HOLE NUMBER: MAN54-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/16/1996
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8269
PROJECT NUMBER: 8269
CLAIM NUMBER: P1200909
LOCATION: Mann Township

PLOTTING COORDS GRID: UTM
NORTH: 0.00N
EAST: 0.00E
ELEV: 280.00

ALTERNATE COORDS GRID: GRID
NORTH: 0+75S
EAST: 1+ 0W
ELEV: 280.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 170.00M
START DEPTH: 0.00M
FINAL DEPTH: 170.00M

COLLAR ASTRONOMIC AZIMUTH: 206° 0' 0"

GRID ASTRONOMIC AZIMUTH: 206° 0' 0"

DATE STARTED: 02/12/1996
DATE COMPLETED: 02/15/1996
DATE LOGGED: 02/15/1996

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

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

CONTRACTOR: NOREX DRILLING
CASING: WB,NW
CORE STORAGE: MINESITE
UTM COORD.:

COMMENTS : Target: fm. conductor, weak mag. Source: 5m graphite (+mafic) with 3% pyrrhotite.
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
60.00	° ' "	-44° 0' 0"	A	OK	
120.00	° ' "	-43° 0' 0"	A	OK	
170.00	° ' "	-43° 0' 0"	A	OK	

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

42A15NW0020 W9660-00327 MANN

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 47.58	Casing «+ob+»					- casing pulled.
47.58 TO 67.42	Pillowed Mafic Volcanic «2,a,p,*a»	- medium green to pale green. - fine grained, massive, moderately hard. - not conductive, not magnetic. - pale to medium green mafic pillows locally have weakly bleached margins. - selvedge material is medium green-grey, fine grained with 1-2 mm grey hyaloclastite fragments. - rare, 2-5mm, beige, subhedral feldspars are randomly scattered through the core. - 64.15-65.45m - breccia interval with 40%, 1-4 cm, angular to subangular, medium green to grey mafic fragments and 10%, 1-3 mm, shard-like, medium grey, weakly vitreous intermediate(?) fragments in a pale brown-green and white, granular textured (tuffaceous?) matrix. This marks the beginning of a series of clastic intervals between massive sections. - 65.38-65.48 - tuffaceous interval with laminations at 50°/ca. - downhole contact is at first appearance of graphitic argillite with a sharp contact at 80°/ca.	80	- <1% carbonate and carbonate + quartz ± epidote filled, 1-5 mm, straight veinlets and 5-20 mm, irregular veinlets and patches.	- trace pyrrhotite and pyrite in hairline fractures. - trace disseminated pyrrhotite in selvedges. - trace 0.5 mm, pod-like blebs of pyrrhotite in massive mafic rock.	
67.42 TO 73.10	Graphitic Argillite/ Mafic Volcanic «5,g/2,1»	- black and medium green with white. - fine grained, moderately to strongly conductive. - moderately foliated at 35-80°/ca. M-type folds and disharmonic folding common. - 15% of interval is comprised of siliceous sediments with fine grained, grey, poorly bedded greywackes (2-10 cm wide) and rare, beige cherty beds (1-2 cm wide). - mafic interval may be section through a pillow, flow or mafic block. Contacts are generally sharp and irregular (deformed). - argillaceous intervals are interbedded with 1-5 mm-thick, fine grained, grey beds (20%) and 1mm pyrrhotitic layers (up to 40%). - in more chaotic layers, fragments of folded argillite are caught up in a pyrrhotitic matrix.		- 1%, thin white veinlets of carbonate typically run subparallel to bedding and are locally discordant.	«4% po, tr cpy+py» - up to 4% pyrrhotite over interval with <1% intermixed chalcopyrite and pyrite. - pyrrhotite is locally net textured but typically flattened along foliation/bedding planes and deformed with them. - in intervals of up to 15%, pyrrhotite is matrix to graphitic fragments. - sulphides are locally finely disseminated in massive wacke sections. - <1% fractures filled with pyrrhotite.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- 69.34-70.2m - massive, fine to medium grained mafic interval (dyke?). Uphole contact is sharp at 60°/ca and downhole contact is irregular. - downhole contact is irregular with possible rip-up clasts of mafic (2-3 cm) in a deformed pyrrhotitic wacke.				- if mafic clasts are rip-ups this may imply tops uphole to the north.
73.10 TO 97.58	Massive Mafic Volcanic «2,a,m»	- medium to dark green; mottled where medium grained. - fine and medium grained. - moderately hard, not magnetic. - massive to weakly foliated. - leopard textured on a mm-scale. - locally porphyritic with 1%, 0.5-1mm, white, lath-like feldspars and 1mm, subhedral, equant, chlorites (pseudomorphed augites?). - <1%, 10 cm-wide intervals of fine grained mafic with carbonate and locally epidote may represent interflow sediments. - downhole contact is sharp, weakly undulose and at 70°/ca.	70	- 86-88m - 20% of interval is moderately carbonate altered with 1-2 mm, irregular, white carbonate veinlets surrounded by dark green then medium brown, 0.1-1 cm wide alteration halos. - cut by 1% carbonate, and quartz + carbonate veinlets. - 88.5m - 1-3 cm carbonate + quartz + chlorite veins at 30°/ca.	- trace disseminated pyrrhotite. - trace fracture controlled pyrrhotite and rare chalcopyrite.	
97.58 TO 99.16	Inter-mediate to Felsic Tuff «3/4,t,*a»	- medium to pale grey. - foliated at 60-70°/ca and locally crenulated. - hard to moderately soft. - finely laminated with alternating light grey, dark grey and pale green beds. - locally, 1-2 cm thick beds contain up to 5%, strongly flattened, locally angular, 1-2 mm dark green to dark grey shards. - no grading observed. - chlorite content increases towards downhole contact as beds become greener and softer. - weakly conductive, not magnetic. - downhole contact abrupt but diffuse at 85°/ca.	65	- cut by rare quartz + chlorite + pyrite veins at low angles to core. - approaching downhole contact, mm-scale fractures are filled with carbonate.	- 1%, disseminated pyrite. - trace pyrite and lesser pyrrhotite disseminated along foliation/bedding planes and infilling hairline fractures.	
99.16 TO 170.00	Tonalite «9,D,q»	- medium greenish-grey with cream and grey. - massive, porphyritic. - 40%, 1-10mm, cream, pale pink and light grey, subhedral, rectangular feldspars. - 2%, 3-10mm, rounded and typically rodded, pale grey, vitreous quartz phenocrysts. - quartz is rodded orthogonal to core axis. - matrix is fine grained and medium green. - <1%, 0.5-1 mm, bright green to dark green,		- 2%, 10 cm wide, pale greenish-beige patches of moderately foliated (80°/ca) sericitized tonalite. Feldspars have been destroyed, but quartz is intact. - <1%, 1-10mm, quartz + chlorite + pyrite veins at random angles to core axis. - <1%, reddish potassic (hematite?)	- 1-2% disseminated pyrite with trace pyrite in fractures.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		anhedral, chlorite(?) (epidote?) phenocrysts. - feldspars commonly have darker cores indicating sausseritization (or zoning?). - not magnetic. - 100.62-101.0m - fine grained, dark green, weakly pyritic mafic xenolith.		alteration of feldspars. - 153.4m - 10% quartz veining over 30 cm.		

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn	Ni ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AR09762	0.00	0.00	0.00	11	111	<2	0.3	13			7							KRAP	
AR09734	61.75	63.00	1.25	35	25	<2	0.2	1			37							2,p	
AR09735	63.00	64.15	1.15	15	29	<2	0.1	1			31							2,p	
AR09736	64.15	65.79	1.64	18	48	10	0.1	1			75							2,bx	
AR09737	65.79	67.42	1.63	90	127	96	0.1	1			25							2,m	
AR09738	67.42	68.47	1.05	540	4040	45	0.7	13			92							5,g	5%po,tr cp
AR09739	68.47	69.34	0.87	447	1690	51	0.6	4			63							5,g	aa
AR09740	69.34	70.20	0.86	26	98	41	0.1	1			27							2,m	
AR09741	70.20	70.96	0.76	292	249	3	0.2	1			34							2,m,t?	2%po,tr cp
AR09742	70.96	71.88	0.92	383	1280	<2	0.3	5			52							5,g	5% po
AR09743	71.88	72.45	0.57	187	261	<2	0.2	4			24							2/3,t	1% po
AR09744	72.45	73.10	0.65	564	2460	103	0.3	1			73							5,g	5%po,tr cp
AR09745	73.10	74.00	0.90	56	84	3	0.1	1			48							2,m	
AR09746	74.00	75.45	1.45	17	55	3	0.1	1			29							2,m	
AR09747	75.45	77.00	1.55	12	60	178	0.1	1			40							2,m	
AR09748	85.03	86.00	0.97	86	112	206	0.1	1			158							2,m	
AR09749	86.00	87.55	1.55	59	135	<2	0.1	1			32							2,m	
AR09750	87.55	89.00	1.45	50	166	7	0.1	1			36							2,m	
AR09751	89.00	90.47	1.47	80	109	3	0.2	1			38							2,m	
AR09752	90.47	92.00	1.53	78	85	<2	0.1	1			33							2,m	
AR09753	92.00	93.23	1.23	187	94	17	0.1	1			32							2,m	
AR09754	93.23	94.49	1.26	194	84	65	0.1	1			36							2,m	
AR09755	94.49	95.79	1.30	65	109	3	0.1	1			30							2,m, alt?	
AR09756	95.79	96.60	0.81	133	117	<2	0.2	1			35							aa	
AR09757	96.60	97.66	1.06	120	112	<2	0.1	1			30							2,m	
AR09758	97.66	99.16	1.50	353	288	17	0.3	1			58							5,tuff	
AR09759	99.16	100.51	1.35	37	27	<2	0.1	1			17							9,D,q	tr py
AR09760	100.51	101.36	0.85	36	42	<2	0.1	1			29							9,D,q	tr py
AR09761	101.36	102.50	1.14	21	36	<2	0.1	1			20							9,D,q	tr py

