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A Report on the 1987 Exploration Programs on the Mary Ellen Resources Inco Option Harker and Holloway Townships, District of Cochrane, Ontario Larder Lake Mining Division

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By

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Kirkland Lake, Ontario

N.T.S. 32D/12

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Project: M-003

Summary

Between May and September 1987, Mary Ellen Resources completed a program of geological mapping and diamond drilling on the Inco Option property located in Harker and Holloway Townships, approximately 35 miles northeast of Kirkland Lake. Diamond drilling was completed to test the possible depth extension of the McDermott ore body onto the Mary Ellen property. Geological mapping aided in the correlation of interflow sedimentary units located to the east on the Argentex-Inco claim group.

Drill hole ME-87-10A was drilled to a total depth of 5,346.0 feet and appears to have intersected both the Ghostmount and McDermott Horizons. A wedged hole (ME-87-10B) also intersected both the Ghostmount and McDermott Horizons, verifying the up dip extension of the horizons.

A mineralized section intersected in ME-87-10A which assayed 0.230 oz Au/ton over 13.0 feet (from 2,964.0-2,977.0 feet), is interpreted to represent the Ghostmount Horizon. A second mineralized horizon assayed 0.109 oz Au/ton over 42.2 feet (from 3,378.8-3,421.0 feet) which also included a 10.6 foot section which assayed 0.257 oz Au/ton (from 3,381.4-3,392.0 feet). This lower mineralized zone appears similar to the mineralization in the Holt-McDermott Mine and is therefore interpreted to represent the

down dip extension of the McDermott Horizon.

The wedged hole intersected both the Ghostmount and McDermott Horizons, both of which assayed lower than the original hole. A weakly mineralized section located between the Ghostmount and McDermott Horizons assayed 0.083 oz Au/ton over 44.0 feet (from 3,242.0-3,286.0 feet). This also included a 20.0 foot section which assayed 0.125 oz Au/ton (from 3,266.0 - 3,286.0 feet). The interpreted wedged intersection of the McDermott Horizon assayed 0.041 oz Au/ton over 15.2 feet from 3,347.8 - 3,363.0 feet).

Diamond drilling has confirmed the depth extension of the McDermott Horizon onto the Mary Ellen-Inco property. Although of little economic significance at this time, the presence of the zone may be important in the future should mining of the zone continue to depth. Further drilling is therefore recommended both up dip and along strike to the west where the McDermott Horizon re-enters the property.

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A Report on the 1987 Exploration Programs
on the Mary Ellen Resources Ltd. Inco Option
Harker and Holloway Townships, District of Cochrane, Ontario
Larder Lake Mining Division

Introduction

Between May and September, 1987, geological mapping and diamond drilling was completed on the Mary Ellen Resources Inco Option property. Holes were drilled to test the depth extension of the McDermott ore body located approximately 1 km northeast of the Mary Ellen property. The McDermott Horizon is postulated to strike within 500 meters of the north boundary of the Mary Ellen property.

An initial drill hole was abandoned at a depth of 483 feet due to excessive deviation. The second hole, ME-87-10A was drilled to depth of 5,346 feet. The results of this hole warranted a wedged hole to intersect the interpreted depth extension of the McDermott Horizon. The results of the diamond drilling and mapping program are presented and recommendations for further work are outlined in this report.

Property Location, Access and Facilities

The Mary Ellen Resources claim group is comprised of 21

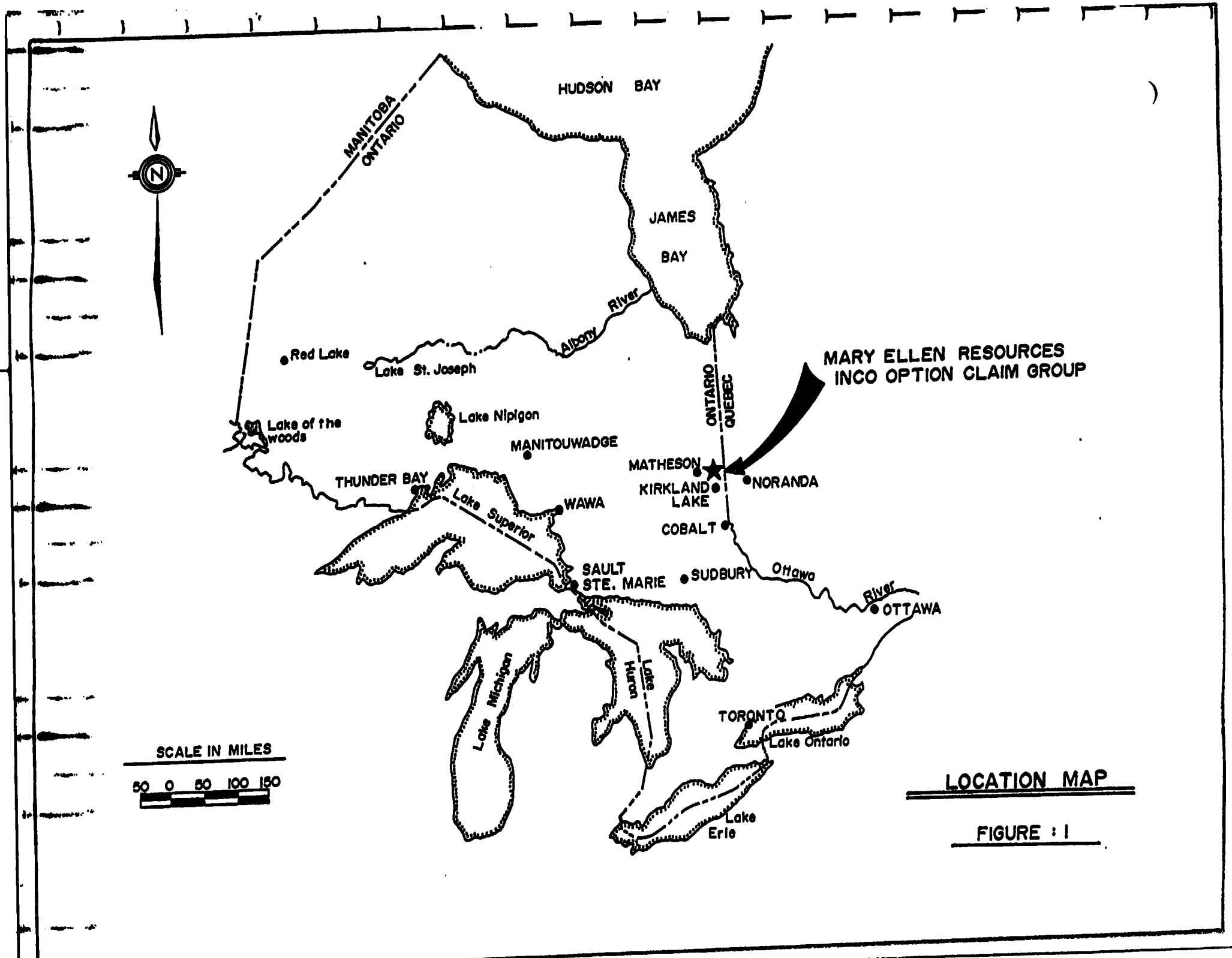
contiguous surveyed mining claims in the northern portions of Harker and Holloway Townships, District of Cochrane. The property is located approximately 35 miles northeast of Kirkland Lake and can be reached by Highway 101 to the American Barrick Resources McDermott Mine. Numerous drill roads extend from the McDermott Mine to the Mary Ellen property.

Facilities to support a mining operation are located a short distance away on the American Barrick property. A recently completed power line passes through the Mary Ellen Resources property.

Previous Work

The property was staked in 1981 by the Canadian Nickel Company Ltd. as part of a contiguous 245 claim group. Staking was followed by airborne magnetic and EM surveys followed by reconnaissance geological mapping and sampling.

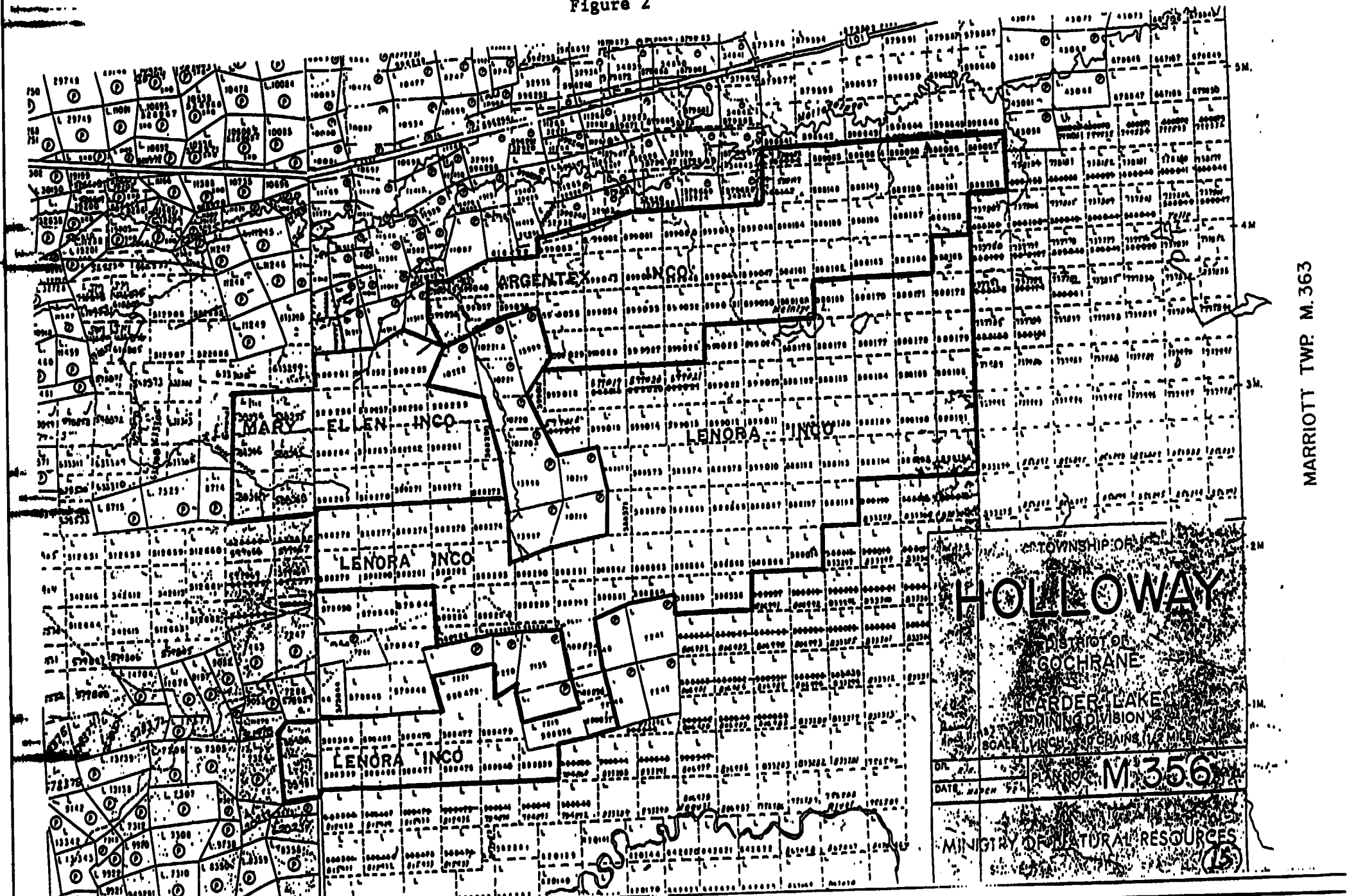
The property was optioned by Mary Ellen Resources in 1985 which completed line cutting, ground magnetometer and VLF-EM surveys. Diamond drilling totalling 6,843.0 feet was completed to test coincidental magnetic and VLF-EM anomalies. Drilling did not intersect any significant gold mineralization. The program did however verify the existence of interflow sedimentary horizons on the south and central parts of the property. Two drill holes,



LOCATION MAP

FIGURE : 1

Figure 2


ARGENTEX
INCO
MARY EL LEN
INCO
LENORA
INCO
LENORA
INCO
LENORA
INCO
TOWNSHIP OF
HOLLOWAY
DISTRICT OF
COCHRANE
LARDER LAKE
MINING DIVISION
SCALE 1 INCH = 20 CHAINS (1/2 MILE)
PLAN NO. M.356
DATE
MINISTRY OF NATURAL RESOURCES
MARRIOTT TWP. M.363

(M-85-1 and 2) appeared to have intersected the Ghostmount Horizon, the best intersection being 0.031 oz/ton over 4.0 feet in M-85-1.

In 1986, Mary Ellen Resources completed an Induced Polarization survey which outlined several weak anomalies which coincided with known interflow units. Anomalies which occurred on outcrops were subsequently prospected and found to have been caused by narrow chert horizons, generally barren of mineralization.

General Geology

The Mary Ellen Resources property is underlain by a steeply south dipping homoclinal sequence of mafic tholeiitic basalts of the Kinojevis Group. Narrow interflow sedimentary horizons of chert and graphitic argillites occur within the volcanic package and have been explored by diamond drilling in the past.

The east-west trending Destor Porcupine Fault Zone occurs approximately one mile north of the property. Splay faulting, perhaps related to movement along the Destor Porcupine Fault appears to have resulted in brecciation of the volcanics. One of the splay faults, the Ghostmount Fault, passes through the north part of the Mary Ellen property. Gold mineralization in the Harker-Holloway area appears to be localized along the splay faults.

