REPORT OF EXPLORATION ACTIVITIES
on the
SYLVANITE PROPERTY
(PATRIE-STRASHIN OPTION)

DENYES TWP., NTS 41 0/15

PROJECT 1307

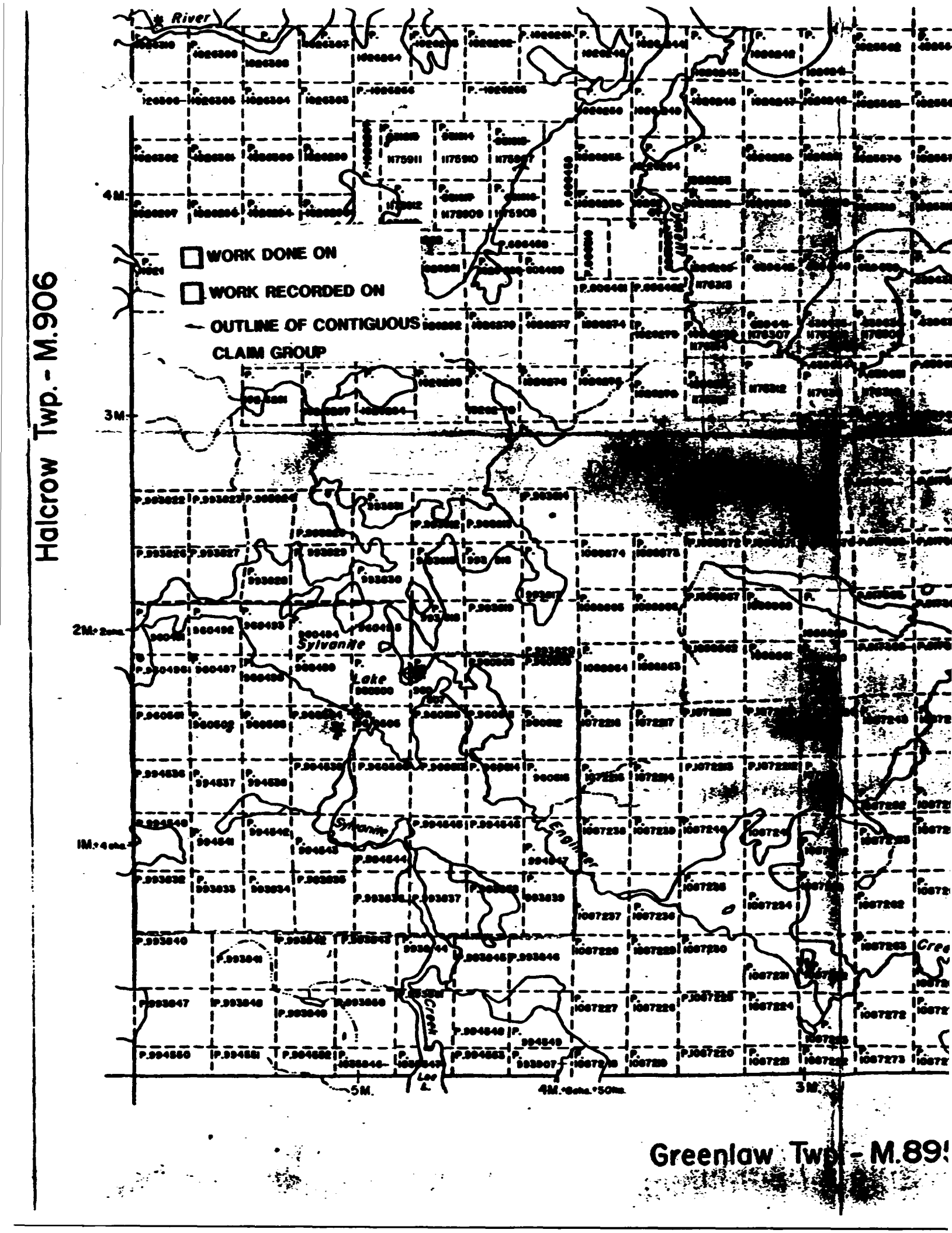
HEMLO GOLD MINES INC.

NORANDA EXPLORATION COMPANY, LIMITED
(No Personal Liability)

JOINT VENTURE

Timmins, Ontario
January, 1994

Reno Pressacco, M.Sc.(A)
Project Geologist


Halcrow Twp. - M.906
WORK DONE ON
WORK RECORDED ON
OUTLINE OF CONTIGUOUS CLAIM GROUP
Sylvanite Lake
Greenlaw Twp. - M.89

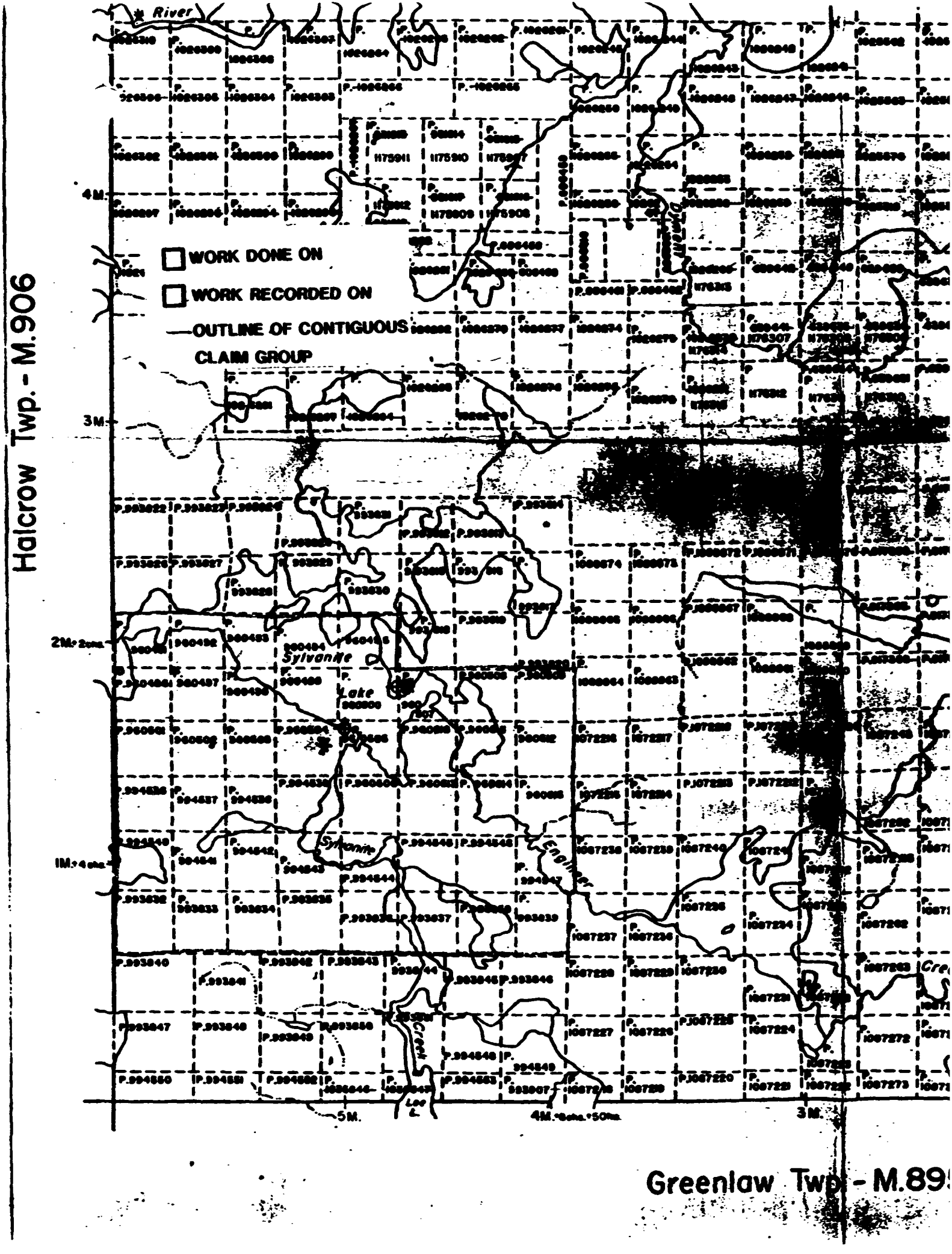

Halcrow Twp. - M.906
WORK DONE ON
WORK RECORDED ON
OUTLINE OF CONTIGUOUS CLAIM GROUP
Sylvanite Lake
Greenlaw Twp. - M.89

TABLE OF CONTENTS

Appendices

SUMMARY

Mafic-hosted strataform / stratabound alteration zones at or near mafic-ultramafic and mafic-sediment contacts have been traced over a strike length of 800 ft by three diamond drill holes in the area of Showing D. These alteration zones can be of significant widths, on the order of 100 ft, and consist dominantly of a moderately to strongly developed pervasive sericite - carbonate - (pyrite) - (+/- foliation-parallel quartz-ankerite veining / veinlets) for the most part. Weak gold values in the 1-2 ppm range have been returned from sections of the alteration containing increased amounts of disseminated - stringer - patchy pyrite. This indicates a gold-pyrite association and thus has a more favourable implication for the property's potential of hosting a "flow ore" style of mineralization. Showing B remains untested and the potential exists for the occurrence of either mafic-hosted "flow ore" style of mineralization or ultramafic-hosted "vein ore" style of mineralization in the vicinity of this Showing.

Recommendations include the drilling of one drill hole along a 1200 - 1600 ft stepout along a VLF - EM anomaly to the southeast of hole SYL-93-5, and drilling of one 200m - 300m hole beneath Showing B to test the gold potential of that area. In addition, examination of the gold potential of claims located to the southeast of the property in the vicinity of Barty Lake is recommended.

CERTIFICATION

I, Reno Pressacco, residing at 181 Christine Street, Timmins, Ontario certify the following:

1) That I am a practising geologist employed by Noranda Exploration.

2) That I hold the following degrees and diplomas:

M.Sc. (A), Mineral Exploration, 1986, McGill University
B.Sc. Geology, 1984, Lake Superior State College
Diploma in Geology Engineering Technology, 1982, Cambrian College.

3) That I am a member in good standing of the following professional associations:

The Geological Association of Canada
Porcupine Prospectors and Developers Association
L'Association des Prospecteurs du Quebec

4) That this report is based on information obtained from government publications, public press releases, and collected by various mining companies including Noranda Exploration Company, Limited.

