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Appendix V

Drill Logs

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S - 5

SHEET 1 OF -

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED DIP TESTS	LOCATION SKETCH OF HOLE
Salerno Lake	Snowdon Township		Nov. 29, 1977		
PROJECT 188	LOT & CONC. Conc. 3, Lot 32	DIP 90°	DATE COMPLETED Nov. 29, 1977		
CLAIM NO. E.O. 469687	CO-ORDINATES. 6+50N	LENGTH 36.9m	DRILLED BY Eastern Ont. D.D.		
GRID NO. West Grid	7+68E	COLLAR ELEV. 1000m	LOGGED BY W. E. Roscoe		

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	ASSAYS % Fe
0	0.7		Overburden - (casing to 1.5m)						
0.7	3.1		Dolomitic Marble - Pale grey, m.g. minor silication. Slightly fetid loc.						
3.1	16.0		Silicated Dolomitic Marble - grey, patchy, about 20% silicates (trem & diop). Loc. sl. fetid						
			5.6 - 6.1 - med. gry, diopside rock						
			10.3 - 10.8 - off white m.g. dolomitic marble						
			14.9 - 16.0 - minor interlayered gry. bndd dolomite						
16.0	20.9		Grey Banded Dolomitic Marble - Dk. gry, well banded, C.A. av. 55°, f.m.g. dolomitic marble, minor silicates, minor pyrite. Minor Zn mineralization, best in 2-2cm. bands at 17.0 & 17.2	2933	16.6	17.0	0.4	0.84	2.70
				2934	17.0	17.5	0.5	4.75	4.53
				2935	17.5	18.8	1.3	0.29	1.62
			16.6 - 17.0 Est. <1% Zn, 1% pyrite						
			17.0 - 17.5 Est. 3% Zn, 5% pyrite						
			17.5 - 18.8 Est. tr Zn, 1% pyrite						
			20.0 - 20.9 Gradation to next unit						

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S - 5

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
20.9	29.4		Silicated Dolomitic Marble - grey, patchy, 20-30% silicates (mostly diopside) sometrem. Locally c.g. salmon calcite crystals. Minor pyrite					
			20.9 - 26.4 Minor pyrite					
			23.3 - 23.6 m.c.g. tr em-diop. with 5% c.g., pyrite and c.g. honey & dk. brn. Sphalerite Est. 3% Zn / 0.3 m					
29.4	32.6		Dolomitic Marble - white, uniform, m.g. minor trem					
32.6	34.6		Silicated Dolomitic Marble - grey, 90% massive tremolite - diopside					
34.6	36.9		Tremolitic Dolomitic Marble - off-white m.g. dol. mb. with abund. f.g. trem. needles					
36.9			End of Hole 1.5 m casing left in.					

Runs ft.	Runs m.	Shorts ft.
5 - 10.5	1.5 - 3.2	0.5
10.5 - 16	3.2 - 4.9	0
- 31	- 9.4	0
- 46	- 14.0	0
- 61	- 18.6	0
- 76	- 23.2	0
- 91	- 27.7	0
-106	- 32.3	0.5
-121	- 36.9	0
116		1.0

Core Recovery = 99.1%

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-7

SHEET 1 OF —

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
Salerno Lake	Snowdon Twp.	N 69° E	December 1, 1977
PROJECT	**LOT & CONC.**	**DIP**	**DATE COMPLETED**
188	Conc.3, Lot 32	45°	December 5, 1977
CLAIM NO.	**CO-ORDINATES**	**LENGTH**	**DRILLED BY**
EO 469687	7+55N	100.6m	Eastern Ont. D.D.
GRID NO.		**COLLAR ELEV.**	**LOGGED BY**
West Grid	6+86E	994 m	W.E.Roscoe/W.J.Cropper

CORRECTED DIP TESTS			
Depth	Mag	True	Dip
91.5	N67½E	N58°E	47°

LOCATION SKETCH OF HOLE

FOOTAGE FROM	FOOTAGE TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	% Fe	
0	1.0		Overburden (casing to 1.5m)							
1.0	16.2		Silicated Dolomitic Marble - light grey, patchy 20%-30% diopside-tremolite. Occas. calcite c.g. crystals. Loc. sl. fetid. Diopside appears somewhat serpentinized down to about 8m							
			9.1 - 10.3 grey banded to off-white m.g. dolomitic marble							
16.2	22.1		Grey Banded Dolomitic Marble with Zinc Mineralization	2939	17.1	18.0	0.9	4.85	3.24	
			light to dark grey f.g. dol. marble. Minor silication,	2940	18.0	18.2	0.2	16.8	9.26	7.03% Zn
			phlog bands, occas. c.g. salmon calcite.	2941	18.2	18.5	0.3	7.04	2.60	1.4m
			Generally well banded, C.A. fairly consistent,	2942	18.5	19.5	1.0	0.84	2.30	
			avge. 60°-65°.	2943	19.5	20.5	1.0	0.38	2.04	
			16.2 - 17.1 - minor phlog., pyrite. Couple specks sphal. Serp. 16.5 - 16.6.							
			17.1 - 18.0 - Bands sphal.-pyrite 1mm - 4cm Est. 5% Zn, 3% pyrite							
			18.0 - 18.2 - Massive sphal.-pyrite Est. 20% Zn, 15% pyrite							
			18.2 - 18.5 - Sphal-pyrite bands up to 1cm thick Est. 6% Zn, 2% pyrite							
			18.5 - 19.5 - Est. tr Zn							
			19.5 - 20.5 - Est. tr Zn							
			20.5 - 22.1 - Occas. specks sphal.							
22.1	24.9		Gradational - interlayered grey banded dol. marble, white dol. marble and light grey mottled silicated dol. marble. Minor calcite. Serp. patches @ 23.4m.							

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-7

SHEET — F.I.

FOOTAGE FROM	FOOTAGE TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
24.9	32.1		Silicated Dolomitic Marble - white to med grey patchy. Minor pyrite, phlog. About 20% diopside-tremolite. Occas. c.g. calcite. 28.8 - 29.6 - massive v.f.g. diopsidic marble					
32.1	34.7		Dolomitic Marble - light to med.grey. Mostly well banded with thin micaceous layers. C.A. 55°-60° 32.9 - 34.3 - several layers (up to 3cm) of soft grey min'l - possibly gypsum					
34.7	63.4		Silicated Dolomitic Marble - light grey, patchy. Minor calcite. Minor pyrite loc. Poss. 20%-30% diopside-tremolite. Notable phlogopite. 42.9 - 43.1, 52.4 - 52.5, 53.4 - 53.6, 54.0 - 54.4, (with grey f.g. calc.-sil.), 56.3 - 56.7, 59.7 - 60.2 53.7 - grey tremolite with minor pyrite tr Zn. 54.2 - 54.3 - phlog. minor pyrite with very soft grey mineral - poss. gypsum 54.6 - 57.9 - light grey massive f.g. calc-silicate					
63.4	64.6		Quartzite - massive grey, vitreous f.g. quartzite, loc. fetid. A few blebs and bands of white f.g. calc-silicate (probably diop.) Minor tremolite. 63.5 - 63.6 - seam of soft, grey poss. gypsum					
64.6	66.6		Diopside Rock - light grey, mottled, massive. 90% (+) f.g. to c.g. diopside. Minor calcite 65.5 - 65.8 - seam and blebs of soft grey mineral poss. gypsum					
66.6	72.5		Silicated Dolomitic Marble - grey, patchy. About 30% diopside and tremolite. Minor phlog. pyrite, calcite 69.9 & 71.0 - 71.4 - seams of very soft grey mineral - poss. gypsum					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-7

Depth in Metres FOOTAGE FROM	TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
72.5	83.0		Dolomitic Marble - light grey, m.g. minor phlog., calcite, pyrite dissem. throughout, averages 1-2%. Contains a few % f.m.g. tremolite needles intergrown with dolomite. Loc. poorly banded - C.A. 60° - 70°.					
83.0	91.4		Grey Banded Dolomitic Marble - Minor silication; loc. pyritic banding and spotting C.A. 60°-80° Fault gouge material at 86.5 and 87.9 1cm 20% Zn at 87.4					
91.4	94.3		Dolomite - light grey-buff med. crystal with pyrite banding @ 5% pyrite, minor sil. C.A. 60°					
94.3	100.6		Mottled Silicated Dolomite - off white - light grey tremolitic with minor calcite Phlog. 98.4 - 98.7					
END OF HOLE								
			Hole cemented from 0 - 24m 1.5 m casing left in.					
			Shorts					
			0.3m of core ground at 58.5m					
			Core Recovery = 99.7%					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-8

SHEET 1 OF —

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED DIP TESTS	LOCATION SKETCH OF HOLE
Salerno Lake	Snowdon Twp.		December 6, 1977	None	
PROJECT: 188	LOT & CONC.: Conc.3, Lot 32	DIP: 90°	DATE COMPLETED: December 7, 1977		
CLAIM NO.: EO 469687	CO-ORDINATES.: 8+05N	LENGTH: 32.3m	DRILLED BY: Eastern Ont. D.D.		
GRID NO.: West Grid	6+51E	COLLAR ELEV.: 994 m	LOGGED BY: W.J.Cropper		

COTTAGE FROM	COTTAGE TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	ASSAYS % Fe
0.0	1.0		OVB.						
1.0	19.8		Silicated Dolomitic Marble Massive off-white to grey medium crystalline. 20% sil. with diop. > trem. loc. cal., loc. weakly fetid Phlog. 16.6 - 16.8						
19.8	23.0		Grey Banded Dolomite Fine grained crystal, loc. sil. Sph. spots and streaks with minor py. Few Zn traces 22.8 - 23.3; best mineralization 22.4 - 22.8. Est. 6% Zn 22.1 - 22.8	2944	22.1	22.8	0.7	7.68	4.27
23.0	24.2		Mixed grey banded and mottled sil. dol.						
24.2	30.7		Dolomite Massive off-white to light grey coarse crystal; minor diop. & trem.						
30.7	32.3		Silicated Dolomitic Marble loc. phlog. banding with C.A. 60° - 70°						
End of hole			1.5m casing left in. 15cm core ground at 2.7m Core recovery = 99.5%						

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-10

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
Salerno Lake	Snowdon Twp.	--	Dec. 14, 1977
PROJECT	LOT & CONC.	DIP	DATE COMPLETED
188	Conc.3, Lot 32	90°	Dec. 15, 1977
C.A.M NO. Boundary of PO 469687 & 469686	CO-ORDINATES. 4+96N	LENGTH 82.9m	DRILLED BY Eastern Ont. D.D.
GRID NO West Grid	7+05E	COLLAR ELEV. 990 m	LOGGED BY W.E.Roscoe

CORRECTED DIP TESTS			
Depth	Mag	True	Dip
61m	N60W	N70W	-89°

LOCATION SKETCH OF HOLE

RECOVERY FROM	RECOVERY TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
0	0.5		Overburden (casing to 1.5m)					
0.5	4.1		Silicated Dolomitic Marble - pale grey, nearly massive diopside, loc. w/tremolite, minor calcite, pyrite. Poss. quartz with f.g. trem. 1.3-1.5.					
4.1	8.6		Grey Banded Dolomitic Marble - dark grey, fairly well banded f.m.g. dol. with 5% v.f.g. pyrite. C.A. variable 60°-75°. Generally somewhat limey. Loc. somewhat graphitic. Tr. Zn at 5.3, 6.4.					
8.6	14.6		Diopside Dolomitic Marble - light grey to off-white mottled, 80% diopside. Minor dolomite. Loc. minor phlog, pyrite. 11.2-12.0 - dark grey banded f.m.g. dolomitic marble 13.4-14.6 - >90% diopside with intervals of laminated v.f.g. diopside. C.A. 40°-90°.					
14.6	16.6		Grey Banded Dolomitic Marble - dark grey, well banded f.m.g. dol., as prev. Loc. v.dark grey to black layers. Minor pyrite, silicates. Loc. light grey sections. C.A. 70° ±.					
16.6	27.3		Dolomitic Marble - light to pale grey, f.m.g. dol. Loc. slightly fetid. Locally silicated sections. Minor f.g. pyrite, phlog. Locally banded. C.A. 60-65°. 25.2-25.9 Mottled calcitic grey marble 26.7-27.3 Transitional; calcitic.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-10

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	ASSAYS % Fe
27.3	32.0		Banded Calc-Silicate - distinctive, med. grey-brown, well-banded rock. Sugary v.f.g. - possibly quartz-tremolite or tremolite-diopside. Contain 5-10% v.f.g. dissem. pyrite. Minor calcite, dol.(?). C.A. 50° - 80°, avge. 65 - 70°.						
32.0	37.0		Calcitic Marble - light grey, mottled. Minor dolomite, silicated sections.						
37.0	48.0		Banded Calc-silicate - as 27.3-32.0. Pyrite v.f.g. dissem. 5-10%. Frequent c.g. salmon calcite 42.2-43.8. Unit gen. somewhat calcitic. C.A. variable, avge. 60°-65°. 38.5-38.8 - light pinkish grey mottled, sl.oxidized calcitic silicated dol. marble 39.4-40.6 - brecciated calcitic zone, some pinkish mottled sil. dol. marble 40cm ground core @ 40.0m. 47.5-48.0 - sheared, serpentinized and fractured. About 30cm lost core.						
48.0	49.5		Calcitic Marble & Breccia Zone - Mottled pink-white m.g. calcite with serp'd patches. 1cm red muddy gouge at 48.9, C.A. 85°. About 30cm lost core.						
49.5	65.8		Silicated Dolomitic Marble - off-white to med. grey patchy. Loc. sl. fetid. Diopside, minor trem., prob. >50%. Loc. light grey serp.(?) patches. 51.1-52.4 and 52.7-53.4 - light grey mottled m.g. dol. marble 56.5-57.7 - off white m.g. dol. marble, minor pyrite 60.3 - veinlet of light grey, very soft, soluble mineral - possibly gypsum. 61.5-65.8 - off-white m.g. dol., minor silicate with narrow pyrite - sphalerite bands. Light brown sphalerite at 65.2. Est. 1-2% Zn.	2948	65.1	65.8	0.7	2.04	1.95

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-10 SHEET 3 4

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn	% Fe			
65.8	72.0		Grey Banded Dolomitic Marble with Zinc Mineralization									
			Med.-dark grey well banded f.m.g. dol.									
			C.A. 45 - 70°, avge 60° - 55°.									
			Minor silicate, prob. f.g. tremolite.									
			A few dark grey v.f.g. calc-silicate sections (qtz?).									
			Banded sphalerite-pyrite, f.m.g. 65.8 - 69.8									
			65.8-66.4 - Some dark grey calc.-sil.	2949	65.8	66.4	0.6	7.17	3.65	) 4.84% Zn		
			Est. 10% Zn, 10% pyrite	2950	66.4	67.0	0.6	0.92	3.19	) 1.6m		
			66.4-67.0 - Est. trace Zn, <5% pyrite	2951	67.0	67.4	0.4	7.24	2.77	)	) 4.14% Zn	
			67.0-67.4 - Est. 7% Zn, 5% pyrite	2952	67.4	67.8	0.4	0.34	1.25		) 3.4m	
			67.4-67.8 - Est. <1% Zn, 2% pyrite	2953	67.8	69.2	1.4	4.42	3.15		)	
			67.8-69.2 - Est. 6% Zn, 5% pyrite	2954	69.2	69.8	0.6	2.97	2.70			
			69.2-69.8 - Est. 3-4% Zn, 5% pyrite	2955	69.8	70.5	0.7	0.58	2.14			
			69.8-70.5 - Dissem. minor sphal. pyrite, pyrrhotite. Est. <1% Zn.									
			70.5-72.0 - Occas. grains sphal., minor pyrrhotite and pyrite.									
72.0	74.5		Transition - Mottled grey silicated dol. marble with some poorly banded grey dol. marble. Loc. trace Zn. C.g. calcite at either end.									
74.5	82.9		Silicated Dolomitic Marble - light grey, mottled. >75% diopside-tremolite. Minor calcite, loc. pyrite.									
82.9			End of Hole 1.5 m casing left in.									
			Note: Hole cemented up from bottom to uncertain depth, with 3 bags cement.									

) 3.96% Zn 4.0m

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-10

SHEET 4 4

Metres FROM	TO	SECTION 1" =	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
			Shorts					
			0.2m from 1.5 - 4.6					
			0.4m at 40.0					
			0.6m at 48.0					
			0.1m from 78.4 to 82.9					
			Core Recovery = 98.4%					

Snow 15

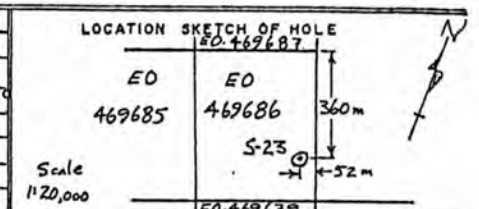
DRILL LOG HOLE NO. S-23

TP OR AREA	AZIMUTH	DATE STARTED
Snowdon Twp.	Approx. N69°E	Feb. 21, 1978
LOT & CONC.	**DIP**	**DATE COMPLETED**
Conc. III, Lot 32	-87°	Feb. 24, 1978
CO-ORDINATES.	**LENGTH**	**DRILLED BY**
1+47N	157.9m	St. Lambert D.D.
7+48E	**COLLAR ELEV.** 991m	**LOGGED BY** W.E. Roscoe

CORRECTED DIP TESTS

Depth	MBrg	TBrg	Dip
157.9	N53E	N43E	-82°

LOCATION SKETCH OF HOLE



METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION
0	2.1		Overburden
2.1	4.6		Silicated Dolomitic Marble - Pale grey m.g. dolomite with 40% light grey diopsidic sections & patches. Minor phlog., loc. minor pyrite
4.6	6.5		Diopside-Quartz Rock - Pale green grey to light grey Ends of section are m.c.g. diopside, centre is poorly banded to patchy quartz-diopside
6.5	12.2		Pyritic Dolomitic Marble - Light grey, m.g. dol., somewhat banded. C.A. 70°-75°. Contains 3% f.g. pyrite in bands and dissem. Loc. calcite bands; silicates. 6.5 - 7.2 - 20% diopside.
12.2	14.5		Dolomitic Marble - Uniform pale grey m.g. dol. with 1% v.f.g. dissem. pyrite
14.5	16.4		Silicated Dolomitic Marble - Pale grey m.g. dol. with 20% light grey diopside, similar to 2.1 - 4.6. Loc. minor pyrite.

SAMPLE NO.	FROM	TO	LENGTH

ASSAYS

DRILL LOG HOLE NO. S-23

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
16.4	20.3		Grey Banded Calcitic-Dolomitic Marble - Somewhat variable. C.A. 70°-75°					
			16.4 - 16.6 - f.g. med-grey calc-dol., serp.spots					
			16.6 - 17.3 - dark grey banded f.g. calc.-dol. and hard, laminated f.g. calc.-silicate. Somewhat graphitic; contains 5%(+) v.f.g. pyrite. Some serp. bands. Part looks like banded diop.-quartz-graphite breccia frags.in calcite-diopside matrix.					
			17.3 - 18.0 - med. grey banded calc.-dol., minor diop.trem., pyrrhotite-pyrite.					
			18.0 - 20.3 - typical banded f.g. med.grey dol. with 3-5% f.g. diss. py, minor calcite.					
			20.1 - 20.3 - tr Zn; v.f.g. diss. sphal.					
20.3	24.4		Silicated Dolomitic Marble - pale grey m.g. dol. with 50% grey diop. sections and patches. Loc. sl. fetid. Minor phlog., pyrite, calcite.					
			23.2 - 23.5 - streaky quartz-diopside					
			23.8 - 24.3 - grey banded calc.-dol. marble					
24.4	29.5		Diopside-Quartz Rock - pale greenish grey. 70% massive diopside; 30% vitreous quartz sections and irreg. patches with diop. spots and streaks. Loc. minor calcite.					
			25.6 - 25.8 and 26.1 - 26.4 - mg. off-white dol. marble with diop. blebs to 5cm.					
29.5	37.8		Banded Diopside-Quartz Rock - Alternating stripes from mm to cm of laminated med.grey diopsidic quartzite (or quartz-diopside granulite) and pale greenish grey speckled f.g. diopside with minor quartz granules. Contains 2-3% v.f.g.-f.g. pyrite and pyrrhotite. Loc. calcitic. Loc. dark grey, poss. graphitic layers. C.A. 55°-70° Avge 67°.					
			37.0 - 37.5 - banded phlog. calc. marble, some					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
37.8	42.6		Calcitic Dolomitic Marble - pale creamy buff-grey, f.m.g. dol. mottled with poss. 20% calcite. Minor v.f.g. pyrite, phlog., serp'd diopside loc. 41.8 - 42.4 - banded diopsidic calc.-dol. marble					
42.6	62.2		Grey Banded Calcitic-Dolomitic Marble - med.-dark grey, f.g., well banded, C.A. 60°-70°. Contains 1-2% v.f.g. dissem. py, loc. pyrrhotite. Loc. layers and patches of dark grey-green serpentinized diopside. Loc. phlog. 50.1 - 52.0 - diopsidic grey dol., phlog.rich 50.6-50.8. Grey quartzite with diopside blebs 51.0-51.8 56.3 - 58.4 - 5% py-po, some m.g. bands. Tr sphal. at 56.3 and 57.3 60.4 - 62.2 - gradational to next unit					
62.2	75.5		Diopside Dolomitic Marble - pale grey, mottled in part. Est. 75% diopside with minor tremolite, 25% m.g. dolomite. Minor calcite, loc. tr pyrite. 68.4 - 68.9 - blotchy to poorly banded diopside-quartz					
75.5	80.2		Diopside-Quartz Rock - light greenish-grey massive f.g.-c.g. diopside with 15% patchily distributed vitreous quartz.					
80.2	82.4		Diopside - massive f.g.-c.g. pale greenish-grey. Quartz bleb @ 80.5					
82.4	87.2		Diopside Dolomitic Marble - pale greenish-grey. 75% diopside, minor trem., and 25% f.m.g. calcitic dol. marble. Similar to 62.2 - 75.5.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
87.2	90.8		Diopside - massive f.g.-c.g. pale greenish-grey. Vaguely mottled. Similar to 80.2 - 82.4					
90.8	93.5		Quartz-Diopside Rock - light greenish-grey massive diopside (40%) and patchy to poorly banded diopsidic quartzite. Similar to 75.5 - 80.2.					
93.5	96.5		Calcitic DolomiticMarble - pale grey-buff, sl. mottled f.m.g. dol. with poss. 15% f.m.g. calcite. Minor phlog, pyrite. 93.8 - 94.2 - massive diop. blebs					
96.5	105.2		Diopside-Quartz Rock - pale greenish-grey massive diopside (70%), grey vitreous quartz with patchy diopside (30%). Loc. poorly banded. Similar to 75.5-80.2 and 90.8-93.5. Quartz is sl. fetid. 100.1 - 100.7 - pale grey m.g. dol., minor phlog., calcite. 100.7 - 100.9 - phlog.-rich diopside					
105.2	108.0		Silicated Dolomitic Marble - pale grey-buff m.g. sl. mottled dol. (minor calcite, phlog) with 40% diop. patches and sections. Similar to 93.5-96.5.					
108.0	124.5		Grey Banded Calcitic Dolomitic Marble - somewhat variable - medium to dark grey well banded f.g. calcite-dolomite. C.A. 45°-55°. Gen. 1-2% f.g. dissem. pyrite-po. Loc. sl. fetid. Loc. minor silicates, phlog. 111.1 - 117.2 - silicated, light grey, dol. marble with sections med.grey banded dol. Minor pyrrhotite. 112.3-112.4, 115.0 - tr Zn 114.3 - 114.6 - 15% pyrite-pyrrhotite in f.m.g. bands. 121.5, 122.2 - tr Zn					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
124.5	127.1		Siliceous Calcitic Marble - mottled pinkish-grey f.m.g. calcite with irreg. grey quartz patches. 124.6 - 124.9 - grey diopsidic quartzite 125.2 - 125.4 - brown-grey diop.-quartz, some banded.					
127.1	139.3		Silicated Dolomitic-Calcitic Marble - pale creamy grey, f.m.g. calcite with variable dol. content and with 10-15% pale v.f.g. diopside bands. C.A. 45°-55°. Minor phlog., pyrite					
139.3	142.6		Banded Diopside-Quartz Rock - alternating stripes of laminated grey diop.-quartz and pale greenish-grey diop.wispy quartz laminations in latter. Similar to 29.5-37.8. Minor pyrrhotite, pyrite. Banding loc. disrupted by fractures, minor folds and calcite veinlets. Poss. some brecciation.					
142.6	150.6		Grey Banded Dolomitic Marble - alternating sections med.grey well banded f.g. dol. and pale grey f.m.g. dol. Loc. v. sl. fetid. Minor calcite, pyrite, pyrrhotite. C.A. 45°-55°. 142.8 and 150.4 - a few m.g. pyrite bands in off-white m.g. dol.					
150.6	153.4		Serpentinized Calcitic Dolomitic Marble - pale greenish grey patchy. Irreg. serp. patches replacing diopside in f.m.g. calcitic dol. Minor po, py, phlog. 151.3 - 151.5 - poorly banded quartz-diop.					
153.4	155.2		Silicated Dolomitic Calcitic Marble - pale grey, poorly banded C.A. 45°-50°, with 15% f.g. diop. layers. Similar to 127.1-139.3. Minor serp., po, phlog.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
155.2	156.0		Siliceous Calcitic Marble - pale pinkish, sl. mottled f.m.g. calcite, with 10% irreg. grey quartz patches. Minor diop.(?), serp. dol. (?). Similar to 124.5-127.1.					
156.0	157.9		Banded Pyritic Calc.-Silicate - distinctive med-dark brownish-grey, well banded, v.f.g. sugary calc.-silicate (poss. diop.-quartz granulite?) C.A. 60°-70°. About 10% f.g.-v.f.g. dissem. pyrite. Minor calcite and serp. veinlets. A few red (oxidized?) fractures.					
157.9			End of Hole - Casing pulled; not cemented.					
			Comment: A strong symmetry exists from 124.5 to 156.0, suggesting a possible fold axis within the grey banded unit 142.6-150.6					
			Lost Core: 0.1m - 109.1-112.2; 145.7-148.8; and 148.8-151.8					
			Core Recovery = 99.8%					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-24

PROPERTY: Salerno Lake	TP OR AREA: Snowdon Twp.	AZIMUTH: N 69°E	DATE STARTED: Feb..25, 1978	CORRECTED DIP TESTS: none
PROJECT: 188	LOT & CONC.: Conc.III,Lot32, S½	DIP: -45°	DATE COMPLETED: Feb. 25, 1978	LOCATION SKETCH OF HOLE
CLAIM NO.: E0469686	CO-ORDINATES.: 0+89N	LENGTH: 51.2 m	DRILLED BY: St. Lambert Drilling	
GRID NO.: West Grid	7+35E	COLLAR ELEV.: 995 m	LOGGED BY: W. E. Roscoe	

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
0	1.6		Overburden					
1.6	13.8		Diopside-Quartz Rock - pale greenish grey to off white, fg - cg diopside with 25% grey quartz sections and irreg. patches. Loc. lt greymcg. tremolite patches. Loc. minor pyrrhotite. Qtz. loc. fetid. 2.4- phlog bands. Diopside is bleached from surface weathering					
			1.6 to 7 metres					
13.8	18.3		Diopside - pale greenish grey massive fg-cg diop. with 10% irreg. mcg tremolite patches;loc. minor pyrrhotite spots; salmon calcite.Similar to 1.6 to 13.8, minus quartz.					
18.3	23.2		Diopside-Quartz Rock - pale greenish-grey massive diop with 35% grey fg glassy quartz sections, patches. Similar to 1.6-13.8 Qtz is loc. fetid					
23.2	25.7		Diopside - pale greenish grey, msv. diopside consisting of cg diop. and vfg white sugary diop. Similar to 13.8 - 18.3 m					
25.7	30.8		Silicated Dolomitic Marble - light grey mg dol. with 15% diopside sections. Loc. minor trem., pyrrhotite. 25.7 - tr. Zn					
30.8	36.5		Dolomitic Marble - light grey, mottled, mg. dol. Minor diop., pyrite, trem. Loc. fetid 35.1 - 36.2 - some diop.-trem-calc.-py 35.2 - tr.Zn in fmg black sphal.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-24

SHEET 2 OF 2

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS %Zn	ASSAYS %Fe
36.5	39.5		Pyritic Dolomitic Marble - pale to light grey mg. drk. mb. with 2-3% fmg dissem & banded pyrite. C.A. 45°-70° Minor diop.-trem. Loc. minor calcite, phlog. Grades to above and below units						
39.5	41.5		Silicated Dolomitic Marble - Lt. gry mg. dol, 15% diop.-trem, minor calcite, loc. minor phlog.						
41.5	46.7		Grey Banded Calcitic-Dolomitic Marble - dark, med. and lt. grey well banded fmg - calc-dol. C.A. 65° - 70°. Loc. sl. fetid. Loc. minor silicates, incl. serp. Contains 1-3% fg. pyrite dissem., loc. in thin bands						
			42.0 - 43.4 Minor sphal. est. ½% Zn	2992	42.0	43.4	1.4	0.41	2.77
			44.1 - tr Pb - Smeared galena in calc.						
46.7	51.2		Silicated Dolomitic Marble - light grey, patchy mg. dol, minor calcite, loc. phlog. 20% diop. (loc. serp'd patches).						
51.2			End of Hole Casing pulled. Core Recovery near 100%						

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-25

Sheet 1 of 3

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
Salerno Lake	Snowden Twp.	N21°W (true)	Feb. 26, 1978
PROJECT 188	LOT & CONC. Conc.III, Lot 32,S½	DIP -45°	DATE COMPLETED Feb. 28, 1978
CLAIM NO. EO 469686	CO-ORDINATES. 0+93N	LENGTH 105.2	DRILLED BY St. Lambert Drilling
GRID NO. West Grid	5+87E	COLLAR ELEV. 969 m	LOGGED BY W. E. Roscoe

CORRECTED DIP TESTS: none

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
0	2.4		Overburden					
2.4	8.8		Grey Pyrrhotitic Dolomitic Marble - medium and light grey mottled fmg dol., fair banding C.A. 45° +. fg dissem. pyrrhotite 3-4%. In part somewhat calcitic. Loc. sl. fetid. Generally somewhat magnetic. Minor diopside. 2.4-3.0 - weathered, bleached and sl. rusty. 4.9-5.1 - 15% pyrite bands.					
8.8	12.2		Grey Banded Dolomitic Marble - med. grey, sl. calcitic, fmg. dol. 1-2% vfg dissem. pyrite, minor pyrrhotite. Minute black graphite flakes appear to give grey colour. Mod. well banded. C.A. 45°-50°. Grades to next with 0.1 m diopside at contact.					
12.2	19.9		Pyrrhotitic Dolomitic Marble - light grey, fmg sl. calcitic dol. Dissem. & some banded fg pyrrhotite and pyrite 3 - 4%. Gen. somewhat magnetic. 14.3 - 14.6 Grey massive diop. 14.6 - 15.2 Abund. cg salmon & grey calcite 16.8 - 19.9 Transition to next unit - Sulphide content lower. Contains 10% diop. patches.					
19.9	32.5		Silicated Dolomitic Marble - variable unit, light grey to light greenish grey, generally mottled. > 60% diopside-tremolite, fg-cg. Loc. sections with fmg. diss. pyrrhotite pyrite.					
32.5	35.2		Diopside-Tremolite-Quartz Rock - pale grey, massive mcg. diopside with some mcg trem. crystals and mg trem. sections. 32.8 - 33.0 irreg. qtz bands. Loc. mg off-white dol.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-25 SHEET 2 OF 3

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS %Zn	ASSAYS %Fe
35.2	39.5		Dolomitic Marble - light grey fmg dol., mottled, poorly banded C.A. 40 - 50°. Poss. 2-3% fg., dissem pyrite & pyrrhotite. Minor phlog, calcite. Minor silicates, esp. towards 39.5 Tr. Zn at 39.5						
39.5	41.7		Grey Banded Dolomitic Marble - minor Zn. Med and lt. gry fg dol. well banded, C.A. 40°-60°. Loc. calcitic, Loc. slightly fetid. Loc diop. patches partly serp'd. Dissem py-po. Zn mineralization is fg. occas. mg. sphal. assoc. pyritic banding.						
			40.0 - 40.7 Est. ½% Zn, 3% py-po	2993	40.0	40.7	0.7	0.28	2.47
			40.7 - 41.1 Est. 2% Zn, 20% py	2994	40.7	41.1	0.4	1.32	15.0
			41.1 - 41.7 Est. 1% Zn, 5% py	2995	41.1	41.7	0.6	0.33	2.73
41.7	45.5		Diopside-Quartz Rock - pale grey msv.diop. with 10% streaky grey fetid quartz bands. Dark grey laminated to blotchy diop.-qtz. minor serp., at both contacts (41.7 - 42.1 and 45.3 - 45.5) C.A. 45°						
45.5	53.9		Grey Banded Dolomitic Marble - med to dark grey fg-vfg dol., loc. somewhat calcitic. Wellbanded C.A.45-55°. Contains 2-4% vfg diss. py, some vfg graphite. Loc-Brecciated looking in calcitic (- diop) matrix, eg.- 47.0-47.4, 51.2, 51.5 53.3-53.4.						
			Minor Zn mineralization:						
			46.8-47.8 est 1% Zn	2996	46.8	47.8	1.0	0.37	3.02
			47.8-48.9 est 1½% Zn, 10% pyrite	2997	47.8	48.9	1.1	0.75	4.21
			50.3-51.8 est ½% Zn, 5% vfg pyrite	2998	50.3	51.8	1.5	0.05	2.74
			in dk. grey, vfg graphitic, calcitic dol. mb						
			Tr. Zn throughout rest of unit.						
53.9	60.5		Silicated Dolomitic Marble - light grey, mottled, mg. dol. with 30-40% diopside patches and sections. Loc. minor serp., calc., po. Brecciated appearance 54.0-54.6 55.3-55.5 - grey banded dol.						

