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31M05NW0405 63.3560 COLEMAN

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1978 SURFACE DIAMOND DRILLING PROGRAM

DRUMMOND - HARGRAVE - #1611 - NORTH DRUMMOND CLAIMS

SUMMARY REPORT FOR M.E.A.P. AGREEMENT, CONTRACT NO. CG-141

Submitted by:

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

December 18, 1978



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Table 1, Summary of Drill Holes

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Drummond - Hargrave - Bursary Area, Surface Diamond Drilling Plan
.....In Pocket.

North Drummond Area, Surface Diamond Drilling Plan.....In Pocket.

Introduction

A total of 8,094' of diamond drilling in 13 holes, C.S. 103 to C.S. 115 inclusive, was completed on the Hargrave, Drummond, #1611 and North Drummond claims during the period August 18th to December 11th, 1978. This program was done to follow-up previous drilling and to test previously unexplored areas for silver mineralization.

Ore grade silver veins were not encountered with this program. Some low grade silver-arsenide mineralization was intersected. The two general areas tested were the south and north limbs of the Kerr Lake diabase arch. These areas have potential for hosting ore grade silver veins. However, the depth of the favourable Nipissing - Keewatin contact is such that the surface diamond drilling or underground development necessary to adequately test the area would be substantial.

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

Location and Access

The Hargrave, Drummond, #1611 and North Drummond claims are essentially contiguous claims about 2 miles south-east of the Town of Cobalt. They are located in Lot 2, Con. IV and Con. V in Coleman Township within the main Cobalt silver producing area.

The properties are easily accessible by car on secondary gravel roads from the Town of Cobalt. Refer to the Index Maps on the Surface Drill Holes plans accompanying this report. Drill holes C.S. 103 to C.S. 108 inclusive are shown on the "Drummond - Hargrave - Bursary Area Surface Diamond Drilling Plan". Drill holes C.S. 109 to C.S. 115 inclusive are shown on the "North Drummond Area, Surface Diamond Drilling Plan".

Geology

The general geology of the area consists of steeply dipping Keewatin volcanics and sediments partially overlain by flat lying Huronian sediments, both of which have been intruded by and underlie a gently undulating Nipissing diabase sheet-like dyke.

Keewatin and Huronian rocks are exposed on surface in the central part of the area where the lower Nipissing contact formed an arch which has since been eroded.

The Keewatin rocks, where exposed, consist of cherts and tuffs striking northeasterly. The surface drilling has indicated various types of volcanics and sediments striking north - south on both sides of the diabase arch. Although the volcanics and sediments interfinger, the stratigraphic sequence of rock types from oldest to youngest appears from surface drilling to be:

- a) MAFIC FLOWS - dark green, massive or pillowled with incipient brecciation developed locally.
- b) PYROCLASTIC TUFF BRECCIA - light coloured, feldspar crystal tuff with angular fragments of feldspar porphyry, mafic flow and chert. In hole C.S. 111 under the north limb of the Nipissing arch this unit consists solely of mafic fragments and matrix.
- c) BLACK ARGILLITE - very fine grained, black, sometimes cherty or graphitic, well-bedded argillite.
- d) CHERT/TUFF - fine grained, hard, light grey, usually well bedded tuff interbedded with light grey chert. Local "grid" type alteration occurs occassionally in this unit.

Flat lying lamprophyre dykes ranging from 1' - 100' thick cut across the Keewatin rocks. The dykes are dark green, massive, coarse grained, with either conspicuous biotite or amphibole grains.

Huronian sediments, overlying the Keewatin, occur under the Kerr Lake diabase arch. The beds strike a little north of east and dip gently to the north. This program did not intersect Huronian sediments. Surface exposures indicate a basal conglomerate with 80% pebbles in a greywacke matrix overlain by massive to well-bedded, light grey, medium grained quartzite.

The Nipissing diabase, which intrudes the Keewatin and Huronian is a dark green, massive, coarse grained somewhat differentiated dyke about 1000' thick. Above about 100' from the lower contact 5 - 15% coarse, honey-brown coloured, hypersthene phenocrysts occur. Below this, the diabase is slightly finer grained and darker coloured. The lower contact of the dyke forms an arch, the Kerr Lake arch, striking at an azimuth of 070°. Close to the arch the contact is relatively steep, about 40°, then becomes about 15° - 20°.

Economic Geology

An estimated 53,700,000 ozs. Ag (Mineral Resources Circular No. 10, 1968, by A.O. Sergiades) has been produced in the immediate area (Kerr Lake, Silver Leaf, Crown Reserve, Drummond and Hargrave claims).

Essentially all of this silver was produced from steeply dipping carbonate veins occurring in Huronian sediments. One exception is the Kerr Lake No. 3 vein in which an estimated 3,000,000 ozs. Ag was produced from the vein in Nipissing diabase.

The majority of the veins in this area strike northeasterly or north - south. The proposed holes were intended to intersect veins striking north - south.

Purpose of the Surface Diamond Drilling Program

This surface diamond drilling program was intended to follow-up previously intersected low grade silver - arsenide values as well as to test unexplored areas for economic silver mineralization.

The general target area was the lower Nipissing - Keewatin contact north and south of the diabase arch. There has been significant silver production from veins in this geological setting in other areas of the Cobalt Camp. The areas tested have had relatively little exploration because of the increasing depth to the contact south and north from the Kerr Lake arch.

Results of the Program

Ore grade silver mineralization was not intersected during this program.

The drilling program consisted of 13 holes totalling 8,094'. 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 is size AQ (1 1/16" diameter) and is presently stored at the Bailey property.

Low grade arsenide veins were intersected on the Drummond, Hargrave and North Drummond claims. On the Drummond and Hargrave claims the following arsenide veins occur:

<u>HOLE #</u>	<u>FOOTAGE</u>	<u>ASSAY (oz.Ag/ton)</u>	<u>DESCRIPTION</u>
C.S. 103	272.1 - 275.0 (2.9')	0.40	- 2" grey chert with fine arsenides.
C.S. 104	461.5 - 462.4 (0.9')	1.79	- 1½" carbonated bed with fine arsenides in the wall rock.

<u>HOLE #</u>	<u>FOOTAGE</u>	<u>ASSAY</u> (oz.Ag/ton)	<u>DESCRIPTION</u>
	492.5 - 492.9 (0.4')	3.23	- 3/4" chlorite-calcite with 5% Co-As.
C.S. 108	723.0 - 723.7 (0.7')	4.22	- 1" grey calcite with 10% sph-ga, fine Co-As.

On the North Drummond claim the following arsenide veins were intersected:

<u>HOLE #</u>	<u>FOOTAGE</u>	<u>ASSAY</u> (oz.Ag/ton)	<u>DESCRIPTION</u>
C.S. 110	370.5 - 370.9 (0.4')	0.08	- ½" - 3/4" white calcite with 80% arsenides.
C.S. 112	226.6 - 227.0 (0.4')	9.02	- ½" - 1" white calcite with 40% arsenides, trace ruby silver.
C.S. 113	166.6 - 167.0 (0.4')	0.03	- ½" chlorite-calcite with 1-5% fine arsenides.
C.S. 114	457.6 - 458.1 (0.5')	0.07	- ¼" pink calcite with fine Co-As.
C.S. 115	241.7 - 242.3 (0.6')	0.20	- ½" pink calcite.

These intersections appear to be on one vein striking northwesterly and dipping steeply to the east.

These veins are relatively weak structures and have been adequately tested within the immediate area of drilling. The vein in hole C.S. 108 on the Hargrave claim may have potential further southeast. The vein on the North Drummond may have potential to the northwest. However, the favourable Nipissing - Keewatin contact in both these areas is at least 400' below surface. Therefore, no further drilling is proposed to follow-up this program.



Respectfully submitted,

A handwritten signature in black ink, appearing to read "R.S. Nichols".

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

RSN:vl

TABLE I

SUMMARY OF DRILL HOLES

<u>HOLE #</u>	<u>CO-ORDINATES</u>	<u>AZIMUTH</u>	<u>DIP</u>	<u>ELEVATION</u>	<u>LENGTH</u>
C.S. 103	5377.3N, 10,303.1E	250°40'	-38°47'	1035.3'	301'
C.S. 104	5249.7N, 10,466.3E	243°47'	-39°49'	1050.2' (778')	1424'
C.S. 105	4848.2N, 10,951.1E	250°37'	-40°04'	1112.4'	1060'
C.S. 106	5111.0N, 10,474.2E	245°49'	-40°29'	1045.0'	549'
C.S. 107	3296.7N, 11,331.0E	248°20'	-44°43'	1113.6'	841'
C.S. 108	4770.5N, 10,419.0E	247°16'	-40°16'	1083.1'	1111'
C.S. 109	7156.5N, 9698.8E	180°34'	-46°34'	1118.9'	296'
C.S. 110	6598.3N, 10,112.5E	336°52'	-44°29'	1002.3'	453'
C.S. 111	6874.4N, 9980.0E	338°41'	-48°22'	1029.9'	822'
C.S. 112	6735.8N, 9916.0E	38°07'	-44°17'	1005.9'	261'
C.S. 113	6775.3N, 9948.9E	38°12'	-44°22'	1012.5'	205'
C.S. 114	7040.6N, 10,194.5E	242°47'	-44°43'	1030.1'	470'
C.S. 115	6724.4N, 10,033.6E	335°43'	-42°41'	1013.1'	301'
<hr/>				TOTAL =	<u>8,094'</u>

