0.08	0.10	3.65	100.33	12	270					35	25	20		4,bx 4jA	204
AR08006	278.00	280.00	2.00	47.69	13.56	6.77	9.91	2.18	1.10	10.74	0.89	0.58	0.19	0.13	7.38	100.97	26	136					90	80	195		2,a,m 2hyB	115
AR08007	284.00	286.00	2.00	67.39	13.03	1.02	3.71	3.44	3.26	5.14	0.34	0.10	0.08	0.08	3.46	97.97	22	192					85	75	45		4,bx,*b4jB	276
AR08008	288.90	289.25	0.35	65.52	13.40	0.98	4.82	1.44	2.60	7.47	0.44	0.12	0.11	0.10	3.88	100.78	22	164					140	50	25		3,C,bx 4jB	267
AR08009	302.00	305.00	3.00	61.59	15.86	4.27	3.49	4.05	2.26	5.42	0.60	0.30	0.09	0.06	3.00	100.93	18	162					65	80	50		4,*a 3j	150
AR08010	311.00	314.00	3.00	69.80	15.52	2.21	0.85	5.48	2.42	2.16	0.23	0.14	0.04	0.09	2.12	100.98	8	112					15	10	25		9,D,P 9jA	164

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR07989	11.00	14.00	3.00			20		<100																					
AR07990	20.00	23.00	3.00			15		100																					
AR07991	29.00	32.00	3.00			10		100																					
AR07992	35.00	38.00	3.00			20		100																					
AR07993	48.00	51.00	3.00			5		1300																					
AR07994	57.00	60.00	3.00			<5		100																					
AR07995	62.00	65.00	3.00			10		<100																					
AR07996	74.00	77.00	3.00			20		200																					
AR07997	149.00	152.00	3.00			20		<100																					
AR07998	188.00	191.00	3.00			55		100																					
AR07999	206.00	209.00	3.00			25		<100																					
AR08000	223.00	224.00	1.00			35		14000																					
AR08001	227.00	228.00	1.00			45		4500																					
AR08002	239.00	242.00	3.00			20		5100																					
AR08003	244.55	245.00	0.45			15		1000																					
AR08004	245.00	248.00	3.00			10		<100																					
AR08005	266.00	269.00	3.00			20		100																					
AR08006	278.00	280.00	2.00			40		200																					
AR08007	284.00	286.00	2.00			15		900																					
AR08008	288.90	289.25	0.35			20		1500																					
AR08009	302.00	305.00	3.00			15		100																					
AR08010	311.00	314.00	3.00			10		200																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO%	CA/AL	NI/MOO	ISHIKW	ZN/NA2
AR07989	11.00	14.00	3.00																					0.57	0.10	9	56	21
AR07990	20.00	23.00	3.00																					0.68	0.09	6	70	27
AR07991	29.00	32.00	3.00																					0.66	0.04	5	78	56
AR07992	35.00	38.00	3.00																					0.66	0.03	9	80	52
AR07993	48.00	51.00	3.00																					0.52	0.05	31	43	7
AR07994	57.00	60.00	3.00																					0.48	0.06	38	24	3
AR07995	62.00	65.00	3.00																					0.62	0.16	13	49	22
AR07996	74.00	77.00	3.00																					0.47	0.08	51	28	4
AR07997	149.00	152.00	3.00																					0.65	0.07	11	49	11
AR07998	188.00	191.00	3.00																					0.52	0.32	9	50	89
AR07999	206.00	209.00	3.00																					0.68	0.03	10	77	37
AR08000	223.00	224.00	1.00																					0.60	0.35	6	67	339
AR08001	227.00	228.00	1.00																					0.64	0.23	10	75	206
AR08002	239.00	242.00	3.00																					0.54	0.16	5	44	9
AR08003	244.55	245.00	0.45																					0.57	0.51	21	43	24
AR08004	245.00	248.00	3.00																					0.63	0.04	6	90	259
AR08005	266.00	269.00	3.00																					0.56	0.16	7	60	17
AR08006	278.00	280.00	2.00																					0.69	0.50	20	55	17
AR08007	284.00	286.00	2.00																					0.63	0.08	12	83	170
AR08008	288.90	289.25	0.35																					0.61	0.07	5	75	35
AR08009	302.00	305.00	3.00																					0.61	0.27	14	41	20
AR08010	311.00	314.00	3.00																					0.48	0.14	29	30	2



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR051-01
Grid A - Section 83+00N (looking north +/-25m)
Browning Twp.
NTS : 42A/6
PROJECT No: 8257
Drawn : Dean F. Rogers
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
0 20 40 60 80
Revised :
BR051-01
Az = 100 deg.
Dip = 50 deg.
400m
300m
200m
100m
0m
Overburden
2,b,e,m
4,b,e,q,+b
2,b,e,m
2,a,bx,e,p
2,b,m
2,a,p
2,a,bx,p
2,a,e,m
2,a,bx,e
2,a,e,p
2,b,m,D
10,b,m,Mag
EOH
288.00m.
PyF5-7%
PyD0.5%,PyF1-2%,SphF0.1%
PyF1%
PyF1%
PyD25-35%
PyF10-12%
PyF1-3%,PoF0.1-0.5%
PyF7-10%,PoF1-2%
PyF0.5%,SphF0.1%
PyF0.5-1%
PyF0.1%
PyF0.1%
PyF0.5%,PoF0.5%,SphF0.1
PyF0.1-0.5%,PoF0.1-0.5%
PyD1%
Claim # 1191299
Astronomic
7500mE
7600mE
7700mE
7800mE
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
a Fine Grained
b Medium Grained
bx Breccia
c Coarse Grained
d Quartz-Feldspar Phyric
e Amygdaloidal/Vesicular
f Primary Fragmentals
g Graphitic/Argillaceous
h Tholeiitic
i Alkalic
j Calc-Alkalic
k Komatiitic
l Flows
m Massive
n Variolitic/Spherulitic
p Pillowed
q Quartz Phyric
r Oxide Iron Formation
s Sulphides, Exhalites
t Pyroclastic
u High Mg
v High Fe
w High Al
x Andesite
y Icelandite
z Highly Evolved (Y>80)
A Primitive (Y<20)
B Evolved (Y>20<80)
C Heterolithic
D Feldspar Phyric
E Chert
F Talc-carbonatized
G leucoxene bearing
H hematization
J Pyroxenite
K
L peridotite
M dunite
N aphitic
P Porphyritic
Q
R polysutured
S fractured
T gabbroic textured
U pyroxene spinifex
V olivine spinifex
W skeletal/crescumulate
X adcumulate
Y mesocumulate
Z orthocumulate
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cpy Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

HOLE NUMBER: BR051-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191299
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5248256.00N
EAST: 486295.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 83+ 0N
EAST: 75+30E
ELEV: 400.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 288.00M
START DEPTH: 0.00M
FINAL DEPTH: 288.00M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"
GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 09/13/1995
DATE COMPLETED: 09/16/1995
DATE LOGGED: 09/18/1995

COLLAR SURVEY: NO
ROD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NW & BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486288mE 5248256mN

COMMENTS : North end of Grid A (DDH #8, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-52° 0' 0"	A	DO	
120.00	100° 0' 0"	-53° 0' 0"	A	DO	
180.00	100° 0' 0"	-51° 0' 0"	A	DO	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 34.30	«{OB}» Casing Overburden					
34.30 TO 46.68	«2,b,e,m» Mafic Volcanic medium grained amygdaloidal/vesicular massive	-pale to dark green mottled texture -rare fragments -very weak fol'n affects some amygdules but mottled texture appears undeformed (primary flow?) -strongly amygdaloidal (>3-4%) which are large (up to 0.5cm), dominantly calcite and Fe-carb filled with some qtz filled and some qtz with calcite rims -some amygdules contain fine-grained Py -mottled texture due to 0.3-2.0cm ameboid patches of carbonate, often nucleated around amygdules and Py clots -unit cut by two breccia zones noted below {36.31-38.05}«2,bx,*x» Mafic Volcanic breccia, frag. (maf>fel), -mafic and felsic fragments in a matrix similar looking to above unit -subangular to angular clasts -clasts decrease in size and abundance downhole -coarser breccia at top has Py veining around fragments {45.11-45.91}«2,bx,*x» Mafic Volcanic breccia, frag. (maf>fel), -similar to above bx but lacks sulphide veining around clasts		-predominantly carbonate alteration (calcite and ferroan) as late veining, amygdule infilling and as ameboid mottling -matrix appears weakly chloritic -Fe-carbonate mottling has a pale green yellowish colour {34.30-46.68}«ChPW ,CbFW,SiFW» weak, pervasive, chloritization; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {34.30-46.68}«CbPM ,F>SS,SiSW» moderate, pervasive, carbonatization; strong, spotty, iron carbonate; weak, spotty, silicification	{34.30-46.68}«PyD0.5%,PyF1-2%,SphF0.1%» 0.5% disseminated/blebby pyrite; 1.0-2.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled sphalerite -overall unit contains 2-3% fine-grained Py as fractures, clots and within amygdules with trace Sph veinlets {36.31-37.10}«PyF5-7%» 5.0-7.0% fracture/vein controlled pyrite -fine-grained Py surrounding clasts in coarse breccia	{36.31-38.00} «AR08261-MEX» {41.00-44.00} «AR08011-WR»
46.68 TO 54.82	«4,b,e,q,*b» Felsic Volcanic medium grained amygdaloidal/vesicular quartz phyric lapilli	-uphole contact sharp and irregular with block of rhyolite in above mafic -med. gray to pale green -1-2% calcite filled amygdules are generally 1mm in size but some up to 3mm -2-3% subrounded to equant qtz eyes (1-2mm), some may be silica filled amygdules -ragged, angular mafic clasts (1-2cm) scattered within unit -large intervals of amygdular mafic volcanic @49.3-49.85m and 53.7-54.3m, possibly		{46.68-54.82}«ChFM ,SiFM,ChPW» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; weak, pervasive, carbonatization -calcite filled fractures and amygdules -also a very weak fracture controlled chlorite/sericite	{46.68-54.82}«PyF1%» 1.0% fracture/vein controlled pyrite -fine Py in fractures within and around fragments with minor disseminations	{50.00-53.00} «AR08012-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	tuff	blocks/fragments but upper one contains blocks of rhyolite within it (injections?) -rare irregular feldspar x-scale up to 1cm may be fragments				
54.82 TO 75.11	«2,b,e,m» Mafic Volcanic medium grained amygdaloidal/vesicular massive	-uphole contact at pyritic qtz/carb vein -pale greenish yellow -similar mottled textured amygdular mafic flow as above -calcite/qtz filled amygdules, some with mottled halos (=5%) increase weakly downhole (tops down?)		-predominantly calcite alteration ⟨⟨54.82-75.11⟩⟩«CbPS ,CbSS,CbFM» strong, pervasive, carbonatization; strong, spotty, carbonatization; moderate, fracture/vein controlled, carbonatization -more green intervals not pervasively carbonated, possibly epidote/chlorite?, some bright green veinlets (fuchsite?) ⟨⟨54.82-75.11⟩⟩«ChFM ,SiFM» moderate, fracture/vein controlled, chloritization; weak, fracture/vein controlled, silicification -fracture controlled chlorite stronger in downhole portion of unit -some amygdules also chlorite filled	⟨⟨54.82-75.11⟩⟩«PyF1%» 1.0% fracture/vein controlled pyrite -overall unit contains ~1% Py veinlets,clots and amygdule cores ⟨⟨64.97-65.52⟩⟩«PyD25-35%» 25.0-35.0% disseminated/blebby pyrite -fine-grained Py in a band almost parallel to CA -minor coarse Py clots -massive but only occupies ¼ of the core -moderately conductive over entire length of interval (probable conductor at surface) ⟨⟨67.05-67.49⟩⟩«PyF10-12%» 10.0-12.0% fracture/vein controlled pyrite -fine-grained Py bands within bright green alteration? (epidote/chlorite/fuchsite)	⟨⟨59.00-62.00⟩⟩ «AR08013-WR» ⟨⟨62.00-63.50⟩⟩ «AR08262-MEX» ⟨⟨63.50-65.00⟩⟩ «AR08263-MEX» ⟨⟨65.00-66.50⟩⟩ «AR08264-MEX» ⟨⟨66.50-68.00⟩⟩ «AR08265-MEX» ⟨⟨66.62-66.82⟩⟩ «AR08014-WR» ⟨⟨68.00-69.50⟩⟩ «AR08266-MEX» ⟨⟨69.50-71.00⟩⟩ «AR08267-MEX» ⟨⟨71.00-74.00⟩⟩ «AR08015»
75.11 TO 93.44	«2,a,bx,e,p» Mafic Volcanic fine grained breccia amygdaloidal/vesicular pillowed	-uphole contact sharp and sulphidic -pale green to gray -blocks of fine-grained weakly amygdular (calcite) mafic volcanic set in a granular chloritic,carbonated and sulphidic matrix -granular chloritic material appear to be pillow selvages which have been carbonate altered -some very angular blocks and other more fluidal textured		-strong pervasive carbonate over entire unit ⟨⟨75.11-93.44⟩⟩«ChFM ,CbFS,CbPS» moderate, fracture/vein controlled, chloritization; strong, fracture/vein controlled, carbonatization; strong, pervasive, carbonatization -distinct calcite veins an carbonated material interstitial to fragments ⟨⟨75.11-93.44⟩⟩«SiFM ,EpFM» weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, epidotization -minor epidote veinlets -cherty alteration interstitial to some fragments	-Py and Po mineralization interstitial to pillow? fragments within carbonate veining ⟨⟨75.11-90.00⟩⟩«PyF1-3%,PoF0.1-0.5%» 1.0-3.0% fracture/vein controlled pyrite; 0.1-0.5% fracture/vein controlled pyrrhotite ⟨⟨90.00-93.44⟩⟩«PyF7-10%,PoF1-2%» 7.0-10.0% fracture/vein controlled pyrite; 1.0-2.0% fracture/vein controlled pyrrhotite	⟨⟨75.50-77.00⟩⟩ «AR08268-MEX» ⟨⟨77.00-78.50⟩⟩ «AR08269-MEX» ⟨⟨78.50-80.00⟩⟩ «AR08270-MEX» ⟨⟨80.00-81.50⟩⟩ «AR08271-MEX» ⟨⟨81.50-83.00⟩⟩ «AR08272-MEX» ⟨⟨83.00-86.00⟩⟩ «AR08016-WR» ⟨⟨83.01-84.50⟩⟩ «AR08273-MEX» ⟨⟨84.50-86.00⟩⟩ «AR08274-MEX» ⟨⟨86.00-87.50⟩⟩ «AR08275-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
						⟨87.50-89.00⟩ «AR08276-MEX»
						⟨89.00-90.50⟩ «AR08277-MEX»
						⟨90.50-92.00⟩ «AR08278-MEX»
						⟨92.00-93.44⟩ «AR08279-MEX»
93.44 TO 108.76	«2,b,m» Mafic Volcanic medium grained massive	-uphole contact gradational but marked at bx'd band at change in grain size -light green with darker, chloritic? spotting giving a med. grained texure -no amygdules -weakly in-situ bx'd with carbonated/chloritic fractures with selvage-like appearance (discontinuous)		⟨93.44-108.76⟩«CbFW ,F>FM,SiFW» weak, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, iron carbonate; weak, fracture/vein controlled, silicification -unit cut b 0.3-1.0cm wide carbonate/qtz veins which are very soft and weakly effervescent unless powdered indicating Fe or Mg carbonate ⟨93.44-108.76⟩«ChSW ,EpFW» weak, spotty, chloritization; weak, fracture/vein controlled, epidotization -small mm scale pale green (epidote?) veinlets with paler Fe/Mg) carbonate alteration halos are sometimes mineralized and cut by later, wider carbonate veinlets	⟨95.44-108.76⟩«PyF0.5%,SphF0.1%» 0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled sphalerite -within qtz/carbonate veins with purplish Sp? within earlier? epidote/carb veinlets	⟨98.00-101.00⟩ «AR08017-WR»
108.76 TO 120.79	«2,a,p» Mafic Volcanic fine grained pillowed	-uphole contact marked at change in grain size at carbonate vein -light to med. green -pillowed flow with selvages approx. every 1.0-1.5m -selvages marked by chloritic/carbonate granular bands some showing bx'n, hyaloclastite, chilled margins with some fluidal te xtured margins -very weakly amygdular at pillow margins but no clear concentration at up or downhole portion -some 'selvages' are very wide (up to 5cm) but most		⟨108.76-120.79⟩«CbFM ,CbPS,SiFW» moderate, fracture/vein controlled, carbonatization; strong, pervasive, carbonatization; weak, fracture/vein controlled, silicification -discreet carb/qtz veins as well as within pillow selvages with pervasive calcite throughout core -predominantly (if not entirely calcite) -selvages also weakly chloritic	⟨108.76-120.79⟩«PyF0.5-1%» 0.5-1.0% fracture/vein controlled pyrite -associated with carbonate alteration	⟨116.00-119.00⟩ «AR08018-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
120.79 TO 123.39	«2,a,bx,p» Mafic Volcanic fine grained breccia pillowed	-uphole contact semi-arbitrary at beginning of strong bx'n -strongly brecciated by carbonate veining but some bx'n is very fluidal and appears primary -weakly amygdular with chlorite infilling -chloritic granular material similar to that within selvages above intermixed with carbonate veining		⟪120.79-123.39⟫«CbFS ,ChFW,SiFW» strong, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, silicification -some weakly effervescent carbonate (Fe/Mg carb) but predominantly calcite-chloritic, discontinuous selvages -some fragments weakly pervasively altered (carbonate) -chloritic spotting probably chlorite filled amygdules	⟪120.79-123.79⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite -associated with carb veining	
123.39 TO 142.52	«2,a,e,m» Mafic Volcanic fine grained amygdaloidal/vesicular massive	-contact marked by decrease in brecciation and carb veining -similar to massive unit above but slightly finer grained and amygdular -1-2% chlorite filled amygdules (<1mm) over lower 4-5m of unit suggests tops downhole? -weakly bx'd by carb veins with minor granular chloritic material as massive flow above ⟪127.00-127.00⟫«{S2 28°}» Foliation -moderately foliated but variable		⟪123.39-142.52⟫«CbFM ,SiFW,ChFW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization -mainly calcite veining with some Fe/Mg carbonate -discontinuous chloritic banding and amygdule infilling	⟪123.39-142.52⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite	⟪134.00-137.00⟫ «AR08018-WR»
142.52 TO 144.30	«2,a,bx,e» Mafic Volcanic fine grained breccia amygdaloidal/vesicular	-uphole contact gradational? -well developed brecciated/fragmental unit consisting of angular to sub-rounded amygdular mafic clasts in a calcitic matrix -clast from 2-3mm up to 5cm in diameter with minor hyaloclastitic matrix -3-5% calcite/qtz filled amygdules within clasts, rarely chlorite filled -excellent flow top breccia		⟪142.52-144.30⟫«CbFS ,SiFW,AbFW» strong, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization -minor albite patches within calcite veining	⟪142.52-144.30⟫«PyF0.5%,PoF0.5%,SphF0.1» 0.5% fracture/vein controlled pyrite; 0.5% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled sphalerite -within calcite matrix/fractures	⟪143.00-144.50⟫ «AR08290-MEX»
144.30 TO 246.50	«2,a,e,p» Mafic Volcanic fine grained amygdaloidal/vesicular pillowed	-uphole contact gradational with breccia above -pale to med. green -very weakly feldspar-phyric (albite, <1mm), possibly leucoxenes -in general, selvages poorly defined and irregular and composedof chloritic, carbonated granular material -become more defined down hole after ~215m -0.5-2.0cm wide-some selvages contain minor		⟪144.30-246.50⟫«CbFM ,SiFW,AbFW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization -calcite veining with weak pervasive calcite in close proximity to larger veins -albite? veinlets	⟪144.30-246.50⟫«PyF0.1-0.5%,PoF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrite; 0.1-0.5% fracture/vein controlled pyrrhotite -within chloritic/calcitic pillow selvages	⟪146.00-149.00⟫ «AR08020-WR» ⟪173.00-176.00⟫ «AR08021-WR» ⟪206.00-209.00⟫ «AR08022-WR» ⟪236.00-239.00⟫ «AR08023-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		brecciated/fragmentalmaterial (weakly hyaloclastitic) and are weakly chilled -amygdules are concentrated locally (up to 4%) usually at pillow margins (weak uphole tops indicated by some amygdule clusters (ie. @183.2m) -amygdules <1-2mm and calcite filled {169.23-170.55}«{FAI}» Fault -broken blocky core {188.95-198.93}«2,a,e,m,D» Mafic Volcanic fine grained, amygdaloidal/vesicular, massive, feldspar phyric, -massive mafic interval with 1-2 calcite/chlorite filled amygdules developed locally -1% large (up to 1cm) irregular albite (feldspar) phenocrysts scattered throughout (typical of Kidd Creek high Al flows) {201.24-201.41}«{FAI}» Fault -broken, blocky core		{144.30-246.50}«ChFW ,EpFW» weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, epidotization -chloritic pillow selvages and slips -minor epidote veinlets associated with some carbonate veins		
246.50 TO 250.90	«2,b,m,D» Mafic Volcanic medium grained massive feldspar phyric	-uphole contact at last selvage and change in grain size -similar to massive flows seen uphole -dark green with black chloritic spotting -unit contains <1% large (up to 1cm) rounded to irregular feldspar (albite) phenocrysts -possibly a dyke but no evidence of intrusive besides coarser grain-size which may only be due to chlorite spotting		{246.50-250.90}«CbFW ,SiFW,ChSM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, spotty, chloritization	-unmineralized	{247.00-250.00} «AR08024-WR»
250.90 TO 288.00	«10,b,m,Mag» Diabase medium grained massive magnetite	-chilled at uphole contact which is marked by sheared qtz/carb vein -broken and blocky over upper 2-3m -steel gray to black with irregular to clotty magnetite x-stals 2-3mm in diameter -very fresh looking as opposed to diabase in AMY36-01 -strongly magnetic except in chill zone		{250.90-288.00}«CbFW ,SiFW,FpFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, epidotization {250.90-288.00}«HeFW ,K>FW» weak, fracture/vein controlled, hematization; weak, fracture/vein controlled, potassic alteration -puplish red hematite veining -orangey pink K-feldspar within some	{250.90-288.00}«PyDi» 1.0% disseminated/blebby pyrite	

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				qtz veins and also as replacement? of individual plagioclase? k-stals (needle-like)		
288.00	*EOH*					
TO	End-Of-Hole					
288.00						