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-25 3 3

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	ASSAYS % Fe
60.5	83.6		Grey Banded Calcitic Dolomitic Marble - dark to med. grey fg. Well banded, C.A. 50°±. Banding loc. sl contorted & disrupted. 2-3% dissem. py-po. visibly graphitic in loc. dark grey to black layers between 62.5 and 72.6 (+).						
			68.3 - 69.0 - well layered, calc-dol. with minor serp., broken core.						
			Minor Zn mineralization in fg. sphal. bands:						
			81.6 - 82.4 est. 1% Zn	2999	81.6	82.4	0.8	0.17	1.19
			82.4 - 83.4 est. 3% Zn	3000	82.4	83.4	1.0	1.84	1.07
83.6	90.3		Transitional - mostly grey banded calc-dol. mb and light grey fmg calc.-dol. mb. with patches and sections of partly serp'd diop. and diop.-qtz.						
90.3	103.5		Diopside-Quartz Rock - pale creamy grey and grn-grey fg-cg diopside with avge. 30% streaky and patchy grey qtz., loc. sl. fetid						
			93.9 - 97.5 sections of mg. dol. mb						
103.5	105.2		Quartzite - med. brown grey, massive glassy quartzite with 5%, 1-4 mm dark grey qtz (?) blebs.						
			104.3 fg. blue fluorite grain						
			104.8 - 105.2 streaked with diop.						
105.2			End of Hole Casing pulled						
			0.3 m lost core 72.6 - 75.6						
			Core recovery 99.7%						

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-26

Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
Salerno Lake	Snowden Twp.	N60°W	Feb. 28, 1978
PROJECT	**LOT & CONC.**	**DIP**	**DATE COMPLETED**
188	Conc. III, Lot 31, S½	-45°	March 2, 1978
CLAIM NO.	**CO-ORDINATES.**	**LENGTH**	**DRILLED BY**
EO469685	1+16N	136.6m	St. Lambert Drilling
GRID NO.		**COLLAR ELEV.**	**LOGGED BY**
West Grid	3+16E	970m	W.E. Roscoe

CORRECTED TESTS

Depth	MBrg	TBrg	Dip
133.6	N48W	N58W	-49°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
0	1.7		Overburden					
1.7	8.9		Grey Banded Dolomitic Marble - med grey, well banded fg dol. C.A. 65° Some light grey phlogopitic fg dol. interlayered. Minor pyrite, calcite. Loc. sl. fetid. Loc. minor pyrrhotite. Few specks fg sphalerite @ 4.1, 4.3, 7.6. Dissem. py-sphal. 8.4-8.5, est. 2% Zn					
8.9	10.7		Silicated Dolomitic Marble - mostly msv., mottled greenish-grey diopside, partly serpentinized dark grn.					
10.7	12.4		Grey Banded Dolomitic Marble - med. grey, banded, fg dol., as 1.7-8.9. Loc. contorted banding. Traces fg sphal. throughout assoc. minor pyrite, C.A. 75°					
12.4	17.3		Black Graphite Quartzite - dark grey to black, banded fg quartzite. Minor diopside, calcite. Banding variable, commonly disrupted, loc. poss. brecciated look. Contains 5% magnetic pyrrhotite blotches, bands veinlets, minor pyrite. Loc. blebs to 1 cm. of massive black graphite. Loc. somewhat conductive. Tr. Zn 12.4-13.1					
17.3	34.3		Grey Dolomitic Marble - variable: mostly med. grey banded fg dol. in part pyritic-pyrrhotitic dol., in part pale grey mg. dol. C.A. 55°-65° Minor Calcite, loc. phlog., loc. serp. 19.3 - 19.6 - 30% fmg magnetic pyrrhotite, pyrite 23.7 - 24.0 - Grey qtz. - diopside 25.4 - 26.7 - Lt. grey mg dol. with 5% serp bands 29.2 - 1 to 3 mm band of fg dark sphalerite 31.6 - 34.3 - gradational to next unit					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S - 28

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
34.3	42.0		Silicated Dolomitic Marble - light grey, mottled, patchy. About 50% diopside. Minor tremolite, calcite, loc. minor pyrrhotite.					
42.0	45.3		Diopside - mottled fg white diop and cg pale grn. gry diop. Loc. minor calcite, trem.					
45.3	48.2		Silicated Dolomitic Marble - light grey. Patchy diop. (50%) minor calc-trem, in mg mottled dol.					
48.2	50.2		Diopside-Quartz Rock - light grey patches and streaks of qtz (40%) in diopside. Cg trem. 48.4					
50.2	50.9		Silicated Dolomitic Marble - as 45.3 - 48.2					
50.9	62.0		Grey Banded Calcitic-Dolomitic Marble - med. dk and light grey, well banded fg dol., poss. 15% calcite. C.A. 75 - 80°. Vfg diss. pyrite throughout, loc. up to 5%. Loc. blebs and thin bands graphite. Tr Zn @ 52.8, 54.5, 56.0. 57.0-58.8 light grey fmg dol., minor diopside.					
62.0	64.8		Diopside-Quartz Rock - light greenish grey msv. diop. with 45% mg, grey, vitreous, fetid quartzite in centre of unit.					
64.8	69.8		Dolomitic Marble - light grey, sl. mottled mg dol. with 1 - 2% fg dissem. pyrrhotite. Minor diop, calcite. Loc. poorly banded. Loc. sl. fetid.					
69.8	79.2		Grey Calcitic-Dolomitic Marble - med. to dark grey, fg - vfg. calcitic dolomite. Frequent white calc. veinlets. loc. graphitic bands, fg blebs Minor vfg-fg pyrite. In part poorly banded., loc. well banded. Loc. serp. blebs. 80.3- tr Zn					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	ASSAYS % Fe			
79.2	88.7		Grey Banded Calcitic-Dolomitic Marble - med.- dark grey, well banded fg. C.A. 55-70° Banding loc. contorted. In part composed of calc. veinlets. Minor po-py. Loc. minor diop., phlog. 79.2 - 83.4 Thin white, bands of fg soft soluble mineral - gypsum (?). 82.5-84.1 Black graphitic bands. Transitional to next unit									
88.7	92.2		Silicated Dolomitic Marble - light grey fmg dol. with patchy diopside-trem. Minor calcite, pyrrhotite 89.7 - 90.3 - gry banded calc. dol. mb.									
92.2	100.2		Quartz-Diopside Rock - light grey fg. quartzite (loc. v. sl. fetid) with 20% pale diopside streaks and sections. Somewhat banded 99.1-99.9, C.A.-75°									
100.2	120.8		Grey Banded Calcitic Dolomitic Marble - med. grey, well banded, fg. calc-dol. C.A. 75-85° Minor pyrrhotite, pyrite, graphite. Notable graphite banding and blebs at 101.6, 107.6, 109.8, 110.8, 113.2 - 113.4, 116.3, 120.7, 116.3 - 120.8 Occas. diop. sections, 118.7 - 120.8 some brecciated dol.									
120.8	125.4		Grey Banded Calcitic Dolomitic Marble - with Zn mineralization, med grey fg, banded. Similar to above unit. 124.0-125.4 Minor diop., somewhat irreg. banding. Zn mineralization is in fmg sphal-pyrite bands.									
			120.8 - 121.1 - Est. 15% pyrrhotite bands; 1% Zn	3901	120.8	121.1	0.3	0.34	12.9			
			121.1 - 121.7 - Est. 3% Zn	3902	121.1	121.7	0.6	2.28	3.35			
			121.7 - 122.4 - Est. Tr. Zn	3903	121.7	122.4	0.7	0.15	1.34		1.74% Zn	
			122.4 - 123.5 - Est. 3% Zn	3904	122.4	123.5	1.1	2.45	6.57		2.4 m	
			123.5 - 124.9 - Est. Tr. Zn	3905	123.5	124.9	1.4	0.02	1.30			
125.4	128.3		Silicated Dolomitic Marble - 20% patchy gry diop. in pale grey mg dol. Minor phlog, po. 127.0 - 127.6 - Grey banded calc-dol. mb 127.6 - 127.8 - Streaky diop.-qtz.									

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-26

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
128.3	135.3		Diopside-Quartz Rock - massive light grey cg and white fg diop. with 5% grey qtz. patches.					
135.3	136.6		Silicated Dolomitic Marble - pale grey fmg dol. with 20% diop.					
136.6			End of Hole - Casing pulled					
			Lost core: 0.1 m from 26.8-29.9, 0.2m from 29.9-32.9, 0.1 m from 130.5 - 133.5.					
			Core Recovery = 99.7%					

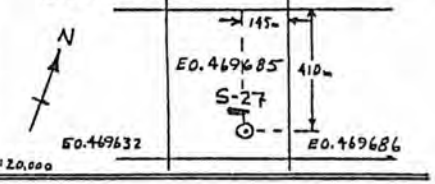
S-27 Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
Salerno Lake	Snowden Twp.	N60°W	March 3, 1978
PROJECT: 188	LOT & CONC.: Conc.III, Lot 31, S½	DIP: -45°	DATE COMPLETED: March 5, 1978
CLAIM NO.: E0469685	CO-ORDINATES.: 0+89N	LENGTH: 133.5 m	DRILLED BY: St. Lambert Drilling
GRID NO.: West Grid	2+29E	COLLAR ELEV.: 967 m	LOGGED BY W. E. Roscoe, W. J. Cropper

CORRECTED ~~SURVEY~~ TESTS

Depth	MBrg	TBrg	dip
133.5	N39W	N49W	-46°

LOCATION SKETCH OF HOLE



METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION
0	1.7		Overburden
1.7	2.3		Dolomitic Marble - white, mg dol. Poss. boulder or bleached equiv. of below unit (?)
2.3	8.4		Grey Banded Calcitic-Dolomitic Marble - variable - 2.3 - 3.2 - lt. grey banded, C.A. 50-60°, 2-3% pyrrhotite bands fg dissem. 3.2 - 7.1 - dark gry graphitic, C.A. 50-60°, 5% fg. diss. po. Some hard graphite bands (prob. diopsidic) & belbs to 1 cm. Tr Zn 5.5-6.6 Somewhat magnetic 7.1 - 8.4 Diopside sections, irreg. banding. Minor pyrrhotite.
8.4	14.9		Dolomitic Marble - light grey, mottled to poorly banded, mg, dol. 2-3% fg diss. po, some bands. Minor calcite, diop, trem., phlog. loc.
14.9	17.2		Diopside-Quartz Rock - light grey, mottled diop., minor trem., calcite, with 20% lt. gry fetid qtzite in centre.
17.2	23.2		Dolomitic Marble - lgt gry, med. xl; Minor silication. Scat. minor py. Sphal traces 19.9-20.4
23.2	28.3		Silicated Dolomitic Marble - gradational to above & below. 25% diop; lgt gy-gn med xl; minor py
28.3	33.0		Diopsidic Marble - Fine xl gn diop. w. 25% lgt gy dol minor qtz and cal, scat py blebs
33.0	43.2		Silicated Dolomitic Marble - gradational from above lgt gy-gn med xl; minor py and po; qtz at 38.7

SAMPLE NO.	FROM	TO	LENGTH

ASSAYS

DRILL LOG HOLE NO. [illegible]

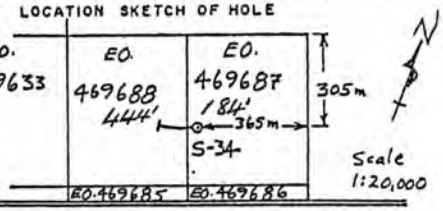
METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
43.2	47.5		Quartzy-Silicated Marble - 10% gy qtz blebs & streaks w. gy diop and mbl. Quartzite?, dark gy w. py 46.4 - 46.9					
47.5	61.6		Gray Banded Dolomite - light-med-dark gy; fine-med xl C.A. 60°-70° minor silication, Scat. calcitic areas, fine quartzite 52.8 - 53.1; Scat fine xl py Sphal traces 50.6, 51.7, 51.8, 54.4, 55.3, 58.5					
[illegible].6	64.3		Gray Banded-Quartzitic-Graphitic Dolomite - C.A.60-70° Dark gy; fine-crypto xl; Scat py, minor cal					
64.3	67.9		Gray Banded Dolomite - light-med gy; med xl; Minor silication Sphal trace at 64.7; Scat cal banding					
67.9	71.7		Quartzy-Diopsidic Marble - Mottled gy-gn; med xl; minor cal and py					
71.9	89.5		Banded gray Dolomite - Med-Dk gray; Mottled & fine banded C.A. 75°-90°. Dissem graphite and py loc. po blebs. Minor silication, locally calcitic banding & spotting					
89.5	96.4		Quartzy-Diopsidic Marble - 30% gy qtz, 40% gn-gy diop					
[illegible].4	120.4		Gray Banded Dolomite - Med-Dk gray; well banded; fine-med xl C.A. 70°-75°. Graphite speckled; Scat py. Minor silication and cal mbl areas					
120.4	121.5		Dolomite Marble - Med xl, light gy, minor sil					
121.5	124.9		Quartzy Diopsidic Marble - gn-gy mottled, gy qtz patches					
124.9	129.7		Dolomitic Marble - lgt gy-buff; med xl; loc. lgt gy banded; qtz and diop at 126.1- 126.3					
129.7	133.5		Quartzy-Diopsidic Marble - gy qtz streaks & patches, lgt gy diop; minor med xl dol					
END			Core Recovery(lost 0.2 m 109.2-112.2)= 99.9% 6' of Casing left in hole (could not be pulled). Hole					

W. E. Rowe

Tropari S-34

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED XXXX TESTS			
SALERNO LAKE	SNOWDON TWP.	S69°W	March 28, 1978	Depth	MBrg	TBrg	Dip
PROJECT 188	LOT & CONC. Conc.3, N½, Lots 32,	DIP -46°	DATE COMPLETED March 31, 1978	191.5	West	S80W	-48°
CLAIM NO. EO 469687, 469688	CO-ORDINATES. 7+02N	LENGTH 191.5	DRILLED BY St.Lambert Drilling				
GRID NO. West Grid	4+38E	COLLAR ELEV. 971m	LOGGED BY W.E.Roscoe				

LOCATION SKETCH OF HOLE



Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
0	1.5		Overburden					
1.5	7.7		Grey Banded Calcitic Dolomitic Marble - light-med.-dark grey, mottled f.g. dol. with calcitic dol. sections. Well banded. C.A. 50°-65°, avge 60°. Minor pyrite. 3-5% grey serp. patches. 5.0 - 7.4 - 2-3% <1-4cm bands of dark grey-black graphitic v.f.g. calc.-silicate, minor py.					
7.7	11.8		Diopside-Quartz Rock - 60% dull grey f.g.-c.g. diop. with 40% dull grey f.g. quartz in irreg. bands, fine streaks and patches. Quartz is loc. sl. fetid.					
11.8	14.5		Dolomitic Marble - light grey, f.g., minor calcite. Loc. sections grey banded. 12.1 - 12.3 - diop.-quartz rock 12.8 - 12.9 - serp'd diop. patches					
14.5	17.8		Grey Banded Calcitic Dolomitic Marble - med. grey, f.g. calc. dol., well banded. C.A. 45°-60°. 2-3% f.g. py. Loc. minor graphite, loc. minor serp'd diop. Traces f.g. sphal. throughout. Best section est. 1% Zn is 15.9 - 16.7.					
17.8	32.9		Silicated Dolomitic Marble - light grey to grey-buff m.g. dol., minor calc., phlog. pyrite; with >60% grey c.g.-f.g. diopside, minor py-po. Grey banded dol. sections: 19.7-19.9, 22.5-23.5, 32.1-32.2. 23.5 - 23.7 - diop.-quartz					

Metres FROM	Metres TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
32.9	43.1		Grey Banded Dolomitic Marble - dark-med. grey f.g. dol., loc. sl. calcitic. Well banded. C.A.50°-70°, av. 55°. Minor py. Several % v.f.g. dissem. graph. flakes (typical of this rock type). Loc. minor serp'd diop. Core surface somewhat finely mottled and pitted. 38.2 - soft, calcitic, friable. Tr Zn 34.9-35.0 as v.f.g. sphal. in white calc. bands.					
43.1	44.8		Diopside Rock - massive pale creamy-grey f.g. diop. Minor small quartz streaks and veinlets.					
44.8	48.1		Grey Dolomitic Marble - light-med. grey f.m.g. dol., loc. calcitic. A few % v.f.g. dissem. graphite, some fine graph. blebs. Minor po. Gen. mottled and with contorted thin diop. bands and streaks in part serp'd.					
48.1	49.6		Diopside-Quartz Rock - pale greenish-grey-buff massive f.g. and c.g. diop., 10% thick, streaky quartz bands. Tr Zn with f.g. py spots @ 48.2.					
49.6	53.8		Quartzy Silicated Dolomitic Marble - alternating 0.5-1m sections of grey dol. (loc. diopsidic, loc. banded) and diop.-quartz rock, similar to 48.1-49.6. Serp. seam 53.0.					
53.8	57.9		Silicated Grey Dolomitic Marble - light-med.gray, f.m.g., mottled dol., with 25% grey diop. irreg. bands and patches. Minor graph., tremolite. Loc. phlog. bands. Loc. calcitic.					
57.9	62.5		Serpentinous Grey Calcitic-Dolomitic Marble - light grey mottled f.m.g. calc. dol. Minor v.f.g. speckled graph. Loc. py. 25% pale to dark grey mottled serp. bands, some patches. Minor phlog. in irreg. bands. Core surface finely pitted. Ressembles above unit 53.8-57.9 with serp. replacing diop.					

DRILL HOLE NO. S-54

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
62.5	65.8		Interbanded Grey Dolomitic Marble & Pyritic Calc.Silicate					
			80% light-med. grey f.g. dol. Minor graphite, pyrite, serp. bands. 20%, <1-6cm bands of v.f.g. commonly laminated pyritic calc.-silicate. Tr Zn @ 63.8. Similar to prev. unit 57.9-62.5 with calc.-silicate in lieu of serp.					
			64.5 - 65.8 - grades to next unit with decr. calc.-silicates, some serp. patches.					
65.8	72.3		Grey Dolomitic Marble - light grey, f.m.g., uniform, clean dol. marble. Vague banding, C.A. 60°-70°. Occas. minor phlog., py. A few fine grains of sphal. @ 70.8 and 71.6.					
72.3	77.3		Interbanded Grey Dolomitic Marble and Pyritic Calc.-Silicate					
			72.3 - 72.5 - light brown, banded calc. marble, phlog., silicates.					
			72.5 - 73.1 - banded diop. quartz rock, pale greenish-grey. Streaky to laminated, minor f.m.g. pyrite.					
			73.1 - 75.6 - as 62.5-65.8. Calc.-silicate layers are folded isoclinally into J, M-W and S-Z shapes, esp. near centre. 74.1-74.2 graphite-calcite banded.					
			75.6 - 76.0 - brown-pale green banded serp'd diop. and phlog.					
			76.0 - 76.6 - massive greyish brown f.g. quartzite, minor calc.-py.					
			76.6 - 77.3 - as 75.6 - 76.0.					
77.3	79.2		Grey Banded Dolomitic Marble - light-med. gray, f.g. dol. Minor py. Well banded. C.A. 60°-85°.					
79.2	82.3		Quartzy Silicated Calcitic Dolomitic Marble - 40% pale greenish-grey diop., quartz streaks, loc. laminated, C.A. variable. 60% grey mottled f.g. calc.-dol. with diop. patches, partly serp'd.					
			81.8 - 82.3 - phlog. banded serp'd f.g. diop.					

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
82.3	87.8		Dolomitic Marble - variable unit. Mostly pale grey to med. grey vaguely banded f.m.g. dol., minor calc., phlog., pyrite. 82.3 - 83.4 - f.g. trem.-diop. calc. dol. marble. 84.9 - 85.3 - med. grey, f.g. mottled calc. dol. with 20% pyritic calc.-silicate bands <1cm wide. Some are tightly isoclinally folded. 85.3 - 85.6 - pale f.g. diop. with grey quartz bands and laminae.					
87.8	92.0		Banded Diopside-Quartz Rock - Thin banded pale-light greenish-grey f.g. diop. and grey f.g. quartz diop. C.A. 60°-70°. Minor phlog. layers. Occas. seams white, soft, soluble (?) mineral - gypsum(?).					
92.0	95.6		Interbanded Grey Calcitic Dolomitic Marble and Pyritic Calc.-Silicate 75% grey f.g. calc.-dol. marble, 25% dark grey-brown v.f.g. pyritic calc.-silicate bands <1-4cm thick. Calc.-silicate bands commonly graphitic.					
95.6	98.1		Silicated Grey Banded Dolomitic Marble - f.g. med.grey dol. well banded, C.A. 50°-60°, with 30% pale f.g. diopside bands.					
98.1	100.5		Interbanded Grey Calcitic Dolomitic Marble & Pyritic Calc.-Silicate as 92.0 - 95.6. Minor phlog.					
100.5	102.5		Banded Diopside-Quartz Rock - as 87.8 - 92.0.					
102.5	109.2		Grey Banded Dolomitic Marble - well banded, med.grey, f.g. dol., minor calc., py, phlog. C.A. 70°-75°. 102.5 - 103.5 and 106.5 - 107.6 - pale grey f.m.g. dol. 107.7 - 108.9 - sections of serp. and diopside					
109.2	111.5		Diopsidic and Serpentinous Dolomitic Marble - variable light grey buff f.m.g. dol.; with banded diop. sections, minor quartz, 109.2-110.0, 110.0-111.5 greenish-grey to pale serp. bands, somewhat calcitic.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-34 5 7

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
111.5	113.3		Serpentinous Dolomitic Calcitic Marble - mottled and spotted greyish-greenish-buff. Minor hematitic spots, prob. oxidized pyrite.					
113.3	117.0		Diopsidic and Serpentinous Dolomitic Marble - similar to 109.2-111.5. Minor quartz 114.4, 116.6.					
117.0	118.8		Calcitic Marble - in part mottled pink-grey f.m.g. calc. spotted with f.g. hematite; in part patchy grey-buff serpentinous calc. marble.					
8.8	129.9		Grey Calc.-Silicate - largely massive, v.f.g., med. brownish-grey calc.-silicate, prob. diopside. In part spotted with <1cm pale grey diop. flecks. Loc. indistinctly mottled and banded. Minor pyrite, loc. altered to hematite spots. 124.9 - 125.9 - pink-red-grey oxidized calc. marble with massive serp. brecciated book @ 124.9					
129.9	131.3		Dolomitic Marble - off-white, m.g., sl. mottled dol., with 3% light grey serpentinized (?) tremolite crystals up to 1cm.					
131.3	133.0		Grey Calc.-Silicate - as 118.8-129.9. 2-3% f.g. py., flecked with diop. 132.7 - 133.0 - massive dark red serp., fractured.					
133.0	134.2		Calcitic Marble - mottled pink, f.m.g. Minor silicates. Rather vuggy.					
134.2	138.9		Red Calc.-Silicate - dark brownish-red, massive, v.f.g. calc.-silicate. Red colour due to abund. hematite (oxidized pyrite) shot through. Oxidized equivalent of grey calc.-silicate units. 134.2 - 135.2 - mottled grey and red serpentine.					
138.9	141.4		Grey Calc.-Silicate - as 118.8-129.9 and 131.3-133.0. Sections hem.-spotted; mostly pyritic.					

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
141.4	146.2		Calcitic Dolomitic Marble - pale grey-buff, sl. mottled f.m.g. calc. dol. Minor phlog., loc. minor pyrite. 145.8 - 146.0 - med.-grey mottled to banded.					
146.2	148.1		Interbanded Grey Calcitic Dolomitic Marble & Pyritic Calc.-Silicate As 92.0-95.6, C.A. 80°. Many bands are slabby frags. 146.2 - 146.8 - Irreg. banded diop.-quartz.					
148.1	151.6		Interbanded Grey Calcitic Dolomitic Marble & Banded Diopside-Quartz 70% well banded pale green diop. loc. with quartz bands. 30% f.g. med.-grey mottled calc.-dol., part banded. C.A. 70°-75°.					
151.6	153.4		Serpentinous Dolomitic-Calcitic Marble - pale creamy grey-buff, somewhat banded. 40% pale serp'd diop. bands. Minor talc loc.					
153.4	160.5		Serpentinous Calcitic Marble - mottled pinkish-grey m.g. calc. with small spots and seams of dark serp. 153.5 - 154.2 - massive serpentinized, dark reddish-brown, hematitic f.g. calc.-silicate. 155.5 - 155.7 - massive mottled grey serp. 159.8 - 160.5 - dol.-calc. marble, pale grey					
160.5	162.9		Silicated Dolomitic Marble - pale grey-off white m.g. dol., minor pyrrhotite, with 20% pale grey diop. patches, some serp'd.					
162.9	165.2		Calcitic Dolomitic Marble - light grey, sl. mottled, f.g. calc. dol. Minor po, loc. serp'd diop. patches. Loc. phlog. bands. 163.4 - 163.5 - finely banded diop. and diop.-quartz.					
165.2	167.0		Serpentinous Dolomitic Calcitic Marble - >50% serp. as banded greys and greens, some mottled, in light-med. gray dol.-calc. Minor phlog. bands.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-34

Metres FROM	Metres TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
167.0	170.2		Grey Dolomitic Marble - light grey, sl. mottled, f.m.g. dol. loc. sl. fetid. Spotted with 1-2% f.g. po and py. Minor phlog. 169.4 couple grains brown sphalerite.					
170.2	183.5		Grey Banded Calcitic Dolomitic Marble - med. grey, well banded, f.g. dol., minor py, loc. serp. C.A. 85°. Calcite content increases from 170.2 towards 183.5. 170.8 - 171.4 - small slabs and layers pyritic calc.-sil. 175.8 - 1cm brown chondrodite(?) xls in calcitic section.					
183.5	185.0		Interbanded Grey Dolomitic Calcitic Marble and Calc.-Silicate 70% grey mottled f.m.g. dol.-calc. marble, 30% laminated bands and slabs of dark grey calc.-silicate (incl. some quartz) and greenish diopside.					
185.0	187.3		Banded Diopside-Quartz - med.grey-green laminated f.g. diopside with some quartz. 25% sections mottled grey dol.-calc. marble.					
187.3	191.5		Dolomitic Calcitic Marble - light grey buff, mottled, f.m.g. calc., minor dol. Vaguely banded with diop. Minor phlog.					
11.5			End of Hole - Hole plugged at 15m, cemented with 3/4 bag. Casing pulled.					
			NOTE: Repetition and symmetrical distribution of units (e.g. 82.3-109.2) suggests possibility of isoclinal folding.					
			Core Recovery: near 100%					

A. W. Rose

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-35

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	-	Oct. 4, 1978
PROJECT	LOT & CONC.	DIP	DATE COMPLETED
188	Lot 32, Conc. 3	-90°	Oct. 5, 1978
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY
EO 469687	8+00N	129.0m	St. Lambert Drilling
GRID NO.	COLLAR ELEV.	LOGGED BY	
West Grid	6+00E	977m	W.E. Roscoe

CORRECTED DIP TESTS			
Depth	MBrg	TBrg	Dip
129	N01E	N09W	-83°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - Test Zones D and MGB down dip from S-8					
0	2.5		OVERBURDEN					
2.5	8.7		Serpentinized Silicated Calcitic Dolomitic Marble - very mottled - patchy, light greyish. Poss. 20% grey to reddish-brown serpentine spots and patches in m.g. dol. marble with 10%(+) calcite. Serp. probably replaced diopside. Loc. minor f.g. hematite, probably after pyrite. C.A. 40-60°.					
8.7	25.1		Silicated Dolomitic Marble - 30% grey diopside patches in white m.g. dol. marble. Loc. minor calcite, tremolite. Loc. serpentinized. Loc. sl. fetid. 10.3 - 10.5 - grey quartz with serp. at contacts 14.3 - 18.4 - off-white to grey massive diopside 21.3 - 2cm banded white diop. & grey serp. 24.6 - 24.9 - grey quartz, fetid, with diopside at contacts.					
25.1	26.5		Dolomitic Marble - light grey, pt. mottled, m.g. Minor phlog. Loc. pyritic bands. Gradational to next unit. 25.9 - 26.1 - brown f.g. pyritic calc.-silicate, massive.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
26.5	33.1		Grey Banded Dolomitic Marble - (Unit D) - well-banded light to med. grey, f.m.g. dol. marble; some mottled grey poorly banded sections. Loc. diop.-serp. bands and schist sections. Loc. sl. fetid. F.g. dissem. py, some po, 1-2%. Minor calcite, phlog. C.A. 60°.					
			29.7 - 30.0 - grey laminated partly serp'd diop. and dol.					
			28.2 - 33.1 - minor Zn mineralization as f.g. narrow sphalerite-rich bands (2-8mm).					
			28.2 - 28.4 - Est. 4% Zn, 15% pyrite	3938	28.2	28.4	0.2	7.08
			28.4 - 29.8 - Est. 1% Zn, 2% po, py	3939	28.4	29.8	1.4	0.48
			29.8 - 31.2 - Est. 1% Zn, 2% po, py	3940	29.8	31.2	1.4	0.51
			31.2 - 31.8 - Est. 5% Zn, 12% py	3941	31.2	31.8	0.6	3.25
			31.8 - 33.1 - Est. ½% Zn, 1% po, py	3942	31.8	33.1	1.3	0.24
33.1	36.6		Silicated Dolomitic Marble - light to med. grey f.m.g. dol. marble with sections of grey diop. and mottles of minor white diopside. F.g. 1-2% pyrrhotite and minor py throughout. Minor serp, grey dol., and tremolite. Gradational to next unit.					
36.6	45.1		Silicated Dolomitic Marble - off-white, sl. mottled. Variable silicate (10-20%), tremolite predominates over diopside. Minor pyrrhotite, pyrite, loc. up to 2%. Minor calcite.					
45.1	46.4		Silicated Dolomitic Marble - med.-lt.grey, similar to 33.1 - 36.6. Gradational into next unit.					
46.4	50.9		Grey Banded Dolomitic Marble - med. to dark grey, well banded f.m.g. dol. C.A. 60°-70°. Minor phlog. calcite. 1-3% f.g. pyrite throughout. Trace Zn @ 47.0, and 47.6 to 48.6.					
			49.0 - 50.0 - lt. grey banded dol. marble					
			50.4 - 50.9 - white, f.m.g. dol. marble					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-35 3 5

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
50.9	69.4		Banded Pyritic Calc.-Silicate - brown to dark brownish grey, well banded, fine-grained rock. C.A. 60°. Probably a mixture of diopside-quartz-tremolite. About 10-15% pyrite as f.g. disseminations and occas. thin bands and veinlets. Several % f.g. glassy brown mineral - poss. phlog.(?) 53.7 - 53.9 - white quartz 64.0 - 64.9 - buff-grey f.g. diopsidic minor calcite. 64.9 - 66.9 - dark brown serp. (after banded calc.-silicate) and mottled pink calcitic marble. 66.9 - 67.5 - f.g. buff-grey diop. 67.5 - 69.4 - dark brown serp., sheared towards 69.4. Heavy f.g. pyrite 66.4-66.6.				
69.4	70.5		Calcitic Marble - mottled pink, m.g. calc. marble, minor serp., grading to next unit with loss of calcite and mottling.					
70.5	82.7		Silicated Dolomitic Marble - light grey to pale grey m.g. dol. marble with 20% sections of greenish-grey diopside, minor trem. Minor calcite throughout. 77.3 - 79.4 - mottled diop.-trem.-dol., minor calc., qtz., serp.					
82.7	84.8		Diopside Rock - pale greenish-grey, massive c.g. diopside. Loc. dol., trem., qtz.					
84.8	91.5		Silicated Dolomitic Marble - similar to 70.5 - 82.7. 25% diop. sections in off-white m.g. dol. marble, minor calc., trem. Some mottled sections.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-55 4 5