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	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AR09440	0.00	0.00	0.00	74.95	11.06	0.49	0.51	1.09	7.42	2.41	0.25	0.06	0.03	<0.00	0.77	99.04	118	292		5	135	10		KRAP	9hz	123
AR09432	53.00	56.00	3.00	51.23	14.38	11.04	5.36	2.62	0.28	12.43	0.93	0.10	0.21	0.05	1.92	100.55	22	68		35	80	95		2,a,p	2(h)v	103
AR09433	74.00	77.00	3.00	52.45	13.62	10.23	4.02	2.14	0.20	13.80	1.67	0.14	0.29	0.02	1.79	100.37	40	110		10	80	75		2,a,m	2hv	108
AR09434	93.50	96.70	3.20	49.57	13.58	10.15	3.70	1.74	0.24	17.07	1.59	0.16	0.43	0.01	2.18	100.42	40	110		60	180	45		2,a,m	2hv	112
AR09435	97.66	98.60	0.94	66.24	9.30	4.12	2.40	1.33	1.04	11.13	0.41	0.10	0.13	0.03	3.75	99.98	12	138		325	730	90		4,t	4jA$	143
AR09436	98.60	99.16	0.56	46.99	13.66	10.22	3.92	1.37	0.26	18.07	1.25	0.16	0.55	0.00	4.24	100.69	32	130		170	360	15		2/3,t	2(h)v$	115
AR09437	104.00	107.00	3.00	67.48	15.65	3.05	1.08	4.97	1.96	3.04	0.26	0.12	0.05	0.05	2.91	100.62	2	88		15	45	10		9,D,q	9jA	157
AR09438	137.00	140.00	3.00	65.99	15.29	2.72	0.94	5.62	1.80	2.59	0.23	0.10	0.04	0.01	2.23	97.56	2	82		10	55	20		9,D,q,<He>	9jA	151
AR09439	164.00	167.00	3.00	69.28	15.48	2.49	0.90	5.49	1.84	2.55	0.23	0.12	0.03	0.03	2.40	100.84	2	88		10	50	15		9,D,q	9jA	158

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	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
AR09440	0.00	0.00	0.00						<5		100	30																	
AR09432	53.00	56.00	3.00						40		2700	325																	
AR09433	74.00	77.00	3.00						45		<100	435																	
AR09434	93.50	96.70	3.20						45		300	435																	
AR09435	97.66	98.60	0.94						35		35200	145																	
AR09436	98.60	99.16	0.56						25		16500	320																	
AR09437	104.00	107.00	3.00						5		100	45																	
AR09438	137.00	140.00	3.00						<5		<100	50																	
AR09439	164.00	167.00	3.00						<5		100	50																	

HOLE NUMBER: MAN55-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/20/1996
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8269
PROJECT NUMBER: 8269
CLAIM NUMBER: P1200906
LOCATION: Mann Township

PLOTTING COORDS GRID: UTM
NORTH: 0.00
EAST: 0.00
ELEV: 282.00

ALTERNATE COORDS GRID: GRID
NORTH: 1+ 0N
EAST: 7+ 0E
ELEV: 282.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 233.00M
START DEPTH: 0.00M
FINAL DEPTH: 233.00M

COLLAR ASTRONOMIC AZIMUTH: 190° 0' 0"

GRID ASTRONOMIC AZIMUTH: 190° 0' 0"

DATE STARTED: 02/15/1996
DATE COMPLETED: 02/21/1996
DATE LOGGED: 02/21/1996

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

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

CONTRACTOR: NOREX DRILLING
CASING: BW
CORE STORAGE: MINESITE
UTM COORD.:

COMMENTS : Target: Excellent cond. high mag. Source: 65-100m: 5-10% po ± cpy and at 100-140m: 2% po±cpy.
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	° ' "	-45° 0' 0"	A	OK		-	-	-	-	-	
137.00	° ' "	-44° 0' 0"	A	OK		-	-	-	-	-	
182.00	° ' "	-44° 0' 0"	A	OK		-	-	-	-	-	
221.00	° ' "	-43° 0' 0"	A	OK		-	-	-	-	-	
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C. Petch

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 30.00	Casing «┤ob├»					- BW casing left in hole.
30.00 TO 48.49	Massive Mafic Volcanic «2,a,m»	- medium to dark green. - fine grained, massive. - locally feldspar-phyric with 2%, 2 mm, rectangular, subhedral, white feldpsars. - pale green to grey, 2-4 mm spots in 1 cm bands and on the rims of massive intervals may be varioles(?). - may contain thin tuffaceous layers or interflow sediments (poorly defined). - 45.19-45.71m - dark green, 1-5 cm, angular mafic clasts are matrix supported and moderately aligned (70°/ca) in a white, carbonate-rich matrix. - not magnetic, not conductive. - core locally strongly fractured. - downhole contact approximate at abrupt onset of strong alteration.		- pervasive spotty carbonate alteration with up to 30%, 1-2mm, irregular, grey spots that are weakly to strongly reactant with HCl (6%). - 31-32m - pale brown, bleached, carbonate altered rock with minor epidote. Alteration grades outward into a fracture-controlled carbonate alteration. Locally, 1 cm carbonate veins and carbonate-rich breccias occur in interval.	- trace chalcopyrite + pyrrhotite + pyrite are predominantly fracture-controlled and locally associated with carbonate.	
48.49 TO 66.70	Epidote Altered Mafic Volcanic «2,a,<Ep>,<Cb>»	- pale green to apple green with brown and white. - 70% of interval is epidote, carbonate and garnet(?) altered. - 48.7-49.9m - 5-10cm, pale green fragments with dark green cores are concentrically altered inward to produce a hexagonal pattern. Matrix to fragments is white carbonate. - 0.5-1m brecciated intervals with both unaltered and altered mafic fragments (0.5-1 cm, angular) matrix supported in a carbonate matrix. - textures become more chaotic near downhole contact. - downhole contact at first appearance of >1% sulphides.		- epidote alteration intermixed with carbonate gives core a bright apple green colour. - reddish patchy alteration (associated with the epidote) is a fine grained mixture of carbonate and a vitreous red mineral with crystal faces (garnet). - 51.9m - 10 cm of up to 15%, fine grained, semi-massive, black magnetite with 30% carbonate veining.	- 1% fracture-controlled pyrrhotite and pyrite with trace chalcopyrite. - trace pyrrhotite occurs as fine disseminations or as blebs in the breccia matrix. - locally up to 10% semi-massive magneite (alteration product?).	- at least one phase of carbonate alteration post-dates epidotization as some fragments are wholly or partially epidote-altered.
66.70 TO 97.00	Pyrrhotitic Mafic Volcanic «2,s,<Ep>»	- pale green, dark green and metallic brown. - massive to locally strongly foliated at random orientations. - locally up to 20%, well rounded, 1cm pyrrhotitic and/or altered fragments(?) in a massive green matrix (possible texture a result of intense alteration).		- strong epidote and carbonate alteration in 1) 5-10 cm irregular bands, 2) irregular fracture-controlled patterns and 3) discontinuous bands and blebs. - overall, the interval is strongly altered to a fine grained assemblage	«10% po, 0.5-1% cpy, tr py» - up to 15%, stringer-type, purplish-bronze pyrrhotite intermixed with trace, finely disseminated chalcopyrite and rare pyrite. - pyrrhotite and chalcopyrite also occur in veins and on fracture	- assume protolith is mafic volcanic rocks as alteration, although abrupt, is gradational into it, uphole and downhole.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- matte, medium green, fine grained matrix is a fine to medium grained mixture of chlorite and amphibole (tremolite or actinolite?). - 76.5-77.2m - medium grey mafic/intermediate dyke with sharp, irregular margins is locally fine grained, homogeneous with rare pyrrhotite in cross-cutting fractures. Also seen at 86.31-86.71m. - 96.33-96.55m - brownish-grey feldspar porphyritic intermediate to mafic dyke with 2%, white, subhedral felsdspars in a fine grained, massive matrix. - downhole contact is approximate at first appearance of well defined fragments.		of chlorite and tremolite/ actinolite. - cut by 2%, 1-3 mm wide carbonate veins.	surfaces with minor carbonate. - intervals of between 10-15% pyrrhotite with 1% chalcopyrite include: - 66.7-76.9m - 83.4-97.0m. Intermediary intervals contain 1-5% sulphides. - no sphalerite was observed. - chalcopyrite appears to be more abundant on fracture surfaces indicating probable remobilization. - trace pyrite euhedra on fracture surfaces.	
97.00 TO 132.14	Pyrrhotitic Mafic Fragmental «2,bx,s»	- medium green and pale green with metallic brown. - very hard, massive. - locally fragments are moderately aligned at 55°/ca. - fragments are medium green, angular to subangular, lapilli to block size, poorly sorted, moderately packed in a clastic mineralized matrix. Fragment composition appears to be monomictic comprising variably altered mafic volcanic rock. - matrix is fine grained, dark green with chlorite and lesser biotite with 1-3 mm, light grey and white, subangular clasts (hyaloclastite?). - 20% of fragments are mineralized (pyrrhotite, chalcopyrite) and epidote altered. - near the top of the interval many fragments have a 1-3 mm, white, partial halo of quartz and feldspar indicating hyaloclastite texture(?). - 1%, rounded to irregular shaped, sub-millimetre magnetite grains have hairline white alteration halos of leucoxene(?). - downhole contact is approximate at start of a massive interval and coincides with a sharp decrease in mineralization.		- pervasive silicification is indicated by hardness of rock. - carbonate is no longer present where strongly silicified. Even veins that resemble uphole and downhole carbonate veins do not react with HCl (6%), possibly indicating a final phase of silicification. - locally, matrix is a matte green colour typical of extensive chlorite alteration. - fragments are locally altered (bleached) along margins. - carbonate alteration increases towards downhole contact. - quartz veining near base of interval.	«5% po, 0.5% cpy» - 5% pyrrhotite and 0.5% chalcopyrite and trace pyrite over interval. - mineralization is predominantly disseminated in the matrix. - up to 15% of fragments are mineralized with pyrrhotite, chalcopyrite, and trace pyrite. - 15% of mineralization is fracture controlled. Chalcopyrite occurs in a higher proportion to pyrrhotite within fractures and a lower proportion within the matrix. - 113.32-113.47m - massive pyrrhotite (widest interval in hole).	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
132.14 TO 233.00	Massive Mafic Volcanic «2,a,m»	- dark green to medium grey-green. - fine grained, massive, weak sugary texture. - rare intervals of weakly porphyritic mafic with 5%, 1 mm, white laths of feldspar and 1mm, rounded biotite/chlorite porphyroblasts are gradational into fine grained, massive mafic rock. - 0.5-2 cm bands of up to 20%, 0.5mm, white ovoids which may be tiny amygdules or carbonate alteration. - moderately hard, not magnetic. - 194-209m - medium grained interval, core of flow?. - 218.19-221.6m - carbonate and chlorite altered interval with up to 4% pyrrhotite and trace chalcopyrite and pyrite. Mineralization is associated with the carbonate.		- weak patchy silicification (20%) and carbonate alteration (20%) and rare epidotization (2%). - silicification is charaterized by hazy margins. - carbonate alteration is typically fracture and vein controlled in amoeboid-like patches. - minor patchy chlorite alteration indicated by greener, slightly softer zones. - cut by 1%, 1-5 mm carbonate + chlorite ± pyrite veins. - many hairline fractures have bleached halos that extend 2-10 mm into the host rock. - 218.19-221.6m - 80% of interval is carbonate and chlorite altered.	- near uphole contact, up to 10% pyrrhotite and 1% chlacopyrite and pyrite in 1-10 cm bands at high angles to core axis with carbonate and chlorite. - trace pyrite in flattened framboids on fracture surfaces. - trace blebs of pyrrhotite, pyrite and chalcopyrite scattered throughout interval. - 218.19-221.6m - pyrrhotite and trace chalcopyrite are fracture-controlled in pervasively carbonate altered intervals. - 222.6m - 1 cm wide chalcopyrite + pyrrhotite + carbonate vein. - 232.6m - 5 mm vein of carbonate with remobilized sphalerite at its core. This is the only occurrence of sphalerite noted in this hole.	