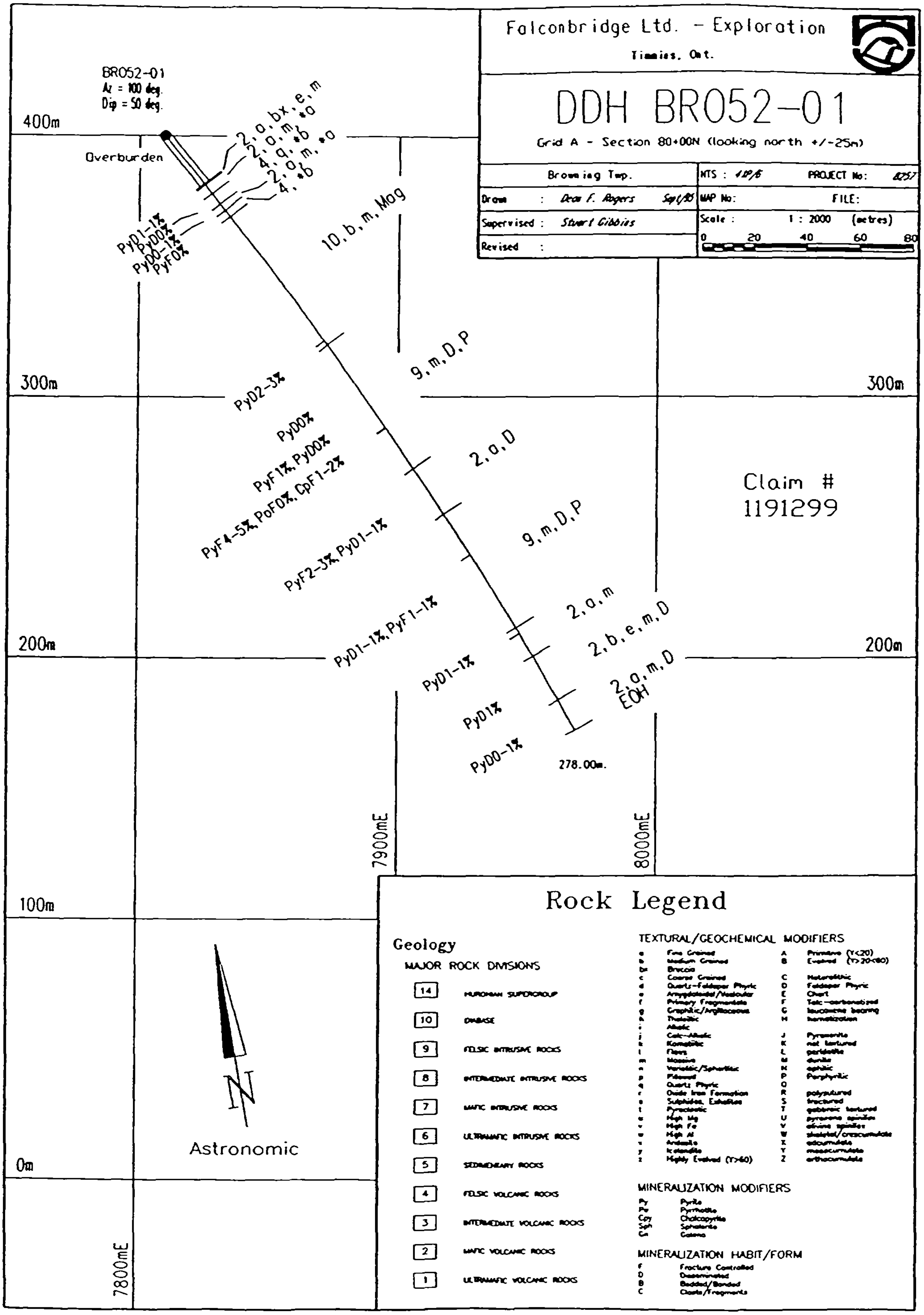
Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08261	36.31	38.00	1.69	88	26	0	0.2	1			127
AR08262	62.00	63.50	1.50	93	67	0	0.1	1			116
AR08263	63.50	65.00	1.50	66	59	0	0.1	2			132
AR08264	65.00	66.50	1.50	133	33	0	0.2	27			117
AR08265	66.50	68.00	1.50	111	20	0	0.2	1			122
AR08266	68.00	69.50	1.50	128	33	0	0.2	1			113
AR08267	69.50	71.00	1.50	113	45	3	0.1	1			126
AR08268	75.50	77.00	1.50	87	78	0	0.1	1			123
AR08269	77.00	78.50	1.50	96	73	0	0.1	1			123
AR08270	78.50	80.00	1.50	95	76	0	0.1	1			128
AR08271	80.00	81.50	1.50	81	77	0	0.1	1			132
AR08272	81.50	83.00	1.50	114	128	0	0.1	1			140
AR08273	83.00	84.50	1.50	121	167	3	0.1	1			141
AR08274	84.50	86.00	1.50	122	138	0	0.1	1			141
AR08275	86.00	87.50	1.50	102	157	0	0.1	1			136
AR08276	87.50	89.00	1.50	106	138	0	0.1	1			135
AR08277	89.00	90.50	1.50	110	105	0	0.1	1			144
AR08278	90.50	92.00	1.50	77	169	0	0.1	1			132
AR08279	92.00	93.44	1.44	151	195	0	0.3	9			115
AR08280	143.00	144.50	1.50	94	51	3	0.1	1			110

HOLE NUMBER : BR051-01 GEOCHEMICAL ASSAY DATE: 08/11/1995

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08011	41.00	44.00	3.00	40.35	13.91	15.31	5.35	1.33	0.20	11.08	0.64	0.08	0.22	1.61	10.87	99.34	14	36					75	135	185		2,b,e,m2hu!	83
AR08012	50.00	53.00	3.00	66.71	14.02	3.14	2.80	2.17	1.62	5.26	0.43	0.10	0.06	0.09	3.73	100.04	14	108					25	20	50		4,e,*b 4jA$	202
AR08013	59.00	62.00	3.00	50.22	13.73	8.72	5.93	2.46	0.18	9.74	0.65	0.08	0.16	0.19	8.60	100.48	12	48					55	65	120		2,b,e,m2hu!	121
AR08014	66.62	66.82	0.20	67.44	14.80	1.53	1.75	0.65	3.48	4.05	0.84	0.20	0.06	0.68	3.00	97.80	14	48					75	135	110		2,b,e,m3h	261
AR08015	71.00	74.00	3.00	47.77	15.59	9.14	4.89	2.05	1.20	9.55	0.75	0.08	0.17	0.17	9.60	100.80	16	60					80	65	125		2,b,e,m2hw!	126
AR08016	83.00	86.00	3.00	46.48	15.23	10.61	4.92	3.28	0.10	9.57	0.76	0.08	0.17	0.07	7.79	98.99	16	46					80	105	95		2,a,bx,2hw$	109
AR08017	98.00	101.00	3.00	43.31	14.13	15.51	6.36	1.53	0.04	11.32	0.75	0.10	0.21	0.06	5.99	99.23	6	46					85	95	190		2,b,m 2ju	83
AR08018	116.00	119.00	3.00	45.06	15.11	11.67	4.94	3.17	0.08	10.29	0.79	0.12	0.17	0.05	9.45	100.85	10	42					115	85	190		2,a,p 2hw!	101
AR08019	134.00	137.00	3.00	47.95	13.97	9.77	8.77	1.29	0.08	10.50	0.68	0.12	0.16	0.08	5.26	98.55	6	38					110	65	180		2,a,e,m2ju	125
AR08020	146.00	149.00	3.00	48.59	14.46	9.80	6.33	3.45	0.06	11.97	0.78	0.12	0.21	0.09	4.90	100.65	10	50					140	155	205		2,a,e,p2hu	109
AR08021	173.00	176.00	3.00	49.29	15.66	9.52	6.77	3.44	<0.02	11.56	0.80	0.10	0.20	0.09	3.50	100.85	18	40					95	65	155		2,a,e,p2hu	121
AR08022	206.00	209.00	3.00	44.44	16.19	12.42	7.34	1.89	0.06	12.73	0.82	0.10	0.21	0.09	4.42	100.60	10	38					130	85	205		2,a,e,p2hu	113
AR08023	236.00	239.00	3.00	48.36	15.57	6.92	9.40	2.81	0.12	11.56	0.86	0.12	0.16	0.08	5.08	100.94	14	44					110	75	205		2,a,e,p2hu	158
AR08024	247.00	250.00	3.00	48.59	14.80	7.85	9.23	3.48	0.36	10.95	0.75	0.10	0.18	0.07	4.38	100.69	12	42					70	85	150		2,b,m,D2hu	127

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08011	41.00	44.00	3.00			45		100																					
AR08012	50.00	53.00	3.00			25		5800																					
AR08013	59.00	62.00	3.00			35		400																					
AR08014	66.62	66.82	0.20			25		2800																					
AR08015	71.00	74.00	3.00			35		4500																					
AR08016	83.00	86.00	3.00			35		8100																					
AR08017	98.00	101.00	3.00			50		<100																					
AR08018	116.00	119.00	3.00			55		100																					
AR08019	134.00	137.00	3.00			45		<100																					
AR08020	146.00	149.00	3.00			55		200																					
AR08021	173.00	176.00	3.00			50		100																					
AR08022	206.00	209.00	3.00			45		100																					
AR08023	236.00	239.00	3.00			45		<100																					
AR08024	247.00	250.00	3.00			45		100																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08011	41.00	44.00	3.00																					0.53	1.10	35	25	102
AR08012	50.00	53.00	3.00																					0.56	0.22	18	45	9
AR08013	59.00	62.00	3.00																					0.59	0.64	20	15	26
AR08014	66.62	66.82	0.20																					0.51	0.10	63	71	208
AR08015	71.00	74.00	3.00																					0.55	0.59	26	35	32
AR08016	83.00	86.00	3.00																					0.55	0.70	19	27	32
AR08017	98.00	101.00	3.00																					0.57	1.10	30	27	62
AR08018	116.00	119.00	3.00																					0.53	0.77	38	25	27
AR08019	134.00	137.00	3.00																					0.67	0.70	21	44	50
AR08020	146.00	149.00	3.00																					0.56	0.68	32	33	45
AR08021	173.00	176.00	3.00																					0.58	0.61	23	34	19
AR08022	206.00	209.00	3.00																					0.58	0.77	28	34	45
AR08023	236.00	239.00	3.00																					0.66	0.44	22	49	27
AR08024	247.00	250.00	3.00																					0.67	0.53	16	46	24



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR052-01
Grid A - Section 80+00N (looking north +/-25m)
Browning Twp.
NTS :
PROJECT No:
Drawn : Dean F. Rogers
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
0 20 40 60 80
Revised :
BR052-01
Az = 100 deg.
Dip = 50 deg.
400m
300m
200m
100m
0m
Overburden
2,a,bx,e,m
2,a,m,*a
4,a,*b
2,a,m,*a
4,*b
PyD1-1%
PyD0%
PyD0-1%
PyF0%
10,b,m,Mag
9,m,D,P
PyD2-3%
PyD0%
PyF1%,PyD0%
PyF4-5%,PoF0%,CpF1-2%
2,a,D
9,m,D,P
PyF2-3%,PyD1-1%
2,a,m
PyD1-1%,PyF1-1%
2,b,e,m,D
PyD1-1%
2,a,m,D
EOH
PyD1%
PyD0-1%
278.00m.
Claim # 1191299
7800mE
7900mE
8000mE
N
Astronomic
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
bx Breccia
c Coarse Grained
C
D Feldspar Phyric
E Chert
r Oxide Iron Formation
R polysutured
S fractured
Highly Evolved (Y>60)
MINERALIZATION MODIFIERS
Py Pyrite
Cpy
Sph
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

HOLE NUMBER: BR052-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191299
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5247912.00N
EAST: 486518.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 80+ 0N
EAST: 78+10E
ELEV: 0.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 278.00M
START DEPTH: 0.00M
FINAL DEPTH: 278.00M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"

GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 09/17/1995
DATE COMPLETED: 09/20/1995
DATE LOGGED: 09/21/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NW & BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486512mE 5247908mN

COMMENTS : North end of Grid A (DDH #9, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-54° 0' 0"	A	DO		-	-	-	-	-	
120.00	100° 0' 0"	-51° 0' 0"	A	DO		-	-	-	-	-	
180.00	100° 0' 0"	-56° 0' 0"	A	DO		-	-	-	-	-	
240.00	100° 0' 0"	-59° 0' 0"	A	DO		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 24.00	«┤OB├» Casing Overburden					
24.00 TO 24.58	«2,a,bx,e,m» Mafic Volcanic fine grained breccia amygdaloidal/vesicular massive	-dark green -weakly brecciated with some possible hyaloclastitic portion -1% qtz/calcite filled amygdules		⟪24.00-24.58⟫«ChFM ,SiPM,CbFW» moderate, fracture/vein controlled, chloritization; moderate, pervasive, silicification; weak, fracture/vein controlled, carbonatization	⟪24.00-24.58⟫«PyD0.5-1%» 0.5-1.0% disseminated/blebby pyrite	
24.58 TO 28.86	«2,a,m,*a» Mafic Volcanic fine grained massive tuff	-uphole contact sharp and planar @29° to CA -dark green -grainy, massive unit with rare rock fragments visible		⟪24.58-28.86⟫«ChPM ,CbFW,SiFW» moderate, pervasive, chloritization; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	-unmineralized	⟪25.50-28.50⟫ «AR08025-WR»
28.86 TO 33.77	«4,q,*b» Felsic Volcanic quartz phyric lapilli tuff	-uphole contact sharp and planar @33° to CA -light green to tan -moderately sheared -qtz,rhyolite and mafic clasts in a sericitic tuffaceous matrix -felsic clasts <1cm, mafics up to 2-3cm, most rounded to subangular -mafic clasts similar to units above and below -qtz eyes are rounded (1%,1-3mm) (possibly qtz clasts?) -possibly reworked ⟪29.50-29.50⟫«┤S2 36°├» Foliation		⟪28.86-33.77⟫«SeSM ,ChFS,CbFW» moderate, spotty, sericitization; strong, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization	⟪28.86-33.77⟫«PyD0.1%» 0.1% disseminated/blebby pyrite	⟪29.00-32.00⟫ «AR08026-WR»
33.77 TO 36.79	«2,a,m,*A» Mafic Volcanic fine grained massive tuff	-uphole contact sharp and planar @19° to CA -similar to mafic tuff above but slightly coarser grained -felsic blocks similar to above felsic lapilli-tuff @34.0-34.6m,36.17-36.24m, 36.30-36.46 -felsic blocks have sharp irregular contacts -lower 30cm strongly brecciated with angular mafic blocks in a felsic lapilli-tuff matrix similar to unit below (as well as felsic tuff		⟪33.77-36.79⟫«ChPM ,CbFW,SiFW» moderate, pervasive, chloritization; weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	⟪33.77-36.79⟫«PyD0.1-0.5%» 0.1-0.5% disseminated/blebby pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		above) -tops downhole?				
36.79 TO 39.85	«4,*b» Felsic Volcanic lapilli tuff	-uphole contact irregular with mafic breccia above -pale green to buff/tan -weakly foliated -consist predominantly of rounded qtz/rhyolite clasts in a sericitic matrix -contains angular to irregular hazy dark patches (either chlorite spotting, mafic clasts or both?)		⟪36.79-39.85⟫«ChSM ,SeFM,SiFW» moderate, spotty, chloritization; moderate, fracture/vein controlled, sericitization; weak, pervasive, silicification ⟪36.79-39.85⟫«HeFW ,F>FM,SiFW» weak, fracture/vein controlled, hematization; weak, fracture/vein controlled, iron carbonate; weak, fracture/vein controlled, silicification -planar to irregular stockworks of very weakly effervescent carbonate and qtz sometimes with hematized margins	⟪36.79-39.85⟫«PyF0.1%» 0.1% fracture/vein controlled pyrite	⟪36.80-39.80⟫ «AR08027-WR»
39.85 TO 101.52	«10,b,m,Mag» Diabase medium grained massive magnetite	-uphole contact planar @26° to CA -chilled over upper 2-3m -dark gray to pale green -unit is mod. to strongly magnetic over most of it's length -downhole contact consists of blocks of underlying felsic unit surrounded by chilled, fine-grained diabase -contact between felsic and diabase very in orientation (diabase dyklets?) ⟪54.10-62.80⟫«10,b,D» Diabase medium grained, feldspar phyric, -interval containing clotty lecoxenes/phenocrysts (3-4%) -pale green colour from ~55-57m -unit is non-magnetic in leucoxene rich portions ⟪66.78-66.94⟫«{FAI}» Fault -broken, ground core ⟪70.60-71.05⟫«{FAI}» Fault -broken, ground core		⟪39.85-101.52⟫«CbFW ,SiFW,EpFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, epidotization -qtz/carbonate veins sometimes with pale green (epidote?) alteration halos ⟪39.85-101.52⟫«K>FW» weak, fracture/vein controlled, potassic alteration -pink K-spar veinlets and as replacement? of feldspar x-stals similar to that at the bottom of BRO51-01 ⟪55.00-57.00⟫«EpFM» moderate, pervasive, epidotization -pale green leucoxene rich interval (epidote?) -also contains pale blue veining (very hard, qtz?)	⟪39.85-99.50⟫«PyD0.1%» 0.1% disseminated/blebby pyrite ⟪99.50-101.52⟫«PyD2-3%» 2.0-3.0% disseminated/blebby pyrite -1mm Py cubes and clots within the chill zones next to felsic blocks and along the contacts between felsic material and diabase	⟪55.00-57.00⟫ «AR08028-WR» -pale green, non-magnetic leucoxene rich interval

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
101.52 TO 159.58	«9,m,D,P» Felsic Intrusive massive feldspar phyric porphyritic	-uphole contact complex with chilled diabase dyklets -grayish green -undeformed except at con tact with diabase which is weakly sheared -upper 3-4m is fine grained and lacks feldspar phenocrysts, either a chill zone of it's own or chilled by later intrusion of diabase -dark chlorite spotting at uphole portion may be amygdules suggesting a flow but unit lacks any good flow indiactors -contains 10-15% feldspar phenocrysts (2-10mm) which are irregular with hazyborders -rare qtz phenocrysts -lower contact flow-banded parralel to contact with mafic		‹‹101.52-159.58››«CbFM ,SiFW,ChPW» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, chloritization	‹‹101.52-159.58››«PyF0.5%,PyD0.1%» 0.5% fracture/vein controlled pyrite; 0.1% disseminated/blebby pyrite ‹‹140.32-140.71››«PyF4-5%,PoF0.1%,CpF1-2% » 4.0-5.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite; 1.0-2.0% fracture/vein controlled chalcopyrite -mineralized, bx'd qtz/calcite vein	‹‹113.00-116.00›› «AR08029-WR» ‹‹140.32-140.71›› «AR08281-MEX» ‹‹146.00-149.00›› «AR08030-WR»
159.58 TO 180.68	«2,a,D» Mafic Volcanic fine grained feldspar phyric	-uphole contact sharp @~5-10° to CA -dark green -strongly sheared at various CA angles (<~40°) -strongly altered shear zone -some intervals of hazy feldspar phenocrysts similar to units above and below (sheared equivalents?) -moderately bx'd by qtz/crb veining		-strongly altered shear zone with qtz/carbonate veins with sericite alteration halos ‹‹159.58-180.68››«CbFS ,SiFS,SeFS» strong, fracture/vein controlled, carbonatization; strong, fracture/vein controlled, silicification; strong, fracture/vein controlled, sericitization ‹‹159.58-180.68››«ChPW ,ChFW» weak, pervasive, chloritization; weak, fracture/vein controlled, chloritization	‹‹159.58-180.68››«PyF2-3%,PyD0.5-1%» 2.0-3.0% fracture/vein controlled pyrite; 0.5-1.0% disseminated/blebby pyrite -within and around qtz/carb/sericite veins	‹‹169.50-171.00›› «AR08282-MEX» ‹‹171.00-172.50›› «AR08283-MEX» ‹‹172.50-174.00›› «AR08284-MEX» ‹‹174.00-175.50›› «AR08285 MEX» ‹‹175.50-177.00›› «AR08286-MEX» ‹‹177.00-178.50›› «AR08287-MEX» ‹‹178.50-180.00›› «AR08288-MEX»
180.68 TO 232.40	«9,m,D,P» Felsic Intrusive massive feldspar phyric porphyritic	-uphole contact gradational, masked by strong alteration/fol'n? -greenish gray -similar unit to feldspar porphyry above with 10-15% large, hazy, irregular phenocrysts -some small shear zones but otherwise undeformed -mottled texture over lower 2-3m ‹‹204.51-204.82››«FAI»» Fault -broken, blocky core		‹‹180.68-232.40››«ChPW ,CbFM,SiFW» weak, pervasive, chloritization; moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	‹‹180.68-232.40››«PyD0.5-1%,PyF0.5-1%» 0.5-1.0% disseminated/blebby pyrite; 0.5-1.0% fracture/vein controlled pyrite	‹‹191.00-194.00›› «AR08031-WR» ‹‹224.00-227.00›› «AR08032-WR»

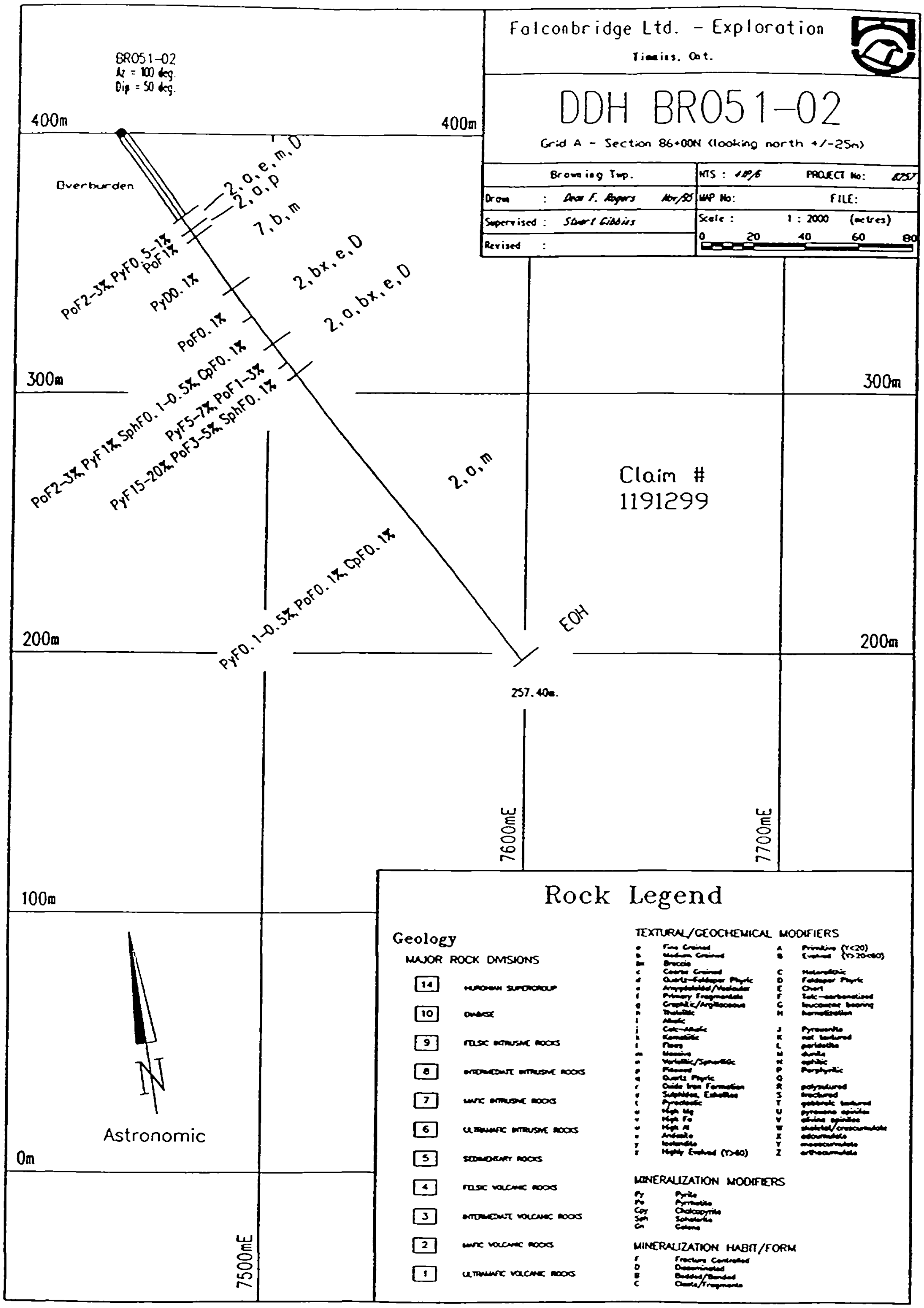
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
232.40 TO 245.12	«2,a,m» Mafic Volcanic fine grained massive	-uphole contact at qtz/carb veining -dark green -unit contains small (<1cm) mafic fragments in a and aphanitic, glassy matrix (possibly hyaloclastitic -minor intervals of coarser grained material similar to unit below		⟪232.40-245.12⟫«SiPM ,CbFM,SiFW» moderate, pervasive, silicification; moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification -also patch pervasive carbonate ⟪232.40-245.12⟫«ChPW ,ChFW» weak, pervasive, chloritization; weak, fracture/vein controlled, chloritization	⟪232.40-235.12⟫«PyD0.5-1%» 0.5-1.0% disseminated/blebby pyrite	⟪239.00-242.00⟫ «ARO[illegible]3-WR»
245.12 TO 264.68	«2,b,e,m,D» Mafic Volcanic medium grained amygdaloidal/vesicular massive feldspar phyric	-uphole contact at qtz/carb vein -pale greenish brown -med. grained mottled texture -mottling due to a combin ation of amygdules, varioles? and Fe/Mg carb spott ing -1-2% irregular clotty feldspar (albite) phenocrysts -2-4% qtz/carbonate filled amygdule in lower 3/4 of unit (2-4mm in diameter) -also contains rounded feldspar? spots (variolitic?)		⟪245.12-264.68⟫«CbFW ,SiFM,ChFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization ⟪252.00-264.00⟫«F>SM ,CbPW» moderate, spotty, iron carbonate; weak, pervasive, carbonatization -ameboid Fe/Mg carbonate mottling similar to that in BRO51-01 butt less well-developed -very weakly effervescent when scratched	⟪245.12-264.68⟫«PyD1%» 0.5% disseminated/blebby pyrite	⟪248.00-251.00⟫ «ARO[illegible]4-WR»
264.68 TO 278.00	«2,a,m,D» Mafic Volcanic fine grained massive feldspar phyric	-uphole contact at thin bx'd (flow-top?) interval -grayish green -1-2% white clotty albite phenocrysts (<1cm) -some chloritic/calcitic bands may be selvages but only 2-3 occur within unit		⟪264.68-278.00⟫«CbFM ,SiFM,ChPW» moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification; weak, pervasive, chloritization	⟪264.68-278.00⟫«PyD0.1-0.5%» 0.1-0.5% disseminated/blebby pyrite	⟪272.00-275.00⟫ «ARO[illegible]5-WR»
278.00 TO 278.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08281	140.32	140.71	0.39	75	67	7	0.1	1			25
AR08282	169.50	171.00	1.50	64	93	45	0.1	1			52
AR08283	171.00	172.50	1.50	57	59	7	0.1	1			26
AR08284	172.50	174.00	1.50	33	76	10	0.1	1			27
AR08285	174.00	175.50	1.50	40	75	7	0.1	1			30
AR08286	175.50	177.00	1.50	30	73	7	0.1	1			28
AR08287	177.00	178.50	1.50	30	68	3	0.1	1			34
AR08288	178.50	180.00	1.50	57	80	24	0.1	1			57