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
96.3	101.9		Dolomitic Marble - pale to light grey, f.m.g. dol. marble, with 10% irreg. streaks and bands of grey serp., and ½ - 2% po-py. Minor calcite. 99.4 - 100.1 - massive dark grey-brown f.g. serpentine, fractured and somewhat sheared.					
101.9	105.7		Grey Banded Dolomitic Marble - medium to light grey f.g. dol. poor to fair banding. C.A. 60°-65°. Minor phlog. layers, serp. patches, pale calcitic layers, dissem. pyrite and po.					
105.7	121.2		Dolomitic Marble - pale grey to white, m.g. dol. marble. Minor calcite. Loc. minor pyrite. Scattered diopside sections, <5% in total. 108.5 - 109.1 - grey banded dol. marble 119.9 - 120.2 - massive f.g. phlog. and massive f.g. talc.					
121.2	123.0		Serpentine - Talc and Calcitic Marble - 121.2 - 121.7 - dark greenish brown serp. with m.g. silvery-grey flake talc, minor calcite. 121.7 - 123.0 - mottled pink calcitic marble, minor phlog. and f.g. serp. spots. In part contains f.g. blebs of clear quartz. Some serp'd diop. - qtz. Grades to next unit.					
123.0	129.0		Serpentine Dolomitic Marble - pale grey m.g. dolomite, loc. mottled, with 20% grey to reddish brown patches of serp. and serp'd c.g. diopside. Minor calcite, minor f.g. hematite spots, loc. phlog. 125.2 - 125.3 - fetid diopside.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. [redacted]

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
129.0			END OF HOLE - not cemented; casing removed.					
			Lost core: 0.8m from 111.0 - 114.0 - ground core 0.3m from 117.0 - 120.0					
			Core recovery = 99.1%					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-37 SHEET 1 OF 5

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED DIP TESTS				LOCATION SKETCH OF HOLE
SALERNO LAKE	SNOWDON TWP.	-	Oct. 6, 1978	Depth	MBrg	TBrg	Dip	
PROJECT 188	LOT & CONC. Lot 32, Conc. 3	DIP -90°	DATE COMPLETED Oct. 8, 1978	168.0m	N01E	N09W	81°	
CLAIM NO. EO 469687	CO-ORDINATES. 6+97N	LENGTH 168.0m	DRILLED BY St. Lambert Drilling					
GRID NO. West Grid	5+03E	COLLAR ELEV. 975m	LOGGED BY D. Robertson					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - To test the 'D' Zone downdip from S-32					
0	2.6		OVERBURDEN					
2.6	8.5		Banded Grey Dolomitic Marble - light to medium grey; fine grained. Banding well developed. Minor calcite. Some banded silicate sections interlayered w/the dolomite. Po finely disseminated 1-2%. 6.7 - 7.0 - altered section high serpentine ± anhydrite (talc?) possibly chlorite.					
8.5	12.3		Quartz Diopside Dolomitic Marble - light grey; fine to medium grained. Diopside and quartz somewhat banded. Patchy appearance of diopside in the dolomite. Minor calcite.					
12.3	16.1		Dolomitic Marble - light grey to grey; fine to med. grained. 30% pale grey whitish dolomite w/spotty patches of serpentine. 70% grey massive to weakly banded dolomite. Minor diopside and quartz sections, serpentine bands. Po as seams and flecks random 1-3%. Gradational from the massive dolomite to the grey banded.					
16.1	20.1		Silicified Dolomitic Marble - pale grey to partially mottled; fine to med. grained. Mostly diopside with some serpentine. Minor calcite. Po sparsely dissem. 1-2%. Gradational to next unit.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-37

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
20.1	27.0		Grey Dolomitic Marble - med. grey, fine to med. grained. Sections mottled with pale white and pale grey diopside - serpentine. Spotty serpentine patches. 30% of dolomite weakly banded. Minor calcite. Po ± Py ~1%.					
27.0	33.2		Silicated Grey Dolomitic Marble - light grey to grey buff, medium grained dolomite. Minor calcite Po, Py <2%. 60% banded diopside ± quartz. Sections of the dolomite are weakly banded. 32.1 - 32.3 - med.grey dolomite + sphalerite + Py. Est. 5-6% Zn.	3943	32.1	32.3	0.2	5.57
33.2	38.5		Grey Dolomitic Marble - generally weakly banded - well developed banding 37.7 - 38.5 - med. grey, med. grained. Finely disseminated flecks of Po and Py. 36.8 - 37.7 - crumbly serpentinous dolomite. Weakly calcitic, patches of serpentine.					
38.5	42.7		Diopside-Quartz Rock - pale greenish-grey buff, granular, medium grained, slightly mottled. Patches of serpentine. >60% diopside ± quartz bands. Local Po seam. Veins of calcite.					
42.7	48.8		Dolomitic Marble - light grey to medium grey, fine to med. grained. >30% med. grained, grey banded. Spots diopside and quartz sections. Minor calcite (<10%) salmon pink and white. Py and Po finely dissem. 2-5%.					
48.8	55.3		Silicated Calcitic Dolomitic Marble - pale buff-grey, fine to med. grained. Quite quartzitic in places. Predominately diopside. Phlogopitic. Minor fleck Po. Spotty quartz alternates with diopside and serpentine. Gradational to next unit.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-37

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
55.3	64.6		Calcitic Dolomitic Marble - light grey - buff grey short sections dark grey; med. grained. Colour banded light and med. grey dolomite. Somewhat mottled appearance. Patches of serpentine and local sections quite calcitic. Slightly fetid. Alternating sections of quartz-dolomitic marble, quartz calcitic marble, calcitic marble.					
64.6	72.4		Dolomitic Marble - dirty white to light grey, med. grained, fetid. Some phlogopite. Minor Py & Po. 65.7 - 66.5 - grey banded dolomite. C.A. 60°. finely dissem. Py (1%). Local 0.2m section of serpentine - greenish.					
72.4	76.9		Grey Dolomitic Marble - pale grey to med. - fine to med. grained. C.A. 55-65°. 80-85% med. grey - banded (fair). 74.3 - 75.0 - pale grey-green dolomite, patches of serpentine and calcite ~15% of unit.					
76.9	79.2		Interbanded Calcitic Dolomitic Marble & Pyritic Calc. Silicate - three interbedded components: a) pale green, fine grained serpentinous diopside with minor Po. b) calcitic phlogopitic dolomite - fine to med. grained - pale grey to green. c) finely laminated calc. silicate comprising quartz graphite ± diopside and Py.					
79.2	85.0		Dolomitic Calcitic Marble - buff pink to grey - mottled, med. grained, in part patchy. 83.9 - 09.5 - calcitic marble - mottled pink, slightly serpentinized and oxidized.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
85.0	116.0		Silicated Dolomitic Marble - off-white to pale grey, fine to med. grained dol. in bands alternating with 70% diopside, grey and white, ± serpentine. Minor phlogopite. Trace of Py. White dolomite slightly fetid.					
116.0	118.2		Diopside Rock - med. grey-blue, med. grained, fairly massive, fetid. > 80% grey diopside. Patches of calcite. Minor quartz < 2%. 117.9 - 118.2 - lt. grey dolomitic section - med. grained. Minor Py and Po.					
118.2	130.6		Banded Grey Dolomitic Marble (Unit D) - med. to dark grey - well banded, fine to med. grained. Local bands finely laminated graphitic calc. silicate. V. slightly fetid. Local minor calcite. C.A. 55°. Minor phlogopite (possibly after calc. silicate) - brown patches. Po and Py 5%. NO apparent Zn mineralization.					
130.6	133.2		Dolomitic Marble - off-white and very faint grey - slightly fetid, med. grained. Some phlogopite and calcite. Minor diopside, pale green to grey colour ± serpentine - patchy. Po and Py 1-2%. Fairly homogeneous.					
133.2	137.4		Banded Pyritic Calc. Silicate - dark grey to grey brown, very fine to fine grained, banded. Py >10% very disseminated. Calcite seams and patches. >80% banded calc. silicate rock. Veins and stringlets of possible feldspar material - 134.2 Several % glassy brown mineral - possibly phlogopite? - soft.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-37

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
137.4	157.8		Silicated Dolomitic Marble - off-white to pale grey fine to med. grained, mottled. Greenish serpentinous spots. Alternating bands of off-white dolomite and pale grey diopside (30%). Slightly to locally strongly fetid, increasing with diopside content. 144.9 - 145.5 - quartz and diopside rock Gradational to next unit.					
157.8	168.0		Dolomitic Marble - 75% a mottled pale grey to med. grained dolomite, alternating bands or patches of diopside (<10%) ± serpentine. 25% faintly developed banding in med. gray dol. marble. Slightly fetid. Finely disseminated Po and Py 1-2%. Minor amounts of phlogopite. Patchy green serpentine. Minor calcite.					
168.0			END OF HOLE - Not cemented. Casing removed.					
			lost core:					
			Core recovery:					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-43 — 1

Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	-	October 20, 1978
PROJECT 188	LOT & CONC. Conc.3, Lot 32	DIP -90°	DATE COMPLETED October 26, 1978
CLAIM NO. EO 469687	CO-ORDINATES. 5+97N	LENGTH 249.0 m	DRILLED BY St.Lambert Drilling
GRID NO. West Grid	5+17E	COLLAR ELEV. 985 m	LOGGED BY W.E. Roscoe

CORRECTED MK TESTS

Depth	MBrg	TBrg	Dip
200m	N11°E	N01°E	-77°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - TO TEST ZONE D ABOUT 200 m BELOW SURFACE					
0	0.7		OVERBURDEN					
0.7	1.8		Dolomitic Marble - off-white to lt.grey, f.m.g. dol. Somewhat calcitic, somewhat serpentinous and with weathered diopside.					
1.8	6.1		Grey Banded Dolomitic Marble - med. grey f.g. dol., somewhat calcitic, with 10% dark grey to black f.g. laminated pyritic calc.-silicate. C.A. 55-60°, loc. low angle. 3% f.g. dissem. pyrite. Some hematitic seams with fractured core at 4.6. Tr Zn @ 4.5, 5.6.					
6.1	14.4		Silicated Dolomitic Marble - pale to light grey m.g. dol., somewhat calcitic loc., with 20% diopside patches. Minor trem. Some lt. grey serp. 12.2 - 14.4 - pale grey dol., minor grey serp.					
14.4	31.5		Grey Banded Calcitic Dolomitic Marble - variable unit. Generally med. to light grey f.m.g. somewhat calcitic, dol. Banding fair to good, C.A. 65-80°, locally contorted diopsidic, loc. mottled. Minor py, loc. po. Tr Zn @ 26.0. 14.4 - 19.7 - gen. med-dark grey, v.f.g. graphitic, with occas. bands f.g. calc.-silicate and black serp. 20. - 21.3 - grey qtz bands, fetid. mottled diopsidic dol., pale grey					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
14.4	31.5	(cont'd)	28.6 - 29.7 - lt. grey f.m.g. dol.					
			29.7 - 31.5 - much black and white banded calc.-dol., black calc.-silicate 31.3-31.4.					
			Broken core @ 18.8 and 19.0.					
31.5	36.9		Weakly Silicated Dolomitic Marble - alternating sections of off-white m.g. dol. marble and lt.grey dol. marble, weakly banded. 20% grey diopside mostly in two sections with sl. fetid quartz in centre. Minor calcite. Loc. py, po.					
36.9	46.5		Grey Banded Dolomitic Marble - variable unit. Similar to 14.4-31.5. Lt. to med. grey, f.m.g. dol., somewhat calcitic, minor py, loc. po. C.A. 60-70°. Loc. mottled. Minor diop. and serp'd diop. bands. Mottled diop.-quartz, banded, 41.4-41.8. Loc. dark calc-silicate bands and diopside lamnae 42.1-43.2. Broken core and muddy gouge @ 42.7.					
			43.7 - 44.3 - massive grey c.g. diopside.					
46.5	55.1		Silicated Dolomitic Marble - pale grey to off-white rock composed of 60% m.c.g. diopside sections (minor c.g. trem.) 35% f.m.g. dol., and 5% grey sl. fetid quartz within diopside sections.					
			46.6 - 47.9 and 53.1 - 54.0 - silicated grey banded dol. marble with contorted banding. Loc. minor po, py.					
55.1	59.2		Silicated Grey Banded Dolomitic Marble - grey and white bands, somewhat contorted, of f.m.g. sl. graphitic dol. and white f.g. diopside. Somewhat calcitic. Loc. minor pyrrhotite, pyrite.					
			57.7 - coarse crystals of glassy, brown chondrodite (?).					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
59.2	65.4		Grey Banded Dolomitic Marble - uniform unit. Med.grey, well banded f.g. dol. C.A. 65-70°, but variable and folded (10°-90°) 60.7-61.5. Somewhat calcitic loc. Poss. 1% f.g. py, loc. c.g. blebs. Diopsidic with 5% po-py 64.4 - 64.8.					
65.4	67.8		Silicated Dolomitic Marble - similar to 46.5-55.1. Pale grey, 80% c.g. diop., 20% f.m.g. dol. Tr py.					
67.8	74.9		Grey Banded Dolomitic Marble - variable. 67.8 - 69.1 - poorly banded lt.-med.grey f.m.g. dol., loc. calc., 1% py-po. C.A. 65-75°. 67.8-68.6 - minor bands sphal., max. 0.5cm, est. 2% Zn	3975	67.8	68.6	0.8	1.85
			69.1 - 70.2 - pale grey to lt. grey, m.g. dol. minor silicates. Quartz band 69.6-69.7. Po @ 69.7-70.2.					
			70.2 - 74.9 - generally well banded med. grey f.g. dol. Minor calcite, loc. diop. C.A. 75-80°. 70.2-71.3 - 5% py streaks, dissem.					
74.9	77.8		Calcitic Dolomitic Marble - off-white to pale grey, f.m.g. calc.-dol. Calcite content increases towards 77.8. Minor diopside, po loc.					
77.8	82.9		Grey Banded Calcitic Dolomitic Marble - variable - 77.8 - 80.4 - banded f.g. grey calc.-dol. and off-white diop.					
			80.4 - 81.4 - mostly grey f.g. granular dol.-calc. marble. 81.2 - grains grey quartz and brown crystals apatite(?).					
			81.4 - 82.9 - granular, poorly to well banded f.g. calc.-dol. Dark calc.-sil. @ 82.7.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
82.9	87.0		Calcitic Dolomitic Marble - pale grey to buff-grey, mixed m.g. and f.g. calc.-dol. Apparently loc. diopside. Loc. minor phlog. F.g. po dissem., 1%.					
87.0	88.8		Dolomitic Calcitic Marble - pale to light grey, granular to mottled f.m.g. calc. marble. Prob. somewhat dolomitic. Core surface somewhat pitted. Some grey serp.					
88.8	91.5		Interlayered Grey Dolomitic-Calcitic Marble and Calc.-Silicate 70% highly mottled (black and white) f.m.g. dol. calc. with abundant f.g. graphite and f.g. dissem. po-py. 30% bands of laminated dark grey f.g. calc.-silicate with v.f.g. po-py. Many are brecciated slabs.					
91.5	101.4		Dolomitic Marble - variable unit. Mostly off-white f.m.g. uniform dol. marble with minor calc., loc. minor py. Occas. patches diopside, one tremolitic section. 92.6 - 93.4 and 99.0 - 99.9 - bands laminated white to buff-grey diop.-calc.-silicate, minor py, partly serpentinized. 96.5 - 97.2 and 100.4 - 101.2 - grey banded dol. C.A. 65°. 97.2 - 97.8 - black pyritic f.g. calc.-sil., part laminated.					
101.4	103.5		Interlayered Dolomitic Calcitic Marble and Calc.-Silicate similar to 88.8-91.5, except less mottled, calc.-silicate layers more brecciated. Some layers laminated greenish f.g. diopside.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43 SHEET 5 of 9

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
103.5	108.2		Dolomitic Calcitic Marble - light grey, poorly banded, f.m.g. dol. calc. Bands and patches of pale grey serp'd diop. Rare brown crystals, poss. apatite (?). Loc. py, po, phlog. 106.7 - 107.1 - grey banded dol.-calc. marble.					
108.2	116.6		Calcitic Marble - pale grey finely mottled f.m.g. calc. marble. Prob. minor dol. loc. Minor v.f.g. dissem. py. Minor quartz grains and thin bands. Loc. pale grey spots, very soft - poss. gypsum(?). 111.4 - 111.8 - bands of dark grey, laminated pyritic calc.-silicate, and pale grey lam. diop.-quartz.					
116.6	122.0		Silicated Calcitic Dolomitic Marble - pale grey to buff-grey. Patchy to poorly banded calc.-dol. Abundant patches diop., gen. part serp'd. Streaky quartz in diop. 117.2-117.6. Minor py, phlog. loc.					
122.0	126.6		Banded Pyritic Calc.-Silicate and Calcitic Marble - Sections (a) Brown-grey, f.g. calc.-silicate with 10-15% py, C.A. 60-65°. (b) Pale grey to buff-pink mottled, calcitic marble, minor py, loc. abundant, minor phlog., loc. quartz. 125.9-126.5 - hematitic stained, serpentinous, broken core.					
126.6	131.8		Serpentinized Silicated Dolomitic Marble - off-white m.g. dol. (minor calc.) with 25% brown to greyish serp'd diop. patches, changing to hard, non-serp'd diop. 130.2-131.8.					
131.8	134.9		Dolomitic Marble - off-white to pale grey m.g. dol. Minor calc., loc. minor py. Minor serp'd diop.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43 SHEET 6 9

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn				
154.9	155.6		Silicated Dolomitic Marble - off-white to white m.g. dol. with 25% grey diopside sections and patches. Diop. is serpentinized, core loc. fractured - 142.0-143.8. Loc. minor calc., thin po band @ 143.4. Loc. trem., quartz assoc. diop.									
155.6	158.8		Grey Banded Dolomitic Marble (Unit D?) - med.-dark grey, f.g. uniform dol. marble. Banding fair, C.A. 65-75°. F.g. dissem. py 1-2%. Minor phlog., loc. calc. Tr Zn @ 156.7.									
158.8	162.5		Grey Dolomitic Marble - with minor Zn. Light to pale grey f.m.g. dol., loc. weakly banded with py and sp. Minor py, 2-3% loc. Minor calc., phlog., grey serp. patches. Occas. lt. grey banded sections. 158.9 - 160.0 - massive grey hard f.g. calc.-silicate, loc. brecciated pyrite. 160.5 - 161.8 - bands, patches sphal-py to 2cm, Est. 2% Zn. 161.8 - 162.4 - dissem. f.g. sphal. Est. ½% Zn.	3976 3977	160.5 161.8	161.8 162.4	1.3 0.6	1.90 1.30		1.71% Zn 1.9m		
162.5	166.2		Silicated Grey Banded Dolomitic Marble - mostly f.g. grey dol. with contorted narrow diopside bands. F.g. dissem. po 1%. Some grey mottled diopsidic dol., 1% po, some grey serp. patches. 165.5 - 165.8 - massive grey calc.-sil. Traces sphal. @ 163.7, 164.5, 164.9.									
166.2	177.2		Grey Banded Dolomitic Marble - med. (loc. dark) grey, well banded, f.g. dol. C.A. 70-75°. Minor py, calc. 166.2 - 168.0 - minor sphal. Est. 2% Zn, 167.5-168.0. 168.0 - 168.9 and 173.4 - 174.6 - highly graphitic, black f.g. dol. marble, 5% py seams and dissem. 168.9 - 171.0 and 171.6 - 173.3 - somewhat	3978	167.5	168.0	0.5	3.77				

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
177.2	182.1		Silicated Dolomitic Marble - white to pale grey m.g. dol. with 20% diopside sections. Some sil. grey banded dol. Minor trem.-calc.					
182.1	184.6		Banded Pyritic Calc.-Silicate - typical brown-grey f.g. well banded calc.-sil., 5-10% f.g. py. C.A. 65-75°. Minor pale buff-grey f.g. diop(?).					
184.6	198.7		Silicated Dolomitic Marble - white to off-white m.g. dol. marble with 50% grey c.g. or f.g. diopside sections. Much mottled trem-calcite-diopside 185.3-189.4. 184.6 - 184.8 - prob. fault zone - brecciated pale green serp. in calcitic matrix. 194.6 - 195.1 - massive, grey mottled f.g. calc. sil.					
198.7	202.3		Diopside-Quartz Rock - massive pale grey c.g. to white f.g. diopside with 20% irreg. patches grey, glassy, fetid quartz. 80% quartz 201.0-201.9.					
202.3	208.1		Silicated Dolomitic Marble - similar to 184.6-198.7. 30% grey diop. sections. Loc. minor c.g. salmon calc.					
208.1	230.0		Grey Banded Dolomitic Marble - (MGB Unit?) - somewhat variable. Mostly med. grey f.g. dol., well banded. C.A. 60-70°. Minor f.g. dissem. py. Local sections: light grey poorly banded dol. with minor calc.; off-white diopsidic dol. 220.2- 228.2 - more pyritic (avge 5%) with minor Zn mineralization. Occas. sections dk. grey to black calc.-silicate and quartz with much pyrite, pyrrhotite and chlorite margins. Sphal. dissem. and in thin pyritic					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn				
208.1	230.0	(cont'd)	220.9 - 222.2 - Est. 1% Zn, 2% po-py.	3979	220.0	222.2	1.3	3.50				
			222.2 - 223.2 - Est. tr Zn, 2% po-py.	3980	222.2	223.2	1.0	0.48		2.77% Zn / 2.6m		
			223.2 - 223.5 - Est. 7% Zn, (3cm band), 5% py.	3981	223.2	223.5	0.3	7.21				1.65 Zn / 7.4
			223.5 - 225.0 - Est. tr Zn, 1% po-py.	3982	223.5	225.0	1.5	0.18				
			225.0 - 226.0 - Est. 1% Zn, 5% py-po.	3983	225.0	226.0	1.0	3.00				
			226.0 - 227.6 - no visible sphal., 3% py.									
			227.6 - 228.3 - Est. 1-2% Zn as honey-coloured poss. sphal. 5-10% py.	3984	227.6	228.3	0.7	2.46				
230.0	231.6		Dolomitic Marble - pale grey, mottled, minor calc., py, serp'd diop. spots. Grades to next.									
231.6	233.9		Silicated Dolomitic Marble - off-white m.g. dol., minor calc., with 10-20% patches and bands of grey diop. Loc. sl. fetid. Minor trem. loc.									
233.9	235.8		Diopside-Quartz Rock - white to pale grey, c.g. diopside with 20% grey, fetid, glassy, quartz patches and streaky bands. Similar to 198.7-202.3.									
235.8	240.5		Silicated Dolomitic Marble - similar to 231.6-233.9. White to off-white m.g. dol. with 20% diop. sections. Minor trem., calc.									
240.5	243.6		Diopside-Quartz Rock - as 233.9 - 235.8.									
243.6	246.4		Silicated Dolomitic Marble - white m.g. dol., with 20% sections trem.-diop. Minor calcite phlog.									
246.4	248.1		Calcitic Marble - mottled pink-grey m.g. calc. with abundant serp. Minor diop-trem.									

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-43

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
248.1	249.0		Calcitic Dolomitic Marble - pale grey mottled m.g. Minor py. Dol. and py content increase to end.					
249.0			END OF HOLE - not cemented, casing removed. Lost core: 0.3m, 81-90. Core recovery: 99.9%					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-54

Tropari

SHEET 1 OF 7

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	--	November 22, 1978
PROJECT	LOT & CONC.	DIP	DATE COMPLETED
3133	Conc.3 Lot 32	-90°	November 26, 1978
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY
EO 469686	0+97N	216.0m	St. Lambert Drilling
GRID NO		COLLAR ELEV.	LOGGED BY
West Grid	7+97E	989m	W.E. Roscoe

CORRECTED DIP TESTS

Depth	MBrg.	TBrg.	Dip
100m	N40E	N30E	-86°
216m	N40E	N30E	-79°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - TO TEST ZONE D SOUTHWEST OF HOLE S-56.					
0	2.0		OVERBURDEN					
2.0	8.2		Tremolitic Dolomitic Marble - pale grey, partly mottled, m.g. dol., with poss. 10% f.g. grey trem. - calcite bands 1-3cm. Minor diop., some partly replaced by trem. F.g. dissem. py, 1-2%. Mostly somewhat banded. C.A. 45°-55°.					
8.2	12.0		Quartz-Diopside Rock - alt. sections and patchy to streaky off-white to lt.grey diop. (50%) and lt. med.grey glassy quartz, loc. sl. fetid (50%). Traces f.g., lt.brown sphalerite in smokey grey quartz 9.6-10.0 and @ 10.6.					
12.0	16.5		Dolomitic and Grey Dolomitic Marble - pale - lt.grey m.f.g. dol., minor calc., py, trem & diop. with sections of med.grey, granular mottled f.m.g. dol., minor calc.silicates, and 1-2% f.g. py and po. 13.8-13.9 - banded quartz-diop.					
16.5	19.4		Quartz-Diopside Rock - as 8.2-12.0. Loc. 1-2% dissem. f.m.g. py in diop. sections.					
19.4	33.0		Banded Quartz-Diopside - very well banded mostly @ 1-2cm; 50% to dk. grey f.g. quartz (in part internally laminated), occas. bands and spots brown phlog.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	TO	SECTION 1" =	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
38.0	42.1		Silicated Dolomitic Marble - pale grey f.m.g. dol., loc. somewhat calcitic, minor phlog. & py, with 25% pale grey diop. sections and patches. 35.5-37.5 - pale greenish-grey, f.g. diopside with loc. abund. phlog. bands and spots, loc. quartz bands and laminae, 1-2% f.m.g. py. 40.1-40.4 - 60% grey quartz, fetid.					
42.1	49.5		Grey Banded Dolomitic Marble - med.-lt.grey, f.m.g. dol., minor calc., 1% f.g. py, loc. phlog., diop. bands. Occas. dark grey graphitic seams and bands. Well banded, C.A. 40°-60°. 45.6-46.1 & 46.5-46.7 - banded brown phlogopitic, pyritic calc.-silicate. Tr Zn @ 45.0, 45.4.					
49.5	53.6		Grey Banded Dolomitic Marble with Calc.Silicate - med.grey, well banded f.g. dol., minor calc., poss. 5% dissem. po & py. About 15% bands of dk.grey f.g. calc.-sil., pale grey contorted diop. bands, and patches of grey quartz w/diop. Loc. dk.grey graphitic bands. Loc. sl. fetid.					
53.6	63.2		Diopside-Quartz Rock and Silicated Dolomitic Marble - 55.7-58.8 and 59.6-63.2 - white and off-white f.g.-c.g. diop. (60%) with sections bands and streaks grey quartz (40%) 53.6-55.7 and 58.8-59.6 - white to off-white f.m.g. dol. with diop. sections, loc. trem., phlog., calc., py.					
63.2	67.3		Banded Diopside-Quartz - very well banded (cm to mm scale) pale greenish-grey--med.grey f.g.-v.f.g. diop. and med.-dk.grey v.f.g. quartz. F.g. py & po 2-5% dissem. L.c. tends towards a banded pyritic calc.-silicate rock. C.A. 40°-70°.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
66.2	67.3	(cont'd)	From 65.1-66.2, banding is folded. Loc. C.A. 0°, with a faint axial plane foliation.					
67.3	78.7		Silicated Dolomitic Marble - 20% sections and patches of pale grey diopside, minor trem. loc. Dol. grades from clean white m.g. dol. (67.3-71.0) to a sl. mottled lt.grey buff m.f.g. dol., minor calc., phlog., 1-3% f.g. dissem. & loc. bands po-py (75.0-78.7). A few med. grey bands C.A. 30°-40°. Tr Zn as f.g. dissem. black sphal., 78.4-78.5.					
78.7	83.3		Calcitic and Dolomitic Marble - pale grey-buff dol.-calc. marble and loc. pale grey to off-white f.m.g. calc.-dol., sl. mottled, minor py, loc. phlog. Some sections mottled calc. marble. Loc. diop. Banded diop.-quartz 80.0-80.2. Loc. grey calc.-dol. bands.					
83.3	88.5		Interlayered Grey Dolomitic Calcitic Marble and Calc.-Silicate - med. grey mottled m.f.g. dol.-calc., loc. phlog. py, with 10-30% 1-10cm bands of black, v.f.g., graphitic, pyritic calc.-silicate (prob. quartz-graph-py-diopside), commonly internally laminated. Some slabby and contorted bx frags. Some incipient brecciation of calc.-sil. layers with calc. veinlets.					
88.5	91.1		Grey Banded Dolomitic Marble - med.grey, f.g. dol., minor calc. Loc.py. Banding fair to good, C.A.45°. One 1-3m dk. brown sphal. band @ 89.6.					
91.1	93.6		Grey Banded Calcitic Dolomitic Marble with Calc.-Silicate Breccia - lt.-med.grey, well banded (C.A. 50°) f.g. dol. with off-white thin calcitic bands. Minor phlog, diop. bands, py. 10% small slabby frags. and boudined bands (up to 1cm thick) of the brownish-grey graphitic calc.-silicate, somewhat serp'd, with phlog. and py.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
83.3	96.3		Grey Calcitic Dolomitic Marble - lt.-med.grey, mottled, m.f.g. calc.-dol., minor phlog. Loc. banded. Grades to dol.-calc. marble w/phlog. and py 95.7-96.3. Tr Zn 93.6-93.8 and @ 95.3.					
96.3	100.0		Banded Pyritic Calc.-Silicate - greyish-brown, f.g. calc.-sil. with 10% f.g. dissem. py and po. Well banded. C.A. 40°-45°. Minor flecks diopside.					
100.00	106.5		Calcitic and Dolomitic Calcitic Marble - white to off-white, f.m.g. calc. marble, some sections dol.-calc. marble. 1% f.g. dissem. py, loc. phlog. bands. 100.0-101.6 - patches of grey quartz. 102.0 - friable broken core. Minor diop. spots.					
106.5	112.4		Banded Diopside-Quartz and Grey Dolomitic-Calcitic Marble - Similar appearance to 83.3-88.5. Interlayered on cm scale - a) lt. to pale grey diopside mottled with f.m.g. po b) dk.grey laminated pyritic calc.-silicate (apparently graphitic quartz-diop.), and lt. med.grey mottled f.m.g. dol.-calc., minor phlog. Occas. brecciation and calc.veining of calc.-silicates. Loc. calc.-sil. bands have rippled convex-concave contacts w/diopside layers.					
112.4	117.3		Grey Banded Dolomitic Calcitic Marble - lt.-med.grey mottled m.f.g. dol.-calc., some off-white sections, notably 112.4-114.3. Loc. py; 1cm band @ 113.5. Fair banding, C.A. 45°.					
117.3	127.4		Dolomitic [illegible] Grey Banded Dolomitic Marble - alternating a) off-white to pale grey m.g. dol., minor calc., loc. po-py. b) [illegible] grey banded mottled f.m.g. dol., loc.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
127.4	131.7		Banded Pyritic Calc.-Silicate - brownish-grey, f.g. calc.-sil., ~10% f.g. dissem. py, banding fair @ 60°-70°. Some calcitic sections, some calc. as loc. bx matrix. Diop. flecks common. Somewhat patchy, spotted texture, suggestive of bx.					
131.7	140.4		Serpentine and Calc.-Silicate Breccia - alternating sections 0.1->1m of a) dark grey-green to maroon serpentine (after calc.silicate and calc.-sil. bx), loc. sheared and broken, e.g. 135.3, 137.9, 138.9-139.2; b) pale grey-buff calc.-sil. breccia - >50% slabby to subrounded frags. <½-2cm in calc. matrix, and c) mottled, pinkish, oxidized, vuggy, m.c.g. calc. marble with serp. patches.					
140.4	143.4		Altered Pyritic Calc.-Silicate - lt.buff-grey, f.g. calc.-sil., loc. banded, 5-10% py, loc. altered to serp., with assoc. red Fe oxide staining. Loc. sections mottled, vuggy calc. marble.					
143.4	150.0		Siliceous Calcitic Marble - mottled pink and white f.m.c.g. calc. marble with poss. 20% irreg. lt.grey quartz patches, loc. streaks. Some lt.grey-buff serp'd pyritic calc.-sil. sections. 5-10% vugs <1cm lined with calcite crystals.					
150.0	156.0		Serpentinized Silicated Dolomitic Marble - pale grey m.f.g. dol., loc. calcitic, with 15% irreg. patches and spots of grey serp'd diopside.					
156.0	160.0		Dolomitic Marble - pale grey f.m.g. dol., minor calc. diop. spots, loc. phlog. seams, 158.2-160.0 - lt.-med.grey, poorly banded dol., loc. sl. fetid, C.A. 30°-50°.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn
160.0	165.7		Silicated Dolomitic Marble - pale grey, clean, m.g. dol. with 25% med.grey diop. sections and patches. Loc. sl. fetid.					
165.7	170.2		Silicated Grey Banded Dolomitic Marble - med.-lt.grey f.m.g. dol., minor calc., phlog. bands, banding fair to good, C.A. 50°-55°. 10% bands of pale grey diop. and med.grey serp'd diop.					
170.2	180.2		Silicated Dolomitic Marble - similar to 160.0-165.7. off-white to white m.g. clean dol. with 30% lt.grey diop. sections and patches, some with pale grey felted tremolite patches and bands. Unit loc. sl. fetid. Grey quartz bands near both contacts.					
180.2	186.1		Dolomitic Marble - white, clean, m.g. dol. with minor diop. patches, loc. calc., some pale grey dol. sections. Loc. sl. fetid. Grades to next.					
186.1	202.8		Grey Banded Dolomitic Marble (Unit D) - med.-dk.grey, some lt.grey banded f.g. dol., minor calc. Loc. sl. fetid. Py up to 2%.					
			186.1-192.0 - med. & lt.grey banded; C.A. 45°, occas. diop.					
			192.0-198.9 - dk.-med.grey, 15% black bands f.g. phlogopitic calc.-sil., some as hook folds, minor graph. spots. C.A. 45°-50°.					
			198.9-202.8 - minor Zn as f.g. sphal. dissem. & thin bands. Samples: Est. 2% Zn	3265	198.9	199.9	1.0	1.67
			Est. tr Zn	3266	199.9	201.4	1.5	0.55
			Est. 1% Zn	3267	201.4	202.2	0.8	0.70
			202.2-202.8 - est. trace Zn in lt.grey dol.					
202.8	210.4		Silicated Dolomitic Marble - pale grey, mottled, m.g. dol., minor calc. with 25% greyish diopside and tremolite-calcite bands and patches. Some sections					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-64