R. Pressacco

January, 1994
Timmins, Ontario

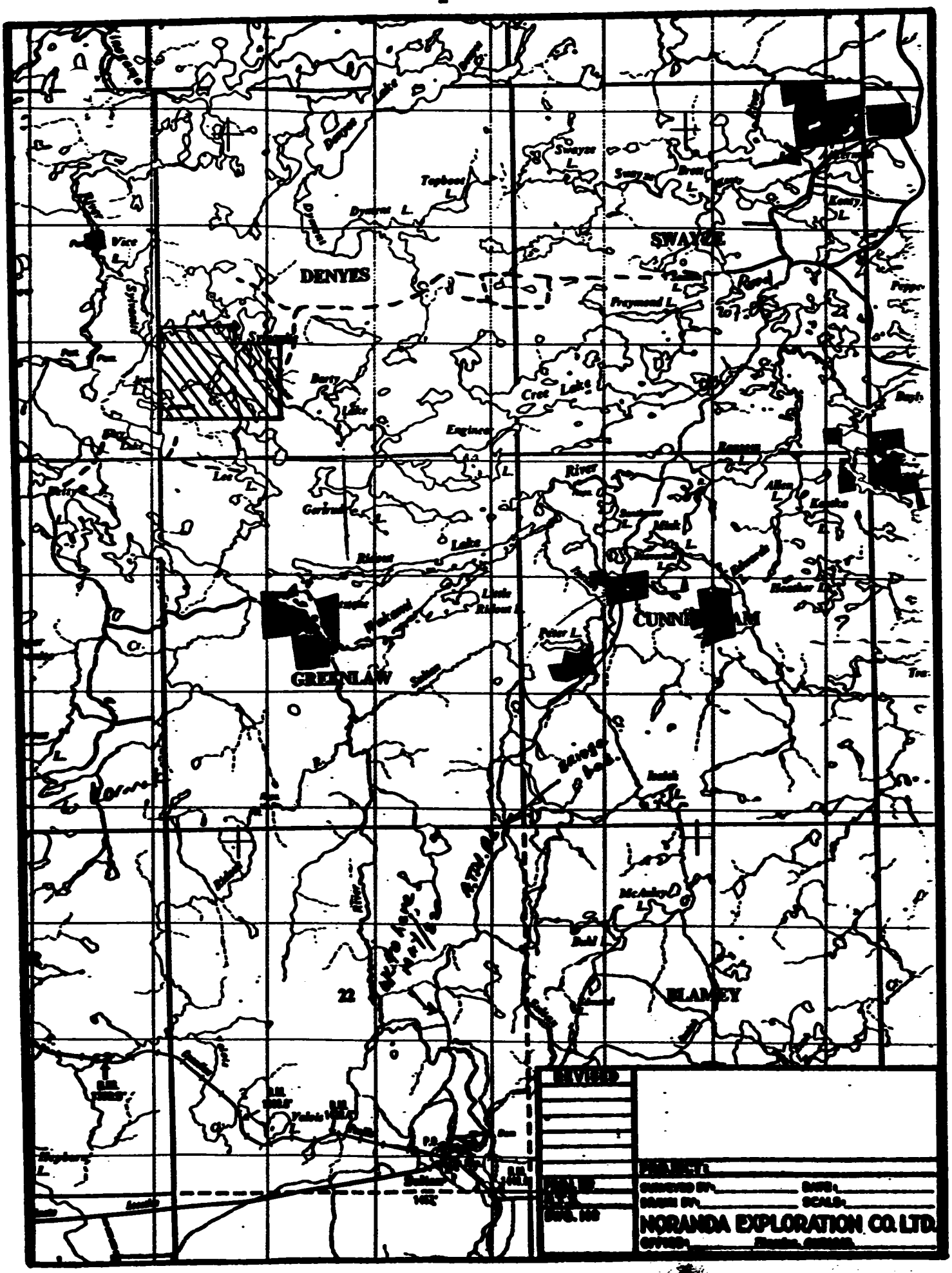
Reno Pressacco
Project Geologist

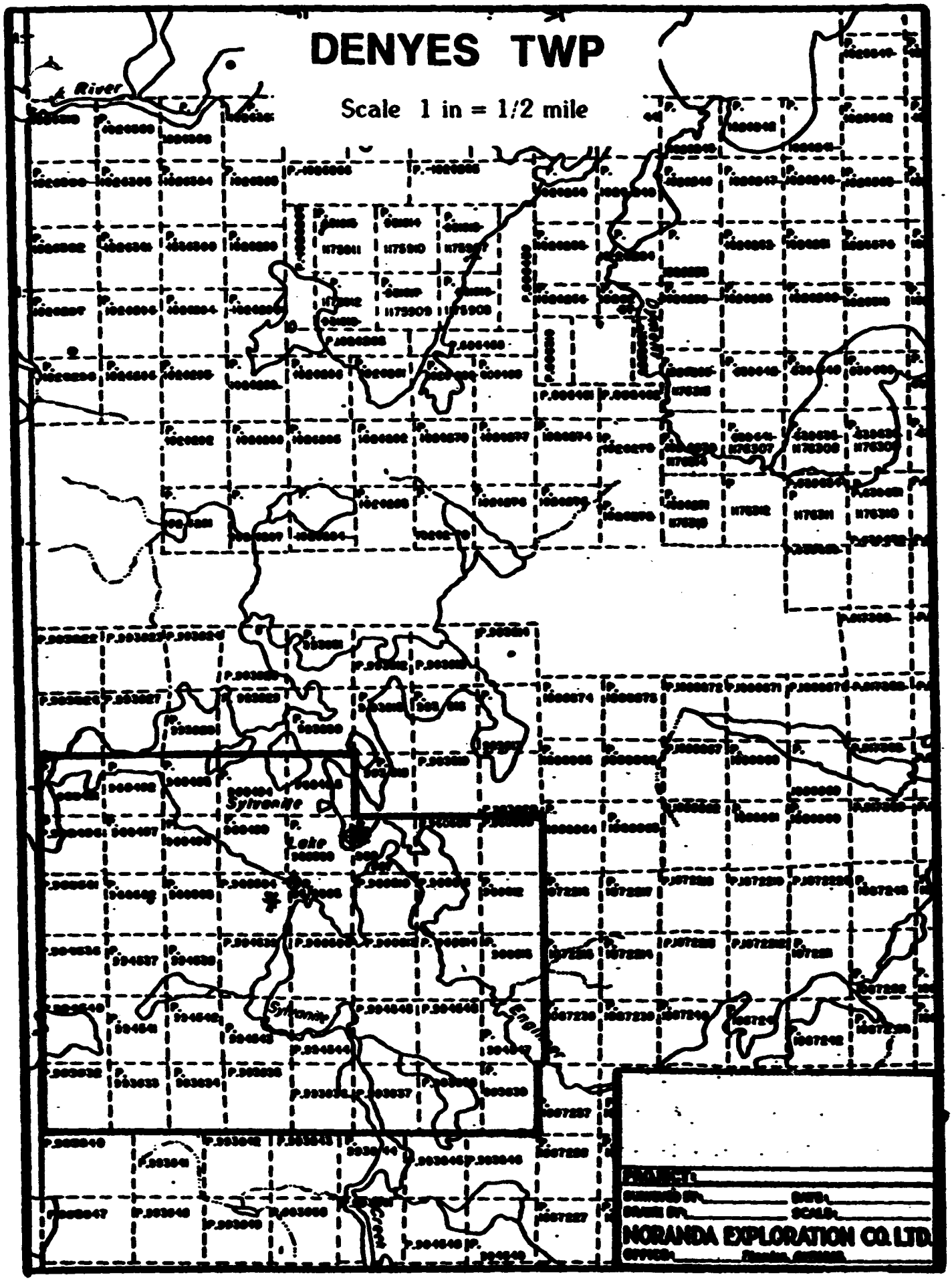
1.0 INTRODUCTION

The purpose of this document is to describe and synthesise the results of the exploration activities conducted on the Sylvanite claim group during 1993. This exploration consisted of a small diamond drill program conducted during the early part of December, 1993. The goal of this program was to test the strike extensions of the encouraging stratigraphy, alteration and weak gold values encountered by hole SYL-92-1 drilled the previous year. As well, one short hole was targeted to undercut Showing C, which had returned good gold values from a pyrite - chalcopyrite - arsenopyrite bearing quartz vein. This drilling program was conducted under the direct field supervision of the author, with assistance being provided by Claude Breton, both of whom were employed by Noranda Exploration.

2.0 LOCATION, ACCESS AND CLAIMS

The claim group is located in the southwestern quadrant of Denyes Twp., approximately 130 km southwest of Timmins, Ontario and 40 km east-southeast of Chapleau, Ontario (Figure 1). Located along the southern and eastern shores of Sylvanite Lake, access to this remote area is difficult at best. Several methods of access are available including; 1) float-equipped aircraft to Sylvanite Lake, 2) canoe access to Sylvanite Creek via Lee Lake and the Kormak Road, 3) road and trail access to within 2 km of the southern claim boundary via the Kormak Road to Betty Lake and Elvy Lake, and 4) primarily winter road access to Sylvanite Lake and Engineer Creeks via an unnamed trail running westwards from the Dore Road in Swayze Twp. This winter road is informally known as the Denyes-Swayze Road. All these means of access are shown in Figure 1. The property currently consists of 45 unpatented mining claims as shown in Figure 2. The mineral rights of these claims currently reside with Hemlo Gold.


DENYES
SWAYZE
GREENLAW
CUNNINGHAM
BLAMEY
22
RIVERS
NORANDA EXPLORATION CO. LTD.


DENYES TWP
Scale 1 in = 1/2 mile
NORANDA EXPLORATION CO.LTD.

3.0 ENVIRONMENTAL ISSUES

Several environmentally-related issues are applicable to mineral exploration on these claims. The central issue in this area is that the fishery resources of Sylvanite Lake and Engineer Creek, and the existing remote nature of this watershed including the Kinogama River have been classified to be of value by the Chapleau Branch of the Ministry of Natural Resources.

With respect to the fisheries issue, the mouth of Engineer Creek at Sylvanite Lake has been designated as a productive spawning area. As such, any exploration activity in this area or any stream crossings of Engineer Creek must be accomplished so as to minimize any impact on these spawning grounds. This can be achieved primarily by ensuring that a minimal to no sediment load enters the waters of Engineer Creek due to heavy equipment crossing the stream. Several locations are present where the bed of the creek is mostly covered by either boulders of coarse sand, and these locations are preferred because a minimal disturbance of the bed of Engineer Creek will be generated.

With respect to the remote nature of this area, two concerns must be addressed. Firstly, access to Sylvanite Lake and vicinity must be kept to a minimum, as several existing fly-in fishing camps are present on Sylvanite Lake. Any access to Sylvanite Lake is likely to adversely affect this existing tourist operation. Sylvanite Lake also forms a part of the Kinogama Canoe Route which has restricted access points, thereby providing tourist value by means of it's remote nature. Additional access points to Sylvanite Lake would downgrade this remote nature.

4.0 TOPOGRAPHY AND VEGETATION

The topography of the property and immediate area is fairly flat to gently rolling with low mounds and higher ridges providing local relief of 10-20 meters. Topography is rarely a factor in the movement of men and equipment on the property, however the presence of a major drainage channel -Sylvanite Creek - poses an obstacle. This Creek is generally too wide and deep for crossing along most of it's length from Lee Lake to Sylvanite Lake, however one short section is amenable for the passing of heavy equipment. This ford is located just downstream of the rapids on Sylvanite Creek and is a place where the stream bed is made up entirely of outcrop exposure. Here, water depths rarely exceed 30 cm, even in flood.

The vegetation of the property consists of virgin stands of mature poplar and black spruce. Some local swampy areas are host to concentrations of cedar and alders but for the most part the property is fairly dry. No forestry operations have been carried out in this area as of yet, but the area is scheduled for harvesting before 1997 according to the Pinelands Forest Management Agreement 5 year Annual Work Schedule.

5.0 PREVIOUS WORK

No records of previous exploration activities on the immediate claim group, aside from that performed by the vendors, are on file at the Timmins Resident Geologist's office. During the 1988-1990 period the vendors carried out a variety of field work including line cutting, VLF and magnetometer surveys, limited HEM surveys, humus sampling, geological mapping and limited

mechanical stripping. Numerous hand-dug pits and trenches were dug prior to 1988 and were located in the field but no record of these have been located. Noranda Exploration conducted an exploration program in 1992 consisting of geological mapping, an Induced Polarization survey, an attempted trenching program, and a small 4 - hole diamond drill program (Pressacco, 1993).

6.0 GEOLOGY

6.1 Regional Geology

The property is located in the western end of the Swayze Greenstone Belt, an Archean-aged assemblage of supracrustal rocks consisting predominantly of mafic to felsic volcanics and intrusives, and chemical and clastic sediments. Basically, nothing is known about the regional geological setting of this area, as few government geological reports have been published. The government maps available are that by Hunt (1979) who compiled the then available data for Denyes Twp. and that by Donovan (1968) who conducted regional scale mapping of Halcrow-Denyes Twps.