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08025	25.50	28.50	3.00	50.77	11.58	10.55	6.49	4.10	0.06	6.08	0.50	0.34	0.16	0.07	10.29	100.92	6	86					10	95	165		2,a,m,*2jyB1	79
AR08026	29.00	32.00	3.00	71.39	12.21	2.41	1.44	1.52	2.74	2.76	0.20	0.10	0.06	0.08	2.92	97.74	10	172					10	45	5		4,q,*b 4jA	183
AR08027	36.80	39.80	3.00	73.54	11.68	1.32	1.36	1.28	3.32	3.84	0.18	0.06	0.07	0.09	1.64	98.31	14	236					<5	30	<5		4,*b 4jA	197
AR08028	55.00	57.00	2.00	53.41	13.27	15.40	2.45	0.24	0.36	11.99	1.16	0.16	0.17	0.06	1.59	100.19	26	128					55	65	<5		10,b,m,7hw	83
AR08029	113.00	116.00	3.00	61.66	15.40	4.85	2.91	4.38	0.78	6.36	0.63	0.22	0.09	0.05	3.57	100.84	12	128					25	65	15		9,m,D,P8j	154
AR08030	146.00	149.00	3.00	59.84	15.47	4.92	2.50	3.78	1.36	6.28	0.70	0.22	0.08	0.06	5.56	100.70	8	134					50	80	45		9,m,D,P8j	154
AR08031	191.00	194.00	3.00	61.94	15.19	4.45	2.37	4.50	0.86	6.02	0.67	0.20	0.09	0.05	4.47	100.74	8	144					80	65	45		9,m,D,P8j	155
AR08032	224.00	227.00	3.00	59.95	14.71	4.38	2.34	4.16	1.08	5.80	0.63	0.20	0.09	0.05	4.20	97.54	6	144					40	65	45		9,m,D,P8j	153
AR08033	239.00	242.00	3.00	46.18	14.36	9.07	6.17	3.35	0.20	9.80	0.74	0.08	0.16	0.05	10.60	100.69	12	46					95	65	200		2,a,m 2hu1	114
AR08034	248.00	251.00	3.00	48.45	14.36	10.21	6.91	1.84	<0.02	9.67	0.66	0.10	0.17	0.16	8.51	100.83	10	54					80	65	135		2,b,e,m2hu1	119
AR08035	272.00	275.00	3.00	50.69	14.70	10.62	7.32	2.75	0.06	10.63	0.71	0.10	0.19	0.13	3.09	100.84	12	42					110	80	165		2,a,m,D2hu	109

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SD PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08025	25.50	28.50	3.00			30		100																					
AR08026	29.00	32.00	3.00			15		100																					
AR08027	36.80	39.80	3.00			10		100																					
AR08028	55.00	57.00	2.00			20		<100																					
AR08029	113.00	116.00	3.00			20		100																					
AR08030	146.00	149.00	3.00			20		<100																					
AR08031	191.00	194.00	3.00			15		100																					
AR08032	224.00	227.00	3.00			15		100																					
AR08033	239.00	242.00	3.00			40		<100																					
AR08034	248.00	251.00	3.00			35		100																					
AR08035	272.00	275.00	3.00			40		200																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08025	25.50	28.50	3.00																					0.72	0.91	25	31	23
AR08026	29.00	32.00	3.00																					0.55	0.20	3	52	30
AR08027	36.80	39.80	3.00																					0.46	0.11	4	64	23
AR08028	55.00	57.00	2.00																					0.33	1.16	2	15	271
AR08029	113.00	116.00	3.00																					0.52	0.31	5	29	15
AR08030	146.00	149.00	3.00																					0.49	0.32	18	31	21
AR08031	191.00	194.00	3.00																					0.48	0.29	19	27	14
AR08032	224.00	227.00	3.00																					0.49	0.30	19	29	16
AR08033	239.00	242.00	3.00																					0.60	0.63	32	34	19
AR08034	248.00	251.00	3.00																					0.63	0.71	20	37	35
AR08035	272.00	275.00	3.00																					0.62	0.72	23	36	29



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR051-02
Grid A - Section 86+00N (looking north +/-25m)
Browning Twp.
NTS : 41P/6
PROJECT No:
Drawn : Alan F. Rogers
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
0 20 40 60 80
Revised :
BR051-02
Az = 100 deg.
Dip = 50 deg.
400m
400m
Overburden
2,o,e,m,D
2,o,p
7,b,m
PoF2-3%,PyF0.5-1%
PoF1%
PyD0.1%
2,bx,e,D
2,o,bx,e,D
PoF0.1%
PoF2-3%,PyF1%,SphF0.1-0.5%,CpF0.1%
PyF5-7%,PoF1-3%
PyF15-20%,PoF3-5%,SphF0.1%
300m
300m
2,o,m
Claim #
1191299
PyF0.1-0.5%,PoF0.1%,CpF0.1%
EOH
200m
200m
257.40m.
7600mE
7700mE
100m
Astronomic
N
0m
7500mE
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
MINERALIZATION MODIFIERS
Py Pyrite
Po Pyrrhotite
Cpy Chalcopyrite
Sph Sphalerite
Gn Galena
MINERALIZATION HABIT/FORM
F Fracture Controlled
D Disseminated
B Bedded/Banded
C Clasts/Fragments

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191299
LOCATION: Browning Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5248567.00N
EAST: 486258.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid A
NORTH: 86+ 0N
EAST: 74+40E
ELEV: 400.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 257.40M
START DEPTH: 0.00M
FINAL DEPTH: 257.40M

COLLAR ASTRONOMIC AZIMUTH: 100° 0' 0"
GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 09/21/1995
DATE COMPLETED: 09/23/1995
DATE LOGGED: 09/24/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: BW & NW left in hole
CORE STORAGE: Timmins
UTM COORD.: 486250mE 5248573mN

COMMENTS : North end of Grid A (DDH #10, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	100° 0' 0"	-56° 0' 0"	A	DO		.	-	-	.	.	
120.00	100° 0' 0"	-52° 0' 0"	A	DO		.	-	-	.	.	
180.00	100° 0' 0"	-49° 0' 0"	A	DO		.	-	-	.	.	
240.00	100° 0' 0"	-52° 0' 0"	A	DO		.	-	-	.	.	

Dean Rogers

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 41.00	«{OB}» Casing Overburden					
41.00 TO 47.00	«2,a,e.m,D» Mafic Volcanic fine grained amygdaloidal/vesicular massive feldspar phyric	-pale to med. green -1-2% amygdules (2-4mm) are sulphide,silica and carbonate filled and are more concentrated in uphole portion -2-3% albite phenocrysts are clotty to subhedal but have hazy margins -weak mottled texture over short intervals is sometimes nucleated around amygdules (possibly variolitic, possibly fragments)		([41.00-47.00]«CbFW ,SiFW,AbSS» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; strong, spotty, albitization -qtz/carb veining and amygdule infilling -pale green to white mottling is very hard and has no reaction to acid -also pale green to white veining (albitization/qtz/epidote?)	([41.00-47.00]«PoF2-3%,PyF0.5-1% 2.0-3.0% fracture/vein controlled pyrrhotite; 0.5-1.0% fracture/vein controlled pyrite -within hairline qtz/carb fractures and veins up to 1-2cm across -1mm Py cubes disseminated within larger Po bands, associated with pale green albite/silica veins -Po also occurs within qtz/calcite filled amygdules	([42.00-45.00] «AR08036-WR»
47.00 TO 50.34	«2,a,p» Mafic Volcanic fine grained pillowed	-uphole contact at fluidal to angular flow-top breccia (30cm) with mafic clasts in a granular matrix -pale green -short pillowed interval with several irregular, calcitic/chloritic selvages -weak bx'n in some selvages		([47.00-50.34]«CbFW ,ChFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, silicification ([47.00-50.34]«AbFW ,EpFW» moderate, fracture/vein controlled, albitization; moderate, fracture/vein controlled, epidotization -pale green veining similar to unit above (albite/epidote/silica) -associated with carbonate veining	([47.00-50.34]«PoF1% 1.0% fracture/vein controlled pyrrhotite -within brecciated pillow selvages	([47.00-50.00] «AR08037-WR»
50.34 TO 75.22	«7,b,m» Mafic Intrusive medium grained massive	-contact strongly altered/brecciated at low CA angle -fine-grained (chilled) at upper and lower contacts with med. grained interior -possibly a massive flow but marked contrast in competency and sulphide content with flows above and below -no amygdules or phenocrysts -contains clasts/xenoliths of fine-grained mafic towards downhole contact ([52.60-53.00]«{FAI}» Fault -broken, blocky core		([50.34-75.22]«CbFW ,SiFW,CbPW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, carbonatization -spotty pervasive carbonate -also similar pale green veining to above	([50.34-75.22]«PyD0.1% 0.1% disseminated/blebby pyrite	([65.00-68.00] «AR08038-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
75.22 TO 101.67	«2,bx,e,D» Mafic Volcanic breccia amygdaloida l/vesicular feldspar phyric	-uphole contact sharp at chilled portion of dyke/flow? -chaotic unit consisting of rounded clasts of fine-grained mafic volcanic,feldspar porphyry and amygdular mafic volcanic -appears that matrix of unit is a strongly albite porphyritic flow/tuff (10% cloty to euhedral phens) but fragments of this unit do occur -some fine-grained mafics are non-porphrytic and some non-amygdular -amgdules (2-5mm,1-3%) are more concentrated at upper portion of unit and are chlorite, qtz and calcite filled -clasts are generally large (>20cm) but some smaller fragments (<1cm) may represent hyaloclastite/auto-brecciated material		⟨75.22-101.67⟩«CbFW ,SiFW,ChSW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, spotty, chloritization -chlorite fills amygdules mainly near upper contact ⟨75.22-101.67⟩«SiFW» moderate, pervasive, silicification -some finer grained mafic material pervasively silicified as are hyaloclastitic? areas containing smaller mafic clasts	⟨75.22-88.30⟩«PoF0.1%» 0.1% fracture/vein controlled pyrrhotite -very trace as small veinlets and rarely within amygdules ⟨88.30-101.67⟩«PoF2-3%,PyF1%,SphF0.1-0.5%,CpF0.1%» 2.0-3.0% fracture/vein controlled pyrrhotite; 1.0% fracture/vein controlled pyrite; 0.1-0.5% fracture/vein controlled sphalerite; 0.1% fracture/vein controlled chalcopyrite -Po occure in qtz/carb veins and interstitial to mafic clasts -fine Py cubes along border of Po veinlets -tr. Sph? and Cpy occur associated with Po/carb veinlets (ie. <50.4m)	⟨77.00-80.00⟩ «AR08039-WR» ⟨88.00-89.50⟩ «AR08289-MEX» ⟨89.50-91.00⟩ «AR08290-MEX» ⟨91.00-92.50⟩ «AR08291-MEX» ⟨92.50-94.00⟩ «AR08292-MEX» ⟨94.00-95.50⟩ «AR08293-MEX» ⟨95.50-97.00⟩ «AR08294-MEX» ⟨97.00-98.50⟩ «AR08295-MEX» ⟨98.00-101.00⟩ «AR08040-WR» ⟨98.50-100.00⟩ «AR08296-MEX» ⟨100.00-101.70⟩ «AR08297-MEX»
101.67 TO 116.34	«2,a,bx,e,D» Mafic Volcanic fine grained breccia amygdaloida l/vesicular feldspar phyric	-uphole contact sharp and planar but porphyritic intervals continue into unit -med. green -mafic nor sulphides deformed -subrounded clasts (10-50cm) of fine-grained mafic cemented by Fe-sulphides -clasts contain from 0-3% calcite/sulphide filled amygdules and 0-2% irregular albite phenocrysts -both amygdules and phenocrysts occur sporadically within clasts		⟨101.67-116.34⟩«ChFS ,SiFW,ChFW» strong, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization -calcite strongly associated with Fe-sulphides -chloritic bands possibly broken pillow selvages	-sulphides occur as fine-grained clots to well banded layers between mafic fragments -colloform banded in places -massive over short 3-7cm intervals which are conductive over their length ⟨101.67-110.70⟩«PyF5-7%,PoF1-3%» 5.0-7.0% fracture/vein controlled pyrite; 1.0-3.0% fracture/vein controlled pyrrhotite ⟨110.70-116.74⟩«PyF15-20%,PoF3-5%,SphF0.1%» 15.0-20.0% fracture/vein controlled pyrite; 3.0-5.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled sphalerite	⟨101.70-103.20⟩ «AR08298-MEX» ⟨103.20-104.70⟩ «AR08299-MEX» ⟨104.70-106.20⟩ «AR08300-MEX» ⟨106.20-107.70⟩ «AR08351-MEX» ⟨107.70-109.20⟩ «AR08352-MEX» ⟨109.20-110.70⟩ «AR08353-MEX» ⟨110.70-112.20⟩ «AR08354-MEX» ⟨112.20-113.70⟩ «AR08355-MEX» ⟨113.70-115.20⟩ «AR08356-MEX» ⟨115.20-116.70⟩ «AR08357-MEX»

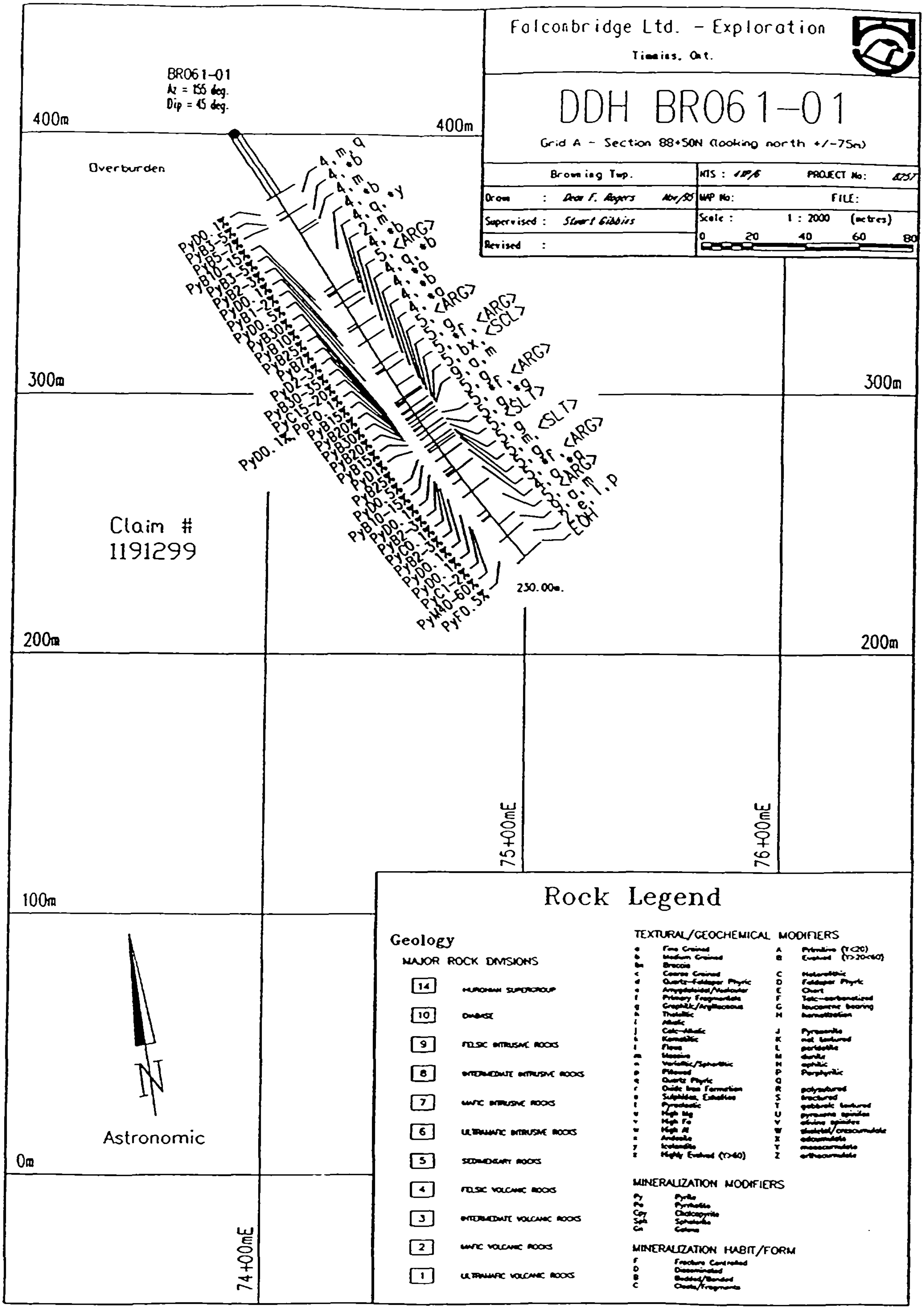
FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
116.34 TO 257.40	«2,a,m» Mafic Volcanic fine grained massive	-contact placed at last sulphide band but a chilled zone at 115.66m may be the actual contact between breccia and massive unit -extremely massive unit varying from fine-med. fine grained -pale-med. green -relatively undeformed except from 207-216m which is mod. to strongly sheared at 5-20° to CA and has strong Cb/Si veining -probably a series of flows defined by bx's noted below -rare Po filled amygdules and albite phenocrysts -weakly bx'd -possibly a very large dyke but amygdules and bx'n suggest a massive flow -from 197.0 to EOH unit is peppered by tiny white leccoxenes which increase in abundance downhole (1%) {127.60-128.0}«{FAI}» Fault -broken, blocky core {159.50-164.00}«2,bx» Mafic Volcanic breccia, -fine grained blocks(10-20cm) within a coarser matrix -chills on fine grained blocks but not in coarser material {218.50-218.71}«2,bx» Mafic Volcanic breccia, -small 1-3cm mafic clasts in a carbonate matrix -flow top breccia? defining individual flows {253.55-254.46}«{FAI}» Fault -broken, blocky core with qtz/carb veining and hematite staining		{116.34-172.00}«CbFM ,SiFM,ChFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization -chloritic slips/fractures in bx'd intervals {116.34-172.00}«ChSM ,ChFM» weak, spotty, chloritization; weak, pervasive, chloritization -weak mottle texture in coarser grained intervals due to chlorite spotting {172.00-257.40}«CbFM ,CbPM,SiFM» moderate, fracture/vein controlled, carbonatization; moderate, pervasive, carbonatization; weak, fracture/vein controlled, silicification -patchy pervasive calcite {172.00-257.40}«ChPM ,ChFM» moderate, pervasive, chloritization; moderate, fracture/vein controlled, chloritization -chloritization increasing downhole -strong in sheared interval from 207-216m {215.65-216.00}«SePM ,SiPM,SiFS» moderate, pervasive, sericitization; moderate, pervasive, silicification; strong, fracture/vein controlled, silicification -Se & Si associated wit qtz veining	{116.34-257.40}«PyFO.1-0.5%,PoFO.1%,Cpf 0.1%» 0.1-0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled chalcopyrite -very weakly mineralized compared to breccia above -Cpy within qtz/carb vein at 120m and rarely within Po fractures/clots	{122.00-125.00} «AR08041-WR» {149.00-152.00} «AR08042-WR» {182.00-185.00} «AR08043-WR» {203.00-206.00} «AR08044-WR» {230.00-233.00} «AR08045-WR» {248.00-251.00} «AR08046-WR»
257.40 TO 257.40	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08289	88.00	89.50	1.50	182	133	24	0.2	14			153
AR08290	89.50	91.00	1.50	66	366	24	0.1	17			91
AR08291	91.00	92.50	1.50	51	66	0	0.1	2			106
AR08292	92.50	94.00	1.50	67	64	0	0.1	2			100
AR08293	94.00	95.50	1.50	60	80	0	0.1	1			98
AR08294	95.50	97.00	1.50	122	75	3	0.1	3			136
AR08295	97.00	98.50	1.50	131	98	0	0.1	1			151
AR08296	98.50	100.00	1.50	103	39	3	0.1	1			130
AR08297	100.00	101.70	1.70	75	45	0	0.1	1			106
AR08298	101.70	103.20	1.50	89	45	0	0.1	1			144
AR08299	103.20	104.70	1.50	96	46	7	0.1	1			145
AR08300	104.70	106.20	1.50	121	58	14	0.1	1			154
AR08351	106.20	107.70	1.50	118	52	3	0.1	1			118
AR08352	107.70	109.20	1.50	132	40	0	0.1	1			122
AR08353	109.20	110.70	1.50	183	46	0	0.1	2			131
AR08354	110.70	112.20	1.50	102	46	0	0.1	2			105
AR08355	112.20	113.70	1.50	101	47	0	0.1	1			107
AR08356	113.70	115.20	1.50	141	87	3	0.2	1			103
AR08357	115.20	116.70	1.50	105	60	3	0.1	1			109