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
210.4	216.0		Dolomitic Marble - mottled, pale grey m.g. dol., 1% f.g. py, minor phlog. bands. 214.0-216.0 - some med.grey banded dol.					
216.0			END OF HOLE - Not cemented, casing left in. Core recovery - near 100%					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-67 Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	---	December 2, 1978
PROPERTY	LOT & CONC.	DIP	DATE COMPLETED
[illegible] 3	Conc.2, Lot 33	-90°	December 6, 1978
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY
TO 469678	0+98S	288.0m	St.Lambert Drilling
GRID NO.		COLLAR ELEV.	LOGGED BY
West Grid	8+45E	990m	W.E.Roscoe

CORRECTED SURVEY TESTS

Depth	MBrg	TBrg	Dip
144m	N37°E	N27°E	-76°
288m	N40°E	N30°E	-71°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - TO TEST ZONE D ON SECTION 1+00 South					
0.0	2.0		Overburden					
2.0	14.4		Silicated Dolomitic Marble - white to pale grey m.g. dol., minor f.g. py, with 25% lt.grey diopside sections and patches. Loc.trem.: 5.9 - streaky quartz-diop. Loc. mottled, somewhat phlogopitic, calcitic sections with a few % py.					
14.4	19.7		Grey Banded Dolomitic Marble - 14.4-16.8 - off-white m.f.g. dol. with minor lt. grey bands. Minor calc. 1% f.g. py. 16.8-19.7 - med.grey f.m.g. dol., minor calc. 1% dissem. f.g. py. Well banded. C.A. 50°. Tr Zn @ 18.3.					
19.7	37.1		Silicated Dolomitic Marble - pale, dull grey m.g.dol., minor calc., loc. sl. mottled, with 20-30% patches, sections and spots of lt.grey c.g. diop. & trem.-calc. Quartz patches @ 29.9, 36.3. Spotted with 1-2% f.g. (loc. m.g.) py. Po streaks @ 37.0.					
37.1	59.3		Grey Banded Dolomitic Marble - mostly med.grey, well banded f.g. dol., minor calc., C.A. 55°-60°. Minor py. Some sections lt.grey dol., minor phlog., calc. 37.1-39.5 & 52.8-59.3 - up to 10% bands of white diop., loc. quartz-diop. and dk.grey calc.sil. Loc. contorted banding.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67 SHEET 2 8

METRES FROM	TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
37.1	59.3	(cont'd)	43.2-45.7 & 47.3-50.4 - pale grey sil.dol.marble, with diop. (pt.serp'd) patches & sections.					
			45.9-47.3 - some bands grey pyritic calc.-sil., some soft, friable f.g. grey dol. with muddy serp. gouge @ 46.6.					
			55.3-55.4 - much f.g. po.					
			57.7-59.3 - freq. bands of black graphitic and v.f.g. graphitic dol. marble.					
			Tr Zn @ 37.1.					
59.3	60.9		Dolomitic Calcitic Marble - mottled pale grey m.g. dol. and white m.g. calc. Sections yellowish c.g. calc. & phlog-talcy calc with soft, buff, fibrous xls(?). 1-2% f.g. dissem py. Minor diop.					
60.9	65.3		Silicated Grey Calcitic Dolomitic Marble - pale grey, f.g. calc.-dol. with 2% f.g. diss. py, minor phlog. with 10% diop. patches and f.g. trem. Sections of med.grey banded f.g. calc. dol., C.A. 45°-55°. 1-2% f.g. py (loc. po), loc. black graph. bands; with 10% diop. bands & patches. 20% quartzy sections 61.3-62.3. Tr Zn @ 62.7.					
65.3	70.0		Diopside Rock - dull, pale grey, massive c.g. diopside. Loc. felted white trem. bands, calc. dol. patches, f.m.g. py.					
			65.3-65.5 - 70% felted white trem. C.A. 55°-60°.					
70.0	79.4		Quartz-Diopside Rock - alternating sections, irreg. patches, & streaky lt.grey quartz (80%) and pale grey c.g. diop. (50%). Loc. py spots.					
79.4	93.4		Silicated Dolomitic Marble - white to pale grey, sl. mottled, m.g. dol., loc minor calc., with 30% sections of lt-med.grey c.g. diopside. Loc. sl. fetid.					
			89.7-90.3 - sl. fetid grey quartz with diop.patches.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67 SHEET 3 OF 8

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
93.4	97.6		Dolomitic Marble - white to pale grey m.g.-f.g. dol. minor calc. 1% f.g. py as thin bands & dissem. 93.7-93.9 - vague bands brownish pyritic calc.sil. 93.9-94.8 - occas.bands phlog. F.g. dissem. sphal. & py. Est. ½% Zn	3279	93.9	94.8	0.9	0.09
97.6	100.2		Interlayered Dolomitic Calcitic Marble & Diopside - pale grey mottled f.g.-m.g. dol. calc.marble (70%) with bands & sections of banded to laminated off-white to lt.brown f.g. diop. and calc.-silicate. C.A. 40°-55°. 1-2% dissem. f.m.g. pyrrhotite, minor py.					
100.2	107.4		Grey Banded Calcitic Dolomitic Marble - med.grey, f.g. calc.-dol. and dol.calc. marble. Banding fair to good, C.A. 50°+. Thin white bands loc. isoclinally folded and contorted. Minor f.g. py & po. Trace Zn as f.g. sphal. @ 100.8, 101.7, 104.1.					
107.4	114.0		Grey Banded Calcitic Dolomitic Marble w/Banded Calc.-Silicate lt.-med.grey f.g. calc. dol. & dol. Calc. marble, loc. minor py & po. Gen. well banded, C.A. 60° +. Some sections off-white dol. marble, minor calc. 20% sections, bands and slabby bx frags. of lt.-med. brownish-grey laminated f.g. calc.-sil. and f.g. diop. with 2-3% f.g. po. Calc.-sil. is prob. f.g. quartz and diop. 111.7-111.9 - contorted isoclinal folds in grey banded dol. calc.					
114.0	131.2		Calcitic Marble - pale buff-grey, highly mottled, f.m.g. some c.g., calc. marble. Minor grey quartz in irreg. spots. 1-2% f.g. dissem. py. 115.1-124.7 - scattered patches and streaks (poss.5%) of mauve fluorite. 130.5-131.2 - bands of pale grey serp'd diop.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	ASSAYS FROM	TO	LENGTH
131.2	135.7		Calcitic Dolomitic Marble - pale grey, f.g. calc.-dol., minor phlog., f.g. py. A few % lt. purplish streaks and patches of fluorite(?). Occas. 1mm veinlets of soft, pale grey, apparently soluble gypsum(?).				
135.7	138.3		Silicated Calcitic Dolomitic Marble - as 131.2-135.7, except with 10% off-white, well defined bands of diop. with phlog. margins. Minor lt.purplish fluorite(?) and gypsum(?) veinlets.				
138.3	140.6		Diopside Rock - pale grey to off-white f.g. massive diop. Loc. minor calc.-dol. marble with phlog. Dissem. f.m.g. py 2%. Occas. phlog. bands, banded quartz-diop. bands.				
140.6	150.1		Banded Diopside-Quartz-Pyritic Calc.-Silicate - Alternating sections 5-20cm of: a) off-white f.g. diop., pt.ser'd with quartz spots, 1-2% pale py spots. b) laminated med.grey calc.-silicate grading to laminated quartz-diop. 5% v.f.g. py-po. C.A. 40°-50°. Minor phlog. bands. Occas. seams white soluble gypsum(?) <½-1cm, some as cross-fibre xls. 149.0-150.1 - grey, serpentinized calc.-sil. and dol.-calc. marble.				
150.1	159.7		Dolomitic and Grey Dolomitic Marble - off-white, m.g. dol., minor calc., py, serp. spots, and lt.-med. grey sl. mottled m.f.g. dol. marble, minor py, some calcitic sections. Loc. banded, C.A. 50°.				
159.7	162.6		Serpentinized Silicated Grey Banded Dolomitic Marble - med.grey f.m.g. dol., minor calc., some calc. sec-[illegible], minor py, with 20% white to grey patches and bands of serpentinized diopside.				

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
159.7	162.6	(cont'd)	160.7-160.9 - shattered core, some soft muddy gouge(?) 161.0-161.8 - 20% bands of black pyritic calc.-silicate, some white calc. seams.					
162.6	166.5		Dolomitic and Grey Banded Dolomitic Marble - similar to 150.1-159.7. Off-white m.g. dol., minor calc., and med.-lt.grey banded f.m.g. dol., some calc. sections. C.A. 45°.					
166.5	171.0		Quartz-Diopside Rock - alternating sectons, <0.1-0.4m, of lt.grey glassy quartz (50%) and white to off-white c.g. diopside. F.m.g. honey-coloured sphal. in diop. section 167.5-167.6 (est. 2-3% Zn).					
171.0	177.2		Dolomitic and Grey Banded Dolomitic Marble - as 162.6-166.5. Minor calc. Some hematite spots. Minor serp. patches. Some patches and seams of lt.pink carbonate. C.A. 70°-80°.					
177.2	187.6		Vuggy Carbonate Rock - mottled lt.pink m.c.g. carbonate (poss. ankenite? - rhombohedral, fizzes with HCl when heated). Poss. 25% vugs, in part containing soft pale grey to white f.g. gypsum(?). Poss. 5% grey f.m.c.g. calcite spots and veins. Loc. quartz patches. 177.6-178.1 - angular frags. of pink carb. in c.g. grey calcite.					
187.6	193.1		Calcitic Marble - highly mottled grey f.m.c.g. calc. marble. Loc. salmon c.g. 1-2% f.g. py. Variable dk. green serp. - mixed with calc. marble, and as patches and bands.					
193.1	201.1		Pyritic Calc.-Silicate - dark greyish-brown, f.g. calc.-sil. with 10-15% f.m.g. py, dissem., occas. bands.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
193.1	201.1	(cont'd	10% grey glassy quartz bands, some patches, 1-6cm. Loc. rimmed by f.g. py.					
201.1	203.1		Calcitic Marble - mottled, vuggy, pale grey to pale pink m.c.g. calc. marble. Minor f.g. py.					
203.1	218.3		Banded Pyritic Calc.-Silicate - med.-dk. greyish brown, f.g. calc.-sil., 10-15% f.g. py. Banding poor to fair, C.A. 50°-60°. Small diop. flecks and streaks, rare quartz blebs. 217.9-218.3 - salmon m.c.g. calc.-marble.					
218.3	224.4		Silicated Dolomitic Marble - white to off-white m.f.g. dol., minor calc., with 25% patches and sections of lt.-med.grey diopside, loc. serp'd. Loc. sl. fetid. F.g. sphal. 222.9-223.0, est. 1% Zn.					
224.4	226.3		Pyritic Calc.-Silicate and Grey Banded Dolomitic Marble - black, f.g., calc.-sil. Loc. dk.grey quartzite bands, with 5% f.g. py, loc. po, dissem. Well banded, C.A. 50°-60°. Prob. a diopsidic graphitic quartzite. At both contacts, 0.4m of lt.-med.grey banded f.g. dol., minor calc., py, phlog; as well as short sections within the calc.-silicate.					
226.3	244.0		Silicated Dolomitic Marble - off-white to pale grey, sl. mottled, m.g. dol., loc. minor calc., with 30% sections and patches of lt.-med.grey f.g. & c.g. diop., occas. pt. serp'd. Loc. sl. fetid. 239.3 - m.g. flake talc patch. 242.4-243.2 - massive med.grey c.g. diop.					
244.0	246.0		Dol[illegible] Marble - pale grey, m.f.g. dol., minor calc., serp. spots, loc. abund. phlog. bands, up to 1% py. 245.7-246 - grey banded, soft, friable, calc.-dol.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67 SHEET 7 8

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
246.0	257.0		Diopside-Tremolite Rock - pale greenish-grey f.g., massive diopside with 40% sections of lt.greenish-grey trem.-calc., mostly spotted with white diop. ovoids. <5% m.g. white dol.					
257.0	270.5		Silicated Dolomitic Marble - mostly off-white m.g.dol. with 20-30% sections and patches of f.g.diop., some trem.-calc. and mottled trem.-calc.-diop. Scattered c.g. calc. bands. 267.0-270.5 - frequent phlog. bands, 20% diop. pt. serp'd.					
270.5	274.4		Silicated Calcitic Dolomitic Marble - pale grey to pale grey-buff f.m.g. calc. dol. 25% dk. spots and lt.sections of serp'd diop. Loc. abund. phlog. bands. 1-2% f.g. py dissem. Massive grey f.g. calc.-sil. bands @ 270.9-271.0 & 273.5-273.7.					
274.4	275.7		Banded Diopside-Quartz - laminated pale apple green f.g. diop.(70%) and f.g. quartz(30%). Diop. is mostly serp'd. 2-3% f.g. dissem. py. C.A. 55°.					
275.7	277.3		Calcitic Dolomitic Marble - similar to 270.5-274.4, with less silicate. Pale grey, poorly banded with phlog., C.A. 55°. 10% serp'd diop. spots. 2% f.g. dissem. py+po. 276.9-277.0 - f.g. brown sphal., est. 2% Zn.					
277.3	278.4		Calcitic Marble - pale creamy-grey, mottled m.g. calc. marble with serp. spots, minor py. In part soft, friable.					
278.4	288.0		Silicated Dolomitic Marble - white m.f.g. dol. w/25% patches & sections ptly. serp'd diop., & mottled trem.-calc.-diop. Loc. 1% py-po.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-67

SHEET 8 OF 8

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
285.0			END OF HOLE - not cemented, casing left in.					
			Core recovery - near 100%.					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-69 — SHEET 1 OF 7

Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
GALERNO LAKE	SNOWDON TWP.	N69E	January 18, 1979
PROJECT 0193	LOT & CONC. Lot 33, Conc. II	DIP -70°	DATE COMPLETED January 23, 1979
CLAIM NO. SO 469677	CO-ORDINATES. (L7S)	LENGTH 234m	DRILLED BY St.Lambert Drilling
GRID NO. West Grid	(9+84E)	COLLAR ELEV. 970.3	LOGGED BY Alar Soever

CORRECTED SURVEY TESTS

Depth	MBrg	TBrg	Dip
126m	N79°E	N69°E	-69°
234m	N77°E	N67°E	-67°

LOCATION SKETCH OF HOLE

METERS FROM	METERS TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE: TO TEST IP ZONE K + D ZONE EXTENSION					
0	2.0m		OVERBURDEN					
2.0	45.9		Calcitic Dolomitic Marble to Silicated Dolomitic Marble m.to c.g., white to lt.grey. Calcitic in places - mottled appearance 2.0-7.3 - lt. pale grey, c.g. dolomite, minor diss. py+po. Few small patches pale green diopside, slightly calcitic, shallow vugs in places. 7.3-14.3 - silicated calcitic dolomite with large patches of c.g. grey to pale green diop. 13.1-13.5 - phlogopitic band w/calcite + py. 14.3-16.2 - dolomitic marble, white to buff - diss. phlog. Minor diss. py. 16.2-28.9 - silicated dolomite, white m.g. locally patches of green or lt.grey slightly serp. diopside. Few spots calcite stringers. several lt.green tremolitic patches. 28.9-33.2 - dolomitic marble, pale grey, m.-c.g. minor phlog, py. 33.2-35.7 - silicated dolomite - mottled lt. to dk.grey, with patches of dk.grey diop., minor serp. Several 1cm bands of phlog. 35.7-45.9 - dolomitic marble, c.g. grey, slightly calcitic, minor phlog. Several small patches of serp'd diopside.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-69

METERS FROM	METERS TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
45.9	48.6		Quartz Diopside Dolomitic Marble - qtz. diopside rock of f.g. green to grey diopside interbanded with qtz. Silicated dolomite 35% f.g. diopside, 20% tremolite. More tremolitic sections are calcareous. 45.9-46.2 - well banded qtz diopside. C.A. 70°-75°.					
48.6	52.6		Light Grey to White Dolomitic Marble - m.g. dolomitic marble, lt.grey to white, minor diss. phlogopite - weakly silicated minor diopside & f.g. tremolite needles, minor py+po. 1-2cm thick band of massive po 50.4-50.6 Tr Zn 48.6-47.1, 49.6 - bands of submassive sph. 49.6-50.1, C.A. 60°-70°. ~~Tr Zn~~ Tr Zn 50.7, 50.8-50.9, 51.0-51.5, 52.1-52.3, 52.5-52.8 Tr Zn - Samples Est. tr Zn	3299	48.6	49.6	1.0m	0.18
			Est. 9.0%	3300	49.6	50.1	0.5m	6.54
			Est. 0.4%	3301	50.1	52.6	2.5m	0.50
52.6	55.0		Diopside Rock to Silicated Dolomite - silicated dolomite, over 60% c.g. grey to pale green diopside. Several tremolitic sections at 53.0m & 54.0m, gradational to next unit. Minor diss py. Tr honey coloured sph. 53.0-53.9, 55.0					
55.0	38.5		Diopside [illegible] Rock - mottled, patches of grey qtz. in f. to c.g. white diopside. 55% qtz. 40% diopside, 5% calcitic stringers. 57.0-58.0 - diopside interbeded w/streaks of dk. grey qtz. 69.1-69.3 - diss. graphite & py in diopside. Est. 2% graphite, 1.5% py. 73.7-74.5 - diss. graphite + py in diopside Est. 4% graphite + 1% py. Tr honey to brown sphalerite. Tr Zn at 55.5, 59.3, 60.8, 64.6, 69.1.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-69 SHEET 3 7

METERS FROM	METERS TO	SECTION 1" =	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
83.5	96.2		Quartz Diopside Dolomitic Marble - white to lt.grey dolomite with ~60% c.g. diopside, 5% quartz patches, blebs of py ~0.5cm across scattered throughout ~3% - locally c.g. xls of calcite, tr graphite assoc.w/py. Tr Zn - 88.6, 89.0, 89.1.					
96.2	106.3		Silicated Dolomitic Marble - mottled grey to white, m.g., locally blebs & stringers of calcite, sl.fetid, up to 50% c.g. grey diopside. Blebs of py & patches of diss. py & po at 101.6, 104.5, 105.2-105.9. 97.0-97.1 - section of pink pitted calcite (gypsum?)					
106.3	112.1		Diopside Quartz - irregular shaped patches of qtz. in a pale grey to lt.green, f.to c.g. diopside matrix, locally tremolitic with masses of f.g. tremolite 15% qtz., locally blebs of py.					
112.1	116.6		Diopside Rock to Silicated Dolomite - variable unit pale green to grey. C.g. pale grey to green diopside interlayered with sections of m.g. tremolitic dolomite. Locally books of c.g. brown phlogopite. 114.9-115.2 - fine bands of dk. grey to brown f.g. calc. silicate. 115.6-115.8, 116.5 - bands of diss. to submassive py-po.					
116.6	125.7		Silicated Dolomite - white m.g. dolomite, with 20% patches of grey c.g. diopside. Locally f.g. diss. py, minor qtz at 120.1, 121.3.					
125.7	129.0		Dolomitic Marble - white to lt.grey, m.g., weakly banded, phlogopitic. C.A. 50°-55°. Locally silicated with c.g. patches of diopside.					
129.0	133.7		Silicated Dolomitic Marble - white to lt.grey, m.to					

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METERS FROM	METERS TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
133.7	138.9		Light Grey Banded Dolomite & Dark Grey Pyritic Calc. Silicate					
			lt.grey banded, m.g., dolomite interlayered with brecciated bands of dk.grey pyritic calc.silicate. C.A. 55°-60°.					
			133.7-134.6 - lt.grey banded dolomite.					
			134.6-135.7 - mottled w/dk.grey patches of pyritic calc.silicate.					
			135.7-136.5 - lt. grey banded.					
			136.5-137.8 - mottled with patches of pyritic calc.silicate.					
			137.8-138.9 - grey banded.					
			Minor diss. py, tr Zn scattered throughout unit.					
			Tr Zn at 133.9, 134.3, 136.3, 136.5, 136.7, 136.8, 137.1, 138.1, 138.4-138.9. Est. <½% Zn from 133.7-138.9.					
138.9	145.1		Silicated Dolomitic Marble - off-white to pale grey, m.g. with about 30% patches of c.g. diopside, phlogopitic, minor diss. py. Tr Zn at 140.0, 140.5.					
145.1	146.7		Diopside with Qtz & Pyritic Calc.Silicate - massive lt.grey to white, c.g. diopside, fractured with irreg. streaks of qtz. and patches of dk.grey v.f.g. calc.silicate, minor diss. py throughout.					
146.7	155.3		Dolomitic Marble - white to pale buff to lt.grey, f.g. diss. phlogopite, weak phlogopitic bands C.A. 70°. Minor diss. py, also few pyritic stringers throughout, very slightly calcitic.					
155.3	160.3		Calcitic Dolomitic Marble - pale greyish-green, m.g. dolomitic v.f.g. diss. py 1-2% diss. throughout. Small patches of purplish anhydrite 5%.					
			155.3-156.0 - soft white mineral gypsum, filling small cavities.					

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METERS FROM	METERS TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
160.3	165.1		Calcitic Dolomitic Marble - white to lt.grey, c.g., dolomitic marble, f.g. diss. py throughout, large calcitic patches -10% bands & irreg. shaped patches of purplish anhydrite, minor diopside as ~~e.g. calcitic~~ coarse grains. CALCITIC					
165.1	173.7		Grey Banded Dolomite & Pyritic Calc.Silicate - m.g. grey banded dolomite, quite phlogopitic., calcitic interbanded with thin bands of dk.grey to black pyritic calc.silicate, also interlayered with bands of c.g. white diopside. Minor qtz. @ 170.3, 169.7. C.A. 65°-70°. 50% pyritic calc.silicate, 35% grey phlogopitic dolomite, 15% diopside.					
173.7	130.0		Light Grey Dolomitic Marble - lt.grey, m.g. dolomite, faintly banded, minor phlogopite, locally minor f.g. diss. py+po.					
130.0	186.1		Pyritic Calc.Silicate, Diopside & Grey Banded Dolomite dk.grey, banded, pyritic calc silicate interbanded w/sections of white f.g.-c.g. diopside & grey phlogopitic dolomite. 60% pyritic calc.silicate, 20% diopside, 15% grey dolomite, 5% calcite stringers.					
186.1	190.3		Calcitic Mottled Grey Silicated Dolomite - f. to m.g., med.grey, dolomite with 35% patches of lt.grey, m. to c.g. diopside, minor diss. py. Minor f.g. diss. phlog.					
190.3	197.0		Calcitic Dolomitic Marble - lt.grey to buff, m.g. dolomite, slightly phlogopitic - patches of c.g. pink to buff calcitic purplish anhydrite, minor diss. py. As 160.3-165.1.					
197.0	198.4		Silicat[illegible]omitic Marble - white to very pale lt.grey, [illegible] with 15% patches of lt.grey diopside					

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METERS FROM	METERS TO	SECTION 1"=	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn
198.4	203.3		Grey Banded Dolomite - med. to dk.grey, f.to m.g. dolomite, few bands of dk. brownish grey f.g. calc. silicate. C.A. 55°, minor f.g. diss. phlog & py. 201.1-202.4 - unit is fractured, black gangue in fractures. 202.2-202.4 - soft black, serpentuous gangue. 202.9-203.1 - large grains serpentinized diopside.					
203.3	205.8		Dolomitic Marble - pale buff to white, c.g., dolomite, slightly phlogopitic, irregular shaped patches of white gypsum as vug filling, minor diss. py.					
205.8	209.8		Vuggy Carbonate Rock - 60% buff to grey ankerite? M.g. carbonate fizzes where heated, 15% white hydrous mineral expands & flakes pop off when heated. 10% pink mineral. Minor gypsum, anhydrite. Vuggy, mottled pink to white to grey.					
209.8	212.7		Silicated Dolomite - white m.g. slightly calcitic, minor m.g. diopside patches ~20%.					
212.7	215.3		Grey Mottled Dolomite - f. to m.g., grey dolomite with lighter calcitic patches, minor diss. py., fine bands of diss. sphl. @ 212.9, 213.3, 213.7, 213.9. C.A. 60°-65°. Tr diss. sph. @ 213.0, 213.2, 213.8. Sample Est. 1.25% Zn	3302	212.8	214.3	1.5	0.48
215.3	225.3		Silicated Dolomite - white, c.g. dolomite w/20% c.g. lt.grey diopside patches. 220.6-222.3 - numerous bands of phlogopite ~½cm thick. 224.9-225.3 - massive f.g. grey to lt.green calc. silicate diopside? banded on both sides by phlog. bands.					

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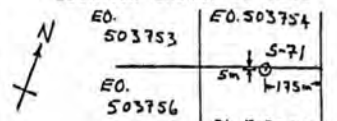
METERS FROM	METERS TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
225.3	231.4		Grey Dolomitic Marble - f. to m.g., med.grey, weakly banded, locally slightly silicated with minor trem. & diopside, minor diss. py, locally phlogopitic. Tr Zn @ 225.5, 226.9, 227.3, 228.4-228.5, 228.9, 229.3, 230.4. Fine bands of diss. sphl. from 227.4-228.2 - 227.0-227.2. Sample Est. 2.5%	3303	226.8	228.2	1.4	1.03
			Sample Est. <½%	3304	228.2	231.1	2.9	0.05
231.4	233.5		Silicated Dolomite to Diopside Rock - pale green to lt.grey, f.g. massive w/sections of massive f. to m.g. diopside. dolomite					
233.5	234.0		Banded Serpentinized Pyritic Calc.Silicate - lt.green to grey banded, f.g. pyritic calc.silicate, serpentinized, minor phlog.					
234.0			END OF HOLE - casing pulled, no cement.					
			Lost core: 204.0-207.0 0.1m 207.0-210.0 1.0m					
			Core recovery - 99.9%					

[redacted] EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-71 1 7

Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED XXXX TESTS			
SALERNO LAKE	SNOWDON TWP.	290°	Feb. 3, 1979	Depth	MBrg	TBrg	Dip
PROJECT	LOT & CONC.	DIP	DATE COMPLETED				
3188	Lot 27 Conc I	-45°	Feb. 6, 1979	156m	316°	306°	50°
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY				
EO 503755	4 + 55N	156 m	St. Lambert Drilling				
GRID NO.		COLLAR ELEV.	LOGGED BY				
SOUTH WEST (overlap)	8 + 76E	960.7	D. Robertson				

LOCATION SKETCH OF HOLE



METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE: To test a geochemical anomaly, a Zn showing and an I.P. anomaly					
0.0	1.9		OVERBURDEN					
1.9	22.0		Grey Dolomitic Calcitic Marble and Grey Silicated Dolomitic Calcitic Marble Lt.grey, mottled, f. to m.g., locally c.g. calcitic marble. Disseminated f. to m.g. of phlogopite, graphite, occasional biotite. Minor and random sections of a m. to c.g. diopside scattered throughout unit. Local small calcite vuggs (@6.7m) Py & po disseminated grains and clots 2% 15.4-17.4 - a finer grained unit, with increased graphite content. Get local finely laminated bands (mm scale) 17.0-17.4 Serpentine alteration is dominant in this unit. Unit is quite variable owing to the various distribution of specific minerals i.e. there are sections more graphitic; sections more calcitic; more altered sections w/serpentine; variable phlogopite content. The mix of specific units are too small to break down, but would always fall under a dolomitic marble.					
22.0	24.2		Calcitic Marble with Silicated Calcitic Marble Pale off-cream to very lt.grey, f. to m.g. calcitic marble. Abundant phlogopite as dissem. grains and narrow bands plus minor biotite. Minor diopside and serpentine. Silicated sections 23.1-23.3 and 23.4-23.6 and 23.8-24.0. Minor py & po - trace of cpy at 23.25 m. Locally the phlogopite has been oxidized					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. [illegible]

METRES FROM	METRES TO	SECTION 1" =	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
24.2	25.5		Banded Pyritic Phlogopitic Calc.Silicate v.f.g. med.grey to dark grey and Fe oxide red fine laminations. C.A. irregular and contorted between 70°-90°. V.f.g. py - po 5-6% V.f.g. oxidized phlog. 6-10%. Dark grey to black finely lamellae (mm scale) probably of diop ± quartz + graphite. Minor c.g. diop. and local serp. alteration.					
25.5	25.9		Quartz Diopside Rock - pale grey f. to c.g. Minor phlogopite restricted to narrow bands. Trace of py & po. An aqua-green mineral at 25.7 believed to be anhydrite.					
25.9	27.1		Intermixed Diopside, Quartz and Banded Calc.Silicate Rock Lt.grey with med. to dark grey irregular bands. Banding weak and contorted. Swirls of (1) diop + quartz + graphite, (2) quartz + graphite w/minor diop (3) black v.fine lamellae of calc. silicate and graphite w/minor quartz and diopside. Very narrow bands and swirls of oxidized phlog. Minor serp. Py + po 2-4% usually disseminated.					
27.1	30.1		Silicated Calcitic Dolomitic Marble - off-white to buff, f. to m.g., somewhat mottled. A mixed section w/varying proportions of diop. and calcite in pred. a dol. marble. Abundant phlog.(oxidized locally). Local quartz patches. Dissem. py + po. Traces of graphite.					
30.1	31.2		Intermixed Diopside, Quartz and Banded Calc. Silicate Rock Lt. to med.grey w/dark grey bands, fine to med.gr. Faint irregular banding that is contorted and swirled. Unit is pred. diopside with quartz as streaks and bands (mm scale). V.f.gr., fine lamellae of diop + quartz + graphite and calc. silicate. Narrow bands of oxidized phlog. Py + po 1% dissem. Minor grey dolomitic marble.					

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METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
31.2	31.9		Grey Dolomitic Marble - med.grey, m.gr.; faint banding. Minor streaks of calcite. Trace disseminations of py + po (2%). Minor oxidized phlog.					
31.9	32.2		Dolomitic Marble - off-white, m.gr., py + po 2% finely dissem. Traces of calcite. Minor phlog. 31.9 - very minor flecks of sphalerite.					
32.2	39.7		Grey to Grey Banded Dolomitic Marble - med. to steel grey, f. to m.gr. Faint to weak banding in short sections. C.A. 86° - 90°. Minor phlogopite (10%). Minor calcite as fine stringers and matrix. Occasional serp. patches assoc. w/phlog. Py + po finely disseminated 1-2%. Locally find minor diop. Random v.fine black lamellae of calc. silicate and graphite (i.e. 38.9 to 39.2). Gradational into next unit.					
39.7	41.1		Interlayered Grey Dolomitic Marble and Diopside, Quartz and Calc. Silicate Lt. to dark grey, f.gr., fair banding though irregular. mm scale irregular bands of: 1) calc.silicate & graphite, w/minor diop ± quartz. 2) diopside ± quartz 3) evaporite - diopside and quartz. Minor serp. and phlog. in association. 40.9 - get what appears to be a chert pebble with oxidized section. 40.9-41.1 - get incr. of irregular bands of evaporite or Mg carbonate. Assoc. with a black-green serp. Gradational into next unit.					
41.1	72.8		Grey to Grey Banded Dolomitic Marble - lt. to med.grey, f. to m.gr., faint to fair banding. C.A. variable 40°-85°. Minor calcite, evaporite, and diopside stringy bands and patches. Locally get more graphitic sections. Traces of phlog. Py + po as dissem.					