HOLE NUMBER: MAN55-01 DRILL HOLE RECORD LOGGED BY: C.A. Petch PAGE: 4

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn	Ni ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AT02115	0.00	0.00	0.00	12	111	<2	0.3	14			7							KRAP	
AT02125	0.00	0.00	0.00	13	116	<2	0.3	13			10							KRAP	
AT02145	0.00	0.00	0.00	15	119	<2	0.3	13			8							KRAP	
AT02160	0.00	0.00	0.00	1120	30800	<2	10.4	1			53							KZe	
AT02180	0.00	0.00	0.00	14	138	<2	0.3	14			11							KRAP	
AT02110	63.89	65.00	1.11	41	35	<2	0.1	1			31							2,ep,cb	
AT02111	65.00	65.82	0.82	117	26	<2	0.1	1			66							aa	
AT02112	65.82	66.70	0.88	195	24	<2	0.1	1			52							2,m,ep,cb	
AT02113	66.70	67.30	0.60	1850	25	<2	0.3	27			1580							15% po, tr cpy	2,m
AT02114	67.30	68.00	0.70	1010	43	<2	0.2	1			683							5% po, tr cpy	2 alt
AT02116	68.00	69.00	1.00	1380	41	3	0.2	1			936							7% po, 0.5% cp	2 alt
AT02117	69.00	70.00	1.00	654	46	<2	0.1	1			435							5% po, tr cpy	2 alt
AT02118	70.00	71.00	1.00	1090	34	7	0.2	1			1030							10% po, 1% cpy	2 alt
AT02119	71.00	72.00	1.00	1530	39	<2	0.2	1			863							8% po, 0.5% cpy	2 alt
AT02120	72.00	73.00	1.00	825	38	<2	0.1	1			889							3% po, tr cpy	2 alt
AT02121	73.00	74.00	1.00	1180	26	<2	0.2	1			980							5% po, tr cpy	2 alt
AT02122	74.00	75.00	1.00	1140	22	<2	0.2	1			1020							10% po, 1% cpy	2 alt
AT02123	75.00	76.00	1.00	1280	33	<2	0.2	1			1490							15% po, 1% cpy	2 alt
AT02124	76.00	76.50	0.50	2260	44	<2	0.3	1			1420							15% po, 1.5% cp	2 alt
AT02126	76.50	77.30	0.80	250	26	<2	0.1	1			125							2% po, tr cpy	2 alt
AT02127	77.30	78.00	0.70	1100	44	3	0.1	1			777							5% po, tr cpy	2 alt
AT02128	78.00	79.00	1.00	435	46	<2	0.1	1			350							3% po, tr cpy	2 alt
AT02129	79.00	80.00	1.00	397	33	<2	0.1	1			312							2% po, tr cpy	2 alt
AT02130	80.00	81.00	1.00	145	46	<2	0.1	1			315							3% po, tr cpy	2 alt
AT02131	81.00	82.00	1.00	127	58	<2	0.1	1			114							1% po, tr cpy	2 alt
AT02132	82.00	83.00	1.00	158	39	<2	0.1	1			75							aa	2 alt
AT02133	83.00	84.00	1.00	414	40	3	0.1	1			149							3% po, tr cpy	2 alt
AT02134	84.00	85.00	1.00	360	39	<2	0.1	1			269							3% po, tr cpy	2 alt
AT02135	85.00	86.00	1.00	544	34	<2	0.1	1			335							6% po, 0.5% cpy	2 alt
AT02136	86.00	86.70	0.70	352	33	<2	0.1	1			187							2% po, tr cpy	2,8
AT02137	86.70	88.00	1.30	1620	51	<2	0.3	1			640							5% po, 0.5% cpy	2 alt
AT02138	88.00	89.00	1.00	678	19	<2	0.2	1			233							2% po, tr cpy	2 alt
AT02139	89.00	90.00	1.00	2560	25	14	0.4	1			986							20% po, 2% cpy	2 alt
AT02140	90.00	91.00	1.00	621	50	<2	0.1	1			268							5% po, tr cpy	2 alt
AT02141	91.00	92.00	1.00	1110	28	<2	0.3	1			741							15% po, 1% cpy	2 alt
AT02142	92.00	93.00	1.00	3660	21	<2	0.6	1			1120							10% po, 1% cpy	2 alt
AT02143	93.00	94.00	1.00	2200	20	<2	0.5	1			1280							12% po, 1% cpy	2 alt
AT02144	94.00	95.00	1.00	1980	19	10	0.4	1			1000							aa	2 alt
AT02146	95.00	96.00	1.00	1980	20	10	0.2	1			1130							8% po, 0.5% cpy	2 alt
AT02147	96.00	97.00	1.00	526	16	3	0.1	1			361							2% po, tr cpy	2 alt
AT02148	97.00	98.00	1.00	710	15	<2	0.1	1			423							aa	2t alt
AT02149	98.00	99.00	1.00	594	19	<2	0.1	1			710							3% po, tr cpy	2t alt
AT02150	99.00	100.00	1.00	554	27	<2	0.1	1			814							3%po, tr cpy	2t alt
AT02151	100.00	101.00	1.00	56	18	<2	0.1	1			84							1% po, tr cpy	2t alt
AT02152	101.00	102.00	1.00	853	23	<2	0.2	1			612							2% po, tr cpy	2t alt
AT02153	102.00	103.00	1.00	1550	31	<2	0.3	1			1080							2% po, tr cpy	2t alt
AT02154	103.00	104.00	1.00	512	36	<2	0.1	1			273							aa	2t alt

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn	Ni ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AT02155	104.00	105.00	1.00	851	33	14	0.2	1			952							aa	2t alt
AT02156	105.00	106.00	1.00	1030	27	<2	0.2	1			1020							aa	2t alt
AT02157	106.00	107.00	1.00	900	31	<2	0.2	1			832							2% po, tr cpy	2t alt
AT02158	107.00	108.00	1.00	1820	24	<2	0.3	1			1410							3% po, tr cpy	2t alt
AT02159	108.00	109.00	1.00	631	23	<2	0.2	342			1090							8% po, 0.5% cpy	2t alt
AT02161	109.00	110.00	1.00	1250	44	<2	0.3	1			1350							5% po, tr cpy	2t alt
AT02162	110.00	111.00	1.00	2540	43	<2	0.4	1			2740							aa	2t alt
AT02163	111.00	112.00	1.00	1500	57	7	0.3	1			2280							10% po, 1% cpy	2t alt
AT02164	112.00	113.00	1.00	844	71	<2	0.2	1			2080							5% po, tr cpy	2t alt
AT02165	113.00	114.00	1.00	1530	74	3	0.3	1			4400							20% po, 1.5% cp	2t alt
AT02166	114.00	115.00	1.00	1550	83	<2	0.3	1			3380							8% po, 0.5% cpy	2t alt
AT02167	115.00	116.00	1.00	707	679	<2	0.1	1			1910							aa	2t alt
AT02168	116.00	117.00	1.00	750	41	<2	0.1	1			2900							10% po, 0.2% cp	2t alt
AT02169	117.00	118.00	1.00	669	34	<2	0.1	1			2020							3% po, 0.2% cpy	2t alt
AT02170	118.00	119.00	1.00	1690	49	<2	0.3	1			2460							5% po, tr cpy	2t alt
AT02171	119.00	120.00	1.00	820	42	<2	0.2	1			3580							10% po, 1% cpy	2t alt
AT02172	120.00	121.00	1.00	1020	21	<2	0.2	1			4020							10% po, 1% cpy	2t alt
AT02173	121.00	122.00	1.00	1260	22	<2	0.2	1			3380							5% po, tr cpy	2t alt
AT02174	122.00	123.00	1.00	1350	18	21	0.2	1			4440							7% po, 0.5% cpy	2t alt
AT02175	123.00	124.10	1.10	2430	30	<2	0.3	1			3000							7% po, 0.5% cpy	0.9m
AT02176	124.10	125.00	0.90	546	21	10	0.3	1			1690							3% po, tr cpy	2t alt
AT02177	125.00	126.00	1.00	423	14	3	15.3	1			806							3% po, tr cpy	2t, sil
AT02178	126.00	127.15	1.15	283	22	3	0.2	1			629							1% po, tr cpy	2t alt
AT02179	127.15	128.00	0.85	906	25	<2	0.1	1			1100							3% po, tr cpy	2t alt
AT02181	128.00	129.00	1.00	338	15	<2	0.5	1			615							0.5% po, tr cpy	2, carb
AT02182	129.00	130.04	1.04	800	19	<2	1.2	1			1790							3% po, tr cpy	2t alt
AT02183	130.04	131.00	0.96	1410	14	7	0.6	1			3640							10% po, 1% cpy	2t alt
AT02184	131.00	132.14	1.14	422	13	<2	0.1	1			363							7% po, 0.5% cpy	2t alt
AT02185	132.14	133.19	1.05	71	18	<2	0.1	1			95							1% po, tr cpy	2,a,m
AT02186	133.19	134.67	1.48	226	23	<2	0.1	1			48							tr po, tr cpy	2,a,m
AT02187	134.67	136.10	1.43	401	22	3	0.1	1			58							1% po, 0.1% cpy	2,a,m
AT02188	136.10	137.36	1.26	117	18	<2	0.1	1			36							tr po, py	2,a,m
AT02189	217.09	218.19	1.10	130	102	10	0.1	1			24							2,a,m	cut off
AT02190	218.19	219.40	1.21	279	122	110	0.8	1			39							1% py,po,cpy	2,m alt
AT02191	219.40	220.50	1.10	301	139	182	0.7	15			67							2% po,py (cpy)	2,m carb
AT02192	220.50	221.60	1.10	46	86	14	0.1	1			41							1% po,py	2m, alt
AT02193	221.60	223.00	1.40	1290	87	7	0.6	1			35							1 cm cpy	
AT02194	223.00	224.50	1.50	142	68	21	0.1	1			35							tr py, po	
AT02195	224.50	225.84	1.34	87	28	7	0.1	1			48							2,a,m	cut off
AT02196	225.84	226.73	0.89	57	37	10	0.1	1			41							aa	