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08036	42.00	45.00	3.00	50.58	14.78	9.32	7.60	3.53	0.08	10.75	0.70	0.10	0.19	0.19	2.67	100.30	16	64					45	105	75		2,a,e,m2hu$	114
AR08037	47.00	50.00	3.00	47.78	13.55	11.95	6.52	2.61	0.04	10.68	0.75	0.08	0.20	0.06	6.74	100.90	12	50					90	65	125		2,a,p 2hu	93
AR08038	65.00	68.00	3.00	48.00	13.97	11.93	7.27	1.78	0.10	11.79	0.78	0.10	0.20	0.05	5.03	100.93	16	38					120	90	150		2,b,m 2hu	101
AR08039	77.00	80.00	3.00	57.86	14.83	6.39	6.04	3.20	0.10	8.24	0.59	0.10	0.13	0.10	3.12	100.60	10	78					60	55	165		2,bx,e,2jw	151
AR08040	98.00	101.00	3.00	50.33	14.71	12.18	6.24	2.51	0.10	10.50	0.71	0.10	0.20	0.31	3.04	100.61	6	52					50	125	80		2,bx,e,2ju$	99
AR08041	122.00	125.00	3.00	47.83	14.17	12.09	7.64	1.67	<0.02	12.28	0.77	0.10	0.21	0.08	3.64	100.41	14	36					110	80	165		2,a,m 2hu	103
AR08042	149.00	152.00	3.00	48.50	13.87	11.09	6.67	1.59	0.06	12.59	0.73	0.10	0.21	0.05	3.09	98.52	6	36					110	65	165		2,a,m 2ju	109
AR08043	182.00	185.00	3.00	47.24	14.45	8.98	7.06	2.08	0.20	11.86	0.81	0.10	0.19	0.05	7.92	100.89	16	48					130	670	115		2,a,m 2hu	128
AR08044	203.00	206.00	3.00	45.82	13.95	9.98	6.83	1.74	0.24	11.54	0.77	0.10	0.18	0.04	9.41	100.57	15	48					120	110	70		2,a,m,G2hu!	117
AR08045	230.00	233.00	3.00	46.94	14.10	9.30	6.57	1.99	0.28	11.66	0.79	0.10	0.18	0.05	9.06	100.96	12	38					140	85	125		2,a,m,G2hu!	122
AR08046	248.00	251.00	3.00	46.75	14.64	9.18	7.10	1.99	0.08	11.73	0.82	0.12	0.18	0.05	7.77	100.36	12	36					110	70	75		2,a,m,G2hu	110

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08036	42.00	45.00	3.00			20		13800																					
AR08037	47.00	50.00	3.00			35		200																					
AR08038	65.00	68.00	3.00			45		100																					
AR08039	77.00	80.00	3.00			25		<100																					
AR08040	98.00	101.00	3.00			30		12500																					
AR08041	122.00	125.00	3.00			45		100																					
AR08042	149.00	152.00	3.00			55		200																					
AR08043	182.00	185.00	3.00			40		200																					
AR08044	203.00	206.00	3.00			40		100																					
AR08045	230.00	233.00	3.00			35		<100																					
AR08046	248.00	251.00	3.00			40		<100																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08036	42.00	45.00	3.00																					0.63	0.63	10	37	10
AR08037	47.00	50.00	3.00																					0.59	0.88	19	31	25
AR08038	65.00	68.00	3.00																					0.60	0.85	21	35	51
AR08039	77.00	80.00	3.00																					0.64	0.43	27	39	17
AR08040	98.00	101.00	3.00																					0.59	0.83	13	30	50
AR08041	122.00	125.00	3.00																					0.60	0.85	22	36	48
AR08042	149.00	152.00	3.00																					0.56	0.80	25	35	41
AR08043	182.00	185.00	3.00																					0.59	0.62	16	40	122
AR08044	203.00	206.00	3.00																					0.59	0.72	10	38	63
AR08045	230.00	233.00	3.00																					0.57	0.66	19	38	43
AR08046	248.00	251.00	3.00																					0.59	0.63	11	39	35



Falconbridge Ltd. - Exploration
Timmins, Ont.
DDH BR061-01
Grid A - Section 88+50N (looking north +/-75m)
Browning Twp.
NTS :
PROJECT No:
Drawn :
MAP No:
FILE:
Supervised :
Scale : 1 : 2000 (metres)
Revised :
0 20 40 60 80
BR061-01
Az = 155 deg.
Dip = 45 deg.
400m
400m
Overburden
300m
300m
200m
200m
100m
0m
250.00m.
EOH
Claim #
1191299
75+00mE
76+00mE
74+00mE
N
Astronomic
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14
10
9
8
7
6
5
4
3
2
1
TEXTURAL/GEOCHEMICAL MODIFIERS
MINERALIZATION MODIFIERS
MINERALIZATION HABIT/FORM

HOLE NUMBER: BR061-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1191299
LOCATION: BROWNING

PLOTTING COORDS GRID: UTM
NORTH: 5248888.00N
EAST: 486250.00E
ELEV: 400.00

ALTERNATE COORDS GRID: GRID A
NORTH: 89+15N
EAST: 73+80E
ELEV: 400.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 230.00M
START DEPTH: 0.00M
FINAL DEPTH: 230.00M

COLLAR ASTRONOMIC AZIMUTH: 155° 0' 0"
GRID ASTRONOMIC AZIMUTH: 10° 0' 0"

DATE STARTED: 09/24/1995
DATE COMPLETED: 09/25/1995
DATE LOGGED: 09/27/1995

COLLAR SURVEY: NO
ROD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX DRILLING
CASING: 33m - NO
CORE STORAGE: TIMMINS
UTM COORD.: 486250mE,5248891mN

COMMENTS :
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	155° 0' 0"	-48° 0' 0"	A	OO	
120.00	155° 0' 0"	-47° 0' 0"	A	OO	
180.00	155° 0' 0"	-43° 0' 0"	A	OO	
230.00	155° 0' 0"	-37° 0' 0"	A	OO	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 33.00	«CASING» Casing Overburden					
33.00 TO 43.20	«A,M,Q» Felsic Volcanic massive quartz phyric	-abundant subhedral qtz eyes (5-10%) up to 1.5mm -qtz crystals becoming less abundant towards end of the hole looking more like an ash tuff. -Mottled pale olive green/grey becoming dominantly dark grey towards end of interval. -moderate foliation throughout inteval.		⟨33.00-40.80⟩«SePS ,ChFM» strong, pervasive, sericitization; weak, fracture/vein controlled, chloritization ⟨40.80-43.20⟩«SePM ,ChFM,ChPM» moderate, pervasive, sericitization; moderate, fracture/vein controlled, chloritization; moderate, pervasive, chloritization	⟨33.00-40.80⟩«PyD0.1%» 0.1% disseminated/blebby pyrite ⟨40.80-43.20⟩«PyB3-5%» 3.0-5.0% bedded/banded pyrite. 1-2cm bands of pyrite	⟨35.00-38.00⟩ «AR08047-WR» ⟨38.00-41.00⟩ «AR08070-WR» ⟨40.86-43.80⟩ «AR08358-MEX»
43.20 TO 51.31	«A,*B» Felsic Volcanic lapilli tuff	-mottled dark grey/pale olive green -sharp uphole contact at 50 to C.A. -felsic fragments up to 3cm, angular to subangular -minor zones appear more brecciated -moderate foliation		⟨43.20-43.35⟩«ChFS» strong, fracture/vein controlled, chloritization ⟨43.35-43.70⟩«SiFS» strong, fracture/vein controlled, silicification ⟨43.70-48.50⟩«SeFS ,ChSS» strong, fracture/vein controlled, sericitization; strong, spotty, chloritization ⟨48.50-51.31⟩«SePS ,ChFM» strong, pervasive, sericitization; moderate, fracture/vein controlled, chloritization	⟨43.20-43.80⟩«PyB5-7%» 5.0-7.0% bedded/banded pyrite	⟨44.00-47.00⟩ «AR08048-WR»
51.31 TO 52.90	«A,M» Felsic Volcanic massive	-obscured contact -medium grey color with pale olive green and grey-white bands -weakly fractured -moderately foliated -possible flow top breccia at uphole contact? 51.31-51.68 «A,BX» Felsic Volcanic		⟨51.31-52.90⟩«SeFM ,SiFS» moderate, fracture/vein controlled, sericitization; strong, fracture/vein controlled, silicification		⟨51.68-52.90⟩ «AR08049-WR»

HOLE NUMBER: BRO61-01 | DRILL HOLE RECORD | DATE: 11/08/1995

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		breccia				
52.90 TO 82.79	«4,*b» Felsic Volcanic lapilli tuff	-sharp uphole contact at 29 to CA -dominantly light grey with pale olive green patches and bands -visible felsic fragments up to 5cm by 1.5 cm making up 15% of rock -fragments decreasing in size towards end of interval -small 0.5m qtz phyric felsic dike from 79.42m to 79.14m with sharp contacts -moderatly foliated {60.00}«{S2 42°}»		{52.90-71.62}«SeFS ,SePM,ChFM» strong, fracture/vein controlled, sericitization; moderate, pervasive, sericitization; moderate, fracture/vein controlled, chloritization {71.62-72.16}«SePS ,ChFM» strong, pervasive, sericitization; weak, fracture/vein controlled, chloritization {72.16-80.30}«SeFS ,SePM,ChFM» strong, fracture/vein controlled, sericitization; moderate, pervasive, sericitization; weak, fracture/vein controlled, chloritization {80.30-82.79}«ChPS ,SePM» strong, pervasive, chloritization; weak, pervasive, sericitization	{80.30-82.58}«PyB10-15%» 10.0-15.0% bedded/banded pyrite	{59.00-62.00} «AR08050-WR» {74.00-77.00} «AR08051-WR» {80.30-81.45} «AR08359-MEX» {81.45-82.58} «AR08360-MEX»
82.79 TO 88.78	«4,q,*y» Felsic Volcanic quartz phyric crystal tuff	-obscured contact -banded light grey pale olive green -anhedral qtz eyes throughout interval, with larger up to 2mm decreasing to 1mm towards end of interval -small (<1.5mm) felsic fragments subangular to angular -qtz eyes make up 1% of rock -moderate foliation alligning frags and xls		{82.79-88.70}«SeFS ,ChFM» strong, fracture/vein controlled, sericitization; moderate, fracture/vein controlled, chloritization	{83.65-88.78}«PyB3-5%» 3.0-5.0% bedded/banded pyrite. Bands of semi massive pyrite appear locally	{83.00-86.00} «AR08052-WR» {83.65-85.68} «AR08361-MEX» {86.51-87.60} «AR08362-MEX» {87.60-88.78} «AR08363-MEX»
88.78 TO 92.06	«2,m» Mafic Volcanic massive	-sharp uphole contact at as 51 to CA -medium grey -weakly fractured		{88.78-92.06}«CbFM ,BlPM» weak, fracture/vein controlled, carbonatization; moderate, pervasive, bleaching		{88.78-92.00} «AR08053-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
92.06 TO 101.67	«4,°b» Felsic Volcanic lapilli tuff	-sharp uphole contact at az 48 to CA -abundant fragments up to 5mm alligned parallel to foliation -foliation moderate		⟨92.06-101.67⟩«SeFM ,ChFW,SiFW» moderate, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, silicification	⟨100.00-101.30⟩«PyB2-3%» 2.0-3.0% bedded/banded pyrite. Bands up to 4mm wide	⟨95.00-98.00⟩ «AR08054-WR» ⟨100.00-101.30⟩ «AR08354-MEX»
101.67 TO 108.96	«5,<ARG>» Sedimentary mudstone-argillite	-sharp contact at az 25 to CA -grey brown color dull -fine white specs -could be felsic intrusive. -weak foliation/bedding?		⟨101.67-108.96⟩«CbFM» moderate, fracture/vein controlled, carbonatization	⟨101.67-108.96⟩«PyD0.1%» 0.1% disseminated/blebby pyrite	⟨104.00-107.00⟩ «AR08055-WR»
108.96 TO 120.30	«4,q,°b» Felsic Volcanic quartz phyric lapilli tuff	-sharp uphole contact at az 40 to CA -mottled dark and light grey color -subangular to subrounded fragments up to 8cm by 4cm within a finer ash groundmass -fragments decrease in last 0.5m of interval -felsic fragments, some with <1% qtz eyes -qtz phyric zones near top 2m of interval, with up to 3% qtz eyes, (1mm) becoming much less abundant through remainder of interval -some of the off white felsic frags are larger than can be seen in BQ core -foliation weak ⟨108.96-120.30⟩«⟨S2 49°⟩»		⟨108.96-111.78⟩«SeFM ,ChFW» moderate, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization ⟨111.78-120.30⟩«SeFM ,ChFW» weak, fracture/vein controlled, sericitization; weak, fracture/vein controlled, chloritization	⟨108.96-120.30⟩«PyB1-2%» 1.0-2.0% bedded/banded pyrite, 5mm wide bands of py throughout interval, becoming diss in last 0.5m of interval	⟨109.20-110.50⟩ «AR08355-MEX» ⟨110.50-112.00⟩ «AR08366-MEX» ⟨112.00-113.50⟩ «AR08367-MEX» ⟨113.00-116.00⟩ «AR08056-WR» ⟨113.50-115.00⟩ «AR08368-MEX» ⟨115.00-116.50⟩ «AR08369-MEX» ⟨116.50-118.00⟩ «AR08370-MEX» ⟨118.00-119.00⟩ «AR08371-MEX» ⟨119.00-120.30⟩ «AR08372-MEX»

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
120.30	«4,*a»	-obscured up hole contact				
TO	Felsic	-light grey with darker grey sections				
124.53	Volcanic	-fine ash tuff		{120.30-124.53}«SeFW ,ChFW»	{123.00-124.00}«PyD0.5%»	{121.00-124.00} «AR08057-WR»
	tuff	-very few frags >1mm		weak, fracture/vein controlled,	0.5% disseminated/blebby pyrite	
		-weak foliation		sericitization; weak, fracture/vein		
				controlled, chloritization		
124.53	«4,*b»	-sharp uphole contact at az60 to CA				
TO	Felsic	-dark grey with patches of light grey				
132.83	Volcanic			{124.53-132.83}«SeFW ,ChFW,CbFW»		{128.00-131.00} «AR08058-WR»
	lapilli	-subangular to subrounded felsic frags up to		weak, fracture/vein controlled,		
	tuff	1.5cm by 1cm		sericitization; weak, pervasive,		
		-visible frags making up 50 % of rock with a		chloritization; weak, fracture/vein		
		finer surrounding groundmass		controlled, carbonatization		
		-weakly foliated and fractured				
		-frags elongated with foliation				
132.83	«4,*a»	-obscured uphole contact				
TO	Felsic	-pale olive green grey banded				
138.62	Volcanic	-subrounded to subangular felsic frags up to 1cm,		{132.83-138.62}«SeFW ,ChFW»		{134.00-137.00} «AR08059-WR»
	tuff	80% of frags <1mm to fine ash size		moderate, fracture/vein controlled,		
		-weak foliation		sericitization; weak, fracture/vein		
				controlled, chloritization		
138.62	«5,<ARG>»	-sharp uphole contact at az61 to CA				
TO	Sedimentary	-dark grey an pyrite banded				
139.66	mudstone-ar	-fine mudstone with pyrite bands		{138.62-139.66}«SeFW»	{138.62-139.66}«PyB30%»	{138.62-139.66} «AR08373-MEX»
	gillite	-bedding/foliation moderate		weak, fracture/vein controlled,	30.0% bedded/banded pyrite Bands of	
		small felsic clasts within last 15cm of interval		sericitization	pyrite from 2mm to 1cm wide,continuous	
					through entire interval	
139.66	«5,g»	-sharp uphole contact at az38 to CA				
TO	Sedimentary	-black with dark grey bands more carbonate rich				
144.42	graphitic/a	-very conductive		{139.66-144.42}«CbPM ,CbFW»	{139.66-140.11}«PyB10%»	{139.66-141.00} «AR08374-MEX»
	rgillaceous			moderate, pervasive, carbonatization,	10.0% bedded/banded pyrite	
		{141.73-144.42}«{FAI}blocky»		weak, fracture/vein controlled,		
				carbonatization	{140.11-140.90}«PyD25%»	{141.00-142.50} «AR08375-MEX»
					25.0% bedded/banded pyrite	
					{140.90-144.42}«PyD7%»	{142.50-144.00} «AR08376-MEX»
					7.0% bedded/banded pyrite Pyrite also	
					forming diss cubes 1-3mm	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
144.42 TO 147.44	«S,*f,<ARG>» Sedimentary thickly laminated mudstone-argillite	-sharp uphole fault contact at az63 to CA -sediment looks deformed with small cm scale crenulations -zone appears to have a faulted contact with a small felsic dike at the contact -deformation likely attributed to faulting -zone is not organic {144.42-147.44}«{S0 53°}» -bedded pyrite and argillite {145.33-146.00}«{FAI}blocky»		{144.42-147.44}«K>FS ,CbFM,SlFM» strong, fracture/vein controlled, potassic alteration; moderate, fracture/vein controlled, carbonatization; moderate, fracture/vein controlled, silicification	{144.61-145.00}«PyD2-3%» 2.0-3.0% disseminated/blebby pyrite {145.00-147.44}«PyD30-35%» 30.0-35.0% bedded/banded pyrite	{144.00-145.30} «AR08377-MEX» {144.60-146.50} «AR08060-WR» {145.30-146.70} «AR08378-MEX» {146.70-148.24} «AR08379-MEX»
147.44 TO 148.24	«S,bx,<SCL>» Sedimentary breccia sulphide clasts	-sharp uphole contact at az 66 to CA -a chaotic breccia possibly talus from a steep slope, incorporating fragments of pyrite, graphitic argillite, pyritic material, and siltstone -fragments are angular and range in size from 1mm to 4cm -groundmass appears to be conductive graphitic argillite		{147.44-148.24}«CbPW» weak, pervasive, carbonatization	{147.44-148.24}«PyC15-20%» 15.0-20.0% clasts/fragment of pyrite	
148.24 TO 149.97	«9,a,m» Felsic Intrusive fine grained massive	-sharp uphole contact at az55 to CA -dull medium grey -small brecciated zone 2cm wide at 149.3m			{148.24-149.97}«PyD0.1%,PoF0.1%» 0.1% disseminated/blebby pyrite; 0.1% fracture/vein controlled pyrrhotite	{148.24-149.97} «AR08380-MEX» {148.29-149.97} «AR08061-WR»
149.97 TO 151.80	«S,q» Sedimentary graphitic/argillaceous	-sharp uphole contact at 52 to CA -very contourted looking beds, few recognizable primary features -moderately conductive -small section of more siltstone material at top of interval -strongly deformed		{149.97-151.80}«CbFS» strong, fracture/vein controlled, carbonatization	{149.97-151.80}«PyB15%» 15.0% bedded/banded pyrite	{149.97-151.50} «AR08381-MEX»
151.80 TO 156.36	«S,*f,<ARG>» Sedimentary thickly laminated mudstone-argillite	-sharp uphole contact at az 38 to CA -weakly graphitic looking in small sections -very similiar to upper unit at 144.42m -banded -deformation becomes moderate towards the end of interval with crenulations		{151.80-156.36}«K>FS ,CbFM» strong, fracture/vein controlled, potassic alteration; moderate, fracture/vein controlled, carbonatization	{151.80-153.41}«PyB20%» 20.0% bedded/banded pyrite, partially replacing beds {153.41-154.20}«PyB10%»	{151.50-153.00} «AR08382-MEX» {152.00-155.00} «AR08062-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
					30.0% bedded/banded pyrite, bands up to 3cm wide	‖153.00-154.50‖ «AR08383-MEX»
					‖154.20-156.36‖«PyB20%» 20.0% bedded/banded pyrite	‖154.50-156.00‖ «AR08384-MEX»
156.36 TO 158.92	«S,g,*g» Sedimentary graphitic/argillaceous thinly laminated	-unknown contact due to missing core -banded sulphidic and graphitic argillite -highly conductive zone -minor degree of deformation to beds some crenulations ‖156.50‖«‖50 42°‖»		‖156.36-158.92‖«ChFW» moderate, fracture/vein controlled, carbonatization	‖156.36-158.92‖«PyB15%» 15.0% bedded/banded pyrite, bands up to 5mm wide	‖156.00-157.50‖ «AR08385-MEX» ‖157.00-158.50‖ «AR08063-WR» ‖157.50-159.00‖ «AR08386-MEX»
158.92 TO 162.78	«S,<SLT>» Sedimentary siltstone	-core missing at contact -dull grey siltstone -massive and featureless		‖158.92-162.78‖«ChFW» weak, fracture/vein controlled, carbonatization	‖158.92-162.78‖«PyD1%» 1.0% disseminated/blebby pyrite, cubes up to 5mm	‖159.00-160.50‖ «AR08387-MEX» ‖160.50-161.94‖ «AR08388-MEX» ‖161.94-162.78‖ «AR08389-MEX»
162.78 TO 164.58	«S,q» Sedimentary graphitic/argillaceous	-sharp uphole contact at a258 to CA -banded black argillite and pyrite -shows some deformation midway through interval with some faulting/brecciation -beds appear to be more contorted towards end of interval -pyrite appears to be forming with silica in bedding planes		‖162.78-164.58‖«ChFW .SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	‖162.78-164.58‖«PyB25%» 25.0% bedded/banded pyrite appears to be forming with silica in bedding planes in some spots small semi massive bands up to 5cm wide	‖162.78-164.00‖ «AR08390-MEX»
164.58 TO 166.00	«S,m,<SLT>» Sedimentary massive siltstone	-sharp uphole contact at a260 to CA -dull grey siltstone as seen earlier -massive and featureless		‖164.58-166.00‖«ChFW» weak, fracture/vein controlled, carbonatization	‖164.58-166.00‖«PyD0.5%» 0.5% disseminated/blebby pyrite, becoming more abundant and banded within 2cm of downhole contact	‖164.00-165.50‖ «AR08391-MEX»
166.00 TO 170.76	«S,g» Sedimentary graphitic/argillaceous	-appears to be a gradational contact with the siltstone fining to an argillite to a graphitic argillite indicating possible tops downhole -grades into a non graphitic argillite from 168.62		‖166.00-168.62‖«SiFW .ChFW» weak, fracture/vein controlled,	‖166.00-170.76‖«PyB10-15%» 10.0-15.0% bedded/banded pyrite	‖165.50-167.00‖ «AR08392-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		to 169.60 and then back to graphitic to end of interval -bedding at 51 to CA -white specs strung out in the foliation plane occur from 167.5m to 169.62m most likely a mix of mudstone and graphitic argillite beds		silicification; weak, fracture/vein controlled, carbonatization (168.62-169.84)«K>FM ,CbFW» moderate, fracture/vein controlled, potassic alteration; weak, fracture/vein controlled, carbonatization (169.84-170.76)«CbFW» weak, fracture/vein controlled, carbonatization		(167.00-168.50) «AR08393-MEX» (168.50-170.00) «AR08394-MEX» (170.00-171.50) «AR08395-MEX»
170.76 TO 179.22	«S,*f,<ARG>» Sedimentary thickly laminated mudstone-argillite	-sharp uphole contact at az63 to CA -mottled grey and qacky green -banded dark and light grey where alteration is not as intense -this mudstone appears to mark the end of the volcanic hiatus -bedding is good in some short intervals at 52 to CA -sediment appears to be fining downhole indicating possible tops downhole		(170.76-178.04)«P>FS ,CbPS,SiFW» strong, fracture/vein controlled, iron carbonate; strong, pervasive, carbonatization; weak, fracture/vein controlled, silicification	(170.76-176.53)«PyD0.1%» 0.1% disseminated/blebby pyrite (176.53-178.04)«PyB2-3%» 2.0-3.0% bedded/banded pyrite (178.04-179.22)«PyC0.1%» 0.1% clasts/fragment of pyrite.pyrite cubes up to 7mm	(171.50-173.00) «AR08395-MEX» (173.00-174.50) «AR08397-MEX» (173.01-176.00) «AR08044-MR» (174.50-176.00) «AR08398-MEX» (176.00-177.50) «AR08399-MEX» (177.50-179.22) «AR08400-MEX»
179.22 TO 190.78	«4,q,*a» Felsic Volcanic quartz phyric tuff	-sharp uphole contact at az50 to CA -medium grey with a pale green tinge -fine ash tuff with 1% qtz xls up to 1mm -many of the xls appear broken -moderate foliation at 56 to CA		(179.22-190.78)«ChFM ,CbPM,CbFW» moderate, fracture/vein controlled, chloritization; moderate, pervasive, carbonatization; weak, fracture/vein controlled, carbonatization	(179.22-183.40)«PyB2-3%» 2.0-3.0% bedded/banded pyrite (183.40-190.78)«PyD0.1%» 0.1% disseminated/blebby pyrite	(179.22-180.50) «AR09801-MEX» (180.50-182.00) «AR09802-MEX» (182.00-183.40) «AR09803-MEX» (182.01-185.00) «AR08055-MR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
						⟨190.28-190.90⟩ «AR09807-MEX»
190.78	«S,<ARG>»	-sharp uphole contact at ax58 to CA				
TO	Sedimentary	-fairly massive with ocassional 1-2cm beds				
210.50	mudstone-ar	-greyish green		⟨190.78-210.50⟩«CbFW»	⟨190.78-201.63⟩«PyD0.1%»	⟨200.00-203.00⟩ «AR08066-WR»
	gillite			weak, fracture/vein controlled,	0.1% disseminated/blebby pyrite	
		203.92-204.20 «9,a,m»		carbonatization		
		Felsic Intrusive			⟨201.63-204.20⟩«PyC1-2%»	⟨201.63-203.00⟩ «AR09804-MEX»
		fine grained, massive			1.0-2.0% clasts/fragment of pyrite	
		-irregular contact				
					⟨204.20-204.80⟩«PyM40-60%»	⟨201.00-201.92⟩ «AR09805-MEX»
					40.0-60.0% massive pyrite massive over	
					25cm and banded for the remainder	⟨204.24-204.80⟩ «AR09806-MEX»
210.50	«9,a,m»	-irregular uphole contact				
TO	Felsic	-carries rafts of argillite and mafic volc.				
217.05	Intrusive	-intruded by med. grained felsic		⟨210.50-217.05⟩«CbFW»		⟨210.50-211.40⟩ «AR08067-WR»
	fine			weak, fracture/vein controlled,		
	grained	211.40-214.09 «9,b,m»		carbonatization		
	massive	Felsic Intrusive				
		medium grained, massive				
		-looks slightly granitic				
		-carries large 0.5 to 1m rafts of argillite and				
		mafic volcanic				
217.05	«2,e,l,p»	-irregular up hole contact				
TO	Mafic	-salvages up to 1.5cm thick				
230.00	Volcanic	-apple to emerald green		⟨217.05-230.00⟩«ChFW ,CbFW,DlFW»	⟨217.05-230.00⟩«PyF0.5%»	⟨218.00-221.00⟩ «AR08068-WR»
	amygdaloida	-few amygdules		weak, fracture/vein controlled,	0.5% fracture/vein controlled pyrite	
	l/vesicular	-amygdules up to 2mm filled with carbonate		chloritization; weak, fracture/vein	mostly in salvages with minor	⟨226.50-227.00⟩ «AR09808-MEX»
	flows	-weakly fractured		controlled, carbonatization; weak,	disseminations throughout	
	pillowed			pervasive, bleaching		
						⟨227.00-228.50⟩ «AR09801-MEX»
				⟨219.40-219.66⟩«EpPS»		
				strong, pervasive, epidotization		
						⟨227.01-230.00⟩ «AR08069-WR»
230.00	«EOH»					
TO	End-Of-Hole					
230.00						