13 HOLES

KESPEE EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. Q.S. 103

PROPERTY BRUNNMOND	TP OR AREA COLEMAN	AZIMUTH 250° 40'	DATE STARTED Aug. 18/78	CORRECTED DIP TESTS 200' -34°	LOCATION SKETCH OF HOLE
PROJECT # 131.3	LOT & CONC. 2 IV	DIP -38° 47'	DATE COMPLETED Aug. 24/78		
CLAIM NO.	CO-ORDINATES 5377.3N, 10303.1E	LENGTH 301'	DRILLED BY Barron D.D.		
GRID NO.	Core at Bailey Property	COLLAR ELEV. 1035.33	LOGGED BY <i>Douglas Robinson</i> D. Robinson		

FOOTAGE	SECTION FROM TO 1" =	DESCRIPTION	ASSAYS			
			SAMPLE NO.	FROM	TO	LENGTH
0 22		CASING	sludge	22	30	8
22.0 161.5		KEEWATIN CHERTS AND TUFFS Massive grey to dark grey chert interlayered with fine tuff <1/64" to silt size. Numerous 1 - 6" grey chert bands (Possibly Alteration)	"	30	40	10'
			"	40	50	"
			"	50	60	"
			"	60	70	"
			"	70	80	"
			"	80	90	"
			"	90	100	"
			"	100	110	"
			"	110	120	"
			"	120	130	"
			"	130	140	"
			"	140	150	"
			"	150	160	"
		Bedding 31' - 45-50° to C.A. line between chert beds.				
		39.7' - 60° to C.A. Finely laminated silt size tuff				
		45.0' - 70° to C.A. Fine grit size tuff <1/64"				
		59.0' - 65° to C.A. fine silt to fine grit size tuff 1/64"				
		68.0' - 40° to C.A. as 59.0'				
		81.0' - 55° to C.A. as 59.0'				
		91.7' & 91.9' - 1" Magnetite beds				
		95.0' - 60° to C.A. as 59.0'.				
		101.3' - 55° to C.A. silt size tuff.				

FOOTAGE		SECTION 1" =	DESCRIPTION					ASSAYS	
FROM	TO			SAMPLE NO	FROM	TO	LENGTH	Ag oz/t	Cu %
VEINS & ALTERATION:									
31.2'	31.9'		1½ pale grey chert (Alt 2) minor pink Ca Minor Cp 70° to C.A.	371	31.0	31.9	0.9'	0.05	0.114
31.2'	33.0'		Carbonated along healed fractures, few 1/32" euhedral pyrite xls.	372	31.9	33.0	1.1'	0.02	
34.7'	37.5'		Carbonated, black, trace Py, moderately soft to very hard <to> nail.						
35.1'	35.6'		1/8" Pink Ca (Dolomite) 65° to C.A. Minor Ca stringers to vein (40° to C.A.) (Chl. + white Cht. alt. of wall rock ?)	373	34.7	35.6	0.9'	0.03	
35.4'	36.8'		1/16" pink Ca (Dolomite) 55° to C.A. Sub parallel to vein at 35.1 Minor Chlorite.	374	35.6	36.8	1.2'	0.02	
37.0'	37.6'		1/16" - ¼" Poorly defined Ca vein ll to bedding 40° to C.A.	375	36.8	37.6	0.8'	0.02	
45.0'	45.8'		0-¼" Pink Ca (Dolomite) 15° to C.A. Chloritic, one pyrite grain.						
50.8'	51.7'		1/8" Pink Ca (Dolomite) Irregular.						
51.9'	55.1'		Carbonated						
51.9'	52.5'		Chert and Carbonated hard						
52.5'	55.1'		Strongly carbonated rock, soft, chloritic						
52.5'	55.1'		½" Ca Calcite, 1/32" xline, white, 1/16 fine chlorite along walls 32° to C.A.	376	51.7	52.8	1.1'	tr	
54.1'	54.8'		½ to 1" Ca (Calcite) 1/32" xline white, cross- cutting and parallel to banded white chert and chlorite, chert chlgrite banding 65° to C.A. Calcite 35° to C.A. Pyrite noted in chert and calcite.	377	52.8	54.1	1.3'	0.03	
				378	54.0	55.1	1.1'	0.05	

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
							Ag oz/t	Cu%
		54.6' - $\frac{1}{2}$ " Ca (Calcite) along 18° to C.A. strong slip. Minor chlorite in vein, $1/32"$ xline, minor dolomite, wall rock chloritic white cherty.						
56.2'	- 56.6'	- Grey, chert (Alt?) 2% Py 50° to C.A. (in part, strongly chloritic) Pink Dolomite + Albite ? veining in fractures.						
57.0'	-	irregular Dolomite (+Albite ?) veining- Pink	379	56.1	57.3	1.2'	0.03	
65.6'	- 66.2'	Pale grey chert (Alt ?) 0.5% Py, 5% Dolomite + (Albite ?) veining walls 35 and 65 to C.A.	380	65.6	66.3	0.7'	0.02	
71.2'	- 71.8'	- grey chert (Alt ?) 2% (Albite ?) veining 1% Py minor Cp, coarse banding ll bedding $40 - 50^\circ$ to C.A.	381	71.2	72.0	0.8'	0.04	0.056
75.2'	- 75.7'	- grey chert (Alt ?) parallel bedding 40° to C.A. 0.5% Py 1% Dolomite veining.						
76.3'	- 76.5'	- grey chert 5% (Albite ?) veining parallel bedding $40 - 70^\circ$ to C.A. Minor Py.						
83.0'	- 84.5'	- broken core chips to 1" pieces						
84.5'	-	No water pressure						
84.8'	-	1/8" Ca Qtz. vein, pink 40° to C.A.						
88.0'	- 90.0'	Strongly carbonated, variable hardness, soft chloritic sections in hard dark grey chert. 0 - 5% Cp, parallel bedding $55 - 65^\circ$ to C.A.	382	88.0	90.0	2.0'	0.18	0.36
91.0'	- 92.1'	Carbonated trace Py						
91.7'	and 91.9'	1" magnetite beds.						
102.6'	-	1" chert vein, grey 65° to C.A.						

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DRILL LOG

HOLE NO. C.S. 103

STAGE	SECTION	DESCRIPTION					ASSAYS
			SAMPLE NO.	FROM	TO	LENGTH	
		103.1' - 1/8" Opaque Ca (Calcite) vein 40° to C.A.					
		110.2' - 112.3' - Strongly Carbonated, Chloritic soft. Locally 1-2% Py.					
		110.4' - 1/16" Ca (Calcite) along slip, fine xline 1/32" 75° to C.A.					
		110.8' - 1/8" Ca as 110.4'					
		111.3' - Film Ca 1/16 Opaque					
		111.8' - 1/16 Opaque Dolomite 65° to C.A.					
		112.3' - 113.2' - Carbonated in Fractures					
		113.0' - Film Ca, 75° to C.A.					
		127.5' - $\frac{1}{4}$ " Ca Qtz. vein (Dolomite) 45° to C.A. Pale Pink	392	127.3	127.5	0.3'	0.02
		127.5' - 1/8" Qtz. vein 30° to C.A.	393	132.0	132.2	0.2'	0.02
		132.1' - 1/8" Ca (Dolomite) white, fine grained 1/64" 60° to C.A.					
		133.7' - Minor Py					
		135.4' - Film Py, Ca 25° to C.A.					
		135.5' - 136.0' - Banded by $\frac{1}{2}$ - 1" Grey Chert (Alt) (30° to C.A.) and Black chert, 2-5% Py.	394	135.0	136.1	1.1'	0.09
		137.6' - 137.9' - Pale Grey chert (Alt?)					
		137.7' - 1/8" White Ca, fine Pb 25° to C.A. 60° to Grey Chert.	395	137.4	138.6	1.2'	0.11
		138.3' - 138.5' - 2" Pale Grey chert (ALT ?) with 5% white (Albite ?) alteration in fractures 30° to C.A.					

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DRILL LOC

HOLE NO. C.S. 10

SMEEL ~~ET AL.~~

ST. JOSEPH EXPLORATIONS LIMITED

DRILL LOG HOLE NO. C.S. 103

FOOTAGE	SECTION #	DESCRIPTION	ASSAYS				
			SAMPLE NO.	FROM	TO	LENGTH	
		Soft & Nail, Carbonated throughout.					
		VEINS:					
		164.1' - 1/8" calcite vein 25° to C.A. fine white xline, 1/8" chlorite along walls.					
		165.6' - 1/4" Ca as 164.1 40° to C.A.	6263	165.5	165.8	0.3'	0.02
		169.1' - 1/8" Ca as 164.1 30° to C.A.					
		169.2' - 1/8" Ca as 164.1 60° to C.A.					
		veins at 169.1' & 169.2' are perpendicular.					
		169.4' - 170.6' - Trace Cp in slips with films of Ca 0-10° to C.A.	6264	169.3	171.0	1.7'	0.02
		172.8' as 164.1 55° to C.A.					
		173.3' as 164.1 50° to C.A.					
		175.0' - 1/8 - 1/4" Ca as 164.1 35° to C.A.					
		176.5' - 1/8" Ca as 164.1 55° to C.A.					
		177.3' - 1/8" Pink Dolomite vein 70° to C.A.					
		177.9' - 1/4" Pink Dolomite vein 40° to C.A. Minor Quartz - Slickenslides on face 40° to C.A.	6265	177.0	178.2	1.2	0.03
		179.9' - 1/8" Pale pink dolomite vein 25° to C.A. Parallel to contact with sediments.	6266	179.6	180.2	0.6'	0.03
		180.2' - Slickenslides 45° to C.A. along slip contact.	ST. JUDGE	160	170	10'	0.02
180.2	270.0	KEEWATIN TUFFS & CHERTS Dominantly graded beds of silt to fine sand size grains 1/64" beds 1/4 - 3" average locally beds 1/32" to 24" medium grey, very hard, minor grid alteration		170	180	"	0.02
				180	190	"	0.03
				190	200	"	0.03
				200	210	"	0.04
				210	220	"	0.15
				220	230	"	0.15
				230	240	"	0.04
				240	250	"	0.02