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	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT02306	0.00	0.00	0.00	73.20	10.95	0.22	0.56	1.28	7.12	2.95	0.24	0.06	0.03	0.05	1.19	97.85	122	292		30	95	60		KRAP	9hz	127
AT02303	32.00	35.00	3.00	50.92	14.66	9.72	7.09	2.68	1.32	11.35	0.65	0.16	0.21	0.10	1.87	100.73	18	56		65	90	150		2,a,m	2(h)u	107
AT02304	56.00	59.00	3.00	39.57	10.81	24.65	3.16	0.17	0.06	15.60	0.33	0.06	0.44	0.05	4.21	99.11	10	18		135	95	60		2, ep, cb	4hA$	43
AT02305	77.00	80.00	3.00	43.26	13.11	11.83	5.41	2.02	0.54	21.36	0.68	0.42	0.22	0.05	1.41	100.31	44	52		95	90	155		2m, alt, chl	2hyB	91
AT02307	86.31	86.70	0.39	54.87	16.69	7.95	3.75	5.53	0.72	7.74	0.56	0.34	0.11	0.03	1.00	99.29	18	90		25	50	10		2/3 dyke	3(j)y	118
AT02308	98.00	101.00	3.00	48.81	11.95	16.01	6.07	2.79	0.16	11.76	1.34	0.32	0.21	0.04	1.25	100.71	30	100		95	70	160		2t,*b,sil	2(h)yB	63
AT02309	123.60	124.00	0.40	51.64	18.02	10.35	3.83	5.14	0.98	6.05	0.69	0.40	0.11	0.04	3.57	100.82	28	250		30	45	265		2,D single frag	'3jy	109
AT02310	130.00	132.00	2.00	51.03	12.81	11.63	5.37	3.94	0.22	13.22	0.95	0.48	0.11	0.04	0.94	100.74	48	122		330	30	440		2t	2hyB$	81
AT02311	134.00	137.00	3.00	49.28	12.89	10.68	3.92	3.25	0.34	17.43	1.58	0.20	0.17	0.04	0.45	100.23	52	108		55	50	45		2,a,m	2hv	90
AT02312	161.00	164.00	3.00	49.30	12.87	8.13	3.65	2.67	1.02	20.74	1.59	0.16	0.21	0.03	0.38	100.75	40	100		505	55	60		2,a,m	2hv	109
AT02313	191.00	194.00	3.00	49.71	13.07	4.55	5.77	1.65	1.14	20.12	1.63	0.16	0.30	0.02	2.61	100.73	42	106		110	140	60		2,a,m	2hv	178
AT02314	226.73	229.14	2.41	42.89	12.10	13.14	4.38	2.50	0.28	10.89	0.81	0.08	0.20	0.03	13.23	100.53	20	44		10	85	60		2, Bl	2hv!	76
AT02315	230.00	233.00	3.00	50.00	14.84	11.08	5.95	2.26	0.24	13.63	1.08	0.12	0.25	0.05	0.92	100.42	28	68		35	105	75		2 wk alt	2hv	109

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	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
AT02306	0.00	0.00	0.00						<5		200	30																	
AT02303	32.00	35.00	3.00						40		100	240																	
AT02304	56.00	59.00	3.00						40		9200	210																	
AT02305	77.00	80.00	3.00						90		4900	285																	
AT02307	86.31	86.70	0.39						25		100	150																	
AT02308	98.00	101.00	3.00						60		6100	475																	
AT02309	123.60	124.00	0.40						30		<100	235																	
AT02310	130.00	132.00	2.00						135		18500	565																	
AT02311	134.00	137.00	3.00						75		1400	405																	
AT02312	161.00	164.00	3.00						60		1700	380																	
AT02313	191.00	194.00	3.00						40		400	435																	
AT02314	226.73	229.14	2.41						35		100	260																	
AT02315	230.00	233.00	3.00						50		100	360																	

HOLE NUMBER: MAN55-02

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/20/1996
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8269
PROJECT NUMBER: 8269
CLAIM NUMBER: P1200906
LOCATION: Mann Township

PLOTTING COORDS GRID: UTM
NORTH: 0.00N
EAST: 0.00E
ELEV: 280.00

ALTERNATE COORDS GRID: GRID
NORTH: 0+50N
EAST: 6+ 0E
ELEV: 280.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 182.00M
START DEPTH: 0.00M
FINAL DEPTH: 182.00M

COLLAR ASTRONOMIC AZIMUTH: 190° 0' 0"

GRID ASTRONOMIC AZIMUTH: 190° 0' 0"

DATE STARTED: 02/21/1996
DATE COMPLETED: 02/23/1996
DATE LOGGED: 02/25/1996

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

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

CONTRACTOR: NOREX DRILLING
CASING: BW
CORE STORAGE: MINESITE
UTM COORD.:

COMMENTS : Target: strong cond. good mag. Source: 3% ds po, py cpy in 2am, 2/5t.
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
53.00	° ' "	-47° 0' 0"	A	OK	
98.00	° ' "	-46° 0' 0"	A	OK	
149.00	° ' "	-46° 0' 0"	A	OK	

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

C. Petch

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 17.60	Casing «┤ob├»					- casing left in hole (18m, BW).
17.60 TO 62.00	Altered Mafic Volcanic «2,,a,m,<Si>,<Cb>»	- light to dark green, light to medium grey. - mafic volcanic rock is fine grained, massive to weakly foliated at 20-60°/ca. - 'flows' or 'beds' range from 30 cm to 5 m and are typically homogeneous, however local fine laminations indicate a tuffaceous component. - light grey, moderately 'silicified' portions are brecciated in a medium, matte green chloritic matrix that is very hard (also silicified?). The fragment are 1-6 cm and have sharp arcuate, thinly bleached (white) edges. Most are fractures filled by chlorite with lesser pyrrhotite and carbonate. Texture is possibly an altered flow top breccia. - 31.54-32.0m - brownish, massive, felsdpar porphyritic (1%, 2mm, white, subhedral) intermediate dyke as seen in MAN55-01 and MAN54-01.		- variably chlorite altered. - locally silicified, light grey, very hard. - variably carbonate altered with up to 10 cm intervals pervasively altered (react with HCl (6%)). - carbonate veinlets cross-cut core. - alteration apppers to alter both the mafic rock, the sediement and possibly perferentially the brecciated flow tops? - trace epidote and carbonate alteration. - chlorite and/or carbonate veins (1-2mm, 1%, up to 10%) with 1-5mm pale green halos contain trace iron sulphides. ┤44.5-47.0├ «2,<Si>» - intense silicification of mafic volcanic, weakly gradational contacts. - 49m - 2 cm carbonate + chlorite (massive) + quartz vein with trace pyrrhotite and chalcopyrite.	«3% po, tr cpy, py» - pyrrhotite is fracture-controlled and locally stringer-like. - trace chalcopryite is fracture-controlled and locally associated with larger patches of carbonate ± chlorite alteration. - trace pyrite is fracture-controlled and most commonly occurs as 2-5 mm flattened blebs. - pyrrhotite is also found remobilized in late carbonate veins with trace chalcopyrite and pyrite. - associated with chlorite alteration and carbonate alteration. - fracture surfaces have a grey-blue matte oxide coating (dissolves in 6% HCl) and contain flattened pyrite, chalcopyrite and pyrrhotite blebs. - most mineralized intervals are: - 24.5-27.5m and - 29-33.6m.	
62.00 TO 109.31	Intercalated Mafic Volcanic Rocks and Sediments «2a,m/5<ARG>»	- light green, light to medium grey, dark green, and brown. - mafic volcanic rock is fine grained and massive with a weak foliation at 20-60°/ca with fine laminations (tuffaceous). - sediments are dark brown, fine grained, thin to thickly laminated argillites/mudstones at 0-35°/ca. Beds are weakly sulphidic with 1-10%, disseminated pyrrhotite. Minor folding is expressed as broad, open folds with local mm-scale crenulations. - contacts are between 10-45°/ca and can be 1) sharp and abrupt. 2) 1-20 cm widths of thinly intercalated argillite and pale green, homogeneous mafic tuffs that are locallly folded (soft sediment deformation?). 3) light grey-brown (possibly hornfelsed)	35	- similar to previous interval but much less intense. - variably chlorite altered. - locally weakly silicified. - chlorite and/or carbonate veinlets (1-2mm, 1%, up to 10%) with 1-5mm pale green halos, contain trace iron sulphides, and cut core at random angles.	«1% po, tr cpy, py» - 1-2% pyrrhotite is fracture-controlled and is most abundant in the argillaceous intervals. - trace pyrite is fracture-controlled typically occurs as 2-5 mm flattened blebs on the fracture surfaces. - pyrrhotite occurs in late carbonate ± chlorite veins with trace chalcopyrite and pyrite. - pyrrhotite is locally finely disseminated within the argillite beds. - 104m - 1-3mm pyrrhotitic and competant argillaceous beds(?) are brecciated and deformed to produce a pseudo-mermykitic texture. - up to 4% pyrrhotite in a weakly	- 91.5-97.35m - 50 cm of missing core from dropped/broken box.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		sediment moderately fractured with chlorite, carbonate and locally pyrrhotite. 4) gradational contact from argillite into tuffaceous mafic. - downhole contact is approximate after last argillite interval and into predominantly massive mafic volcanic rock.			conductive graphitic argillite in intervals: 89.5-89.9m 103.0-104.4m 108.35-109.51m	
109.31 TO 182.00	Mafic Volcanic «2,a,m,<Cb>»	- medium to dark green with light grey. - fine grained, massive with rare tuffaceous intervals. - locally very weakly foliated at 45°/ca. - local rare intervals of porphyritic mafic with up to 10% subhedral, white, 0.5-1 mm feldspars. - 142.92-144.63m - light grey and brown graphitic argillite and mafic tuff, finely laminated at 45°/ca and locally folded. 4% pyrrhotite is disseminated along bedding planes and in rare cross-cutting veins with trace chalcopyrite.		- carbonate alteration increases near bottom of hole. - cross-cutting carbonate veinlets have 1-3 mm bleached alteration halos. - 154m - concentration of veinlets with carbonate-rich halos produce a pervasively carbonate altered interval that is feldspar destructive. - 162-164.2m - light olive brown interval (resembles bleached mafic) is pervasively carbonate altered (reacts with HCl (6%)). The interval is in turn cut by 1-3 cm, irregular carbonate + quartz ± epidote (?) veins. - locally cut by 3%, irregular, fine chlorite veinlets. - fine grained, greener interval may indicate a local pervasive chlorite alteration.	- up to 10% pyrrhotite and pyrite with trace chalcopyrite is fracture controlled, typically with carbonate and lesser chlorite in 1-10 cm intervals.	