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR08358	40.86	43.80	2.94	30	35	17	0.3	12			60
AR08359	80.30	81.45	1.15	25	66	7	0.2	5			21
AR08360	81.45	82.58	1.13	41	81	21	0.3	3			39
AR08361	83.65	85.68	2.03	39	373	0	0.1	2			18
AR08362	86.51	87.60	1.09	32	185	3	0.1	1			13
AR08363	87.60	88.78	1.18	45	43	0	0.2	5			23
AR08364	100.00	101.30	1.30	43	62	0	0.2	2			35
AR08365	109.20	110.50	1.30	17	43	3	0.2	5			20
AR08366	110.50	112.00	1.50	20	48	0	0.2	3			24
AR08367	112.00	113.50	1.50	24	54	7	0.2	4			23
AR08368	113.50	115.00	1.50	19	45	0	0.1	1			19
AR08369	115.00	116.50	1.50	22	50	0	0.1	1			19
AR08370	116.50	118.00	1.50	24	69	0	0.2	1			21
AR08371	118.00	119.00	1.00	25	88	0	0.3	3			23
AR08372	119.00	120.30	1.30	27	78	3	0.2	1			16
AR08373	138.62	139.66	1.04	37	56	10	0.6	26			22
AR08374	139.66	141.00	1.34	245	191	0	0.8	62			62
AR08375	141.00	142.50	1.50	606	9620	3	6.5	111			135
AR08376	142.50	144.00	1.50	502	781	24	6.8	53			106
AR08377	144.00	145.30	1.30	213	258	7	1.1	15			48
AR08378	145.30	146.70	1.40	68	122	3	0.3	12			25
AR08379	146.70	148.24	1.54	103	115	10	0.5	35			52
AR08380	148.24	149.97	1.73	23	79	0	0.2	42			37
AR08381	149.97	151.50	1.53	221	310	0	0.5	20			46
AR08382	151.50	153.00	1.50	140	596	0	0.3	17			45
AR08383	153.00	154.50	1.50	147	134	14	0.5	27			35
AR08384	154.50	156.00	1.50	42	81	10	0.4	31			28
AR08385	156.00	157.50	1.50	316	1100	7	0.5	39			77
AR08386	157.50	159.00	1.50	346	1850	10	0.5	30			100
AR08387	159.00	160.50	1.50	273	684	3	0.2	13			73
AR08388	160.50	161.94	1.44	124	227	0	0.1	1			72
AR08389	161.94	162.78	0.84	150	281	0	0.1	3			63
AR08390	162.78	164.00	1.22	283	475	7	0.9	86			158
AR08391	164.00	165.50	1.50	271	332	0	0.2	6			73
AR08392	165.50	167.00	1.50	245	1110	0	0.3	13			59
AR08393	167.00	168.50	1.50	158	684	0	0.5	41			54
AR08394	168.50	170.00	1.50	114	162	0	0.2	7			48
AR08395	170.00	171.50	1.50	150	113	3	0.2	18			100
AR08396	171.50	173.00	1.50	171	75	0	0.1	1			108
AR08397	173.00	174.50	1.50	132	90	0	0.1	1			103
AR08398	174.50	176.00	1.50	117	114	0	0.1	1			85
AR08399	176.00	177.50	1.50	178	224	0	0.1	2			91
AR08400	177.50	179.22	1.72	46	119	0	0.1	1			23
AR09801	179.22	180.50	1.28	26	52	0	0.1	1			28
AR09802	180.50	182.00	1.50	22	36	3	0.1	1			24
AR09803	182.00	183.40	1.40	25	43	0	0.1	1			24
AR09807	190.28	190.90	0.62	52	61	0	0.1	1			35

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR09804	201.63	203.00	1.37	105	133	0	0.1	1			87
AR09805	203.00	203.92	0.92	76	144	0	0.1	1			61
AR09806	204.24	204.80	0.56	144	244	7	1.0	31			63
AR09808	226.50	227.00	0.50	101	80	0	0.1	1			77
AR09809	227.00	228.50	1.50	115	86	0	0.1	1			79

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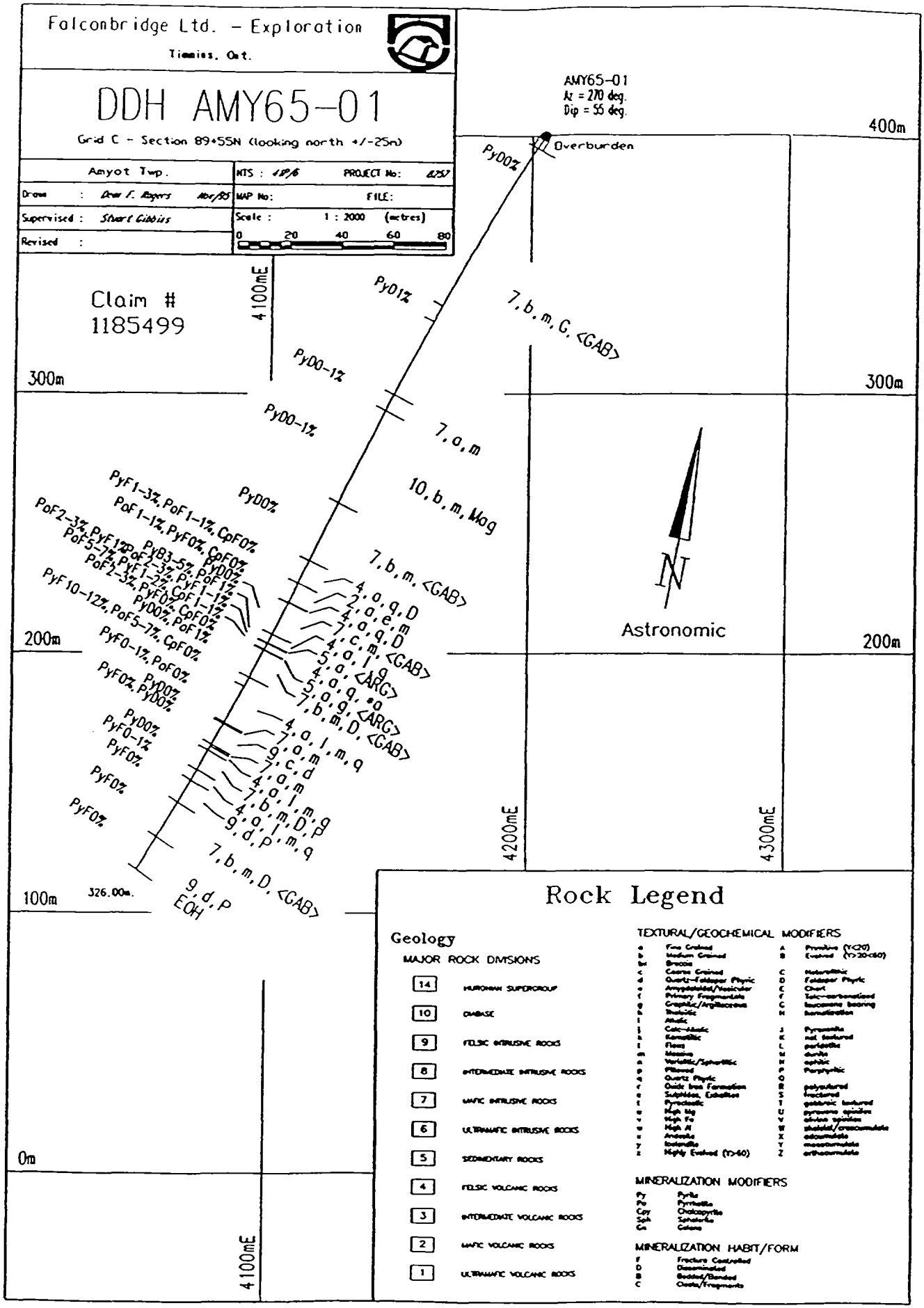
Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08047	35.00	38.00	3.00	69.95	11.68	3.24	1.25	0.27	3.24	2.54	0.12	0.04	0.10	0.09	5.23	97.68	22	136					15	20	30		4,m,q 4jB	173
AR08070	38.00	41.00	3.00	71.75	11.56	3.21	0.69	0.40	3.16	2.04	0.16	0.04	0.10	0.07	4.45	97.56	16	108					5	20	20		4,m,q 4jA	171
AR08048	44.00	47.00	3.00	71.35	12.26	2.58	0.77	1.00	2.82	3.27	0.18	0.06	0.06	0.05	3.48	97.82	18	196					30	20	<5		4,*b 4jA	192
AR08049	51.68	52.90	1.22	74.83	10.97	1.24	0.64	2.22	1.84	3.76	0.14	0.04	0.03	0.05	2.08	97.80	14	166					15	30	5		4,m 4jA	207
AR08050	59.00	62.00	3.00	74.37	11.75	1.65	0.60	2.14	2.36	3.13	0.19	0.06	0.05	0.05	2.80	99.10	18	198					15	35	15		4,*b 4jA	191
AR08051	74.00	77.00	3.00	68.34	11.77	3.03	1.30	1.01	2.94	4.30	0.25	0.06	0.11	0.04	5.58	98.68	16	162					35	30	25		4,*b 4jA	169
AR08052	83.00	86.00	3.00	61.13	13.56	4.69	1.61	1.19	2.92	7.36	0.33	0.10	0.43	0.03	7.69	100.99	12	142					10	30	20		4,q,*y 4jA	154
AR08053	88.78	92.00	3.22	42.49	11.84	8.50	6.36	1.54	0.78	13.97	0.79	0.08	0.28	0.03	13.73	100.37	18	54					105	85	90		2,m 2hv!	109
AR08054	95.00	98.00	3.00	61.41	14.59	4.01	2.54	3.33	2.24	4.12	0.41	0.12	0.14	0.04	6.46	99.37	12	128					40	15	30		4,*b 4jA	152
AR08055	104.00	107.00	3.00	47.79	13.47	7.15	6.07	1.93	0.12	14.13	0.87	0.10	0.18	0.01	8.85	100.66	20	58					125	85	85		5,<ARG>5!	146
AR08056	113.00	116.00	3.00	60.79	14.63	3.18	2.00	3.22	1.78	7.65	0.44	0.12	0.18	0.04	4.19	98.19	14	146					25	30	10		4,q,*b 4jA5	179
AR08057	121.00	124.00	3.00	63.25	13.90	3.92	1.55	3.88	1.84	2.90	0.48	0.14	0.09	0.03	5.65	97.61	18	154					20	10	15		4,*b 3j	144
AR08058	128.00	131.00	3.00	68.05	14.63	2.52	1.50	4.14	1.68	3.28	0.51	0.14	0.06	0.03	4.13	100.65	18	146					20	35	25		4,*b 3j	176
AR08059	134.00	137.00	3.00	65.20	13.29	4.19	1.80	2.04	2.22	3.28	0.46	0.14	0.09	0.03	6.81	99.49	16	156					20	35	<5		4,*a 4jA	157
AR08060	144.60	146.50	1.90	58.01	14.78	6.55	2.10	1.37	1.20	7.28	0.98	0.34	0.12	0.04	5.58	98.29	16	152					10	220	5		5,*f,<A5$	162
AR08061	148.29	149.97	1.68	63.90	14.75	4.26	1.91	4.51	1.74	3.93	0.54	0.22	0.07	0.04	4.90	100.72	8	134					10	65	40		9,a,m 8j	140
AR08062	152.00	155.00	3.00	57.84	11.42	5.20	1.01	1.00	0.54	14.58	0.28	0.10	0.06	0.08	6.03	98.07	10	132					35	75	170		5,*f,<A5$	169
AR08063	157.00	158.50	1.50	61.01	14.75	2.90	1.35	1.02	0.58	12.27	0.41	0.12	0.06	0.07	6.19	100.65	22	170					300	1605	65		5,g,*g 5$	328
AR08064	173.01	176.00	2.99	35.92	11.95	16.95	3.32	0.41	0.52	11.30	0.58	0.08	0.21	0.05	16.54	97.77	14	38					75	100	80		5,*f,<A5!	67
AR08065	182.01	185.00	2.99	58.42	13.74	9.62	0.77	0.82	1.12	4.46	0.37	0.10	0.11	0.03	8.40	97.93	8	114					10	70	40		4,q,*a 4jA!	119
AR08066	200.00	203.00	3.00	50.34	14.76	6.16	3.47	0.58	1.94	10.75	1.08	0.12	0.14	0.04	9.15	98.49	18	70					60	110	80		5,<ARG>5!	170
AR08067	210.50	211.40	0.90	63.55	14.67	3.82	2.10	4.74	1.22	3.72	0.47	0.20	0.05	0.04	3.23	97.75	8	122					10	60	45		9,a,m 9jA	150
AR08068	218.00	221.00	3.00	49.94	14.86	9.64	4.32	3.72	0.04	10.94	1.10	0.12	0.18	0.04	5.63	100.48	22	70					80	105	105		2,e,l,p2hw	111
AR08069	227.01	230.00	2.99	50.49	15.20	9.93	5.03	3.66	0.04	12.04	1.12	0.10	0.20	0.04	3.18	100.98	22	64					85	110	110		2,e,l,p2hw	112

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08047	35.00	38.00	3.00			15		<100																					
AR08070	38.00	41.00	3.00			10		100																					
AR08048	44.00	47.00	3.00			<5		<100																					
AR08049	51.68	52.90	1.22			5		100																					
AR08050	59.00	62.00	3.00			5		<100																					
AR08051	74.00	77.00	3.00			10		100																					
AR08052	83.00	86.00	3.00			<5		100																					
AR08053	88.78	92.00	3.22			45		100																					
AR08054	95.00	98.00	3.00			15		<100																					
AR08055	104.00	107.00	3.00			50		100																					
AR08056	113.00	116.00	3.00			15		9700																					
AR08057	121.00	124.00	3.00			10		100																					
AR08058	128.00	131.00	3.00			10		<100																					
AR08059	134.00	137.00	3.00			10		100																					
AR08060	144.60	146.50	1.90			10		14700																					
AR08061	148.29	149.97	1.68			10		1300																					
AR08062	152.00	155.00	3.00			55		55300																					
AR08063	157.00	158.50	1.50			80		42600																					
AR08064	173.01	176.00	2.99			25		700																					
AR08065	182.01	185.00	2.99			10		100																					
AR08066	200.00	203.00	3.00			40		600																					
AR08067	210.50	211.40	0.90			10		<100																					
AR08068	218.00	221.00	3.00			40		400																					
AR08069	227.01	230.00	2.99			45		400																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08047	35.00	38.00	3.00																					0.54	0.28	24	56	74
AR08070	38.00	41.00	3.00																					0.44	0.28	29	52	50
AR08048	44.00	47.00	3.00																					0.36	0.21	6	50	20
AR08049	51.68	52.90	1.22																					0.29	0.11	8	42	14
AR08050	59.00	62.00	3.00																					0.31	0.14	25	44	16
AR08051	74.00	77.00	3.00																					0.42	0.26	19	51	30
AR08052	83.00	86.00	3.00																					0.34	0.35	12	44	25
AR08053	88.78	92.00	3.22																					0.52	0.72	14	42	55
AR08054	95.00	98.00	3.00																					0.60	0.27	12	39	5
AR08055	104.00	107.00	3.00																					0.50	0.53	14	41	44
AR08056	113.00	116.00	3.00																					0.38	0.22	5	37	9
AR08057	121.00	124.00	3.00																					0.56	0.28	10	30	1
AR08058	128.00	131.00	3.00																					0.52	0.17	17	32	8
AR08059	134.00	137.00	3.00																					0.57	0.32	1	39	17
AR08060	144.60	146.50	1.90																					0.41	0.44	2	29	161
AR08061	148.29	149.97	1.68																					0.54	0.29	21	29	14
AR08062	152.00	155.00	3.00																					0.14	0.46	168	20	75
AR08063	157.00	158.50	1.50																					0.21	0.20	48	33	1574
AR08064	173.01	176.00	2.99																					0.41	1.42	24	18	244
AR08065	182.01	185.00	2.99																					0.29	0.70	52	15	85
AR08066	200.00	203.00	3.00																					0.43	0.42	23	45	190
AR08067	210.50	211.40	0.90																					0.57	0.26	21	28	13
AR08068	218.00	221.00	3.00																					0.48	0.65	24	25	28
AR08069	227.01	230.00	2.99																					0.50	0.65	22	27	30


Falconbridge Ltd. – Exploration
Timmins, Ont.
DDH AMY65-01
Grid C – Section 89+55N (looking north +/-25m)
Amyot Twp.
NTS : 42P/6
PROJECT No: 4257
Drawn : Drew F. Rogers Nov/93
MAP No:
FILE:
Supervised : Stuart Gibbins
Scale : 1 : 2000 (metres)
Revised :
0 20 40 60 80
AMY65-01
Az = 270 deg.
Dip = 55 deg.
Overburden
400m
300m
200m
100m
0m
4100mE
4200mE
4300mE
Claim #
1185499
Astronomic
326.00m.
EOH
Rock Legend
Geology
MAJOR ROCK DIVISIONS
14 HURONIAN SUPERGROUP
10 DIABASE
9 FELSIC INTRUSIVE ROCKS
8 INTERMEDIATE INTRUSIVE ROCKS
7 MAFIC INTRUSIVE ROCKS
6 ULTRAMAFIC INTRUSIVE ROCKS
5 SEDIMENTARY ROCKS
4 FELSIC VOLCANIC ROCKS
3 INTERMEDIATE VOLCANIC ROCKS
2 MAFIC VOLCANIC ROCKS
1 ULTRAMAFIC VOLCANIC ROCKS
TEXTURAL/GEOCHEMICAL MODIFIERS
Highly Evolved (Y>60)
MINERALIZATION MODIFIERS
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena
MINERALIZATION HABIT/FORM
Fracture Controlled
Disseminated
Bedded/Banded
Clasts/Fragments

HOLE NUMBER: AMY65-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1185499
LOCATION: Amyot Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5249332.00N
EAST: 481904.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid C
NORTH: 89+55N
EAST: 42+ 5E
ELEV: 400.00

COLLAR DIP: -55° 0' 0°
LENGTH OF THE HOLE: 326.00M
START DEPTH: 0.00M
FINAL DEPTH: 326.00M

COLLAR ASTRONOMIC AZIMUTH: 270° 0' 0°

GRID ASTRONOMIC AZIMUTH: 345° 0' 0°

DATE STARTED: 09/27/1995
DATE COMPLETED: 09/01/1995
DATE LOGGED: 09/03/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: NW & BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 481905mE 5249332mN

COMMENTS : Western Conductor Grid C (DDH #12, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	270° 0' 0°	-63° 0' 0°	A	DO	
120.00	270° 0' 0°	-58° 0' 0°	A	DO	
180.00	270° 0' 0°	-65° 0' 0°	A	DO	
240.00	270° 0' 0°	-63° 0' 0°	A	DO	
300.00	270° 0' 0°	-56° 0' 0°	A	DO	

