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CG-142

1978 SURFACE DIAMOND DRILLING PROGRAM,

DEERHORN PROPERTY

Summary Report for M.E.A.P. Agreement

Submitted by:

R.S. Nichols, B.Sc., P.Eng.

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Introduction

A total of 8,112' of diamond drilling in 13 holes was completed on the Deerhorn property during the period April 27th to September 6, 1978. This program was intended to test previously unexplored areas for silver mineralization.

Some arsenide mineralization was intersected, but economic silver mineralization was not encountered in this program. The two main areas explored were under Cross Lake west of the shaft and southwest of the mine workings. The latter area has some potential for hosting ore grade silver mineralization in Huronian sediments, however the depth of overburden is such that mining in the Huronian is not feasible.

No further surface drilling is proposed or warranted at this time.

Location and Access

The Deerhorn property is centered about the Cross Lake O'Brien shaft on the east side of Cross Lake, about 2 miles due east of the Town of Cobalt.

It is easily accessible by car on a secondary gravel road which joins with Highway 11B at Mileage 104 (about 1 mile north of Cobalt). See the Index Map on the Composite Plan and Surface Drill Holes map accompanying this report.

Geology

The general geology of the Deerhorn property consists of Keewatin volcanics and sediments occurring below Nipissing diabase. A wedge of Huronian sediments between the Keewatin and Nipissing starts to occur about 700' east of the shaft, strikes N-S and thickens to greater than 200' at the east boundary.

The Keewatin rocks in the mine area strike W-E to N.W-S.E. The stratigraphic sequence of rock types from oldest to youngest appears from surface drilling to be:

- a) MAFIC FLOWS - dark green, usually well pillowed, occasionally incipiently brecciated.
- b) PYROCLASTIC TUFF BRECCIA - light coloured, feldspar crystal tuff with angular fragments of feldspar porphyry, mafic flow and chert.
- c) FELDSPAR PORPHYRY DYKE - light grey, hard, massive with 10% - 20% coarse white feldspar phenocrysts. This dyke cuts the mafic flows and pyroclastic breccia but not the overlying sediments.
- d) BLACK ARGILLITE - very fine grained, black, hard, well bedded argillite.
- e) FELSIC/CHERTY TUFF - light grey, very fine to medium grained usually well bedded tuff. Local lapilli tuff beds and chert beds occur in this unit.

Flat lying lamprophyre dykes cut across the Keewatin rocks. The dykes are dark green, massive, coarse grained, sometimes biotitic and sometimes amphibolitic.

Huronian sediments, overlying the Keewatin, occur in the east part of the property starting about 700' east of the shaft and thickening to greater than 200' at the east boundary. The general strike of the Keewatin valley is N-S. The surface drilling has indicated the following five distinct beds from bottom to top:

- a) BASAL CONGLOMERATE - 80% rounded to subrounded pebbles in a (0'-40' dark green greywacke matrix. The pebble types are predominantly underlying Keewatin rocks. Some chlorite spotting, locally well developed, is evident.
Thick)
- b) GREYWACKE - fine grained, dark green, well bedded with no (15'- 20' chlorite spotting.
Thick)
- c) CONGLOMERATE - 80% rounded pebbles to boulders in a dark green (40' thick) greywacke matrix. The boulders are predominantly granitic. Sparse chlorite spotting occurs.

- d) QUARTZITE - medium to coarse grained, impure quartzite
(30'- 40' with reddish arkosic sections. Faint chlorite
Thick) spotting occurs.
- e) GREYWACKE - dark green, fine grained, well bedded grey-
(40'thick) wacke with trace fine chlorite spotting.

The Nipissing diabase sill, which intrudes the Keewatin and Huronian, shows some differentiation. Above 100' from the lower contact 1 - 10% coarse, honey brown, hypersthene phenocrysts are evident with local sections containing 10% - 20% hypersthene. The lower contact of the sill strikes N-S and dips from 10° - 25° to the west.

Economic Geology

An estimated 11,600,000 ozs. Ag (Mineral Resources Circular No. 10, 1968, by A.D. Sergiades) has been produced from this property by Cross Lake O'Brien Mines, subsequent leasors and Deer Horn Mines.

Greater than 90% of the silver produced came from steeply dipping veins in Nipissing and Keewatin rock types. Less than 10% of the silver production came from veins in Huronian sediments.

The major veins strike parallel to the strike of the Keewatin except No. 1 vein which cross-cuts the strike at a high angle.

Purpose of the Surface Diamond Drilling Program

This surface diamond drilling program was intended to test for silver veins in previously unexplored areas.

The two areas considered as having the most potential for hosting silver mineralization were:

- a) South and southwest of the mine workings. The occurrence of Huronian sediments in this area and proximity to the Cross Lake fault appeared to be very favourable geological conditions.

b) West of the shaft. This area is bordered by productive silver veins on the north and east, yet had not been adequately tested close to the Nipissing - Keewatin contact.

Results of the Program

Ore grade silver mineralization was not intersected in either area.

The program consisted of 13 holes totalling 8,112' of diamond drilling during the period April 27 to September 6, 1978. A summary of the drill hole numbers, location, azimuth, dip and length are given in Table 1. All holes were drilled by Barron Diamond Drilling Limited, Haileybury. The core recovered was size AQ (1 1/16" diameter) and is presently stored at the Bailey property.

Low grade arsenide veins were intersected in holes DH 14 and DH 16 about 1800' southeast of the shaft. The following assays occurred with the veins:

- a) DH 14 at 612.5' a 1/2" calcite-cobalt vein assayed 0.74 oz. Ag/ton over 0.6'.
- b) DH 16 at 479.3' a 1/8" calcite-cobalt vein assayed 0.13 oz. Ag/ton over 0.3'.

No other veins of economic significance were intersected in the program. These veins could be related to potentially high grade silver mineralization in the overlying Huronian sediments. However, there is only 65' of Huronian rock which is directly overlain by overburden under Cross Lake so that mining in this area is not feasible.

There appears to be no other areas south and west of the Deerhorn workings which should be tested for silver veins. No additional surface drilling is warranted or proposed to explore this area.