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn	Ni ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AT02205	0.00	0.00	0.00	13	116	<2	0.4	13			7							KRAP	standard
AT02239	0.00	0.00	0.00	12	113	<2	0.3	14			6							KRAP	
AT02252	0.00	0.00	0.00	12	112	<2	0.3	15			7							KRAP	
AT02332	0.00	0.00	0.00	13	110	3	0.3	14			7							KRAP	
AT02197	18.50	20.05	1.55	395	34	21	0.1	1			98							2	cut off
AT02198	20.05	21.50	1.45	214	67	7	0.1	1			84							tr po	2
AT02199	21.50	23.00	1.50	790	255	24	0.2	1			118							2% po	2
AT02200	23.00	24.50	1.50	116	50	7	0.1	1			75							tr po	aa
AT02201	24.50	26.00	1.50	1440	38	27	0.2	1			305							10% po, 1% cpy	2 alt
AT02202	26.00	27.50	1.50	250	58	3	0.1	1			226							5% po, 0.5% cpy	2 alt
AT02203	27.50	29.00	1.50	148	41	21	0.1	1			122							tr po, tr cpy	2 alt
AT02204	29.00	30.50	1.50	208	41	<2	0.1	1			57							5% po	2 alt
AT02206	30.50	32.00	1.50	584	34	10	0.2	1			64							10% po, 1% cpy	2 alt
AT02207	32.00	33.55	1.55	630	25	<2	0.1	1			72							3% po, tr cpy	2 alt
AT02208	33.55	35.00	1.45	325	30	<2	0.1	1			62							5% po, 0.5% cpy	2 alt
AT02209	35.00	36.50	1.50	262	33	<2	0.1	1			37							4%po,1%py,tr cp	2 alt
AT02210	36.50	38.00	1.50	1630	29	7	0.3	1			95							aa	
AT02211	38.00	39.50	1.50	510	28	7	0.1	1			50							3% po	aa
AT02212	39.50	41.00	1.50	287	20	3	0.1	1			28							tr po	2t?
AT02213	41.00	42.50	1.50	806	22	<2	0.2	1			49							3% po, 0.5% cpy	2t
AT02214	42.50	44.00	1.50	226	25	<2	0.1	1			34							1% po+cpy	2 chl
AT02215	44.00	45.50	1.50	737	21	<2	0.2	1			55							2% po, tr cpy	
AT02216	45.50	47.00	1.50	484	20	34	0.1	1			24							1% po+cpy	2 sil
AT02294	47.00	48.30	1.30	265	42	<2	0.1	1			42							tr po	2 chl
AT02217	48.30	50.00	1.70	416	55	79	0.2	1			29							tr po, cpy	
AT02218	50.00	51.50	1.50	2460	47	123	0.7	1			42							1% cpy, po	2 sil
AT02219	51.50	53.00	1.50	1380	35	182	0.4	1			18							1% po, cpy	2 sil, chl
AT02220	53.00	54.50	1.50	1710	48	312	0.7	1			25							1% po, cpy	2 chl+sil
AT02221	54.50	56.00	1.50	1320	50	65	0.4	1			58							tr cpy, po	2m, alt
AT02222	56.00	57.50	1.50	267	40	<2	0.1	1			40							tr py, po	2,m
AT02326	57.50	59.00	1.50	1290	65	21	0.2	1			36								2,m
AT02327	59.00	60.50	1.50	2760	76	51	0.4	1			32							1% po, tr cpy	
AT02328	60.50	62.00	1.50	1070	53	7	0.2	1			76							5% po, tr cpy	
AT02329	62.00	63.70	1.70	1410	62	10	0.2	1			42							tr po	2 sil
AT02330	63.60	65.00	1.40	2040	53	<2	0.3	1			65							3% po,py tr cpy	5 arg, 2t
AT02331	65.00	66.50	1.50	1730	87	14	0.3	1			45							5% po, 0.5% cpy	2t,m 5 arg
AT02333	66.50	68.00	1.50	1650	100	21	0.2	1			41							3% po, tr cpy	5 arg
AT02334	68.00	69.50	1.50	3400	177	31	0.1	1			56							aa	5 arg, 2t
AT02223	69.50	71.00	1.50	1990	145	21	0.3	1			46							3% po, tr cpy	2t, 5 arg
AT02224	71.00	72.50	1.50	2000	125	14	0.2	1			40							aa	
AT02225	72.50	74.00	1.50	1720	72	24	0.2	1			40							aa	2,m,t
AT02226	74.00	75.45	1.45	1460	71	10	0.2	1			35							tr po,py,cpy	2,m
AT02227	75.45	76.47	1.02	266	39	21	0.1	1			32							tr po	2f,7?
AT02228	78.66	80.00	1.34	2020	93	24	0.3	1			67							2/7	
AT02229	80.00	81.50	1.50	1240	116	31	0.2	1			89							tr po	2t/7
AT02230	81.50	82.85	1.35	876	116	17	0.3	1			47							1% po	
AT02231	82.85	84.50	1.65	2540	118	21	0.8	1			51							2%po, tr py,cpy	2t,5arg

HOLE NUMBER : MAN55-02

ASSAYS SHEET

DATE: 19/04/1996

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	Co ppm	Cu/Zn	Ni ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK TYPE	Comments
AT02232	84.50	86.00	1.50	1460	90	14	0.2	1			66							3% po, tr cpy	5 arg
AT02233	86.00	87.70	1.70	1540	133	21	0.3	1			71							5%po, 0.5% cpy	5 arg, 2t
AT02234	87.70	89.00	1.30	494	202	<2	0.1	1			57							2% po, tr cpy	
AT02235	89.00	90.50	1.50	1590	142	14	0.3	1			82							4% po, 1% cpy	5 arg, 2t
AT02236	90.50	92.00	1.50	504	158	<2	0.1	1			46							1% po, cpy	2 sil
AT02237	92.00	93.50	1.50	485	166	<2	0.1	1			46							3% po, tr cpy	5 arg, 2t
AT02238	93.50	95.00	1.50	532	150	14	0.1	1			57							5% po, 0.5% cpy	5 arg
AT02240	95.00	96.50	1.50	496	240	7	0.1	1			54							2% po, tr cpy	5 arg, 2t
AT02241	96.50	98.00	1.50	620	526	<2	0.1	1			52							aa	
AT02242	98.00	99.50	1.50	378	146	89	0.1	1			68							12% po, cpy	2t,5arg
AT02243	99.50	101.00	1.50	119	70	3	0.1	1			56							2,m	no sulphid
AT02244	101.00	102.23	1.23	384	44	<2	0.1	1			75							3% po, tr cpy	2t
AT02245	102.23	103.24	1.01	26	50	<2	0.1	1			94							2,m	0% sx
AT02246	103.24	104.40	1.16	1780	73	<2	0.3	1			122							3% po	5 arg
AT02247	104.40	105.75	1.35	554	70	7	0.1	1			55							5% po, tr cpy	2,m
AT02248	105.75	106.75	1.00	673	140	<2	0.1	1			62							1% po	aa
AT02249	106.75	108.04	1.29	730	144	<2	0.1	1			63							aa	
AT02250	108.04	109.51	1.47	732	111	3	0.1	1			84							5% po, tr cpy	5g
AT02251	109.51	110.79	1.28	337	71	<2	0.1	1			59							2% po	2m, t?
AT02253	110.79	111.79	1.00	600	67	3	0.1	1			72							5% po	2t
AT02254	111.79	113.00	1.21	757	78	<2	0.1	1			38							2 alt	
AT02255	113.00	114.31	1.31	103	81	<2	0.1	1			40							2,a,m	
AT02256	114.31	115.46	1.15	833	88	3	0.3	1			33							1% po	2,a,m alt
AT02257	115.46	116.49	1.03	78	90	<2	0.1	1			38							2,m	
AT02258	141.89	142.92	1.03	79	142	<2	0.2	1			29							2,m	cut off
AT02259	142.92	144.63	1.71	614	77	<2	0.6	1			58							3% po, tr cpy	5,sil
AT02260	144.63	146.00	1.37	61	93	<2	0.1	1			28							2,m	cut off

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	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT02321	0.00	0.00	0.00	75.21	11.09	0.47	0.50	1.08	7.42	2.48	0.25	0.06	0.03	<0.00	0.71	99.30	122	294		10	130	10		KRAP	9hz	124
AT02316	20.00	23.00	3.00	50.64	15.26	11.49	5.77	2.90	0.86	11.23	0.82	0.08	0.23	0.08	1.57	100.93	18	42		50	190	135		2	2hw	100
AT02317	43.00	45.00	2.00	70.04	10.09	2.37	2.65	3.46	0.38	9.44	0.32	0.12	0.07	0.09	1.66	100.69	10	124		155	35	25		2,t,*a alt	4jA$	162
AT02318	45.00	47.00	2.00	82.32	7.96	1.65	0.42	3.44	0.12	3.49	0.38	0.10	0.04	0.13	0.64	100.69	4	80		125	15	30		2 sil	4jA$	153
AT02319	48.30	50.60	2.30	48.85	12.78	7.43	5.45	3.08	0.90	19.20	1.38	0.14	0.20	0.04	0.93	100.38	36	92		95	80	70		2 sil, chl	2hv	112
AT02320	56.00	58.10	2.10	48.74	11.77	7.97	8.10	2.41	0.90	17.93	1.03	0.16	0.19	0.08	1.40	100.68	30	80		690	105	155		2,t , chl?	2hv	104
AT02322	77.00	79.20	2.20	50.83	13.30	8.66	10.28	1.62	2.62	9.73	0.54	0.24	0.17	0.10	2.11	100.20	14	74		65	75	200		2, P dike?	2(j)u	103
AT02323	98.00	98.35	0.35	57.75	14.13	1.84	3.25	1.40	3.56	11.81	0.53	0.16	0.13	0.03	3.99	98.58	24	178		185	220	40		2/5t?	2jw$	208
AT02324	109.81	112.00	2.19	48.93	14.81	9.23	4.12	1.08	1.16	17.61	1.19	0.14	0.39	0.05	1.85	100.56	34	136		105	155	35		2 alt, chl	2(h)v$	129
AT02325	116.00	119.00	3.00	50.10	13.83	7.69	6.72	2.34	1.04	15.76	1.50	0.16	0.34	0.04	1.13	100.65	36	98		40	210	85		2,a,m	2hv	126
AT02335	146.00	149.00	3.00	50.15	13.30	9.98	4.97	2.22	0.46	16.24	1.67	0.16	0.38	0.03	1.05	100.61	42	112		25	110	65		2,a,m	2hv	105
AT02336	173.00	176.00	3.00	48.64	14.64	10.96	6.98	2.04	0.28	13.26	0.96	0.10	0.31	0.06	1.13	99.36	24	52		110	65	90		2,a,m	2hv	110

Sample	From (M)	To (M)	Leng. (M)	RB PPM	SR PPM	CO2 %	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
AT02321	0.00	0.00	0.00						<5		100	25																	
AT02316	20.00	23.00	3.00						40		<100	300																	
AT02317	43.00	45.00	2.00						60		18500	55																	
AT02318	45.00	47.00	2.00						35		6400	80																	
AT02319	48.30	50.60	2.30						45		1700	360																	
AT02320	56.00	58.10	2.10						40		2200	320																	
AT02322	77.00	79.20	2.20						40		400	180																	
AT02323	98.00	98.35	0.35						40		22700	95																	
AT02324	109.81	112.00	2.19						25		9200	285																	
AT02325	116.00	119.00	3.00						45		400	390																	
AT02335	146.00	149.00	3.00						45		100	410																	
AT02336	173.00	176.00	3.00						50		900	310																	