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 5.76	«{OB}» Casing Overburden					
5.76 TO 116.79	«?,b,m,G,<G AB»» Mafic Intrusive medium grained massive leucoxene bearing gabbro	-dark green to black -unit varies from med. to coarse grained -clotty white leucoxenes (1-2%) peppered throughout -undeformed except for minor 10-20cm shears -very rare rounded qtz-eyes {77.49-84.58}«10,a,m,D,Ma» Diabase fine grained, massive, feldspar phyric, magnetite, -sharp contact @=60° to CA with well chilled borders -<1% feldspar clots but large (up to 1cm) -strongly magnetic {105.62-105.82}«4,a.m,D» Felsic Volcanic fine grained, massive, feldspar phyric. -xenolith within gabbro {105.94-106.23}«4,a.m,D» Felsic Volcanic fine grained, massive, feldspar phyric. -xenolith within gabbro		{5.76-116.79}«CbFM ,SiFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification {53.40-55.60}«CbPS» strong, pervasive, carbonatization -mottled textured unit with ill-defined borders 77.49-84.58 -unaltered diabase dyke -very minor calcite veinlets {85.11-85.48}«SiPM» moderate, pervasive, silicification -near lower contact with fine-grained dyke	{5.76-116.79}«PyD0.1%» 0.1% disseminated/blebby pyrite {77.49-84.58}«PyD1%» 1.0% disseminated/blebby pyrite -within diabase dyke	{41.00-44.00} «AR08071-WR»
116.79 TO 123.86	«?,a,m» Mafic Intrusive fine grained massive	-uphole contact sharp and planar @36° to CA -dark gray to black -unit is slightly coarser grained with weak gabbroic texture in interior -probably fine grained phase of gabbro -contains rare 2-3mm fragments of felsic material and larger rhyolite xenolith noted below {122.48-123.62}«4,a.m,D» Felsic Volcanic fine grained, massive, feldspar phyric. -very irregular but sharp contacts -1% small (1-2mm) feldspar phenocrysts -unmineralized		{116.79-123.86}«CbFM ,SiFM,SiPM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, pervasive, silicification {122.48-123.62}«CbFM ,SiFM,SePM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, pervasive, sericitization -within rhyolite xenolith	{116.79-123.86}«PyD0.1-0.5%» 0.1-0.5% disseminated/blebby pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
123.86 TO 163.88	«10,b,m,Mag» Diabase medium grained massive magnetite	-uphole contact sharp and planar @48° to CA -excellent chills on upper and lower contacts over 0.5-1.0m -dark gray to green -moderately to strongly magnetic over length of unit -very fresh, unfractured unit ¶129.60-130.02¶«FAI» Fault -broken, ground core with poor recovery ¶135.99-136.17¶«FAI» Fault -broken,blocky core		¶123.86-163.88¶«CbFM» weak, fracture/vein controlled, carbonatization	¶123.86-163.88¶«PyD0.1-0.5%» 0.1-0.5% disseminated/blebby pyrite	
163.88 TO 188.86	«7,b,m,«GAB»» Mafic Intrusive medium grained massive gabbro	-uphole contact sharp and planar @57° to CA -good chill on diabase above but none on gabbro -similar to above gabbro		¶163.88-188.86¶«CbFM ,SiFM,K>FM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic alteration -very minor K-feldspar veining	¶163.88-188.88¶«PyD0.1%» 0.1% disseminated/blebby pyrite	
188.86 TO 198.59	«4,a,q,D» Felsic Volcanic fine grained quartz phyric feldspar phyric	-uphole contact sharp and planar @37° to CA but strongly carbonate altered (gabbro above chilled over 2-3m) -gray to black -unit is variably textured due to alteration differences (massive to granular/tuffaceous textures) -weakly banded (flow or fol'n?) -possibly a lapilli/ash tuff but fragments are difficult to discern -2-3% large 2-4mm blue qtz eyes are rounded and elongate along weak foliation (some possibly amygdules) -feldspar phens are smaller (1-2%, <2mm generally) and have hazy, diffuse borders -unit is cut by several mafic dykes listed below which have sharp contacts @~60° to CA -dykes are grainy textured, dark green and weakly carbonate veined with ¶93.10-93.10¶«FS2 42°» Foliation		¶188.86-193.63¶«CbFM ,ChFM,SiFM» weak, fracture/vein controlled, carbonatization; weak, pervasive, chloritization; weak, pervasive, silicification ¶193.63-198.59¶«CbFM ,ChFM,SiPS» weak, fracture/vein controlled, carbonatization; moderate, pervasive, chloritization; strong, pervasive, silicification	¶188.86-198.59¶«PyF1-3%,PoF0.5-1%,CpF0.1» 1.0-3.0% fracture/vein controlled pyrite; 0.5-1.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled chalcopyrite -fine-grained Py/Po veinlets with minor Cpy associated with Po veinlets	¶194.00-197.00¶ «AR08072-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		([189.58-192.01]«7,a,m» Mafic Intrusive fine grained, massive, ([192.24-192.45]«7,a,m» Mafic Intrusive fine grained, massive, ([197.43-197.84]«7,a,m» Mafic Intrusive fine grained, massive,				
198.59 TO 206.79	«2,a,e,m» Mafic Volcanic fine grained amygdaloida l/vesicular massive	-uphole contact extremely sharp @45° to CA -dark green to black -massive featureless unit except for 1-2% calcite filled amygdules from 3-10mm in diameter -amygdules often contain sulphides (entire amygdule or within calcite) -amygdules increase towards downhole portion of unit (tops down?) -unit contains 2-3% clotty white albite phenocrysts up to .5cm across over lowermost 40cm -6cm albite? 'egg' at 198.8m ([201.12-201.51]«|FAI|» Fault -broken, blocky core		([198.59-206.79]«CbFW ,ChPW,SiPM» weak, fracture/vein controlled, carbonatization; weak, pervasive, chloritization; moderate, pervasive, silicification	([198.59-206.79]«PoF0.5-1%,PyF0.1%,CpF0.1» 0.5-1.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled pyrite; 0.1% fracture/vein controlled chalcopyrite -predominantly Po with minor associated Cpy/Py within calcitic fractures and within amygdules	([203.00-206.00] «AR08073-WR»
206.79 TO 207.14	«4,a,q,D» Felsic Volcanic fine grained quartz phyric feldspar phyric	-sharp uphole contact -similar to rhyolite above -possibly a clast within mafic above or gabbro below		([206.79-207.14]«CbFW ,ChPW,SiPM» weak, fracture/vein controlled, carbonatization; weak, pervasive, chloritization; moderate, pervasive, silicification	-unmineralized	
207.14 TO 220.46	«7,c,m,«GAB »» Mafic Intrusive coarse grained massive	-uphole contact sharp and planar @60° to CA -good chill with rhyolite above ([216.98-217.18]«|FAI|» Fault -broken, blocky core		([207.14-220.46]«CbFW ,SiFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	([207.14-220.46]«PyD0.1%» 0.1% disseminated/blebby pyrite	([212.00-215.00] «AR08074-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	gabbro					
220.46 TO 224.16	«4,a,1,q» Felsic Volcanic fine grained flows (banded) quartz phyric	-uphole contact sharp and planar @49° to CA -brownish gray to tan -<1% 1mm equant qtz eyes -weakly fol'd but textures appear to be primary flow banding -minor 1-2cm fragmental bands most prominant in sulphide rich bands ⟦221.00-221.00⟧«{50 47°}» Bedding -flow-banding?		⟦220.46-224.16⟧«ChFW ,SiPM,SePM» weak, fracture/vein controlled, chloritization; moderate, pervasive, silicification; moderate, pervasive, sericitization	⟦220.46-224.16⟧«PyB3-5%,PoF1%» 3.0-5.0% bedded/banded pyrite; 1.0% fracture/vein controlled pyrrhotite -sulphides occur as 0.5-3.0cm wide bands of coarse recrystallized Py with minor fine grained Po -also small Po fractures within massive rhyolite ⟦224.16-224.56⟧«PoF2-3%,PyF1%» 2.0-3.0% fracture/vein controlled pyrrhotite; 1.0% fracture/vein controlled pyrite -fine Fe-sulphides along cleavage/bedding planes within argillite and as small (1-2mm) clots	⟦220.46-221.96⟧ «AR09810-MEX» ⟦221.00-224.00⟧ «AR08075-MR» ⟦221.96-223.46⟧ «AR09811-MEX» ⟦223.46-224.16⟧ «AR09812-MEX»
224.16 TO 224.56	«5,a,<ARG>» Sedimentary fine grained mudstone-ar gillite	-upper contact broken but appears sharp -2cm rhyolite clast at up hole contact (tops down?) -dark gray to black but non-conductive -minor silty wisps but no tops from grading ⟦224.29-224.29⟧«{80 42°}» Bedding -transposed cleavage/bedding?		-unaltered	⟦224.16-224.56⟧«PoF2-3%,PyF0.5-1%» 2.0-3.0% fracture/vein controlled pyrrhotite; 0.5-1.0% fracture/vein controlled pyrite -fine Fe-sulphides along cleavage/bedding planes with minor Po/Py fractures (remobilized)	⟦224.16-224.56⟧ «AR09813-MEX»
224.56 TO 227.09	«4,a,q,*a» Felsic Volcanic fine grained quartz phyric tuff	-uphole contact with argillite diffuse/gradational -gray to buff -granular textured with rare 2-3cm of massive rhyolite and minor 1-2cm bands of fragmental/brecciated material most evident when cemented by sulphide -rare qtz eyes		⟦224.56-227.09⟧«ChFW ,SeFW,SiPM» weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization; weak, pervasive, silicification -discreet alteration veins and as diffuse bands	⟦224.56-227.09⟧«PoF5-7%,PyF1-2%,CpF0.5-1» 5.0-7.0% fracture/vein controlled pyrrhotite; 1.0-2.0% fracture/vein controlled pyrite; 0.5-1.0% fracture/vein controlled chalcopyrite -"net-textured" Po veinlets surrounding felsic lapilli within minor brecciaete intervals -also discreet Py/Po veinlets and wisps along fol'n/bedding planes -Cpy veinlets (1mm) associated with Po	⟦224.56-226.06⟧ «AR09814-MEX» ⟦226.06-227.09⟧ «AR09815-MEX»
227.09 TO 227.48	«5,A,g,<ARG>» Sedimentary fine	-uphole contact sharp and planar at Po band @32° to CA -gray to black -silty material at top of unit which is		⟦227.09-227.48⟧«CbFW» weak, fracture/vein controlled, carbonatization	⟦227.09-227.48⟧«PoF2-3%,PyF0.1%,CpF0.1%» 2.0-3.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein	⟦227.09-227.48⟧ «AR09815-MEX»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	grained graphitic/argillaceous mudstone-Argillite	non-conductive and finer grained, weakly to moderately conductive material towards base (tops down) ⟦227.16-227.16⟧«⟨SO 36°⟩» Bedding ·transposed bedding, weakly contorted			controlled pyrite; 0.1% fracture/vein controlled chalcopyrite ·fine Po streaks along cleavage/bedding and within irregular (remobilized) veinlets ·minor Py/Cpy within some Po veinlets	
227.48 TO 239.36	«?,b,m,D.<OAD>» Mafic Intrusive medium grained massive feldspar phyric gabbro	·similar to gabbro dykes uphole with sharp contacts @~40-50° to CA with well chilled margins and coarser grained interiors ·1% clotty feldspar phenocrysts up to 1cm in diameter		⟦227.48-239.36⟧«CbFM ,SlFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	⟦227.48-239.36⟧«PyD0.1%,PoF0.5%» 0.1% disseminated/blebby pyrite; 0.5% fracture/vein controlled pyrrhotite ·Po within qtz vein	⟦230.00-233.00⟧ «AR08076-WR»
239.36 TO 259.15	«4,a,l,m,q» Felsic Volcanic fine grained flows (banded) massive quartz phyric	·uphole contact sharp and planar @52° to CA ·dark gray to black ·vitric massive unit ·1-3% 1mm equant qtz-eyes ·tr. feldspar phenocrysts are hazy to distinct but sub-rounded ·well banded uniform texture at 50-55° to CA ·some grainy spots likely 1-2mm amygdules but difficult to differentiate form qtz-eyes ⟦248.30-248.30⟧«⟨SO 53°⟩» Bedding ·flow-banding ⟦253.51-253.83⟧«⟨FAI⟩» Fault ·broken, blocky core		·alteration consists of a pervasive silicification/chloritization over entire unit as well as discreet chlorite/calcite veinlets which have bleached(sericitic) 1cm alteration halos ·strongly banded 'barber-pole' texture in areas of stronger fracture controlled alteration ·pervasive sericite over short diffuse intervals listed below ⟦239.36-259.15⟧«ChFM ,SlFM» moderate, pervasive, chloritization; moderate, pervasive, silicification ⟦239.36-259.15⟧«ChFW ,SeSS,CbFW» weak, fracture/vein controlled, chloritization; strong, spotty, sericitization; weak, fracture/vein controlled, carbonatization ⟦245.00-245.66⟧«SePS» strong, pervasive, sericitization ⟦246.51-246.64⟧«SePS» strong, pervasive, sericitization	⟦239.36-243.40⟧«PyF10-12%,PoF5-7%,CpF0.1%» 10.0-12.0% fracture/vein controlled pyrite; 5.0-7.0% fracture/vein controlled pyrrhotite; 0.1% fracture/vein controlled chalcopyrite ·fine Po and coarser recrystallized Py within irregular fractures and bands some reaching massive over 7-10cm ·tr. Cp associated with Po veinlets ⟦243.40-259.15⟧«PyF0-1%,PoF0%» 0.1-0.5% fracture/vein controlled pyrite; 0.1% fracture/vein controlled pyrrhotite ·abrupt decrease in sulphide content ·sulphides generally associated with chloritic veinlets	⟦239.36-240.86⟧ «AR09817-MEX» ⟦240.86-242.36⟧ «AR09818-MEX» ⟦242.36-243.86⟧ «AR09819-MEX» ⟦248.00-251.00⟧ «AR08077-WR»

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				(254.96-255.19)<SePM> moderate, pervasive, sericitization		
259.15 TO 259.89	<7,a,m> Mafic Intrusive fine grained massive	-uphole contact broken -dark green -similar to above gabbros but finer grained and less altered		(259.15-259.89)<CbFW ,SiFM> weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	(259.15-259.89)<PyD0.1%> 0.1% disseminated/blebby pyrite	
259.89 TO 268.88	<9,c,d> Felsic Intrusive coarse grained quartz-feld spar Phyric	-uphole contact sharp and planar @50° to CA -weakly deformed -distinctive unit with large (up to 1cm) rounded to irregular bluish qtz grains and altered feldspars in a granular chloritic matrix -35% qtz and 30% feldspar phenocrysts -very uniform coarse-grained texture		(259.89-268.88)<ChFW ,SePM,ChPM> weak, fracture/vein controlled, chloritization; moderate, pervasive, sericitization; weak, pervasive, chloritization -hazy sericite altered feldspars within a chloritized groundmass	(259.89-268.88)<PyF0.1%,PyD0.1%> 0.1% fracture/vein controlled pyrite; 0.1% disseminated/blebby pyrite -very weakly mineralized	(263.00-266.00) <AR08078-WR>
268.88 TO 269.81	<7,a,m> Mafic Intrusive fine grained massive	-similar to above mafic dyke				
269.81 TO 271.58	<4,a,l,m,q> Felsic Volcanic fine grained flows (banded) massive quartz phyric	-uphole contact sharp and planar @46° to CA -massive flow-banded unit similar to above rhyolite -<1% (<1mm) qtz phenocrysts -tr. irregular feldspar phenocrysts (<1mm) (270.50-270.50)<{50 51°}> Bedding -flow-banding		(269.81-271.58)<ChFW ,SiFM,SePM> weak, pervasive, chloritization; weak, pervasive, silicification; weak, pervasive, sericitization	-unmineralized	
271.58 TO 280.34	<7,b,m,D,P> Mafic Intrusive medium grained massive feldspar phyric porphyritic	-sharp, chilled contacts at 60° to CA -deep green -1% irregular, clotty albite phenocrysts up to .5cm in diameter (2cm @272.46m)		(271.58-280.34)<CbFW ,SiFM> weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	(271.58-280.34)<PyD0.1%> 0.1% disseminated/blebby pyrite	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
280.34 TO 284.98	«4,a,l,m,q» Felsic Volcanic fine grained flows (banded) massive quartz phyric	-uphole contact sharp but irregular @~80° to CA -dark gray -massive, flow-banded rhyolite -1-2% equant qtz-eyes (1mm) {280.85-281.44}«?,a,m» Mafic Intrusive fine grained, massive, {282.00-282.00}«{SO 50°}» Bedding -flow-banding		{280.34-284.98}«ChFW ,SiFW,SeFW» weak, pervasive, chloritization; weak, pervasive, silicification; weak, fracture/vein controlled, sericitization {280.34-284.98}«ChFW ,CbFW» weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, carbonatization	{280.34-284.98}«PyF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrite -associated with chlorite veinlets	{281.90-284.90} «AR08079-MR»
284.98 TO 295.01	«9,d,P» Felsic Intrusive quartz-feldspar Phyric porphyritic	-uphole contact sharp and planar @51° to CA -puplish brown -undeformed except for minor shears -strongly feldspar porphyritic with 40% irregular to euhedral but very fresh-looking feldspar phenocrysts (2-7mm in diameter) -1-2% 3-5mm rounded blue qtz phenocrysts -very similar to porphyry intersected in BR041-03 except for presence of qtz-phenocrysts -probably equivalent to porphyry at north-western corner of Grid C		{284.98-295.01}«CbFW ,SiFW,ChFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization	{284.98-295.00}«PyF0.1%» 0.1% fracture/vein controlled pyrite -within very minor chlori tic veinlets	{290.00-293.00} «AR08080-MR»
295.01 TO 310.89	«7,b,m,D,<0 Ah»» Mafic Intrusive medium grained massive feldspar phyric gabbro	-uphole contact sharp and planar @48° to CA -good chill on gabbro, porphyry above appears chilled but this is tectonic grain-size reduction due to shearing -<1% clotty feldspar phenocrysts		{295.01-310.89}«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	{295.01-310.89}«PyF0.1%» 0.1% fracture/vein controlled pyrite	
310.89 TO 326.00	«9,d,P» Felsic Intrusive quartz-feldspar Phyric porphyritic	-uphole contact sharp and planar @64° to CA -identical to fresh-looking strongly porphyritic unit at 284.98-295.01m {311.47-314.38}«4,a,d,l,m» Felsic Volcanic fine grained, quartz-feldspar Phyric, flows (banded), massive, -massive unit similar to rhyolites above -becomes feldspar porphyritic towards base and appears to grade into feldspar porphyry below		{310.89-326.00}«CbFW ,SiFW,ChFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, chloritization {311.47-314.38}«ChFW ,SiFW» weak, pervasive, chloritization; weak, pervasive, silicification -within rhyolite xenolith/interval	{310.89-326.00}«PyF0.1%» 0.1% fracture/vein controlled pyrite	{317.00-320.00} «AR08081-MR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-hyaloclastite/brecciated bands @311.12m				
		[325.68-326.00]«7,a,m,«GAB»»				
		Mafic Intrusive				
		fine grained, massive, gabbro,				
		-probably fine grained chill to underlying gabbro				
326.00	«EOH»					
TO	End-Of-Hole					
326.00						

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn ppm	Ni ppm
AR09810	220.46	221.96	1.50	142	522	7	0.2	3			41
AR09811	221.96	223.46	1.50	50	173	3	0.2	7			22
AR09812	223.46	224.16	0.70	44	121	14	0.1	1			20
AR09813	224.16	224.56	0.40	188	1090	14	0.2	1			70
AR09814	224.56	226.06	1.50	400	633	10	0.5	1			69
AR09815	226.06	227.09	1.03	169	766	0	0.4	1			62
AR09816	227.09	227.48	0.39	550	505	14	1.9	20			126
AR09817	239.36	240.86	1.50	301	787	34	0.7	1			41
AR09818	240.86	242.36	1.50	261	456	17	0.5	5			37
AR09819	242.36	243.86	1.50	220	568	38	1.4	6			38

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08071	41.00	44.00	3.00	48.19	14.19	10.97	7.63	2.42	0.36	11.82	0.81	0.08	0.18	0.09	1.48	98.14	14	32					150	80	95		7,b,m,<7hu	103
AR08072	194.00	197.00	3.00	71.16	12.36	1.80	1.48	4.61	0.88	4.29	0.28	0.08	0.04	0.08	1.09	98.05	22	176					30	35	30		4,a,q,D4jB	170
AR08073	203.00	206.00	3.00	54.06	16.80	5.46	4.35	5.04	1.08	8.81	0.68	0.14	0.12	0.05	1.44	97.99	12	104					55	120	35		2,a,e,m3j	145
AR08074	212.00	215.00	3.00	48.60	13.64	9.04	5.46	2.40	0.56	15.51	1.41	0.18	0.24	0.04	1.14	98.17	28	92					65	120	55		7,c,m,<7hv	114
AR08075	221.00	224.00	3.00	77.05	10.24	1.90	0.74	1.63	2.46	2.74	0.20	0.06	0.04	0.08	1.17	98.22	30	156					35	595	20		4,a,l,q4hBS	171
AR08076	230.00	233.00	3.00	49.57	14.28	10.08	7.34	2.34	0.62	12.67	0.96	0.12	0.20	0.04	2.49	100.67	16	58					30	85	105		7,b,m,D7hu	110
AR08077	248.00	251.00	3.00	76.92	12.29	1.96	0.48	4.12	1.58	2.41	0.13	0.04	0.03	0.13	0.96	100.93	36	218					15	90	10		4,a,l,m4jB	160
AR08078	263.00	266.00	3.00	70.02	13.49	2.75	0.66	4.37	1.58	2.78	0.28	0.10	0.04	0.06	1.48	97.54	14	142					10	195	5		9,c,d 9jA	155
AR08079	281.90	284.90	3.00	75.24	11.78	1.18	0.39	5.23	1.18	2.13	0.11	0.04	0.02	0.10	0.81	98.13	30	204					20	50	<5		4,a,l,m4jB	155
AR08080	290.00	293.00	3.00	66.36	15.60	4.18	1.58	4.86	1.20	3.94	0.42	0.12	0.06	0.09	1.26	99.57	10	134					10	55	20		9,d,P 9jA	152
AR08081	317.00	320.00	3.00	66.95	14.29	3.42	1.55	4.34	1.22	4.18	0.37	0.12	0.06	0.06	1.66	98.15	8	116					10	60	30		9,d,P 9jA	159

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08071	41.00	44.00	3.00			50		100																					
AR08072	194.00	197.00	3.00			15		4900																					
AR08073	203.00	206.00	3.00			30		<100																					
AR08074	212.00	215.00	3.00			40		1300																					
AR08075	221.00	224.00	3.00			15		9100																					
AR08076	230.00	233.00	3.00			45		<100																					
AR08077	248.00	251.00	3.00			10		100																					
AR08078	263.00	266.00	3.00			10		100																					
AR08079	281.90	284.90	3.00			5		100																					
AR08080	290.00	293.00	3.00			15		100																					
AR08081	317.00	320.00	3.00			20		100																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08071	41.00	44.00	3.00																					0.61	0.77	12	37	31
AR08072	194.00	197.00	3.00																					0.45	0.15	20	27	8
AR08073	203.00	206.00	3.00																					0.54	0.33	8	34	24
AR08074	212.00	215.00	3.00																					0.45	0.66	10	34	50
AR08075	221.00	224.00	3.00																					0.39	0.19	27	48	365
AR08076	230.00	233.00	3.00																					0.58	0.71	14	39	36
AR08077	248.00	251.00	3.00																					0.32	0.16	21	25	22
AR08078	263.00	266.00	3.00																					0.36	0.20	8	24	45
AR08079	281.90	284.90	3.00																					0.30	0.10	13	20	10
AR08080	290.00	293.00	3.00																					0.49	0.27	13	24	11
AR08081	317.00	320.00	3.00																					0.47	0.24	19	26	14

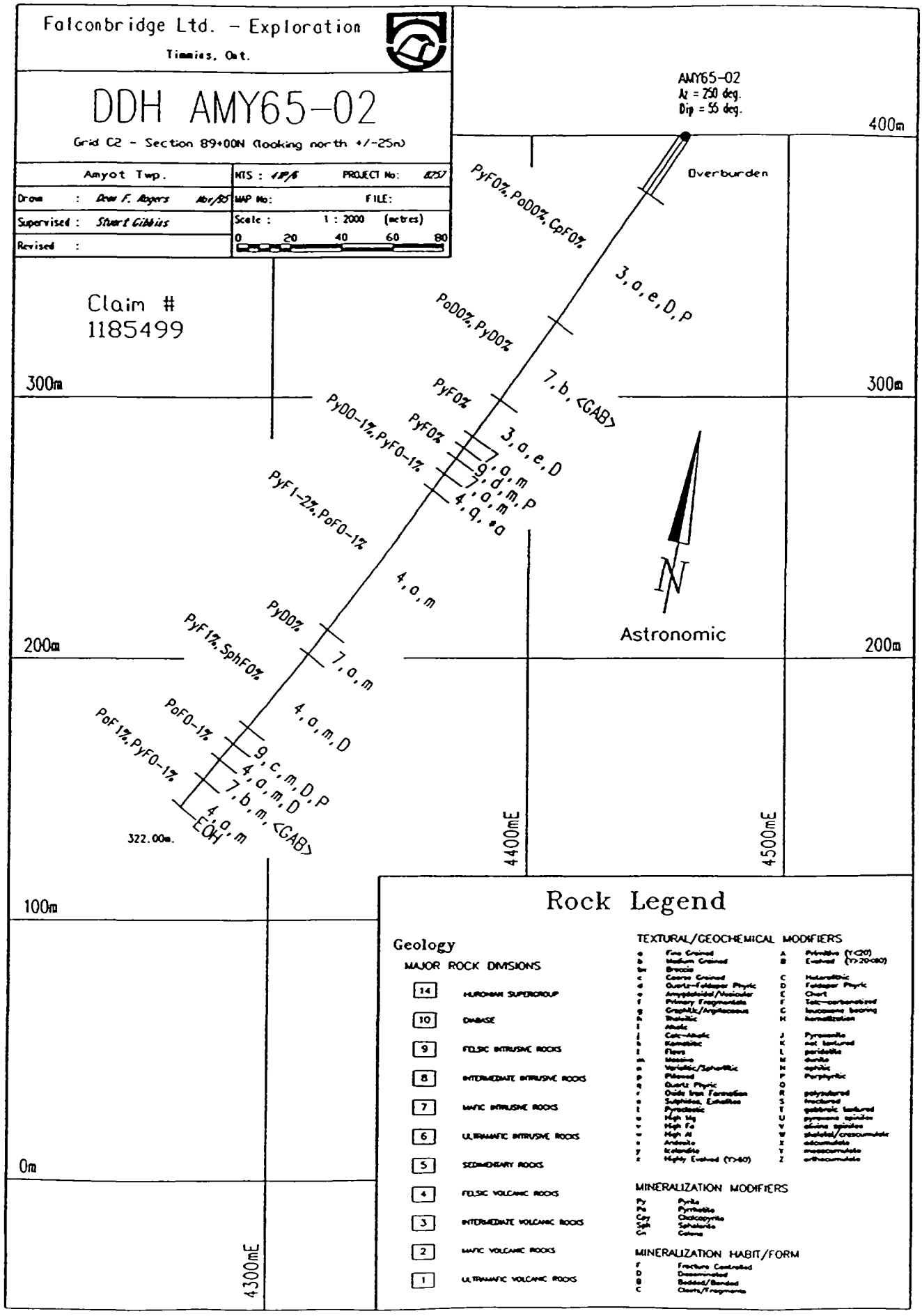
Falconbridge Ltd. – Exploration

Timmins, Ont.