DRILL LOG HOLE NO. S-71

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
41.1	72.8		(cont'd) Intermittently thru section get short sections w/incr. diop. content. Minor spotty serp. Speck of sphalerite at 45.7 m. Cleaner(off-white to lt. grey colour) dol. marble f. to m.gr., faintly banded 53.2 to 54.3 and 59.5 to 60.7 and 64.0 to 65.8; 68.3 to 70.7. This entire section exhibits subtle repeated changes to small to tenable breaking down of smaller units.					
8	73.1		Silicated Dolomitic Marble - off-white, f. to c.g., slightly mottled, fetid. Darker grey diop. and pale green serp. patches. Minor calcite. Py + po dissem. (1%).					
73.1	73.9		Pyritic Calc. Silicate - dark brownish-grey, v.f.g., faintly banded. Py + po 15-20%. Minor calcite. Intermixed patches of partially serp. diop.					
73.9	74.4		Silicated Dolomitic Marble - cream off-white, f. to m.gr., slightly mottled, fetid. Unit similar to 72.8 to 73.1.					
.4	76.1		Pyritic Calc. Silicate - similar to 73.1 to 73.9. Unit more homogeneous - not as many random patches of partially serp. diop.					
76.1	79.2		Dolomitic Marble - Off pale white, tinge of green, f. to m.g., somewhat mottled. Dissem. py + po 2-5%. Minor diop. and serp. Short sections calcitic. Conc. of py + po >5% at 77.2 to 77.4. Short section of grey dol. marble 76.3 to 76.7.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
79.2	86.6		Grey Dolomitic Marble - lt. to med. grey, f. to m.g., Quite variable both in mineral constituents and physical texture. Variability is restricted to short sections. In the unit you find sections as: 1) a lt. to med. grey, f. to m.g, dol. marble. Traces of py & po dissem. 2) grey dol. marble w/minor to substantial calcite content occurring as narrow (mm scale) streaks and patches (mm to cm scale) 3) graphitic-rich grey dol. marble w/minor phlog. Po & py dissem. 1%. 4) grey dol. marble w/irregular and contorted swirls of calcite ± diopside. 5) grey dol. marble w/irregular diop. ± quartz and serp. patches and bands predominates 85.3 to 85.8. 83.00-83.8 - get an extensively altered section which is soft and crumbly consisting of serp., carbonate, phlog., dissem. py & po 2%. Do find a narrow quartz wedge at 83.45 m.					
86.6	88.4		Intermixed Diopside and Quartz with Grey Dolomitic Marble Lt. greenish-grey to med. grey, f.g., ± irregularly mottled. Patchy and swirls of diop. ± quartz and serp. Minor calcite and phlog. Short sections of finely laminated calc. silicate and graphite. Py & po 2-5% v. finely dissem.					
88.4	88.5		Banded Pyritic Calc. Silicate - brownish-grey, v.f.g., ± weakly banded. Py - po 15-20%, Fine lamellae of graphitic calc. silicate. Similar to 74.4-76.1.					
88.5	123.7		Grey Banded and Grey Dolomitic Marble - med. grey, f. to m.g., faint to fair banding. C.A. 70°-80° but variable. Minor calcite stringlets and small patches. Occasional patches and narrow swirls of diop. Py & po (1-2%) finely dissem. Short sections of calc. sil. + graphite (cm scale) finely laminated					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-71

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
88.5	123.7		(cont'd)					
			94.9-95.3 - short section of v.f.g. diop. + quartz poss. calc.sil. Very pyritic though v.f.g.(10%). Large calcite veins discordant.					
			Flecks of sphalerite at 97.2-97.3, 100.65, 103.5, 103.95.					
123.7	125.7		Interlayered Diopside Quartz Rock with Dolomitic Marble					
			Pale grey, f. to m.g. sections weakly banded-irregular. The unit is pred. a f.g. diop, pale grey with mm scale irregular bands and streaks of smokey quartz. Serp. alteration patches. Py & po 3% dissem. Phlog. dissem. 5%. Minor calcite. Short sections of a pale buff white dol. marble with minor diop., calcitic. Py & po dissem. 1%.					
125.7	144.8		Silicated Grey Dolomitic Marble and Grey Dolomitic Marble					
			Lt. to med. grey, f. to m.g., somewhat mottled appearance. Diopside is lighter w/darker med.grey grains in the dol. marble having a patchy appearance. Minor calcite patches and seams. Dissem. traces of phlog. & graphite. Py & po finely dissem. 1%. Flecks of sphalerite at 139.2, 139.4, 139.5 140.2, 140.6, 140.8 142.2, 143.0.					
4.8	150.3		Interlayered Diopside Quartz Rock with a Weakly Silicated Grey Dolomitic Marble					
			144.8-145.3; 146.4-146.9; 147.7-148.6; 149-6-150.3 are sections of a pale grey(greenish tinge) f.g. diopside-quartz rock with short sections weakly banded. Minor phlog. as dissem. grains & conc. steaks. Dissem. py & po 2-3%, locally greater. Patch serp. alter'n and minor calcite.					
			145.3-146.4; 146.9-147.7; 148.6-149.6 - a med.grey f. to m.g. weakly silicated dolomitic marble. Diop. as darker grey patches, occasional diop. & quartz. Weakly calcitic section. Traces of finely dissem. graphite. Py & po dissem. 1%.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
150.3	156.0		Grey Dolomitic Marble - med. grey, f. to m.g., local faint banding. Minor calcite, trace of diop., graphite. Dissem. py & po <1%.					
156.0			END OF HOLE					
			Casing pulled, no cement.					
			Core recovery - near 100%					

W. E. Rowe
for DR

DRILL LOG HOLE NO. S72

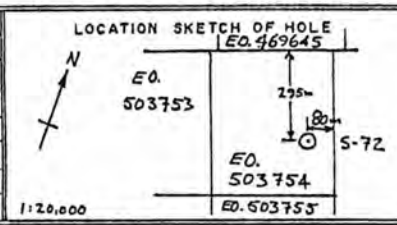
Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	290°	February 7, 1979
PROJECT 3188	LOT & CONC. Lot 27 Conc. I	DIP -45°	DATE COMPLETED February 12, 1979
CLAIM NO. EO 503754	CO-ORDINATES. 6 + 31N	LENGTH 186 m	DRILLED BY St. Lambert Drilling
GRID NO. (overlap) SouthWest Grid	9 +68E	COLLAR ELEV. 958.3	LOGGED BY Dennis Robertson

CORRECTED TESTS

Depth	MBrg	TBrg	Dip
102m	304°	294°	-47°
186m	306°	296°	-46°

LOCATION SKETCH OF HOLE



METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE: TO TEST A GEOCHEMICAL ANOMALY, ZN SHOWING & I.P. ANOMALY					
0.0	4.3		OVERBURDEN					
4.3	4.45		Granitic Boulder					
4.45	44.5		Weakly Silicated Grey Banded Dolomitic Marble with Minor Interlayered Diopside & Quartz Lt. to med. grey, f. to m.g., fair banding. C.A. variable between 70°-80°. Sections fetid. Regular and irregular interlayering of diop. ± quartz-rich banded dol. marble. Fine black lamellae of graphitic cal. silicate (mm scale). Diop. usually a darker grey or dull lustered patchy grains or lenses. Quartz is smokey grey patch grains or streaks. Difficult to break out grey banded dol. marble units because of complex intermixing of diop. ± quartz. Sections of the grey banded dol. marble have only traces of diop. while others have diop. ± quartz 20%. Py & po dissem. grains and locally more concentrated 2-5%. Short minor section of calcitic dol. marble w/calcite patches and veinlets. Serp. patches between 29.1 and 30.3. 8.1-8.3 and 14.3-14.5 - pyritic calc. silicate sections w/assoc. phlog. 9.6-10.0 and 22.9-23.4 - short section of pred. diopside quartz rock. Flecks of sphalerite at 11.5, 15.7, 15.9, 25.1.					
44.5	48.7		Altered Calcitic Dolomitic Marble - buff-white to lt. grey, f. to m.g. mottled. Highly altered w/incr. serpentinization and calcification. Unit almost					

ST. JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-72

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
44.5	48.7		(cont'd) Minor phlog. and finely dissem. py ± po (2%). Sections of grey dol. marble and pyritic sil. dol. marble. 44.5-45.0; 45.3-45.5; 46.7-46.9 - a med. grey, f. to m.g. dol. marble faintly banded. Patchy calcite (10%). Trace of py + po finely dissem. 47.2-48.2 - pale greenish-grey, m. to c.g. weakly silicated dol. marble w/py + po (3-5%) in conc. short sections (mm scale). Diop. (darker grey) and serp. diop. patches. Slightly calcitic. Fleck of sphalerite at 45.8.					
48.7	54.8		Banded Pyritic Calc. Silicate - dark brownish-grey, v.f.g. finely banded. V.f.g. dissem py ± po 10-15%. Unit consists of v.f.g. diop - quartz - calc. silicate + py. Minor calcitic stringlets and small (mm scale) patches. Noteworthy are the serpentine alter'n patches. At 49.3-49.4 get such alt'd patches. This local patch exhibits trace Zn mineralization (i.e. over 0.1m ½% Zn).					
54.8	58.6		Silicated Dolomitic Marble - pale grey, f. to m.g. somewhat mottled. Darker grey diop. patches, minor serp. Calcite patches and unit somewhat calcitic in short sections. Scattered traces of py - po <½%.					
58.6	61.6		Banded Grey Dolomitic Marble - lt. to med. grey, f. to m.g., fair banding though some sections irregular swirls. Somewhat mottled appearance. Patches and swirls of calcite and occassional minor diop. Traces of py - po. Local graphitic seams (mm scale). Gradational into next unit.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
61.6	66.8		Interlayered Diopside, Quartz, Calc.Silicate and Dolomitic Marble generally a pale to med. grey w/greenish and beige sections, f. to m.g. w/local c.g. sections. An interlayering of: a) diop. and serp. diop. ± quartz - patches and bands (cm scale) b) quartz bands w/possible f.g. diop usually as bands. c) quartz and black finely laminated calc.silicate with a somewhat altered dol. marble w/abundant phlog. and calcite locally. Serp. patches random. The phlog. occurs as narrow seams. Minor altered diop. Throughout the unit dissem. and local conc. of py + po 1-3% variable. * Unit might be an interlayered quartz diopside paragneiss - owing to content of minerals.					
66.8	81.1		Grey Dolomitic Marble - med.grey, f. to m.g., sections weakly banded. C.A. variable about 80°, slightly fetid. Minor diop. patches and swirls also calcite seamlets. Locally more graphitic-rich sections. Traces of py + po (<1%). Occasional serp. alteration patches w/closely assoc. phlog. Gradational into next unit.					
81.1	82.0		Weakly Silicated Dolomtic Marble - pale grey, m.g., Minor diopside - quartz. Dissem. py + po (2%) locally more conc. Traces of tremolite.					
82.0	89.9		Dolomitic Marble - lt.grey, f. to m.g., somewhat mottled. Minor diop.(darker grey patches). Altered serp. patches somewhat calcitic locally thru unit. Minor random phlog. Traces of dissem.py + po - speck of cpy. Fleck of sphalerite at 89.1 and 89.6.					
89.9	92.4		Silicated Grey Dolomitic Marble - lt. to med.grey, f. to m.g.locally coarse. Somewhat mottled. Diop. as darker grey patches. Finely dissem. py + po <½%. Fetid					

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METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
92.4	96.0		Dolomitic Marble - similar to 82.0-89.9. Zn mineralization - fleck at 92.7; 92.9-93.2 est. <½% Zn. Finely dissem gr.					
96.0	96.7		Serpentinized Dolomitic Marble - pale greenish-grey, f. to m.g., mottled. Traces of py + po. Calcitic and serpentinized patches, minor phlogopite. Py + po content incr. slightly toward bottom of unit.					
96.7	97.5		Banded Pyritic Calc. Silicate - dark brown to grey, v.f.g.; finely banded py + po 10% finely dissem. Clots of Fe sulphide. Serp. alteration thruout unit. Faintly calcitic.					
97.5	99.1		Serpentinized Dolomitic Marble - similar to 96.0-96.7. Slight incr. in py + po. Occasional bands of finely laminated black pyritic calc. silicate. Calcite veinlets.					
99.1	100.4		Dolomitic Marble - lt.grey, m.g., slightly fetid. Local calcification & serpentinization. Traces of py + po.					
100.4	102.3		Grey Dolomitic and Grey Banded Dolomitic Marble - lt. to med.grey, f.g., sections fair banding. C.A.75°-90°. Py & po finely dissem. (<½%). Short quite graphitic rich sections w/slight incr. in Fe sulphides. Also v.f.g. Minor calcite. Gradational into next unit					
102.3	107.3		Calcitic Marble - off buff-white, m.g., pitted surface. Minor phlog. sections. Minor py & po dissem. 105.8-107.2 - pale green colour owing to incr. of serp. Unit is becoming more dolomitic.					

[redacted] DRILL LOG HOLE NO. [redacted]

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
07.3	109.5		Quartzite - smokey brown colour, v.f.g., somewhat mottled. Patch of lt.grey-blue quartz. Intermixed are short sections of the serpentinized calcitic to dolomitic marble, and within this is talc gypsum which is Irish green.					
09.5	111.2		Grey Banded Dolomitic Marble - lt. to med.grey, f.to m.g., weak to fair banding. C.A. 70°-80°. Minor calcite as narrow (cm scale) veinlets and bands. Trace of phlog. Py + po dissem. 1%. Occasional serpentine bands and clots.					
11.2	122.3		Grey to Grey Banded Dolomitic Marble w/Minor Interlayered Silicates med.grey, f.g., faint to weak banding, though very irregular and contorted. C.A. variable. Py + po finely dissem. 1%. Irregular swirls and patches and narrow bands of: 1) diopside 2) calcite 3) graphitic-rich calc. silicate 4) serp'n and calcite 5) phlogopite (decreasing abundance) Get occasional ovoids of quartz. Short sections of unit are weakly fetid. Flecks of sphalerite at 112.2, 112.4 and 113.8.					
22.3	124.4		Silicated Dolomitic Marble - off grey-white to very lt.grey, f. to m.g., somewhat mottled, fetid. Darker grey patch of diopside. <10% with a section 123.1-123.6 which is >60% diop. Clotty py + po 1% dissem. Minor serp. patches.					
24.4	126.2		Grey Banded Dolomitic Marble - lt. to med. grey, f. to m.g., fair banding. C.A. 80°-85°. Minor narrow seams (mm scale) of phlog. Finely dissem. py ± po <½%.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
126.2	126.6		Dolomitic Marble - buff-white, f. to m.g., weakly silicated and calcitic. Minor phlog, and assoc. serp. alter'n. Clots of py, random.					
126.6	134.4		Grey Dolomitic Marble - med. to dark grey, f.g., faint occasional banding. Random minor patches and swirls of diop, calcite and serp'n. Occasional phlog. seams. Gradational into next unit. Flecks of sphalerite at 126.7, 129.5 and 130.2.					
134.4	155.4		Interlayered Grey Dolomitic Marble and Diopside-Quartz and Calc.Silicate Rock Interlayering of: a) A greater percentage of the unit is a variable grey dol. marble which is generally med.grey, f.g. w/finely dissem. py - po (1%). Sections in the dol. are weakly silicated w/minor diop. patches - serp. alter'n. Rarely find scattered quartz grains. Quite a bit of the grey dol. marble is phlogopitic. The phlog. occuring as narrow seams and lenses. The phlog can be up to 20% in the dol. marble. b) Variable coloured v.f.g. diop. pale green thru to dark brownish-grey. Diopside occuring frequently as cm scale bands and can be assoc. w/minor quartz or v.finely laminated calc.silicate or w/phlog. section. Po + py is dissem. Bands quartz diopside rock 135.9-136.7. c) v.finely laminated calc.silicate, dark brownish-grey to grey. Py - po finely dissem. Bands of calc.sil. narrow (mm & cm scales). Locally quite graphitic. There is a very complex intermixing of the grey dol. marble with diop. and phlog. Impossible to break out units. Gradational into next unit.					
155.4	166.0		Grey Dolomitic Marble - lt. to med.grey, f. to m.g. Somewhat mottled. Patches and swirls of calcite 10%. Minor darker grey patches of diop. occas. assoc. serp'n. Narrow seams of phlog. Py - po finely					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
166.0	167.8		Serpentinized Rock - Dark green, soft. Variable green colour patch of serp. w/assoc. calcite. Minor phlog. and anhydrite. Possibly some evaporite.					
167.8	169.4		Calcitic Marble - buff-white to salmon pink, m.g. Pitted slightly. Alter'n patches of serp. - pale green.					
169.4	169.9		Silicate Dolomitic Marble - lt.grey, f. to m.g. Somewhat calcitic. Dissem. py + po 1%. Darker grey sections pred. diop. w/serp'n alter'n.					
169.9	172.5		Grey Banded Dolomitic Marble - med.grey, f. to m.g. weak to fair banding. C.A. 75°-85°. Throughout the unit serpentinization prevails. Minor calcite as irreg. seamlets and patches. Very finely dissem. py <½%.					
172.5	174.8		Interlayered Weakly Banded Diopside-Quartz Rock and Dolomitic Marble Interlayering of a v.f.g. buff-white to pale grey diopside ± minor quartz rock with a generally phlogopitic and pyritic (2±3%) lt.grey, f. to m.g. dolomitic marble. The diopside-quartz rock is weakly banded. The dol. marble has sections within it that are quite calcitic, (pinkish calcite grains). The dol. marble has minor diop. Gradational into next unit.					
174.8	180.8		Calcitic Marble - off-white to buff, pitted surface, f. to m.g. Sections within are somewhat dolomitic and are also serpentinized. Specks of py + po throughout. 180.0-180.6 - get highly altered and crumbly section.					

METRES FROM	METRES TO	SECTION 1"=	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
180.8	186.0		Quartzite -					
			180.8-182.0 - get a severe gypsum(?) serpentine and calcite alteration that gradually fades at depth into a cleaner pinkish quartzite.					
			182.0-186.0 - a pinkish to lt.grey quartzite with serp'n specks random throughout. The quartzite looks granitic in nature. There is very finely dissem. py + po <1/4%.					
186.0			END OF HOLE					
			Casing pulled - no cement.					
			Core lost - 180.8-181.2 - lost 0.1m					
			Core recovery - 99.9%					
			W. G. Monroe for DR					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-78 Tropari

SHEET 1 of 10

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED	CORRECTED SURVEY TESTS				LOCATION SKETCH OF HOLE
SALERNO LAKE	SNOWDON TOWNSHIP	N69°E	October 24, 1979	Depth	MBrg.	TBrg.	Dip	
PROJECT 3188	LOT & CONC. Conc. 2, Lot 33	DIP -66°	DATE COMPLETED October 30, 1979	240m	N72°E	N62°E	-62°	
CLAIM NO. EO 469678	CO-ORDINATES 1+00S	LENGTH 273.0	DRILLED BY St.Lambert Drilling					
GRID NO. West	9+38E	COLLAR ELEV. 994m	LOGGED BY D.Robertson					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVES:- TO TEST B ZONE ON SECTION 1+00S, down dip from S-50.					
0.0	2.5		OVERBURDEN					
2.5	8.4		DIOPSIDE QUARTZ ROCK - pale green to lt.greyish-green, f.to c.g. 75% pale grey f.to c.g. diopside rock w/minor tremolite locally through section 25% irregular grey patches of quartz intermixed thru the diopside rock. 3.0-3.7 - broken and ground core 4.0-4.5 - buff f.to m.g. dolomitic marble w/trace amounts of phlog. Finely dissem. thru unit <1% py ± po - locally concentrating in small blebs and as fracture fillings (micro scale).					
8.4	14.3		SILICATED DOLOMITIC MARBLE - off white to lt.grey, f.to m.g. 80% dolomitic marble w/v.finely dissem. py <½% 20% darker grey patches of f.to c.g. diopside ± minor tremolite randomly the diopside is altered to serpentine					
14.3	18.7		TREMOLITIC SILICATED DOLOMITIC MARBLE - pale grey to buff f.to m.g. somewhat mottled. 14.3-16.7 - section is altered w/abundant serpentinized diopside and salmon buff calcite intermixed with a predominance of tremolite. This section is basically composed of diopside and tremolite and its altered forms. 16.7-18.7 - Find a less altered tremolitic silicated dolomite off-white to lt.grey f.to m.g. The unit is still altered w/serpentinized diopside patches & secondary calcite. Assoc. with the calcite patches find hematite. Splattered thru the unit ≈1% py ± po as dissem grains, blebs					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
18.7	21.2		HIGHLY ALTERED ROCK - dk.brown & green f.g. The rock is highly altered w/abundant serpentine. It appears that the rock could have originally been a silicated dolomitic marble. 19.1-19.6 - short section of dk.green serpentinite - probably after diopside. 18.7-19.1 & 19.6-21.2 - the rock is predominated by the presence of biotite. Intermixed is serpentine, calcite, dolomite grains.					
21.2	22.7		SILICATED DOLOMITIC MARBLE - pale grey to off-white, f.to m.g. 21.2-22.0 - hematitic stained silicated dol.marble w/enriched tremolitic sections & darker green patches of altered diopside. 22.0-22.7 - a cleaner off-white silicated dolomitic marble - 20% dk.grey-green patches of c.g. diopside & minor amounts of dolomite. Finely dissem. thru unit 1% py + po.					
22.7	24.8		DIOPSIDE ROCK - pale green to brownish-green, f.to c.g. 22.7-23.2 - massive c.g. altered diopside w/minor hematite grains. 23.2-23.7 - highly serpentinous section after c.g. diopside 23.7-24.8 - altered intermixed section of (1) altered silicated dolomitic marble (2) massive tremolite (3) massive altered diopside (4) intermixed calcite, tremolite and altered diopside (5) clots and seams (mm scale) of phlogopite and calcite.					
24.8	26.6		ALTERED SILICATED DOLOMITIC MARBLE - buff to beige-grey, f.to m.g. 24.8-26.0 - altered dolomitic marble, weakly silicated, present are altered products of diopside and tremolite; minor hematitic stain; splattered thru section get a dk.green mineral? Possibly a Fe & Mg enriched Al. Silicate. 26.0-26.3 - short section of highly serpentinized c.g. massive diopside and tremolite w/grains of hematite and hematite stains. 26.3-26.6 - a lt.buff f.to m.g. dolomitic marble w/phlogopite and traces of tremolite & diopside. Finely dissem. grains of py + po.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
26.6	28.4		CALCITIC MARBLE and CALCITIC SILICATED DOLOMITIC MARBLE - variable pink to dk.brown-beige & green, f.to m.g. Abundant dk.brown & green serpentine intermixed w/calcitic marble & minor phlog. 27.7-28.4 - an altered silicated dol. marble. Serpentinized diopside and minor amounts of tremolite intermixed with a weakly calcitic silicated dol. marble define this short section. Rare traces of py.					
28.4	29.7		WEAKLY SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g. Only short sections of unit can be classified as a silicated dol.marble. <10% small spotty altered diopside, minor, fine tremolite. Unit somewhat calcitic.					
29.7	33.2		GREY DOLOMITIC MARBLE - lt.grey, f.to m.g., sections faintly banded (C.A. 50°); very locally find (mm scale) seams of serp. w/calcite & phlog. Flake of sphalerite at 30.5.					
33.2	40.0		DOLOMITIC MARBLE WITH CALC.SILICATE BANDS - lt.grey to dk.grey, f.to m.g. The dolomitic marble is interlaced with (mm scale) seams, irregular bands and contorted patches of a very f.g. graphitic calc.silicate pred. composed of v.f.g. diop. intermixed w/quartz giving rise to a banded appearance for the unit. Sections of the dol.marble are more graphitic leading to the darker grey colour. Random thru the unit get contorted seams of possible evaporite - a buff-pink-white colour. Spotty and irregular thru the dol.marble are green patches of diopside - altered diopside. Assoc. with the calc.silicate material is v.f.g. py ± po. 37.6-38.2 - the rock is noticeably more altered-increased serpentine, calcite & evaporite and minor phlog. 38.2-40.0 - the dol.marble has ≃20% diop. as well as the ribbons of calc.silicate material. Dissem. thru the section <1% f.g. py ± po.					
40.00	51.3		SILICATED DOLOMITIC MARBLE - off-white to lt.buff-grey, f.to m.g. somewhat mottled. 40.0-43.3 - predominately f.g. dolomite and diopside ± quartz. Random darker coloured patches of c.g. diopside - tremolite. Locally brown patches of serpentinous diop. 43.3-44.4 - section of a quartz diopside rock. -60% smokey					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
40.0	51.3	(cont'd)	44.4-51.3 - comparatively more silicated i.e. increased proportion of diopside ± quartz to dolomite than in section 40.0-43.3. This section is weakly fetid. Find light splatterings of py-po thru out sil. dol. marble unit. Local conc. of py-po i.e. 45.2 occurring as "blobby seams". Gradational into next unit.					
51.3	55.6		GREY DOLOMITIC MARBLE - lt.grey, f.to m.g. Short sections weakly fetid & local faint banding. Minor amounts of phlog & finely dissem py - po mixed thru unit. Slight incr.in phlog content is assoc. w/slight incr. in py-po i.e. 54.0-55.6. Gradational into next unit.					
55.6	68.4		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g., mottled. 30% darker grey patches of diop., both f. & c.g. as well as patchy serpentinous diop. - darker green colour. Minor irregular patches of calcite <1% finely dissem. py+po thru unit. 61.7-62.3 - short section of buff f.g. dol.marble w/phlogopite. 64.0-64.4 - v.f.g. pyritic feldspathic rock -- pyritic calc. silicate unit. The pyritic feldspathic rock is dk. brown f.g. 5-7% py v.f.g. dissem minor serp., calcite & dolomite. Abundant bt. and brown phlog is present. At either end of this pyritic feldspathic rock find a highly serpentinous silicated dol. marble dk. green in colour.					
68.4	73.3		PYRITIC FELDSPATHIC ROCK - Pyritic Calc. Silicate - dk. grey to brown f.g. 10% v.f.g. dissem. py ± po. Minor serp'n & calcite. Patchy lt.grey to brown diop. (?) possibly a feldspar.					
73.3	75.3		CALCITIC MARBLE Off-buff-cream-white to lt.grey-buff, f.g. spotted & patchy. 30-40% blotchy patches & spots of serpentine (?) a lt.brownish-grey colour. These patches are fairly hard, possibly a weakly altered silicate mineral. Very finely dissem. traces of py <½%.					
75.3	79.1		SILICATED DOLOMITIC MARBLE - off-white to lt.grey-buff, f.to m.g. 15% darker grey patches of diopside ± tremolite f.to c.g. Minor serp. & calcite & dolomite thru unit. Dissem py+po 1%. Faint banding & minor phlog. content is observed in the less silicated-					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
79.1	83.9		INTERMIXED DIOPSIDE QUARTZ ROCK, SILICATED DOLOMITIC MARBLE & DOLOMITIC MARBLE - Due to the complex intermixing of rock types the unit is lumped together only locally do you get short sections that can be broken out. 79.1-80.9 observe - 1) a buff f.to m.g. phlogopitic dolomitic marble w/bands or streaks of brown mica and/or v.f.g. graphitic diopside ± quartz or feldspathic material(?); minor calcite thru the dol. marble as well as serp'n. 2) pale green f.to c.g. silicated dol. marble w/stringers & bands (mm scale) of a dk.grey f.g. quartz-diopside ± mm scale increased conc. of phlog. in the sil. dol. marble. 3) pale green c.g. diopside rock w/minor narrow streaks of grey quartz+f.g. diop. (80.9-82.6) 4) dk.grey f.g. quartz+pale green f.g. diop. patches & bands & v.f.g. lamellae of phlog+diop.+graphite. i.e. 82.6-83.3 5) off-white, f.to m.g. dol. marble, weakly silicated. Thru out this mixed unit find varying amounts of py+po - average <1%; py+po occurs as finely dissem. grains & clots usually.					
83.9	91.1		GREY DOLOMITIC MARBLE and DOLOMITIC MARBLE - 83.9-87.0 & 88.1-89.6 - a med.grey f.to m.g. dolomitic marble locally faintly banded. Minor seams & bands of calcite. Weakly fetid. Local trace concentrations of py+po. 88.8-89.5 - contorted faint banding in the grey dol. marble w/ minor phlog & diop. & serp'n & calcite. 87.0-88.1 & 89.6-91.1 - an off-white to lt.grey dol. marble. 30% of the dol. marble is a silicated dol.marble w/darker grey patches of f.g. diop. Minor seams of calcite & evaporite. Finely dissem py+po thru dol. marble at 90.7-90.8 - conc. of py+po 3-4%.					
91.1	103.0		PYRITIC FELDSPATHIC ROCK -- PYRITIC CALC.SILICATE - dk.grey to brown v.f.g. The unit exhibits contorted banding generally 10% v.f.g. dissem py+po. The Fe sulphide also occurs on fracture or bedding planes. V.f.g. feldspathic rock, silicates & quartz					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn
91.1	103.0	(cont'd)	97.5-99.5 - a diopsidic pyritic feldspathic rock - pale green f.g. diopside 30% of rock.					
103.00	104.2		SILICATED DOLOMITIC MARBLE - off-white to lt.green, f.to m.g., mottled. Dissem. f.to m.g. py+po 3-5%. 40% dolomitic marble.					
104.2	124.3		PYRITIC FELDSPATHIC ROCK - Pyritic Calc.Silicate Rock - similar to unit 91.1-103.0 104.8-104.9 - purple anhydrite 123.6-124.0 - section of calc. marble 124.0-124.3 - pyritic feldspathic rock					
124.3	126.6		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g.; 20% darker grey patches of c.g.diop. Locally weakly fetid. 124.3-124.4 - concentration of py+po 30%. Dissem. thru out unit trace amts. of py+po.					
126.6	136.5		INTERLAYERED SILICATED DOLOMITIC MARBLE & DOLOMITIC MARBLE - Interlayering of: 1) a lt. to med.grey dol. marble & grey to grey banded dol. marble (Unit D) 126.6-133.0, f.to m.g. somewhat mottled by the variability of minor diopside content. Trace amounts of pholog. & calcite & finely dissem py+po. Locally get incr. of serpentine & phlog & calcite (i.e. 126.6-127.0). 2) an off-white to lt.grey silicated dolomitic marble; mottled 10-15% variable, darker grey patches of c.g. diopside; generally diop. is f.g. Minor brownish-green serp'n patches and seams. Minor amounts of dol. marble. Weakly fetid. Minor Zn mineralization as dissem. f.g. sphalerite in dol.marble Est. trace of ½% Zn Est. 1% Zn	4101 4102	126.6 129.9	128.0 130.3	1.4 0.4	1.29 1.04
136.5	143.9		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g., somewhat mottled. 30-40% darker grey patches of c.g. diop. Py+po finely dissem. Minor serp'n and calcite patches. 141.8-143.9 - the dolomitic marble becomes less silicated and more of a dolomitic marble w/minor phlogopite dissem. thru out. Trace amounts of v.finely dissem. py+po.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn
143.9	149.4		GREY BANDED DOLOMITIC MARBLE - lt.to med.grey, f.to m.g. dol. marble. Very faintly fetid and fair banding. Finely dissem py-po thru out. Locally conc. into narrow seams and/or clots. Minor serp'n & calcite patches & seams. Randomly find v.f.g. graphitic lamellae - f.g. diop. Finely dissem phlogopite locally found. Weakly silicated sections <15% w/f.g. diop. NOTE: trace Zn mineralization in the dol. marble that is silicated w/pale green serp'n, slightly increase phlog content. Py-po >1%. Trace Zn mineralization is v.f.g. of sphalerite @ 147.5, 148.0 thru to 148.3. Trace Zn mineralization. Est. trace to ½% Zn	4103	148.4	148.9	0.5	0.09
149.4	150.0		SILICATED DOLOMITIC MARBLE - pale green, f.to m.g. A silicated dol. marble w/f.g. diop and serpentinous diop plus tremolite and minor micaceous material. Finely dissem py+po - trace amounts.					
150.0	154.4		BANDED DIOPSIDE QUARTZ ROCK - dark grey, v.f.g., well banded. C.A.variable between 55°-65°. The bands are distinguished by v.fine lamellae (micro scale) of v.f.g. diopside, quartz graphite and calc.silicate, possibly some feldspathic material. These bands are irregular, contorted & variable. Finely dissem thru unit is py-po <1% with local concentrations. 154.2-154.4 - get slight increase in phlogopite content.					
154.4	156.0		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g., well mottled. 10% darker grey patches of c.g. diopside. Finely dissem grains of py-po thru out. Find local concentrated irregular clots.					
156.0	193.6		QUARTZ DIOPSIDE ROCK - pale green to lt.smokey grey, generally f.g. w/random c.g. diopside. This unit is comprised almost entirely of 55% diopside & 45% quartz. Locally get either almost massive diopside or quartz sections or bands (10-20cm scale) (i.e. from 174.0-180.0). Generally the unit exhibits an intergrown network of diop. & quartz in a "wormy" or irregular "knotted" appearance. Find random c.g. calcite bands 2-8cm scale (i.e. at 164.5) Noteworthy is the symetry of the quartz diop rock - at the top and bottom of the unit get the well banded diopside quartz rock. 189.2-190.7 - short interlayered section of silicated dolomitic marble and faintly banded dolomitic marble. The dol. marble is somewhat phlogopitic.					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
193.6	195.7		GREY BANDED DOLOMITIC MARBLE - med.grey, f.to m.g., fair banding. Minor serp. & diop patches. Local phlog conc. Finely dissem py+po 1-2% thru unit.					
195.7	200.2		INTERLAYERED DOLOMITIC AND SILICATED DOLOMITIC MARBLE - interlayering of 1) an off-white f.to m.g. dol. marble. Finely dissem pyrite - weakly pyritic unit. 1-2%. Trace Zn mineralization from 195.9-196.7. Est. trace Zn occurring as fine dissem. grains assoc. with py. 2) the silicated dol. marble is off-white to lt.grey, w/patchy serpentine and 10% darker grey patches of c.g. diop. Minor calcite sections 2-8 cm scale in the sil. dol. sections. Traces of phlog & py+po.	4104	195.9	196.7	0.8	0.62
200.2	210.0		WEAKLY PYRITIC DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g. w/finely dissem py+po varying 1-5%. Minor patchy serp'n, diop., calcite. 200.2-200.8 - brown mica enriched (up to 40%) dol. marble w/py+po 5%. 200-8-201.8 - the dol. marble is phlogopitic. 205.3-205.8 - a pale green f.g. diopside ± quartz rock 205.8-205.9 - purple anhydrite w/green diopside & purple anhydrite 207.0. 205.9-206.5 - banded pyritic feldspathic rock Zn mineralization. Est. <1% Zn	4105	201.2	202.2	1.0	2.41
			Est. 2% Zn in a grey dol. marble	4106	204.5	204.8	0.3	1.97
			Est. trace Zn from 204.8-205.6					
			Est. 1-1½% Zn in grey dol. marble	4107	205.6	206.9	1.3	0.67
210.0	231.4		DOLOMITIC MARBLE W/INTERLAYERED SILICATED DOLOMITIC MARBLE - The dol. marble is off-white to buff, f.to m.g., somewhat mottled w/patches of white diop & serpentinized diop. Minor calcite. Locally the dol. marble is phlogopitic. Minor py-po dissem thru out. Interlayered with the dolomitic marble are: 1) sections of silicated dol. marble, off-white to lt.green or grey, mottled, f.to m.g. Dissem py-po. 2) a pale green diopside-quartz rock, f.to c.g. w/serp'n & traces of phlog. (i.e. 220.4-221.2). 3) a pale salmon pink calcite marble (i.e. 224.2-224.4) 4) short sections 10's of cm of brown mica & serpentinous diop.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-78