1987 Exploration Program

i)Geological Mapping

As part of an ongoing exploration program of the Inco Option, geological mapping of the Mary Ellen Property was completed during the drilling program. Geological mapping aided in correlating interflow sedimentary horizons and structures located to the east on the Argentex property with those located on the Mary Ellen property.

The property is underlain by a homoclinal sequence of iron and magnesium rich tholeiitic flows and interflow sediments of the Kinojevis Group. The stratigraphy strikes 070 degrees and dips steeply (70-80 degrees) south.

At least three interflow sedimentary horizons have been located by previous diamond drilling on the Mary Ellen property. Two of these horizons, the Cryderman and Baseline Horizons, may be traced by magnetics to the east and across the Argentex property. Drilling on the Baseline Horizon has produced negligible results on the Argentex property but has yet to be tested on the Mary Ellen property.

The Cryderman Horizon was found to outcrop at two locations on

the Mary Ellen property. The locations included line 26+00E, 8+50S, and line 12+00E, 7+60S. At both locations, recognizable sedimentary features were absent. Both locations did however show minor brecciated chert with traces of graphite. Sampling at both locations assayed trace gold values.

The central part of the property is marked by two narrow, parallel chert bands. The units average 5 feet in thickness and have been traced for a distance of 800 meters on surface. Gold values returned by drilling and surface sampling were negligible, the best value being 242 ppb Au in a grab sample from an outcrop located on line 17+00E, 4+00S.

Approximately 300 meters north of the chert horizons, a magnetic low passes through the property roughly parallel to the baseline. This magnetic low appears to represent the west extension of the Baseline Horizon located on the Argentex property. The horizon has yet to be verified by diamond drilling on the Mary Ellen Resources property.

Drilling by Mary Ellen in 1985 located a brecciated and silicified unit on claim 588251 (diamond drill holes M-85-1,2). This unit appears to represent the west extension of the Ghostmount Horizon. Gold values were generally low, the best assay being 0.031 oz Au/ton over 4.0 feet in M-85-1. A drill hole further to

the west (M-85-3) failed to intersect a similarly altered unit. Geological mapping did however locate a zone of silicification and shearing 2-3 feet in width. This may represent the upper deformation zone intersected in holes ME-87-10A and 10B. It is possible that hole M-85-3 was not drilled deep enough to intersect the Ghostmount Horizon.

ii)Diamond Drilling

Introduction

The Mary Ellen property is located one kilometer southwest of the McDermott property and 300 meters south of the Worvest property. Both the McDermott and Worvest properties cover the McDermott Deformation Zone in which lenses of significant gold mineralization occur. The deformation zone is marked by a consistent structure, termed the McKenna Fault, which is roughly conformable to the volcanic stratigraphy and has an average dip of 66 degrees south. The fault appears to be a possible splay fault off of the Destor Porcupine Fault Zone, however, the genetic relationship between gold mineralization and the fault is inconclusive. Deeper drilling by American Barrick Resources has indicated that gold mineralization may occur on the hanging wall side of the fault. Mineralization normally occurs on only the

footwall side of the fault. Targeting for the Mary Ellen 1987 drill program was based on extrapolation of the strike and dip of the McKenna fault onto the property.

Results

Hole, ME-87-10 was collared 107 meters south of the American Barrick - Mary Ellen property boundary and drilled vertical. This hole flattened too quickly and was subsequently abandoned at a depth of 483 feet. The hole was moved 350 meters south of the boundary and redrilled using an azimuth of 325 degrees and a dip of 85 degrees. Full stabilization was used for drilling with Sperry Sun tests taken every 200 feet. The hole was de-stabilized at a depth of 1,777 feet followed by four west deflecting and two flattening wedges. Upon completion, the hole was tested using a Sperry Sun gycoscopic survey instrument (see Appendix B).

At a depth of 2,910 feet, a 46.6 foot wide zone of silicification and brecciation was cored. A 13 foot section (2,964.0-2,977.0) containing 3-5% pyrite assayed 0.230 oz Au/ton which included a 5.8 foot section which assayed 0.509 oz Au/ton. This horizon, when projected to surface, appears to correlate with a similar unit intersected in hole M-85-2 which assayed 0.012 oz Au/ton over 6.7 feet. This unit appears to represent the Ghostmount Horizon.

From a depth of 3,355.0-3,454.0 feet, the hole intersected a wide zone of deformation consisting of an upper transitionally mineralized zone, a main mineralized zone and lower transitionally mineralized zone. Both the upper and lower transition zones are characterized by erratically silicified and mineralized volcanics weakly anomalous in gold. The main mineralized zone consists of an intensely fractured/brecciated and silicified unit. Breccia fragments are locally magnetic and appear to represent an altered unit of the overlying magnetic basalts. Hematite alteration in the main zone appears to have been caused by the breakdown of magnetite imparting a purple tinge to the zone. Fragments have locally been either albitized or sericitized imparting a buff honey-coloration. Pervasive silica/carbonate alteration occurs interstitial to breccia fragments as stringers and hosts the majority of sulfide mineralization, which rarely exceeds 8-10%. Accessory mineralization includes specular hematite and a trace of chalcopyrite.

Gold mineralization does not appear to be limited to any particular alteration feature but does tend to occur in the upper portion of the main mineralized zone. The entire main mineralized zone assayed 0.109 oz Au/ton over 42.2 feet including a higher grading section which assayed 0.257 oz Au/ton over 10.6 feet. The entire deformation zone including upper and lower transition zones

assayed 0.062 oz Au/ton over 77.0 feet.

A chemical change appears to occur at this mineralized horizon from iron-rich volcanics to iron-poor volcanics. It is speculated the change represents an iron-magnesium tholeiite contact. Lower in the drill hole, local sections of weak talc alteration may represent the basaltic komatiites.

At a depth of 4,471.0 feet, a 4 inch zone of lithified clay and sand was intersected. This seam may represent the extension of the McKenna Fault. The volcanics hosting the fault showed only mild deformation and were not mineralized.

Upon receiving the results of ME-87-10A, it was decided to complete a wedged hole (ME-87-10B) to intersect both the Ghostmount and McDermott Horizons so as to determine the dip of both units.

The Ghostmount Horizon was intersected at a depth of 2,772.0 feet with the best assay being 0.023 oz Au/ton over 4.8 feet. The hole encountered difficulties and was terminated at a depth of 2,976.0 feet due to broken rods. A by-pass wedge was installed at a depth of 2,771.0 feet. The hole re-drilled the Ghostmount Horizon which assayed 0.053 oz Au/ton over 3.8 feet.

At a depth of 3,176.0 feet, a 149 foot section of spherulitic

basalt was cored which was not intersected in the first hole. This unit was erratically brecciated and silicified throughout. A 20.0 foot section from 3,266.0 feet assayed 0.125 oz. Au/ton.

The McDermott Horizon, which was intersected from 3,325.0-3,447.0 feet, included a lower mineralized unit within the lower transition zone. The main mineralized zone was similar to that intersected in the first hole with a decrease in albite/sericite alteration and pyrite mineralization. The main zone assayed 0.041 oz Au/ton over 15.2 feet with the lower mineralized zone assaying 0.033 oz Au/ton over 6.2 feet (3,398.3-3,404.5 feet). The entire McDermott Horizon and overlying spherulitic basalt assayed 0.030 oz Au/ton over 210.0 feet from 3,242.0-3,452.0 feet.

The dip of the Ghostmount Horizon is approximately 73 degrees south which is consistent with the regional geology. The apparent dip of the McDermott Horizon is approximately 30 degrees south. This apparent flat dip may be due to the following:

1) the apparent dip is in fact the true dip representing a flattening at depth of the McDermott Horizon.
2) the flat dip represents a local flexure within the main zone. The McDermott Horizon is know to pinch and swell vertically giving flat dips locally.
3) the apparent flattening may be due to the occurrence of a

right hand lateral cross fault passing between the first and wedged holes. Such a fault may occur at 3,056.8 feet in the wedged hole off-setting the main mineralized zone a distance of 70 feet horizontal. Such a fault could account for a deeper intersection of the main mineralized zone in the wedged hole. However, there is little proof to support such a fault.

iii) Conclusion and Recommendations

Deep diamond drilling on the Mary Ellen Resources Harker-Holloway claim group indicates the McDermott gold horizon crosses onto the Mary Ellen Resources property at a maximum depth of approximately 2,900 feet vertical. This projection assumes a dip of 30 degrees for the horizon. It is possible that the dip may be steeper.

A projection from the closest Barrick hole (ME-87-304) to the intersection in ME-87-10A gives a dip of 66 degrees for the main mineralized zone and a boundary intersection of 2,430 feet vertically. The two projections provide a boundary envelope extending from 2,430.0 to 2,800.0 feet and may be used as a future drill target. Such a hole is highly recommended to verify the dip of the McDermott Horizon on the Mary Ellen-American Barrick property boundary.

Should the dip of the McDermott Horizon prove to be steeper than the indicated 30 degrees, additional deep drilling to the west may be warranted. At a vertical depth of 3,350 feet, the McDermott Horizon would enter the north boundary of the Mary Ellen claim group at approximately L 12+00E. The divergence of the claim boundary and the McDermott horizon may indicate a similar situation to that on claim 588251 near diamond drill hole M-85-3. This drill hole appears to have been drilled very close to the west extension at the Ghostmount Horizon, but perhaps not deep enough to intersect the Ghostmount Horizon.

Approximately 9,000 feet of diamond drilling is recommended to drill both the up-dip and west extension of the McDermott Horizon. This exploration program is estimated to cost $325,000.

Respectfully Submitted,

S. J. Carmichael

S.J. Carmichael, B.Sc.

Estimate of Expenditures for 1987s

Diamond drilling and administration	$285,633.22
Wages	24,040.00
Exploration services	28,508.43
Equipment rental	2,819.00
Travel and accommodations	2,684.00
Misc. expenses including report writing	3,852.00
	61,903.43
+ 12% administration	7,428.41
	69,331.84
Estimate of Expenditures for 1987	354,965.06

Budget Proposal for 1988

Diamond drilling (9,000 ft. x 30.00/ft.) (includes a 3,000 ft. hole above ME-87-10B and 6,000 ft. on the west extension of the McDermott Deformation zone)	$270,000.00
Assaying (200 samples x $15.00/sample)	3,000.00
Transportation	2,000.00
Supervision, drafting and report writing	10,000.00
Subtotal	285,000.00
Contingency	40,000.00
Total	325,000.00

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Certificate of Qualifications

I, Stewart J. Carmichael, of the town of Kirkland Lake, in the District of Timiskaming, in the Province of Ontario, do hereby certify that:

1) I am a geologist with Mary Ellen Resources Ltd. with an office in Kenogami, Ontario, address P.O. Box 546, Kirkland Lake, Ontario, P2N 3L1

2) I am a graduate of McMaster University, Hamilton, Ontario, having received the degree of Bachelor of Science, Geology, from the Faculty of Science in 1982. I have since practiced in the field of mineral exploration continuously since graduation.

3) I have knowledge of, and previous exploration experience in the region of the Mary Ellen Resources Ltd. Inco Option property.

4) In addition to my personal knowledge of the area, I have made use of the records of the Ministry of Natural Resources of Ontario and of Mary Ellen Resources Ltd. in the preparation of this report. I supervised the drilling of all holes and geological mapping in the program between the months of May and September, 1987.

Dated this 5 day of May 1987.

Stewart J. Carmichael

Stewart J. Carmichael, B.Sc. Geology

Appendix A
Diamond Drill Logs

DIAMOND DRILL RECORD

Company:	Mary Ellen Resources			Hole No.	ME-87-10	
Location:	Holloway Township	Date Started:	April 15, 1987	Page No.	1	
Level:	Surface	Date Finished:	April 22, 1987	Core Size:	BQ	
Bearing:	N/A	Logged:	D. Daggett	Test-Acid:		Tropari: Yes
Inclination:	-90 deg.	Core Saved?	Yes	Discarded:		Strike Dip
		Casing: Pulled				
Total Depth:	483.0 ft.	Elevation:	N/A	At:	0.0 ft.	-90.(
	(147.26m)	Claim No.:		At:	483.0 ft.	-87.(
Coords Collar - Lat:	5+40 N	Dep:	17+00E	At:		
Drilled by:	Heath and Sherwood	Date Logged:	May 2, 1987			

FOOTAGE From - To	GEOLOGICAL & PHYSICAL DESCRIPTION	SAMPLE NUMBER	FROM - TO	AU PPB	AU GRAMS/TON	AU OZ/TON	LENG
0.0-106.0 ft. (0.00-32.32m)	CASING						
106.0-234.0 ft. (32.32-71.34m)	MAFIC VOLCANICS Massive, dark geen, fine-grained basalt. Moderately fractured with qtz/ calcite and hematite stringers. Trace pyrite. Lower contact is gradational. 121.0-122.0' - brecciated section. 150.0' - becoming slightly magnetic. 180.0-192.0' - up to 1% fine leucoxene throughout.						
234.0-254.5 ft. (71.34-77.59m)	BRECCIA ZONE Strongly magnetic brecciated volcanics. Lower contact is marked by a 1.5' fault zone. Fractures are filled with calcite. 248.0-251.0' - highly silicified and albitized section. Slight purple tinge. 253.0-254.5' - fault zone at 40-45 deg. to C.A.						
254.5-310.0 ft. (77.59-94.51m)	MAFIC VOLCANICS Fine grained massive basalt. Moderately magnetic, moderately fractured over the first 15'. Lower contact is gradational.						
310.0-365.5 ft. (94.51-111.43m)	MAFIC VOLCANICS Flow-top breccia. Medium green colored angular fragments in a hyaloclastite matrix. Lower contact is gradational. 343.5-345.0' - hematized pyrite vein at 20 deg. to C.A.						