Respectfully Submitted,

R. S. Nichols

R. S. Nichols, B.Sc., P. Eng.
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TABLE 1

SUMMARY OF DRILL HOLES

HOLE #	CO-ORDINATES	AZIMUTH	DIP	ELEVATION	LENGTH
DH 8	3841.7S,7135.6E	210°01'	-41°26'	865'	484'
DH 9	3742.9S,7221.0E	217°43'	-40°16'	880'	454'
DH 10	3365.7S,7045.7E	300°37'	-42°53'	875'	686'
DH 11	4017.3S,7300.8E	267°54'	-47°14'	866'	485'
DH 12	3507.3S,6995.2E	301°21'	-39°42'	871'	848'
DH 13	4150.6S,7376.8E	273°09'	-37°32'	862'	631'
DH 14	3895.5S,7397.6E	209°23'	-38°15'	875'	689'
DH 15	4010S, 7274E	201°	-38°	865'	48'
DH 16	4013.4S,7276.4E	220°23'	-37°57'	863'	659'
DH 17	3830.9S,7221.3E	30°33'	-37°44'	870'	472'
DH 18	3545.1S,6893.4E	209°03'	-40°09'	868'	801'
DH 19	2829.5S,6303.0E	267°13'	-53°44'	888'	800'
DH 20	2653.4S,6161.1E	207°40'	-52°38'	883'	1055'
				TOTAL	= 8112'

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DRILL LOG

HOLE NO. D.H. 8

PROPERTY DEER HORN	TP OR AREA COLEMAN on clay field S.E. of	AZIMUTH shaft 210°01'	DATE STARTED April 27, 1978	CORRECTED DIP TESTS 180' 211' -41'			LOCATION SKETCH OF HOLE <i>R.S. Nichols</i>
PROJECT	LOT & CONC. 1 V	DIP -41°26'	DATE COMPLETED May 3, 1978	490'	—	-38° (acid test)	
CLAIM NO.	CO-ORDINATES 3841.7S; 7135.61E	LENGTH 484'	DRILLED BY Barron D.D. AQ size				
GRID NO.	CORE AT BAILEY PROPERTY	COLLAR ELEV. ~ 865	LOGGED BY R. S. Nichols				

FOOTAGE		SECTION 1" =	DESCRIPTION	SAMPLE NO.			ASSAYS	
FROM	TO			FROM	TO	LENGTH	Ag	
0	14		CLAY					
14	150	hd 113.2 vd 98.4	BOULDERS, TILL					
150	166.0	hd 125.3 vd 108.9	NIPISSING DIABASE - typical coarse grained diabase. Lower, chilled contact, is ~40° to C.A.	160	170	10'	.03	
			VEINS:					
			157.8' - 1/2" grey calcite vein with 40% chl, 5% py, at 20° to C.A. 1/2" dark chl. alt'n halo.	886	158.5	160.0	0.5'	tr
166.0	229	hd 172.8 vd 150.2	HURONIAN GREYWACKE - dark green, well bedded, fine grained greywacke. Lower contact is gradational from 228.7'-229.5'. Bedding is 40° to C.A.		170	180	10'	.03
			Fine 0-5% chl spotting throughout, particularly in the darker beds. Sections of blocky core at 170'-179', 212'-223.5' with very bad cave at 218'- 225'. hd 164.5-169.8		180	190	"	.03
					190	200	"	.04
					200	210	"	.03
					210	220	"	.02
					220	230	"	tr
			VEINS:					
			193.8' - slip with py, at 30° to C.A.					
			206.5'-209.6' - hairline calcite stringers from 30°-50° to C.A. and cutting the bedding at steep angles.	887	206.5	209.6	3.1'	.12
229	263	hd 198.7 vd 172.4	HURONIAN QUARTZITE - med. grey, med. to coarse grained, arkosic quartzite (impure), faint bedding occurs at 229'-231' becoming more massive after 231'. Increasing red felds content at 231'-246'. Lower contact is first appearance of pebbles 0-5% fine chlorite spotting throughout. 3-5% fine white spots (not calcareous) throughout.		230	240	10'	tr
					240	250	"	tr
					250	260	"	.02

FOOTAGE		SECTION " =	DESCRIPTION				ASSAYS					
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	Ag	Cu	Pb	Zn	
406.6	431.4		ANDESITE - dark green, fine grained massive andesite. Possible indistinct brecciation occurs locally.									
			ALTERATION: 5-20% chl spotting throughout. Some locally intense alteration results in bleached & blotchy sections.									
			VEINS:									
			408.7' - 1/8" banded calcite - py vein at 30° to C.A. Some spy in wall rock next to vein.	912	408.5	408.9	0.4'	.22				
431.4	434.5		CHERT - light grey, very fine grained, bedded chert. Bedding is 25° to C.A. ~1% sph - ga occurs throughout.	913	431.4	434.2	2.8'	.08	.017	.18	0.47	
434.5	451		ANDESITE - CHERT INTERMIXED - fine grained, dark green andesite with inclusions of 1"-8" grey chert. There is also some calcite in the									
			VEINS:									
			434.5' - 1/2" vuggy calcite vein parallel to C.A. 1%-3% py occurs as fine to coarse grains.	914	434.2	435.0	0.8'	.17	.029	.52	1.99	
			443-444 - blocky core.									
451	484		ANDESITE BRECCIA - dark green, fine grained andesite with incipient brecciation (no dark matrix as before).									
			ALTERATION: 5-10% rectangular chl alt'n occurs at 451-460'.									
			MINERALIZATION: generally <1% py occurs along chl slips.									
			VEINS:									
			454.6' - 1/8" band calcite - py vein at 30°	915	454.4	454.9	0.5'	.04				
			476.3' - 3/8" slightly pink calcite vein with 5% sph, 1% py, at 60° to C.A.	916	476.0	476.5	0.5'	.05				

PROPERTY DEER HORN	TP OR AREA COLEMAN on clay field S.E. of shaft	AZIMUTH 217° 43'	DATE STARTED May 4, 1978	CORRECTED DIP TESTS 300' 218° -40°			LOCATION SKETCH OF HOLE
PROJECT	LOT & CONC. 1 V	DIP -40° 16'	DATE COMPLETED May 9, 1978				
CLAIM NO.	CO-ORDINATES. 3742.9S, 7221.0E	LENGTH 454	DRILLED BY Barron D.D. AQ size				
GRID NO.	CORE AT BAILEY PROPERTY	COLLAR ELEV. ~880'	LOGGED BY R.S. Nichols				

FOOTAGE		SECTION	DESCRIPTION	SAMPLE NO.			ASSAYS			
FROM	TO	1"=		FROM	TO	LENGTH	Ag			
0	12'		CLAY							
12	126	hd 965. vd 81.0	BOULDERS, TILL							
126	177.7	hd 136.1 vd 114.2	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase. Contact is 40° to C.A. & well chilled.	130	140	10'	tr			
			VEINS:							
			137.0' - 1/4" grey calcite vein with 1" alt'n halo, at 50° to C.A.	918	136.9	137.4	0.5'	tr		
			150.5' - 1/8" white calcite vein with 1" alt'n halo, at 50° to C.A.	919	150.3	150.8	0.5'	tr		
			172.4' - 1/4" pink calcite along slip with 1 1/2" alt'n halo.	920	172.1	172.6	0.5'	tr		
177.7	243.0	hd 186.1 vd 156.2	HURONIAN GREYWACKE - fine grained, dark green, well bedded greywacke. Bedding is 40° to C.A. Very, very fine chl. spotting. Thin py occurs along hairline fractures. Blocky core at 239'-241'.	180	190	10'	tr			
				190	200	"	tr			
				200	210	"	tr			
				210	220	"	tr			
				220	230	"	tr			
				230	240	"	tr			
				LOST WATER.						
243.0	288.0	hd 220.6 vd 185.1	HURONIAN QUARTZITE - arkosic, coarse grained with felds and odd pebble to 259.5'. After, medium grained, grey, fairly massive quartzite. No chl. spotting. 0-5% fine white spots throughout. Granitic pebble at 281.5'.							