A synthesis of the limited knowledge available to-date suggests that the area is underlain by a northwesterly striking assemblage composed predominantly of mafic metavolcanics which contain small amounts of ultramafic material and clastic sediments. Some small accumulations of felsic volcanics are present to the south in northwestern Greenlaw Twp. All units are believed to be steeply dipping.

6.2 Local Geology

Prior to the 1992 exploration program, little was known about the detailed geological setting of the claim group. Since then the geology of the property has been shown to consist predominantly

of massive and weakly pillowed mafic metavolcanics and ultramafic flows (Basaltic komatiites and komatiites). Some clastic sediments (polymictic pebble conglomerate, quartzites, mature arenites, and argillites) occur as both interflow units and as larger units/areas. All units are interpreted to strike at approximately azimuth 130 degrees and dip steeply north at roughly 65-75°. Stratigraphic tops are undetermined, as conflicting younging directions were observed during the course of the 1992 exploration program. No evidence of folding has been observed to date.

Some evidence of shearing is present in the area of Showing D located at 27+00S and Line 24+00E. Here, a wide zone of strongly developed foliation roughly parallels the overall stratigraphic attitude and may form part of a larger shear zone.

6.3 Economic Geology

A number of interesting occurrences of either gold-bearing mineralization or significant alteration have been located by the vendors. These are described below:

Showing	Location	Description
A,A-1	Lines 44W and 40W, 24+00S	Silicified-carbonatized mafic volcanics containing narrow quartz veins. Grab samples returned up to 0.11 opt Au.
B	35+50W, 45+50S	Strongly developed, foliated fuchsite alteration containing quartz veins/stockworks and weak silicification. Veins up to 1m in width. Only anomalous Au values returned to-date.
C	Line 0W, 31+50S	56m long, 1 m wide quartz vein hosted by weakly carbonatized ultramafics. Vein contains py-cpy-asp sulphide assemblage. Chip samples return up to 0.518 opt Au/1.0m and grab samples return up to 1.44 opt Au.
D	Line 24+00E 27+00S	Minimum 40m wide, strongly foliated to sheared ankerite-fuchsite zone contains 5-7% quartz veins. Veins at all angles to foliation and may contain a py-cpy-asp sulphide assemblage. Chip samples returned up to 0.78 opt Au/4 ft. and 0.49 opt Au/10 ft.

7.0 DIAMOND DRILLING

Three drill holes totalling 2,198 ft (669.95m) were drilled by NDS drilling of Timmins, Ontario during the December 8 - 14, 1993 period. Two of these holes (SYL-93-5 and SYL-93-6) were drilled 400 ft on either side of an existing hole (SYL-92-1) which contained interesting alteration and elevated gold values. The third hole (SYL-93-7) was drilled underneath Showing C to test the depth extension of the gold-bearing quartz vein exposed in an old, hand-dug surface trench. All of the core was logged by the author, and any sections which may have contained elevated gold values were

sampled. A total of 170 samples of split BQ core were sent to Swastika Laboratories for gold analysis. All of the core was transported from the Engineer Creek campsite to the Timmins office of Noranda Exploration for storage. The analytical results of the sampling are given on the Laboratory Certificates in Appendix I, and further details regarding sample locations are given in the complete drill logs in Appendix II. The individual locations of the drill holes are shown on Map 1 in Appendix III and the data for each drill hole are illustrated on the interpreted drill hole cross-sections in Appendix III. A brief description of the lithologies, alteration and analytical results encountered by each drill hole are given in the Summary Descriptions following:

SUMMARY DESCRIPTION

Hole No.	Co-Ordinates	Dip	Azimuth	Length
SYL-93-5	28+00E 23+50S	-45	az 210	956ft (291.39m)

FOOTAGE		DESCRIPTION
From	To	
0	12	Casing. All BW casing left in hole.
12	70.3	Basalt, weakly pillowed, amygdaloidal.
70.3	88.7	Ultramafic (Komatiitic Basalt).
88.7	201.2	Weakly pillowed Basalt. Moderate sericite-ankerite alteration 190-201.2ft.
201.2	220.3	Altered Ultramafic (?). 1-3% diss., vfg anhedral pyrite hosted in fine quartz stockworks.
220.3	324.6	Sericitized, Pillowed Basalt. Moderate pervasive sericitization. 1% disseminated, vfg anhedral pyrite in fine quartz stockworks. Zone of brecciation, quartz veining, and fuchsitic alteration 312.4-324.6ft.
324.6	412.2	Zone of Brecciation, Shearing, and Sericite-Carbonate Alteration. Trace-1% vfg anhedral pyrite.
412.2	717.6	Basalt, weakly pillowed. Weak pervasive sericite alteration. Intense sericitization with 1-3% patchy-stringer pyrite 482.3 - 489.5ft
717.6	790.8	Zone of Shearing and Alteration. Strong pervasive sericitization, trace disseminated euhedral pyrite.
790.8	874.8	Hematitic Polymictic Conglomerate.
874.8	932.2	Massive Basalt.
932.2	956.0	Weakly Hematitic, Monomictic Conglomerate.
	956.0	End of Hole.

ASSAYS: 485.3 - 489.5 ft: 0.042 opt Au / 4.2 ft (1.43 gpt Au / 1.28m)
732.4 - 742.1 ft: 0.031 opt Au / 9.7 ft (1.05 gpt Au / 2.96m)

SUMMARY DESCRIPTION

Hole No	Co-Ordinates	Dip	Azimuth	Length
SYL-93-6	20+00E 24+50S	-45	az 210	816ft (248.72m)

FOOTAGE From	To	DESCRIPTION
0	5	Casing. All casing removed on termination of hole.
5	117.8	Ultramafics (Komatiitic Basalts).
117.8	509.2	Pillowed Basalt. Occasional weak sericitization.
509.2	597.5	Sheared, Altered Mafic Volcanics. Moderate patchy / pervasive sericitization - (carbonatization). Trace disseminated pyrite.
597.5	621.1	Silicified, Sericitized Mafics (?). Moderate mixed silicification, sericitization and chloritization.
621.1	816.0	Hematitic, Polymictic, Quartzitic Conglomerates. 3-5% chlorite veinlets throughout.
	816.0	End of Hole.

ASSAYS: 516.5 - 526.0 ft: 0.015 opt Au / 9.5 ft (0.53 gpt Au / 2.90m)

SUMMARY DESCRIPTION

Hole No	Co-Ordinates	Dip	Azimuth	Length
SYL-93-7	0+00E 29+25S	-45	az 210	426ft (129.84m)

FOOTAGE From	To	DESCRIPTION
0	11	Casing. All casing recovered on termination of hole.
11	83.7	Fine grained Ultramafic (Komatiitic Basalt).
83.7	226.0	Gabbro (Coarse Mafic Intrusive).
226.0	388.9	Ultramafic Flow (Weakly pillowed Komatiitic Basalt).
388.9	426.0	Gabbro (Medium, Porphyritic Mafic Intrusive).

ASSAYS: No samples taken from this hole.

8.0 DISCUSSION OF RESULTS

Hole SYL-93-5 intersected much the same stratigraphic package as did hole SYL-92-1, however the amount of ultramafic material in the hole was substantially less than previously intersected, and occurs primarily as two narrow ultramafic bands intercalated with mafic volcanics. Hole SYL-93-5 also intersected the same hematitic conglomerate unit as hole SYL-92-1, however a thin band of mafic volcanics is interbedded with the conglomerates at the bottom of the hole. Three zones of alteration were encountered. The first can be correlated to the alteration uncovered in the stripped area of Showing D, and is quite wide (99.8 ft core length). The second zone is very narrow (7.2 ft core length) and consists of a zone of strong foliation / shearing with intense sericitization and containing 1 - 3% patchy and stringer pyrite. The third zone is also quite wide (73.2 ft core length), is located at the northern contact of the conglomerates, and appears to be composed of altered mafic volcanics. This third zone can be correlated to the gold value in hole SYL-92-1 (3.3 gpt Au / 1.34m) and consists of a strong pervasive sericitization (+/- carbonatization), locally developed shearing, 7 - 10% foliation-parallel quartz-carbonate veining, and 1% disseminated, very fine grained pyrite. In terms of gold values, despite comprehensive sampling the first alteration zone failed to return any significant gold values. The second alteration zone returned a weighted average grade of 0.042 opt Au / 4.20 ft (1.43 gpt Au / 1.28m), and the third alteration zone returned a weighted average grade of 0.031 opt Au / 9.7 ft (1.05 gpt Au / 2.96m). Zones 2 and 3 are new and have not been tested by any previous exploration activities. They are considered to be encouraging, as the style of alteration, pyrite mineralization and weak gold values are very similar to the "flow ores" of such gold mines as Kerr-Addisson, Aunor-Delnite, and the Dome. Much room remains along strike and at depth for these zones to develop into significant mineralization.

Hole SYL-93-6 was drilled 400 ft to the west of SYL-92-1, and also intersected much the same stratigraphic assemblage. However only the Zone 3 alteration was encountered at the mafic-conglomerate contact, and the Zones 1 and 2 alteration packages were completely absent. Despite comprehensive sampling, no significant gold values were returned from any of the samples taken from this hole.

Hole SYL-93-7 was drilled directly underneath Showing C, and failed to intersect any significant amounts of quartz veining, pyrite - chalcopyrite - arsenopyrite mineralization, or any significant alteration. No samples were taken from this hole.

The results described above are considered to be encouraging, despite the less than ore grade gold values returned to-date. Favourable points include: 1) the development of mafic-hosted moderate to strong sericite - carbonate alteration zones at or near mafic-ultramafic contacts, 2) development of patchy to stringer pyrite mineralization within these alteration zones yielding weak gold values in the 1-2 ppm Au range, 3) lack of significant amounts of gold-bearing quartz veins as seen on surface in Showing D (this type of mineralization usually is too erratic to form good economic tonnages), and 4) the stratabound / strataform nature of these alteration zones.

Historically, gold occurrences in the Swayze Greenstone Belt have been hosted by quartz veins which have been found to have limited extents for the most part (Showing C on the property for example). Even the largest of the known quartz vein occurrences (the Jerome, Joburke, Rundle, and Kenty Mines) have been shown to have mineral inventories of less than 1 million tons; the point being that the style of alteration and mineralization seen on the Sylvanite property to-date is a departure from the historical gold showings in the Swayze Belt. Rather, the alteration and

mineralization observed is more akin to that of "flow ores" and has potential to form into a significant mineralized body.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information presented above, the following conclusions are suggested:

1) mafic-hosted strataform / stratabound alteration zones at or near mafic-ultramafic and mafic-sediment contacts have been traced over a strike length of 800 ft by three diamond drill holes.

2) these alteration zones can be of significant widths, on the order of 100 ft, and consist of a moderately to strongly developed pervasive sericite - carbonate - (pyrite) - (+/- foliation-parallel quartz-ankerite veining / veinlets) for the most part.

3) weak gold values in the 1-2 ppm range have been returned from sections of the alteration containing increased amounts of disseminated - stringer - patchy pyrite. This indicates a gold-pyrite association and thus has a more favourable implication for the property's potential of hosting a "flow ore" style of mineralization.

4) Showing B, a small hand-stripped area measuring perhaps 2 x 2m, consists of a strongly developed fuchsitic alteration containing abundant quartz veining and stockworks. No additional exploration has been done on this showing, and the possibility exists that the mafic volcanics near this Showing may be altered as well. A second possibility exists in that

despite the lack of significant gold values to-date, potential still remains to locate gold mineralization of the "vein ore" type in the vicinity of this Showing.