FALCONBRIDGE LIMITED

Exploration Division — Timmins ONTARIO

MANN BELT PROJECT
GRID MAN96-12
MANN TOWNSHIP

DIAMOND DRILL PLAN

TRACED:	EXSICS	DATE 01/96	NTS: 42-A/15	PROJECT: 8269	
DRAWN	P Gauthier	DATE 01/96	MAP No.	FILE: MAN9612-	
SUPERVISED	P J Nagert	DATE 25/02/96	SCALE 1:5 000 (metres)		
REVISED:	d e l	DATE 04/03/96	0 40 80 120 160		

ASTRONOMIC

N

SHEET ORIENTED UTM NORTH
AZIMUTH 000° 11'

LOT 5 | LOT 4

L 200 W | L 100 W | L 000 | Drill Road | L 100 E | L 200 E | L 300 E | L 400 E | L 500 E | L 600 E | L 700 E | L 800 E | L 900 E | L 1000 E | L 1100 E | L 1200 E

600 N | TL 400 N | 200 N | BL 000 (117°) | 200 S | TL 500 S

CON V

1200909
(8 Units)

MAN54-01
2, g, p, *a
5, g/2, l
2, a, m
3/4, t, *a
9, D, q
100m.
170.00m.

MAN55-02
2, , a, m, <Si>, <Cb>
2a, m/SCARG>
100m.
2, a, m, <Cb>
182.00m.

MAN55-01
2, a, m
2, a, <ER>, <Cb>
2, s, <Ep>
2, bx, s
100m.
200m.
2, a, m
233.00m

1200906
(16 Units)

1200910
(8 Units)

Creek

LOT 5

LOT 4

FALCONBRIDGE LIMITED

Exploration Division — Timmins ONTARIO

MANN BELT PROJECT

GRID MAN96-12

MANN TOWNSHIP

DIAMOND DRILL PLAN

TRACED	EXSICS	DATE 01/96	NTS 42-A/15		PROJECT: 8269
DRAWN	P Gauthier	DATE 01/96	MAP No		FILE MAN9612-
SUPERVISED:	P J Nagel	DATE: 26/02/96	SCALE 1 5 000 (metres)		
REVISED	d e l	DATE 04/03/96	0	40 80 120 160	

ASTRONOMIC

N

SHEET ORIENTED UTM NORTH AZIMUTH 000° 11'

LOT 5

LOT 4

L 200 W

L 100 W

L 000

Drill Road

L 100 E

L 200 E

L 300 E

L 400 E

L 500 E

L 600 E

L 700 E

L 800 E

L 900 E

L 1000 E

L 1100 E

L 1200 E

600 N

TL 400 N

200 N

BL 000 (117°)

CON V

200 S

TL 500 S

1200909
(8 Units)

MAN54-01 (L 100 W , 075mS , Az. 206° , Dip -45°)

1.a.p.*a
5.g/2.1
2.a.m
3/4.t.*a
9.D.q

170.00m

(L 700 E , 100mN , Az. 206° , Dip -45°)

(L 600 E , 050mN , Az. 206° , Dip -45°)

MAN55-02

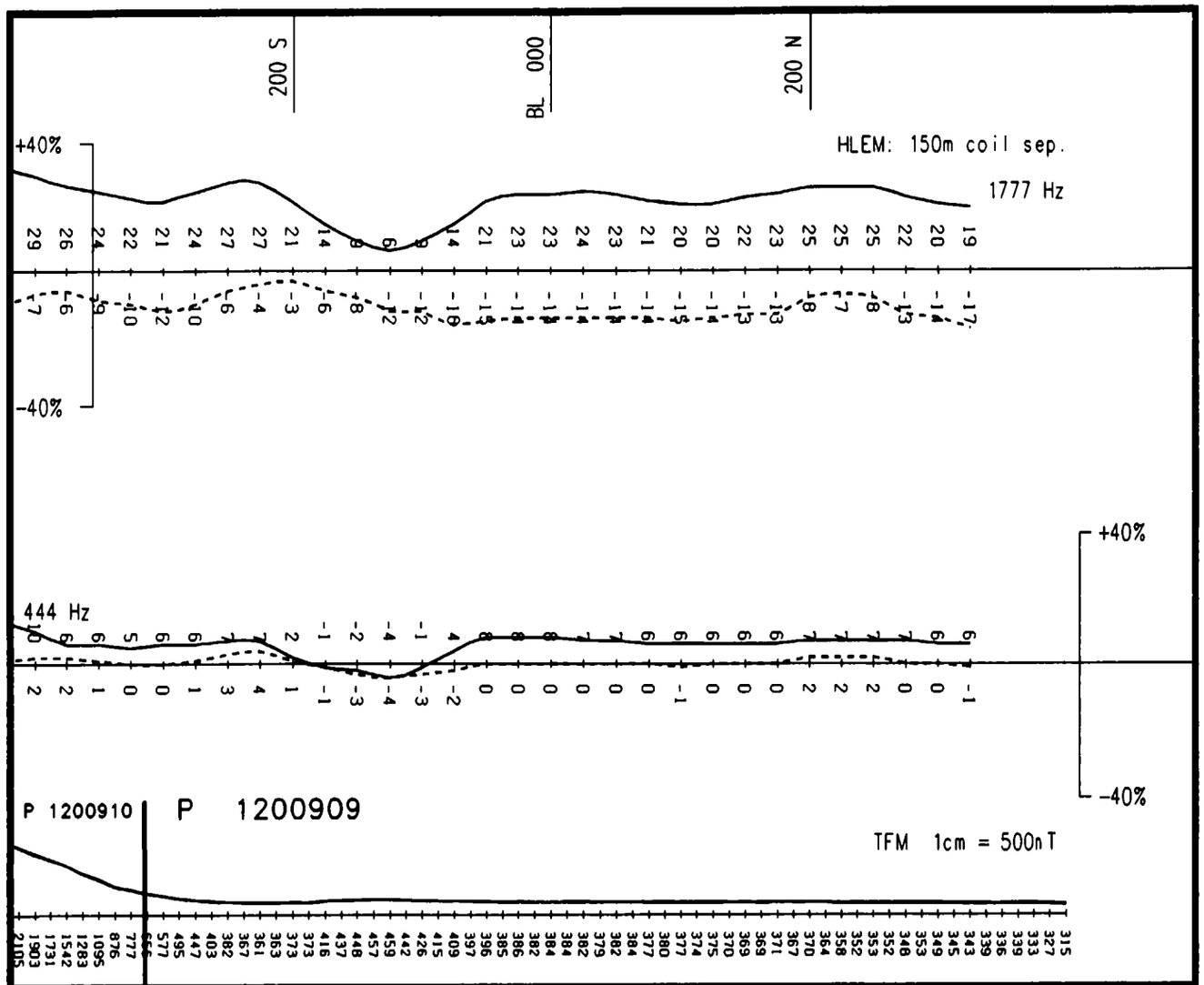
MAN55-01

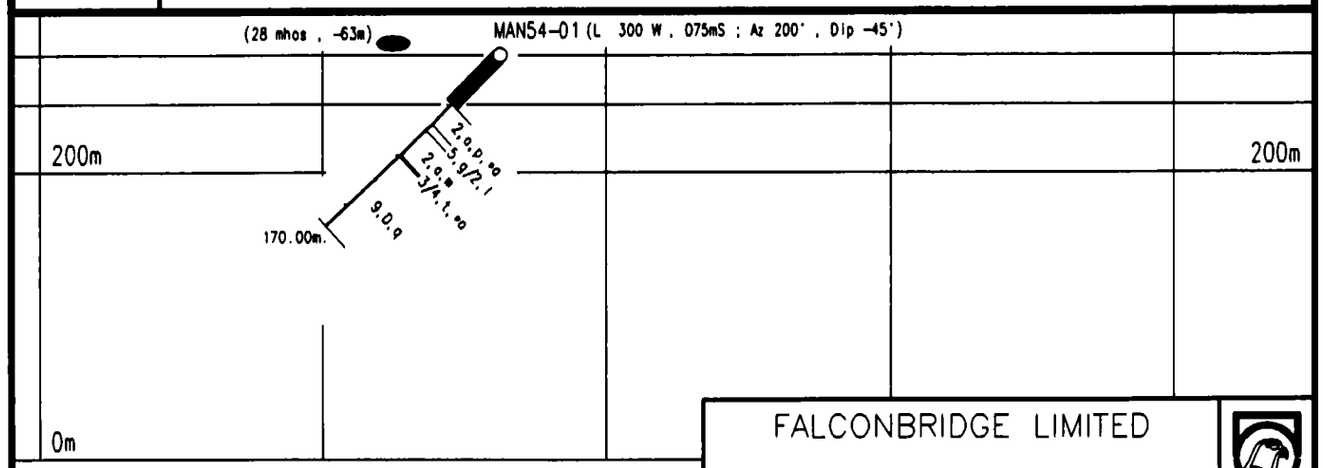
1.a.m.<S1>.<Cb>
2a.m/SCARG
2.a.m.<Cb>
182.00m
2.a.m
2.a.m
2.a.m.<ER>.<Cb>
2.s.<Ep>
2.bx.s
233.00m

1200906
(16 Units)

Creek

1200910
(8 Units)





LEGEND

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

- 100m grid line separation
- 2 line TFM
- HLEM
- AEM: 11-12 ch , cond 12 siemens : ch 6 384 ppm

FALCONBRIDGE LIMITED

Exploration Division — Timmins ONTARIO

MANN BELT PROJECT

ROTATED DRILL SECTION 100 W

DDH MAN54-01

GRID MAN96-12

Az 020° — MANN Twp.

TRACED: PRODES	DATE: 05/03/96	NTS: 42-A/14 & 15	PROJECT: 8269
DRAWN: d e l	DATE: 05/03/96	MAP No:	FILE: 8269 AW
SUPERVISED P J Nagel	DATE: 08/02/96	SCALE 1:5 000 (metres)	
REVISED:	DATE:	0 40 80 120 160	

200 S

BL 000

200 N

+40%

HLEM: 150m coil sep.

1777 Hz

-40%

444 Hz

+40%

-40%

P 1200906

TFM 1cm = 500nT

(28 mhos , -20m)

MAN55-01 (L 700 E , 100mN ; Az 200° , Dip -45°)

2.0.m

2.0, 45Ω?, 40Ω?

2.3, 45Ω?

2.bx.s

2.0.m

233.00m.