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DRILL LOG

HOLE NO. C.S. 10

C. T. JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO.C.S. 103

FOOTAGE	SECTION FROM	TO	I" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				
									Ag	Au	Cu%	Pb%	Zn%
				293.0' - 294.0' - 50% agglomerate fragments to 1/8 x $\frac{1}{4}$ "					oz/t	oz/t			
				299.6' - 300.0' - 10% Agglomerate fragments to 1"									
				VEINS:									
				272.1 - 274.0' - Strongly, carbonated, minor Sph, Po, Cp.									
				272.8' - 2" Grey chert (Alt ?) walls 40° & 60° to C.A. 1/16" Arsenide stringer (arsenopyrite ?) $\frac{1}{4}$ " from chert, parallel chert.	6277	272.1	275.0	2.9'	0.40	tr	0.36	0.41	0.65
				273.3' - 1/8" Ca white dolomite 28° to C.A.									
				273.9' - 1/8" Ca white calcite & Dolomite 35° to C.A. Parallel vein at 273.3 90° to Bedding.									
				274.5' - 275.0' - Grey chert (trace Arsenides ?) minor Cp.									
				278.4' - Minor Pink Dolomite veining 60° & 20° to C.A.									
				279.2 - 280.0' - Carbonated 2% Sph, Cp, along bedding	6276	279.2	280.0	0.8'	0.43	tr	0.73	1.31	1.35
				279.9' - 1½ Grey chert band parallel bedding 45° to C.A. (Alteration?)		279.1	280.0	7.9	3.18	tr	0.26	0.28	0.37
				281.5 - ½ Grey chert band (Alt ?) ll bedding 60° to C.A.									
				290.0' - 295.0' - Carbonated tuff agglomerate beds									
				290.4' - 1/16 Pink dolomite, trace Cp 48° to C.A.									
				290.8' - 291.5' Albite veining									
				292.0' - 1/2 Qtz. veins parallel bedding 45° to C.A.									
				293.3' - 293.5' - fine Ca veining, irregular									
				294.0' - 294.4' - Sph along grid alteration of cherty bed, black with pale greenish alterations.									
				300.0' - 2 intersecting (65° & 30° to C.A.) $\frac{1}{4}$ " Quartz Dolomite veins. pink. slin along 65° vein.	6275	300.0	300.5	0.5'	0.05				

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DRILL LOG

HOLE NO. c.s. 104

SHEET 1 OF 10

PROPERTY HARGRAVES	TP OR AREA COLEMAN	AZIMUTH $243^{\circ} 47'$	DATE STARTED Aug. 25/78	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE 500' -33° 248°
				200'	-40°		
PROJECT 130.2	LOT & CONC. 2 IV	DIP $-39^{\circ} 49'$	DATE COMPLETED Sept. 6/78	400'	-37°		Test 800' -27°
CLAIM NO.	CO-ORDINATES. 5249.7N, 10,466.3E	LENGTH 778'	DRILLED BY AQ SIZE Barron D.D.	600'	-33°		1000' -24°
GRID NO.	Core at Bailey Property	COLLAR ELEV. 1050.2'	LOGGED BY R.S. Nichols				1100' -22° 256°
							1200' -20°
							1400' -16° 258°

FOOTAGE	SECTION	DESCRIPTION					ASSAYS
			FROM	TO	1" =	SAMPLE NO.	
0	15	hd 11.5 vd 9.6	CASING				
15	202.5	hd 155.1 vd 130.2	NIPISSING DIABASE - typical, coarse grained, massive dark green diabase. The core is generally quite blocky.				
			No hypersthene can be seen. Becomes fine grained after 183' Contact is chilled at 45° to C.A.				
				15	30	15'	.03
				30	40	10'	.03
				40	50	"	.03
				50	60	"	.02
				60	70	"	.02
				70	80	"	tr
				80	90	"	.02
				90	100	"	tr
				100	110	"	tr
			VEINS:	110	120	"	tr
			15.6' - $\frac{1}{2}$ " grey calcite vein with 1% cpy at 35° to C.A. Light and dark (carbonated) alt'n. halo for 6" on each side.	405	15.4	15.9	0.5' .04
			35.5' - 37.0' - broken core with rusty slips and some white calcite. No alt'n. halo in diabase. (had to cement)		120	130	10' tr
					130	140	" .02
					140	150	" tr
					150	160	" tr
					160	170	" tr
			59.0' - 60.0' - altered, carbonated zone. No definite vein.		170	180	" tr
					180	190	" tr
					190	200	" .02
			106.0' - $\frac{1}{8}$ " white, vuggy calcite vein at 30° to C.A. No alt'n. halo.				
			128.5' - several $\frac{1}{16}$ " epidote stringers at 30° - 50° to C.A.				
			170 - 202.5' - blocky core with some fine grained, al tered sections.				

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS		
							Ag	Cu	Pb
		MINERALIZATION: after 345' 0-1% sph, occurs along grid alt'n. usually in the coarse grained beds.							
hd. 276.1		358 - 363.2' - 1% sph along grid alt'n.	418	358	363.5'	5.5'	.03	.004	.074
vd. 280.3		STRUCTURE: graded bedding at 266' indicates <u>tops up the hole.</u> - graded bedding at 271' indicates <u>tops up the hole.</u> - graded bedding at 313' indicates <u>tops up the hole.</u>							
		VEINS:							
hd. 183.1		239.0' - 240.5' - FAULT ZONE, no core. Blocky core from							
vd. 153.6		231' - 243'. Temporarily lost water.							
		354.0' - 4" (true width) quartz vein with 10% pink calcite at 30° - 40° to C.A.	417	353.5	354.3	0.8'	.02		
		376.8' - 1" pink calcite vein with 1% ga, 5% chl, 10% qtz. at 60° to C.A.	419	376.5	376.9	0.4'	0.15		
385.7	401.6	hd. 310.9 vd. 254.0	TUFF - consistently sandy to lapilli size, green beds with rare chert. Bedding is 45° - 50° to C.A. Graded bedding at 392' indicates <u>tops up the hole.</u>						
		ALTERATION: no grid alteration is apparent.							
401.6	408.1	hd. 316.1 vd. 258.0	LAMPROPHYRE DYKE - dark green, massive, coarse grained, biotitic dyke. Upper & lower contacts are 30° to C.A. and 90° to bedding.						
408.1	445.3	hd. 345.8 vd. 280.3	TUFF - as before, sandy to lapilli sized, dark green, well-bedded tuff. Becomes more massive with the frags. aligned along bedding (?) after 427'.						

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
							Ag	Au
		VEINS:						
		415.7' - 6" zone of quartz-chlorite with tr sph, ga, red feldspar.						
		418.1' - 1" white quartz vein with patches sph, ga at 25° to C.A.						
		423.9' - 1/4" creamy calcite-quartz vein with 3% sph, ga, at 70° to C.A.	420	423.7	424.1	0.4'	0.21	
		428.2' - 1½" white quartz vein with 1% ga, sph at 50° to C.A.						
445.3	335.0 HS	CHERTY TUFF - as before with sandy tuff beds & cherty beds alternating to 454'. After 454' it is predominantly dark green cherty beds.						
	419.0	The core is generally blocky at 445'- 482'.						
	332.4	The lower contact is obscured by blocky core.						
		ALTERATION: some grid alt'n. occurs in the cherty sections.						
		MINERALIZATION: 0-½% cpy occurs at 463'- 473' as fine to coarse blebs. - 0-½% sph occurs as fine grains to coarse blebs at 473'- 481'. - 521.5'- 532' - ½ - 1% sph occurs as coarse blebs & stringers along bedding.						
		VEINS:						
		453.2' - 3/4" vein (?) of cll, felds & calcite with 1% 2% fine arsenides, at 50° to C.A.	421	453.0	453.4	0.4'	0.21	.002
		459.6' - 3/4" grey quartz vein with 10% cpy, 1% fine arsenides tr ga, at 60° to C.A.	422	459.3	459.8	0.5'	1.42	tr
hd	359.2*	462.0' - 1½" carbonated bed (?) with 5% cpy, tr arsenides at 60° to C.A. Wall rock contains	423	461.5	462.4	0.9'	1.79	.02
vd	290.4	5-10% cpy, ½-2% arsenides (arsenopy) for 3" on each side.						

COTAGE FROM	SECTION TO	DESCRIPTION					ASSAYS	
			SAMPLE NO.	FROM	TO	LENGTH	AC	Au
		475.4' - 2" grey quartz bed (?) with 10% calcite, blebs of sph, cpy at 60° to C.A.	424	475.1	475.6	0.5'	.10	.002
		485.8' - $\frac{1}{4}$ " - $\frac{1}{2}$ " fault gouge & mud with galena along the edge at 40° to C.A.	425	485.6	486.0	0.4'	0.54	
hd 383.7*	vc 308.9	492.7' - 3/4" chlorite-calcite vein with 5% Co-As (round blebs), at 30° to C.A.	434	492.5	492.9	0.4'	3.23	
65.0	671.1hd	533.1 ANDESITE - fine grained, dark green, well pillowed andesite to 569'. At 569' - 625' it is more massive with occasional pillow selvage.						
	vd 406.5	At 625' - 647' well pillowed. Bottom contact is 30° - 35° to C.A.						
		ALTERATION: Local heavy, dark green chlorite alteration in and around the pillows to 569' and 631' - 633'						
		"grid" alteration with creamy to white bleaching of small frags in the pillow selvages. -orange felds alt'n. occurs at 622' - 633'. -light green epidote alt'n. is common after 639' usually along pillow rims.						
671.1	702.7hd	559.6 TUFF - grey, coarse sand size tuff beds. vd 423.7 0 - 20% white felds (?) grains throughout indicating a x-tal tuff. Pyroclastic tuff beds with pebble-size frags. occur at 688.3' - 690.6', 695.5' - 698.2'.						
		STRUCTURE - bedding is generally 45° - 55° to C.A. - tops - ?						
702.7	727.5hd	580.4 ANDESITE (?) - dark green, fine grained locally pillowd andesite. Upper contact is 40° to C.A. vd 437.2 Lower contact is 50° to C.A.						
		ALTERATION: intense light green epidote, orange & white felds alt'n. to 718'.						