Recommendations include:

1) a VLF - EM anomaly extending from the location of the alteration zones in hole SYL-93-5 to approximately 1200-1600 ft to the southeast is present. One drill hole is recommended to test his anomaly at a 1200-1600 ft stepout southeast of hole SYL-93-5.

2) one drill hole 200m - 300m in length is recommended to undercut Showing B in order to examine the fuchsitic alteration for the potential of hosting "vein ore" mineralization and in order to test the mafic volcanics for "flow ore" potential.

3) examination of the gold potential of claims located to the southeast of the property in the vicinity of Barty Lake is recommended.

10.0 REFERENCES

Donovan, J.F., 1968, Geology of Halcrow-Rideout Lakes Area: Ontario Department of Mines Geological Report 63, 45 p., 2 maps.

Hunt, D.S., 1979, Timmins Data Series - Denyes Twp.: Ontario Geological Survey Preliminary Map P2294, Scale 1:15,840.

Jensen, L.S., 1976, A New Cation Plot For Classifying Subalkalic Volcanic Rocks: Ministry of Natural Resources Miscellaneous Paper 66, 22p.

Ontario Geological Survey, 1982, Amag & Aem Surveys of the South Swayze Area: OGS Geophysical/Geochemical Series Maps 80540 and 80541.

Pressacco, R., 1993, Report of Exploration Activities on the Sylvanite Property: Noranda Exploration Unpublished Internal Document, 18 p., maps and sections.

Timmins, Ontario
January, 1994

Reno Pressacco
Project Geologist

APPENDIX I

Laboratory Certificates

Established 1928

Swastika Laboratories

A Division of TSL / ASSAYERS INC.

Assaying - Consulting - Representation

Assay Certificate

3W-2971-RA1

Company: NORANDA EXPLORATION CO. LTD.
Project: 607
Attn: J. WAKEFORD

Date: DEC-16-93

SYL-93-5

We hereby certify the following Assay of 39 SPLIT CORE samples submitted DEC-15-93 by .

Sample Number	Au g/tonne	Au Check g/tonne
26801	0.01	
26802	0.01	
26803	0.02	
26804	0.01	
26805	0.01	
26806	0.01	
26807	0.01	0.01
26808	0.01	
26809	0.01	
26810	0.01	
26811	0.01	
26812	0.01	
26813	0.01	
26814	0.01	
26815	0.01	0.01
26816	0.01	
26817	0.01	
26818	0.01	
26819	0.01	
26820	0.01	
26821	0.01	
26822	0.01	0.01
26823	0.01	
26824	0.01	
26825	0.01	
26826	0.01	
26827	0.01	
26828	0.01	
26829	0.01	
26830	0.01	

Certified by Denis Chartre

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories

A Division of TSL / ASSAYERS INC.

Assaying - Consulting - Representation

Established 1938

Assay Certificate

3W-2971-RA1

Company: NORANDA EXPLORATION CO. LTD.
Project: 607
Attn: J. WAKEFORD

SYL-93-5

Date: DEC-16-93

We hereby certify the following Assay of 39 SPLIT CORE samples submitted DEC-15-93 by .

Sample Number	Au g/tonne	Au Check g/tonne
26831	0.01	
26832	0.01	
26833	0.01	
26834	0.01	
26835	0.01	0.01
26836	0.02	
26837	0.01	
26838	0.03	
26839	0.01	0.01

Certified by Denis Chartre

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories
A Division of TSL / ASSAYERS INC.
Established 1988
Assaying - Consulting - Representation

SYL-93-5

Assay Certificate

3W-2976-RA1

Company: NORANDA EXPLORATION CO LTD
Project: 607
Attn: J WAKEFORD

Date: DEC-17-93

We hereby certify the following Assay of 23 SPLIT CORE samples submitted DEC-16-93 by .

Sample Number	Au g/tonne	Au check g/tonne
26840	0.01	
26841	0.09	
26842	0.01	
26843	0.01	
26844	0.01	
26845	0.01	
26846	0.03	
26847	0.01	
26848	0.01	
26849	0.01	
26850	0.01	
26851	0.01	
26852	0.02	
26853	0.20	0.17
26854	0.01	
26855	0.01	
26856	0.01	
26857	0.20	
26858	1.13	1.13
26859	1.67	
26860	0.11	0.12
26861	0.01	
26862	0.01	

Certified by G. Ebert

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories
A Division of TSL/Assayers Inc.
Established 1928
Assaying - Consulting - Representation

Assay Certificate

3W-3006-RA1

Company: NORANDA EXPLORATION CO LTD
Project: 1307
Attn: J WAKEFORD

Date: DEC-23-93

We hereby certify the following Assay of 107 CORE samples submitted DEC-20-93 by .

SYL-93-5

Sample Number	Au g/tonne	Au Check g/tonne
26863	0.01	
26864	0.01	
26865	0.29	
26866	1.14	1.11
26867	0.96	1.01
26868	0.02	
26869	0.13	
26870	0.01	
26871	0.01	
26872	0.01	
26873	0.01	
26874	0.01	
26875	0.01	
26876	0.01	
26877	0.01	
26878	0.01	
26879	0.01	0.01
26880	0.01	
26881	0.02	
26882	0.01	
26883	0.01	
26884	0.12	0.10
26885	0.03	
26886	0.13	
26887	0.05	
26888	0.02	
26889	0.01	
26890	0.01	
26891	0.01	
26892	0.02	

Certified by G. Leh

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories
A Division of TSL/Assayers Inc.
Established 1928
Assaying · Consulting · Representation

3W-3006-RA1

Assay Certificate

Company: NORANDA EXPLORATION CO LTD
Project: 1307
Attn: J WAKEFORD

Date: DEC-23-93

We hereby certify the following Assay of 107 CORE samples submitted DEC-20-93 by .

Sample Number	Au g/tonne	Au Check g/tonne
26893	0.01	
26894	0.01	
26895	0.02	
26896	0.01	
26897	0.01	0.01
26898	0.01	
26899	0.01	
26900	0.01	
26901	0.01	
26902	0.01	
26903	0.01	
26904	0.01	
26905	0.01	
26906	0.01	
26907	0.02	
26908	0.01	
26909	0.53	0.37
26910	0.54	
26911	0.02	
26912	0.03	
26913	0.01	
26914	0.02	
26915	0.01	
26916	0.01	
26917	0.01	
26918	0.01	
26919	0.01	
26920	0.01	
26921	0.01	0.01
26922	0.01	

SYL-93-5

SYL-93-6

Certified by G. Lebel

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705)642-3244 FAX (705)642-3300

Swastika Laboratories
A Division of TSL/Assayers Inc.
Established 1928
Assaying - Consulting - Representation

Assay Certificate

3W-3006-RA1

Company: NORANDA EXPLORATION CO LTD
Project: 1307
Attn: J WAKEFORD

Date: DEC-23-93

We hereby certify the following Assay of 107 CORE samples submitted DEC-20-93 by .

SYL-93-6

Sample Number	Au g/tonne	Au Check g/tonne
26923	0.01	0.01
26924	0.01	
26925	0.01	
26926	0.01	
26927	0.01	
26928	0.01	
26929	0.01	
26930	0.01	
26931	0.01	
26932	0.01	
26933	0.01	
26934	0.01	
26935	0.01	
26936	0.01	
26937	0.01	
26938	0.01	
26939	0.01	
26940	0.01	
26941	0.01	
26942	0.01	
26943	0.16	0.16
26944	0.15	0.13
26945	0.01	
26946	0.01	
26947	0.01	
26948	0.01	
26949	0.01	
26950	0.01	
26951	0.01	0.01
26952	0.01	

Certified by G. Leborg

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories
A Division of TSL/Assayers Inc.
Established 1928
Assaying - Consulting - Representation

Assay Certificate

3W-3006-RA1

Company: NORANDA EXPLORATION CO LTD
Project: 1307
Attn: J WAKEFORD

Date: DEC-23-93

We hereby certify the following Assay of 107 CORE samples submitted DEC-20-93 by .

SYL-936

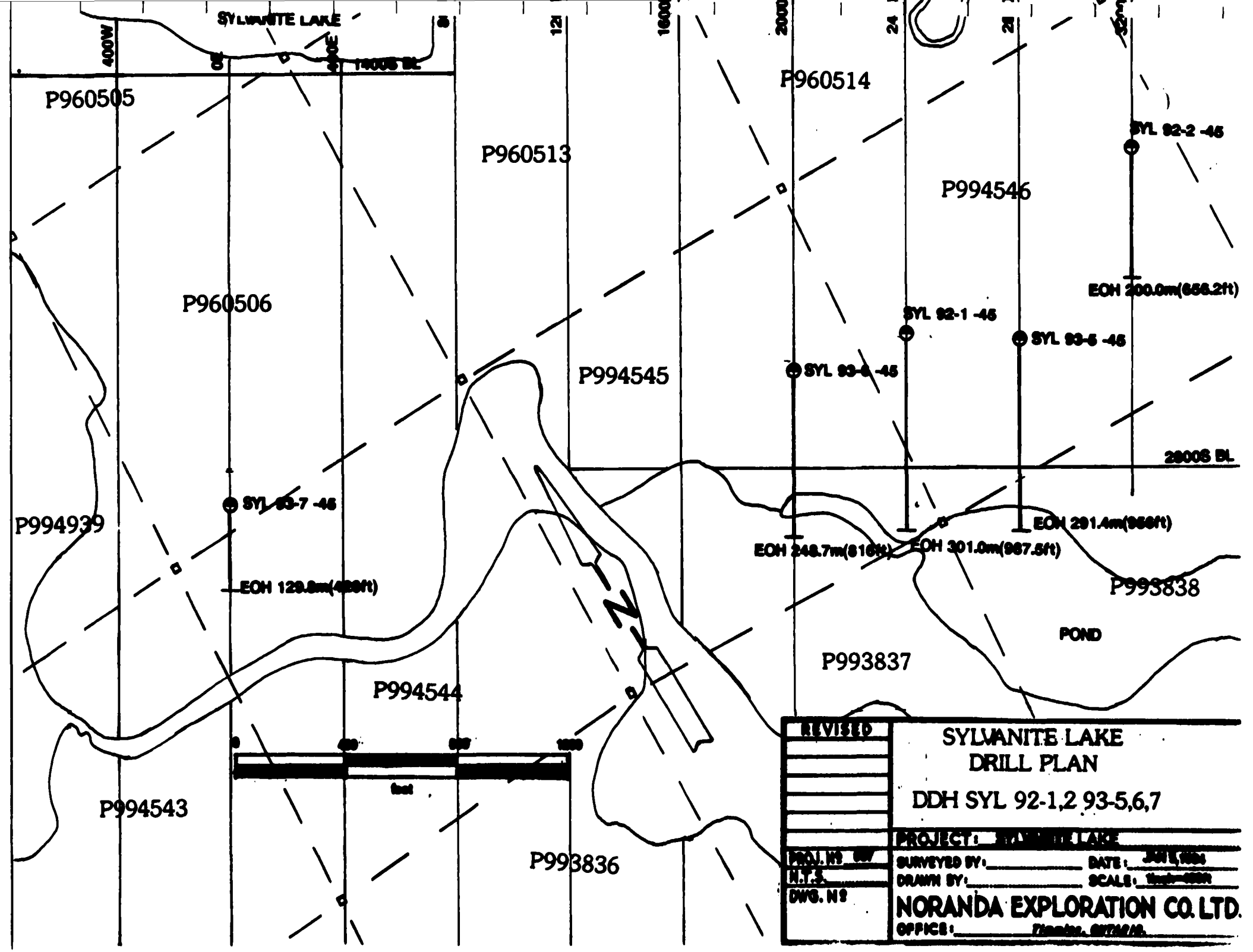
Sample Number	Au g/tonne	Au Check g/tonne
26953	0.01	
26954	0.01	
26955	0.01	
26956	0.01	
26957	0.01	
26958	0.01	
26959	0.01	0.01
26960	0.01	
26961	0.01	
26962	0.01	
26963	0.01	
26964	0.01	
26965	0.01	
26966	0.01	
26967	0.01	
26968	0.01	
26969	0.01	0.01