200m

200m

0m

LEGEND

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

- 100m grid line separation
- 2 line TFM
- 2 line HLEM
- AEM: 11-12 ch ; cond 15 siemens , ch 6 428 ppm

FALCONBRIDGE LIMITED

Exploration Division Timmins ONTARIO

MANN BELT PROJECT

ROTATED DRILL SECTION 700 E

DDH MAN55-01

GRID MAN96-12

Az 020° MANN Twp.

TRACED:	PRODES	DATE: 05/03/96	NTS: 42-A/14 & 15	PROJECT: 8269	
DRAWN:	d e l	DATE: 05/03/96	MAP No.	FILE: 8269 BA	
SUPERVISED:	P J Nagori	DATE: 08/02/96	SCALE 1:5 000 (metres)		
REVISED:		DATE:	0 40 80 120 160		

200 S

BL 000

200 N

+40%

HLEM: 150m coil sep.

1777 Hz

-40%

444 Hz

+40%

-40%

P 1200906

TFM 1cm = 500nT

(28 mhos , -20m)

MAN55-02 (L 600 E , 050mN ; Az 200° , Dip -45°)

200m

200m

182.00m.

0m

LEGEND

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

- 100m grid line separation
- 2 line TFM
- 2 line HLEM
- AEM 11-12 ch ; cond 15 siemens ; ch 6 428 ppm

FALCONBRIDGE LIMITED

Exploration Division Timmins ONTARIO

MANN BELT PROJECT

ROTATED DRILL SECTION 600 E

DDH MAN55-02

GRID MAN96-12

Az 020° MANN Twp.

TRACED:	PRODES	DATE:	05/03/96	NTS: 42-A/14 & 15	PROJECT: 8269
DRAWN:	d e l	DATE:	05/03/96	MAP No:	FILE: 8269 BB
SUPERVISED:	P J Nagori	DATE:	08/02/96	SCALE 1:5 000 (metres)	
REVISED:		DATE		0 40 80 120 160	

LEGEND

Geology

MAJOR ROCK DIVISIONS

- 15 — TO BE ANNOUNCED
- 14 — HURONIAN SUPERGROUP
- 13 — METAMORPHIC (Unknown)
- 12 — GNEISS
- 11 — SCHIST
- 10 — DIABASE
- 9 — FELSIC INTRUSIVE ROCKS
- 8 — INTERMEDIATE INTRUSIVE ROCKS
- 7 — MAFIC INTRUSIVE ROCKS
- 6 — ULTRAMAFIC INTRUSIVE 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

TEXTURAL/GEOCHEMICAL MODIFIERS

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

TEXTURAL/STRUCTURAL MODIFIERS

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

MINERALOGICAL NAMES

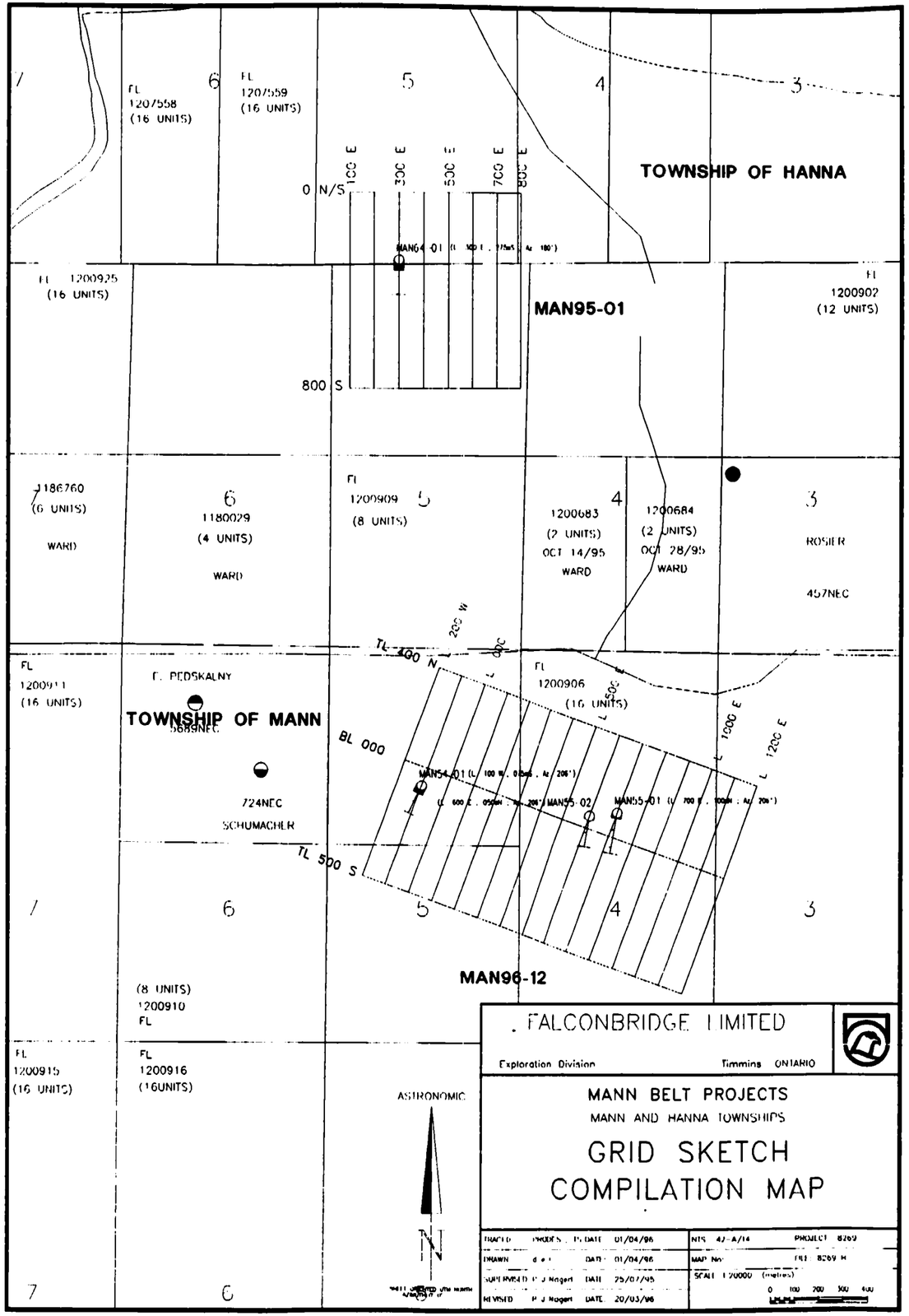
Ak	Actinolite	Gn	Galena	Po	Pyrrhotite		
Alb	Albite	Gt	Garnet	Qt	Quartz		
Al	Almandine	VG	Gold	Ro	Rhodochrosite		
Am	Amphibolite	Gf	Graphite	Ru	Rutile		
Ah	Anhydrite	GS	Gravel & Sand	Sur	Serpentine		
Ad	Andalusite	Gyp	Gypsum	Sc	Sericite		
Ay	Anthophyllite	Hem	Hematite	Sh	Scheelite		
Ap	Apatite	Hb	Hornblende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

ALTERATION MODIFIERS

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

ROCK TYPE

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


FL
1207558
(16 UNITS)
FL
1207559
(16 UNITS)
TOWNSHIP OF HANNA
0 N/S
100 E
300 E
500 E
700 E
800 E
MAN94-01
MAN95-01
FL 1200925
(16 UNITS)
FL
1200902
(12 UNITS)
800 S
1186760
(6 UNITS)
WARD
6
1180029
(4 UNITS)
WARD
FL
1200909
(8 UNITS)
1200683
(2 UNITS)
OCT 14/95
WARD
1200684
(2 UNITS)
OCT 28/95
WARD
ROSIER
457NEC
TL 400 N
200 W
FL
1200911
(16 UNITS)
E. PEDSKALNY
TOWNSHIP OF MANN
568SNEC.
724NEC
SCHUMACHER
FL
1200906
(16 UNITS)
BL 000
1500 E
1200 E
MAN54-01
MAN55-02
MAN55-01
TL 500 S
MAN96-12
(8 UNITS)
1200910
FL
FL
1200915
(16 UNITS)
FL
1200916
(16UNITS)
ASTRONOMIC
FALCONBRIDGE LIMITED
Exploration Division
Timmins ONTARIO
MANN BELT PROJECTS
MANN AND HANNA TOWNSHIPS
GRID SKETCH
COMPILATION MAP
DRAWN
DATE: 01/04/96
SURVEYED P. J. Nagert
DATE 25/07/95
REVISED P. J. Nagert
DATE 20/03/96
NTS 42-A/14
PROJECT 8269
MAP No.
FILE: 8269 H
SCALE 1:20000 (metres)
0 100 200 500 1000

Norex Drilling Limited
P.O. Box 88 - Porcupine, Ontario P0N 1C0

Telephone (705) 235-2222
Fax (705) 235-2806

March 4, 1996

Invoice #F96305

FALCONBRIDGE LIMITED
P.O. BOX 1140
TIMMINS, ONTARIO P4N 7H9

EAST ONTARIO - DRILLING PERIOD - FEB 16-29/96

HOLE #MAN-55-01	
47 to 150 = 103 x $44.00	4,532.00
150 to 233 = 83 x $45.75	3,797.25
30m BW Casing x $40.00	1,200.00
1 BW Shoe x $154.00	154.00
HOLE #MAN-55-02, Casing 18m	
15 x $44.00	660.00
03 x $52.00	156.00
18 to 150 = 132 x $44.00	5,808.00
150 to 183 = 33 x $45.75	1,509.75
18m BW Casing x $40.00	720.00
1 BW Shoe x $154.00	154.00
HOLE #MAN-64-01, Casing 42m 61m	
15 x $44.00	660.00
15 x $52.00	780.00
12 x $61.00	732.00
42 to 150 = 108 x $44.00	4,752.00
150 to 203 = 53 x $45.75	2,424.75
Pull Casing Out: 2 hr x $75.00	150.00
HOLE #MAN-13-01, Casing 63m	
15 x $44.00	660.00
15 x $52.00	780.00
15 x $61.00	915.00
15 x $70.00	1,050.00
03 x $80.00	240.00
63 to 150 = 87 x $44.00	3,828.00
150 to 182 = 32 x $45.75	1,464.00
112 BQ Core Trays x $5.25	588.00
Waterline: 20 hrs x $25.00 = 500.00	
Propane 8 x $36.00 = 288.00	

Total: 788.00 x 54%	425.52
Newmarket Area Road Construction:	
25 Muskeg Tractor Hrs x $20.00	500.00
75 Man Hrs x $25.00	1,875.00
----------	----------
Sub total:	40,515.27
GST#R103904504	2,836.07
INVOICE TOTAL:	**$ 43,351.34**