365.5-483.0 ft. (111.43-147.26m)	MAFIC VOLCANICS Massive, fine-grained basalt. Non magnetic to 412.0', then becoming magnetic. Weakly fractured with qtz/carb stringers. 365.5-395.0' - amygdaloidal. 412.0' - becoming magnetic. 452.0' - becoming coarser grained.						
483.0 ft. (147.26m)	End of Hole Hole terminated due to deflection. Casing Pulled						
	Averages: No averages calculated.						

DIAMOND DRILL RECORD

Company:	Mary Ellen Resources Ltd.			**Hole No.**	ME-87-10A
Location:	Harker Township	**Date Started:**	May 22, 1987	**Page No.**	1
Level:	Surface	**Date Finished:**	July 18, 1987	**Core Size:**	BQ
Bearing:	325 deg.	**Logged:**	S.C., D.D.	**Test-Acid:**	**Tropari:** Yes
Inclination:	-85 deg.	**Core Saved?**	Yes	**Discarded:**	**Strike** **Dip**
		Casing: Left	Yes		
Total Depth:	5,346.0 ft. (1629.88m)	**Elevation:**	N/A	**At:**	see last page
		Claim No.:	L-580251	**At:**	
Coords Collar - Lat:	3+00 N	**Dep:**	17+00E	**At:**	
Drilled by:	Heath and Sherwood	**Date Logged:**			

FOOTAGE From - To	GEOLOGICAL & PHYSICAL DESCRIPTION	SAMPLE NUMBER	FROM - TO	AU PPB	AU GRAMS/TON	AU OZ/TON	LENGTH
0.0-11.0 ft. (0.00-3.35m)	CASING						
11.0-158.7 ft. (3.35-48.38m)	MAFIC VOLCANICS Dark green, fine-grained flow-top breccia. Fragments are angular and fractured. Volcanic matrix is epidotized and clast-supported. Lower contact is gradational. 65.2-66.0' - felsic dike. Contacts are sharp, lower contact at 45 deg. to C.A. Dike is purple in color with epidotized olive coloured patches. Strongly reactive to HCl. Unit is highly magnetic. 76.7-78.3' - mafic dike, similar to above unit. Euhedral amphiboles or pyroxenes up to 2mm in size. Matrix may be syenitic. Fractures reactive to HCl. Upper and lower contacts are sharp but irregular. Unit is non-magnetic.						
	79.7-78.3' - as above	15307	76.7-78.3 ft. (23.38-23.87m)	<50.0	Nil	Nil	1.6 ft. (0.49m)
	145.0-145.3' - felsic dike, similar to dike at 65.2-66.0' but non-magnetic. Upper and lower contacts are sharp but irregular.						
fault	158.7-354.1' - Fine to medium grained massive, diabasic basalt. Unit is dark green, weakly fractured and non-magnetic. Minor hematite staining along fractures. Lower contact is sharp at 40 deg. to C.A. marked by a fault.						
	310.1-367.0' - Felsic dike. Fine-grained purple-grey in colour. Lower contact						

sharp but dip undetermined. Unit is moderately magnetic. 367.0-444.0' - Basalt (flow top breccia) Remnant pillow selvages visible, fragment supported with large and small angular fragments with minor qtz/carb. stringers. Trace sulphides. Lower contact at 60 deg. to C.A. 444.0-449.0' - Felsic dike. Similar to unit at 354.1', centre of dike is strongly reactive to HCl. Lower contact is sharp at 70 deg. 449.0-457.0' - Basalt (Flow top breccia) Continuation of unit above dike, grading down section into pillowed unit 457.0-550.0' - Basalt (Pillowed). Fine-grained, dark green selvages of epidote qtz/calcite with minor pyrite. Lower contact is sharp at 45 deg. to C.A. 550.0-551.6' - Interflow sediments. Interflow unit consists of volcanic fragments with minor pyrite. Laminations at 45 deg. to C.A.						
550.5-551.6' - as above 551.6-622.0' - Basalt (massive). Fine-grained dark green amygdaloidal basalt. Amygdules up to 5mm in size. Unit is slightly fractured. Amygdules are filled with calcite and chlorite. Lower contact is gradational.	15308	550.5-551.6 ft. (1677.84-168.17m)	<50.0	Nil	Nil	1.1 ft. (0.34m)
622.0-627.0' - pillow selvage? 622.0-895.3 ft. - Basalt (Pillowed) Fine-grained dark green amygdaloidal pillowed basalt. Amygdules up to 4mm filled with qtz, qtz/calcite, hematite chlorite and minor pyrite. Selvages are epidotized with qtz/calcite. Lower contact at 80-85 deg. to C.A. 895.3-900.2' - Felsic dike. Fine-grained purple in colour. Upper contact is chilled and sharp. Moderately reactive to HCl. Trace pyrite. 900.2-920.2' - Basalt (Pillowed) Continuation of unit above dike. Lower contact is gradational. 920.2-1033.6' - Basalt (massive) Massive, fine-grained flow. fine-grained at top with grain size increasing down section. 1033.6-1033.9' - Mafic dike. Dark green in colour. Contacts are sharp and chilled. Lower contact at 65 deg. to						

C.A. Moderately reactive to HCl. 1033.9-1067.0' - Basalt (massive) Massive diabasic flows, locally reactive to HCl. Lower contact at 50 deg. to C.A. 1067.0-1147.0' -Basalt(flow top breccia Fine-grained angular fragments in a epidotized and slightly pyritic matrix. Remnant pillow selvages visible in some of the fragments. Fragments are amygdaloidal and filled with chlorite, qtz/carb and pyrite. 1147.0-1262.0' - Basalt(massive) Massive diabasic fine-grained flow. Locally amygdaloidal. Lower contact is gradational. 1262.0-1285.0' -Basalt(flow top breccia Fine-grained amygdaloidal, slightly to moderately magnetic. Local with hyalo-clastite. Lower contact is gradational. 1289.0-1285.0' -moderately to highly magnetic. 1285.0-1440.5' - Basalt (massive) Massive, fine- to medium- grained amygdular to 1385', becoming strongly magnetic at 1380'. Lower contact is sharp at 70 deg. to C.A. 1380.0-1440.5' - strongly magnetic, weakly fractured. Unit has a slight purple tinge.						
1396.0-1397.8' - as above 1440.5-1443.2' - Felsic dike Fine-grained, purple in colour, reacts strongly to HCl. Upper contact sharp at 70 deg. to C.A. Trace pyrite. 1443.2-1543.5' - Basalt (massive) Continuation of unit above dike. 1543.5-1544.6' - Felsic dike Similar to dike at 1440.5' but not reactive to HCl. Strongly magnetic. Lower contact at 60 deg. to C.A. 1544.6-1639.0' - Basalt (massive) Massive fine- to medium-grained, dark green, weakly fractured to with minor qtz/carb. stringers. Strongly magnetic. Lower contact is gradational. 1639.0-1684.2' - Basalt (Pillowed) Variolitic, well-developed pillows with hyaloclastite in selvages. Variolites to 5mm in size. Lower contact is sharp at 50-55 deg. to C.A. 1684.2-1686.6' - Felsic dike	13389	1396.0-1397.8 ft. (425.61-426.16m)	<50.0	Nil	Nil	1.8 ft. (0.55m)

	Fine-grained, purple in colour with minor pyroxenes.Strongly reactive to HCl. Lower contact is sharp but not defineable. Dike is magnetic and may be a diabase.						
	1686.6-1698.0' - Basalt (Pillowed) Continuation of unit above dike. Lower contact is sharp at 55 deg. to C.A.						
	1698.0-1700.3' - Felsic dike Similar to unit at 1684.2'. Lower contact is sharp at 55 deg. to C.A.						
	1700.3-1707.0' - Basalt (Pillowed) Continuation of unit above dike. Lower contact is gradational.						
	1707.0-1781.0' - Basalt (massive) Fine-grained massive dark green basalt. Moderately magnetic. Top 25' of unit is highly reactive to to HCl. Lower contact						
hole de-stabilized wedge west	is gradational. 1777.0-1781.0' - wedge west, 4.0' of core missing due to bullnose.						
	1781.0-1904.0' - Basalt (Pillowed) Fine-grained variolitic unit. Selvages are filled with sericite, calcite and hyalocalcite. Varioles up to 3mm in size. Lower contact is gradational. Lower 15' of unit is weakly magnetic.						
wedge west	1836.0' - wedge west, 4' of missing core due to bullnose.						
	1871.0-1874.0' - minor breccia zone, possible healed fault.						
	1904.0-2026.8' - Basalt (massive) Massive variolitic basalt with varioles up to 3cm in size. Section is locally amygdular. Top 15' of unit is strongly magnetic and weakly reactive to HCl. Lower contact is sharp.						
	1927.0' -possible shearing at 20 deg. to C.A.						
	2026.8-2034.7' -Basalt(Flow top breccia Flow top breccia with sections of angular fragments and hyaloclastite. Minor qtz/carb stringers. Lower contact is gradational.						
	2034.7-2211.8' - Basalt (massive) Dark green, fine-grained unit. Weakly fractured with qtz/carb and hematite stringers. Lower contact is gradational Unit is slightly to moderately magnetic.						
	2137.0-2184.0' - strongly magnetic						

	2176.0' - fracturing increasing down-hole. Slightly reactive to HCl. 2211.0' - becoming highly reactive to HCl.						
	2211.8-2248.0' - Brecciated basalt Deformed and brecciated section. Highly reactive to HCl. Lower contact is gradational.						
fault	2211.8-2212.5' - fault gouge at 35-40 deg. to C.A.						
	2248.0-2305.4' -Basalt(flow top breccia Fragment-supported with angular to sub-angular amygdaloidal fragments. Slightly reactive to HCl. Lower contact is sharp and chilled at 70 deg. to C.A.	052341	2294.7-2300.0 ft. (699.60-701.22m)	<5.0	Nil	Nil	5.3 ft. (1.62m)
		052342	2300.0-2305.0 ft. (701.22-702.74m)	<5.0	Nil	Nil	5.0 ft. (1.52m)
	2305.4-2321.4' - Mafic syenite Fine- to medium-grained red-purple in colour dike.						
	2321.4-2328.0' - Basalt (flow top)						
	2328.0-2638.1' - Basalt (massive) Dark green, fine grained massive basalt Top 15' of unit is amygdaloidal and non magnetic, then becoming strongly magnetic.						
fault	2402.7-2407.5' - broken core, possible gouge or shear zone.						
	2450.0-2516.0' - medium to coarse grained, moderately to strongly magnetic.						
	2516.0-2529.0' - amygdaloidal, highly magnetic.						
	2560.0-2576.0' - highly reactive to HCl						
	2621.0-2630.0' - medium grained basalt.						
	2638.1-2639.8' - Mafic dike Fine grained, light green in color with a slightly speckled appearance. Good chilled contacts. Highly reactive to HCl. Lower contact at 10-15 deg. to C.A.						
	2639.8-2747.0' - Basalt (pillowed) Dark green fine grained, slightly amygdaloidal unit. Amygdules are filled with py, qtz/carb and chlorite. Unit is slightly fractured with qtz/carb stringers. Unit is highly magnetic.						
	2747.0-2766.0' - Basalt (flow top) Angular fragments set in a volcanic matrix. Slightly magnetic, lower contact is gradational.						
	2746.0-2747.7' - possible shear zone, 5-7% py with epidote and calcite.	15310	2746.0-2747.7 ft. (837.19-837.71m)	<50.0	Nil	Nil	1.7 ft. (0.15m)
	2766.0-2910.3' - Basalt (massive) Massive dark green fine grained basalt.						