R.S. Nichols

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DRILL LOG

HOLE NO. D.H. 10

PROPERTY DEER HORN	TP OR AREA <i>COLEMAN</i> on NW edge of field	AZIMUTH 300° 37'	DATE STARTED May 11, 1978	CORRECTED DIP TESTS		LOCATION SKETCH OF HOLE
PROJECT	LOT & CONC. 1&2 V	DIP -42° 53'	DATE COMPLETED May 24, 1978	200'	-42°	
CLAIM NO.	CO-ORDINATES. 3365.1S, 7045.7E	LENGTH 686'	DRILLED BY Barron D.D. - AQ SIZE	300'	-41° 306°	
GRID NO.	CORE AT BAILEY PROPERTY	COLLAR ELEV. ~875'	LOGGED BY R. S. Nichols	400'	-39° (acid test)	
				650'	-37° 305°	

R.S. Nichols

FOOTAGE		SECTION	DESCRIPTION	SAMPLE NO.			ASSAYS	
FROM	TO	1" =		FROM	TO	LENGTH	Ag	
0	36	hd 26.3 vd 24.6	CASING, BOULDERS					
36	280.4	hd 208.1 vd 187.8	NIPISSING DIABASE - typical coarse grained diabase (no hypersthene). Contact is well chilled, at 45° to C.A.	40	50	10'	.02	
				50	60	"	.03	
				60	70	"	.03	
				70	80	"	.03	
				80	90	"	.02	
				90	100	"	tr	
				100	110	"	.02	
			VEINS:	110	120	"	tr	
			56.9' - 1/2" vein of calcite-gtz. epidote - feldspar at ~30° to C.A. No alt'n halo.	120	130	"	.02	
				130	140	"	tr	
				140	150	"	tr	
				150	160	"	tr	
			68.9' - 1/8" grey quartz vein with 1/2" alt'n halo, at 35° to C.A.	160	170	"	.02	
				170	180	"	.02	
				180	190	"	.02	
		hd 69.0 vd 64.3	94.3' - 1/4" grey-white calcite vein with 1 1/2" very strong, bleached alt'n halo at 45° to C.A.	929	94.2	94.5	0.3'	.18
				190	200	10'	.02	
				200	210	"	tr	
			126' - 1/8" white green calcite stringer and no alt'n halo, parallel to C.A.	210	220	"	.02	
				220	230	"	.02	
				230	240	"	.02	
				240	250	"	.05	
				250	260	"	.04	
280.4	326.0	hd 243.1 vd 217.1	HURONIAN CONGLOMERATE - possible greywacke at 280.4 & 281.9' followed by conglomerate with 20%-40% rounded pebbles to boulders of red granite, sparse andesite.	260	270	"	.02	
				270	280	"	.06	
				280	290	"	.06	
				290	300	"	.07	
			hd 217.6	300	310	"	.09	
			Extremely blocky ground at 293'-306'. Had to cement hole. No apparent veining in this section. Also blocky ground at 321-326'-hd 234.2	310	320	"	.05	
				320	330	"	.06	

FOOTAGE		SECTION " =	DESCRIPTION				ASSAYS			
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	Ag	Pb	Zn
			Bottom contact is obscured by blocky & broken core.							
			325.0' - 1/4" piece of pink calcite vein, ground at both ends.	930	325.0	325.1	0.1'	.09		
326.0	550.3	hd 420.6 vd 354.0	KEEWATIN ANDESITE BRECCIA - dark green, fairly massive fine grained andesite with incipient brecciation. Somewhat blocky core at 485'-492'		330	340	10'	tr		
					340	350	"	tr		
					350	360	"	tr		
					360	370	"	.02		
					370	380	"	.02		
			Pillow selvages become apparent after 400'		380	390	"	.02		
					390	400	"	.02		
					400	410	"	.03		
			ALTERATION: some chl alt'n is developed along the breccia fractures. Dark brown, hard, siliceous (?) alteration is prominent within the breccia fragments to 375'		410	420	"	.02		
					420	430	"	.02		
					430	440	"	.02		
					440	450	"	.02		
					450	460	"	tr		
					460	470	"	tr		
			MINERALIZATION: generally less than 1/2% Po throughout as fine grains.		470	480	"	tr		
					480	490	"	.02		
					490	500	"	tr		
					500	510	"	tr		
					510	520	"	tr		
					520	530	"	tr		
					530	540	"	.02		
			VEINS:		540	550	"	.02		
			243.5' - 1/4" creamy pink calcite quartz vein parallel to C.A.							
			365.8' - 1/4" creamy pink calcite vein at 40° to C.A.	931	365.6	366.0	0.4'	.20		
		hd 286.3 vd 286.3	381.6'-385'- broken and blocky ground with minor calcite vein and local patches of sph, ga.	932	381.6	385.0	4.4'	.05	.26	.29
			386.2' - 1/4" discontinuous, creamy calcite vein at 45° to C.A.	933	386.1	386.5	0.4'	.04		
		hd 320.6 vd 278.6	425'-427'- FAULT ZONE, very blocky core, had to cement hole.							

FOOTAGE		SECTION ("=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS						
FROM	TO							Ag						
328.6	472.0	nd 330.8 vd 336.5	KEEWATIN ANDESITE BRECCIA - intensely bleached and chloritic spotted to 356'. Has a conglomeratic appearance in places. After 356', becomes more uniform andesite breccia. Chert for 328.6-328.8' is bedded at 40° to C.A.											
			MINERALIZATION: 338.5'-340.4' - <.5% very fine sph diss. throughout.											
			VEINS: 337.3'-6" white qtz. with tr sph, ga, cpy. 358.6'-1" white qtz. with tr sph, cpy, at 5° to C.A. 368.0'-6" white qtz-chl. with tr py, po, cpy and 2 grains arseno.											
		nd 275.9 vd 283.4	395.6'-2" qtz.calcite vein 3% combined blebs of ga, sph, py, at 25° to C.A.	973	395.2	395.9	0.7'	.11						
			407.0'-1/4" calcite - chl. along gouge at 45° to C.A.	974	406.9	407.2	0.3'	tr						
		nd 299.0 vd 305.8	427.8'-1/4" white calcite vein with 10% py (mostly along edges) at 30° to C.A.	975	427.6	428.0	0.4'	.07						
		nd 297.4 vd 304.2	425.5'-1/4" gouge with chl. 50% py, po, sph, at 70° to C.A.	976	425.4	425.8	0.4'	.23						
			450.2'-1/8" gouge, at 40° to C.A. 461.7'-4" white quartz vein with tr cpy, py at 35° to C.A. 471.8'-4" white quartz vein at 30° to C.A. Seems to coincide with dyke contact.											
472.0	485'	nd 340.2 vd 345.5	LAMPROPHYRE (?) DYKE - dark green, massive, med. grained dyke with 10% red felds in an amphibolitic rock.											
			END OF HOLE - CASING LEFT IN.....											