THANK YOU

Norex Drilling Limited
P.O. Box 88 - Porcupine, Ontario P0N 1C0

Telephone (705) 235-2222
Fax (705) 235-2806

February 19, 1996

Invoice #F96220

FALCONBRIDGE LIMITED
P.O. BOX 1140
TIMMINS, ONTARIO
P4N 7H9

EAST ONTARIO
DRILLING PERIOD - FEBRUARY 1-15/96

HOLE #NEW-15-01	
170 to 206 = 36 x $45.75	1,647.00
4 Acid Tests x $50.00	200.00
Left In Hole:	
80.44m BW Casing x $40.00	3,217.60
1 BW Shoe x $154.00	154.00
Pull NW Casing Out: 1 hr x $75.00	75.00
HOLE #NEW-15-02, Casing 39m	
15 x $44.00	660.00
15 x $52.00	780.00
09 x $61.00	549.00
39 to 150 = 111 x $44.00	4,884.00
150 to 182 = 32 x $45.75	1,464.00
2 Test x $50.00	100.00
Pull All Casing Out: 2 hr x $75.00	150.00
HOLE #MCC-63-01, Casing 37.4m	
15 x $44.00	660.00
15 x $52.00	780.00
7.4 x $61.00	451.40
37.4 to 101 = 63.6 x $44.00	2,798.40
2 Tests x $50.00	100.00
Pull All Casing Out: 1 hr x $75.00	75.00
HOLE #MAN-52-02, Casing 33m	
15 x $44.00	660.00
15 x $52.00	780.00
03 x $61.00	183.00
33 to 150 = 117 x $44.00	5,148.00
150 to 179 = 29 x $45.75	1,326.75
3 Tests x $50.00	150.00
Lost In Hole:	
31.82m NW Casing x $47.00	1,495.54
1 NW Shoe x $204.00	204.00
36m BW Casing x $40.00	1,440.00
1 BW Shoe x $154.00	154.00

==continued on page 2==

pd

Norex Drilling Limited
P.O. Box 88 - Porcupine, Ontario P0N 1C0

Telephone (705) 235-2222
Fax (705) 235-2806

February 19, 1996

FALCONBRIDGE LIMITED
P.O. BOX 1140
TIMMINS, ONTARIO
P4N 7H9

EAST ONTARIO
DRILLING PERIOD - FEBRUARY 1-15/96

HOLE #MAN-54-01, Casing 48m	
15 x $44.00	660.00
15 x $52.00	780.00
13 x $61.00	793.00
48 to 150 = 102 x $44.00	4,488.00
150 to 170 = 20 x $45.75	915.00
3 Tests x $50.00	150.00
Pull All Casing Out: 1 hr x $75.00	75.00
HOLE #MAN-? , Casing 30m	
15 x $44.00	660.00
15 x $52.00	780.00
30 to 47 = 17 x $44.00	748.00
94 BQ Core Trays x $5.25	493.50
Sub total:	40,829.19
GST #R103904504	2,858.04
INVOICE TOTAL:	**$43,687.23**

THANK YOU

OASIS PARK MOTEL

Hwy. 11,
Tunis, Ont.
P.O. Box 640,
Iroquois Falls, Ont.
P0K 1G0

Feb. 16, 1996.

Falconbridge Exploration Ltd.,
P.O. Box 1140,
Timmins, Ont. P4N 7H9

re - Rental - 2 Motel Rooms,
Month of February/96,
& Lobby Facilities

2 @ $800.00.....$1600.00

Thank You!

OASIS PARK MOTEL
Phil Tessier, Owner

C. Petit
PN# 8269
Feb. 20, 1996

•ROAD BUILDERS
•ALL TYPES OF AGGREGATES
•EQUIPMENT RENTALS
•CONTRACT CRUSHING
•FLOAT SERVICE

M.J. LABELLE CO. LTD.

Contractors

FAX (705) 272-6005
Telephone (705) 272-4201
17-1st St. - P.O. Box 610
COCHRANE, ONT.
P0L 1C0

INVOICE

96-102

SOLD TO
Falconbridge Ltd.
P.O. Box 1140
571 Moneta Ave.
Timmins, ON
P4N 7H9

FAXED Feb. 15/96

Jan. 31 19 96

Please Pay from INVOICE - Statement sent only on request

CUSTOMER'S ORDER No. _____

DATE	Terms: Net 30 days — 1 1/2% Interest Per Month Charged On Past Due Accounts		RATE	DEBIT	CREDIT
1996	Rental of equipment for snow removal at Potter and Dunns Lake Area				
n. 29-30	3½ Hours - Truck & Float	@	85.00	297.50	
n. 29-30	13 Hours - Cat 140 Grader	@	85.00	1,105.00	
n. 30-31	15 Hours - Cat D7G Dozer	@	90.00	1,350.00	
				2,752.50	
	G.S.T.			192.68	
				$2,945.18	

GST Reg. # R103721759

PITS & QUARRIES THROUGHOUT THE COCHRANE DISTRICT

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Transaction Number: W9660.00327

Mining Act DDHs MAN54-01, MAN55-01, 02
Grid MAN96-12

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 [illegible] of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7284.

Instructions:
- Please type or print and submit in du[illegible]
- Refer to the Mining Act and Regulatic[illegible] ining Recorder.
- A separate copy of this form must be completed for each [illegible]
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

42A15NW0020 W9660-00327 MANN

900

Recorded Holder(s): FALCONBRIDGE LIMITED		Client No.: 130679
Address: 571 Moneta Ave. P.O. Box 1140 Timmins, Ont. P4N 7H9		Telephone No.: (705) 267-1188
Mining Division: Porcupine	Township/Area: MANN	M or G Plan No.:
Dates Work Performed: From: FEBRUARY 12, 1996	To: FEBRUARY 23, 1996	

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	
	Physical Work, Including Drilling	Diamond drill hole(s) MAN54-01 (170m), MAN55-01 (233m), MAN55-02 (182m)
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

RECORDED
APR 25 1996
Receipt _____

Total Assessment Work Claimed on the Attached Statement of Costs $ 36389

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
Norex Drilling Ltd.	HWY 101 East Porcupine Ont. (705) 235-2222

(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: April 12/96	Recorded Holder or Agent (Signature): C. Petch

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: CHRISTINE PETCH 571 Moneta Ave. P.O. Box 1140 Timmins Ont. P4N 7H9

Telepone No.: (705) 267-1188	Date: April 12/96	Certified By (Signature): C. Petch

For Office Use Only

Total Value Cr. Recorded: 36,389	Date Recorded	Mining Recorder	Received Stamp: APR 25 1996 PORCUPINE MINING DIVISION
	Deemed Approval Date: July 24/96	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

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
	P1200909	8	HAN64-01 12123	4200	7923	
	P1200906	16	HAN55-01,02 24266	6500	17766	
	1200924	16		8057		
	1200923	16		5100		
	1200945	6		800		
	1200917	8		4100		
	1200949	8		3393		
	1200950	4		429		
	1201903	8		3200		
	1201901	16		610		
	10		36389	36389	25689	
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

0241 (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. P1200906

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

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 W9660.00327

DDHs MAN54-01, MAN55-01,02
Grid MAN96-12

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	2200	
	Field Supervision Supervision sur le terrain	900	3100
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type MAN54-01 Drilling	8523	Invoice # F96220 F96305
	MAN55-01	12904	
	MAN55-02	9812	31239
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type Truck	200	
	Snowmobile	50	
			250
		Total Direct Costs Total des coûts directs	34589

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 Labelle	1000	
	Gasoline	200	
			1200
Food and Lodging Nourriture et hébergement	Oasis Motel	500	
	Oasis Rest.	100	600
Mobilization and Demobilization Mobilisation et démobilisation			
		Sub Total of Indirect Costs Total partiel des coûts indirects	1800
		Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)	34589
		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	36389

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
× 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
× 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 C. PETCH I am authorized
(Recorded Holder, Agent, Position in Company)

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 _____ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
C. Petch	April 12/96

0212 (04/91)

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

C-2231

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M. & S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

W.P.R. WATER POWER RESERVE

W.O. 87 / 87

(RI) MINING AND SURFACE RIGHTS WITHDRAWN UNDER SECTION 36 OF THE MINING ACT (OCTOBER 15, 1987) see file 894253.

SURFACE AND MINING RIGHTS RE-OPENED TO PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 36 OF THE MINING ACT R.S.O. 1980 EFFECTIVE 90-SEP-05 AT 7AM E.S.T. ORDER NO. O-P 4/90 NR DATED 90-AUG-22.

NOTE- PII25837 PLOTTED IN ERROR.
S/B PII14737.

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 INFOPMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

C-2231

MANN TOWNSHIP

DUFF TOWNSHIP

NEWMARKET TOWNSHIP

LITTLE TOWNSHIP

Pickerel Lake

Firefly Lake

Horse River

W.P.R.

Devonshire Road

Lickers Lake

1200925 (16 UNITS)
1200902
1200901
1201319 (2 UNITS)
1201909 (8 Units) PT90056
1200928
1200927
1204690 (8 Units)
(6 UNITS)
1186760 (6 units)
1180029 (4 UNITS)
1200909
1198992 (12 UNITS)
1198991
1206524
1206710
F-2
1200684
1200683
2 UNITS
1180028 2 UNITS
1200926
1186762
1200912 (3 UNITS)
1180030
1200913
1200903
1200911
1200906 (8 UNITS)
1200905
1200904
1200910 (16 UNITS)
1200914 (4 UNITS)
1200915
1200916 (16 UNITS)
1200908 (12 UNITS)
1190952 12 UNITS
1201907 12 UNITS
1200947
1200918 (2 UNITS)
1200907 (8 UNITS)
1200948 (9 UNITS)
1200919 (4 UNITS)
1200920
1200922
1200938 (8 UNITS)
1200921 (4 UNITS)
1200924
1200923
1201944 (4 UNITS)
1204445 (2 UNITS)
1201945 (2 UNITS)
1201901
1201903 8 UNITS
1201902 4 UNITS
H03260 8 UNITS
1201373 (4 UNITS)
1200984 (4 UNITS)

I II III IV V VI

12 11 10 9 8 7 6 5 4 3 2 1

LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIP, BASE LINES ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	
LAND USE PERMIT	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO 1913, VESTED IN ORIGINAL PATENTEE BY LANDS ACT, R.S.O. 1970, CHAP 380, SEC. 62, SUB 1

L.U.P.

Miles 0 500
Chains 0 10 20 30 40 50 60
Feet 500 0 1000 2000 3000 4000 5000

SCALE 1:20 000

(ST) SNOWMOBILE TRAIL (LAND USE PERMIT) NOTICE RECEIVED 92-DEC-09

ISSUED
AUG 6 19
PORCUPINE MINING DIVISION
RECEIVED Sept 22/86

TOWNSHIP

MANN

M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources — Ontario
Ministry of Northern Development and Mines

Date SEPTEMBER, 1986
Number G-3537

C-2231

42A15NW0020 W9660-00327 MANN