FOOTAGE	SECTION	DESCRIPTION					ASSAYS
			FROM	TO	IN =	SAMPLE NO.	
727.5	769.8	hd 615.9 vd 460.2	TUFF - as before. Fine grained, more massive, green tuff occurs at 745'- 769.8' with local 2"- 6" beds of grey to black chert. The chert beds are at 60' to C.A.				
769.8	778	hd 622.8 vd 464.7	PYROCLASTIC TUFF BRECCIA - coarse frags. of felds. porphyry in a very chloritic matrix. ALTERATION: 10-15% med. to dark green chlorite "shot" throughout the rock. MINERALIZATION: ½% - 1% po occurs as frags (?). END OF HOLE - CASING LEFT IN. HOLE DEEPENED NOV. 30 - DEC. 11, 1978				
778'	937.3	hd 773.9 vd 520.7	PYROCLASTIC TUFF BRECCIA - mostly mafic frags. to (Aquagene Tuff ?) 851' with some feldspar porphyry and chert fragments tightly packed with occasional thin feldspathic tuff. Thin mafic dyke at 831.0' - 833.7', 913.4' - 918.7' at ~20' to C.A. Block of black chert at 907.3' - 908.2'. After 851' increasing light grey to white feldspar porphyry frags in size and number in a light grey, coarse grained feldspathic tuff. ALTERATION: The mafic fragments are usually well bleached, locally red feldspathized. Also some sections show brecciation with fine white alt'n. along the breccia. - the rock appears to be generally chloritic with 5%- 10% black chlorite streaks. - in the predominantly porphyritic section the white hairline brecciation remains evident. Chlorite streaks also occur in the frags. MINERALIZATION: - sparse blebs of po occur with tr cpy. - local 1" - 6" sections of 20% po, tr cpy occur with thin cherty beds to 825'.				

FOOTAGE	SECTION 1" =	DESCRIPTION					ASSAYS
			SAMPLE NO.	FROM	TO	LENGTH	
		- - 1% - 5% po occurs in the feldspar porphyry frags. - tr sph starts to occur in frags after 896'.					
		STRUCTURE: occassional chert beds and feldspathic tuff beds are generally at 60° to C.A.					
937.3	1046'hd	873.9	FELDSPAR LAPILLI TUFF - medium grey, fairly massive coarse grained; feldspar x-tal tuff with 0 - 10% angular frags. of chert and white feldspar porphyry (possibly some bleached andesite). The frags are generally 1/4" - 1/2" diam. Increasing black chert frags (up to 10%) at 1009' - 1025'.				
	vd	563.4	Gradational contact to pyroclastic breccia. There is a general increase in size and number of fragments from 1030' - 1046'.				
		ALTERATION: 0 - 5% light green chlorite streaks throughout. Occassional 1" - 3" zone of 30% light green chlorite.					
		MINERALIZATION: very sparse blebs and grains of po. generally 1% diss. po throughout.					
		STRUCTURE - occassional faint bedding is 60° to C.A.					
		VEINS:					
		941.1' - 1½" pink, weathered & broken up calcite vein with tr ga, cpy. (can't determine angle)	7681	940.9	941.4	0.5'	(whole core sampled)
1046	1065hd	891.5	PYROCLASTIC BRECCIA - angular to rounded fragments of porphyry, chert and andesite in a coarse grained, medium grey feldspar x-tal tuff.				
	vd	570.5					
1065	1132hd	954.0	TUFF AND ARGILLITE - interbedded coarse grained, massive, feldspar x-tal tuff and medium to dark grey, fine grained, well-bedded argillite. Occassional black (graphitic ?) hairline beds occur within the argillite.				
	vd	594.6					

FOOTAGE	SECTION	DESCRIPTION					ASSAYS
			FROM	TO	I" =	SAMPLE NO.	
		Graphite argillite beds $\frac{1}{2}$ " and thicker occur at 1097.5' - 1107.5'. Bottom contact is gradational from 1129' - 1132' with an increase in size and number of fragments. The contact is taken as the last definite bedding.					
		ALTERATION: very weak, sparse chlorite occurs.					
		MINERALIZATION: sparse po.					
		STRUCTURE - bedding in the argillite is generally 75° to C.A.					
		- flame structures indicate tops UP THE HOLE					
1132	1257.3	nd	1072.4	vd	635.6	PYROCLASTIC BRECCIA - very coarse pyroclastic with 80% sub-rounded frags of feldspar porphyry, mafic volcanics (andesite) and chert. The frags are generally 1" - 6" diam.	
						One block (?) of graphitic argillite occurs at 1151.1' - 1152.8'. This block contains 10% po, tr cpy.	
						Mafic dyke cuts this unit at shallow core angles at 1172' - 1183', 1185' - 1189', 1192' - 1194', 1209' - 1211	
		ALTERATION: 5-10% dark green chlorite streaks occur throughout.					
		MINERALIZATION - generally 1% po throughout as fine diss. grains.					
		- at 1168.7' a 1" diameter fragment of massive po occurs.					

WEST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 104

SHEET 9 OF 10

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S.104

SHEET 10 OF 10

FOOTAGE	SECTION	DESCRIPTION					ASSAYS
			FROM	TO	1" =	SAMPLE NO.	
1337.0	1424	1232.2	ANDESITE ARGILLITE BRECCIA - brecciated, fairly massive, andesite with black argillite as the matrix.				
		vd 683.0					
			ALTERATION:	no alteration is evident			
			MINERALIZATION:	sparse fine po occurs throughout with local breccia sections contain 1% - 5% po, tr cpy.			
			VEINS:				
			1418.5'	- 1/8" - 1/2" cream coloured calcite vein with 1% ga, sph at 25° to C.A.			
1424			END OF HOLE - CASING LEFT IN HOLE.				

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 105

SHEET 1 OF 4

PROPERTY HARGRAVES	TP OR AREA COLEMAN	AZIMUTH 250° 37'	DATE STARTED Sept. 7/78	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE
				200'	-40°		
PROJECT 130.2	LOT & CONC. 2 IV	DIP -40° 04'	DATE COMPLETED Sept. 16/78	400'	-39°		
CLAY NO.	CO-ORDINATES. 4848.2N, 10,951.1E	LENGTH 1059.5'	DRILLED BY AQ SIZE Barron D.D	500'	-38°	258°	
GRID NO.	Core at Bailey Property	COLLAR ELEV. 1112.4	LOGGED BY R.S. Nichols R.S. Nichols	600'	-38°		
				850'	-36°	262°	
				1000'	-32°		

FOOTAGE	SECTION	DESCRIPTION	ASSAYS				
			SAMPLE NO.	FROM	TO	LENGTH	Ag
C	12 hd vd	CASING					
12	700 hd vd	542.8 NIPISSING DIABASE - coarse grained, massive typical diabase. Somewhat blocky core with chl. slips at 448'- 474'. - hypersthene diabase at 469.5'- 550 (this contact is gradational from 550'- 560'). Lower contact is 11° to C.A. for about 8"- 10".	sludge	12	300	378'	tr (samples at 10 intervals)
				390	400	10'	.02
				400	440	30'	tr ("
				440	450	10'	.02
				450	460	10'	.03
				460	470	10'	tr
				470	490	20'	.02 ("
		VEINS:		490	510	20'	tr ("
				510	520	10'	.02 ("
		25.6' - 1/8" white qtz-calcite vein @ 40° to C.A. No alt'n. halo.		510	690	180'	tr ("
				690	700	10'	.02 ()
	*good looking	57.7' - 1/4 white calcite vein at 40° to C.A. 3" alt'n. halo and some py beside vein.	437	57.5	58.0	0.5'	.04
		173.5' - 173.9' - light altered section of fine grained diabase (no vein).					
		524 - 525' - broken core with chl. slip & some red hematite.					
		638.8' - 1" zone of chlorite and 10% white calcite with tr cpy at 30° to C.A. Some wall rock alt'n.	438	638.0	638.9	0.9'	.06
		669.4' - 3/8" white-green calcite vein with tr po, at 40° to C.A. Alt'n. halo for 3/4".	439	669.2	669.5	0.3'	.03
		697.0' - 1/4" white-green calcite vein at 30° to C.A.					
700.	713.4hd vd	553.6 KEEWATIN ANDESITE - dark green, fine to med. grained, quite massive andesite.		700	710	10'	.02
		449.7					