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FOOTAGE		SECTION " =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				
FROM	TO							Ag				
340.4	345.6	hd 271.1 vd 214.2	HURONIAN CONGLOMERATE - 0-20% rounded mostly granitic pebbles in a dark grey quartzite matrix. No chlorite spotting. Lower contact is 45° to C.A.		340	350	10'	.03				
345.6	562.7	hd 448.0 vd	KEEWATIN ANDESITE BRECCIA - dark green, fine grained, pillowed andesite with incipient brecciation. The frags are often bleached around the rims. Blocky core at 439'-438', 447'-448' Increasing breccia and alteration after 450-504.6' Bx frags. are 1/2"-1" diam., rounded to sub-rounded. After 504.6' rock is quite massive, dark green, minor bx. ALTERATION: local chlorite spotting. Also chlorite occurs as fine stringers (5% of rocks) Chlorite alt'n. is evident in the matrix and as fine stringers in the frags. -450'-504.6' the frags become very bleached.		350	360	10'	.03				
					360	370	"	.03				
					370	380	"	.02				
					380	390	"	.02				
					390	400	"	.02				
					400	410	"	.04				
					410	420	"	.03				
					420	430	"	.03				
					430	440	"	.03				
					440	450	"	.05				
					450	460	"	.03				
					460	470	"	.04				
					470	480	"	.02				
					480	490	"	.04				
					490	500	"	.02				
			VEINS:		500	510	"	.03				
					510	520	"	.03				
			371.5' - 1/8" pink calcite-chl. vein at 20° to C.A. The core is blocky and ground around the vein.		520	530	"	.03				
					530	540	"	.04				
					540	550	"	.02				
					550	560	"	.03				
			386.4' - 3/4" white calcite-quartz vein at 30° to C.A.	989	386.2	386.5	0.3'	.02				
		hd 353.1 vd 273.8	447.0' - 3" breccia with calcite filling (possibly a vein), 17. blebs of ga-sph.	990	446.9	447.3	0.4'	.11				
		hd 425.8 vd 325.0	535.8' - 1" white calcite, red felds, chlorite vein with tr ga, at 40° to C.A.	991	535.7	535.9	0.2'	.35				
562.7	729.2	hd 586.6 vd 432.3	LAMPROPHYRE DYKE - fine to med. grained, massive, dark green amphibolitic with possible biotite.		560	570	10'	.03				
					570	580	"	.03				
					580	590	"	.03				
					590	600	"	.04				

FOOTAGE		SECTION " =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				
FROM	TO							Ag	Cu	Pb	Zn	
			Upper contact is 15° to C.A.		600	610	10'	.04				
			Lower contact is irregular 15° to C.A.		610	620	"	.03				
					620	630	"	.03				
		hd 482.2	488.9 604'-612'-FAULT ZONE-very blocky core with		630	640	"	.02				
		vd 363.2	gouge & chl. slips. Had to cement hole.		640	650	"	.04				
					650	660	"	.04				
					660	670	"	.02				
			635-649 - sections of very blocky core.		670	680	"	.02				
					680	690	"	.02				
			VEINS:		690	700	"	.02				
					700	710	"	.03				
			601.1' - 3/8" pink quartz calcite vein at 20° to C.A.		710	720	"	.02				
					720	730	"	.02				
			603.2' - 2" discontinuous irregular pink calcite-chl. vein with tr sph. at ? to c.a.	992	603.1	603.6	0.5'	tr				
		hd 484.8	607.1' - pieces of pink calcite & chl. in gouge.	993	607.0	607.5	0.5'	.10				
		vd 364.9			(whole core sampled)							
			623.0' - 1/4" banded pink calcite-chl. vein at 60°	254	622.9	623.3	0.4'	.04				
			631.3' - 1/8" white calcite vein at 50°									
729.2	825.7	hd 668.4	FELDSPAR PORPHYRY - med. grey, hard, fine grained,	sludge	730	740	10'	.05				
		vd 483.4	groundmass with 10% - 30% coarse white feldspar		740	750	"	.04				
			phenocrysts.		750	760	"	.07				
					760	770	"	.07				
					770	780	"	.06				
					780	790	"	.16				
					790	800	"	.30				
					800	810	"	.08				
					810	820	"	.05				
			MINERALIZATION: 737'-824' - 0-2% sph. occurs as	255	737	742	5.0'	.06	.06	.15	.22	
			stringers and fine disseminated grains (about most	256	742	747	"	.06	---	.066	.092	
			common mineralization).	257	747	752	"	.03	---	.022	.038	
				258	752	757	"	.07	---	.026	.022	
				259	757	762	"	.07	---	.086	.17	
				260	762	767	"	.05	---	.049	.43	
				261	767	772	"	.05	---	.070	.32	
				252	772	777	5.0'	.04	---	.035	.078	

PROPERTY DEER HORN	TP OR AREA COLEMAN	AZIMUTH 273°09'	DATE STARTED June 19, 1978	CORRECTED DIP TESTS		LOCATION SKETCH OF HOLE
PROJECT	LOT & CONC. 1 V	DIP -37°32'	DATE COMPLETED June 27, 1978	200' -38°	281°	
CLAIM NO.	CO-ORDINATES 4150.6S, 7376.8E	LENGTH 631'	DRILLED BY Barton D.D. - AQ SIZE	300' -36°		
GRID NO.	CORE AT BAILEY PROPERTY	COLLAR ELEV. 862'	LOGGED BY R. S. Nichols	400' -32°		