	Slightly fractured with qtz/carb and chlorite stringers. Top 25' of unit is highly reactive to HCl.						
wedge west	2870.0' - steel non-retrievable wedge Box 154, core ends at 2896.0', box 155 core starts at 2851.0'.						
wedge west	2851.0' - steel non-retrievable wedge						
Wedge drilled incorrectly, 2nd attempt at 2870.0'	2890.0' - core becoming more intensely fractured with qtz/carb gash infilling. Lower contact is relatively sharp.						
2910.3-2956.9 ft. (887.28-901.49m)	SILICIFIED ZONE						
	Silicified and fractured, locally brecciated volcanics. Trace to 1% py, locally up to 5-7% py. Trace cpy. Section has a purple tinge. Minor qtz eyes. Lower contact is sharp but not defineable. May be chert or felsic volcanics.						
	2899.8-2904.9' - silicified, slightly fractured, trace pyrite.	15311	2899.8-2904.9 ft. (884.09-885.64m)	62.0	Trace	Trace	5.1 ft. (1.55m)
	2904.9-2909.7' - as above	15312	2904.9-2909.7 ft. (885.64-886.49m)	82.0	Trace	Trace	4.8 ft. (1.46m)
	2907.7-2912.4' - silicified, moderately fractured, trace-1% pyrite.	15313	2907.7-2912.4 ft. (886.49-887.93m)	195.0	0.195	0.006	4.7 ft. (1.43m)
	2912.4-2915.1' - moderately fractured, trace-1% pyrite.	15314	2912.4-2915.1 ft. (887.93-888.75m)	856.0	0.856	0.025	2.7 ft. (0.82m)
	2915.1-2916.4' - calcite vein, trace py	15315	2915.1-2916.4 ft. (888.75-889.15m)	179.0	0.179	0.005	1.3 ft. (0.40m)
	2916.4-2918.8' - highly brecciated, 3% py, qtz eyes.	15316	2916.4-2918.8 ft. (889.15-889.88m)	532.0	0.532	0.016	2.4 ft. (0.73m)
	2918.8-2921.8' - brecciated, possible fragmental, 1-2% pyrite.	15317	2918.8-2921.8 ft. (889.88-890.79m)	<50.0	Nil	Nil	3.0 ft. (0.91m)
	2921.8-2923.5' - moderately fractured, 3-5% pyrite.	15318	2921.8-2923.5 ft. (890.79-891.31m)	141.0	0.141	0.004	1.7 ft. (0.52m)
	2923.5-2926.4' - moderately fractured, 1-2% pyrite.	15319	2923.5-2926.4 ft. (891.31-892.20m)	75.0	Trace	Trace	2.9 ft. (0.88m)
	2926.4-2929.5' - highly fractured, 3% pyrite, 3" qtz vein.	15320	2926.4-2929.5 ft. (892.20-893.14m)	121.0	0.121	0.004	3.1 ft. (0.95m)
	2929.5-2933.0' - moderately fractured, 1% pyrite.	15321	2929.5-2933.0 ft. (893.14-894.21m)	112.0	0.112	0.003	3.5 ft. (1.07m)
	2933.0-2937.0' - mafic dike, moderately to highly reactive to HCl.						
	2937.0-2941.6' - moderately to highly fractured, 1% pyrite.	15322	2937.0-2941.6 ft. (895.43m-896.83m)	51.0	Trace	Trace	4.6 ft. (1.40m)
	2941.6-2943.1' - moderately fractured, 1% pyrite.	15323	2941.6-2943.1 ft. (896.83-897.29m)	<50.0	Nil	Nil	1.5 ft. (0.46m)
	2943.1-2947.1' - slightly silicified and fractured, trace-1% pyrite.	15324	2943.1-2947.1 ft. (897.29-898.51m)	<50.0	Nil	Nil	4.0 ft. (1.22m)
	2947.1-2952.5' - as above	15325	2947.1-2952.5 ft. (898.51-900.15m)	<50.0	Nil	Nil	5.4 ft. (1.65m)
	2952.5-2956.9' - as above	15326	2952.5-2956.9 ft.	723.0	0.723	0.021	4.4 ft.

			(908.15-981.49m)				(1.34m)
	2956.9-2964.0' - mafic dike, fine grained (lamprophyre?). Slightly speckled in appearance. Dike is non-magnetic, highly reactive to HCl. Lower contact is sharp but not defineable.						
	2964.0-2967.3' - continuation of unit above dike, silicified, slightly fractured with 1% pyrite.	15327	2964.0-2967.3 ft. (903.66-904.66m)	134.0	0.134	0.004	3.3 ft. (1.01m)
	2967.3-2969.8' - silicified, moderately fractured with 3-5% pyrite.	15328	2967.3-2969.8 ft. (904.66-905.43m)	2028.0	2.028	0.059	2.5 ft. (0.76m)
	2969.8-2973.1' - brecciated and silicified, possible albitization or sericite	15329	2969.8-2973.1 ft. (905.43-906.43m)	29195.0	29.195	0.851	3.3 ft. (1.01m)
	2973.1-2977.0' - silicified, moderately fractured, qtz eyes with 1% pyrite.	15330	2973.1-2977.0 ft. (906.43-907.62m)	241.0	0.241	0.007	3.9 ft. (1.19m)
	2977.0-2982.2' - patchy silicification with green chlorite. Slightly fractured with 1% pyrite. Possibly deformed with a fabric at 0-30 deg. to C.A.	15331	2977.0-2982.2 ft. (907.62-909.21m)	<50.0	Nil	Nil	5.2 ft. (1.59m)
2982.2-3235.0 ft. (909.21-986.28m)	MAFIC VOLCANICS						
	29082.2-3013.0' - Basalt (pillowed) Dark green massive to possibly pillowed basalt. Unit is weakly reactive to HCl. Unit contains local silicified or cherty sections. Trace pyrite throughout. Lower contact is gradational.						
	2990.0-2991.0' - silicified or felsic section, possible qtz eyes, grey color.						
	3000.0-3003.0' -minor cherty or silicified sections mixed with chlorite -carbonate matrix.						
	3003.0-3013.0' - coarse py (up to 5mm in size). 1-3% pyrite in brecciated or fragmental section. Slight fabric at 0-30 deg. to C.A. Possible slickensides						
	3013.0-3101.8' -Basalt(flow top breccia Light green angular fragments in a chlorite/qtz matrix.Minor sections of hyaloclastite. Broken pillows with selvages are visible. Some fragments are spherulitic and amygdaloidal. Lower contact is gradational.						
	3095.0-3101.8' - broken core.						
	3101.8-3231.7' - Basalt (massive) Dark green, fine-grained massive basalt Top 15" of unit is amygdaloidal. Locally moderately magnetic. Unit is weakly fractured with qtz/carb stringers. Lower contact is relatively sharp.						
	3117.0-3118.0' - mafic dike, fine						

	grained, purple-red in colour, strongly magnetic. Moderately reactive to HCl. Contacts are sharp, lower contact at 60 deg. to C.A.						
wedge flatten	3120.0' - flattening retrievable 3120.0-3124.0' - 4' of missing core due to bullnose. 3166.0' - strongly magnetic						
wedge flatten	3196.0' - flattening retrievable 3120.0-3124.0' - 4' of missing core due to bullnose. 3206.0-3207.5' - qtz/carb vein, barren, lower contact at 45 deg. to C.A. 3225.0-3229.7' - amygdaloidal section, (up to 3mm in size)						
	3229.7-3231.7' - silicified section, moderately fractured, 1-3% pyrite.	15332	3229.7-3231.7 ft. (984.66-985.27m)	2310.0	2.310	0.067	2.0 ft. (0.61m)
	3231.7-3235.0' - Basalt (flow top) Contact between flows are not well developed. Lower contact is gradational						
3235.0-3355.0 ft. (986.28-1022.87m)	CARBONATIZED BASALT Medium green coloured fine-grained basalt. Weakly-fractured, moderately carbonatized. Unit shows amygdules to 3255.0'-Unit is highly magnetic throughout.	50431	3261.0-3264.5 ft.	101.0	0.102	0.003	3.5 ft.
	3264.5-3267.0' - moderately silicified, 1-2% pyrite.	51732	3264.5-3267.0 ft. (995.27-996.04m)	4157.0	4.157	0.121	2.5 ft. (0.76m)
	3316.0-3318.5' - brecciated section, lower contact is sharp at 50 deg. to C.A.	51733	3267.0-3272.0 ft. (996.04-997.56m)	3338.0	3.338	0.097	5.0 ft. (1.52m)
		51734	3341.0-3346.0 ft. (1018.60-1020.12m)	127.0	0.127	0.004	5.0 ft. (1.52m)
3355.0 3378.8' (1022.87-1030.12m)	UPPER TRANSITION ZONE Medium-grained, non-magnetic, non-carbonatized unit. 60% pink feldspar phenocrysts (K-spar)?. Unit is moderately fractured with qtz/pink calcite stringers. Upper contact appears to be gradational. Unit may be an altered basalt or mafic intrusive. Trace sulphides throughout.						
	3355.0-3360.0' - as above	15333	3355.0-3360.0 ft (1022.87-1024.39m)	179.0	0.179	0.005	5.0 ft. (1.52m)
	3360.0-3365.0' - as above	15334	3360.0-3365.0 ft (1024.39-1025.91m)	257.0	0.257	0.007	5.0 ft. (1.52m)
	3365.0-3370.0' - blocky broken core from 3367.0-3368.0'	15335	3365.0-3370.0 ft (1025.91-1027.44m)	193.0	0.193	0.006	5.0 ft. (1.52m)
	3370.0-3375.0' - becoming increasingly brecciated and finer grained.	15336	3370.0-3375.0 ft (1027.44-1028.96m)	101.0	0.101	0.003	5.0 ft. (1.52m)
	3375.0-3378.8' - as above	15337	3375.0-3378.8 ft (1028.96-1030.12m)	106.0	0.106	0.003	3.8 ft. (1.16m)
3378.8-3421.0 ft.	MAIN MINERALIZED ZONE						

(1030.12-1042.99m)	Highly fractured and brecciated unit. Fractures compose up to 50% of the unit and show pervasive buff carbonate alteration. Up to 5-8% pyrite in alteration halos. Unit is moderately to locally highly silicified. Color is generally black to slightly purple with local buff sericite/carbonate sections. Darker sections show moderate to strong magnetism.						
	3378.0-3381.4' - well foliated section with micro-faults. Foliation at 48 deg. to C.A. Trace sulfides	15338	3378.0-3381.4 ft. (1030.12-1030.91m)	461.0	0.461	0.013	2.6 ft. (0.79m)
	3381.4-3386.5' - buff colored weakly foliated unit. May be weakly feldspathized or albitized. 5% pyrite	15339	3381.4-3386.5 ft. (1030.91-1032.47m)	3587.0	3.587	0.105	5.1 ft. (1.56m)
	3386.5-3389.2' - as above, 5-8% fine pyrite.	15340	3386.5-3389.2 ft. (1032.47-1033.29m)	12477.0	12.477	0.364	2.7 ft. (0.82m)
	3389.2-3392.0' - highly fractured purple colored section, 5% pyrite in fractures with carbonate alteration.	15341	3389.2-3392.0 ft. (1033.29-1034.15m)	14694.0	14.694	0.429	2.8 ft. (0.85m)
	3392.0-3395.0' - as above	15342	3392.0-3395.0 ft. (1034.15-1035.06m)	722.0	0.722	0.021	3.0 ft. (0.92m)
	3395.0-3397.8' - as above	15343	3395.0-3397.8 ft. (1035.06-1035.91m)	330.0	0.330	0.010	2.8 ft. (0.85m)
	3397.8-3402.5' - massive buff colored section, 3-4% fine euhedral pyrite.	15344	3397.8-3402.5 ft. (1035.91-1037.35m)	2792.0	2.792	0.081	4.7 ft. (1.43m)
	3402.5-3406.0' - fractured purple colored section, 2-4% pyrite.	15345	3402.5-3406.0 ft. (1037.35-1038.41m)	3403.0	3.403	0.099	3.5 ft. (1.07m)
	3406.0-3409.0' - as above	15346	3406.0-3409.0 ft. (1038.41-1039.33m)	1876.0	1.876	0.055	3.0 ft. (0.91m)
	3409.0-3412.0' - as above	15347	3409.0-3412.0 ft. (1039.33-1040.24m)	980.0	0.980	0.029	3.0 ft. (0.91m)
	3412.0-3415.6' - as above, 6-8% pyrite	15348	3412.0-3415.6 ft. (1040.24-1041.34m)	4133.0	4.133	0.121	3.6 ft. (1.10m)
	3415.6-3418.5' - extreme silicification 10-15% finely disseminated pyrite. Section shows a good fabric at 38 deg. to C.A.	15349	3415.6-3418.5 ft. (1041.34-1042.23m)	2172.0	2.172	0.063	2.9 ft. (0.88m)
	3418.5-3421.0' - as above, contact with lower unit at 74 deg. to C.A.	15350	3418.5-3421.0 ft. (1042.23-1042.99m)	1974.0	1.974	0.058	2.5 ft. (0.76m)
3421.0-3454.0 ft. (1042.99-1053.05m)	LOWER TRANSITION ZONE Unit consisits of alternating sections of weakly to non-magnetic medium green colored carbonatized mafic volcanics and fractured purple colored silicified sections. Silicified sections are similar to those of the Main Zone. Volcanics show a foliation at 43 deg. to C.A.						
	3421.0-3422.7' - mafic volcanics, trace	0112	3421.0-3422.7 ft.	257.0	0.257	0.007	1.7 ft.

	sulfides.		(1042.99-1043.51m)				(0.52m)
	3422.7-3426.0' - silicified section, 3-4% pyrite.	0113	3422.7-3426.0 ft. (1043.51-1044.51m)	656.0	0.656	0.019	3.3 ft. (1.00m)
	3426.0-3430.0' - 70% chloritized volcanics.	0114	3426.0-3430.0 ft. (1044.51-1045.73m)	150.0	0.150	0.004	4.0 ft. (1.22m)
	3430.0-3432.0' - laminated pyritic section from 3430.0-3431.0', mafic volcanics to 3432.0'.	0115	3430.0-3432.0 ft. (1045.73-1046.34m)	171.0	0.171	0.005	2.0 ft. (0.61m)
	3432.0-3437.0' - chloritic mafic volcanics, trace-1% pyrite.	0116	3432.0-3437.0 ft. (1046.34-1047.87m)	61.0	Trace	Trace	5.0 ft. (1.52m)
	3437.0-3442.0' - as above	0117	3437.0-3442.0 ft. (1047.87-1049.39m)	137.0	0.137	0.004	5.0 ft. (1.52m)
	3442.0-3447.0' - as above	0118	3442.0-3447.0 ft. (1049.39-1050.92m)	31.0	Nil	Nil	5.0 ft. (1.52m)
	3447.0-3451.0' - weakly to moderately silicified, 1-2% py, possible mud seam at 3449.6'.	0119	3447.0-3451.0 ft. (1050.92-1052.13m)	1156.0	1.156	0.034	4.0 ft. (1.22m)
	3451.0-3454.0' - as above, silicification decreases down section.	0120	3451.0-3454.0 ft. (1052.13-1053.05m)	406.0	0.406	0.012	3.0 ft. (0.92m)
		0122	3454.0-3459.0 ft. (1053.05-1054.57m)	437.0	0.437	0.013	5.0 ft. (1.52m)
3454.0-5346.0 ft. (1053.05-1629.88m)	**MAFIC VOLCANICS** Buff to medium green colored volcanics. Weakly to moderately fractured with epidote and calcite stringers. Volcanics are non-magnetic and weakly carbonatized. Unit may be a Ng-tholeiite. Schistose to 3546.0'.						
	3470.2-3470.3' - syenite dike, contact at 45 deg. to C.A.						
	3610.6-3611.4' - qtz vein, barren.						
	3624.6' - 1" wide zone of spherules.						
	3634.0-3637.0' - highly carbonatized section, 4% pyrite.						
shear	3691.0' - 2" zone of highly schistose rock. Foliation at 41 deg. to C.A.						
	3691.0' - volcanics becoming darker in color and slightly coarser grained.						
	3745.0' - becoming finer grained, lighter green in color. Non-carbonatized.						
	3777.5-3784.5' - flow-top breccia						
	3886.0' - box 210 misnumbered						
	3906.0' - fracturing increasing						
	3941.0-3946.0' - 20% calcite flooding, 4-5% pyrite.	0121	3941.0-3946.0 ft. (1201.52-1203.05m)	<50.0	Nil	Nil	5.0 ft. (1.52m)
	3968.0' - flows becoming finer grained and pillowed.						
	3998.0' - foliation at 34 deg. to C.A.						
fault	4027.8-4029.0' - brecciated qtz/calcite flooded section. No gouge noted.						
	4075.0' - 1/2" seam of gouge at 60 deg.						
fault	to C.A.						