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
							Ag	
713.4	857.5	hd 670.3	LAMPROPHYRE DYKE - dark green, med. to coarse grained, massive, biotitic dyke. 1/16" white calcite stringers at random angles occur about 1 per 12". The core is generally blocky & roughout.	710	720	10'	tr	
	vd 534.4			720	730	"	.02	
				730	740	"	.02	
				740	750	"	tr	
				750	760	"	.02	
				760	770	"	.02	
		VEINS:		770	780	"	.02	
			440	714.2	716.2	2.0'	.02	
		714.2' - 716.2' - zone of brecciated wall rock with white calcite filling. Some py occurs in the calcite.						
		765.7' - 1/8" white calcite vein at 50° to C.A.	441	765.4	766.0	0.6'	.03	
hd 604.3	776.0'	- 784.0' - FAULT ZONE - very badly broken &						
vd 486.5		muddled core with chl. slips. A few pink calcite stringers occur.						
		802.9' - 3/8" pink calcite vein at 90° to C.A.	442	802.8	803.1	0.3'	.02	
		810.7' - 1/4" pink calcite-qtz. vein at 70° to C.A.	443	810.5	811.0	0.5'	tr	
hd 646.4	828	- 830' - blocky ground, possible fault						
vd 517.0				780	790	10'	.02	
				790	800	"	tr	
				800	810	"	.02	
				810	820	"	tr	
				820	830	"	.02	
				830	840	"	.03	
				840	850	"	.02	
				850	860	"	.04	
857.5	907.0	nd 710.6	BLACK AND BROWN CHERT - very fine grained, hard, well bedded chert (85% black). More black, massive chert occurs after 879' to 903.6'.	860	870	"	.03	
	vd 563.1			870	880	"	.06	
				880	890	"	.05	
				890	900	"	.04	
		Lamp. dykes at 888.4'- 896.0', 903.6'- 907.0' contain numerous 1/8" - 1/4" white calcite veins (no min. seen)		900	910	"	.06	
		STRUCTURE: bedding is 65° at 863'		910	920	"	.09	
		45° at 882'		920	930	"	.08	
		55° at 903'		930	940	"	.04	
		tops are up the hole - flame at 859'		940	950	"	.03	
		flame & graded bed at 882'		950	960	"	.04	
				960	970	"	.03	

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.A. 105

SHEET 3 OF 4

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 105

SHEET 4 OF 4

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 106

SHEET 1 OF 3

PROPERTY DRUMMOND	TP OR AREA COLEMAN	AZIMUTH 245° 49'	DATE STARTED Sept. 18/78	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE
				200'	-43°		
PROJECT 131.3	LOT 5 CONC. 2 IV	DIP -40° 29'	DATE COMPLETED Sept. 21/78	400'	-42°		
CLAIM NO.	CO-ORDINATES. 5111.0N, 10,474.2E	LENGTH 549'	DRILLED BY AQ SIZE Barron D.D.	540'	-41°	252.5°	
GRID NO.	CORE AT BATLEY PROPERTY	COLLAR ELEV. 1045'	LOGGED BY R.S. Nichols R.S. Nichols				

FOOTAGE	SECTION	DESCRIPTION	ASSAYS			
			SAMPLE NO.	FROM	TO	LENGTH
0	26' hd 19.6	CASING				
	vd 17.0					
26'	357.7 hd 264.7	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase. Lower contact is 65° to C.A. No hypersthene diabase seen.	20	130	110'	tr
	vd 240.6		130	140	10'	.02
			140	180	40'	tr
			180	190	10'	.02
			190	200	10'	tr
		10% Coarse, round chlorite (dark green) spots occur at 86' - 132'	200	220	20'	.02
			220	280	60'	tr
			280	300	20'	.03
		VEINS:	300	320	20'	.02
			320	330	10'	.03
hd 49.1	65' - 89' - FAULT ZONE - altered, badly broken up dia-		330	340	"	tr
vd 42.6	base with chl. slips and red hematite stain.		340	350	"	tr
hd 67.2			350	360	"	tr
		84.4' - $\frac{1}{2}$ " calcite - chl. vein at 30° to C.A.	7506	84.0	84.9	0.9' .02
		99.7' - 1/16" white calcite vein with 1" alt'n. halo, at 75° to C.A.				
		101.0 & 101.3' - $\frac{1}{4}$ " white calcite veins along gouge at 40° to C.A. No alt'n. halo.				
hd 110.4	147.7' - $\frac{1}{2}$ " strong, grey calcite vein with $\frac{1}{2}$ % Cpy at		7507	147.2	147.8	0.6' .05
vd 98.1	*good 25° to C.A. A 2" (true width) alt'n. halo looking occurs.					
		172.8' - $\frac{1}{2}$ " green quartz-calcite vein at 30° to C.A. Alt'n. halo is less than $\frac{1}{2}$ ".				
		231.6' - 3/8" grey calcite vein with tr py at 70° to C.A. No alt'n. halo.	7508	231.5	231.8	0.3' .02

FOOTAGE	SECTION FROM	TO " =	DESCRIPTION					ASSAYS			
				SAMPLE NO.	FROM	TO	LENGTH	Ag			
hd 207.0	279.8'	- 1"	white qtz.-Ca vein with 1% po, tr cpy at	7509	279.6	280.3	0.7'	.05			
vd 188.2	good	30°	to C.A. 3"- 4" alt'n. halo.								
357.7	431.1	hd 319.2	KEEWATIN TUFF - fine to coarse grained, med. grey tuff. Some coarse angular pebble size frags of light & dark occur at 391' - 413'. Long thin shards of crushed rumpice (?) occur in some beds to 395'. Some interbedded dark chert occurs at 402' - 405'.	360	370	370	10'	tr			
		vd 289.7		370	380	380	"	tr			
				380	390	390	"	tr			
				390	400	400	"	tr			
				400	410	410	"	tr			
				410	420	420	"	tr			
				420	430	430	"	tr			
			STRUCTURE: bedding is 35° - 40° to C.A.								
			ALTERATION: local chl. alt'n. occurs as fine grains to 3" - 4" sections of 10-15% chl.								
			The dark chert frags have bleached rims and some frags are almost completely bleached.								
			MINERALIZATION: sparse sulphides occur usually in calcite blebs.								
			VEINS:								
			379.2' - $\frac{1}{4}$ " pink calcite vein, tr cpy at 30° to C.A.								
			386.5', 387.8' - 2" - 3" white quartz - chl. veins (?) with py and mag.								
			414.1' - $\frac{1}{2}$ " qtz. - pink calcite vein with 20% chl. at 70° to C.A.								
431.8	482.0	hd 357.0	LAMPROPHYRE DYKE - dark green, coarse grained, massive, biotite dyke.	430	440	440	10'	tr			
		vd 323.8		440	450	450	"	.02			
				450	460	460	"	tr			
				460	470	470	"	.02			
			Upper contact is 60° to C.A. Lower contact is 30° to C.A.	470	480	480	"	tr			

SP JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 106

SHEET 3 OF 3

FOOTAGE REV	SECTION TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
							Aa	
		VEINS:						
hd 329.9	vd 299.4	445.5' - $\frac{1}{2}$ " pink calcite-chlorite-qtz. vein with tr cpy, at 20° to C.A.	7509	445.3	445.9	0.6'	.05	
hd 345.9	vd 313.7	467'-477' - FAULT ZONE - several 1' sections of very blocky core and altered wall rock.						
		462.9' - $\frac{3}{4}$ " buff coloured qtz. - calcite vein at 60° to C.A.						
482.0	549.0	407.4	465.1' - $\frac{1}{2}$ " white qtz.-calcite vein, tr ga at 60° to C.A.	7510	464.8	465.2	0.4'	.03
hd 367.9		ALTERED ANDESITE - dark green, possibly pillowd well altered andesite. (Not as intense as C.S. 105) Lamp. dykes occur at 500.6' - 504.8', 511.7' - 522.5'. Secondary brecciation (as in Conisil 610 NE X-C) occurs at 528' - 537'.						
		ALTERATION: - 5-10% chl. alt'n. as $\frac{1}{2}"$ - 3" zones cross cutting the structures. - local minor red felds alt'n. - bleaching of pillow frags & selvages is common and increases at 509' - 549'. - 1" - 2" blue - purple quartz veins (?) crosscut the rocks generally at 40° - 50° to C.A. at 535' - 549'.						
		MINERALIZATION: tr py occurs with the chlorite.						
		VEINS:						
hd 373.4	vd 338.7	504.4' - $\frac{1}{2}$ " white calcite vein at 60°	7511	504.2	504.6	0.4'	.03	
549		END OF HOLE - CASING LEFT IN						

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO.C.S. 107

SHEET 1 OF 1

PROPERTY BURSARY	TP OR AREA COLEMAN	AZIMUTH 248° 20'	DATE STARTED Sept. 26/78	CORRECTED DIP TESTS	LOCATION SKETCH OF HOLE
PROJECT 131.1	LOT & CONC. 2 V	DIP -44° 43'	DATE COMPLETED Sept. 29/78	400° -50° 600° -51° 700° -49°	
CLAIM NO.	CO-ORDINATES. 3296.7N, 11.331.0E	LENGTH 841.5	DRILLED BY AQ SIZE Barron D.D.	259°	
GRID NO.	Core At Bailey Property	COLLAR ELEV. 1113.6	LOGGED BY R.S. Nichols R.S. Nichols		

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
FROM	TO	I" =					Ag
0	12' hd 8.5	CASING					
	hd 8.5						
12	841.5' hd 555.7	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase. - 5% - 10% hypersthene occurs at 280' - 841.5'.	7512	112.6	113.2	0.6	tr
			7513	131.7	132.2	0.5	.03
		VEINS:					
		112.9' - 6" alteration zone, some 1/8" calcite veining at 50° to C.A.	7512	112.6	113.2	0.6	tr
		131.9' - irregular 1/8" - 1/2" white calcite vein at 40° to C.A. Approx. 1" alt'n halo.	7513	131.7	132.2	0.5	.03
hd 116.1	166.6' - 1/2" white calcite vein at 40° to C.A. Wall	7514	166.4	166.9	0.5	tr	
vd 119.4	*good rock alt'n. and red felds occurs for 4"- 5" 100king on each side of vein.						
		181.3' - 1/2" white calcite vein at 35° to C.A. Alt'n. zone (red feldspathic) for 3" - 4" on each side.	7515	181.0	181.5	0.5	tr
hd 169.7	245.1' - 1 1/2" pink calcite vein with possible arsenides	7516	244.9	245.5	0.6	tr	
vd 176.8	*good at 40° to C.A. Wall rock alt'n for 6" +. 100king						
		256.5' - 4"- 5" fine grained dark green altered section bordered by 1/2" light coloured zone at 30° to C.A.					
		263.2' - 2" fine grained, dark green, altered section bordered by 1/4" light coloured zone at 50° to C.A.					