DDH AMY65-02

Grid C2 – Section 89+00N (looking north +/-25m)

Amyot Twp.		NTS : 41P/6	PROJECT No: 8257
Drawn :	Drew F. Rogers Mar/95	MAP No:	FILE:
Supervised :	Stuart Gibbins	Scale :	1 : 2000 (metres)
Revised :		0 20 40 60 80	



Rock Legend

Geology

MAJOR ROCK DIVISIONS

14	HURONIAN SUPERGROUP
10	DIABASE
9	FELSIC INTRUSIVE ROCKS
8	INTERMEDIATE INTRUSIVE ROCKS
7	MAFIC INTRUSIVE ROCKS
6	ULTRAMAFIC INTRUSIVE ROCKS
5	SEDIMENTARY ROCKS
4	FELSIC VOLCANIC ROCKS
3	INTERMEDIATE VOLCANIC ROCKS
2	MAFIC VOLCANIC ROCKS
1	ULTRAMAFIC VOLCANIC ROCKS

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained	A	Primitive (Y<20)
b	Medium Grained	B	Evolved (Y>20<60)
c	Breccia		
d	Coarse Grained	C	Komatiitic
e	Quartz-Feldspar Phyric	D	Feldspar Phyric
f	Amygdaloidal/Vesicular	E	Chert
g	Primary Fragmentals	F	Talc-carbonate rock
h	Cryptic/Argillaceous	G	Manganese bearing
i	Rhyolitic	H	Hematization
j	Mafic		
k	Calc-Mafic	J	Pyroxenite
l	Komatiitic	K	Ank bearing
m	Fiamme	L	peridotite
n	Massive	M	dunite
o	Variolitic/Spherulitic	N	syenite
p	Pillowed	O	Porphyritic
q	Quartz Phyric	P	
r	Oxide Iron Formation	Q	polycrystal
s	Sulphides, Exhalites	R	fractured
t	Pyroclastic	S	gabbroic textured
u	High Mg	T	pyroxene spinifex
v	High Fe	U	olivine spinifex
w	High Al	V	foliated/cataclastic
x	Andesite	W	adcumulate
y	Dacite/Rio	X	mesocumulate
z	Highly Evolved (Y>60)	Y	orthocumulate
		Z	

MINERALIZATION MODIFIERS

Py	Pyrite
Po	Pyrrhotite
Cp	Chalcopyrite
Sph	Sphalerite
G	Galena

MINERALIZATION HABIT/FORM

f	Fracture Controlled
d	Disseminated
b	Bedded/Banded
c	Clasts/Fragments

HOLE NUMBER: AMY65-02

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 11/08/1995
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8257
PROJECT NUMBER: 8257
CLAIM NUMBER: 1185499
LOCATION: Amyot Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5249372.00N
EAST: 482162.00E
ELEV: 400.00

ALTERNATE COORDS GRID: Grid C2
NORTH: 89+ 0N
EAST: 44+60E
ELEV: 400.00

COLLAR DIP: -55° 0' 0°
LENGTH OF THE HOLE: 322.00M
START DEPTH: 0.00M
FINAL DEPTH: 322.00M

COLLAR ASTRONOMIC AZIMUTH: 250° 0' 0°

GRID ASTRONOMIC AZIMUTH: 345° 0' 0°

DATE STARTED: 10/02/1995
DATE COMPLETED: 10/10/1995
DATE LOGGED: 10/11/1995

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: NOREX
CASING: BW left in hole
CORE STORAGE: Timmins
UTM COORD.: 482169mE 5249371mN

COMMENTS : Eastern conductor Grid C2 (DDH #13, 1995)
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	250° 0' 0°	-55° 0' 0°	A	DO	
120.00	250° 0' 0°	-54° 0' 0°	A	DO	
180.00	250° 0' 0°	-53° 0' 0°	A	DO	
240.00	250° 0' 0°	-51° 0' 0°	A	DO	
300.00	250° 0' 0°	-50° 0' 0°	A	DO	

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 26.60	«{OB}» Casing Overburden					
26.60 TO 87.33	«I,a.e,D,P» Intermediate Volcanic fine grained amygdaloidal/vesicular feldspar phyric porphyritic	-26.60-29.64m consists of unconsolidated boulders and cobbles of gabbroic and qtz/feldspar porphyry material -pale to med green -unusual unit consisting of variable textures from massive and featureless to strongly porphyritic to fragmental -intruded by gabbro dykes at top of hole -1-2% large (3-5mm) blue qtz clots are likely amygdules -Po filled amygdules @42. 8m -1-5% white to pink feldspar phenocrysts are euhedral to broken looking and are sporadic throughout unit -fragmental intervals consist of black to dark green clasts up to 1.5cm in a paler green matrix (texture probably due to alteration as edges of clasts are mottled to sharp) [29.64-33.59]«?,b,m,<GAB>» Mafic Intrusive medium grained, massive, gabbro, [36.72-41.62]«?,b,m,<GAB>» Mafic Intrusive medium grained, massive, gabbro. [45.08-46.42]«?,b,m,<GAB>» Mafic Intrusive medium grained, massive, gabbro, [46.42-46.52]«{FAI}» Fault -broken blocky core [60.15-60.65]«{FAI}» Fault -broken, blocky core [76.17-76.45]«{FAI}» Fault -broken blocky core		-unit is marked by a strong network veining of qtz/carb/albite? -veinlets are 1-2mm wide with 1-3mm whitish alteration halos [26.60-87.33]«SIFS ,CbFM,AbFW» strong, fracture/vein controlled, silicification; moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, albitization	[26.60-87.33]«PyF0.1%,PoD0.1%,CpF0.1%» 0.1% fracture/vein controlled pyrite; 0.1% disseminated/blebby pyrrhotite; 0.1% fracture/vein controlled chalcopyrite -associated with late qtz veins -isolated Po filled amygdules at 42.8m	[50.00-53.00] «AR08082-WR» [83.00-86.00] «AR08083-WR»

HOLE NUMBER: AMY65-02 | DRILL HOLE RECORD | DATE: 11/08/1995

FROM / TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
87.33 TO 124.19	«7,b,«GAB»» Mafic Intrusive medium grained gabbro	-uphole contact irregular & masked by alteration -dark green to black -<1% irregular clotty feldspar phenocrysts -varies considerably from fine to med. grained {95.81-96.17}«9,d,P» Felsic Intrusive quartz-feldspar Phyric, porphyritic, {103.37-104.86}«3,a,D,P» Intermediate Volcanic fine grained, feldspar phyric, porphyritic. {120.39-120.69}«9,d,P» Felsic Intrusive quartz-feldspar Phyric, porphyritic,		{87.33-124.19}«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	{87.33-124.19}«PoD0.1%,PyD0.1%» 0.1% disseminated/blebby pyrrhotite; 0.1% disseminated/blebby pyrite	{107.00-110.00} «AR08084-WR»
124.19 TO 141.41	«3,a,e,D» Intermediate Volcanic fine grained amygdaloidal/vesicular feldspar phyric	-sharp uphole contact 058° to CA -med. to dark green -similar to porphyritic flow above -tr. irregular blue qtz filled amygdules -feldspars (1%) are very irregular to hazy -mottled/fragmental texture over short intervals -cherty clasts or brecciated veins at {124.65-126.90}«7,b,m,«GAB»» Mafic Intrusive medium grained, massive, gabbro, {127.94-130.42}«7,b,m,«GAB»» Mafic Intrusive medium grained, massive, gabbro,		{124.19-141.41}«CbFW ,SiFW,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, pervasive, silicification	{124.19-141.41}«PyF0.1%» 0.1% fracture/vein controlled pyrite	{134.00-137.00} «AR08085-WR»
141.41 TO 146.92	«7,a,m» Mafic Intrusive fine grained massive	-diffuse uphole contact -dark green -massive and featureless		{141.41-146.92}«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	-unmineralized	
146.92 TO 151.97	«9,d,m,P» Felsic Intrusive quartz-feldspar Phyric	-uphole contact broken -15% large (up to 1cm) irregular feldspar phenocrysts and 1% irregular qtz phenocrysts (<.5cm) in a granular textured matrix -some orangy pink feldspars are either primary		{146.92-151.97}«CbFW ,SiFW,K>FW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, potassic	{146.92-151.97}«PyF0.1%» 0.1% fracture/vein controlled pyrite	{148.00-151.00} «AR08086-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	massive porphyritic	K-spar or K-spar altered		alteration -some feldspar phenocrysts K-spar altered (orangy pink rims with white interiors)		
151.97 TO 159.24	«7,a,m» Mafic Intrusive fine grained massive	-uphole contact sharp and planar @45° to CA -dark green -massive and featureless		(151.97-159.24)«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification	-unmineralized	(152.00-155.00) «AR08087-WR»
159.24 TO 167.01	«4,q,*a» Felsic Volcanic quartz phyric tuff	-uphole contact sharp and planar @47° to CA -med. to dark gray -undeformed -grainy textured, massive unit -1-2% equant (1mm) qtz eyes -core is moderately broken and blocky (probably mecanical breakage)		(159.24-167.01)«CbFW ,SiFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification (159.24-167.01)«ChFW ,SiSW,SeFW» weak, fracture/vein controlled, chloritization; weak, spotty, silicification; weak, fracture/vein controlled, sericitization	(159.24-167.01)«PyD0.1-0.5%,PyF0.1-0.5%» 0.1-0.5% disseminated/blebby pyrite; 0.1-0.5% fracture/vein controlled pyrite	(161.00-164.00) «AR08088-WR»
167.01 TO 234.16	«4,a,m» Felsic Volcanic fine grained massive	-uphole contact sharp but qtz/carb veined -dark green to black -unit is strongly broken which may represent a fault zone or mechanical breakage -very hard, dense unit -strongly siliceous, either a chloritized rhyolite or silicified mafic volcanic? -feldspar phenocrysts are very irregular and hazy, some of which may be rock fragments -contains very diffuse mafic-looking intervals (dykes/precursor mafic?) (216.39-220.80)«9,d,m,P» Felsic Intrusive quartz-feldspar Phyric, massive, porphyritic. -upper contact sharp at 80° to CA, lower contact broken -large (3-7mm) blue qtz phenocrysts comprise 2-3% of unit -altered, irregular feldspar phenocrysts from 1-10mm (5-7%) -set in a med. grained granular groundmass		-network/stockwork veining of creamy white to pale green albite/epidote) sometimes giving a mottled texture (167.01-234.16)«AbFW ,SiFW,EpFW» moderate, fracture/vein controlled, albitization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, epidotization (167.01-234.16)«ChPS ,SeFW,CbFW» strong, pervasive, chloritization; weak, fracture/vein controlled, sericitization; weak, fracture/vein controlled, carbonatization	(167.01-234.16)«PyF1-2%,PoF0.1-0.5%» 1.0-2.0% fracture/vein controlled pyrite; 0.1-0.5% fracture/vein controlled pyrrhotite	(173.00-176.00) «AR08089-WR» (206.00-209.00) «AR08090-WR» (227.00-230.00) «AR08091-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
234.16 TO 246.31	«7,a,m» Mafic Intrusive fine grained massive	·uphole contact sharp and planar @25° to CA but brecciated by qtz/carb veining ·dark green and massive		⟨234.16-246.31⟩«CbFM ,SiFM,AbFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization	⟨234.16-246.31⟩«PyD0.1%» 0.1% disseminated/blebby pyrite	
246.31 TO 282.33	«4,a,m,D» Felsic Volcanic fine grained massive feldspar phyric	·uphole contact sharp but irregular ·med. gray to black ·similar to above siliceous unit but with more clearly defined feldspar phenocrysts (1-2mm, 1-3%) ·strongly broken ·mottled texture in some areas due to alteration ·rare qtz phenocrysts present ⟨249.86-250.78⟩«7,a,m» Mafic Intrusive fine grained, massive, ⟨277.66-279.81⟩«7,a,m» Mafic Intrusive fine grained, massive,		⟨246.31-282.33⟩«CbFM ,SiFM,AbFM» moderate, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization ⟨246.31-282.33⟩«ChPM ,ChFM,SeFM» moderate, pervasive, chloritization; weak, fracture/vein controlled, chloritization; weak, fracture/vein controlled, sericitization	⟨246.31-282.33⟩«PyF1%,SphF0.1%» 1.0% fracture/vein controlled pyrite; 0.1% fracture/vein controlled sphalerite ·sphalerite clots associated with some qtz/carb veins	⟨254.00-257.00⟩ «AR08092-WR» ⟨275.00-278.00⟩ «AR08093-WR»
282.33 TO 290.61	«9,c,m,D,P» Felsic Intrusive coarse grained massive feldspar phyric porphyritic	·uphole contact sharp but irregular ·greenish gray to orange ·25% 2-4mm white feldspar phenocrysts which are partially to wholly K-spar altered ·set in a finer grained, grainy, weakly chloritic matrix ·qtz phenocrysts present but are largely subordinate to feldspars		⟨282.33-290.61⟩«K>FM ,K>PM,ChPM» weak, fracture/vein controlled, potassic alteration; moderate, pervasive, potassic alteration; weak, pervasive, chloritization	·unmineralized	⟨284.00-287.00⟩ «AR08094-WR»
290.61 TO 298.57	«4,a,m,D» Felsic Volcanic fine grained massive feldspar phyric	·uphole contact sharp and planar @52° to CA ·black ·1% irregular feldspar phenocrysts are clotty to euhedral and weakly stretched along foliation ·mottled texture due to alteration ·rare fragments present ⟨294.50-294.50⟩«{S2 45°}» Foliation		·network albite/qtz veining as in massive rhyolites above ⟨290.61-298.57⟩«CbFM ,SiFM,AbFM» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; moderate, fracture/vein controlled, albitization ·alteration halos sometimes forming a mottled texture ⟨290.61-298.57⟩«ChPM ,SiPM,ChFM»	⟨290.61-298.57⟩«PoF0.1-0.5%» 0.1-0.5% fracture/vein controlled pyrrhotite	⟨293.00-296.00⟩ «AR08095-WR»

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				moderate, pervasive, chloritization; weak, pervasive, silicification; weak, fracture/vein controlled, chloritization		
298.57 TO 308.47	«7,b,m,<GAB» Mafic Intrusive medium grained massive gabbro	·uphole contact sharp and planar @67° to CA ·dark green ·feathery plagioclase clots ·very weakly magnetic in some short intervals ·good chill zones at upper and lower contacts ▯304.11-304.32▯«FAI»· Fault ·broken, ground core ▯305.21-305.64▯«FAI»· Fault ·broken, blocky core				
308.47 TO 322.00	«4,a,m» Felsic Volcanic fine grained massive	·uphole contact sharp @65° to CA but broken ·dark gray ·similar clotty feldspar phenocrysts to above rhyolite but only over very short intervals ·rare qtz phenocryts (possibly amygdules) ▯314.95-316.21▯«7,a,m» Mafic Intrusive fine grained, massive,		▯308.47-322.00▯«CbFW ,SiFW,AbFW» weak, fracture/vein controlled, carbonatization; weak, fracture/vein controlled, silicification; weak, fracture/vein controlled, albitization ▯308.47-322.00▯«ChFW ,ChFW» weak, pervasive, chloritization; weak, fracture/vein controlled, chloritization	▯308.47-322.00▯«PoF1%,PyF0.1-0.5%» 1.0% fracture/vein controlled pyrrhotite; 0.1-0.5% fracture/vein controlled pyrite ·associated with qtz/chlorite veining sometimes with siliceous alteration halos	▯317.00-320.00▯ «AR08096-WR»
322.00 TO 322.00	«EOH» End-Of-Hole					

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD CHEM ID	ALUM
AR08082	50.00	53.00	3.00	63.54	13.85	3.60	2.46	3.63	1.14	6.78	0.76	0.28	0.09	0.06	2.11	98.24	18	176					10	75	<5		3,a,e,D3j	165
AR08083	83.00	86.00	3.00	55.85	14.01	6.85	5.33	3.03	0.30	9.29	0.50	0.10	0.12	0.10	2.17	97.54	12	70					265	125	85		3,a,e,D2jw	138
AR08084	107.00	110.00	3.00	49.83	13.70	8.27	4.27	3.00	0.36	18.19	2.07	0.22	0.25	0.04	0.81	100.98	40	132					75	150	45		7,b,m,<7hvB	118
AR08085	134.00	137.00	3.00	53.48	14.86	6.72	7.57	3.28	0.42	11.17	0.59	0.08	0.15	0.07	2.16	100.50	14	70					110	65	120		3,a,d,e2hu	143
AR08086	148.00	151.00	3.00	69.79	14.43	3.94	0.99	4.21	1.34	3.62	0.31	0.10	0.05	0.12	1.45	100.23	12	140					10	45	15		9,d,m,P9jA	152
AR08087	152.00	155.00	3.00	56.75	14.60	6.50	4.38	3.00	0.88	9.90	0.80	0.16	0.10	0.05	1.22	98.27	14	132					45	100	65		7,a,m 7jw	141
AR08088	161.00	164.00	3.00	74.78	12.01	2.77	0.35	3.74	1.42	2.16	0.12	0.06	0.03	0.11	1.51	98.95	18	148					5	250	15		4,q,*a 4jA	151
AR08089	173.00	176.00	3.00	67.95	13.43	2.50	1.94	4.50	1.32	3.55	0.38	0.12	0.06	0.12	1.78	97.54	18	176					15	225	20		4,a,m 4jA	161
AR08090	206.00	209.00	3.00	69.65	14.22	2.26	1.77	5.20	1.16	3.48	0.43	0.14	0.06	0.08	1.15	99.51	18	196					65	210	25		4,a,m 4jA	165
AR08091	227.00	230.00	3.00	69.77	14.07	2.26	1.98	4.68	1.48	3.76	0.40	0.12	0.07	0.10	1.59	100.19	20	202					<5	50	15		4,a,m 4jB	167
AR08092	254.00	257.00	3.00	69.10	14.10	3.70	1.19	3.07	2.18	3.15	0.40	0.12	0.07	0.09	1.65	98.73	16	192					10	35	15		4,a,m,D4jA	158
AR08093	275.00	278.00	3.00	66.66	14.43	3.62	0.99	4.89	1.18	3.91	0.41	0.12	0.13	0.09	1.33	97.67	18	208					50	200	15		4,a,m,D4jA	149
AR08094	284.00	287.00	3.00	69.58	15.03	2.02	0.55	5.87	2.64	1.69	0.21	0.14	0.02	0.06	1.02	98.76	4	104					<5	30	<5		9,c,m,D9jA	143
AR08095	293.00	296.00	3.00	68.25	13.81	3.78	1.06	4.94	1.02	3.32	0.38	0.12	0.07	0.11	1.06	97.82	16	170					35	115	30		4,a,m,D4jA	142
AR08096	317.00	320.00	3.00	69.83	14.68	3.19	2.02	5.23	0.78	3.23	0.42	0.14	0.06	0.08	1.00	100.57	20	188					15	90	20		4,a,m 4jB	160

HOLE NUMBER : AMY65-02

GEOCHEMICAL ASSAYS

DATE: 08/11/199

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AR08082	50.00	53.00	3.00			20		100																					
AR08083	83.00	86.00	3.00			40		100																					
AR08084	107.00	110.00	3.00			45		2000																					
AR08085	134.00	137.00	3.00			40		100																					
AR08086	148.00	151.00	3.00			15		100																					
AR08087	152.00	155.00	3.00			35		100																					
AR08088	161.00	164.00	3.00			10		<100																					
AR08089	173.00	176.00	3.00			15		2600																					
AR08090	206.00	209.00	3.00			15		100																					
AR08091	227.00	230.00	3.00			15		<100																					
AR08092	254.00	257.00	3.00			15		<100																					
AR08093	275.00	278.00	3.00			20		1400																					
AR08094	284.00	287.00	3.00			5		100																					
AR08095	293.00	296.00	3.00			15		200																					
AR08096	317.00	320.00	3.00			10		1900																					

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AR08082	50.00	53.00	3.00																					0.46	0.26	2	33	21
AR08083	83.00	86.00	3.00																					0.58	0.49	16	36	41
AR08084	107.00	110.00	3.00																					0.36	0.60	11	29	50
AR08085	134.00	137.00	3.00																					0.62	0.45	16	44	20
AR08086	148.00	151.00	3.00																					0.39	0.27	15	22	11
AR08087	152.00	155.00	3.00																					0.51	0.45	15	36	33
AR08088	161.00	164.00	3.00																					0.28	0.23	43	21	67
AR08089	173.00	176.00	3.00																					0.57	0.19	10	32	50
AR08090	206.00	209.00	3.00																					0.55	0.16	14	28	40
AR08091	227.00	230.00	3.00																					0.56	0.16	8	33	11
AR08092	254.00	257.00	3.00																					0.47	0.26	13	33	11
AR08093	275.00	278.00	3.00																					0.37	0.25	15	20	41
AR08094	284.00	287.00	3.00																					0.44	0.13	9	29	5
AR08095	293.00	296.00	3.00																					0.43	0.27	28	19	23
AR08096	317.00	320.00	3.00																					0.60	0.22	10	25	17