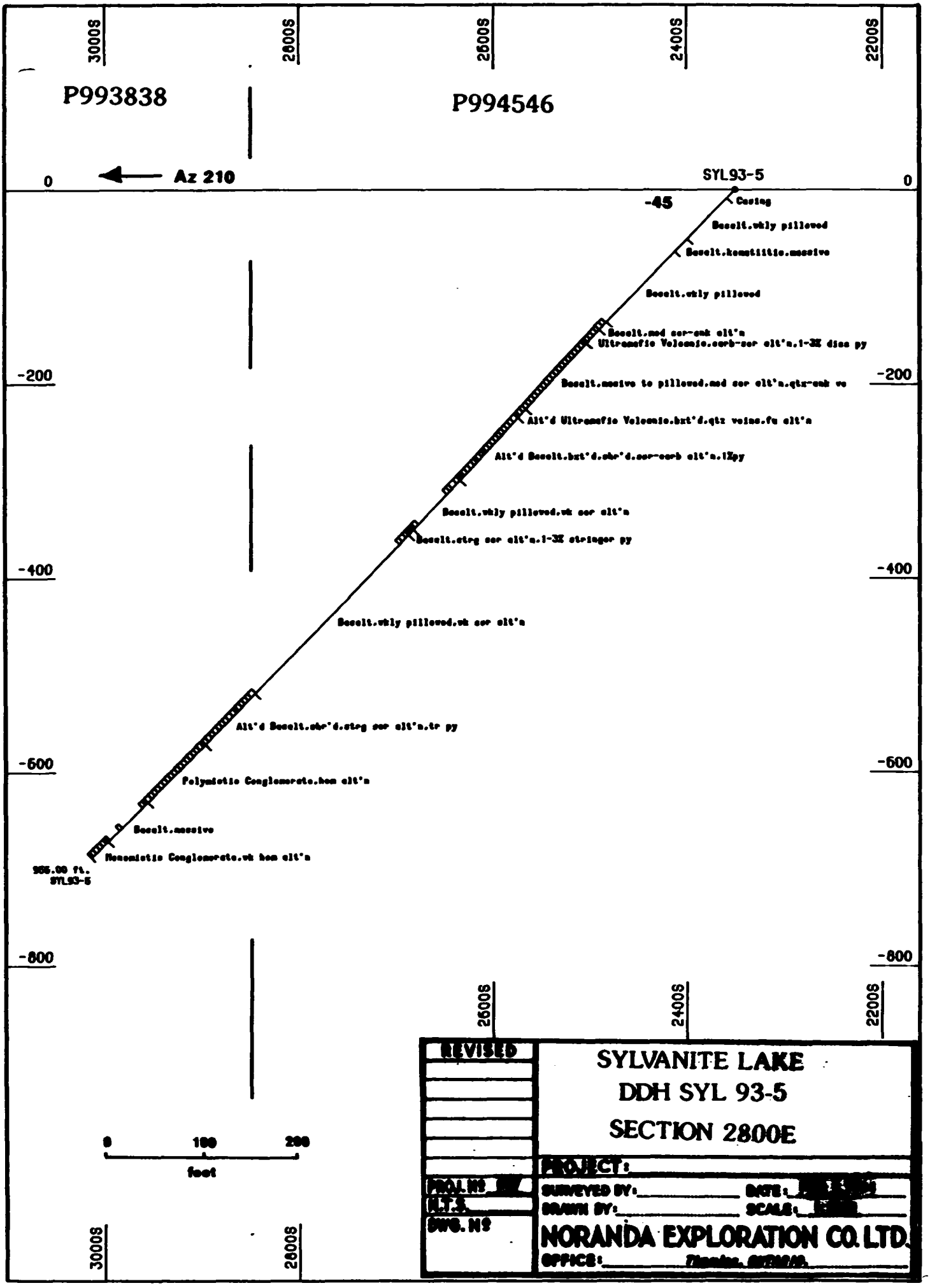
Certified by G. Lebel

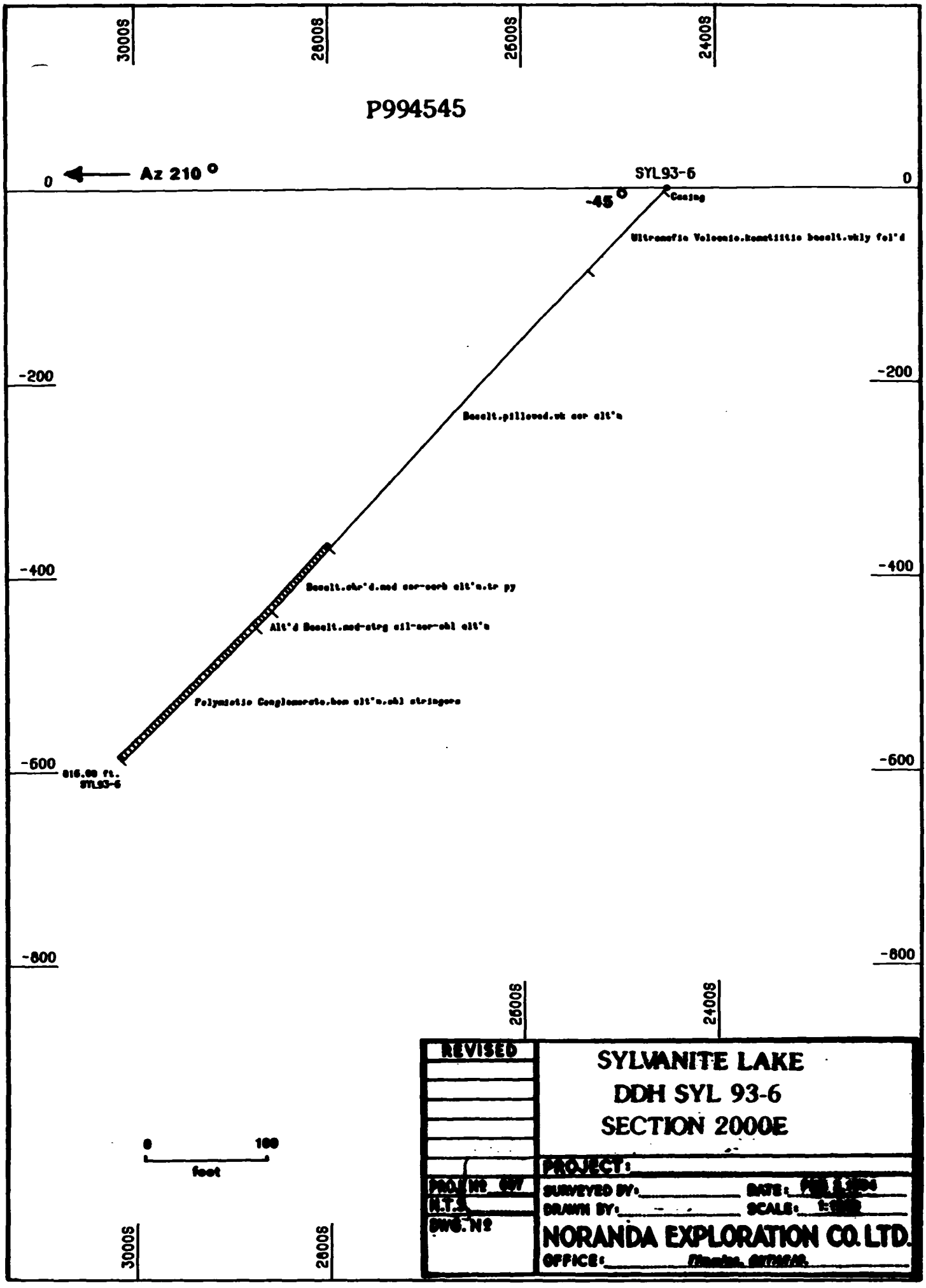
P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

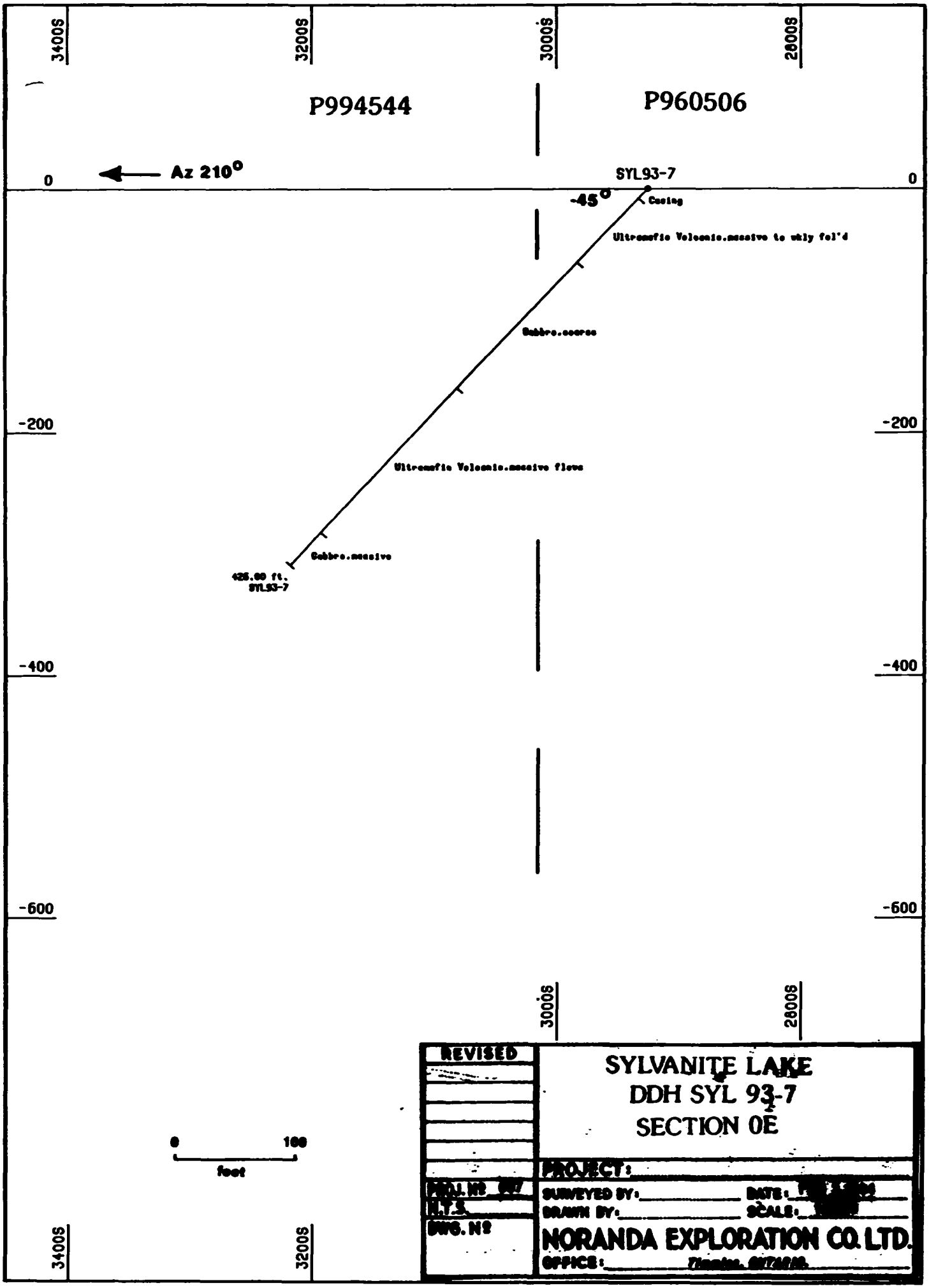
APPENDIX II

Drill Logs


SYLVANITE LAKE
400W
0E
400E
1600S BL
P960505
P960514
P960513
P994546
P960506
P994545
P994939
P994544
P994543
P993836
P993838
P993837
POND
SYL 92-2 -45
EOH 200.0m(656.2ft)
SYL 92-1 -45
SYL 93-5 -45
SYL 93-6 -45
2800S BL
SYL 93-7 -45
EOH 129.8m(426ft)
EOH 248.7m(816ft)
EOH 301.0m(987.5ft)
EOH 291.4m(956ft)
N
0
400
800
1200
feet
REVISED
SYLVANITE LAKE
DRILL PLAN
DDH SYL 92-1,2 93-5,6,7
PROJECT:
PROJ. Nº
SURVEYED BY:
DATE:
N.T.S.
DRAWN BY:
SCALE:
DWG. Nº
NORANDA EXPLORATION CO. LTD.
OFFICE:


3000S
2800S
2500S
2400S
2200S
P993838
P994546
0
Az 210
SYL93-5
0
-45
Casing
Basalt.vbly pillowed
Basalt.komatiitic.massive
Basalt.vbly pillowed
Basalt.mod ser-cmk alt'n
Ultramafic Volcanic.carb-ser alt'n.1-3% diss py
-200
-200
Basalt.massive to pillowed.mod ser alt'n.qtz-cmk ve
Alt'd Ultramafic Volcanic.bxt'd.qtz veins.fu alt'n
Alt'd Basalt.bxt'd.chr'd.ser-carb alt'n.1%py
Basalt.vbly pillowed.vk ser alt'n
Basalt.strg ser alt'n.1-3% stringer py
-400
-400
Basalt.vbly pillowed.vk ser alt'n
Alt'd Basalt.chr'd.strg ser alt'n.tr py
-600
-600
Polymictic Conglomerate.hem alt'n
Basalt.massive
Monomictic Conglomerate.vk hem alt'n
985.00 ft.
SYL93-5
-800
-800
2600S
2400S
2200S
0
100
200
feet
3000S
2800S
REVISED
SYLVANITE LAKE
DDH SYL 93-5
SECTION 2800E
PROJECT:
PROJ. NO.
SURVEYED BY:
DATE:
DRAWN BY:
SCALE:
DWG. NO
NORANDA EXPLORATION CO. LTD.
OFFICE:


3000S
2800S
2600S
2400S
P994545
0
Az 210°
SYL93-6
0
-45°
Casing
Ultramafic Volcanic.Komatiitic basalt.wkly fol'd
-200
-200
Basalt.pillowed.wk ser alt'n
-400
-400
Basalt.chr'd.mod ser-carb alt'n.tr py
Alt'd Basalt.mod-strg sil-ser-chl alt'n
Polymictic Conglomerate.bas alt'n.chl stringers
-600
-600
816.00 ft.
SYL93-6
-800
-800
2600S
2400S
0
100
feet
3000S
2800S
REVISED
SYLVANITE LAKE
DDH SYL 93-6
SECTION 2000E
PROJECT:
SURVEYED BY:
DATE:
DRAWN BY:
SCALE:
N.T.S.
DWG. No
NORANDA EXPLORATION CO. LTD.
OFFICE:


3400S
3200S
3000S
2800S
P994544
P960506
0
Az 210°
SYL93-7
0
-45°
Casing
Ultramafic Volcanic.massive to mkly fol'd
Gabbro.coarse
-200
-200
Ultramafic Volcanic.massive flows
Gabbro.massive
425.00 ft.
SYL93-7
-400
-400
-600
-600
3000S
2800S
0
100
feet
REVISED
SYLVANITE LAKE
DDH SYL 93-7
SECTION 0E
PROJECT:
PROJ. Nº
N.T.S.
DWG. Nº
SURVEYED BY:
DATE:
DRAWN BY:
SCALE:
NORANDA EXPLORATION CO. LTD.
OFFICE:
3400S
3200S

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: SYLVANITE
HOLE No.: SYL93-5
Collar Eastings: 2800.00
Collar Northings: -2350.00
Collar Elevation: 0.00

Date: Dec 14, 1993
Logged by: REP
Collar Inclination: -45.00
Grid Bearing: 210.00
Final Depth: 956.00 feet

FROM	TO	LITHOLOGICAL DESCRIPTION
0	12	Casing. All casing left in place.
12	70.3	BASALT. Colour light green-grey, moderately soft, non-magnetic. Generally fine to medium grained texture 12-36 ft, very fine grained to aphanitic texture 36-70.3 ft. Upper coarser section resembles a plagioclase-porphyritic gabbro, gradational contacts over 5 ft. The lower fine grained section becomes weakly amygdaloidal within 15 ft of lower contact, with 1-3% chloritic-filled, 1-2 mm sized amygdules. This lower section may be weakly pillowed, as several very thin (5 mm) chloritic selvages are observed. 1-3% quartz-calcite veinlets at all angles to CA.
70.3	88.7	KOMATIITIC BASALT (ULTRAMAFICS). Colour black to very dark grey, very soft, non-magnetic, non-calcitic. Fine grained to very fine grained massive texture for the most part. Coarser grained sections contain 5-7% very fine (0.1 mm) white coloured grains in a black matrix. Quite abundant (7-10%) quartz-calcite-talc veinlets are at all angles to CA. Most veinlets do not exceed 1 cm in width. Weakly developed brecciated texture within 3-4 ft of upper contact. Gradational lower contact.
88.7	201.2	BASALT. Weakly pillowed. Colour light to medium grey-green, hard, non-magnetic, non-calcitic. Massive to very weakly developed pillowed and amygdaloidal texture. Grain size is quite variable, ranging from medium grained to aphanitic. Amygdules are most common in the 88.7-140 ft interval, being 3-5% in abundance near the upper contact, gradually diminishing to trace amounts through 140 ft. The amygdules are all chlorite-filled and range in size from 1 mm up to 5-7 mm (eg 117 ft). ALTERATION: Weak to moderate sericitic-ankeritic alteration developed 190-201.2 ft. Alteration occurs as pervasive replacement, gradually developing through 190 ft. 1-3% quartz-ankerite veinlets begin to develop below 196 ft. Weak increase in foliation in this interval.

FROM	TO	LITHOLOGICAL DESCRIPTION
		158.4-176 ft: Leucoxene-bearing interval. Sharp upper contact at 60deg to CA, gradational lower contact over 5-10 ft. 1-3% fine grained leucoxene is rather evenly distributed throughout the interval, grain size becomes smaller down the hole. CORE ANGLE: 45 deg to CA at 192 ft. Foliation. Gradational lower contact to this major unit. Contact chosen as first appearance of significant khaki-green coloured material.
201.2	220.3	ALTERED ULTRAMAFIC ? Colour dull olive green to khaki, very soft, non-magnetic. Generally massive very fine grained texture. Abundant quartz veining / stockwork (+/- ankerite-carbonate) occur as very thin veinlets and small amorphous patches. Overall quartz abundance estimated at 10%. 1-3% waxy-green coloured talc-filled veinlets and patches are present throughout. ALTERATION: Possible pervasive carbonate-sericite alteration imparts olive-green colour to the core. MINERALIZATION: 1-3% disseminated, very fine, anhedral pyrite is present, usually associated with the quartz stockworks. 218.3-220.3 ft: Fine Conglomerate. Well developed heterolithic fragmental texture (fragment compositions difficult to identify) with 20-30% 3-5 mm sized fragments set in a grey-black matrix. Fragments are rounded to sub-angular in shape.
220.3	324.6	SERICITIZED PILLOWED BASALT. Colour light yellow-grey-green, soft, non-magnetic, non-calcitic. Massive to weakly foliated texture overall with some local sections displaying pillowed textures (eg 261 ft, 266 ft, 282 ft). 5-7% quartz-ankerite veins throughout. Occasional yellowish sericite veinlets. CORE ANGLE: 75 deg to CA at 226 ft. Foliation. CORE ANGLE: 60 deg to CA at 278 ft. Foliation.

FROM	TO	LITHOLOGICAL DESCRIPTION
		ALTERATION: Weak to moderately developed pervasive sericitization throughout. Sericite is restricted to the groundmass only and has not affected the pillow selvages. Some local sections of strong sericitization. MINERALIZATION: 1% disseminated, very fine grained anhedral pyrite is present through much of the interval, usually in association with quartz-ankerite veinlets / stockworks / patches. 312.4 - 324.6 ft: Zone of brecciation, quartz veining, and fuchsitic alteration. Gradational contacts over 2-3 ft. The main characteristic of this interval is the development of weak to moderate fuchsitic alteration. This fuchsite (5-7% abundance) occurs mostly as thin veinlets (1 mm) and a pervasive alteration to a lesser degree. A brecciated texture is quite well developed, with angular fragments of sericitic basalts (?) / sericitic-carbonate material set in a very fine grained , dark-coloured matrix. 7-10% irregularly shaped quartz-ankerite veins. Trace amounts of very fine grained disseminated pyrite. CORE ANGLE: 60 deg to CA at 311 ft. Foliation.
324.6	412.2	ZONE OF BRECCIATION, SHEARING AND ALTERATION. Colour generally dull yellow-brown, soft, non-magnetic, non-calcitic. Strongly developed foliated and fragmental texture. Gradational contacts with brecciated zone described at 312.4 - 324.6 ft, original rock type is virtually impossible to determine. Most of the interval is composed of mixed fragments of strongly sericitized material (basalt ?) and iron carbonate knots, stringers, and patches. These sericitic and carbonate fragments are roughly 30-40% in abundance, and are separated by bands (1-5 mm) of olive green / khaki brown material which define most of the foliation. Quartz veining / brecciation / patches are developed throughout (estimated at 10%), occurring mostly in foliation-parallel mode. Some of the veinlets have been boudinaged into elliptical shaped patches. Two generations of quartz are observed, and early foliation-parallel set (described above), and a later cross-cutting set typically containing ankerite patches. These later veins can reach 10 cm in width. The strength of brecciation, shearing, and alteration

FROM	TO	LITHOLOGICAL DESCRIPTION

gradually decreases down the hole. Below 391 ft the core becomes more uniform in texture and is moderately pervasively sericitized. Local short sections of shearing. Gradational lower contact.

CORE ANGLE: 50 deg to CA at 366 ft. Foliation

ALTERATION: Difficult to determine. Possible pervasive, strong, early sericitization prior to fragmentation / shearing. Pervasive carbonatization throughout. Weakly fuchsitic, containing 10-15% quartz-ankerite veining in the 375.5-391 ft section.

MINERALIZATION: Trace to 1% disseminated very fine grained anhedral pyrite.

CORE ANGLE: 60 deg of CA at 406 ft. Foliation.

412.2 717.6 BASALT, WEAKLY PILLOWED.
Colour variable from dark grass green to light yellow-beige, soft, non-magnetic, weakly calcitic. Weakly to moderately developed foliated texture overall, with short local sections exhibiting weakly developed pillowed or pillow breccia textures (eg 431 ft, 436 ft). A crackle texture or a wormy texture of very fine chloritic veinlets / stringers and tiny patches is commonly developed and outlines small fragments of sericitic material. Quartz veining is quite low, perhaps 3% in overall abundance. Most veins do not exceed 2-3 cm in width, but occasional veins to 15-20 cm are present. A short 2 ft section of broken core (RQD 0%) is present at 426 ft.

482 - 498 ft: Zone of broken / blocky core, overall RQD estimated at 50%. Minor section (1-2 cm) of fault gouge observed at 487 ft.