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS % Zn
210.0	231.4	(cont'd)	5) short section of v.f.g. dk.grey diop & quartz-feldspathic material. Minor Zn mineralization (230.5-231.0) <1%.					
231.4	244.8		GREY DOLOMITIC MARBLE - lt. to med.grey, f.to m.g., ghost banding. Finely dissem phlogopite. Spotty, serp'n & calcite patches. Dissem py±po. Short sections weakly silicated (minor diopside) Zn mineralization as finely dissem grains of sphalerite, locally concentrating into narrow (mm scale) seams. Est. 1% Zn	4108	231.7	232.7	1.0	0.45
			Scattered traces of sphalerite 232.7-234.0 Est. ½ to 1% Zn	4109	234.1	235.0	0.9	0.17
			Est. 1-1½% Zn	4110	235.0	236.0	1.0	0.22
			Est. ½% Zn	4111	236.0	237.0	1.0	0.35
			Scattered traces of sphalerite 237.0-239.2 Est. 1-2% Zn	4112	239.2	240.3	1.1	1.00
			Traces of Zn mineralization 240.3-241.2 Est. 1-1½% Zn	4113	241.2	241.7	0.5	0.74
244.8	249.0		DIOPSIDE QUARTZ ROCK - pale green, f.to c.g., diopside and slightly serpentinized diopside+quartz rock. Intermixed in short 10-30cm sections is a silicated dol. marble that is weakly phlogopitic. Narrow c.g. calcite patches. Py & po clotty generally but do get f.g. disseminations.					
249.0	265.2		GREY-GREY BANDED DOLOMITIC MARBLE - med.grey, f.to m.g., poor to well banded - variable. Minor phlogopite, calcite, serpentinous diop. 258.4-259.1 & 263.5-264.5 - an almost black v.f.g. dol. marble w/v.f.g. graphite, dolomite, diopside(?)+quartz(?) and pyrite. Micro scale lamellae. 259.5-261.1 & 264.5-265.1 - grey banded dolomitic marble - dk.grey, f.g. well banded, dissem py+po. Sporadically weak Zn mineralization from 249.0-263.5. Traces Zn mineralization 249.0-251.5 Est. ½% Zn	4114	251.5	252.5	1.0	0.17
			Est. ½% Zn	4115	252.5	253.5	1.0	0.18
			Est. ½-1% Zn	4116	253.5	254.5	1.0	0.61
			Trace Zn mineralization 254.5-256.9 255.85 & 256.0 - a couple rich seams of sphalerite (mm scale) Est. 1½-2% Zn	4117	256.9	257.4	0.5	5.66
			Traces of sphalerite at 260.1, 260.4, 260.6-260.7, 262.9, 263.4.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-78

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
265.2	273.0		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f.to m.g., fetid, mottled. 30% darker grey patches of diop. Minor serpentine. Traces of tremolite. 270.1-273.0 - the silicated dolomite is quite calcitic w/minor dark patches of serp'n.					
273.0			END OF HOLE - casing left in, no cement.					
			Core Recovery - near 100%.					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-79

Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	Snowdon Township	N69°E	October 30, 1979
PROJECT	LOT & CONC. Bdy. of	DIP	DATE COMPLETED
3188	Conc.2 & 3, Lot 33	-50°	November 2, 1979
CLAIM NO. Bdy. of Nittoly	CO-ORDINATES.	LENGTH	DRILLED BY
Option & PO 469678	0+08S	231m	St.Lambert Drilling
GRID NO.		COLLAR ELEV.	LOGGED BY
West Grid	8+90E	993m	W.E.Roscoe

CORRECTED SURVEY TESTS

Depth	MBrg	TBrg	Dip
200m	N77E	N67E	-51°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
			OBJECTIVES:- To test Zone B on Section 0+00 down dip from S-20.					
0.0	2.1		OVERBURDEN					
2.1	5.9		DIOPSIDE-QUARTZ ROCK - alternating sections & intermixed mottled sections of off-white diopside (60%) and lt.grey glassy quartz (40%). Weathered to 3.0m.					
5.9	28.1		ALTERNATING SILICATED DOLOMITIC MARBLE, DOLOMITIC MARBLE and GREY BANDED DOLOMITE - alternating sections, gen. 2-4m long, of: a) lt.grey m.g. dol. marble w/20% patches & spots lt.-med.grey diopside. Minor calc., py. b) pale-lt.grey m.g. dol. marble, minor calc., py loc. up to 2%. Somewhat mottled. c) lt.-med.grey banded dol. marble, loc. somewhat calcitic, minor py, loc. 3%, serp'd diop. Banding fair to poor, C.A. 50-60°. 12.6-13.8 - py-po bands 5-10%.					
28.1	33.8		TREMOLITIC MARBLE, CALCITIC MARBLE & BANDED "CALC.SILICATE" (Possible Swamp Unit) - 28.1-29.7; 30.1-30.4; 30.9-31.9 - tremolitic, calcitic, dolomitic marble, somewhat foliated C.A.; minor diopside, serp., py. 29.7-30.1 - banded f.g. "calc.silicate", grey-buff, 2% py, w/pale green diopside layers. 30.4-30.9 - mottled reddish & grey serpentinous calc. marble. Soft & pitted. 30.9-33.8 - calc. marble 7 trem. calc. dol. marble, grading to next unit.					
33.8	36.6		GREY BANDED DOLOMITIC MARBLE - f.m.g. med.grey well banded dol. marble, some sections pale-lt.grey m.g. dol. Loc. somewhat calcitic. Core loc. somewhat soft and broken. C.A. 70°.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-79

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
36.6	39.5		SILICATED DOLOMITIC MARBLE - off-white m.g. dol. w/10-30% lt.-med. grey diop. sections and patches. Similar to part (a) of 5.9-28.1.					
39.5	53.3		DOLOMITIC MARBLE - pale grey, m.g. dol. marble. Minor calc., loc. phlog., py, hem. spots, serp'd diop. 47.9-48.4 - dk. green serp. patches, calc. veinlets. 49.9-50.4 - grey banded dol. marble					
53.3	54.8		PYRITIC "CALC.-SILICATE" (Swamp Unit) - med. grey, massive to sl. mottled f.g. soft altered sodic feldspar rock. F.g. dissem. py 5%. 54.5-54.8 - streaky diop.(?) rock.					
54.8	60.3		SILICATED DOLOMITIC AND CALCITIC MARBLE (Swamp Unit ?) - mostly patchy to mottled pale grey to buff-grey dol. w/serp'd diop. patches & streaks, loc. calcitic, talc. Sections of mottled serpentinous calc. marble at either end, w/pitted core surface.					
60.3	67.8		ALTERED PYRITIC "CALC.-SILICATE" (Swamp Unit) - dk. reddish-brown to grey, soft, f.g. massive to sl. mottled rock. 10% f.g. dissem. py, altered to red hem. near both ends. Serpentinous to poss. clayey alteration of "Swamp Unit 'calc.-silciate'", prob. mostly sodic feldspar. Occas. seams of white, soft gypsum(?).					
67.8	77.8		VUGGY CARBONATE ROCK (Swamp Unit) - mottled pale cream to buff to pink w/20-40% f.m.g. vugs commonly lined w/f.g. calcite. Main pale mineral unknown (m.g. anhedral, H-5, some as cellular and latticework masses). Some dol., loc. phlog., quartz. Poss. anhydrite/gypsum.					
77.8	101.3		SILICATED DOLOMITIC MARBLE (FSD Unit) - pale grey to lt.grey m.g. dol. marble w/20-40% sections and patches lt.-med.grey diopside, loc. serp'd., loc. sl. fetid. Loc. minor calcite 99.2 - 0.2m grey quartz. Grades to next unit.					
101.3	129.4		GREY BANDED DOLOMITIC MARBLE (Unit D) - minor calc. 101.3-103.6 - lt.grey, poorly banded throughout f.m.g. dol. marble, grading from last unit. Minor serp'd diop. 103.6-109.7 - well banded, med.-dk.grey f.g. dol. marble, C.A. 65°, 1-3% f.g. py, loc. black graph. flecks. Muddy seam @ 107.5. Zn mineralization as irreg.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-79

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn	
101.3	129.4	(cont'd)	at a 0.3m band of dk.brown serp'd pyritic calc.-silicate(?) @ 107.9. Decreases down hole to narrow bands.						
			Est. 10% Zn, 15% py	4118	107.9	108.9	1.0	17.0	) 10.53% Zn
			Est. ½% Zn, 2% py	4119	108.9	109.6	0.7	1.29	) 1.7 m
			109.7-115.0 - lt.-med.grey, f.g. dol. marble, banding fair to poor, C.A. 70°-. Minor py; somewhat calcitic. Occas. patches & bands of grey diop. & serp'd diop., contorting banding. 110.5 - 1cm bluish gypsum-calcite cross-cutting vein w/minor Zn in adjacent dol.-calc.						
			115.0-122.1 - dk.grey v.f.g.dol., 2-5% v.f.g. py, thin bands and small flecks black graphite, somewhat calcitic. Contains 5% bands (5-10cm) of black, hard, graphitic, pyritic "calc.-silciate", loc. w/po. Zn mineralization as irreg. streaks, small patches of dk. f.m.g. sp. w/py. Massive sp-py streak (10cm) @ 115.8.						
			Est. <½% Zn, 5% py	4120	115.0	115.7	0.7	0.25	
			Est. 12% Zn, 8% py	4121	115.7	116.2	0.5	14.5	) 2.36% Zn
			Est. 1% Zn, 8% py/po	4122	116.2	116.8	0.6	0.91	) 3.7 m
			Est. 2% Zn, 8% py	4123	119.0	119.4	0.4	2.37	)
			Est. 1% Zn, 5% py	4124	120.9	122.1	1.2	1.07	
			Est. <½% Zn, 5% py	4125	122.1	123.8	1.7	0.62	
			122.1-129.4 - med.grey, well banded, f.g. dol. marble, C.A. 55-60°. Some 1-2cm lt.grey dol. & calc. bands. Minor calc., 3-5% py. Black graph. flecks & thin streaks. Minor Zn mineralization as f.g. dissem. sphal. 122.1-123.8, 126.6, 128.7.						
129.4	136.1		SILICATED DOLOMITIC MARBLE - med.grey fading down hole to lt.grey, f.m.g. dol. w/10-20% diopside sections & patches. Grades from last unit. Minor calc., loc. minor py, po, graph.						
			129.5 - patch of calc.-trem.-py-gypsum (?).						
			129.6-133.7 - occas. grey banded sections.						
			132.0 - 1cm spot of purplish anhydrite.						
136.1	140.1		GREY DOLOMITIC MARBLE - lt.grey, sl. mottled, m.g. dol. Minor f.g. graph.; calc.; loc. diop. Fairly uniform unit.						

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-79

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
140.1	154.7		GREY BANDED DOLOMITIC MARBLE (MGB UNIT) - med.grey banded f.m.g. dol. marble, minor calc., phlog. bands, ½ - 2% f.g. py. Loc. diop. 145.5-153.2 - 10% sections and patches of grey diop., loc. f.g. black graph. flecks. 146.6 - tr Zn 149.4-150.1 - minor f.m.g. sp in thin bands, est. ½-1% Zn. 154.1-154.7 - lt.grey bleached look towards contact.					
154.7	157.5		BANDED DIOPSIDE-QUARTZ ROCK - finely interlaminated pale grey-green f.g. diopside and grey glassy quartz. C.A. 50°-75°. Occas. grey qtz. veinlets and tiny tension gashes. Minor py. 154.7-155.8 - altered to pale serp.-calc., w/dol. & phlog. layers and minor po-py.					
157.5	179.0		DIOPSIDE-QUARTZ ROCK - alternating sections, streaky interlayered and irreg. intermixed pale grey-green to off-white f.g. diopside and grey glassy quartz. Loc. minor short dol. sections, py, phlog. banded sections, calc. Avges 75% diop & 25% qtz, but central part is 50% qtz. 164.8-165.7 - banded diop.-qtz., some phlog-py. 165.7-166.3 - off-white m.g. dol., minor diop., trem.					
179.0	181.4		SILICATED DOLOMITIC MARBLE - mottled lt. grey-buff f.m.g. dol., somewhat calcitic and phlogopitic, with 40% diop. sections & f.g. trem. Minor py.					
181.4	183.6		BANDED DIOPSIDE-QUARTZ ROCK - sim. to 154.7-157.5. Thinly laminated grey f.g. qtz and pale f.g. green-grey diop., 2-5% py. Some sections banded serp-calc-dol-phlog, as prev.					
183.6	185.3		SILICATED DOLOMITIC MARBLE - off-white m.g. dol. w/abund. trem. and trem. diop. mottled sections. Fairly calcitic. Minor py. 184.3-184.6 - three thin bands with f.m.g. brown sphal. Est. 1% Zn.					
185.3	187.1		CALCITIC MARBLE AND SERPENTINE - salmon m.g. calc. marble mottled w/dark serp., loc. w/grey qtz spots. 185.7-186.3 - dark grey, mottled, soft serp., 5% py, calcitic.					
187.1	190.9		SILICATED DOLOMITIC MARBLE - off-white m.g. dol. w/40% bands &					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. [illegible]

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
190.9	203.4		DOLOMITIC MARBLE (Unit B?) - pale-lt. grey, sl. mottled m.g. dol. Minor calc., phlog. F.g. dissem. py 2-3%, loc. to 5%, as 196.7-197.6, 201.0-201.8, 202.6. Lt. med.grey poorly banded dol. marble 196.8-197.7 with assoc. Zn-Py mineralization in streaky bands (1-15mm) of brown sphal. Est. 3% Zn, 5% py. Tr Zn 196.3-196.5.	4126	196.7	197.3	0.6	3.93
203.4	206.6		SILICATED DOLOMITIC MARBLE - off-white m.g. dol. w/50% mottled whitish diop-trem. grading downhole to grey v. tremolitic calcitic dol. Loc. minor py. 206.6 - spots lt. purplish anhydrite.					
206.6	209.9		PYRITIC DIOPSIDIC QUARTZITE - med.grey to brownish grey, glassy qtzite (80%) with f.m.g. flecks and streaks of pale diopside (10%) and f.g. dissem. py (10%). Vaguely banded appearance. Resembles the banded pyritic "calcsilicate" rock of the Swamp Unit.					
209.9	217.5		SILICATED DOLOMITIC MARBLE - with 20% diopside quartz sections. Somewhat variable unit, dominated by diopsidic dolomitic marble much spotted & streaked with variable pyrite, phlogopite, tremolite. Several short sections of diopside quartz, some thinly banded. Fractured broken core w/serp. @ 213.4. Minor Zn mineralization (est. 1-2%) 212.9-213.0 and 213.8-214.1.					
217.5	231.0		DOLOMITIC MARBLE - lt. to pale grey to grey-buff, m.g. somewhat mottled dol. marble. Minor calc., 1-2% f.g. dissem. py & phlog. Loc. diop. - trem. up to 10%. Dark phlog.-py sections @ 220.5, 222.0-222.3, 226.5.					
231.0			END OF HOLE - not cemented' casing left in. Core lost: 0.2m from 186 to 189. Core recovery: 99.9%					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-81 Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TWP.	--	November 13, 1979
PROJECT: 3188	LOT & CONC: Lot 32 Conc. III	DIP: -90°	DATE COMPLETED: November 18, 1979
CLAIM NO.: EO 469686	CO-ORDINATES: 1+95N	LENGTH: 447m	DRILLED BY: St.Lambert Drilling
GRID NO.: West	6+01E	COLLAR ELEV.: 974	LOGGED BY: D. Robertson

DIRECTION TESTS			
Depth	MBrg	TBrg	Dip
100m	N39°E	N29°E	-85°
193m	N52°E	N40°E	-83°
300m	N41°E	N31°E	-80°
393m	N35°E	N25°E	-75°
441m	N29°E	N19°E	-74°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVES:- TO TEST THE FOLLOWING ZONES "D", "MGB", "B" and BOUNDARY.					
0.0	1.1		OVERBURDEN					
1.1	10.8		DOLOMITIC MARBLE - off-white to lt.grey, f. to m.g. Sections faintly banded (C.A. 60-70°). Finely dissem py - po thru out unit (~2%). Locally find weakly silicated sections & phlogopitic sections (cm scale). Spotty green serp'n patches. Minor calcite (i.e. 4.0 to 4.1). 3.6-4.0 - v.f.g. pyritic feldspathic rock = calc. sil. unit & a highly altered serpentinous rock, notably altered equivalent to calc. sil. rock. Gradational into next unit.					
10.8	18.0		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, f. to c.g., mottled. Darker green or grey patches of c.g. diopside or weakly altered diopside. Short sections of dolomitic marble in the sil. dol. marble unit. (i.e. 16.7-17.1) and others. Local c.g. calcite. Traces of py - po scattered thru unit. Local concentrations of v.f.g. quartz. 14.4-14.5 - micaceous serpentinous dol. marble. 15.2-16.2 - section of granitic rock - pred. feld. & quartz + Bo.					
18.0	24.8		DIOPSIDE QUARTZ ROCK - alternating bands, sections (cm scale) & patches of - 1) a pale green f. to c.g. diopside, weakly altered; and 2) a v.f.g. grey quartz.					
24.8	31.8		INTERLAYERED SILICATED DOLOMITIC MARBLE & DOLOMITIC MARBLE - the unit is predominated by a pale green to grey, f. to m.g. sil. dol. marble. Find c.g. section of diopside & serpentinous diop. Patchy serp'n. Minor local tremolite (i.e. 26.6). Dissem py - po in trace amounts & concentrated clots. Interlayered w/the					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
24.8	31.8	(cont'd)	marble w/minor serpentine & diopside patches. Finely dissem py ± po (<2%). Example of dol. marble 25.8-26.2, 27.5-27.6, 27.9-28.0, 28.3-28.6, - sections of diopside quartz rock. 26.5 & 26.6-26.7 - scattered flakes of sphalerite concentrating into a narrow seam.					
31.8	40.6		GREY BANDED DOLOMITIC MARBLE - med. to dk. grey, f. to m.g. well banded. C.A. 60-70°. The banding is generally regular but defined contorted & swirling of bands. Minor trace amounts of phlog. diopside, calcite & serpentine thru unit. Trace amounts of py ± po w/local concentrations as seams & streaks. Local v. finely laminated bands of graphite, silicate & dolomite. 36.3-36.5 - find a v.f.g. diopside, quartz rock & patches of v.f.g. diop. quartz at 36.8-36.9. Trace amounts of sphalerite as v.finely dissem. grains can be seen throughout this grey banded unit. Specks of sphalerite at 32.4, 32.6, 33.5, 33.8-33.9, 34.7, 36.5, 37.7, 37.9-38.0, 38.5-38.6, 38.8, 39.3, 40.3.					
40.6	46.5		DOLOMITIC MARBLE - off-white to lt.grey, f. to m.g. Interlayering of an off-white & med. grey dol. marble. The off-white dol. is weakly silicated w/minor serp'n ± diopside. Minor calcite and trace amounts of dissem py ± po. The grey dol. marble is weakly phlogopitic w/ dissem py ± po. Minor serp'n & calcite. Speck of sphalerite at 43.8.					
46.5	50.9		SILICATED DOLOMITIC MARBLE - cream-white to lt.grey, f. to m.g. w/c.g. diop. sections, mottled. Minor tremolite scattered thru rock. Minor dolomitic marble sections (cm scale). 49.0-49.4 - find a v.f.g. quartz diopside rock. Trace of calcite. Finely dissem py ± po thru unit.					
50.9	74.5		GREY BANDED DOLOMITIC MARBLE - dk. grey, f. to m.g. generally well banded. C.A. 60-70° but variable. The banding of this grey banded dol. is variably contorted & swirled. Find v.f.g. black finely laminated bands of graphite ± diop ± quartz & dolomite random thru unit. Contorted & swirled bands & patches of calcite & serp'n ± phlogopite, possibly some evaporite. Finely dissem py ± po thru unit. Minor c.g. diopside. Sparse random quartz patches. Short sections 10's of cm scale of silicated grey dol. marble. Trace Zn mineralization as v. finely dissem. grains of sphalerite at 53.7, 70.1, 70.4, 72.1, 72.4.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-81

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
74.5	75.6		SILICEOUS DOLOMITIC MARBLE - pale green-grey, f. to c.g., mottled. Patchy c.g. diopside & serpentinized diopside. Minor calcite & dolomite. Clotty concentrations of py - po - dissem. clots yet local.					
75.6	84.4		MIX OF DIOPSIDE QUARTZ ROCK, QUARTZ ROCK & SERPENTINIZED DIOPSIDE QUARTZ ROCK - an integrated mix of - 1) 75.6-76.0 - a diopside quartz rock with 30% serpentine. 2) 76.0-78.8 - a massive smokey white quartz rock - minor f.g. diopside & short sections of highly altered serpentinous & calcitic rock. (probably after a diopside rock). 3) 78.8-79.2 - a highly altered serpentinous rock. 4) 79.2-80.0 - a smokey grey v.f.g. quartz - diopside rock w/minor serp'n. 5) 80.0-81.2 - a dk.grey v.f.g. diopside quartz rock. 6) 81.2-82.3 - a highly altered serpentinous rock. 7) 82.3-84.4 - a v.f.g. lt.grey quartz diopside rock w/minor serp'n & calcite patches. Traces of py + po are scattered locally thru the unit.					
84.4	122.4		GREY BANDED DOLOMITIC MARBLE W/VARIABILITY - med. to dk.grey, f. to m.g. well banded - yet irregular & contorted. Contorted swirls & bands & seams & patches of calcite & serpentine. Minor traces of phlogopite, Finely dissem py - po thru out. Minor amounts of diopside - quartz as patches generally & local thru unit. Find also silicated grey to grey banded marble sections. Local (mm scale) v.f.g. laminated bands of pred. graphite - diopside - quartz - feldspar (possibly). Traces of sphalerite as single dissem grains 86.3-86.4 & 94.9. 91.0-98.0 - roughly the grey banded dol. is variable. The grey dol. marble is not as dark a grey. Find interlayering of a dk.grey band & med. to lt. grey dol. marble. Locally the lt. to med. grey dol. is weakly silicated w/diopside - quartz. 95.9-96.3 - a massive f.g. diop. rock - quartz & tremolite - 3% py + po. 96.3-97.8 - a silicated dol. marble w/variable sized (mm & cm scale) v.f.g. diop. & quartz. 97.8 - you grade into the good grey banded dol. marble. 100.2 & 101.9, 104.2 - scattered flecks of sphalerite.					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
84.4	122.4	(cont'd)	107.3-107.8 & 108.4-108.8 - a dk.grey w/green tinge, f.to m.g. siliceous dol. marble (siliceous being possibly recrystallized granular feldspar ± quartz). Spotty specks of serp'n, possibly some chlorite. Locally find a weakly phlogopitic grey dol. marble (i.e. 110.0-110.3). 109.0-115.0 - the dol. marble is grey but absent of any banding or is faint to weak banded.					
122.4	139.8		INTERMIXED DIOPSIDE ROCK, DIOPSIDE-QUARTZ ROCK - the unit is predominately a v.f.g. off-cream white to pale green diopside rock w/intermixed smokey f.g. quartz bands & patches. Thru the unit are short intervals of a diopsidic silicated dol. marble. Minor serp'n alteration patches scattered as well as occas. tremolite scattered in w/the diopside. Fine sparse py - po. Phlogopite and calcite clots random.					
139.8	144.3		DOLOMITIC AND GREY-GREY BANDED DOLOMITIC MARBLE - 139.8-140.9 - a buff-white to lt.grey dolomitic to weakly silicated dol. marble. Darker grey diop. patches <10%, local phlogopite. Minor serp'n & calcite. Trace dissem of py + po. 140.9-144.3 - a med. to dk. grey, grey to grey banded dol. marble, f.g. Minor serp'n patches. Abundant dissem py + po thru section w/ increased conc. 141.2-141.8 (>5%). Minor diopside - quartz & calcite. This unit is locally calcitic. Flecks of sphalerite at 141.2, 142.9.					
144.3	157.9		INTERMIXED DIOPSIDE & DIOPSIDE-QUARTZ ROCK - intermixing of a predominately f. to c.g. pale green-grey diopside rock w/irregular patchy v.f.g. smokey quartz ~8-10% of entire unit. Serp'n type alteration of the diopside is weak. 15.. - ..8 - a phlogopitic diopside rock. Locally find other conc. of phlog (<5%). Scattered clots & dissem grains of py + po.					
157.9	175.9		GREY ... DOLOMITIC MARBLE INTERLAYERED W/CALCITIC GREY BANDED DOLOMITIC MARBLE - med. to dk.grey, f.to m.g., well banded dol. marble. Minor diopside, serp'n, calcite. Finely dissem py + po thru unit. Patches & seams of v.f.g. laminated graphite,					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
157.9	175.9	(cont'd)	Locally get minor phlog in the grey banded dol. marble. 157.9-164.8 - a section of calcitic grey banded dol. marble. Random thru the unit the dol. marble is a med. to lt.grey dol., ghost banding or contorted & swirled seams & patches. Minor phlogopite, serpentinous f.g. diop - quartz. Trace amounts of Zn mineralization as very scarce & finely dissem. grains of sphalerite at 171.6, 173.4, 173.6, 173.8.					
175.9	197.8		CALCITIC DOLOMITE TO CALCITIC GREY-GREY BANDED DOLOMITIC MARBLE - The dol. marble unit is variable in colour from a beige-buff thru to a dk.grey well banded dol. The dol. exhibits phlogopite dissem in varying concentrations. Minor serpentine altered diopside & diopside patches & seams & calcite - generally contorted & elongated patches & seams & bands. Trace dissem of py + po thru out. 179.0-190.0 - the calcitic grey banded dol. marble predominate. Thru the unit find v. finely laminated bands (mm scale) of graphite - quartz - feldspar (?) Also note elipsoid pinkish-brown lenses of possibly a feldspathic dolomitic rock (mm scale). 190.0-196.0 - a calcitic lt.grey dol. marble - locally weakly banded. 196.0-197.8 - calcitic grey banded dol. marble similar to 179.0-190.0.					
197.8	236.5		PYRITIC FELDSPATHIC ROCK ≡ PYRITIC CALC. SILICATE ROCK - dk. brownish-grey, v.f.g., pyritic >10% finely dissem py - po - weak to fair banding. Narrow calcite seams & calcite patches. Minor serp'n patches & clots. Short section of buff coloured calcitic marble 207.5-209.1. Heavy py - po concentrations 40% 208.6-210.1. Broken core 226.7-227.1.					
236.5	239.8		CALCITIC MARBLE - buff pale green, m.g. weakly mottled. Minor pale green f. to m.g. serp'n. Sections are weakly silicated w/f.g. diop & serp'n - trace dissem py - po.					
239.8	261.0		INTERLAYERED GREY-GREY BANDED DOLOMITIC MARBLE & SILICATED DOLOMITIC MARBLE - interlayering of a med. to dk.grey dol. marble, f. to m. exhibiting a range of well banded dol. marble to a ghost banding, to a homogeneous off-white dol. marble. Scattered					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
239.8	261.0	(cont'd)	Minor calcite, phlogopite and serp'n as patches & seams. Short sections of the lt. to med. grey dol. marble is weakly silicated. 250.7-251.7 - calcitic marble. 251.7-252.8 - pyritic feldspathic rock ≡ calc. sil. rock. 252.8-253.8 - calcitic marble. 254.0-255.0 & 256.0-258.5 - silicated dolomitic marble w/25% darker grey patches of c.g. diop.					
261.0	268.7		SILICATED DOLOMITIC MARBLE - off-white to pale grey, m.g., weakly fetid, mottled. 30% darker grey patches of c.g. diop. Minor serp. patches. Trace dissem of py - po thru unit 268.2-268.4 - a dk. grey dol. marble.					
268.7	278.3		GREY BANDED DOLOMITIC MARBLE (D ZONE) - med. to dk. grey, f. to m.g., fair to well banded. Minor calcite, serpentine patches & seams. Trace amounts of phlogopite. Weakly contorted bands. Dissem. py ± po <1% f.g. Trace Zn mineralization as scattered individual grains of sphalerite 272.2-273.0, 273.2, 275.0.					
278.3	303.0		SILICATED DOLOMITIC MARBLE - off-white to lt.grey or pale green, m.g. Locally very weakly fetid. Scattered traces of py. 279.0-280.0 - 40% serp'n patches. The sil. dol. marble unit is variable in appearance largely owing to variability in colour. 287.9-288.6 - a v.f.g. quartz feldspathic rock w/books of brown mica & c.g. calcite. 291.0-291.5 & 293.2-295.3 - a phlogopitic.					
303.0	317.0		DOLOMITIC MARBLE - pale grey, m.g. dol. marble w/minor sections weakly silicated. Serpentine patches random as well as (mm scale) seams of serp'n ± calcite ± phlog. Finely dissem thru unit py ± po <1%. 309.0-315.0 - hematitic staining of dol. marble.					
317.0	331.4		PYRITIC FELDSPATHIC ROCK ≡ PYRITIC CALC. SILICATE ROCK - dk. brown-grey, v.f.g., weak to fair banding. Minor mm scale bands & seams of serp'n dolomite, diopside ± quartz. >10% v.f.g. dissem pyrite ± po. Clots of py random. Few breccia fragments. Narrow v.f.g. grey seams & patches of quartz ± feldspar ± diopside (?)					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
331.4	366.9		SILICATED DOLOMITIC MARBLE - pale grey, m.g., mottled. Serp'n patches (10% small darker patches of c.g. diop. Locally quite tremolitic. Finely dissem py ± po thru out unit. Individual grains of sphalerite at 342.5 & 342.7. Interlayered within the sil. dol. marble are sections of phlogopitic dol. marble. (i.e. 347.5-348.2; 351.2-352.0; 353.6-353.9; 356.5-357.0). Purple anhydrite at 362.2-362.3. 365.3-366.9 - a m.g. silicated lt.grey dol. marble.					
366.9	384.4		PYRITIC FELDSPATHIC ROCK ≡ PYRITIC CALC. SILICATE ROCK - dk. brownish grey, v.f.g. Very f.g. dissem py ± po >10%. Irregular & contorted seams (mm scale) & patches of calcite & alteration material. 370.4-374.0 - a pale green m.g. calcitic marble. 374.0-375.1 - a heavily hematitic stained calcitic marble.					
384.4	390.0		ALTERED CALCITIC MARBLE - variably coloured w/a hematitic stain, f. to m.g. calcitic marble. Abundant serp'n patches. Minor fine phlogopite locally hematitic stained. 386.7-387.2 - a f.g. silicated dol. marble (386.6-387.0 highly serpentinous). Broken core 389.3-389.6.					
390.0	414.6		SILICATED DOLOMITIC MARBLE - off-white to lt.grey, m.g., mottled Locally tremolitic. Minor serp'n & phlogopite. 15% dk. grey patches of c.g. diop. Short sections of weakly sil dol. marble. Traces of finely dissem py ± po. 406.2-407.1 - a brownish-grey, m.g. pyritic phlogopitic silicated dol. marble. 407.1-408.6 - a c.g. diopside rock. 408.6-409.0 - a diopside quartz rock. 413.4-413.6 - a phlogopitic feldspathic rock - dk.brown in colour w/calcite seams. 414.3 - a 10cm band of v.f.g. diopside ± quartz - dk.grey.					
414.6	436.0		LIGHT GREY DOLOMITIC MARBLE & GREY BANDED DOLOMITIC MARBLE - lt. to dk. grey, f. to m.g., faintly to well banded dol. marble. Fetid locally. 414.6-417.0 - weakly silicated. Minor dissem phlogopite thru out unit. Dissem py ± po (1%) locally concentrating (5-8%) (i.e. 421.0-					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-81

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
414.6	436.0	(cont'd)	Zn mineralization. <½% py + Est. trace Zn	4151	420.0	420.6	0.6	0.54
			1-2% py ± po Est. 2-3% Zn	4152	420.6	421.1	0.5	4.28
			2-5% py ± po Est. ½% Zn	4153	421.1	421.8	0.7	0.06
			2-3% py ± po Est. 4-5% Zn	4154	421.8	422.7	0.9	7.65
			<½% py ± po Est. 1% Zn	4155	422.7	423.2	0.5	2.26
			Few grains of sphalerite at 424.9-425.0					
			Trace Zn as scattered individual grains 425.7-426.6	4156	425.7	426.6	0.9	0.04
			<5% py Est. 1% Zn	4157	429.3	430.0	0.7	1.15
			3-5% py Est. 1-1½% Zn	4158	430.0	431.0	1.0	0.72
			2-3% py Est. 1-1½% Zn	4159	431.0	432.0	1.0	1.86
			3-5% py Est. 1-2% Zn	4160	432.0	433.0	1.0	1.70
			2-3% py Est. ½% Zn	4161	433.0	434.0	1.0	0.39
			2-3% py Est. trace Zn	4162	434.0	435.0	1.0	0.40
436.0	439.4		PYRITIC WEAKLY SILICATED DOLOMITIC MARBLE - off-white - lt.grey, m.g. Pyrite - buckshot dissem 5-7% thru out. Minor diop. Serp'n patches locally scattered. Some c.g. calcite.					
439.4	447.0		CALCITIC MARBLE - variably coloured from hematitic pink to pale green, m. to c.g. Phlogopitic sections. Minor dolomite sections (mm scale). Serpentinous patches rare & scattered.					
447.0			END OF HOLE					
			Casing left, no cement. Plug put in casing to hold water in.					
			Core recovery - near 100%.					