R.S. Nichols

FOOTAGE		SECTION	DESCRIPTION	SAMPLE NO.			ASSAYS	
FROM	TO	1" =		FROM	TO	LENGTH	Ag	
0	91	hd 71.7 vd 56.0	CASING					
91	183.5	hd 144.6 vd 113.0	NIPISSING DIABASE - typical, coarse grained, massive diabase. No coarse grained hypersthene. Blocky core, chlorite clips, at 146'-149'. Becomes fine grained at 172'. Bottom, chilled contact is 60° to C.A.	90	100	10'		
				100	110	"	.04	
				110	120	"	.04	
				120	130	"	.02	
				130	140	"	.02	
				140	150	"	.02	
				150	160	"	.03	
				160	170	"	.03	
				170	180	"	.02	
183.5	223.8	hd 178.9 vd 137.1	HURONIAN GREYWACKE - fine grained, dark green well bedded greywacke. Bedding is: 40° to C.A. at 187' 40° to C.A. at 215' Blocky core occurs at 193'-195', 202'-204'. Lower Contact is gradational from 222' on and is taken as the last appearance of bedding. ALTERATION: Some fine chl. spotting along certain beds. VEINS: 222.0'-chl. seen with coarse py cubes, at 60° to C.A. and 90° to bedding.	180	190	10'	.02	
				190	200	"	.03	
				200	210	"	.02	
				210	220	"	.02	
223.8	258.3	hd 188.5 vd 157.4	HURONIAN QUARTZITE - med. grained, med. grey, massive quartzite. Hairline calcite stringers occur about 1 per foot throughout, mostly at 30-40° to C.A. Arkosic looking material with granitic pebble occurs at 234.5'-240.0'. No chlorite spotting. Local bedding at 241' is 35° to C.A.	224	222.9	223.2	0.3'	.05
				220	230	10'	tr	
				230	240	"	tr	
				240	250	"	tr	
				250	260	"	.03	

PROPERTY BEER HORN	TP OR AREA COLEMAN	AZIMUTH 209°23'	DATE STARTED June 28, 1978	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE
PROJECT	LOT & CONC. 1 V	DIP -38°15'	DATE COMPLETED July 12, 1978	200'	---	-37°	
CLAIM NO.	CO-ORDINATES. 3895.5S.7397.6E	LENGTH 689'	DRILLED BY Barron D.D. - AQ size	300'	212°	-37°	
GRID NO.	CORE AT BAILEY PROPERTY	COLLAR ELEV. ~875'	LOGGED BY R.S. Nichols	400'	---	-31°	
				500'	217°	-30°	

FOOTAGE		SECTION	DESCRIPTION	CORRECTED DIP TESTS			ASSAYS				
FROM	TO	I"=		SAMPLE NO.	FROM	TO	LENGTH	Ag			
0	86'	hd 67.8 vd 52.9	CASING								
86	238'	hd 189.9 vd 144.7	NIPISSING DIABASE - "varied texture" type diabase from 86' - 131'. After 131' becomes massive, uniform, coarse grained. Local fine grained sections of the varied texture diabase are magnetic. The diabase is generally quite blocky throughout. Becomes fine grained at 231'. Contact is obscured by very blocky and some ground core.	100	110	10'	tr				
				110	120	"	.02				
				120	130	"	.02				
				130	140	"	.02				
				140	150	"	.02				
				150	160	"	.02				
				160	170	"	.02				
				170	180	"	.02				
				180	190	"	.02				
				190	200	"	.03				
				200	210	"	.04				
				210	220	"	.02				
				220	230	"	tr				
				230	240	"	.02				
				240	250	"	tr				
238	254.3	hd 202.0 vd 154.5	HURONIAN GREYWACKE - fine grained, dark green, well-bedded greywacke. Bedding is 40° to C.A. Had to cement at 239'-240'. Very blocky core from 237.5' - 251'. No chlorite spotting occurs....								
254.3	284.7	hd 226.3 vd 172.8	HURONIAN QUARTZITE - med. grey, med. grained, massive quartzite. Some arkosic rock with small pebbles occurs at 264' - 268.4'. No chlorite spotting..	250	260	10'	tr				
				260	270	"	tr				
				270	280	"	tr				
			VEINS:								
			256'-267' - series of 1/16" - 1/8" parallel pink & white calcite veins with tr cpy, at 60° - 70° to C.A. About 1 per 8"-12" occurs.	312	256	259	3.0'	.04			
				313	259	262	3.0'	.06			
				314	262	265	3.0'	.03			
				315	265	268	3.0'	.03			
				316	268	271	3.0'	tr			

R.S. Nichols

PROPERTY DEERHORN	TP OR AREA COLEMAN	AZIMUTH 220° 23'	DATE STARTED July 13, 1978	CORRECTED DIP TESTS		LOCATION SKETCH OF HOLE
PROJECT	LOT & CONC. I V	DIP -37° 57'	DATE COMPLETED July 27, 1978	200' 40°	227°	
CLAIM NO.	CO-ORDINATES. 4013.4S, 7276.4E	LENGTH 659'	DRILLED BY Barron D.D. -AQ size	300' 38°	227°	
GRID NO.	COLE AT BAILEY PROPERTY	COLLAR ELEV. ~863	LOGGED BY R. S. Nichols	400' 36°		
				500' 35°		

R.S. Nichols

FOOTAGE		SECTION	DESCRIPTION	CORRECTED DIP TESTS			ASSAYS				
FROM	TO	1" =		SAMPLE NO.	FROM	TO	LENGTH	Ag			
0	150	hd 117.1 vd 93.7	CASING								
150	160.6'	hd 125.2 vd 100.6	NIPISSING DIABASE - fine grained, but typical diabase. Contact is 40° to C.A. (Had to cement at 162')		150	160	10'	.03			
160.6	217.0	hd 168.8 vd 136.4	HURONIAN GREYWACKE - fine grained, dark green, well bedded greywacke. The core is generally blocky to 195'. Bedding is 40° to C.A. Fine chlorite spotting throughout. Trace fine cpy and py along cracks at 174' - 200'		160	170	10'	.02			
					170	180	"	.02			
					180	190	"	tr			
					190	200	"	tr			
					200	210	"	.02			
					210	220	"	tr			
217.0	246.5	hd 192.0 vd 154.5	HURONIAN QUARTZITE - feldspathic, coarse grained arkose to 234.3' with the odd granitic pebble. After the arkose is med. grained, med grey massive quartzite. Occasional bed is 45° - 50° to C.A. No chlorite spotting is evident. Local 2" - 6" sections are calcified at 225' - 231'. VEINS: 227.4' - ½" white vuggy calcite vein at 60° to C.A. Some py and calcite occurs in wall rock. 232' - 6" - 8" broken core with some calcite filling.		220	230	10'	.02			
					230	240	"	tr			
					240	250	"	.03			
					335	226.8	227.6	0.8'	.07		
					336	231.6	232.6	1.0'	.07		