TIMMINS EXPLORATION ROCK LEGEND

1. MAIN ROCK DIVISIONS

15	To be Announced
14	Huronian Supergroup
13	Metamorphic (Unknown)
12	Gneiss
11	Schist
10	Diabase
9	Felsic Intrusive
8	Intermediate Intr. Rocks
7	Mafic Intrusive Rocks
6	Ultramafic Intr. Rocks
5	Sedimentary Rocks
5,s	Sulphide (>40%)
4	Felsic Volcanic Rocks
3	Intermediate Volcanic Rocks
3,C	Heterolithic Volcanic Rocks
2	Mafic Volcanic rocks
1	Ultramafic Volcanic Rocks

2. TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained	A	Primitive (Y<20)
b	Medium Grained	B	Evolved (Y>20<60)
bx	Breccia		
c	Coarse Grained	C	Heterolithic
d	Quartz-Feldspar Phyric	D	Feldspar Phyric
e	Amygdaloidal/Vesicular	E	Chert
f	Primary Fragmentals	F	Wacke
g	Graphitic/Argillaceous	G	Leucoxene Bearing
h	Tholeiitic	H	Basaltic Komatiite
i	Alkalic		
j	Calc-Alkalic	J	Pyroxenite
k	Komatiitic	K	Net Textured
l	Flows (banded)	L	Peridotite
m	Massive	M	Dunite
n	Variolitic/Spherulitic	N	Ophitic
p	Pillowed	P	Porphyritic
q	Quartz Phyric	Q	
r	Oxide Iron Formation	R	Polysutured
s	Sulphides, Exhallites	S	Fractured
t	Pyroclastic	T	Gabbroic Textured
u	High Mg	U	Pyroxene Spinifex
v	High Fe	V	Olivine Spinifex
w	High Al	W	Skeletal/Crescumulate
x	Andesite	X	Adcumulate
y	Icelandite	Y	Mesocumulate
z	Highly Evolved (Y>60)	Z	Orthocumulate

ROCK NAMES MUST HAVE ALL MODIFIERS COMMA DELIMITED AND CAN BE NO LONGER THAN 15 CHARACTERS, COMMAS INCLUDED. Example: 3,*y,d,<DAC>,*t

3. ALTERATION MODIFIERS

Ab	Albitization
Bl	Bleached
C>	Carbonaceous
Cb	Carbonatization
Ch	Chloritization
Ep	Epidotization
F>	Iron Carbonatization
He	Hematization
K>	Potassic Alteration
Rs	Rust Stained
Se	Sericitization
Si	Silicification
Sr	Serpentinization
Tc	Talc-Carbonatization
Tk	Talc

4. Textural/Structural MODIFIERS

*a	Tuff (67% <2mm)	*n	Graded Bedding
*b	Lapilli Tuff (2-64mm)	*o	Cross bedding
*c	Lapillistone (76% <264mm)	*p	Fault Gouge
*d	Block (>64mm)/Xenolith	*q	Augen
*e	Autoclastic/Hyaloclastic	*r	Porphyroblastic
*f	Thickly Laminated	*s	Hornfels
*g	Thinly Laminated	*t	foliated/sheared
*h	Clast Supported	*u	folded
*i	Matrix Supported	*v	boudinage
*j	Granule (grit 2-4mm)	*w	fragmental (felsic>mafic)
*k	Pebble (4-64mm)	*x	fragmental (mafic>felsic)
*l	Cobble (64-256mm)	*y	Crystal Tuff (>50% of frags)
*m	Boulder (>256)	*z	Lithic Tuff (>50% of frags)

ALTERATION CODES

FORM

S	Spots
F	Fracture/vein controlled
P	Pervasive

STRENGTH

S	Strong
M	Moderate
W	Weak

Example: EpPW = Epidote,Pervasive,Weak

MINERALIZATION CODES

FORM

D	Disseminated/Blebs
F	Fracture/vein controlled
M	Massive
B	Bedded
C	Clasts/Fragments

PERCENTAGE

Numeric pecentage, or percentage range (i.e. 1-3%), must always be specified

Example: CpB3% = Chalcopyrite, Bedded, 3%

5. MINERALOGICAL NAMES

Ak	Actinolite	Fc	Fuchsite	Pn	Pentlandite
Alb	Albite	Gn	Galena	Py	Pyrite
Al	Almandine	Gt	Garnet	Px	Pyroxene
Am	Amphibolite	VG	Gold	Po	Pyrrhotite
Ah	Anhydrite	Gf	Graphite	Qt	Quartz
Ad	Andalusite	GS	Gravel & sand	Ro	Rhodochrosite
Ay	Anthophyllite	Gyp	Gypsum	Ru	Rutile
Ap	Apatite	Hem	Hematite	Sur	Serpentine
Ar	Argentite	Hb	Hornblende	Sc	Sericite
Asp	Arsenopyrite	Hy	Hypersthene	Sh	Scheelite
Asb	Asbestos	Il	Ilmenite	Sid	Siderite
Aug	Augite	I-F	Iron Formation	Sil	Silica
Az	Azurite	Jr	Jarosite	Slm	Silliminite
Ba	Barite	Ky	Kyanite	Sps	Spessarite
bi	Bismuthite	Ls	Limestone	Sph	Sphalerite
Bi	Biotite	Lm	Limonite	Ti	Sphene (Titanite)
Bo	Bornite	Mag	Magnetite	Ag	Silver
Ca	Calcite	Mc	Malachite	Sp	Spinel
Cn	Chalcedony	Ma	Marcasite	Spd	Spodumene
Cc	Chalcocite	Mi	Mica	St	Staurolite
Cp	Chalcopyrite	Mk	Microcline	Sb	Stibnite
Chl	Chlorite	Mi	Millerite	Sul	Sulphides
Ch>	Chloritoid	Mo	Molybdenite	S-M	Mass.Sulphides
Cr	Chromite	Mu	Muscovite	S-D	Diss.Sulphides
Cpx	Clinopyroxene	Ne	Nepheline	Tk	Talc
Co	Cobalt Minerals	Nc	Niccolite	Te	Telluride
Cv	Covellite	Ni	Nickel minerals	Tt	Tertrahedrite
Ct	Cordierite	Ov	Olivine	Ta-Cl	Tantalite-Columbite
Dp	Diopside	Or	Orthoclase	Tl	Tourmaline
Dol	Dolomite	Opx	Orthopyroxene	Tr	Tremolite
Epi	Epidote	Pl	Phlogopite	Wo	Wollastonite
Fel	Feldspar	Pg	Plagioclase	Zr	Zircon
Fl	Fluorite				

6. ROCK TYPE / PROTOLITH

<QFG>	Quartzofeldspathic	<PER>	Peridotite	<CHM>	Chem. Precip.
<QTZ>	Quartzite	<SER>	Serpentinite	<SLA>	Slate
<MAR>	Marble	<DUN>	Dunite	<KIM>	Kimberlite
<SKA>	Skarn(Calc-Silicate)	<PRX>	Pyroxenite	<CAR>	Carbonatite
<PHY>	Phyllite	<LMP>	Lamprophyre	<AMP>	Amphibolite
<TON>	Tonalite	<SST>	Sandstone	<MIG>	Migmatite
<SYN>	Syenite	<ARK>	Arkosic sandstone	<PEG>	Pegmatite
<GRA>	Granite	<WCK>	Graywacke	<LEU>	Leucocratic
<MON>	Monzonite	<CGL>	Conglomerate	<MEL>	Melanocratic
<GRD>	Granodiorite	<SLT>	Siltstone	<UNK>	Unknown Protolith
<APL>	Aplite	<ARG>	Mudstone-argillite	<UMF>	Ultramafic
<FEL>	Felsite	<EXH>	Chert/exhalite	<MAF>	Mafic
<QDI>	Quartz Diorite	<QIF>	Silicate IF	<AND>	Andesite
<GAB>	Gabbro	<OIF>	Oxide IF	<DAC>	Dacite
<NOR>	Norite	<SIF>	Sulphide IF	<RYD>	Rhyodacite
<ANT>	Anorthosite	<CIF>	Carbonate IF	<RHY>	Rhyolite
<DIO>	Diorite	<SHA>	Shale	<SCL>	Sulphide Clasts
		<LST>	Limestone	<RWV>	Reworked Volcanic Debris

FALCONBRIDGE LIMITED
Kidd Creek Division
Bag-2002, P4N 7K1
Timmins, Ontario
Canada

GEOLOGY DEPARTMENT
FAX (705) 267-8996

Date: March 22/96

To: Ministry of Northern Dev. & Mines
Lands Div.

Fax: (705) 670-5863

Phone:

From: Dean Rogers - Falconbridge Exp.

No. of pages: Cover + (2)

Message:

I am forwarding a certification of qualifications for technical reports as per requested regarding assessment filing for Sheard, Amyot, Ogilvie and Browning Twps.

Please contact me at the address/FAX above with any questions

CERTIFICATION OF QUALIFICATIONS

March 22, 1996

I, Dean F. Rogers, graduated from the University of Toronto in 1993 with a Bachelor of Science degree in geology. I have been employed in the mineral exploration industry during summer field seasons since 1987 and have been a practicing geologist continually since 1994. I am currently an Associate Geologist with Falconbridge Ltd. (Exploration) and a member of the Prospectors and Developers Association of Canada, the Canadian Institute of Mining and Metallurgy and am an Associate Member of the Geological Association of Canada.

Respectfully Submitted,

Dean F. Rogers
Associate Geologist
Falconbridge Limited

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9580.00800

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.16373

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for re Recorder.
- A separate copy of this form must be complete
- Technical reports and maps must accompany
- A sketch, showing the claims the work is assig

41P06NE0019 2 16373 BROWNING

900

Recorded Holder(s): Falconbridge Limited	Client No.: 130679
Address: Box 1140, 571 Moneta Ave. Timmins, Ont. P4N 7H9	Telephone No.: (705) 267-1188
Mining Division: Larder Lake / Township/Area: Browning, Amyot	M or G Plan No.
Dates Work Performed From: July 28/95	To: Oct. 10/95

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
✓	Assays	Whole Rock and Assay Geochemistry from diamond drilling
	Assignment from Reserve	

RECEIVED
JAN 19 1996
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 6,157

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Falconbridge Exploration	P.O. Box 1140, 571 Moneta Ave.
Dean F. Rogers (Associate Geologist)	Timmins, Ont.
	P4N 7H9

(attach a schedule if necessary)

Certification of Beneficial Interest * **See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date: Nov 30/95	Recorded Holder or Agent (Signature): Dean Rogers

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: Dean F. Rogers, 511 Rea St. North, Timmins, Ont.		
Telepone No.: 267-1188	Date: Nov. 30/95	Certified By (Signature): Dean Rogers

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
$6,157	Dec 20/95	[signature]	JAN 1996 (original received Dec 20/95)
	Deemed Approval Date: March 19/96	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W9580.00800

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type (198) Mech Rock Geochem	3,439	
	Assay (219)	2718	
			6,157
Supplies Used Fournitures utilisées	Type		
			+
Equipment Rental Location de matériel	Type		
			+
	Total Direct Costs Total des coûts directs		6157

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type –		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) / Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)			

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
x 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
x 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Associate Geologist (Recorded Holder, Agent, Position in Company) I am authorized

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé

à faire cette attestation.

Signature	Date
Alan Bagot	Nov. 30/95

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	L-1191304	16	1,826	Ø	1,826	
	L-1191301	16	927	927	Ø	
	L-1191303	16	535	Ø	535	
	L-1191299	16	2,288	Ø	2,288	
	L-1185499	16	581	581	Ø	
	L-1191307	16	Ø	4,649	Ø	
	6		6,157	6,157	4,649	
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

6241 (03/91)

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☒ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Signature

Date

Ontario

Ministry of Northern Development and Mines | Ministère du Développement du Nord et des Mines

April 17, 1996

Geoscience Approvals Office
933 Ramsey Lake Rd., 6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Mining Recorder
Ministry of Northern Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Our File: 2.16373
Transaction #: W9580.00800

Dear Mr.Spooner

RE: Approval of Assessment work submitted on Mining Claims L1191304 et al. in the Township(s) of Browning, Amyot.

This assessment work report was not assessed prior to the 90 day deemed approval date. Accordingly, as outlined in subsection 6(7) of the Mining Act Regulations, this Report of Work is deemed approved as of April 3, 1996.

If you have any questions regarding this correspondence please contact Blair Kite at (705) 670-5861.

Yours sincerely
ORIGINAL SIGNED BY

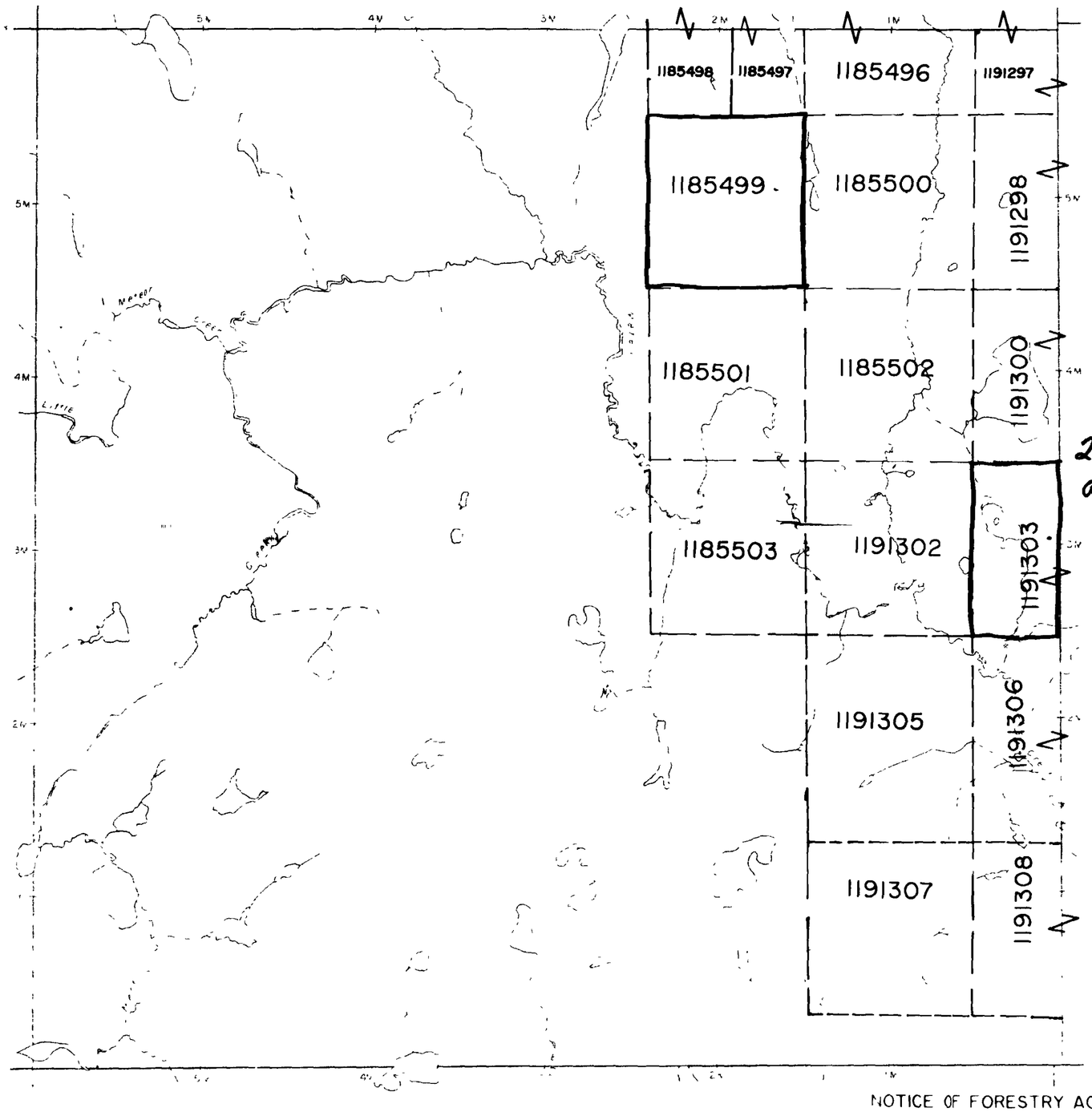
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch

BK/bk

cc: Resident Geologist, Kirkland Lake
Assessment Files Office, Sudbury

COBALT RESIDENT GEO.

Sheard Twp



THE TOWNSHIP
OF

AMYOT

DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	P
CROWN LAND SALE	C
LEASES	L
LOCATED LAND	LOC
LICENSE OF OCCUPATION	L O
MINING RIGHTS ONLY	M R O
SURFACE RIGHTS ONLY	S R O
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C

2.16373
assays

NOTES

All Surface Rights Reservation around all lakes and rivers

1995

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER. MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION

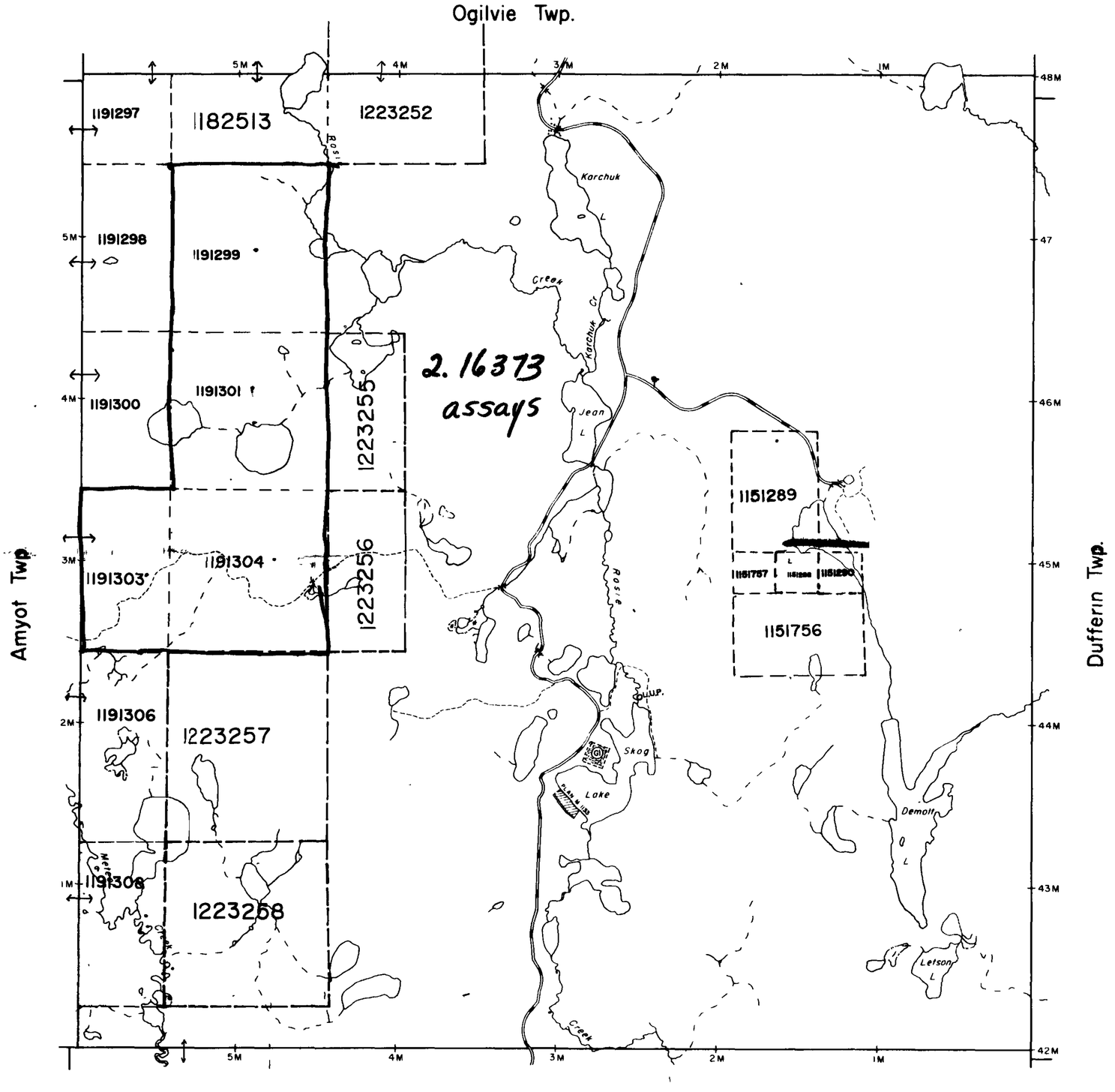
PLAN NO G-512

DEPARTMENT OF MINES

— ONTARIO —

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE _____
MINING TREE MANAGEMENT UNIT
AND MAY BE SUBJECT TO FORESTRY OPERATIONS
THE MNR UNIT FORESTER FOR THIS AREA CAN BE
CONTACTED AT P.O. Box 129
LOW AVENUE
GOGAMA, ONT
POM 1WO
705-894-2000



THE TOWNSHIP
OF

BROWNING

DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C S
LEASES	(L)
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L O
MINING RIGHTS ONLY	M R O
SURFACE RIGHTS ONLY	S R O
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
~~MINES~~	
CANCELLED	C

NOTES

400' Surface Rights Reservation around all lakes and rivers

SAND and GRAVEL

(G) MNR GRAVEL RESERVE SC20

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP/AREA FALLS WITHIN THE SHERMTREE MANAGEMENT UNIT
AND MAY BE SUBJECT TO FORESTRY OPERATIONS
THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT, P.O.BOX 129 LOW AVENUE GOGAMA,ONT POM-1W0 705-894-2000

PLAN NO. G-957

DEPARTMENT OF MINES

— ONTARIO —

CIRCULATED MARCH 13th 1990

Sheard

Amyot

Browning

Ogilvie

GRID C

GRID C2

GRID A

GRID F

1185494 1185495 1191296 1223252

1185497 1185498 1185499 1185500 1191297 1191298 1191299

1185501 1185502 1191300 1191301 1223255

1185503 1191302 1191303 1191304 1223256

1191305 1191306 1223257

1191307 1191308 1223258

FL

A-T OPTION

TL 47+00E

TL 50+00E

BL 40+00E

TL 44+00E

L 95+00N

TL 90+00E

L 85+00N

TL 46+00E

TL 51+00E

TL 56+00E

L 67+00N

L 65+00N

L 60+00N

L 55+00N

L 50+00N

L 46+00N

L 40+00N

L 33+00N

L 26+00N

TL 56+00E

TL 46+00E

TL 51+00E

TL 80+00E

BL 75+00E

TL 71+00E

L 90+00N

L 80+00N

L 70+00N

L 65+00N

L 60+00N

L 55+00N

L 50+00N

L 45+00N

L 40+00N

MAR.24/97

AT EXTENSION

FEB.13/97

AT EXTENSION

FEB.13/97

AT EXTENSION

FEB 14/97

AT EXTENSION

FEB.14/97

AT EXTENSION

ASTRONOMIC

N

SHEET ORIENTED UTM NORTH AZIMUTH 359° 49'

FALCONBRIDGE LIMITED

Exploration Division Timmins ONTARIO

SHEARD/AMYOT/BROWNING/OGILVIE TWPS.
ANNETT-TINDALE PROPERTY

FL Diamond Drill Hole Locations

2.163 73

TRACED	S.G	DATE	10/95	NTS 41P/06	PROJECT 8257,8266
DRAWN	S.GIBBINS	DATE	02/10/95	MAP No 8257	FILE 8257-
SUPERVISED	S.G	DATE	10/95	SCALE 1:10000 (metres)	0 100 200 300 400
REVISED		DATE			

41P06NE0019 2 16373 BROWNING