2.140
0.042
6.545
1.130
10.117 = 3.372 %

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-82 Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TOWNSHIP	—	November 21, 1979
PROJECT 3188	LOT & CONC Lot 32 Conc. III	DIP -90°	DATE COMPLETED November 24, 1979
CLAIM NO. EO 469687	CO-ORDINATES 6+01N	LENGTH 354m	DRILLED BY St.Lambert Drilling
GRID NO West Grid	4+03E	COLLAR ELEV. 987m	LOGGED BY D. Robertson

CORRECTED SURVEY TESTS

Depth	MBrg	TBrg	Dip
112m	N35°W	N45°W	-85°
220m	N79°W	N89°W	-76°
346m	N73°W	N83°W	-74°

LOCATION SKETCH OF HOLE

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
			OBJECTIVES:- TO TEST ZONES D, MGB, B and BOUNDARY NEAR AXIS OF SALERNO SYNFORM.					
0.0	1.0		OVERBURDEN					
1.0	10.2		WEAKLY SILICATED DOLOMITIC MARBLE TO SILICATED DOLOMITIC MARBLE - off-white to pale grey, f. to m.g. weakly sil. dol. marble to sil. dol. marble. Minor altered diop. & serp'n patches giving mottled appearance. Scattered traces of phlog. Finely dissem grains of py ± po. Sections of the dol. marble is weakly banded.					
10.2	38.5		GREY BANDED DOLOMITIC MARBLE - lt. to dk. grey, f. to m.g., fair to well banded. C.A. variable around 60°. Irregular patches & seams of calcite, serpentine scattered. Locally find fine ± cm scale bands of v.f.g. v. finely laminated graphite ± diop. ± qtz. ± pyrite (i.e. 12.2). Interlayered w/the grey banded dol. is a grey dol. marble mottled w/minor serp. calcite. Dissem thru the unit 1% f.g. py ± po locally conc. into clots & seams. Trace Zn mineralization as finely dissem grains of sphalerite at 13.1, 13.4, 14.2-14.3, 18.2, 24.8, 32.6, 33.5-33.6. Est. 1-1½% Zn	4163	26.4	26.8	0.4	1.52
			Silicated dolomitic marble sections 15.5-16.3, 19.5-21.3, 24.9-26.3.					
38.5	43.0		GREY SILICATED DOLOMITIC MARBLE - lt. to med. grey, f.g. generally w/c.g. sections, mottled sil. dol. marble. <15% bands of v.f.g. smokey quartz (cm scale). The diop. is not altered, therefore very little serp'n. Traces of f.g. py ± po.					
43.0	46.5		GREY BANDED DOLOMITIC MARBLE - med. to dk.grey, f. to m.g., weakly banded. Irregular seams & patches & bands of dol. w/ serp'n ± calcite ± v.f.g. graphite. Minor diop. or altered diop.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-82

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
46.5	53.1		SILICATED DOLOMITIC MARBLE - lt. to med. grey, generally f.g. mottled. Minor serp'n w/traces of calcite. Finely dissem py ± po <½%.					
53.1	55.8		WEAKLY SILICATED GREY DOLOMITIC MARBLE - med. grey, m.g., irregularly mottled, fetid. Contorted patches & swirls of serpentine & calcite. Irregular weak bands (mm scale) of graphitic enriched dol. marble. Locally concentration of py - po but generally finely dissem <1%.					
55.8	60.2		SILICATED DOLOMITIC MARBLE - lt.grey, f.g., mottled. Patches & cm scale bands of v.f.g. smokey quartz - diop. The bands of quartz & diopside are interlayering of qtz & diop. (i.e. 59.3-59.5; 59.6-59.7). Clots of concentrated py - po 1-2%. Short section of sil. dol. that is calcitic w/pink calcite 57.7-58.0.					
60.2	82.0		GREY-GREY BANDED DOLOMITIC MARBLE - med. to dk.grey, f. to m.g., faint to well banded. C.A. 65°-55°. 65.9-66.4 - bands cm scale of black v.f.g. well laminated graphite ± diop - quartz - feldspar - py. The lamellae are both regular and highly contorted. Minor serp., calcite and diopside, traces of phlog. thru unit. 62.0-63.7 - sil. dol. marble - 62.4-62.7 a diopside quartz rock. Py - po v.f.g. and dissem. 72.0-76.1 - a lt.grey m.g. weakly sil. lt.grey dol. marble. 73.0-73.9 - interbanded well laminated graphite-diop-quartz rock w/diopside-sil.dol. marble. Gradational into next unit.					
82.0	86.5		WEAKLY SILICATED TO SILICATED DOLOMITIC MARBLE - lt. to med.grey, f. to m.g. Minor serp'n & calcite seams & patches. Locally phlog. clots. Finely dissem py - po. Scattered individual grains of apatite.					
86.5	89.6		PY[illegible] DIOPSIDE FELDSPATHIC ROCK - Note: Not Swamp Unit. A dark grey f. to m.g. pyritic (py <5%) quartz diopside feldspathic rock, fetid. Minor serp. generally along fracture patterns as well as calcite.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-82

SHEET 3 5

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
89.6	128.2		GREY BANDED DOLOMITIC MARBLE - dk. grey, f. to m.g., fair to well banded. Minor serp., diop., calcite as irregular & contorted patches & seams & bands. Finely dissem py - po. Traces of phlogopite. Patchy f.g. quartz (smokey grey) - diop. (i.e. 95.6 & 95.9). Also cm bands of grey diop. quartz interlayered w/the grey banded dol. marble. Trace Zn mineralization as f.g. of sphalerite at 91.0, 91.6, 92.0, 92.5, 93.4, 94.7, 94.9, 97.6, 98.8, 99.6, 101.0, 102.3, 102.5, 102.8, 103.4. 100.2-100.4 - a unique veining pattern infilled w/py (mm scale) 101.5-101.9 - v.finely laminated, swirled band & patches of graphite - diop - quartz - feldspar - py. 119.0-120.0 - an off-white dol. marble.					
128.2	129.8		DIOPSIDE QUARTZ ROCK W/INTERLAYERED LAMINATED DIOPSIDE QUARTZ FELDSPAR BANDS - pale green, f.g. Variable w/serpentine alteration & phlogopite bands and patches. Cm scale bands of v.f.g. finely laminated diop - quartz - feldspars - py. Dissem py - po 1%.					
129.8	133.9		VARIABLE DOLOMITIC MARBLE - 129.8-131.4 - a calcitic serpentinous dolomitic marble, pale green grey buff. Finely dissem traces of py. 131.4-133.4 - a lt.grey, f. to m.g. silicated dol. marble, fetid, mottled. Minor serp., alter'n, calcite. Finely dissem. grains of py. 133.4-133.9 - phlogopitic dol. marble w/minor serp. & calcite.					
133.9	135.6		QUARTZ DIOPSIDE ROCK - med. to dk.grey, v.f.g. quartz diop. rock, mottled. Serpentine & calcite irregular patches w/increase conc. of py - po. Very fine dissem py thru out unit <½%.					
135.6	137.7		SILICIFIED DOLOMITIC MARBLE - pale grey to grey-green, f.g. Serpentine, altered diop. phlog. Narrow bands of v.f.g. graphite - diop - quartz. Dissem. py <1% thru unit.					
137.7	150.0		CALCITIC MARBLE - variable colour, f. to m.g. 137.7-143.9 - generally a pale grey-green. Minor serp. Short sections of iron oxide staining. Sections are a calcitic dolomitic marble. 143.9-150.0 - a heavy iron oxidized stained calc. marble. All					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
150.0	152.7		HIGHLY ALTERED ROCK - this unit is pred. iron oxide, talc(?) serpentine, calc. Thought to represent originally the pyritic (calc. silicate rock) feldspathic rock.					
152.7	155.1		CALCITIC MARBLE - pale grey w/heavy iron oxide staining, f.to m.g. Serp. alteration occurring in patches.					
155.1	166.2		SILICATED DOLOMITIC MARBLE - pale grey to green, f. to m.g. mottled. Scattered dissem of oxidized py, & py. Minor serp'n patches. Minor traces of tremolite. Short sections are weakly calcitic. More serpentinous & calcitic from 163.5-166.2. 162.5-163.5 - a highly oxidized dk. green serpentinous rock ± talc - gypsum.					
166.2	214.8		VARIABLE CALCITIC MARBLE - variably coloured from pale grey-green to salmon pink, f. to c.g. The entire unit is highly serpentinous w/abundant dissem oxidized py staining the calc. marble. Short sections of the calc. marble are serpentinous dol. marble. The entire unit exhibits a high degree of ground water movement as exhibited by the oxidized py grains & pitted & vuggy texture & generally 'muddy' nature. Highly altered oxidized serpentinous ± talc ± gypsum rock in short sections. 1) 187.9-188.5 2) 192.4-192.7 3) 199.4-201.1 Gradational into next unit.					
214.8	222.1		ALTERED [illegible] - a buff-pink-grey rock, f.to m.g., altered - an unusual rock. Pred. dolomite, serpentine mineral(?), kaolinite(?) Weakly calcitic.					
222.1	238.3		ALTERED PYRITIC FELDSPATHIC ROCK (Altered Pyritic Calc. Sil. Rock)- dk. brown-grey to dk.brick red, v.f.g., dissem py & oxidized py >10%. Intermittent thru the unit the rock is highly altered to a [illegible]. ± talc + oxidized py. Broken core - 222.4-222.8, 223.9-224.2, 226.1-226.3, 227.2-227.4, 235.3-235.5.					
238.3	245.2		CALC[illegible]BLE - variable colour, f. to m.g., solution pitted w/[illegible] dissem. py. 238.3-[illegible] - pyritic feldspathic rock.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-82

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
245.2	250.4		SERPENTINOUS & CALCITIC SILICATED DOLOMITIC MARBLE - pale grey-green, f. to m.g., mottled. Various proportions of serpentine alteration & calcite scattered thru unit. Dissem py - po 1%. Traces of tremolite.					
250.4	273.9		CALCITIC MARBLE - variable colour, generally grey-green to buff-pink, f. to m.g. w/c.g. sections. Local sections w/dissem oxidized py. Finely dissem py ± po shot thru unit <1%. 263.0-263.8 - darker grey m.g. calc. marble w/biotite. 256.9-258.0 & 268.0-268.6 - calcitic serpentinous sil.dol.marble.					
273.9	276.1		MICACEOUS DOLOMITIC MARBLE - lt. to med.grey, m.g. dol. marble. The unit is laminated by biotite & phlogopite (20-30%). Shot thru the unit is dissem py (1%). The unit is more calcitic w/depth. Minor serp. Gradational into next unit.					
276.1	282.0		PHLOGOPTIC CALCITIC MARBLE - pale grey to buff-beige, f.to m.g., gnost banding highlighted by phlogopite. Dissem. phlog. 10-20% thru out unit. Minor serp. Dissem grains of py ± po <½%.					
282.0	326.5		CALCITIC DOLOMITIC MARBLE TO DOLOMITIC CALCITIC MARBLE - pale green-grey to lt.grey, f.to m.g. Variable phlogopite concentrations. Dissem py ± po f.g. <1%. The greater part of the unit is weakly serpentinized. Possible purple anhydrite 288.4-288.5.					
326.5	344.2		GREY-GREY BANDED CALCITIC MARBLE - med. to dk.grey, m.g., fair to well banded. C.A. 60°-40°. 330.0-330.7 - micro scale bands of v.finely laminated graphit - dolomite ± quartz ± calc.silicates. Minor dolomite thru section. 10cm bands of milky quartz @ 336.1 & 336.2. 337.6-338.3, 343.1-343.3, 343.5-344.2 Sections of pale pink-off-white c.g. silicated marble, short sections being vuggy. 338.0 - a 2cm band of massive py.					
344.2	354.0		GREY SILICATED MARBLE w/DOLOMITIC CALCITIC MARBLE - a med. to dk. grey, f. to m.g. calc. marble. Minor silicated & altered silicated marble patches. Traces of f.g. py locally.					
354.00			END OF HOLE - Casing left, no cement.					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-83 Tropari

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TOWNSHIP	--	November 26, 1979
PROJECT	LOT & CONC	DIP	DATE COMPLETED
3188	Conc. III, Lot 32	-90°	November 29, 1979
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY
EO 469686	2+76N	384.0m	St.Lambert Drilling
GRID NO		COLLAR ELEV.	LOGGED BY
West Grid	4+54E	971m	W.E.Roscoe

TESTS	Depth	NBrg	TBrg	Dip
	148m	300°	290°	-85°
	296m	304°	294°	-82°
	380m	013°	003°	-82°

LOCATION SKETCH OF HOLE

NOTE: Last Tropari test questionable.

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVE - TO TEST ZONE D AND OTHER ZONES AT APPARENT INTERSECTION OF MINERALIZATION TREND W/THE HINGE AREA OF AN EARLY ISOCLINAL FOLD.					
0.0	2.4		OVERBURDEN					
2.4	3.4		DIOPSIDE-QUARTZ ROCK - pale grey, somewhat weathered, f.m.g. diop. w/poss. 15% qtz. streaks.					
3.4	6.0		GREY BANDED DOLOMITIC MARBLE - med.grey f.g. dol., banding fair to poor, C.A. 70°-80°. Minor po, py, phlog., calc.; occas. patch calc.-sil. & diop. Trace Zn 5.6-5.8.					
6.0	12.7		QUARTZY SILICATED DOLOMITIC MARBLE - pale-lt.grey f.m.g. dol. mottled w/pale diop. spots, v.f.g. trem. & 2-3% f.g. po + py. Minor calcite. 15% f.g. grey sl. fetid quartzite sections, <0.1-0.6m long. Up to 3% v.f.g. dissem. py. Loc. vaguely banded. Traces Zn assoc. w/quartite @ 6.6-6.7 and 7.0-7.1.					
12.7	23.9		DIOPSIDE ROCK - massive pale grey c.g. and off-white f.g. diopside. Loc. mottled w/lt. grey trem. Loc. minor py. 18.5-19.2 - pale grey dol., minor po, a few patches of quartz rimmed w/diop.					
23.9	29.3		DIOPSIDE-QUARTZ ROCK - massive pale grey to off-white diopside, similar to prev. unit, but w/avge. 10% irreg. streaks & patches of grey glassy quartz.					
29.3	37.0		SILICATED DOLOMITIC MARBLE - pale grey m.g. dol. w/perhaps 50% diopside as spots, patches and massive sections. Minor trem., calc., loc. po, py.					
37.0	44.3		DIOPSIDE-QUARTZ ROCK - off-white to pale grey diop w/avge. 30% grey glassy quartz in irreg. bands, streaks & patches. Loc.					

ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-83

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
44.3	48.4		SILICATED DOLOMITIC MARBLE - variable off-white to lt.grey. M.g. dol. w/25% diop. sections, patches, spots. Minor trem., calc., po, py. 45.1-45.5 - green diop. w/v.f.g. brown py & f.m.g. py.					
48.4	56.1		GREY BANDED DOLOMITIC MARBLE - med.-lt.grey f.m.g. dol., somewhat calcitic. Banding fair to good. C.A. 75°-85°. 1-2% f.g. dissem. py, loc. po, phlog. 53.8-55.2 - 90% pale grey diop., minor po. Traces f.g. sphalerite @ 49.0, 50.3, 52.2-52.3, 55.3, 56.1.					
56.1	85.2		GREY & GREY BANDED DOLOMITIC MARBLE W/CALC.-SILICATE BANDS - med.-lt.grey, f.m.g., sl. mottled dol. marble, somewhat calcitic loc. Minor py, po. Occas. blebs & flecks of black graphite. C.A. variable, avge. 70°. 10% dk.grey to black thin 'calc.-silicate' bands, irreg. distributed, composed of f.g. quartz + diop., w/minor graph., py. 10% thin pale grey diop. bands commonly contorted. Some sections black qtz & lt. diopside, irreg. banded, e.g. 84.2-85.2. 79.2-83.7 - 5-10% po streaks, patches, dissem. Tr Zn 70.8-71.2.					
85.2	93.5		QUARTZY SILICATED DOLOMITIC MARBLE - pale grey to off-white m.g. dol. w/30% lt.grey c.g. diopside patches & sections. Med.- dk. grey glassy qtz. streaks & patches assoc. diopside. Loc. sl. fetid.					
93.5	99.2		DIOPSIDE-QUARTZ ROCK - alternating sections, some streaky sections, of off-white m.c.g. diop. (55%) and grey glassy qtz (45%). Loc. sl. fetid. Some qtz sections up to 0.7m w/minor diop. streaks. 97.7-99.2 - pale buff diopsidic calc. dol., 5% py streaks, loc. phlog., occas. traces f.g. sphal.					
99.2	144.5		GREY BANDED AND GREY DOLOMITIC MARBLE - med.-lt. grey f.m.g. dol. sl. mottled. Banding fair, C.A. avge. 50°-60°. Some sections pale-lt.grey m.f.g. dol. Gen. somewhat calcitic. Minor py, po, phlog., loc. graph. flecks. Some diop. sections & contorted bands. Occas. dk. f.g. qtz., graph., py bands. 105.7-108.6 - pale grey m.f.g. dol. w/10-20% bands & sections pale grey serp'd diop., loc. qtz.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-83

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
99.2	144.5	(cont'd)	139.7-143.8 - minor Zn mineralization in grey banded dol. w/ 5-10% py-po dissem. & irreg. patches & bands. 139.7-139.8 - est. 5% Zn, streaks sp. to 1cm. 141.9 - 5cm band massive sp-py. 142.9 - patchy sp in 0.1m of 10% py. Best section assayed, est. 2% Zn	4164	141.9	143.0	1.1	2.35
144.5	149.4		DIOPSIDE & DIOPSIDE-QUARTZ ROCK - massive lt.grey c.g. diop. w/ patches off-white f.g. diop.-trem. Loc. minor py. 145.2-147.0 - 20% grey quartz streaks.					
149.4	152.9		SILICATED DOLOMITIC MARBLE - pale grey-buff dol. w/50% sections, patches of pale-lt.grey c.g. diop., loc. trem.					
152.9	154.3		QUARTZ-DIOPSIDE ROCK - streaky to patchy grey quartz (60%) & pale grey diop. (40%). Loc. minor py. Loc. sl. fetid.					
154.3	163.6		SILICATED DOLOMITIC MARBLE - similar to 149.4-152.9. 40% diop., some trem.-calc. Loc. minor f.g. py, phlog. Diop. loc. serp'd. 156.8-157.1 - 60% glassy grey quartz. 159.3-159.5 - phlogopitic calcitic dol. w/bands serp'd diop. 161.0-162.0 - med.grey, sl. banded calc. dol., some bands dk. calc. silicate & serp'd diop					
163.6	168.0		GREY BANDED DOLOMITIC MARBLE - med.grey f.m.g. dol., banding poor to good, C.A. 85°. Minor calc., py, phlog.					
168.0	173.1		SILICATED GREY DOLOMITIC MARBLE - alternating 0.5-1.0m sections of: a) med.grey to grey banded f.m.g. dol. w/contorted diop. bands, minor calc., py, po, phlog.; and b) pale-lt.grey silicated (diop.) dol., as prev. unit, minor py, phlog. Dk. laminated calc.-sil. bands near 173.1.					
173.1	176.2		GREY BANDED DOLOMITIC MARBLE - similar to 163.6-168.0. Med.grey f.m.g. dol., somewhat calcitic loc. Minor py, phlog., Loc. minor diop., dk. calc-sil. bands. Banding fair, C.A. 60°.					
176.2	198.8		CALCITIC MARBLE (Swamp Unit?) - varying lt.grey mottled to buff mottled, m.f.g. calc. marble, prob. somewhat dolomitic locally. 1-2% f.g. dissem. py. Loc. somewhat phlogopitic. Loc. qtz.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-83 SHEET 4

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
176.2	198.8	(cont'd)	181.5-185.1 - 10-20% short sections laminated pale green to brownish diop.-phlog.-py, po.					
198.8	206.7		SILICIFIED CALCITIC DOLOMITIC MARBLE W/PYRITIC "CALC.-SILICATE" BANDS - pale grey-buff f.g. calc.-dol. marble w/25% cm scale bands pale grey f.g. serp'd diop. Minor phlog., py, striped w/25% <1-2cm bands of brown f.g. pyritic 'calc.-silicate', resembling Swamp Unit material. Some f.g. plag. at centres of bands. C.A. 40°-80°. 198.8-199.2 - grey banded dol. marble.					
206.7	211.4		SILICIFIED CALCITIC DOLOMITIC MARBLE - pale grey-buff to off-white m.g. dol., fairly calcitic, w/sections & patches lt.grey diop. Minor py, phlog. Grey qtz. sections & streaks 209.9-210.2. In part resembles FSD Unit.					
211.4	219.1		BANDED DIOPSIDE-QUARTZ-CALCITE ROCK (Swamp Unit?) - 211.4-213.5 - mostly f.g. pale grey-buff calc. marble w/irreg. streaks & patches grey qtz. Minor py, phlog. dol. 213.5-217.0 - alt. sections - a) pale green laminated f.g.diop. ± qtz., sl. serp'd, 1-2% po; and b) grey, mottled, f.g. calc. marble, sim. to next unit. 217.0-219.1 - pale grey-buff mottled calc. marble w/25% bands of grey, laminated qtz ± py ± po, <1-5cm. 217.3 - several grains f.m.g. sphal. within a qtz. band.					
219.1	221.4		SYENITE - uniform, massive med.grey; mostly f.m.g. plag. feldspar. Minor py. 2-3% f.g. dissem. mafic spots.					
221.4	227.7		GREY [illegible] DOLOMITIC MARBLE - med.-dk.grey, f.g. dol. w/abund. thin white calc. bands, commonly contorted. Banding good, C.A. 40°-90°. Several % v.f.g. dissem. graph. Up to 1% py loc.					
227.7	243.1		CALCITIC [illegible] CALCITIC-DOLOMITIC MARBLE - chiefly lt.-med.grey & buff mottled f.m.g. calc. marble. Minor py, phlog. Some sections pale-lt.grey f.m.g. calc. dol., loc. banded, C.A. 60°-70°. Minor py, phlog., diop. (serp'd). (cont'd)					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-83 SHEET 5 OF 7

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
227.7	243.1	(cont'd)	229.7-233.7 - 15% bands laminated dk.grey-black v.f.g. graphitic pyritic calc.-sil. & qtz. - diop. Loc. bx'd.					
			240.7-243.1 - 20% bands dk.grey-black laminated pyritic calc.-sil. diop. - qtz. Loc. contorted.					
243.1	246.4		GREY BANDED DOLOMITIC MARBLE - lt.-med.grey f.m.g. dol., somewhat calcitic. Banding good, C.A. 60°. Minor py, phlog., diop.					
246.4	249.4		BANDED DIOPSIDE-QUARTZ (Swamp Unit?) - banded to laminated pale green-grey diop. & grey quartz. Abund. phlog. layers. Several % po-py. In part serp'd. Mottled pale grey calc. marble 248.9-249.4.					
249.4	251.1		DOLOMITIC MARBLE - pale grey, sl. mottled m.g. dol., somewhat calcitic. Minor py.					
251.1	255.2		CALCITIC MARBLE (Swamp Unit) - lt.grey-buff mottled calc. marble. Pt. vaguely banded. Loc. dol. Somewhat phlogopitic. 1-2% f.g. dissem. py. In part soft serpentinous, pale grey. 251.8-252.3 - banded diop.-quartz. 254.5-255.2 - soft, friable, pitted, vuggy calc. marble.					
255.2	281.3		SILICATED DOLOMITIC MARBLE (FSD) - off-white to pale grey m.g. dol., minor calc., w/30% lt.grey diop. patches & sections, commonly partly serp'd lt.-med.grey. 264.0-264.3 - pale serp.-phlog. section. 278.1-279.6 - diop. is completely serp'd to irreg. dk.green patches.					
281.3	288.3		DOLOMITIC MARBLE - pale grey, mottled m.g. dol. Somewhat calcitic. Minor dissem. f.g. py, up to 1%. Minor phlog. 281.8-282.3 - pink mottled calc. marble.					
288.3	297.6		SILICATED DOLOMITIC MARBLE - white m.g. dol. w/25% pale grey diop. patches, pt. serp'd. 293.0-294.6 - mottled m.c.g. dol., loc. calcitic. 294.6-297.6 - much green serp., calc. veinlets.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-83

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
297.6	298.5		ALTERED RED SYENITE(?) - dk. reddish brown, f.g. rock, core much broken on serp. fractures. Muddy gouge at contacts. 1-2% f.g. dissem. py. Soft, apparently altered feldspar. Resembles 'altered calc.-silicate rock' in Hole S-34.					
298.5	303.7		SILICATED DOLOMITIC MARBLE - off-white m.g. dol. w/50% patchy to mottled pale trem. & diop.					
303.7	307.0		RED SYENITE(?) - less altered than 297.6-298.5. Brown to dk.red f.g. feldspar(?) rock. 5% f.g. dissem. py, minor v.f.g. black mafic(?) spots. Massive, uniform. Minor calc. veins. Serp'd at both contacts. Has some resemblance to both Swamp Unit & Syenite.					
307.0	311.9		SILICATED DOLOMITIC MARBLE - off-white to pale grey buff m.g. dol. w/25% diop. patches, largely altered to lt.green serp. Becomes rather calcitic towards 311.9.					
311.9	317.9		SERPENTINOUS CALCITIC MARBLE - highly mottled lt.grey to salmon m.g. calc. marble w/30% irreg. lt. & dk. green serp. patches & spots. Loc. minor f.g. diss. hm after pyrite. Somewhat dolomitic, poss. more altered version of prev. unit. 311.9-313.2 - altered, serp'd green-grey diop. or fd.(?) rock w/phlog. books, dissem. py & hm.					
317.9	324.7		ALTERED CALC.-SILICATE(?) - dk.grey to reddish-brown f.g. highly serpentinized, soft rock, much broken core. Several % f.g. dissem. py & red. hm. spots after py. Resembles altered calc.-silicate in S-34 as well as 311.9-313.2 in above unit. Poss. altered Swamp Unit. A few 0.3m sections of calc. marble, mottled.					
324.7	352.0		CALCITIC MARBLE - varies from mottled salmon m.g. calc. marble w/abund. serp. spots & f.g. dissem. py/hm. to lt.grey mottled m.g. calc. marble w/minor py. Minor phlog. loc. Minor short tremolitic sections.					
352.0	365.4		SERPENTINIZED SILICATED CALCITIC DOLOMITIC MARBLE - pale grey m.g. dol. marble, w/30% diop. patches, altered to pale & dk. green serp. Some salmon mottled calc. marble sections. 356.7-358.7 - mottled trem.-diop. rock.					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-83

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	ASSAYS
365.4	373.7		DIOPSIDIC CALCITIC MARBLE - mostly lt.grey mottled calc. marble w/30% massive to mottled sections pale grey diop., partly serp'd., loc. w/talc seams. Loc. patches of c.g. phlog. books.					
373.7	378.4		CALCITIC MARBLE - pale-med.grey m.f.g. calc., several % f.g. phlog., loc. minor f.g. py. Central part is trem.-phlog. calc. rock.					
378.4	380.6		DOLOMITIC MARBLE - pale grey-off-white m.g. dol. 5-10% pale grey diop. spots & patches. Minor py.					
380.6	384.0		CALCITIC MARBLE - lt.grey mottled m.f.g. calc. w/a few % f.g. dissem. py & phlog. A few % lt.grey qtz. patches & bands, loc. laminated, increasing towards 384.0 to 25%.					
384.0			END OF HOLE - not cemented. Casing left in.					
			Core recovery - near 100%.					