	4096.0' - basalt becoming slightly coarser grained and amygdaloidal. Amygdules are chlorite filled and pin-head size. 4121.0' - basalt is non-amygdaloidal. 4136.0' - basalt becoming darker in color, possibly ultramafic.						
fault	4186.0' - qtz flooded and brecciated from 4185.0-4187.0'. Qtz veining at 40 deg. to C.A.						
	4201.0' - basalt becoming lighter green in color, increasingly mafic (Mg-rich) 4214.3-4215.0' - qtz vein, barren. 4316.0' - becoming darker green in color, possibly ultramafic. 4327.2-4327.6' - silicified section, 2% pyrite. 4346.0' - becoming coarser grained. 4369.0-4370.0' - qtz/carb flooded section, barren. 4458.3-4459.0' - quartz vein, barren. 4465.0' - becoming coarser grained. 4466.0' - coarse grained and epidotized						
fault	4471.0' - 4" of lithified gouge. Gouge fragments appear out of place. 1' of missing core due to sand seam. Coarser grained unit continues to 4474.0'.						
	4478.0-4481.0' - agglomerate and flow top breccia. Lower contact at 50 deg. to C.A. 4481.0-4486.0' - weakly carbonatized basalt with 2% chloritic gash fractures 4486.0' - medium grained basalt. 4506.0' - becoming very fine grained and light green in color. 4511.0-4515.2' - flow top breccia, lower contact at 33 deg. to C./A. 4530.0' - very fine grained and pillowed.						
	4612.0-4616.5' - very fine grained section. May be interflow material. 2% pyrite.	0124	4612.0-4616.5 ft. (1406.10-1407.47m)	<5.0	Nil	Nil	4.5 ft. (1.37m)
	4638.0' - foliation at 50 deg. to C.A. 4694.5-4694.7' - mafic dike (lampro-phyry), contacts at 36 deg. to C.A. 4710.3-4726.0' - as above, upper contact is chilled at 13 deg. to C.A. Lower contact is coarse grained at 17 deg. to C.A. Dike is moderately reactive to HCl. 2-4% biotite in coarse grained phases.						

	4732.6-4735.0' - fine grained lampro-phyry, contacts at 17 deg. to C.A. 4749.0' - basalt becoming foliated with 2-5% qtz/carb stringers. Foliation at 44 deg. to C.A. 4773.0' - basalt becoming massive and fine grained, non-pillowed. 4786.0' - becoming speckled in appearance, possible due to leucocrene. 4919.0' - flow contact 4922.6-4938.0' - mafic dike, possibly diabase. Dike becomes porphyritic towards the lower contact. Lower contact at 39 deg. to C.A. 4938.0' - pillowed basalt, amygdaloidal to 4939.0'. Light green in color. Moderately fractured. Probably Mg-rich. 4975.0-4982.0' - amygdaloidal with pin head size amygdules filled with chlorite. 5066.0-5078.0' - mafic syenite dike. Fine grained, becoming medium grained and porphyritic at 5079.0'. Upper and lower contacts at 39 deg. to C.A. 5097.3-5103.0' - as above, upper contact at 70 deg. to C.A., lower contact at 38 deg. to C.A. 5108.0' - basalt becoming massive, non-pillowed. Grain size increasing. 5136.7-5140.8' - mafic syenite, weakly porphyritic. Upper and lower contacts at 31 deg. to C.A. Lower contact is poorly defined. 5153.7-5157.2' - as above, upper contact at 26 deg. to C.A. Lower contac at 22 deg. to C.A.					
shear	5170.0-5172.0' - qtz flooded shear. Foliation at 26 deg. to C.A. 5186.0'-5186.5' - flow top breccia. 5202.4-5203.1' - section of coalescing spherules or possible coarse grained monzonitic dike. No chill contacts noted. 5268.5' - massive fine grained to diabasic basalt. Amygdaloidal with pin head size amygdules filled with qtz and chlorite. Upper contact at 44 deg. to C.A. 5294.0-5297.0' - fine grained section, possible flow top breccia. 5303.5-5307.0' - coarsely brecciated section (not flow top). Fragments are					

	angular and buff grey in color and highly fractured up to 1cm in size. Blocky core at 5306.8' may indicate a fault. 5307.0-5333.0' - alternating sections of fine grained basalt and pillowed basalt with flow top breccia. 5333.0' - becoming slightly coarser grained and darker green in color. Non magnetic.					
5346.0 ft. (1629.88m)	End of Hole					

Averages:

From 2967.3' to 2973.1', 0.509 oz/ton over 5.8 ft.
(904.66-906.43m) (17.452 gms/ton over 1.77m)
or
From 2964.0' to 2977.0', 0.230 oz/ton over 13.0 ft.
(903.66-907.62m) (7.886 gms/ton over 3.96m)

From 3381.4' to 3392.0', 0.257 oz/ton over 10.6 ft.
(1030.91-1034.15m) (8.811 gms/ton over 3.23m)
or
From 3378.8' to 3421.0', 0.109 oz/ton over 42.2 ft.
(1030.12-1042.99m) (3.737 gms/ton over 12.87m)
or
From 3355.0' to 3432.0', 0.062 oz/ton over 77.0 ft.
(1022.87-1046.34m) (2.126 gms/ton over 23.48m)

DIAMOND DRILL RECORD

Company:	Mary Ellen Resources			Hole No.	ME-87-10B
Location:	Holloway Township	Date Started:	July 21, 1987	Page No.	1
Level:	-1500.0 ft.	Date Finished:	Sept. 17, 1987	Core Size:	BQ
Bearing:	353.0 deg.	Logged:	S. Carmichael	Test-Acid:	Tropari: Yes
Inclination:	-83 deg.	Core Saved?	Yes	Discarded:	Strike Dip
		Casing: Left			
Total Depth:	Drilled to 3,581.0 ft.	Elevation:	N/A	At:	see last page
		Claim No.:	L-588251	At:	
Coords Collar - Lat:	3+00 N	Dep:	17+00 E	At:	
Drilled by:	Heath and Sherwood	Date Logged:			

FOOTAGE From - To	GEOLOGICAL & PHYSICAL DESCRIPTION	SAMPLE NUMBER	FROM - TO	AU PPB	AU GRAMS/TON	AU OZ/TON	LENGTH
1,500.0 ft. (457.32m)	Wedge, flatten, non-retrievable 1500.0-1504.0' - 4.0' of missing core due to bullnose.						
1504.0-2146.0 ft. (457.32-654.27m)	MAFIC VOLCANICS Dark green massive medium grained basalt. Weakly magnetic. Basalt has a speckled appearance due to leucoxene. 1526.0-1536.2' - hematized and qtz-flooded section, 2% pyrite. 1561.0' - basalt becoming non-magnetic. 1588.0' - becoming finer grained						
wedge	1606.0' - wedge, flattening retrievable						
	1610.0-1616.0' - sperulitic section, spherules up to 2mm in size. 1617.7-1618.4' - hyaloclastite 1621.0-1625.5' - spherulitic basalt. Fine grained with 10% spherulitic phases. 1625.5-1740.0' - massive fine grained basalt, moderately magnetic to 1663.0' 1661.0' - 4" of spherulitic basalt 1679.1-1681.0' - mafic syenite dike, weakly carbonatized. Upper contact at 45 deg. to C.A. 1694.0-1696.7' - as above, upper contact at 52 deg. to C.A., lower contact at 38 deg. to C.A. 1740.0' - basalt becoming pillowed. 1758.0-1759.0' - hyaloclastite						
fault	1773.0' - 3" of highly schistose core and chloritic gouge at 28 deg. to C.A. 1778.0' - flow contact at 35 deg. to						

	C.A. 1796.7-1797.4' - hyaloclastite. 1839.3-1840.0' - possible interflow chert, trace to 1% pyrite. 1856.7' - flow contact at 36 deg. to C.A. Becoming spherulitic at 1865.0' Note: non-spherulitic phases are magnetic.						
	1909.1-1912.0' - highly fractured/ brecciated section. Silicified and weakly carbonatized. Weak purple hue. Trace to 1% pyrite.	0124	1909.1-1912.0 ft. (582.04-582.93m)	<5.0	Nil	Nil	2.9 ft. (0.88m)
	1917.9-1921.4' - carbonatized to 1919.2' then silicified/cherty to 1920.0'. Fractured basalt to 1921.4'. 1% py in carbonatized section, 2% py in silicified sections.	0125	1917.9-1921.4 ft. (584.73-585.79m)	<5.0	Nil	Nil	3.5 ft. (1.07m)
	1921.4' - spherulitic basalt with magnetic fine grained massive phases. Spherules coalesce at 1926.0', up to 1cm in size. 1937.6' - basalt is weakly to moderately fractured with epidote and qtz/carb stringers. Moderately magnetic throughout. 1962.0-1963.2' - fine grained lamprophyry dike. Carbonatized, upper contact at 23 deg. to C.A. 1963.2' - alternating sections of spherulitic basalt and massive fine grained magnetic phases. 1972.5' - flow contact at 34 deg. to C.A. 1989.7-1992.0' - weakly carbonatized basalt. 1993.6-1997.7' - hyaloclastite with minor flow-top breccia. 2006.0' - magnetism becoming erratic and weak. 2016.0' - core showing minor magnetite/hematite stringers. 2086.0' - becoming incresingly fractured with qtz/calcite stringers. Weakly magnetic. 2136.0' - basalt is non-magnetic 2144.0-2146.0' - becoming highly fractured with micro-fractures.						
16.0-2213.0 ft. (674.27-674.70m)	FAULT ZONE Highly brecciated and carbonatized basalt. Locally weakly silicified with qtz flooding. Trace sulfides through-						

	out.						
fault	2146.2-2146.6' - mylonite or tectite gouge at 23 deg. to C.A.						
	2151.0-2156.0' - check sample, trace sulfides.	0126	2151.0-2156.0 ft. (655.79-657.32m)	54.0	Trace	Trace	5.0 ft. (1.52m)
	2191.0-2196.0' - highly brecciated and possibly albitized. May be pillow fragments with flow-top breccia.	0127	2191.0-2196.0 ft. (667.99-669.51m)	20.0	Nil	Nil	5.0 ft. (1.52m)
	2196.0-2201.0' - as above, trace to 1% pyrite.	0128	2196.0-2201.0 ft. (669.51-671.04m)	24.0	Nil	Nil	5.0 ft. (1.52m)
213.0-2297.7 ft. (674.70-700.52m)	MAFIC VOLCANICS Pillowed amygdular basalt to 2224.0', then massive fine grained amygdular basalt. Massive basalt is weakly magnetic. 2238.0-2239.8' - syenite dike, upper contact at 30 deg. to C.A., lower contact at 45 deg. to C.A. 2243.0' - basalt becoming non-amygdular still magnetic.						
2297.7-2321.5 ft. (700.52-707.77m)	LAMPROPHYRY DIKE Basalt is syenitized from 2295.0-2297.7' Upper contact at 32 deg. to C.A. Lower contact at 44 deg. to C.A. Highly reactive to HCl.						
2321.5-2772.0 ft. (707.77-845.12m)	MAFIC VOLCANICS Massive fine to, medium grained basalt. Moderately magnetic. 2341.0' - becoming coarse grained and non-magnetic. 2378.0' - becoming gradationaly finer grained. 2381.0' - becoming pillowed. 2416.0' - pillowed amygdular basalt, non-magnetic.						
fault	2454.0' - minor fault at 20 deg. to C.A 2454.0' - basalt becoming massive, not pillowed, weakly magnetic. 2501.0' - becoming slightly coarser grained. 2552.0' - becoming very fine grained. 2527.5-2528.0' - interflow material and hyaloclastite at 24 deg. to C.A. 2543.8' - 2" section of graphitic(?) chert at 32 deg. to C.A. 2547.5-2551.0' - moderately carbonatized, weakly silicified with trace py. 2551.0' - basalt becoming pillowed, moderately magnetic with minor amyg-						