CORE ANGLE: 60 deg to CA at 486 ft. Foliation.
CORE ANGLE: 55 deg to CA at 694 ft. Foliation.

Gradational lower contact over 3-5 ft. Lower contact subjectively chosen as the first appearance of sericite-carbonate alteration.

ALTERATION: Weak pervasive sericitization occurs as small patches, and short sections throughout. 482.3 -

FROM	TO	LITHOLOGICAL DESCRIPTION
		489.5 ft: section of intense sericitization containing 1-3% disseminated and patchy / stringer anhedral to euhedral pyrite. 5-7% quartz-carbonate veinlets to 10 cm. Gradational upper and lower contacts over 3-5 ft. MINERALIZATION: 1 % disseminated very fine grained pyrite throughout.
717.6	790.8	ZONE OF SHEARING AND ALTERATION. Colour variable from light yellow-green to light beige, depending on strength of alteration, soft, non-magnetic. Strongly developed foliated texture overall, with local 2-3 ft sections displaying shearing and boudinaged textures. The beginning of stronger shearing and alteration is in the area of 726 ft. The local sections with sheared textures are typically more chloritic, with thin (1 mm) chlorite-filled shear planes defining the foliation. These shear planes usually outline small fragments / patches of sericite-carbonate alteration. Based on gradational upper contact, this altered zone is interpreted to be altered mafic volcanics. Quartz-carbonate vein abundance is on the order of 7-10%, occurring mostly as thin (1-3 cm) foliation-parallel bands, stretched out patches and occasional cross-cutting veinlets. These veinlets seem to be preferentially concentrated in the chloritic sheared intervals; those sections containing massive sericite alteration contain little quantities of veining. CORE ANGLE: 60 deg to CA at 740 ft. Shearing. CORE ANGLE: 55 deg to CA at 786 ft. Foliation. ALTERATION: Strong pervasive sericite alteration throughout, largely obliterating observation of the original rock composition. Some pervasive carbonatization may also be present with the sericitic alteration. MINERALIZATION: Trace-1% disseminated, subhedral-euhedral, fine grained pyrite is present throughout, but seems to be preferentially hosted in sections of sericitic alteration. 776.4-780.8 ft: Zone of quartz-carbonate veining.

FROM	TO	LITHOLOGICAL DESCRIPTION
		Overall vein abundance is on the order of 70%, mostly composed of one large vein 777.6-779.5 ft, containing 1-3% chloritic fragments and stringers. Several of the smaller veins have drusy carbonate developed along the vein walls, and clearly cross-cut the foliation (late stage veins).
790.8	874.8	HEMATITIC POLYMICTIC CONGLOMERATE. Colour variable from light reddish-pink to light beige to light green, moderately hard, non-magnetic. Moderately foliated, granular to coarse clastic texture. Although variable, the abundance of coarse clasts is on the order of 10-20% overall, with clast sizes ranging up to 2-3 cm in size. The clasts can be seen to be polymictic, although one composition is most abundant (quartzitic clasts). Other clast compositions include mafic volcanics, sericitic material, and an apple-green material. The clasts are sub-angular to rounded in shape, and are matrix-supported by a fine, relatively clean quartzitic matrix. The foliation is defined by an orientation / fabric in the matrix to some degree, but more by bands of chloritic / dark green coloured material up to 5 mm in width. Trace quartz veining and patches. ALTERATION: Weak pervasive hematization throughout. Minor chloritization defines the foliation. MINERALIZATION: nil sulphides observed. CORE ANGLE: 55 deg to CA at 796 ft. Foliation. CORE ANGLE: 50 deg to CA at 851 ft. Foliation. Minor shearing within 5-7 ft of lower contact.
874.8	932.2	MASSIVE BASALT. Colour dark green, soft, non-magnetic. Massive to weakly foliated, very fine grained to aphanitic texture. Quartz-carbonate is rather common, being on the order of 7-10% in overall abundance, and occurring as thin veinlets and very fine networks / stockworks. One short section (912-915 ft) contains 60-70% quartz veining. The veins also contain sericitized fragments and thin veinlets / patches of a dark green to black material (Fe-chlorite?). ALTERATION: Weakly developed chloritization in

FROM	TO	LITHOLOGICAL DESCRIPTION
		vicinity of larger quartz veins. MINERALIZATION: Rare to minor disseminated pyrite within 5 ft of upper contact. CORE ANGLE: 60 deg to CA at 876 ft. Foliation. CORE ANGLE: 55 deg to CA at 927 ft. Foliation.
932.2	956.0	WEAKLY HEMATITIC MONOMICTIC CONGLOMERATE. Colour light reddish-pink to light beige, moderately hard, non-magnetic. Moderately foliated, well developed fragmental texture. Clast abundance is less than in the similar unit above, but the matrix remains the same. Trace quartz-carbonate veining / patches. ALTERATION: Weak pervasive hematization, weak sericitization. Minor chloritic stringers / veinlets throughout. MINERALIZATION: Trace sulphides observed within 5 ft of upper contact. Sulphides are disseminated, fine grained euhedral pyrite. END OF HOLE, 956.0 FT.

** BORSURV **

ASSAY LOG
PROPERTY: SYLVANITE
HOLE No.: SYL93-5

FROM	TO	WIDTH	SampleNo	Au (ppm)
191.00	195.80	4.80	26801.000	0.010
195.80	201.20	5.40	26802.000	0.010
201.20	204.80	3.60	29803.000	0.020
204.80	209.50	4.70	26804.000	0.010
209.50	214.10	4.60	26805.000	0.010
214.10	218.40	4.30	26806.000	0.010
218.40	220.30	1.90	26807.000	0.010
220.30	223.10	2.80	26808.000	0.010
223.10	227.80	4.70	26809.000	0.010
227.80	232.60	4.80	26810.000	0.010
232.60	237.50	4.90	26811.000	0.010
237.50	242.00	4.50	26812.000	0.010
242.00	246.70	4.70	26813.000	0.010
246.70	251.30	4.60	26814.000	0.010
251.30	256.00	4.70	26815.000	0.010
256.00	260.80	4.80	26816.000	0.010
260.80	265.40	4.60	26817.000	0.010
265.40	270.20	4.80	26818.000	0.010
270.20	275.40	5.20	26819.000	0.010
275.40	279.80	4.40	26820.000	0.010
279.80	284.40	4.60	26821.000	0.010
284.40	288.90	4.50	26822.000	0.010
288.90	293.70	4.80	26823.000	0.010
293.70	298.30	4.60	26824.000	0.010
298.30	303.00	4.70	26825.000	0.010
303.00	307.50	4.50	26826.000	0.010
307.50	312.40	4.90	26827.000	0.010
312.40	316.60	4.20	26828.000	0.010
316.60	321.30	4.70	26829.000	0.010
321.30	324.60	3.30	26830.000	0.010
324.60	330.80	6.20	26831.000	0.010
330.80	335.40	4.60	26832.000	0.010
335.40	340.10	4.70	26833.000	0.010
340.10	344.70	4.60	26834.000	0.010
344.70	349.10	4.40	26835.000	0.010
349.10	353.30	4.20	26836.000	0.020
353.30	358.10	4.80	26837.000	0.010
358.10	363.00	4.90	26838.000	0.030
363.00	367.60	4.60	26839.000	0.010
367.60	372.30	4.70	26840.000	0.010
372.30	375.50	3.20	26841.000	0.090
375.50	379.10	3.60	26842.000	0.010
379.10	383.70	4.60	26843.000	0.010
383.70	386.70	3.00	26844.000	0.010
386.70	390.80	4.10	26845.000	0.010
390.80	396.10	5.30	26846.000	0.030
396.10	400.90	4.80	26847.000	0.010
400.90	405.60	4.70	26848.000	0.010
405.60	408.80	3.20	26849.000	0.010
408.80	412.20	3.40	26850.000	0.010

** BORSURV **

ASSAY LOG
PROPERTY: SYLVANITE
HOLE No.: SYL93-5

FROM	TO	WIDTH	SampleNo	Au (ppm)
412.20	417.10	4.90	26851.000	0.010
417.10	424.00	6.90	26852.000	0.020
424.00	427.90	3.90	26853.000	0.200
427.90	432.50	4.60	26854.000	0.010
474.30	479.40	5.10	26855.000	0.010
479.40	482.30	2.90	26856.000	0.010
482.30	485.30	3.00	26857.000	0.200
485.30	487.20	1.90	26858.000	1.130
487.20	489.50	2.30	26859.000	1.670
489.50	493.30	3.80	26860.000	0.110
493.30	498.80	5.50	26861.000	0.010
498.80	503.10	4.30	26862.000	0.010
716.60	723.00	6.40	26863.000	0.010
723.00	727.50	4.50	26864.000	0.010
727.50	732.40	4.90	26865.000	0.290
732.40	737.10	4.70	26866.000	1.140
737.10	742.10	5.00	26867.000	0.960
742.10	745.30	3.20	26868.000	0.020
745.30	750.50	5.20	26869.000	0.130
750.50	756.30	5.80	26870.000	0.010
756.30	761.30	5.00	26871.000	0.010
761.30	766.00	4.70	26872.000	0.010
766.00	770.80	4.80	26873.000	0.010
770.80	776.40	5.60	26874.000	0.010
776.40	780.80	4.40	26875.000	0.010
780.80	786.00	5.20	26876.000	0.010
786.00	790.80	4.80	26877.000	0.010
790.80	794.00	3.20	26878.000	0.010
794.00	798.80	4.80	26879.000	0.010
798.80	803.50	4.70	26880.000	0.010
803.50	808.00	4.50	26881.000	0.020
808.00	812.80	4.80	26882.000	0.010
812.80	817.60	4.80	26883.000	0.010
817.60	822.50	4.90	26884.000	0.120
822.50	827.00	4.50	26885.000	0.030
827.00	831.60	4.60	26886.000	0.130
831.60	836.30	4.70	26887.000	0.050
836.30	841.00	4.70	26888.000	0.020
841.00	845.80	4.80	26889.000	0.010
845.80	850.60	4.80	26890.000	0.010
850.60	855.50	4.90	26891.000	0.010
855.50	860.10	4.60	26892.000	0.020
860.10	864.70	4.60	26893.000	0.010
864.70	869.30	4.60	26894.000	0.010
869.30	874.80	5.50	26895.000	0.020
874.80	878.20	3.40	26896.000	0.010
878.20	882.70	4.50	26897.000	0.010
912.00	916.00	4.00	26898.000	0.010
930.00	932.20	2.20	26899.000	0.010
932.20	934.80	2.60	26900.000	0.010

** BORSURV **

ASSAY LOG
PROPERTY: SYLVANITE
HOLE No.: SYL93-5

FROM	TO	WIDTH	SampleNo	Au (ppm)
934.80	939.50	4.70	26901.000	0.010
939.50	944.10	4.60	26902.000	0.010
944.10	948.90	4.80	26903.000	0.010
948.90	953.40	4.50	26904.000	0.010
953.40	956.00	2.60	26905.000	0.010

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: Sylvanite
HOLE No.: SYL93-6
Collar Eastings: 2000.00
Collar Northings: -2450.00
Collar Elevation: 0.00

Date: Jan 3, 1994
Logged by: rep
Collar Inclination: -45.00
Grid Bearing: 210.00
Final Depth: 816.00 feet

FROM	TO	LITHOLOGICAL DESCRIPTION
0	5	Casing. All casing recovered.
5	117.8	ULTRAMAFICS (KOMATIITIC BASALTS). Colour dark green, soft, weakly to non-magnetic. Weakly to moderately well developed foliated texture. Quartz-(talc) veinlets are quite common, accounting for roughly 7-10% of the core. These veinlets are quite variable in width, up to 2-3 cm, and are at all angles to CA. Core Angle: 75 deg to CA at 76 ft. Foliation. Possible weakly developed pillowed texture observed in the 86-96 ft interval. Occasional narrow sections of fault gouge (5mm - 1cm) are present in the 111 - 117.8 ft interval. MINERALIZATION: Trace disseminated, very fine grained anhedral pyrite.
117.8	509.2	PILLOWED BASALT. Colour medium green-yellow, soft, non-magnetic.Moderately well developed pillowed texture is observed in at least the 117.8 - 156 ft section. The pillows are on the order of 3-4 ft in size, and separated by narrow (3 -5cm) bands of dark green to black hyaloclastic material. 1-3% quartz-calcite veinlets are present at all angles to CA. Core becomes more massive in texture and taking on a gabbroic texture below roughly 186 ft to 231 ft. Core Angle: 60 deg to CA at 376 ft. Foliation. Core Angle: 60 deg to CA at 455 ft. Foliation. Core Angle: 50 deg to CA at 468 ft. Shearing. Core Angle: 55 deg to CA at 501 ft. Foliation. Foliation strength gradually increases down the hole from roughly 450 ft to end of this section. A narrow section of sericitic fault gouge is present 467.6-468.7 ft. ALTERATION: Occasional very weak sericitization

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: Sylvanite
HOLE No.: SYL93-6

FROM	TO	LITHOLOGICAL DESCRIPTION

observed along some of the pillow margins.