FOOTAGE FROM	TO	I" =	DESCRIPTION	ASSAYS			
				SAMPLE NO.	FROM	TO	LENGTH
			265.3' - 3" fine grained dark green altered section bordered by $\frac{1}{2}$ " light coloured zone at 40° to C.A.				
			267.4' - $\frac{1}{2}$ " white calcite vein with 2" - 6" alt'n. halo at 50° to C.A.	7517	267.2	267.6	0.4' .05
hd 223.9			326.1' - 6" slightly pink calcite vein at 45° to C.A. very altn halo for 3" - 4".	7518	325.7	326.7	1.0' tr
vd 237.0							
			328' - 338' - FAULT ZONE - blocky core with rusty hematite stain and some chlorite slips.				
hd 244.4			358.0' - 1 $\frac{1}{4}$ " pink calcite vein with tr arsenides along the edges at 15° to C.A.	7519	357.7	358.4	0.7' tr
vd 261.4			100king				
			402.8' - 3/4" grey calcite vein, tr cpy and 2" alt'n. halo, at 40° to C.A.	7520	402.5	403.0	0.5' .02
			450.0' - 3" (true width) alt'n. zone at 15° to C.A.				
			473.9' - $\frac{1}{2}$ " grey calcite vein with 1" alt'n. halo, at 40° to C.A.	7521	473.7	474.1	0.4' tr
			490.2' - $\frac{1}{2}$ " - 3/4" grey calcite vein with 3" alt'n. halo, at 35° to C.A.	7522	489.7	490.3	0.5' .02
			573.5' - $\frac{1}{2}$ " pink calcite vein with 2" alt'n. (red felds) halo at 30° to C.A.	7523	573.3	573.9	0.6' tr
			647.4' - $\frac{1}{4}$ " white qtz.-calcite vein with 1" alt'n. halo, at 35° to C.A.				
			655.1' - $\frac{1}{2}$ " white calcite - chl. vein with 1 $\frac{1}{2}$ " alt'n. halo at 25° to C.A.	7524	655.0	655.2	0.2' .02
			663.4' - 1/8" grey calcite vein with 1" alt'n. halo at 30° to C.A.				

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. C.S. 107

SHEET 5 OF 2

FOOTAGE	SECTION	DESCRIPTION					ASSAYS	
			SAMPLE NO.	FROM	TO	LENGTH	Ag	
		665.0' - $\frac{1}{4}$ " white calcite - Qtz. vein with 2" strong alt'n. halo, at 40° to C.A.	7525	664.8	665.2	0.4'	.02	
		671.5' - $\frac{1}{8}$ " white calcite vein with 2" alt'n. halo, at 40° to C.A.						
hd 462.4 vd 524.1		699.3' - $\frac{3}{4}$ " - 1" pink calcite vein with 3" alt'n. Good halo, at 45° to C.A. looking	7526	699.0	699.8	0.8'	tr	
		766.6' - 5" carbonated zone at 30° to C.A.						
		825.4' - $\frac{1}{4}$ " white calcite vein with 2" alt'n. halo at 30° to C.A.						
831.5		END OF HOLE - CASING LEFT IN						

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DRILL LOG

HOLE NO. c.s. 108

SHEET 1 OF

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED DIP TESTS				LOCATION SKETCH OF HOLE
HARGRAVE	COLEMAN	247° 16'	Oct. 3/78	200'	-43°			
PROJECT 130.2	LOT & CONC. 2 IV	DIP -40° 16'	DATE COMPLETED Oct. 12/78	400'	-45°			
CLAIM NO.	CO-ORDINATES 4770.5N, 10,419.0E	LENGTH 1111'	DRILLED BY AQ Size Barron D.D.	500'	-45°	253°		
GRD NO.	Core at Bailey Property	COLLAR ELEV. 1083.1'	LOGGED BY R. S. Nichols R. S. Nichols	600'	-46°			
				800'	-47°	acid	test	
				800'	44°	256°		

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
							Ag	
614.9	618.6	LAMPROPHYRE DYKE - dark green, massive coarse grained, biotitic dyke.						
vd	427.4	Lower contact is 45° to C.A.						
618.6	840.5	KEEWATIN ANDESITE - dark green, massive andesite with distinct felds & amph phenocrysts (dyke ?) to 653'. Some 1/16" epidote stringers occur at random angles.	620	630	10'	.03		
vd	383.6	Some local "crackle breccia" occurs.	630	640	"	.03		
		Dark green, massive, mafic (chloritic) dykes occur at 664.9' - 678.9', 680.5' - 693.2', 773.9' - 781.0'.	640	650	"	.13		
			650	660	"	.10		
			660	670	"	.10		
			670	680	"	.05		
			680	690	"	.04		
			690	700	"	.03		
			700	710	"	.03		
			710	720	"	.07		
			720	730	"	.23		
hd	499.1	After 694' "crackle breccia" is very well developed	730	740	"	.04		
vd	481.7	as well as small 1" - 6" pillows.	740	750	"	.06		
			750	760	"	.05		
			760	770	"	.04		
hd	561.5	After 781' the texture is more like pyroclastic	770	780	"	.04		
vd	542.3	breccia with angular frags. of different colours (due to alteration). Possible feldspar porphyry frag at 801.7', 819'.	780	790	"	.05		
			790	800	"	.05		
			800	810	"	.06		
			810	820	"	.04		
			820	830	"	.05		
			830	840	"	.02		
		ALTERATION: "grid alt'n." and white bleaching around the "crackle breccia" occurs after 694'.						
		- 20 - 30% chlorite alteration in the matrix of the breccia, as stringers and zones increasingly after 750' with some very local patches of red felds alt'n.						
		MINERALIZATION: ½% - 1% py, tr cpy sph occurs in the matrix of the crackle breccia after 694'.						
		- local pyrite clusters also occur with in fragments and/or small pillows.						
		- after 781' py-po, clusters, stringers and disseminated grains amount to 5-10% of rock, mostly in the matrix, with occassional splashes of cpy.						

FOOTAGE	SECTION FROM	TO "	DESCRIPTION					ASSAYS
				SAMPLE NO.	FROM	TO	LENGTH	
			VEINS:					
			652.5' - 3/8" pink calcite vein at 40° to C.A.					
			656.6' - pink calcite vein 11° to C.A.					
			670.5' - 3/4" pink calcite chlorite vein at 60° to C.A.	7529	670.2	670.7	0.5'	.02
			686.1' - 1½" pink feldspar-white calcite vein at 80° to C.A.					
hd 519.9*	good	723.2'	- 1" grey calcite vein with 10% sph-ga	7530	723.0	723.7	0.7'	4.22
vd 502.1	looking		throughout and fine Co-As along the edges, at 25° to C.A.					
640.5	871.9	hd 626.9	X-TAL TUFF - hard light to dark green, tuff with abundant white feldspar x-tals. The top contact is reddish coloured to 842.3'.	840	850	850	10'	tr
		vd 605.4		850	860	860	"	tr
			½" - 3" fragments of dark green mafic rock occur in the tuff at 840.5' - 850' (lower contact is gradational over several feet).	860	870	870	"	tr
			Lower contact grades into pyroclastic breccia from 867' - 871.9.					
			STRUCTURE: bedding appears to be very contorted from 20° to 60° to C.A.					
			ALTERATION: no chlorite alteration is evident - white bleaching of some frags. is common.					
			MINERALIZATION: very sparse blebs or stringers of po-cpy occur.					
871.9	920.5	hd 661.8	CHERT - dark grey-green, fine grained, well bedded chert. Local thin x-tal tuff beds occur.	870	880	880	10'	tr
		vd 639.2	1%-5% white feldspar x-tals occur at 888'-897'. Lamp. dykes occur at 904.1-905.5', 909.0'-910.7'.	880	890	890	"	.02
				890	900	900	"	tr
				900	910	910	"	tr
				910	920	920	"	tr

FOOTAGE		SECTION " =	DESCRIPTION					ASSAYS	
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	AS	
			STRUCTURE: bedding angles from 30° - 50° to C.A. - graded bedding at 919.5' - TOPS UP THE HOLE						
			ALTERATION: local "grid" type alteration is developed along and across beds.						
			MINERALIZATION: sparse, fine grains of sph occur.						
920.5	979.3	hd	PYROCLASTIC BRECCIA - coarse, angular, predominantly mafic fragments in a light to dark green, x-tal tuff matrix.	920	930	10'	.02		
vd	680.0		Lamp dykes occur at 960.9' - 964.3'	930	940	"	.03		
			Grades into tuff at 968'	940	950	"	.03		
			STRUCTURE - local bedding angles range from 30° - 50° to C.A.	950	960	"	.02		
			ALTERATION: some 6" - 3' beds appear to have intensive chlorite alteration, although they are still hard to scratch with a nail.	960	970	"	.02		
			MINERALIZATION: 0 - 1% fine disseminated sphalerite. occurs throughout in the altered and unaltered sections. Some pyrite clusters occur. Tr cpy occurs rarely.	970	980	"	.04		
979.3	1104.6	hd	LAMPROPHYRE DYKE - coarse grained, massive, dark green, locally very biotitic dyke.	980	990	10'	.03		
vd	767.1		Upper contact is 55° to C.A.	990	1000	"	.04		
			Lower contact is 20° to C.A.	1000	1010	"	.02		
				1010	1020	"	.02		
				1020	1030	"	.03		
				1030	1040	"	.02		
				1040	1050	"	.02		
				1050	1060	"	tr		
				1060	1070	"	tr		
				1070	1080	"	tr		
				1080	1090	"	.02		
				1090	1100	"	.04		