	dules.						
	2571.0' - core becoming blocky and broken.						
	2578.3' - 3" zone of brecciation and quartz flooding.						
wedge	2580.0' -wedge, flattening retrievable.						
	2580.0-2585.0' - missing core due to bullnose.						
shear	2599.0' -possible shear zone, foliation at 28 deg. to C.A.						
	2600.0-2640.0' - basalt is non-magnetic moderately fractured with qtz/calcite/ hematite stringers along the core axis.						
	2640.0' - pillowed basalt, selvages are filled with hyaloclastite and minor chert. 1% pyrite occurs in the selvages Basalt is non-magnetic.						
	2660.0'basalt becoming massive and fine grained.						
	2673.2-2676.5' - mafic syenite dike, upper contact is irregular at 16 deg. to C.A. Lower contact at 20 deg. to C.A						
	2706.0' - basalt becoming moderately magnetic.						
	2732.0' - basalt becoming non-magnetic, moderately fractured with chloritic gash fractures.						
	2758.4' - basalt becoming increasingly fractured with qtz/calcite stringers.						
2772.0-2813.0 ft. (845.12-857.62m)	ALTERATION ZONE Moderately to weakly carbonatized basalt and interflow material. Basalt is moderately to highly fractured with calcite stringers. Interflow material is weakly to modertaely silicified, dark green to buff in color. Silicified sections carry trace to 1% pyrite.						
	2774.2-2779.2' - as above	10607	2774.2-2779.2 ft. (845.79-847.32m)	11.0	Trace	Trace	5.0 ft. (1.52m)
	2779.2-2784.0' - weakly silicified and carbonatized, trace to 1% pyrite.	10601	2779.2-2784.0 ft. (847.32-848.78m)	800.0	0.800	0.023	4.8 ft. (1.46m)
	2784.0-2789.0' - carbonatized to 2786.0 then silicified and carbonatized to 2789.0'.	10602	2784.0-2789.0 ft. (848.78-850.30m)	113.0	0.113	0.003	5.0 ft. (1.52m)
	2789.0-2794.0' - weakly altered basalt	10603	2789.0-2794.0 ft. (850.30-851.83m)	25.0	Nil	Nil	5.0 ft. (1.52m)
	2794.0-2798.7' - as above, section shows minor qtz/calcite amygdules.	10604	2794.0-2798.7 ft. (851.83-853.26m)	11.0	Nil	Nil	4.7 ft. (1.43m)
	2798.7-2802.2' - highly silicified section with quartz 'eyes' which may	10605	2798.7-2802.2 ft. (853.26-854.33m)	6.0	Nil	Nil	3.5 ft. (1.07m)

	be secondary. 1% pyrite.						
	2802.2-2806.0' - as above, pyritic quartz vein (2") at 2804.0' at 28 deg. to C.A.	10606	2802.2-2806.0 ft. (854.33-855.49m)	11.0	Nil	Nil	3.8 ft. (1.16m)
	2806.0-2811.0' - 5% silicification, trace pyrite.	1607	2806.0-2811.0 ft. (855.49-857.01m)	<5.0	Nil	Nil	5.0 ft. (1.52m)
2813.0-2976.0 ft. (857.62-907.32m)	MAFIC VOLCANICS Medium to dark green massive fine grained basalt. Weakly fractured with qtz/calcite stringers.						
	2872.6'-2906.7' - flow-top breccia with pillowed basalt. Hyaloclastite occurs interstitial to fragments.						
	2906.7' - massive fine grained basalt. Amygdaloidal to 2916.5'.						
2976.0 ft. (907.32m)	End of Hole Hole terminated due to broken rods.						
wedge	2771.0' - flattening, non-retrievable						
	2771.0-2775.0' - missing core due to bullnose.						
	2775.0-2780.0' - basalt						
2780.0-2814.0 ft. (847.56-857.93m)	ALTERATION ZONE Moderately to highly silicified section. Locally weakly carbonatized. Trace to 1% pyrite throughout.						
	2780.2-2784.0' - highly carbonatized, 1-2% pyrite. Buff grey in color.	10609	2780.2-2784.0 ft. (847.62-848.78m)	1807.0	1.807	0.053	3.8 ft. (1.16m)
	2784.0-2789.0' - silicified with trace pyrite.	10610	2784.0-2789.0 ft. (848.78-850.30m)	84.0	Trace	Trace	5.0 ft. (1.52m)
	2789.0-2794.0' - as above, lighter green in color.	10611	2789.0-2794.0 ft. (850.30-851.83m)	<5.0	Nil	Nil	5.0 ft. (1.52m)
	2794.0-2799.0' - as above	10612	2794.0-2799.0 ft. (851.83-853.35m)	30.0	Nil	Nil	5.0 ft. (1.52m)
	2799.0-2804.0' - as above	10613	2799.0-2804.0 ft. (853.35-854.88m)	<5.0	Nil	Nil	5.0 ft. (1.52m)
	2804.0-2809.0' - silicification becoming weak and erratic.	10614	2804.0-2809.0 ft. (854.88-856.40m)	8.0	Nil	Nil	5.0 ft. (1.52m)
	2809.0-2814.0' - as above	10615	2809.0-2814.0 ft. (856.40-857.93m)	<5.0	Nil	Nil	5.0 ft. (1.52m)
2814.0-3089.7 ft. (857.93-941.98m)	MAFIC VOLCANICS Weakly fractured fine grained basalt. Locally weakly carbonatized. Fractures filled with qtz/calcite stringers. Magnetic from 2951.0'.						
	2837.0-2843.0' - weakly carbonatized section.						
	2867.0' - flow contact at 35 deg. to						

	C.A. Contact marked by 3" of pyritic chert. 2867.0-2878.0' - amygdaloidal basalt. Amygdules filled with chlorite. 2878.0-2901.0' - flow-top breccia and pillowed basalt. 2901.0' - basalt becoming massive, locallly amygdaloidal. 2951.0' - becoming magnetic. 2996.0' - becoming slightly coarser grained. 3016.0' - basalt becoming speckled due to leucoxene. 3025.0-3027.7' - qtz vein, barren. 3027.7-3037.0' - lamprophyry dike, lower contact at 10 deg. to C.A. 3055.0-3056.0' - blocky broken core.						
fault	3056.8' - fault, narrow seam of gouge at 18 deg. to C.A. 3056.8' - basalt becoming very coarse grained with minor hematite stringers.						
3089.7-3176.0 ft. (941.98-968.29m)	**LAMPROPHYRY** Unit may be an altered gabbroic intrusive. Biotite is erratic.						
shear	3101.7' - shearing at 16 deg. to C.A. 3165.5' - becoming carbonatized with an increase in pottasium(?) feldspar. 3176.0' - lower contact at 10 deg. to C.A.						
3176.0-3291.0 ft. (968.29-1003.35m)	**SPHERULITIC BASALT** Very fine grained dark green chloritic basalt. Unit contains up to 50% spherules up to 2-3mm in size. Unit is moderately to highly fractured with qtz/epidote hairline fractures. Unit carries 1% pyrite in highly silicified and fractured sections. Carbonatization is weak and erratic.						
	3176.0-3181.0' - trace pyrite	10616	3176.0-3181.0 ft. (968.29-969.82m)	45.0	Nil	Nil	5.0 ft. (1.52m)
	3181.0-3186.0' - as above	10617	3181.0-3186.0 ft. (969.82-971.34m)	344.0	0.344	0.010	5.0 ft. (1.52m)
	3186.0-3191.0' - as above	10618	3186.0-3191.0 ft. (971.34-972.87m)	10.0	Nil	Nil	5.0 ft. (1.52m)
	3191.0-3196.0' - as above	10619	3191.0-3196.0 ft. (972.87-974.39m)	39.09	Nil	Nil	5.0 ft. (1.52m)
	3196.0-3201.0' - as above	10620	3196.0-3201.0 ft. (974.39-975.91m)	65.0	Trace	Trace	5.0 ft. (1.52m)
	3201.0-3206.0' - as above	10621	3201.0-3206.0 ft. (975.91-977.44m)	39.0	Nil	Nil	5.0 ft. (1.52m)

	3206.0-3211.0' - as above	10622	3206.0-3211.0 ft. (977.44-978.96m)	53.0	Trace	Trace	5.0 ft. (1.52m)
	3211.0-3216.0' - as above	10623	3211.0-3216.0 ft. (978.96-980.49m)	81.0	Trace	Trace	5.0 ft. (1.52m)
	3216.0-3221.0' - as above	10624	3216.0-3221.0 ft. (980.49-982.01m)	738.0	0.738	0.022	5.0 ft. (1.52m)
	3221.0-3226.0' - as above	10625	3221.0-3226.0 ft. (982.01-983.54m)	72.0	Trace	Trace	5.0 ft. (1.52m)
	3226.0-3232.0' - becoming increasingly fractured, possible miscount of 1'.	10626	3226.0-3232.0 ft. (983.54-985.37m)	43.0	Nil	Nil	6.0 ft. (1.83m)
	3232.0-3237.0' - as above, 2-3% py.	10627	3232.0-3237.0 ft. (985.37-986.89m)	101.0	0.101	0.003	5.0 ft. (1.52m)
	3237.0-3242.0' - as above	10628	3237.0-3242.0 ft. (986.89-988.41m)	13.0	Nil	Nil	5.0 ft. (1.52m)
	3242.0-3246.0' - highly brecciated with 2-3% pyrite.	10629	3242.0-3246.0 ft. (988.41-989.63m)	1718.0	1.718	0.050	4.0 ft. (1.22m)
	3246.0-3251.0' - as above	10630	3246.0-3251.0 ft. (989.63-991.16m)	816.0	0.816	0.024	5.0 ft. (1.52m)
	3251.0-3256.0' - as above	10631	3251.0-3256.0 ft. (991.16-992.68m)	1290.0	1.290	0.038	5.0 ft. (1.52m)
	3256.0-3261.0' - weakly fractured, trace pyrite.	10632	3256.0-3261.0 ft. (992.68-994.21m)	2576.0	2.576	0.075	5.0 ft. (1.52m)
	3261.0-3266.0' - as above	10633	3261.0-3266.0 ft. (994.21-995.73m)	1764.0	1.764	0.051	5.0 ft. (1.52m)
	3266.0-3269.0' - highly fractured with 8-10% pyrite from 3268.0-3269.0'.	10634	3266.0-3269.0 ft. (995.73-996.65m)	8200.0	8.200	0.239	3.0 ft. (0.92m)
	3269.0-3272.0' - trace pyrite.	10635	3269.0-3272.0 ft. (996.65-997.56m)	326.0	0.326	0.010	3.0 ft. (0.92m)
	3272.0-3276.0' - as above	10636	3272.0-3276.0 ft. (997.56-998.78m)	2314.0	2.314	0.067	4.0 ft. (1.22m)
	3276.0-3281.0' - as above	10637	3276.0-3281.0 ft. (998.78-1000.30m)	5441.0	5.411	0.158	5.0 ft. (1.52m)
	3281.0-3286.0' - as above	10638	3281.0-3286.0 ft. (1000.30-1001.83m)	4738.0	4.738	0.138	5.0 ft. (1.52m)
	3286.0-3291.0' - as above	10639	3286.0-3291.0 ft. (1001.83-1003.35m)	120.0	0.120	0.003	5.0 ft. (1.52m)
3291.0-3325.0 ft. (1003.35-1013.72m)	CARBONATIZED SPHERULITIC BASALT Similar to above unit, however basalt is weakly to moderately carbonatized. Spherulitic phases are still present with a slight increase in sulfide content down section. Silicification is weak and erratic.						
	3291.0-3296.0' - as above	10640	3291.0-3296.0 ft. (1003.35-1004.88m)	211.0	0.211	0.006	5.0 ft. (1.52m)
	3296.0-3301.0' - as above	10641	3296.0-3301.0 ft. (1004.88-1006.40m)	120.0	0.120	0.003	5.0 ft. (1.52m)
	3301.0-3306.0' - as above	10642	3301.0-3306.0 ft. (1006.40-1007.93m)	1777.0	1.777	0.052	5.0 ft. (1.52m)
	3306.0-3311.3' - as above	10643	3306.0-3311.3 ft. (1007.93-1009.54m)	231.0	0.231	0.007	5.3 ft. (1.62m)