FOOTAGE		SECTION " =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	Ag	ASSAYS					
FROM	TO													
			94.5 1/8 Ca grey, 1/4 cleavages 55° t C.A. Chloritic walls, one grain Cp	385	94.3	94.7	0.4	.02						
			100.2 1" Shear, banded, 40° to C.A. Pale Green silicates - Epidote.											
			NOTE: Block at 107 incorrectly labelled 117' an so on to block at labelled.											
			104.0 1/8 1/8 Calcite vein, 1/2 cleavages 40° t C.A. two coarse Cp grains, Chloritic walls, vein parallel dominant slips.	386	103.9	104.2	0.3	.02						
			122.6 & 123.9 Parallel 1/4" healed shears, 30° t C.A. Slickenslides 50° to C.A.											
			129.9 Healed shear 20° t C.A. Feathered appearance. Strong slip 20° t C.A. + to healed shear.											
			132.0 1" healed shear 30° t C.A. Trace Cp, Qtz. & pale green silicates.											
			136.0, 138.0, 138.9 Healed shears, 30° t C.A. Qtz. & pale green silicates.											
			155.5 Rusty slip in broken core at point ≈ 10° t C.A. bit blocked. Also slips at 40 & 30° t C.A.											
			156.0 1/8 healed shear 1/8" chloritic alt. along slip walls, 1 grain Cp.											
			158.0, 163.6, 165.2 Healed shears, 40° to C.A. as before to 1/2 chloritic alt. along walls.											
			168.5 1/4 healed shear 40° t C.A. Quartz and pale green silicates.											
			168.5 Strong Chloritic slip 20° t C.A.											
			173.5 1/8" Qtz. with parallel 1/32 - 1/4" white Ca 50° t C.A. well developed chlorite & carbonate wall rock alt. to 1" from vein.	387	173.3	173.8	0.5	.02						

FOOTAGE		SECTION ("=	DESCRIPTION				ASSAYS		
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	Ag	
		hd 230.9	298.5 - 301.5 Darker Grey, No texture observed very	388	297.0	298.5	1.5	.02	Chips of Rock
		vd 189.1	strongly carbonated (Strongly Chloritic ?) Probably	389	298.5	301.5	3.0	.02	
			alteration zone (possibly sedimentary carbonate)	390	301.5	305.0	3.5	.02	
			270.1 Slip film Ca 40° to C.A.						
			273.9 2 slips bedding 20° to C.A. Films of Ca						
			278.8 slip 45° to C.A.						
			280.6, 281.5 Slips, film Ca, 50° to C.A.						
			280.6 bedding						
			281.5 bedding						
			289.4 Film Ca t Bedding 60° to C.A.						
			294.0, 294.5, 296.0 Films Ca 30 to 45° to C.A.						
			299.0 Calcite crystals in slip 50° to C.A.						
301.5	385.7	hd 294.3	HURONIAN CONGLOMERATE 2%		300	310	10	.06	
		vd 249.0	Medium Grey		310	320	"	.06	
			Very Hard		320	330	"	.05	
			2% mixed pebbles to 2" in sandy matrix		330	340	"	.05	
			Quartz grains to 1/16" noted, Not bedded.		340	350	"	.05	
					350	360	"	.05	
					360	370	"	.02	
					370	380	"	tr	
					380	390	"	tr	
			301.9 - 303.9 Films pink Ca to 1/32" along right fractures weakly carbonated wall rock.						
			304.4 1/16" Pink Ca (Dolomite) 50 to C.A. along slip						
			307 Weak carbonate alteration.						
		hd 238.7	309.2 1/4 Pink Ca (dolomite) 35° to C.A.	391	309.0	309.5	0.5'	.02	
		vd 196.4	Slip face is vuggy with clear calcite crystals.						
			Films of Ca at 312.6 @ 50°, 315.0 @ 55° t C.A.						
			317.8 @ 45° t C.A. 321.5 1/16 Ca @ 50° t C.A.						
			322.0 @ 50° t C.A. 339.0 75° to C.A.						

FOOTAGE		SECTION " =	DESCRIPTION	ASSAYS			
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH
			Medium Grey, to Greenish Grey, locally poorly defined to well defined bedding very fine grains $\leq 1/64$ " to silt size.				
			Beds range from very fine dark argillitic beds to $1/64$ " to coarser fine sand beds to 1".				
			(453.0 - 470.0 - Bedding not observed)				
			422.0 Bedding 40° to C.A.				
			433.7 Bedding 35° to C.A.				
			443.0 Bedding 50° to C.A.				
			446.5 Bedding 45° to C.A.				
			453.0 Bedding 45° to C.A.				
			Soft \leftarrow nail except for fine sand beds which \approx nail. Chlorite spotting along fractures $1/64$ " white spotting in med. grey matrix in silty soft sediment. Also similar $1/64$ " dark green spotting in some soft silty matrix.				
			VEINS:				
			420.3 $1/8$ " Pink Ca trace Qtz. (Dolomite) trace Pb, 30° to C.A. 90° to bedding trace Py in nearby slips.	6282	420.2	420.9	0.7 0.10
			428 - $1\frac{1}{2}$ " Chert ll to bedding 25° to C.A. Grey $\approx 5\%$ Cp.				
			428.7 $1/16$ " Pk. Ca. 45° to C.A. (Dolomite).				
hd	325.8		429.6 $3/16$ " Pink Ca., trace Cp. 40° to C.A. (Sub-parallel to bedding ?)				
vs	279.5						
			430.0 $1/16$ " Pk. Ca. $\approx 30^\circ$ to C.A.				
			430.3 - 430.6 Grey Chert - Sub parallel or parallel to bedding, (Both 15° to C.A.)				
			427.3 - 430.9 Disseminated Cp $\approx 0.2\%$	6283	427.0	430.9	3.9 0.50

PROPERTY DEERHORN	TP OR AREA 140'S.E. of Shaft	AZIMUTH 267°13'	DATE STARTED Aug. 18, 1978	CORRECTED DIP TESTS		LOCATION SKETCH OF HOLE <i>D.R. Robinson</i>
PROJECT	LOT & CONC. 2 V	DIP -53°44'	DATE COMPLETED Aug. 25/78	0 - 53°44' 267°13'	and	
XXXXX CORE AT BAILEY PROPERTY	CO-ORDINATES. 2829.49 South	LENGTH 800'	DRILLED BY AQ SIZE Barron D.D.	200' - 50°	273° 10'	
GRID NO.	6302.99 East	COLLAR ELEV. 888'	LOGGED BY D. R. Robinson	300' - 53°	and	
				400' - 52°	and	