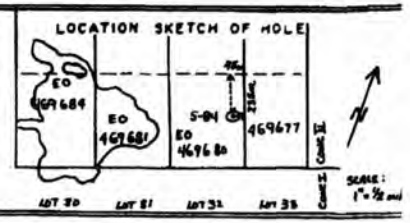
ST JOSEPH EXPLORATIONS LIMITED — DRILL LOG — HOLE NO. S-84

PROPERTY	TP OR AREA	AZIMUTH	DATE STARTED
SALERNO LAKE	SNOWDON TOWNSHIP	n/a	January 17, 1980
PROJECT: 3188	LOT & CONC.: Conc. II, lot 32	DIP: -90°	DATE COMPLETED: January 31, 1980
CLAIM NO.: EO 469680	CO-ORDINATES.: 7+24S	LENGTH: 672m	DRILLED BY: St.Lambert Drilling
GRID NO.: West Grid	6+90E	COLLAR ELEV.: ~972m	LOGGED BY: Alar Soever

CORRECTED DIP TESTS

Depth	MBrg	TBrg	Dip
99m	360°	350°	-85°
192m	357°	347°	-85°
330m	06°	356°	-78°
414m	20°	10°	-75°
504m	19°	9°	-74°
606m	39°	29°	-74°

LOCATION SKETCH OF HOLE



METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
			OBJECTIVES:- TO TEST SOUTHERN EXTENSION OF SALERNO DOLOMITIC SECTION.					
0.0	1.2		OVERBURDEN					
1.2	32.5		VARIABLE GREY BANDED TO MOTTLED GREY CALCITIC MARBLE -					
			1.2-5.6 - m.g. grey banded calcitic marble w/f.g. diss. graphite, phlogopite & pyrite - narrow 1-2mm f.g. black pyritic calc.-silicate bands at 2.3-2.4m, and 2.7m. C.A. 70°-80°, locally at 4.5-5.0m highly variable ~50°.					
			5.6-15.0 - m. to c.g. mottled lt.grey calcitic marble, w/f.g. diss. graphite, pyrite & phlogopite. Minor quartz - locally books of m.g. phlogopite flakes are prominent - minor vesuvianite - mottled appearance is due to patches of white calcite & local concentrations of graphite and/or phlogopite.					
			15.0-15.8 - short section of m.g. dolomite, white to lt.grey, minor diss. py, phlogopitic band at 15.2.					
			15.8-18.2 - much as 5.6-15.0, - 15.8-15.9 highly phlogopitic. 15.9-16.2 - f.g. reddish-brown mineral, iddingsite? altered olivine.					
			18.2-18.8 - slightly calcitic m.g. grey banded dolomitic marble w/f.g. diss. graphite phlogopite & pyrite - highly phlogopitic bands at 16.5, 16.7m.					
			18.8-21.5 - much as 5.6-15.0, but w/sections of qtz-diop. 19.2 - c.g. vesuvianite crystals assoc. w/qtz-diop - qtz diop. contains blebs of py-po - tr Zn in qtz-diop at 20.0m.					
			21.5-32.5 - m.g. grey banded calcitic marble w/f.g. diss. py, phlog. & graphite. C.A. ~70°. 21.5-21.9 - slightly dolomitic. 27.5-27.9 - section of c.g. off-white diopside. 27.1, 29.2-29.3, 29.9 - fragments of brecciated black f.g..py - calc.-silicate					
			30.2-32.5 - becomes lighter grey					

ST JOSEPH EXPLORATIONS LIMITED DRILL LOG HOLE NO. S-84

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
32.5	34.3		CALCITIC GREY BANDED DOLOMITIC MARBLE - m.g. grey banded calcitic dolomitic marble w/f.g. diss. graphite, pyrite & phlogopite - narrow bands of f.g. pyritic calc-silicate. C.A. 65°-70°.					
34.3	42.1		DOLOMITIC MARBLE - white to lt.grey, m.g. dolomitic marble - weakly banded - minor v.f.g. diss. py & phlog. - locally get narrow 1-2m more phlogopitic & pyritic bands. C.A. ~65°.					
42.1	45.0		GREY BANDED DOLOMITIC MARBLE - m.g., grey banded dolomitic marble - slightly fetid - minor f.g. diss. py. - small streaks & bands of white calcite. C.A. 50°. Tr Zn at 42.3, 42.9, 44.2. 4 narrow 2-5mm bands of diss. sph. assoc. w/py at 42.4-42.6 - est. 2.0%/0.2m.					
45.0	54.1		INTERLAYERED GREY BANDED DOLOMITE, SILICATED DOLOMITE AND MASSIVE DIOPSIDE - 45.0-46.9 - grey banded dolomite w/patches of c.g. off-white to pale grey diopside - small patches of white calcite. Tr Zn at 45.2, 46.2-46.3, 46.8. 46.9-49.1 - massive c.g. off-white to very pale greenish-grey diopside - minor dolomite 46.9-47.2, 48.3-48.4, 48.6-48.8. 49.1-51.2 - grey banded dolomitic marble w/patches & contorted bands of white calcite - 15-20% patches of c.g. off-white diopside - minor diss py, po. 51.2-53.9 - c.g. white silicated dolomitic marble w/~50% patches of c.g. pale grey diopside locally w/f.g. tremolite needles - locally quite strongly fetid. 53.9-54.2 - short section of grey banded dolomite w/streaks of white calcite - minor diss. py,po phlog.					
54.2	60.7		WEAKLY SILICATED DOLOMITIC MARBLE - off-white m. to c.g. dolomitic marble w/about 5-10% small patches of c.g. diopside - minor assoc. fine tremolite - tr f.g. diss. py. Zn - f.g. diss. sphalerite assoc. w/diopside 54.2-55.4 - best from 54.2-54.5 Sample est. ~½%-1% Zn	4177	54.2	55.4	1.2	1.12
60.7	64.9		SILICATED DOLOMITIC MARBLE - m. to c.g. dol. marble w/45% patches of m. to c.g. off-white to pale grey diopside - minor assoc. f.g. tremolite.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
64.9	69.4		DIOPSIDE QUARTZ ROCK - 85% pale green f. to m.g. diopside w/fine tremolite needles - 15% sections w/wisps of f.g. grey quartz.					
69.4	102.2		SILICATED DOLOMITIC MARBLE - off-white to very pale grey, m.to c.g. dolomite - ~25-30% patches of c.g. white, pale grey or very pale green c.g. diopside w/minor assoc. f.g. tremolite - locally minor diss. py, po. - unit becomes more silicated towards base. 69.4-73.0 - fetid weakly silicated dolomite. 95.7-98.0 - section of massive diopside, tr Zn at 96.0m, brown to honey coloured sphalerite. Minor qtz at 78.6, 92.6, 96.8.					
102.2	117.7		QUARTZ DIOPSIDE ROCK - 102.6-105.0 - f. to m.g. pale green diopside w/15% sections of wisps of lt.grey qtz - small section of white c.g. dolomite w/serpentinized diopside. 105.0-113.8 - 85-90% massive grey quartz w/10-15% stringers & irregular shaped patches of f.to m.g. pale green diopside. 113.8-118.1 - 75-80% f. to m.g. pale green diopside w/irregular shaped patches of f.g. grey qtz.					
117.7	125.1		DARK GREY BANDED QUARTZ DIOPSIDE CALC.-SILICATE - v.f.g. black to grey, well banded pyritic calc.-silicate mostly v.f.g. dk. grey chert & grey f.g. diopside - slightly fetid - v.f.g. diss. py, po - ~10% patches of f.g. pale grey diopside. C.A. = 60°-65°.					
125.1	176.9		DIOPSIDE-QUARTZ ROCK - pale green, f. to c.g. massive diopside w/patches of grey quartz - few patches of lt.pink to lt. salmon coloured calcite - minor diss. py, po. 125.1-129.9 - massive m. to c.g. pale green diopside w/~35% patches of grey qtz. - minor diss. po, py. 129.9-131.0 - black f.g. pyritic calc.-silicate as in 117.7-125.1. C.A. = 50°. 131.0-137.7 - pale green f. to c.g. massive diopside w/5-10% patches of grey qtz - minor tremolite assoc. w/ diopside - minor diss. py, po - short sections of dolomitic marble 132.6-132.8, 134.9-135.0, 135.2-135.6, 136.7-137.1. (cont'd)					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
125.1	176.9	(cont'd)	137.7-147.7 - 50% grey quartz w/40% irregular shaped patches of pale green f. to c.g. diopside - minor v.f.g. trem. assoc. w/diop. - patches of pale pink calcite at 145.9, 146.2-146.7.					
			147.7-176.9 - pale green f. to c.g. massive diop., locally w/ minor tremolite, ~10% irregular shaped patches of grey quartz, <5%patches of pink calcite - minor diss. py, po.					
			150.0-152.3 - massive pale green diopside w/ minor pink calcite ~5% py, po as f.g. disseminations and small blebs to 5mm dia.					
176.9	189.3		SILICATED DOLOMITE - off-white m.g. dolomitic marble w/~35% patches of f. to c.g. pale green to grey diopside. Diopside has minor f.g. trem. needles assoc. w/it. Locally trace f.g. diss. py, po - minor qtz at 185.4.					
189.3	196.0		QUARTZ DIOPSIDE ROCK - pale green to very lt. greyish f. to c.g. diopside w/15% irregular shaped patches of qtz. 194.5-194.7, 195.6-196.0 - f.g. diss phlogopite, py & po.					
196.0	201.1		DARK GREY BANDED QUARTZ DIOPSIDE CALC.-SILICATE - dk. to lt.grey f.g. diopside & chert - locally fractured & brecciated - patches of f.g. lt.grey diopside - v.f.g. diss py, po C.A. 50°-55°.					
201.1	207.4		MASSIVE DIOPSIDE - pale green to pale grey, f. to c.g. diopside - minor f.g. diss. py, po - locally minor f.g. diss phlog - minor qtz at 204, 207.4 - small patches of dolomite from 205.5-207.4.					
207.4	209.4		DOLOMITIC MARBLE - f. to m.g. white dolomitic marble - traces f.g. diss py, po & phlog - very slightly calcitic. C.A.40°-45°.					
209.4	243.8		SILICATED DOLOMITIC MARBLE - off-white, m.g. dolomitic marble w/patches of v.c.g. pale grey or m. to f.g. pale green diopside - pale green diopside is slightly serp'd w/minor f.g. tremolite needles - locally minor diss. py, po - sections of qtz diopside 213.4-216.3, 236.5-236.7, 237.7-238.0 - minor qtz. at 222.2 - section of serp'd diop 226.9-227.9. (cont'd)					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn
209.4	243.8	(cont'd)	228.4-228.7 - section of banded diopside w/phlogopitic sections above & below. C.A. 45°-50°.					
			231.3-232.6, 233.1-233.8 - 3-4% combined f.g. diss py, po in silicated dol.					
			240.3-243.8 - lt.grey to off-white silicated dol. w/~20% c.g. pale grey to very pale green diop. - bottom 1m of unit is pale greenish due to f.g. diss. phlog. & f.g. slightly serp'd tremolite needles in dolomitic marble - 2-3% diss. po py as diss. grains, & small blebs - locally get thin bands of diss. po, py. C.A. 55°-60° - minor Zn assoc. w/po, py at 241.0-241.4, 241.8-242.1.					
			Sample 241.0-242.1 - Est.<½% Zn	4178	241.0	242.3	1.3	0.28
243.8	248.7		MASSIVE DIOPSIDE - massive very pale green to lt.grey m.g. granular to c.g. diopside - minor f. to m.g. tremolite assoc. w/ diop. - minor qtz at 245.2, 247.5 - few small patches of pink calcite - short sections of white m. to c.g. dol. 245.7-246.1, 246.4, 246.5-246.6, 246.8, 247.6, 247.8-249.0. Tr Zn assoc. w/py at 244.2, tr Zn 244.7, 244.8.					
248.7	257.2		SILICATED DOLOMITIC MARBLE - off-white m. to c.g. dolomitic marble w/about 45% patches of m. to c.g. pale grey diop. Minor diss. py, po.					
257.2	290.1		WEAKLY SILICATED DOLOMITIC MARBLE - off-white, m. to c.g. dolomitic marble w/5-10% patches of m. to c.g. off-white to pale grey diopside locally w/minor tremolite - traces f.g. diss. py, po, narrow 1cm bands py, po at 269.1, 274.7, 275.8. 280.8-283.0 - more silicated section w/~55% m.g. pale grey diop. w/minor f.g. tremolitic needles.					
290.1	296.3		SILICATED GREY TO GREY BANDED DOLOMITIC MARBLE - med. to lt.grey, m.g. weakly banded dolomitic marble w/v.f.g. diss. graphite & pyrite. C.A. 30°-35°. 15-20% sections of c.g. pale grey diopside - locally small patches of white calcite & minor diss. phlogopite. Tr Zn 290.2-290.7, est. 1%/0.5m, 293.4, 295.2, 295.9.					

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
296.3	325.8		GREY TO GREY BANDED DOLOMITIC MARBLE - med.grey, moderately banded, grey dolomitic marble - streaks & irregularly shaped patches of white calcite - f.g. diss. graphite, pyrite & locally minor phlogopite - locally >5% small patches of pale grey f.g. to c.g. diopside, sometimes assoc. w/minor qtz. - minor diss. f.g. py, po locally occurring as small blebs or stringers of massive py, po. Tr Zn as isolated f.g. diss. grains throughout unit, sometimes assoc. w/py, po blebs - submassive blebs of sph. ~1cm dia. at 313.6, 313.8. Better sections of f.g. diss. sph. perhaps 1-2% Zn at 317.5-317.7, 325.4-325.7. C.A. at 297.0 - 40-45° 301.0 - 50° 304.5 - 55-60° 310.0 - 75-80° 318.0 - 50° 323.0 - 45-50°					
325.8	330.9		VARIABLE QUARTZ DIOPSIDE ROCK - 325.8-328.1 - f. to m.g. grey granular slightly fetid quartz w/v.f.g. diss. graphite pyrite? po w/20% patches of off-white m. to c.g. diopside. 326.8 - blue fluorite assoc. w/diop. Tr Zn 325.8-326.8. 328.1-330.1 - pale grey qtz w/30% patches of off-white diopside. Tr Zn at 328.9, 329.7. 330.1-330.9 - lt.grey banded f.g. qtz diopside w/v.f.g. po, py. C.A. 45-50°.					
330.0	333.3		SILICATED GREY DOLOMITIC MARBLE - m.g. grey dolomitic marble w/minor v.f.g. diss. graphite pyrite & phlogopite - 10-15% patches of pale grey diopside w/darker grey granular qtz - minor pale blue fluorite assoc. w/diopside quartz at 331.5.					
333.3	375.1		QUARTZ-DIOPSIDE ROCK INTERLAYERED W/GREY QUARTZITE - 333.3-335.3 - off-white f.g. to c.g.diopside w/fine tremolite needles and ~20% patches of lt.grey to dk.grey granular qtz - brecciated fragments of f.g. grey qtz at 333.6-333.7 - Tr Zn at 333.3-333.6 - short section of grey dolomite 334.8-334.9. (cont'd)					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
333.3	375.1	(cont'd)	335.3-338.1 - med. to dk.grey, f.g. quartzite w/10% patches of f.g. lighter grey diopside - v.f.g. diss. py, po, graphite? - locally slightly fetid - few small patches of white calcite.					
			338.1-343.9 - pale green to grey m. to f.g. diop. w/10% patches of lt.grey quartz - minor pale blue fluorite assoc. w/diopside at 340.4. 341.2, 341.6 - locally slightly fetid					
			343.9-349.1 - massive grey quartzite of f.g. dk. to m.g. quartz w/f.g. diss. py, po, graphite - ~5-10% patches of lt.grey diopside & minor stringers of calcite.					
			349.1-354.6 - massive grey vitreous quartz w/about 25% patches of pale green to off-white diopside - locally fetid - minor fluorite at 350.3, 350.6, 351.6, 352.9 - tr Zn 354.1-354.4.					
			354.6-355.2 - v.f.g. qtz-feldspar-biotite-diopside w/f.g. diss. py.					
			355.2-359.5 - v.f. to m.g. dk. to m.g. quartzite w/about 10% patches of pale grey diopside, few small patches of white calcite - v.f.g. diss. graphite, slightly fetid - section of m.g. pale green diopside 357.3-357.6.					
			359.5-366.0 - diopside-quartz rock of about 70% off-white to pale green to grey, f. to c.g. diopside, locally tremolitic - locally minor pale blue fluorite & minor diss. phlogopite, minor f.g. diss. py, minor po - 30% patches of lt.grey quartz. Tr Zn at 365.9.					
			366.0-367.2 - f.g. dk.grey slightly fetid quartzite w/minor v.f.g. diss. graphite - ~15% pale grey f. to m.g. diopside. Tr Zn at 366.1, 367.0.					
			367.2-375.1 - quartz diopside rock of 60% lt.grey to med.grey quartz w/40% pale green diopside, locally tremolitic & calcitic - py & po as f.g. diss. grains & locally as submassive patches of py, po - minor Zn assoc. w/py, po - trace Zn as diss. grains throughout - narrow submassive bands of sphalerite at 369.8, 372.6.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
375.1	390.5		MASSIVE DIOPSIDE ROCK - pale to med.grey to green, f.to m.g. diopside and f.g. tremolite w/~12% diss. po, w/minor assoc. py - mostly as diss. grains and small blebs up to 1cm diameter - 10-15% patches of f.g. grey to green dolomite w/f.g. diss. po, py & graphite - heavy concentrations of sulphides 385.5-386.4, 387.1-387.6 - traces f.g. graphite assoc. w/diopside - minor quartz 381.7, 382.2-382.6 - tr Zn 385.3, 385.6, 385.7, 385.8-385.9, 387.4-387.5, 387.8, 388.3-388.4, 388.6, 388.8, 389.1-389.3, 389.8, 390.0-390.1.					
390.5	395.0		DIOPSIDE QUARTZ ROCK - 75% pale green m. to c.g. diopside locally tremolitic - minor diss. po, py - 25% patches of lt. grey quartz - few patches of off-white calcite - vein of calcite 391.6-391.9 - tr Zn as v.f.g. isolated disseminated grains from 390.5-393.6.					
395.0	397.9		MASSIVE DIOPSIDE - m.g. to f.g. pale green to pale grey diopside, locally tremolitic w/f. to m.g. tremolite needles - 8~10% py po as f.diss. grains & small submassive blebs. Tr Zn 396.3, 396.4, 396.7-397.0, 397.3, 397.6, 397.7 - few small patches of cream to pink calcite.					
397.9	404.0		SILICATED DOLOMITIC MARBLE - white dolomitic marble w/60% patches of f.g. to c.g. lt.grey to lt.grey diopside w/patches of f.g. disseminated to submassive patches of py & po - locally diopside has f.g. tremolite needles - sulphide rich sections w/30-35% py, po at 398.8-399.2, 401.1-401.8 - py & po about equal Tr Zn at 398.2, 398.5, 398.6, 398.8-399.2, 402.3, 403.3-403.6.					
404.0	435.9		DIOPSIDE QUARTZ & QUARTZ DIOPSIDE ROCK - 404.0-406.4 - quartz diopside rock - 60% lt.grey quartz, 40% patches of off-white diopside, f.g. tremolite & minor phlogopite assoc. w/diopside 404.0-404.6. - few small patches of lt.salmon coloured calcite. 406.4-408.7 - massive off-white diopside w/~20% f.g. tremolite interbanded w/20% m.g. white dolomitic bands - tr py at 407.5. 408.7-419.9 - quartz diopside rock of ~50% grey quartz & ~50% patches of off-white to pale green diopside - diopside patches are highly tremolitic 410.5-411.1, 411.9-412.2. Small patches of lt.salmon calcite 417.6-417.8. (cont'd)					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
404.0	435.9	(cont'd)	419.9-435.9 - diopside, quartz rock of pale green to pale grey f.g. to c.g. diopside w/5-10% patches of lt.grey quartz - percentage of quartz patches decreases w/depth - few small patches of off-white to lt. pink calcite - locally diopside contains 5-10% fine tremolite needles - traces of pyrite, pyrrhotite & sphalerite as scattered isolated diss. grains 432.0-435.9. Tr Zn at 432.0, 432.3-432.7, 433.8.					
435.9	437.7		LIGHT GREY DOLOMITIC MARBLE, PO, PY - lt.grey m.g. dolomitic marble w/6-8% diss. po, minor assoc. py, traces assoc. sphalerite - minor diss. phlog. - <5% patches of lt.grey c.g. diopside w/minor dolomite - slightly calcitic. C.A. 60-70°. Tr Zn throughout, very minor, v.f.g.					
437.7	448.4		DOLOMITIC TO SILICATED DOLOMITIC MARBLE - off-white, m. to c.g. dolomitic w/5-10% small patches of m. to c.g. very pale grey diopside - traces of v.f.g. diss. pyrite - sections of massive f.g. pale grey to pale green to off-white f.g. to c.g. diopside w/minor diss. py & po from 441.3-441.5, 441.8-442.8, C.A. 50-55°. 447.0-448.4 - about 50% patches of m. to c.g. pale grey diopside - 1-2% f.g. diss. py, po from 447.2-448.4. Tr Zn 447.2-447.8, thin bands of diss. sph. grains 447.6-447.7.					
448.4	450.5		DIOPSIDE-QUARTZ ROCK - pale green to pale grey, f. to m.g. diopside, 10% patches of lt.grey massive quartz - 2-3% py, po as f.g. diss. grains and as submassive blebs of py & po at 449.3-449.8. Tr Zn as fine diss. grains 448.5-448.7, 449.0, 449.3-449.7.					
450.5	457.4		DOLOMITIC MARBLE - f. to m.g. off-white dolomitic marble w/<5% small patches of m.g. pale grey diopside - traces v.f.g. diss. py, po? C.A. 70° - small patches of diopside qtz at 455.4, 456.0, 456.1.					
457.4	461.7		GREY BANDED DOLOMITIC MARBLE - m.g. med.grey, grey banded dolomitic marble - lighter bands w/white calcite - v.f.g. diss. graphite & minor diss py - small patches of f.g. grey diopside w/brecciated f.g. black py calc.-silicate at 459.1, 459.3,					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
461.7	470.0		MASSIVE DIOPSIDE & BANDED DIOPSIDE QUARTZ -					
			461.7-463.6 - off-white m.g. dolomitic marble interbanded w/30% patches of lt.grey f.g. diopside - slightly fetid.					
			463.6-466.7 - massive pale green f.g. diopside, traces f.g. diss. py, po - locally phlogopitic patches & a few patches of very light salmon coloured calcite - 15% patches of off-white m.g. dolomitic marble.					
			466.7-467.3 - banded diopside-quartz rock of pale green diopside & f.g. bands of grey quartz. C.A. 60-65°.					
			467.3-468.8 - massive to banded pale green f.g. to pale grey diopside - small patches of white calcite at 467.7, 468.0, 468.7 - narrow bands of grey qtz at 468.2-468.5. C.A. 70-75°.					
			468.8-470.0 - pale grey m. to c.g. diopside w/40% patches of white m.g. calcite.					
470.0	481.0		GREY BANDED DOLOMITIC MARBLE & CALC.-SILICATE - grey banded m.g. dolomitic marble w/thin mm scale bands of white calcite - f.g. diss py & graphite - locally 5% thin bands of black f.g. pyritic calc.-silicate some w/pale grey f.g. diopside. C.A. 55-60°.					
			477.0-477.3 - grey f.g. diopside-quartz calc.-silicate w/f.g. po, py fractured.					
			477.9-478.7 - pale grey f.g. diopside w/thin bands of dk.grey f.g. pyrrhotitic bands - minor diss. po.					
			479.6-480.4 - f.g. black calc.-silicate w/po, py w/minor grey banded dolomitic marble.					
481.0	485.1		PHLOGOPITIC DOLOMITIC MARBLE - off-white m.g. dolomitic marble w/<5% patches of lt.grey diopside - traces of f.g. diss py & phlogopite - section from 483.1-484.5 is tinted a lt.beige colour due to a high concentration of f.g. diss phlogopite flakes. Fetid 481.0-481.6. Bands of phlogopite 483.9-484.0, 484.3, 484.4. C.A. 75-80°.					
485.1	499.1		SILICATED DOLOMITIC MARBLE - v.f. to m.g. off-white to lt.grey dolomitic marble w/about 15-20% patches of lt.grey diopside - minor quartz at 490.8-491.0.					
			497.2 - traces v.f.g. py, po.					
			491.2-492.0 - short section of grey banded dolomite. C.A.80-85°.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
499.1	501.3		DIOPSIDE-QUARTZ ROCK - 60% f. to m.g. pale grey diopside w/10-15% fine tremolite needles - 40% patches of grey massive quartz - vein of purple fluorite or anhydrite at 501.1.					
501.3	508.3		VARIABLE DOLOMITIC TO SILICATED DOLOMITIC MARBLE - 501.3-505.2 - white c.g. dolomitic marble w/<5% patches of pale grey f.g. diopside and fine tremolite needles. Traces f.g. py, po - locally tinted beige due to local concentrations of f.g. diss. phlogopite. 505.2-503.8 - phlogopitic dolomitic marble w/several patches of c.g. pale grey diopside - minor diss. py - highly phlogopitic band at 505.6. 503.8-504.5 - white m. to c.g. dol. w/~15-20% fine tremolite needles and 5-10% patches of slightly serp'd m. to c.g. diopside. 504.5-506.4 - massive pale grey m. to c.g. diop. w/15-20% fine tremolite needles - 20% patches of white dolomite - band of phlogopite at 505.5-505.6. 506.4-508.3 - phlogopitic dolomitic marble w/~10% f.g. diss. phlogopite. Minor diss py.					
508.3	512.1		GREY TO GREY BANDED DOLOMITIC MARBLE - m.g. grey banded dolomitic marble w/f.g. diss graphite & pyrite. C.A. 80°-85° - pale to med.grey diopside and f.g. black pyritic calc.-silicate at 509.0-509.4, 510.3-510.5. Unit banded by sections of lt.grey dolomitic marble 508.3-509.1 and 511.1-512.1.					
512.1	514.3		DIOPSIDE QUARTZ ROCK - pale grey m. to c.g. diopside w/minor patches of lt.salmon calcite - patches of quartz 513.0-513.4.					
514.3	518.0		WHITE DOLOMITIC MARBLE - white m. to c.g. dolomitic marble - locally traces of v.f.g. disseminated pyrite and/or phlogopite.					
518.0	520.7		ALTERED CALCITIC MARBLE W/FELDSPAR CALC.-SILICATE ROCK - 518.0-519.7 - white m. to c.g. calcitic marble, patches of f.g. pyritic calc.-silicate rock 518.0-518.9. 519.7-520.7 - highly altered calcitic marble w/hematitic stain, fractured w/fine flecks of serpentine.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
520.7	538.5		MASSIVE DIOPSIDE ROCK - massive pale grey to off-white f.to c.g. diopside w/5-15% fine tremolite needles - 10% short sections of dolomitic marble - serpentinized sections 521.6, 524.7-525.0. - section of phlogopitic dolomite w/f.g. diss py 524.2-524.7. - major section of silicated white m.g. dolomitic marble w/20% patches of pale grey f.to c.g. diopside 525.2-527.6. Traces of Zn (honey coloured sphalerite) 533.8-534.0, 534.5, 535.2-535.3, 535.5.					
538.5	544.4		SILICATED DOLOMITIC MARBLE - white to very pale grey m. to c.g. dolomitic marble w/~25% patches of m. to c.g. diopside locally w/up to 20% tremolite - minor f.g. diss phlogopite 540.7-541.5 - bands of c.g. phlogopite at 541.1, 541.4-541.5. - locally slightly fetid.					
544.4	549.2		DOLOMITIC MARBLE - very pale, m. to c.g. dolomitic marble - traces v.f.g. diss pyrite, pyrrhotite? - <5% patches of m.g. pale grey diop. Tr Zn as v.f.g.(barely visible) grains throughout unit. Visible sphalerite grains at 544.7, 545.4, 545.8, 546.3-546.4, 548.0.					
549.2	560.6		GREY BANDED DOLOMITE W/PALE GREY DIOPSIDE - m.g. grey banded dolomitic marble w/5-10% small patches of f.g. to c.g. pale grey diopside - f.g. diss graphite ~1-2% diss po py - small thin bands of white calcite. C.A. 80°-85°. 550.6-552.0 - section of pale grey f. to m.g. diopside w/minor pale grey dolomite - minor diss py, po. 557.7-559.7 - massive pale grey f.g. diopside w/5-10% fine tremolite needles - 15% pale grey dolomite. 559.7-560.6 - grey banded dolomitic marble w/narrow chloritic bands and patches of serpentinized diopside. Tr Zn 550.5-550.6, 551.5-552.0, 552.1, 552.8, 553.3, 553.8-554.0, 555.0, 556.3-557.3, 558.8-559.0.					
560.6	564.7		ALTERED SILICATED DOLOMITIC MARBLE TO CARBONATE ROCK - 560.6-562.9 - altered silicated dolomitic marble w/hematitic stain, chloritic phlogopite patches, & highly tremolitic & black serpentinous section. 562.9-564.7 - pink to beige vuggy highly altered calcitic carbonate rock.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS % Zn		
564.7	570.8		SILICATED DOLOMITIC MARBLE - off-white m.g. dolomitic marble w/ ~15% patches of f.g. pale grey diopside w/~20% v. fine tremolite needles.							
570.8	573.8		GREY BANDED DOLOMITIC MARBLE - m.g. grey banded dolomitic marble w/thin bands and patches of white calcite - v.f.g. diss graphite w/3-4% diss. py, po. Zn as sphalerite grains disseminated throughout unit and narrow submassive bands assoc. w/py at 571.9, 572.4.							
			Est. <½% Zn	4179	570.9	572.4	1.5	1.08	)	
			Est. <½% Zn	4180	572.4	573.8	1.4	0.87	)	0.91/4.3m
				4181	573.8	575.2	1.4	0.78	)	
573.8	592.2		GREY DOLOMITIC MARBLE WITH CALC.-SILICATE - m. to c.g. pale grey dolomite w/traces of v.f.g. diss. pyrite - locally slightly phlogopitic w/bands of phlogopite at 578.3, 580.9, 581.7, 583.0, 585.2-585.7. C.A. ~80°. 576.9-575.5 - c.g. off-white diopside. Patches of f.g. grey diopside w/sections of massive f.g. tremolite w/~5% diss po, py 580.5-581.1, 581.4-581.8, 582.1-582.3, 582.4-582.8, 585.9-586.0, 589.1-589.4, 591.5-591.9. Section of grey banded dolomitic marble 589.5-590.1. Zn diss sph. assoc. w/diss py 573.8-575.2. Tr Zn as f.g. diss grains 578.6-580.5, 582.9-583.8, 584.2, 587.3.							
592.2	603.3		BANDED PYRITIC DIOPSIDE-QUARTZ ROCK - v.f.g. pale green to grey diopside w/thin darker bands of quartz and v.f.g. pyritic bands C.A. ~70°. - short sections of calcite marble 397.7-397.9, 398.1. - sections of massive pale green diopside m. to c.g. 600.5-600.9, 601.6-603.3 - locally ½-1cm blebs of massive py 601.6-603.3.							
603.3	621.5		BANDED PYRITIC CALC-SILICATE W/SECTIONS DIOPSIDE ROCK - f.g. grey pyritic calc.-silicate rock of f.g. qtz-diopside+feldspar - 3-4% f.g. diss pyrite - banded C.A. 55°-60° - sections of variable f.g. pale green diopside. 603.5-603.6 - f.g. pale green diopside, minor diss py. 604.3-605.2 - m.g. dolomitic marble w/20% f.g. tremolite and 30% massive pale green f.g. diopside - 2-3% diss phlog. 608.5-609.7 - massive pale green f.g. diopside w/2-3% f.g. diss py - short section of banded diopside quartz at 608.7-608.9 - section of diopside is banded by							

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
603.3	621.5	(cont'd)	609.7-621.5 - short sections of pale green diopside, some w/diss phlogopite. 615.3-617.9 - section of white tremolitc dolomite 20-30% f.g. tremolite needles - sections of massive pale grey diop-side tremolite 617.3-617.6, 617.7.					
621.5	631.1		CALCITIC DOLOMITIC MARBLE - off-white to very pale grey dolomitic marble w/15-20% white calcite - f.g. diss phlogopite locally as bands and small patches of phlogopite - minor c.g. off-white to pale grey diopside - bands of phlogopite at 621.6-621.8, 623.8, 630.5, 630.8-631.1. 2-3% f.g. diss pyrite. 625.6-626.2 - irregular shaped patches of massive pyrite, w/minor assoc. sphalerite. Sections of white dolomitic marble 621.8-622.3 - massive diop. 625.3-625.6. Tr Zn 625.6-626.2.					
631.1	643.2		SILICATED DOLOMITIC MARBLE - white m.g. dolomitic marble w/25-30% patches of pale grey f.g. diopside w/minor f.g. tremolite. Locally minor calcite assoc. w/diopside. 631.1-632.1 - diopside is slightly serpentinized and thus a pale green colour. 632.1-632.5 - phlogopitic section w/~10% f.g. diss phlog.					
643.2	650.5		PYRITIC CALC-SILICATE W/PATCHES OF DIOPSIDE - f.g. lt.grey to pale green banded to mottled pyritic calc.-silicate (mostly f.g. diop & qtz)? ~ 10% patches of m. to c.g. pale green diopside w/~30% fine tremolite. Minor patches of pink calcite - phlogopitic w/up to 15% phlogopite.					
650.5	651.8		TREMOLITIC SILICATED DOLOMITE - white m.g. dolomitic marble w/ ~30% f.g. tremolite needles & 15% m. to c.g. off-white diopside.					
651.8	655.6		PHLOGOPITIC CALCITE MARBLE - very pale grey to off-white m.g. calcitic marble w/~15% disseminated brown phlogopitic flakes. Locally trace diss py.					
655.6	659.4		SERPENTINOUS DOLOMITIC MARBLE - pale grey to off-white, m. to c.g. dolomitic marble w/5-10% small spots to med. size patches of pale grey m. to c.g. diopside and grey to pale green serpen-tinized diopside - locally tr diss po - phlogopitic band.					

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	ASSAYS
659.4	666.2		PHLOGOPITIC CALCITE - pale grey to off-white m.g. calcitic marble - 3-4% f.g. diss phlogopite - 1-2% f.g. diss pyrite - minor diss graphite as f.g. flakes. 660.0-660.3 - section of v.c.g. white dolomite. 660.3-660.6 - massive pale grey c.g. diopside, partly serpentinized, highly phlogopitic - minor quartz.					
666.2	672.2		LOST CORE					
672.2			END OF HOLE					
			Core lost - 0.1m - 498.0-504.0 6m - 666.2-672.2					
			Core recovery - 99.1%					
			Casing left - no cement.					

Dennis Robertson.