	3311.3-3316.0' - becoming increasingly silicified and brecciated from 3315.5-3316.0'.	10644	3311.3-3316.0 ft. (1009.54-1010.98m)	205.0	0.205	0.006	4.7 ft. (1.43m)
	3316.0-3321.0' - spherulitic from 3319.0-3321.0'.	10645	3316.0-3321.0 ft. (1010.98-1012.50m)	1054.0	1.054	0.031	5.0 ft. (1.52m)
	3321.0-3325.0' - increasingly silicified and brecciated with, 1-2% pyrite.	10646	3321.0-3325.0 ft. (1012.50-1013.72m)	1045.0	1.045	0.030	4.0 ft. (1.22m)
3325.0-3330.5 ft. (1013.72-1015.40m)	UPPER TRANSITION ZONE Unit is marked by an increase in silicification and brecciation which has masked volcanic textures. Unit is moderately carbonatized and silicified with 1-2% pyrite. Unit is foliated at 3327.0 at 62 deg. to C.A.						
	3325.0-3327.7'- becoming slightly buff colored with 2% pyrite.	10647	3325.0-3327.7 ft. (1013.72-1014.54m)	1007.0	1.007	0.029	2.7 ft. (0.82m)
	3327.7-3330.5' - as above, buff albitized fragmental from 3329.0-3330.5' with 4-5% pyrite. Fragments are rounded and weakly stretched 2-3mm in size.	10648	3327.7-3330.5 ft. (1014.54-1015.40m)	997.0	0.997	0.029	2.8 ft. (0.85m)
3330.5-3372.1 ft. (1015.40-1028.09m)	MAIN MINERALIZED ZONE Highly silicified and brecciated section, weakly carbonatized. Brecciated with quartz hairline fractures which show pervasive buff carbonate alteration. Coloration is is dark green to purple. Breccia fragments are locally weakly magnetic. Sulfide content is generally 4-5% very finely disseminated pyrite both within the fragments and along fractures.						
	3330.5-3334.0' - as above	10649	3330.5-3334.0 ft. (1015.40-1016.46m)	202.0	0.202	0.006	3.5 ft. (1.07m)
	3334.0-3338.0' - as above	10650	3334.0-3338.0 ft. (1016.46-1017.68m)	881.0	0.881	0.027	4.0 ft. (1.22m)
	3338.0-3339.1' - buff honey-colored section, 8% pyrite.	10651	3338.0-3339.1 ft. (1017.68-1018.02m)	955.0	0.955	0.029	1.1 ft. (0.34m)
	3339.1-3342.0' - dark purple to black section, 2-3% pyrite.	10652	3339.1-3342.0 ft. (1018.02-1018.90m)	662.0	0.662	0.019	2.9 ft. (0.88m)
	3342.0-3345.7' - as above, 5% fine py.	10653	3342.0-3345.7 ft. (1018.90-1020.03m)	426.0	0.426	0.012	3.7 ft. (1.13m)
	3345.7-3347.8' - medium green colored chloritic section, trace pyrite.	10654	3345.7-3347.8 ft. (1020.03-1020.67m)	46.0	Nil	Nil	2.1 ft. (0.64m)
	3347.8-3351.0' - silicified and brecciated section, dark purple-green in color, 5-7% pyrite.	10655	3347.8-3351.0 ft. (1020.67-1021.65m)	1848.0	1.848	0.054	3.2 ft. (0.98m)
	3351.0-3354.0' - as above	10656	3351.0-3354.0 ft. (1021.65-1022.56m)	966.0	0.966	0.028	3.0 ft. (0.92m)
	3354.0-3358.1' - as above, locally	10657	3354.0-3358.1 ft.	2262.0	2.262	0.066	4.1 ft.

	buff sericitic with up to 10% pyrite.		(1022.56-1023.81m)				(1.25m)
	3358.1-3360.0' - medium green colored chloritic section, trace pyrite.	50401	3358.1-3360.0 ft. (1023.81-1024.39m)	99.0	0.099	0.003	1.9 ft. (0.58m)
	3360.0-3363.0' - buff highly fractured section, 4% fine pyrite.	50402	3360.0-3363.0 ft. (1024.39-1025.30m)	1110.0	1.110	0.032	3.0 ft. (0.92m)
	3363.0-3365.6' - as above	50403	3363.0-3365.6 ft. (1025.30-1026.10m)	306.0	0.306	0.009	2.5 ft. (0.76m)
	3365.6-3369.0' - slightly less silicified than above section, 1-2% py.	50404	3365.6-3369.0 ft. (1026.10-1027.13m)	399.0	0.399	0.012	3.4 ft. (1.04m)
	3369.0-3372.1' - highly silicified and brecciated, minor sericite with 3-4% py	50405	3369.0-3372.1 ft. (1027.13-1028.08m)	320.0	0.320	0.009	3.1 ft. (0.95m)
3372.1-3396.3 ft. (1028.08-1035.46m)	LOWER TRANSITION ZONE Section consists of 60-70% chloritic mafic volcanics with locally silicified and brecciated phases. Volcanics are moderately fractured with qtz/calcite stringers and weakly carbonatized. Volcanics carry trace sulfides and are non-magnetic. Silicified sections carry 2-3% pyrite.						
	3372.1-3376.0' - chloritic volcanics, trace pyrite.	50406	3372.1-3376.0 ft. (1028.08-1029.27m)	43.0	Nil	Nil	3.9 ft. (1.19m)
	3376.0-3379.3' - as above	50407	3376.0-3379.3 ft. (1029.27-1030.27m)	14.0	Nil	Nil	3.3 ft. (1.01m)
	3379.3-3381.7' - as above	50408	3379.3-3381.7 ft. (1030.27-1031.01m)	193.0	0.193	0.003	2.4 ft. (0.73m)
	3381.7-3386.7' - moderately to highly brecciated, moderately silicified, 1-2% pyrite.	50409	3381.7-3386.7 ft. (1031.01-1032.53m)	146.0	0.146	0.004	5.0 ft. (1.52m)
	3386.7-3391.7' - chloritic volcanics, moderately fractured.	50410	3386.7-3391.7 ft. (1032.53-1034.05m)	170.0	0.170	0.005	5.0 ft. (1.52m)
	3391.7-3396.3' - as above, possible fault gouge from 3393.0-3393.4'.	50411	3391.7-3396.3 ft. (1034.05-1035.46m)	459.0	0.459	0.013	4.6 ft. (1.40m)
3396.3-3423.6 ft. (1035.46-1043.78m)	LOWER MINERALIZED ZONE Highly silicified and fractured to brecciated section. Generally buff honey-colored with upper 2.0' being a rusty hematitic phase. Section carries up to 10% very fine pyrite.						
	3396.3-3398.3' - hematitic section, highly silicified, 2% pyrite. Upper contact at 33 deg. to C.A.	50412	3396.3-3398.3 ft. (1035.46-1036.07m)	58.0	Trace	Trace	2.0 ft. (0.61m)
	3398.3-3402.0' - buff to honey-colored section, 8% pyrite.	50413	3398.3-3402.0 ft. (1036.07-1037.20m)	1083.0	1.083	0.032	3.7 ft. (1.13m)
	3402.0-3404.5' - as above	50414	3402.0-3404.5 ft. (1037.20-1037.96m)	1130.0	1.130	0.033	2.5 ft. (0.76m)
	3404.5-3408.3' - 20% honey-colored, 80% fractured chloritic volcanics.	50415	3404.5-3408.3 ft. (1037.96-1039.12m)	225.0	0.225	0.007	3.8 ft. (1.16m)
	3408.3-3411.0' - 70% buff honey-colored phases, 30% chloritic volcanics.	50416	3408.3-3411.0 ft. (1039.12-1039.94m)	394.0	0.394	0.011	2.7 ft. (0.82m)

	3411.0-3415.8' - weakly silicified chloritic section, 2-5% honey colored phases.	50417	3411.0-3415.8 ft. (1039.94-1041.40m)	287.0	0.287	0.008	4.8 ft. (1.46m)
	3415.8-3419.0' - silicified/brecciated section, 2% fine pyrite.	50418	3415.8-3419.0 ft. (1041.40-1042.38m)	213.0	0.213	0.006	3.2 ft. (0.98m)
	3419.0-3422.0' - moderately to highly fractured chlorite schist, minor silicification, 1% pyrite.	50419	3419.0-3422.0 ft. (1042.38-1043.29m)	226.0	0.226	0.007	3.0 ft. (0.92m)
	3422.0-3423.6' - moderately silicified and brecciated, 2% pyrite.	50420	3422.0-3423.6 ft. (1043.39-1043.78m)	825.0	0.825	0.024	1.6 ft. (0.49)
3423.6-3447.0 ft. (1043.78-1050.92m)	LOWER TRANSITION ZONE Medium to dark green chloritic volcanics. Moderately fractured with white and pink qtz/calcite stringers. Weakly carbonatized. Locally silicified and sericitic though alteration is erratic. Trace to 1% pyrite increasing to 2-3% in silicified sections.						
	3423.6-3428.0' - as above	50421	3423.6-3428.0 ft. (1043.78-1045.12m)	314.0	0.314	0.009	4.4 ft. (1.34m)
	3428.0-3431.6' - moderately silicified and brecciated, 1% fine pyrite.	50422	3428.0-3431.6 ft. (1045.12-1046.22m)	493.0	0.493	0.014	3.6 ft. (1.10m)
	3431.6-3436.0' - chlorite schist, weakly foliated at 50 deg. to C.A.	50423	3431.6-3436.0 ft. (1046.22-1047.56m)	124.0	0.124	0.004	4.4 ft. (1.34m)
	3436.0-3440.0' - as above, becoming increasingly brecciated and silicified down section, 1-2% pyrite.	50424	3436.0-3440.0 ft. (1047.56-1048.78m)	947.0	0.947	0.028	4.0 ft. (1.22m)
	3440.0-3444.1' - as above	50425	3440.0-3444.1 ft. (1048.78-1049.12m)	827.0	0.827	0.024	4.1 ft. (1.25m)
	3444.1-3447.0' - as above	50426	3444.1-3447.0 ft. (1049.12-1050.91m)	745.0	0.745	0.022	2.9 ft. (0.88m)
3447.0-3581.0 ft. (1050.92-1091.77m)	MAFIC VOLCANICS Medium to dark green colored ,schistose basalt. 10% qyz/calcite stringers. Non-magnetic and non-carbonatized. Trace pyrite throughout.						
	3447.0-3452.0' - as above, foliation at 48 deg. to C.A.	50427	3447.0-3452.0 ft. (1050.91-1052.44m)	340.0	0.340	0.010	5.0 ft. (1.52m)
	3452.0-3457.0' - as above	50428	3452.0-3457.0 ft. (1052.44-1053.96m)	68.0	Trace	Trace	5.0 ft. (1.52m)
	3457.0-3462.0' - as above	50429	3457.0-3462.0 ft. (1053.96-1055.49m)	104.0	0.104	0.003	5.0 ft. (1.52m)
	3478.3-3483.2' - 80% carbonate flooding 2% pyrite.	50430	3478.3-3483.2 ft. (1060.46-1061.95m)	1788.0	1.788	0.052	4.9 ft. (1.49m)
	3486.0' - becoming less foliated, increasingly basaltic in appearance. Fractures are becoming filled with epidote. Non-magnetic.						

3581.0 ft. End of Hole

'1091.77m)

Averages:

From 3266.0-3286.0 ft., 0.125 oz/ton over 20.0 ft.
(995.73-1001.83m) 4.286 gms/ton (6.10m)
or
From 3242.0-3286.0 ft., 0.083 oz/ton over 44.0 ft.
(988.41-1001.83m) 2.85 gms/ton (13.4[illegible])

From 3347.8-3363.0 ft., 0.041 oz/ton over 15.2 ft.
(1020.67-1025.30m) 1.41 gms/ton (4.63m)

From 3242.0-3452.0 ft., 0.030 oz/ton over 210.0 ft.
(988.41-1052.44m) 1.03 gms/ton (64.02m)

Depth	Dip	Strike	
1506.0 ft.	-84 deg.	N 2.5E	wedge
1552.0	-82.5	N 0.0	
1592.0	-82	N 2.0W	wedge at 1606.0'
2030.0	-81.0	N 1.0E	
2245.0	-81.0	N 8.0E	
2372.0	-80.5	N 6.0E	
2536.0	-80.0	N 3.0E	wedge at 2580.0'
2679.0	-77.5	N 5.0E	
2846.0	-77.5	N 3.0E	
2777.0	-77.5	N 6.0E	wedge new hole
3111.0	-75.0	N 5.0E	
3328.0	-75.0	N 5.0W mag.	
3560.0	-71.0	N 4.0W	

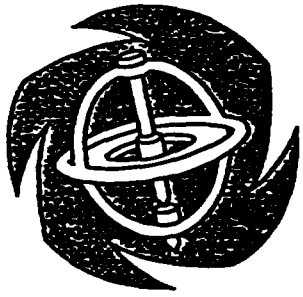
Appendix B
Sperry-Sun Directional Survey Report

sperry-sun

OF CANADA LTD

DIRECTIONAL SURVEY REPORT FOR

THE KASSNER GROUP OF COMPANIES



TYPE OF SURVEY: GYROSCOPIC DIRECTIONAL SURVEY

SURVEY DEPTH: FROM 0 TO: 5245

LEASE: THE KASSNER GROUP OF COMPANIES ME-85-10A-87

FIELD/AREA: KIRKLAND LAKE

PROVINCE: ONTARIO JOB NO. CX-LB-70406

DATE OF SURVEY: 1987 07 18

OFFICE: EDMONTON

GYROSCOPIC DIRECTIONAL SURVEY

THE KASSNER GROUP OF COMPANIES 1987-07-1
ME-85-10A-87 CX-LB-7040
REFERENCE DIRECTION IS TRUE NORTH VERTICAL SECTION ALONG CLOSURE
DISTANCES ARE IN FEET

MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
987.64 FEET ALONG 11.55 DEG
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD