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DRILL LOG

HOLE NO. c.s. 109

SHEET 1 OF 1

PROPERTY NORTH DRUMMOND	TP OR AREA COLEMAN	AZIMUTH 180° 34'	DATE STARTED Oct. 13/78	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE
				180°	-49°		
PROJECT 131.3	LOT & CONC. 2 V	DIP -46° 34'	DATE COMPLETED Oct. 16/78				
CLAIM NO.	CO-ORDINATES. 7156.5N, 9698.8E	LENGTH 296'	DRILLED BY AQ Size Barron D.D.				
GRD NO.	Core At Bailey Property	COLLAR ELEV. 1118.94	LOGGED BY R.S. Nichols R.S. Nichols				

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DRILL LOG

HOLE NO. C.S. 110

SHEET 1 OF

PROPERTY NORTH DRUMMOND	TP OR AREA COLEMAN	AZIMUTH 336° 52'	DATE STARTED Oct. 17, 1978	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE	
				200'	-45°			
PROJECT 131.3	LOT & CONC. 2 V	DIP -44° 29'	DATE COMPLETED Oct. 23, 1978	400'	-41°	acid	test	
CLAIM NO.	CO-ORDINATES 6598.3N, 10,112.5E	LENGTH 453'	DRILLED BY AQ SIZE Barron D.D.	400'	-40°	344°	(tropari)	
GRID NO.	Core At Bailey Property	COLLAR ELEV. 1002.3'	LOGGED BY R.S. Nichols R.S. Nichols					
FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
FROM	TO	"					Ac	
0	18	hd	12.7	CASING				
		vc	12.7					
18	453	hd	328.2	KEEWATIN TUFF & CHERT - light to medium grey, hard, very fine grained chert with grey, siliceous, fine grained, interbedded tuff and lapilli tuff. The core is generally blocky throughout. Lapilli tuff beds occur at 28.5' - 36.5', 171.5' - 198.0'.	20	30	"	tr
		vc	311.9		30	40	"	tr
					40	50	"	tr
					50	60	"	.02
					60	70	"	tr
					70	80	"	.02
					80	90	"	tr
					90	100	"	tr
					100	110	"	.02
					110	120	"	tr
					120	130	"	tr
					130	140	"	.02
					140	150	"	.02
					150	160	"	.03
					160	170	"	.02
					170	180	"	.04
					180	190	"	.03
					190	200	"	.02
					200	210	"	.04
					210	220	"	.03
					220	230	"	.03
					230	240	"	.04
					240	250	"	.04
					250	260	"	.03
					260	270	"	.02
					270	280	"	.03
					280	290	"	.02
					290	300	"	.04
					300	310	"	.04
					310	320	"	.03
					320	330	"	.04

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DRILL LOG

HOLE NO. C.S. 110

SHEET OF

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. c.s. 110

SHEET ____ OF ____

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DRILL LOG

HOLE NO. c.s. 111

SHEET 1 OF

PROPERTY NORTH DRUMMOND	TP OR AREA COLEMAN	AZIMUTH 338° 41'	DATE STARTED Oct. 24, 1978	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE	
				200'	-48°			
PROJECT 131.3	LOT & CONC. 2 V	DIP -48° 22'	DATE COMPLETED Oct. 30, 1978	300'	-50°	345°		
CLAIM NO.	CO-ORDINATES 6874.4N, 9980.0E	LENGTH 822'	DRILLED BY Barron D.D.	400'	-54°			
GRID NO.		COLLAR ELEV. 1029.9'	LOGGED BY R.S. Nichols R.S. Nichols	500'	-50°	344°		
FOOTAGE	SECTION	DESCRIPTION			SAMPLE NO.	FROM	TO	ASSAYS
FROM	TO	1"					LENGTH	Ag
0	31'	hd 20.7	CASING					
		vd 23.0						
31'	445.5	hd 286.1	NIPISSING DIABASE - typical coarse grained massive, dark green diabase. Hypersthene does not occur.		31	450	419'	tr-0.2 (inclusive at 10' intervals)
		vd 341.1	Blocky core at 77' - 81', 105' - 107', 246' - 267'. Local sections are magnetic. Becomes fine grained at 439'. Contact is at 70° to C.A.					
			VEINS:					
hd 140.4	210.3'	- 2"	white qtz.- chl. vein with 3% cpy. at 60° to C.A.	7542	210.0	210.5	0.5	.45
vd 156.5								
	251'	-	several 1/8" light green alteration (not carbo- nate) bands at 50° to C.A.					
445.5	535.8	hd 345.2	PYROCLASTIC ANDESITE BRECCIA - looks like a pyroclastic breccia but all the frags. are dark green andesite with varying degrees of alteration. The frags. are 1/8" - 2" diam., mostly rounded.	450	460	10'	.05	
		vd 409.3		460	470	"	.03	
				470	480	"	.03	
				480	490	"	.02	
				490	500	"	.03	
			Possible bedding (frags. aligned) at 45° at 463', at 40° at 524'.	500	510	"	.03	
				510	520	"	.02	
				520	530	"	.02	
			Blocky ground at 445' - 482'. Abrupt contact with andesite.	530	540	"	.02	
			ALTERATION: local red feldspathization occurs within fragments. - some dark green chl. stringers & flecs occur.					
			MINERALIZATION: tr sph, occurs as very fine, disseminated grains in frags. & matrix.					

FOOTAGE			SECTION I" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	Ag	ASSAYS					
FROM	TO														
				VEINS:											
	hd 321	2		500.0' - 1" zone of white calcite stringers at 60° - 70° to C.A. Fine ga & sph occur in wall rock.	7543	499.9	500.3	0.4"	.15						
	vd 382	7													
535.8	822	hd 542	3	ANDESITE - fairly massive, dark green, fine grained, andesite. Distinct pillows occur at 672' - 782'. Massive at 782' - 822'.	540	550	560	10'	.02						
		vd 616	7		550	560	"	"	.03						
					560	570	"	"	.02						
					570	580	"	"	.02						
					580	590	"	"	.02						
					590	600	"	"	.03						
					600	610	"	"	tr						
				ALTERATION: minor flecs of dark green chlorite through out. Some chlorite stringers do occur locally.	610	620	"	"	.03						
				- seems to be a general increase in chlorite alteration at 590' - 703'. The andesite is locally brecciated and bleached with local red feldspathazation from 590' - 672'.	620	630	"	"	.02						
					630	640	"	"	tr						
					640	650	"	"	.04						
					650	660	"	"	.04						
					660	670	"	"	.03						
					670	680	"	"	.02						
					680	690	"	"	.02						
					690	700	"	"	.03						
					700	710	"	"	.02						
					710	720	"	"	.02						
					720	730	"	"	.02						
					730	740	"	"	.02						
				MINERALIZATION: occassional py duster occurs in chloritic zones after 590'.	740	750	"	"	tr						
				- 575' - 689' - 1% py occurs as clusters.	750	760	"	"	.02						
					760	770	"	"	.03						
					770	780	"	"	.03						
					780	790	"	"	.02						
					790	800	"	"	tr						
					800	810	"	"	.03						
				VEINS:	810	820	"	"	.02						
				574.7' - 1/8" pieces of calcite - cpy-galena in broken ground. Slightly yellow stain in the central part of the vein.	7544	574.7	574.8	0.1"	.04						
									(whole core sampled)						

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DRILL LOG

HOLE NO. c.s. 111

SHEET 2 OF 2

PROPERTY NORTH DRUMMOND	TP OR AREA COLEMAN	AZIMUTH $38^{\circ} 07'$	DATE STARTED Oct. 31, 1978	CORRECTED DIP TESTS				LOCATION SKETCH OF HOLE			
PROJECT 131.3	LOT & CONC. 2 V	DIP $-44^{\circ} 17'$	DATE COMPLETED Nov. 1, 1978								
CLAIM NO.	CO-ORDINATES 6735.8N, 9916.0E		LENGTH 261'	DRILLED BY Barron D.D.							
GRID NO.	Core At: Bailey Property		COLLAR ELEV. 1005.9'	LOGGED BY R.S. Nichols R.S. Nichols							
FOOTAGE	SECTION	DESCRIPTION				SAMPLE NO.	FROM	TO	LENGTH	ASSAYS	
FROM	TO	1" =								Ag	
0	20	hd 14.4 vs 13.9	CASING								
20	199.8	hd 141.2 vs 141.3	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase. 5% coarse grained, honey-brown hypersthene occurs to $\sim 72'$ (very gradational contact). Becomes fine grained after 185'. Contact is distinct at 60° to C.A.			20	200	180'	tr-0.02 (samples at 10' intervals)		
			VEINS:								
			117' - 6" altered zone with some serpentine (no carbonate).								
199.8	261	hd 183.7 vs 185.3	KEEWATIN CHERT - medium grey, fine grained chert with local thin tuff beds. The core is generally blocky throughout.			200	210	10'	tr		
			STRUCTURE - bedding is usually 25° - 30° to C.A. - graded bedding at 232' - tops down the hole.			210	220	"	tr		
			ALTERATION: moderate to strong "grid" type alteration.			220	230	"	0.31		
			MINERALIZATION: tr sph occurs with the grid alteration			230	240	"	.05		
			VEINS:			240	250	"	.04		
			200.5' - hairline arsenides ll to C.A.			250	260	"	.04		
hd 160.0	261	vs 160.7	226.8' - $\frac{1}{2}"$ - 1" white calcite vein with 40% ars., trace ruby Ag, possible leaf Ag, at 30° to C.A.			7547	200.2	200.7	0.5'	0.13	(whole core sampled)
			END OF HOLE - CASING LEFT IN.			7545	226.6	227.0	0.4'	9.02	