FOOTAGE		SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	Ag oz/t	ASSAYS			
FROM	TO	1"=										
0	19		CASING, PIECE OF CASING LEFT IN HOLE	SLUDGE	20	30	10	0.03				
19	800		NIPISSING DIABASE		30	40	"	0.02				
			0 - 288 Dark grey, mottled by white feldspar, coarse grained 1/16 locally fine hypersthene noted \leq 1/16" Prominent to black pyroxæ grains.		40	50	"	0.02				
					50	60	"	0.03				
					60	70	"	0.02				
					70	80	"	0.03				
					80	90	"	0.02				
					90	100	"	0.02				
					100	110	"	tr				
					110	120	"	0.03				
					120	130	"	0.02				
			288 - 762 Hypersthene diabase as above but with 1/8 prominent amber hypersthene cleavages 1 - 10% Hypersthene		130	140	"	0.02				
					140	150	"	0.02				
					150	160	"	tr				
					160	170	"	0.02				
					170	180	"	0.02				
					180	190	"	0.02				
					190	200	"	tr				
			762 - 778 Grades into Normal Diabase hypersthene grain#s become smaller 1/16"		200	210	"	0.02				
					210	220	"	tr				
					230	240	"	tr				
					240	250	"	tr				
			778 - 800.3' Dark Grey, Mottled by white feldspar, 1/16" crystalline		250	260	"	tr				
					260	270	"	tr				
					270	280	"	tr				
					280	290	"	0.02				
					290	300	"	0.02				
					300	310	"	tr				
					310	320	"	0.02				
					320	330	"	0.02				
					330	340	"	tr				
					340	350	"	tr				
					350	360	"	0.02				
					360	370	"	tr				

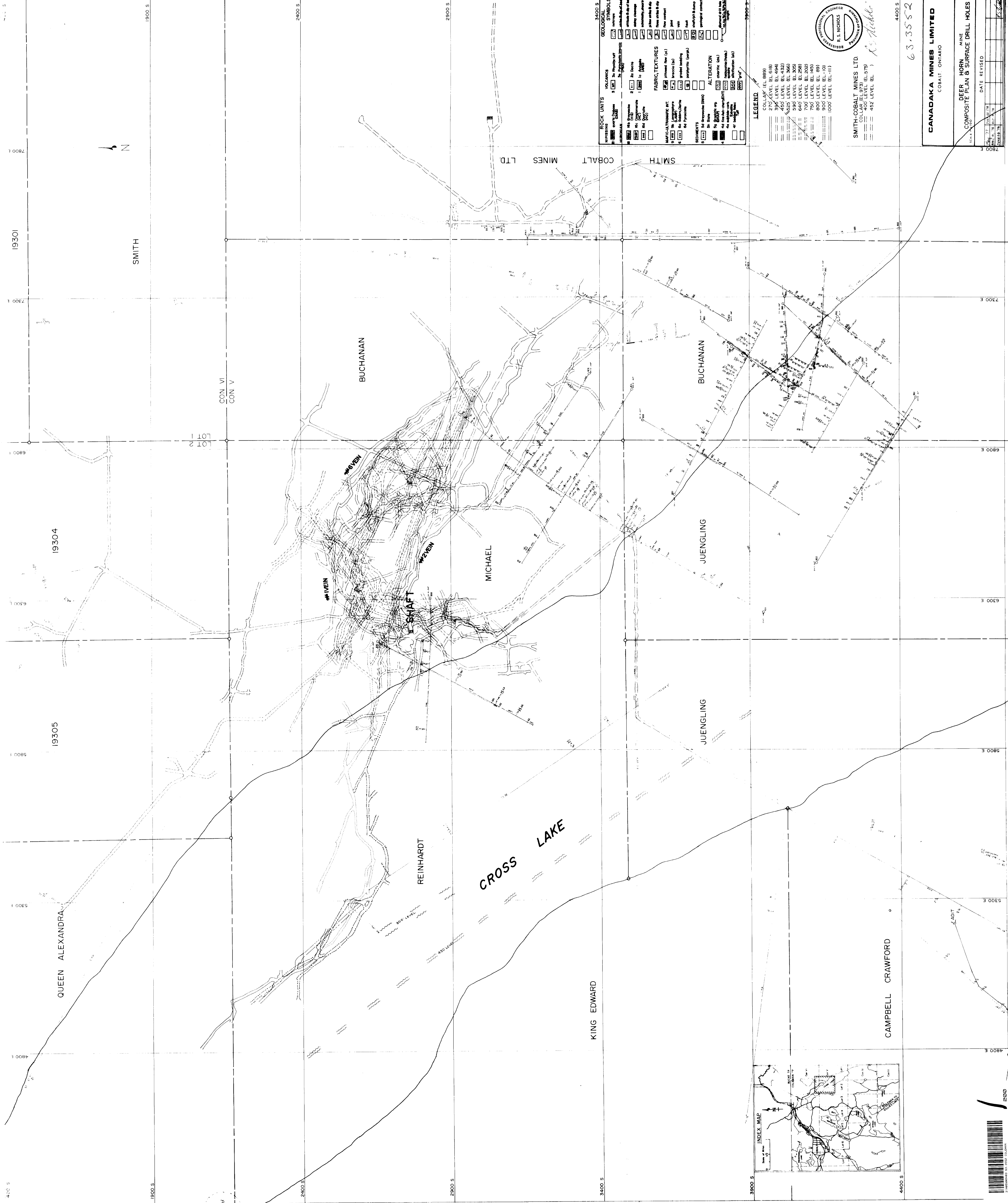
FOOTAGE		SECTION " =	DESCRIPTION				ASSAYS						
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	Ag					
			322.7 Minor bleaching of Diabase minor banded silicate 60° t C.A.										
			341.0 - 341.5 Bleached pale grey along slip at 45° t C.A.										
			342.2 Slip 1/8" Ca and serp. 30° t C.A. 1/4" Bleached wall.										
			343.2 1/16 Serp along slip 25° t C.A. ≈45° t Slip at 342.2										
			348.0 1/8" Ca in Broken Core were bit blocked.										
			352.2 Serp. Slip 25° to C.A.										
			352.5 Serp. Slip 60° t C.A.										
			358.9 3/8" Ca Qtz. vein 48° to C.A. (white)										
			359.2 1/2" Chloritic Grey Ca vein 45° to C.A.										
			358.6-359.3 Carbonated wall rock chloritic near veins.	357	358.4	359.6	1.2	0.02					
			361.0-361.8 Carbonated weakly, Minor Ca veining 60° to C.A.	356	361.0	362.6	1.6	0.03					
			362.1 1/16 vuggy Ca.										
			362.4 Slip 1/2 bleached walls 60° t C.A.										
			Serp. slips at 62.8, 63.2, 63.7, 64.8 at 55° t C.A.										
			368.8 Film Ca 65° t C.A.										
			377.0 1" Bleached along slip 60° to C.A.										
			400.0-400.6 Carbonated	368	399.7	400.7	1.0	0.02					
			399.9,400.3,400.5 1/16 white & Pink Dolomite veins 50 - 60° to C.A.										
			402.9 1/2 Banded grey calcite 60° to C.A. Chloritic	369	402.7	403.4	0.7	tr					