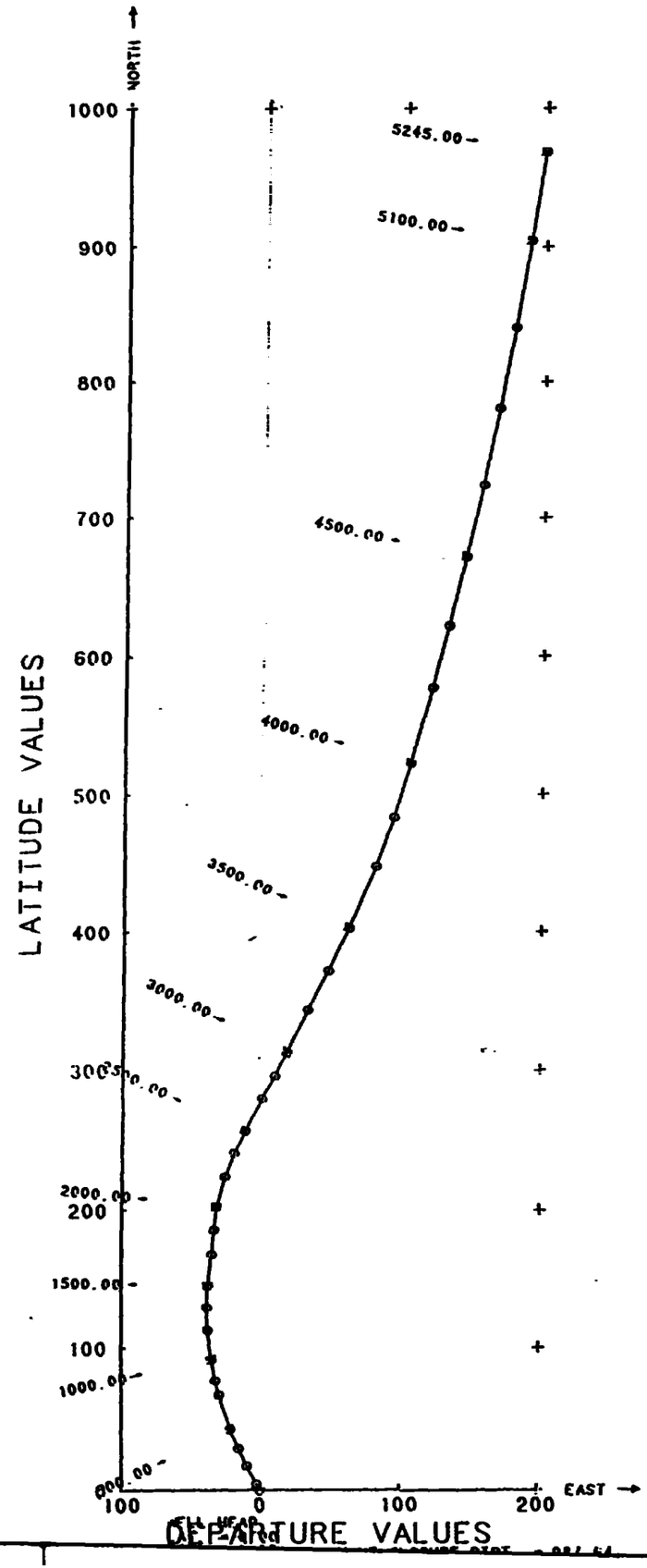
NL SPERRY-SUN OF CANADA

HORIZONTAL PLOT FOR ME-85-10A-87

THE KASSNER GROUP OF COMPANIES
REF. IS WELLHEAD
1987 07 21
CX-L8-70406

START MD. = 0
FINISH MD. = 5245
AXIS IS TRUE NORTH
SCALE IS 100 FEET /INCH

PLOTTED VALUES SHOWN ARE MEASURED DEPTHS



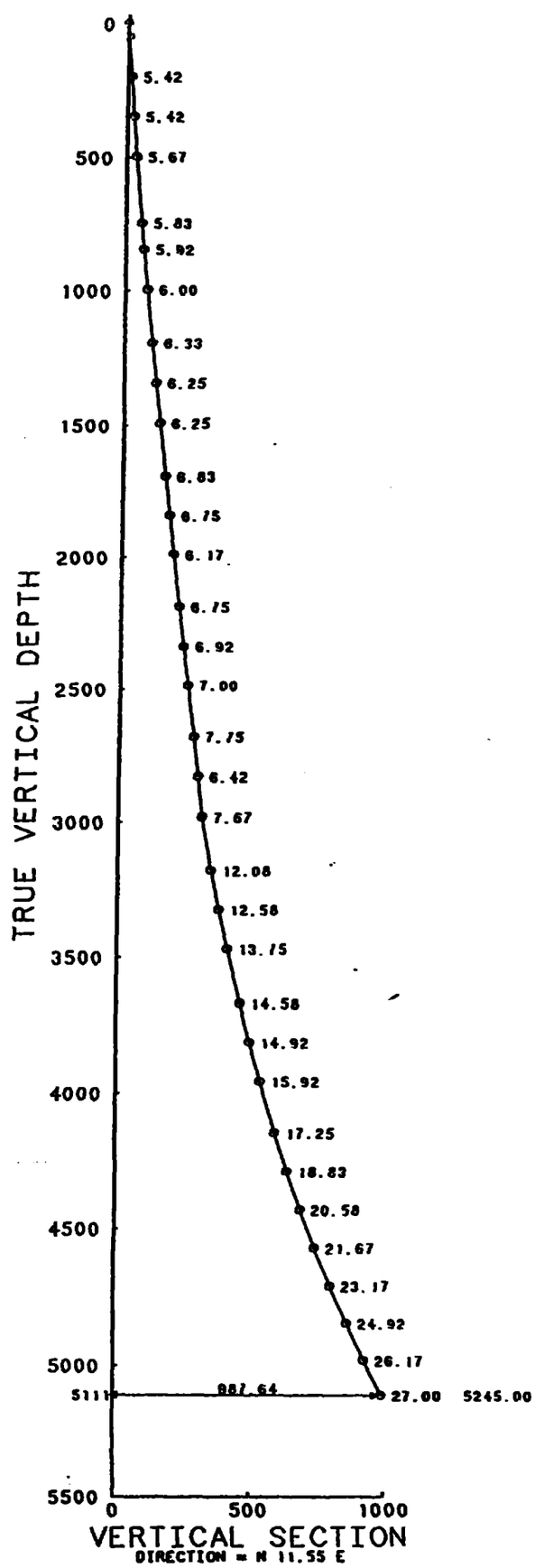
NL SPERRY-SUN OF CANADA

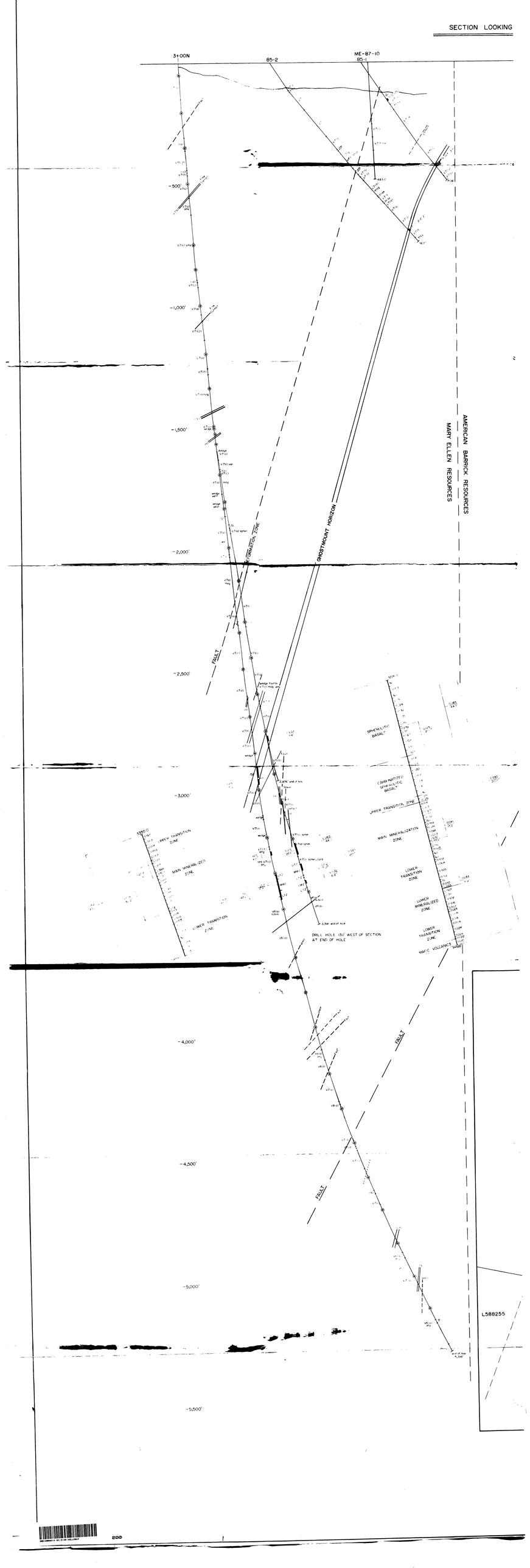
VERTICAL PLOT FOR ME-85-10A-87

THE KASSNER GROUP OF COMPANIES
EF.IS WELLHEAD
987 07 21
CX-LB-70406

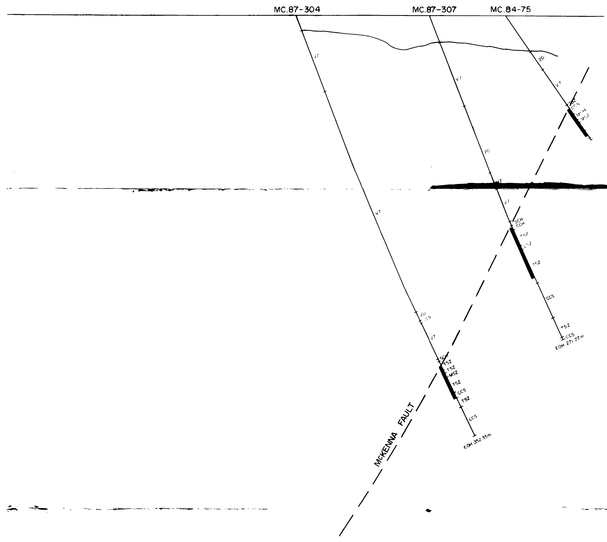
START MD. = 0
FINISH MD. = 5245
SCALE IS 500 FEET /INCH

BOTTOM HOLE DIRECTION = N 11.55 E




SECTION LOOKING
3+00N
85-2
ME-87-10
85-1
-500'
-1,000'
-1,500'
-2,000'
-2,500'
-3,000'
-4,000'
-4,500'
-5,000'
-5,500'
AMERICAN BARRICK RESOURCES
MARY ELLEN RESOURCES
FORMATION ZONE
GHOSTMOUNT HORIZON
FAULT
FAULT
FAULT
SPHERULITIC BASAL
CARB MATRIX(?) SPHERULITIC BASAL
UPPER TRANSITIONAL ZONE
MAIN MINERALIZATION ZONE
LOWER TRANSITION ZONE
LOWER MINERALIZED ZONE
LOWER TRANSITION ZONE
MAFIC VOLCANICS
UPPER TRANSITION ZONE
MAIN MINERALIZED ZONE
LOWER TRANSITION ZONE
DRILL HOLE 150' WEST OF SECTION AT END OF HOLE
L588255

340°



LEGEND

MAFIC VOLCANICS	V7	Iron Tholeiites
	V8	Ultramafic
INTRUSIVES	I	Mafic or Ultramafic
	I	Felsic
SEDIMENTS	S	

b) diabasic
c) pillowed
d) agglomerate
e) tuff
f) flow top breccia

a) undivided
b) diabasic
c) pillowed
d) agglomerate
e) tuff
f) flow top breccia

d) dabase
g) gabbro
l) lamprophyry

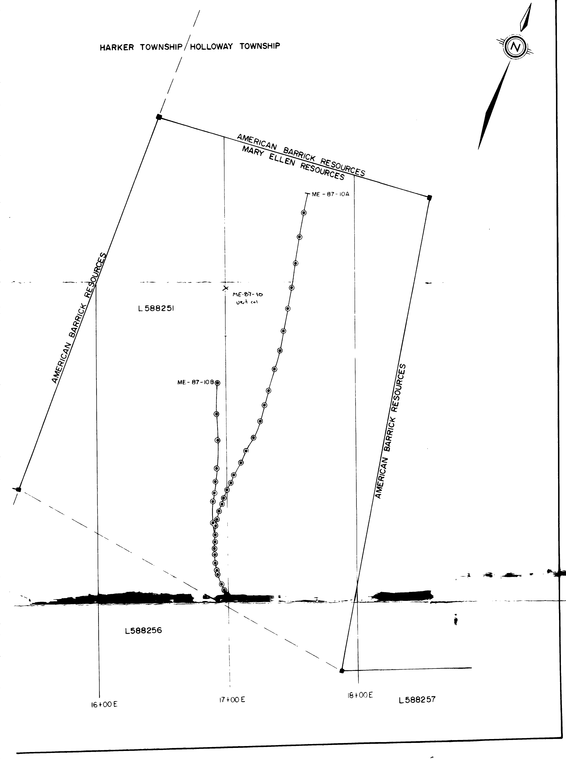
s) syenite
sp) syenite porphyry

(gr) graphitic shale
ar) argillite shale
w) wacke
ch) chert
cb) carbonate

SYMBOLS

amy	amygdules
spher	spherules
var	varioles
mag	magnetic
carb	carbonatized
△	silicification

⊙ test location mid point



63.5149
OM87-018

VERTICAL DRILL SECTION ALONG L 17+00E
SECTION LOOKING 340°
HOLES M-85-1,2 , ME 87-10, 10A, 10B
MC-84-75 , 87-304, 307
— INCO OPTION —

MARY ELLEN RESOURCES LTD.
HOLLOWAY TOWNSHIP

PROJECT NO	DRAWN BY	DATE
M-005	B MANION	OCT 1987

SCALE 1"=100'
100' 50' 0 100' 200' 300' FEET

DESIGN BY : LAMARCHALL
NTS 32 D/12