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO.C.S. 113

PROPERTY NORTH DRUMMOND	TP OR AREA COLEMAN	AZIMUTH $38^{\circ}12'$	DATE STARTED Nov. 2, 1978	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE		
				200'	-47°				
PROJECT	LOT & CONC. 2 V	DIP $-44^{\circ}22'$	DATE COMPLETED Nov. 3, 1978						
CLAIM NO.	CO-ORDINATES. 6775.3N, 9948.9E	LENGTH 205'	DRILLED BY Barron D.D.						
GRID NO.	Core At Bailey Property	COLLAR ELEV. 1012.46	LOGGED BY R.S. Nichols R.S. Nichols						
FOOTAGE	SECTION	DESCRIPTION			ASSAYS				
FROM	TO	1" =			SAMPLE NO.	FROM	TO	LENGTH	Ag
0	20		CASING						
20	198.2	hd 137.7 vd 141.3	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase. The rock is generally weakly magnetic. No hypersthene seen. The diabase is generally darker and fine grained after 112'. Blocky core at 95' - 112'						
			VEINS:						
			87.5' - $\frac{1}{4}$ " white qtz-chl. vein, no alt'n. halo, at 45° to C.A.						
			109.3' - 2" light grey, fine grained, altered zone (no carbonate) at 50° - 60° to C.A.						
		hd 116.1 vd 118.6	166.6' - $\frac{1}{2}$ " chl-calcite vein with 1-5% fine arsenides at 40° to C.A. Wall rock is altered for ~4".	7546	166.6	167.0	0.4	.03	
198.2	205.5	142.3 vd 146.2	KEEWATIN CHERT - fine grained, med. grey-green chert. Bedding is 30° to C.A.						
	205		END OF HOLE - CASING LEFT IN.						

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO.C.S. 114

SHEET 1 OF -

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	RECTORED DIP TESTS	LOCATION SKETCH OF HOLE
North Drummond	Coleman	242° 47'	Nov. 6, 1978	200° -49°	
PROJECT	LOT & CONC.	DIP	DATE COMPLETED	400° -45°	
131.3	2 V	-44° 43'	Nov. 9, 1978	450° -44°	263°
CLAIM NO.	CO-ORDINATES:	LENGTH	DRILLED BY AQ Size		
	7040.6N, 10, 194.5E	470	Barron D.D.		
GRID NO.	Core at: Bailey Property	COLLAR ELEV. 1030.1	LOGGED BY R.S. Nichols		

FOOTAGE	SECTION	DESCRIPTION	ASSAYS				
			SAMPLE NO.	FROM	TO	LENGTH	Ag
0	26' nd 18.4	CASING					
	vd 18.4						
26	232.5' nd 160.2	NIPISSING DIABASE - typical coarse grained, massive, dark green diabase.		26	40	14'	tr
	vd 168.3			40	50	10'	tr
		Becomes fine grained at 150'- 232.5'		50	60	"	tr
		Contact is sharp at 70° to C.A.		60	70	"	.02
				70	80	"	.02
				80	90	"	.03
				90	100	"	.02
				100	110	"	tr
				110	120	"	tr
				120	130	"	tr
				130	140	"	.02
				140	150	"	.03
				150	160	"	.02
				160	170	"	tr
				170	180	"	tr
				180	190	"	.02
				190	200	"	tr
				200	210	"	.02
				210	220	"	tr
				220	230	"	tr
232.5	470' nd 323.0	KEEWATIN CHERT - very fine grained, hard, well-bedded chert.		230	240	10'	.03
	vd 341.0			240	250	"	.03
		Lamp dyke (coarse grained, biotitic) occurs at 339.8' - 342.4'.		250	260	"	.04
				260	270	"	.06
		Blocky core at 441' - 450'.		270	280	"	.05
				280	290	"	.06
				290	300	"	.03
				300	310	"	.06
				310	320	"	.05
				320	330	"	.03
				330	340	"	.03

FOOTAGE	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS		
							Ag		
				340	350	10'	.04		
				350	360	"	.04		
				360	370	"	.07		
				370	380	"	.05		
				380	390	"	.09		
				390	400	"	.06		
				400	410	"	.04		
				410	420	"	.04		
				420	430	"	.04		
		STRUCTURE - bedding angles are:		70° at 272'					
				70° at 254'					
				60° at 302'					
				70° at 330'					
				70° at 355'					
				60° at 369'					
				60° at 420', 451'					
		- tops are - up the hole - graded bed at		264'					
				" " " at 272'					
		- down the hole - " " " at		253'					
		- up the hole - graded bed at		262'					
				- flame at 300'					
				- flame at 330'					
				- graded bed at 420'					
		ALTERATION: - some local "grid" type alteration occurs.							
		MINERALIZATION: very sparse sulphide mineralization.							
		Occassional 1"- 2" beds with 2% sph.							
		417 - 419.8' - approx. 1% sph diss. throughout as fine to coarse grains.							
		VEINS:							
		250.3' - $\frac{1}{2}$ " chlorite vein with 1/8" pink calcite, at 70° to C.A. The wall rock is carbonated for 4" and contains .5% cpy.		7651	250.0	250.5	0.5'	.08	
		321.5' - $\frac{1}{4}$ " slightly pink calcite vein at 35° to C.A.		7652	321.3	321.6	0.3'	.03	
hd	230.6'	338.2' - $\frac{1}{2}$ " - 3/4" white-calcite-chlorite vein at 40° to C.A. with some gouge.		7653	337.8	338.5	0.7'	.06	
vd	247.2'	362.5' - 1/8" white calcite vein at 30° to C.A.		7654	389.0	389.2	0.2'	.02	
		389.0' - 1/8" white calcite vein at 60° to C.A.							

ST JOSEPH EXPLORATIONS LIMITED

DRILL LOG

HOLE NO. c.s. 114

SHEET 3 OF 3

FOOTAGE		SECTION I" =	DESCRIPTION					ASSAYS
FROM	TO			SAMPLE NO.	FROM	TO	LENGTH	
			430.0' & 430.4' - $\frac{1}{4}$ " quartz - pink calcite-chlorite veins at 50° to C.A. Tr cpy.					
			435.4' - $\frac{1}{4}$ " pink calcite-quartz-chlorite vein at 45° to C.A.					
hd 314.3	vd 332.6		457.9' - $\frac{1}{4}$ " pink calcite vein with tr cpy at 60° to C.A. Fine Co-As along side the vein.	7655	457.6	458.1	0.5'	.07
470			END OF HOLE - CASING LEFT IN.					

ST JOSEPH EXPLORATIONS LIMITED


DRILL LOG

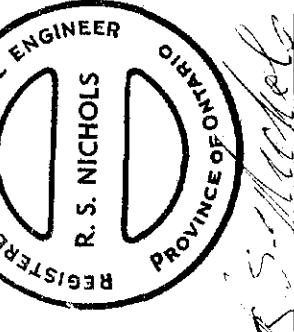

HOLE NO. c.s. 115

SHEET 1 OF -

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED DIP TESTS			LOCATION SKETCH OF HOLE
				200'	-44°		
North Drummond	Coleman	335° 43'	Nov. 10, 1978				
PROJECT	LOT & CONC.	DIP	DATE COMPLETED				
131.3	2 V	-42° 41'	NOV. 13, 1978				
CLAIM NO.	CO-ORDINATES	LENGTH	DRILLED BY AQ Size				
	6724.4N, 10,033.6E	301'	Barron D.D.				
GRID NO.	Core At:	COLLAR ELEV.	LOGGED BY R.S. Nichols				
	Bailey Property	1013.1	R.S. Nichols				

FOOTAGE	SECTION	DESCRIPTION	ASSAYS				
			SAMPLE NO.	FROM	TO	LENGTH	Ag
0	27'	hd 19.7					
	vd	18.4					
27'	301'	hd 217.7	NIPISSING DIABASE - typical, coarse grained, massive,	30	40	10'	.03
		vd 207.8	dark green diabase.	40	50	"	.04
			Local 1" dark, fine grained,	50	60	"	.03
			chloritic zones.	60	70	"	.03
			Becomes fine grained at 110' - 166'	70	80	"	.02
				80	90	"	.02
				90	100	"	.04
				100	110	"	.04
			VEINS:	110	120	"	.03
				120	130	"	.04
				130	140	"	.02
			70.5' - 1/8" white qtz. vein, no alt'n. halo, at	140	150	"	.03
			20° to C.A.	150	160	"	.02
			123.1' - 1/4" qtz.-epidote-chlorite vein, no alt'n.halo	160	170	"	.02
			at 35° to C.A.	170	180	"	tr
				180	190	"	.02
hd	175.2	242.0' - 1/2" pink calcite vein with 1" alt'n. halo,	7656	241.7	242.3	0.6'	0.20
vd	166.8	at 35° to C.A.					
				190	200	10'	.02
				200	210	"	.02
				210	220	"	.02
				220	230	"	tr
				230	240	"	0.02
				240	250	"	0.02
				250	260	"	tr
				260	270	"	0.02
				270	280	"	tr
				280	290	"	tr
				290	300	"	0.02
301'		END OF HOLE - CASING LEFT IN.					





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UBALI MERGER

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