PROJECT	TP OR AREA 100' N. of Shaft	AZIMUTH 207°40'	DATE STARTED Aug. 28, 1978	CORRECTED DIP TESTS		LOCATION SKETCH OF HOLE
CLAIM NO.	LOT & CONC. 2 V	DIP -52°38'	DATE COMPLETED Sept. 7, 1978	200	-55°	
GRID NO.	CO-ORDINATES. 2653.4S, 6161.1E	LENGTH 1055'	DRILLED BY Rarron D.D. AQ SIZE	400	-56°	
	CORE AT BAILEY PROPERTY.	COLLAR ELEV. 883	LOGGED BY R. S. Nichols	600	-57°	
				700	-57°	

R.S. Nichols

FOOTAGE		SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					
FROM	TO	ft						Ag	From	To	Length	Ag	
0	23	13.8	CASING										
		18.4											
23	765.5	430.5	NIPISSING DIABASE - very coarse grained, dark green, massive diabase with 10% - 20% brown hypersthene. Coarser and more abundant hypersthene occurs at 399' - 509' with gradational contacts over 10'. The diabase is weakly magnetic. Hypersthene content decreases markedly after 660'. Blocky core at 734' - 741'. Contact obscured by blocky core.		23	30	7'	.02	160	170	10'	tr	
		632.8			30	40	10'	.02	170	180	"	tr	
					40	50	"	.02	180	190	"	tr	
					50	60	"	.02	190	200	"	.02	
					60	70	"	.03	200	210	"	.02	
					70	80	"	.02	210	220	"	.02	
					80	90	"	.03	220	230	"	.02	
					90	100	"	.02	230	240	"	.02	
					100	110	"	tr	240	250	"	tr	
					110	120	"	.02	250	260	"	tr	
					120	130	"	tr	260	270	"	tr	
			VEINS:		130	140	"	.03	270	280	"	.02	
					140	150	"	tr	280	290	"	.03	
			27.3' - 27.5' - broken core with calcite and hemitite filling.		150	160	"	.02	290	300	"	.02	
									300	310	"	.03	
									310	320	"	.03	
			53.2' - 54.5' - altered carbonated zone. Some 1/8" calcite veins at 30' to C.A.	406	53.2	54.6	1.4'	.02	320	330	"	.02	
									330	340	"	.02	
									340	350	"	.02	
			54.8' - piece of core with 1/2" - 1" grey calcite vein at 30' to C.A.	407	54.6	55.0	0.4'	.03	350	360	"	tr	
									360	370	"	tr	
									370	380	"	.02	
			107.5' - 1/8" white calcite vein with 3/4" alt'n. halo at 30' to C.A.	408	107.3	107.6	0.3'	.02	380	390	"	tr	
									390	400	"	tr	
									400	410	"	tr	
			113.0' - 1/2" pink calcite vein with 3" strong alt'n. at 40' to C.A.	409	112.7	113.3	0.6'	.02	410	420	"	.02	
									420	430	"	tr	
									430	440	"	.02	
			119.6' - 3/4" pink calcite-chl. vein with 6" alt'n. halo, at 20' to C.A.	410	119.2	120.0	0.8'	.03	440	450	"	.02	
									450	460	"	.02	
									460	470	"	.02	
									470	480	"	tr	
									480	490	"	.03	
									490	500	"	tr	

FOOTAGE		SECTION " =	DESCRIPTION				ASSAYS						
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	Ag					
hd	82.6	vd 111.9	*good looking 139.1' - 2" (true width) slightly pink calcite-chlorite vein at 40° to C.A. Very strong (greater than 6") alt'n. halo.	411	138.7	139.4	0.7'	.04					
				145.2' - hairline calcite vein with 1½" alt'n. halo, at 30° to C.A.									
				208.7 - 209.3' - series of parallel ¼"-½" pink calcite veins at 40° - 50° to C.A. Strong alt'n. halo.	412	208.6	209.4	0.8'	.02				
hd	130.9	vd 180.8	*223.2' - 1" slightly pink calcite vein at 30° to C.A.	413	223.0	223.6	0.6'	.02					
				298 - 317' - blocky core, some chl. and serp.									
				- dropped 5' in box 304' - 333', made up in boxes 550 - 571 & 571 - 593									
				368.4 - 369.4' - altered and carbonated diabase.		550	560	10'	.02				
				½" white calcite vein at 30° to C.A. at 368.5'.		560	570	"	.03				
						570	580	"	.02				
						580	590	"	.02				
				393.0' - 395.7' - carbonated and altered diabase. Several stringers of calcite at low core angles but no definite vein.		590	600	"	.02				
					600	610	"	.02					
					610	620	"	.03					
					620	630	"	.04					
hd	290.9	vd 415.8	507.5' - ½" white calcite vein with 3"-4" alt'n. halo, at 25° to C.A.	414	507.3	507.9	0.6'	tr					
				554 - 569 - blocky core with local fine grained, light green altered sections.		630	640	10'	.04				
						640	650	"	.03				
					650	660	"	.03					
					660	670	"	.02					
					670	680	"	.02					
					680	690	"	.02					
					690	700	"	.02					
					700	710	"	.03					
					710	720	"	.02					
					720	730	"	.02					
					730	740	"	tr					



ROCK UNITS	
1	1930-1940
2	1940-1950
3	1950-1960
4	1960-1970
5	1970-1980
6	1980-1990
7	1990-2000
8	2000-2010
9	2010-2020
10	2020-2030

VOLCANICS	
1	1930-1940
2	1940-1950
3	1950-1960
4	1960-1970
5	1970-1980
6	1980-1990
7	1990-2000
8	2000-2010
9	2010-2020
10	2020-2030

FABRIC, TEXTURES	
1	1930-1940
2	1940-1950
3	1950-1960
4	1960-1970
5	1970-1980
6	1980-1990
7	1990-2000
8	2000-2010
9	2010-2020
10	2020-2030

ALTERATION	
1	1930-1940
2	1940-1950
3	1950-1960
4	1960-1970
5	1970-1980
6	1980-1990
7	1990-2000
8	2000-2010
9	2010-2020
10	2020-2030

LEGEND

COLLAR (EL. 893)
 2700 LEVEL (EL. 618)
 3900 LEVEL (EL. 494)
 4500 LEVEL (EL. 432)
 6250 LEVEL (EL. 366)
 9900 LEVEL (EL. 300)
 7000 LEVEL (EL. 200)
 7500 LEVEL (EL. 145)
 8000 LEVEL (EL. 89)
 9000 LEVEL (EL. 10)
 10000 LEVEL (EL. 11)

SMITH-COBALT MINES LTD.
 COLLAR (EL. 973)
 9900 LEVEL (EL. 578)
 452 LEVEL (EL. 3)

REGISTERED PROFESSIONAL ENGINEER
 R.S. NICHOLS
 63,3552

CANADAKA MINES LIMITED
 COBALT, ONTARIO

DEER HORN MINE
 COMPOSITE PLAN & SURFACE DRILL HOLES

DATE REVISED