MINERALIZATION: Nil sulphides observed.

509.2 597.5 SHEARED, ALTERED MAFIC VOLCANICS.

Colour variable from medium green-grey to light beige,depending on strength of alteration, soft, non-magnetic. Well developed foliated texture, variably well developed sheared texture throughout. The shearing texture is displayed by the development of anastomosing chlorite -(sericite) shear planes and by boudinaged and stretched out patches of quartz veinlets / patches. Quartz vein abundance is quite variable, but overall is estimated at 5 - 7%. Veining occurs mostly as foliation parallel veinlets / patches and as lesser amounts of later-stage cross-cutting veinlets. Most veins do not exceed 1 - 2cm in thickness.

ALTERATION: Weak to moderately well developed patchy-pervasive sericitization - (carbonatization) throughout.
558.3 - 571.2 ft: strong sericitic alteration, shearing, and quartz veining. 50% quartz veining 566 - 571.2 ft.

MINERALIZATION: Trace disseminated pyrite.

Core Angle: 60 deg to CA at 531 ft. Foliation.
Core Angle: 50 deg to CA at 595 ft. Foliation.

597.5 621.1 SILICIFIED, SERICITIZED MAFICS ??

Colour variable from light green-grey to light yellow brown, hard, non-magnetic. Moderately to strongly developed foliated texture with thin hairline sericitic- filled veinlets and chlorite-filled veinlets defining the foliation for the most part. Much of the original protolith is not clearly visible due to the strength of the alteration, however the weak green colour suggests that these are altered mafics. Sharp upper contact parallel to foliation, lower contact is indistinct, visible only because of a colour change to a pinkish colour. Weakly developed sheared textures are observed on occasion. 1-3% randomly oriented quartz-carbonate veinlets and patches throughout.

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: Sylvanite
HOLE No.: SYL93-6

FROM	TO	LITHOLOGICAL DESCRIPTION
		Core Angle: 45 deg to CA at 611 ft. Foliation.
		ALTERATION: Mixed silicification, sericitization and chloritization are moderately to strongly developed.
		MINERALIZATION: Trace to nil sulphides observed.
621.1	816.0	HEMATITIC POLYMICTIC QUARTZITIC CONGLOMERATES.
		Colour variable from white to pinkish, hard, non-magnetic. Well developed fragmental texture and moderately to strongly foliated. For the most part, this unit consists of 5 - 10% heterolithic clasts to 3-5cm in size, matrix-supported by a quartzitic granular matrix. The matrix is quite uniform and consists mostly of tiny quartz grains. 1-3% quartz-carbonate - (+/- hematite) veinlets throughout.
		Core Angle: 45 deg to CA at 661 ft. Foliation. Core Angle: 55 deg to CA at 686 ft. Shearing.
		ALTERATION: 3-5% chlorite-filled veinlets are present throughout, at times in an anastomosing sheared texture.
		MINERALIZATION: Rare disseminated pyrite.
		816.0 END OF HOLE.

** BORSURV **

ASSAY LOG

PROPERTY: Sylvanite

HOLE No.: SYL93-6

FROM	TO	WIDTH	SampleNo	Au (ppm)
506.00	509.20	3.20	26906.000	0.010
509.20	511.80	2.60	26907.000	0.020
511.80	516.50	4.70	26908.000	0.010
516.50	521.30	4.80	26909.000	0.530
521.30	526.00	4.70	26910.000	0.540
526.00	530.80	4.80	26911.000	0.020
530.80	535.80	5.00	26912.000	0.030
535.80	540.50	4.70	26913.000	0.010
540.50	545.00	4.50	26914.000	0.020
545.00	549.90	4.90	26915.000	0.010
549.90	554.20	4.30	26916.000	0.010
554.20	558.80	4.60	26917.000	0.010
558.80	563.60	4.80	26918.000	0.010
563.60	568.30	4.70	26919.000	0.010
568.30	572.20	3.90	26920.000	0.010
572.20	576.80	4.60	26921.000	0.010
576.80	581.90	5.10	26922.000	0.010
581.90	586.50	4.60	26923.000	0.010
586.50	591.40	4.90	26924.000	0.010
591.40	597.50	6.10	26925.000	0.010
597.50	602.40	4.90	26926.000	0.010
602.40	607.60	5.20	26927.000	0.010
607.60	612.00	4.40	26928.000	0.010
612.00	617.40	5.40	26929.000	0.010
617.40	621.10	3.70	26930.000	0.010
621.10	627.00	5.90	26931.000	0.010
627.00	633.30	6.30	26932.000	0.010
633.30	637.90	4.60	26933.000	0.010
637.90	642.90	5.00	26934.000	0.010
642.90	647.40	4.50	26935.000	0.010
647.40	652.30	4.90	26936.000	0.010
652.30	657.00	4.70	26937.000	0.010
657.00	661.80	4.80	26938.000	0.010
661.80	666.40	4.60	26939.000	0.010
666.40	671.30	4.90	26940.000	0.010
671.30	677.50	6.20	26941.000	0.010
677.50	682.60	5.10	26942.000	0.010
682.60	687.10	4.50	26943.000	0.160
687.10	692.10	5.00	26944.000	0.150
692.10	698.70	6.60	26945.000	0.010
698.70	703.70	5.00	26946.000	0.010
703.70	708.30	4.60	26947.000	0.010
708.30	713.00	4.70	26948.000	0.010
713.00	717.60	4.60	26949.000	0.010
717.60	722.70	5.10	26950.000	0.010
722.70	727.50	4.80	26951.000	0.010
727.50	731.90	4.40	26952.000	0.010
731.90	736.50	4.60	26953.000	0.010
736.50	741.40	4.90	26954.000	0.010
741.40	746.00	4.60	26955.000	0.010

** BORSURV **

ASSAY LOG

PROPERTY: Sylvanite

HOLE No.: SYL93-6

FROM	TO	WIDTH	SampleNo	Au (ppm)
746.00	750.80	4.80	26956.000	0.010
750.80	755.30	4.50	26957.000	0.010
755.30	760.00	4.70	26958.000	0.010
760.00	765.00	5.00	26959.000	0.010
765.00	769.80	4.80	26960.000	0.010
769.80	774.30	4.50	26961.000	0.010
774.30	779.00	4.70	26962.000	0.010
779.00	785.20	6.20	26963.000	0.010
785.20	790.90	5.70	26964.000	0.010
790.90	796.00	5.10	26965.000	0.010
796.00	801.80	5.80	26966.000	0.010
801.80	807.70	5.90	26967.000	0.010
807.70	812.60	4.90	26968.000	0.010
812.60	816.00	3.40	26969.000	0.010

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: Sylvanite
HOLE No.: SYL93-7
Collar Eastings: 0.00
Collar Northings: -2925.00
Collar Elevation: 0.00

Date: Jan 3, 1994
Logged by: rep
Collar Inclination: -45.00
Grid Bearing: 210.00
Final Depth: 426.00 feet

FROM	TO	LITHOLOGICAL DESCRIPTION
0	11	Casing. All casing recovered on termination of hole.
11	83.7	FINE GRAINED ULTRAMAFIC Colour variable from light grey to dark green, very soft,non-magnetic. Massive patchy/crystalline texture to very weakly foliated locally. For the most part the core is quite homogenous in nature, consisting mostly of 1-5mm sized rounded patches of dark green coloured material set in a matrix of very fine light grey-green material. Possible weakly developed, rare pillow breccia / flow breccia texture is observed at 27-29 ft. Trace quartz-calcite veinlets throughout. Lower contact is gradational over 5 - 10 ft, and is subjectively chosen as the first appearance of significant amounts of porphyritic textured core. MINERALIZATION: Nil sulphides observed.
83.7	226.0	GABBRO (COARSE MAFIC INTRUSIVE) Colour medium green-yellow, moderately hard, non-magnetic. Massive homogenous porphyrititic texture for the most part, with both sausseritized plagioclase phenocrysts and mafic phenocrysts set in a very fine grained to aphanitic matrix. In all, the phenocrysts make up over 50% of the core. The plagioclase has a weakly glomeroporhyritic texture in places, and is mostly as anhedral, rounded patches to a maximum of 5mm in size.The mafic phenocrysts occur mostly within 15-20 ft of upper contact, where they are uniformly of a 1-2mm in size. 1% thin quartz-calcite veinlets throughout. 1-3% chlorite-filled veins to 1cm in width are at all angles to CA. Gradational lower contact is chosen as the last appearance of significant amounts of phenocrystic-textured core.
226.0	388.9	ULTRAMAFIC FLOW (WEAKLY PILLOWED) Colour medium green-grey to black, very soft, non-magnetic. Generally massive, very fine grained texture overall, with only local short sections displaying a weakly developed foliated texture. Possible

NORANDA EXPLORATION CO. LTD.

DIAMOND DRILL LOG

PROPERTY: Sylvanite
HOLE No.: SYL93-7

FROM	TO	LITHOLOGICAL DESCRIPTION
		weakly developed pillowed or flow breccia textures are observed on occasion (eg 261 ft, 267 ft, and 271 ft). 3-5% quartz-calcite veinlets throughout rarely exceed 3-5cm in width. The core is homogenous very fine grained to fine grained for the most part, but becomes medium grained and plagioclase-porphyritic in the 316-331 ft section. Gradational lower contact over 2-3 ft, lower contact is chosen as the first appearance of porphyritic-textured core.
388.9	426.0	GABBRO (MEDIUM, PORPHYRITIC MAFIC INTRUSIVE).
		Colour medium green-grey, moderately hard, non-magnetic.Massive medium grained porphyritic texture throughout.Gradational upper contact. Much of the porphyritic textured material consists of anhedral 1-5mm sized plagioclase phenocrysts and an anhedral khaki to olive green, 1-2mm sized mafic phenocryst. Trace quartz-calcite veinlets.
	426.0	END OF HOLE.

APPENDIX III

Maps and Sections

LOGICAL LEGEND

10 Paleozoic (undifferentiated)

Sedimentary Rocks

10 Ls Limestone

10 Ss Sandstone

9 Proterozoic (undifferentiated)

9I Intrusive Rocks

8 Diabase dykes (all ages)

7 Archean
Felsic Intrusive Rocks (undifferentiated)
7A Aplite
7G Granite
7S Syenite
7GD Granodiorite (trondjhemite)
7P Pegmatite
7F Felsic Dyke
7Q Quartz Porphyry
7QF Quartz-Feldspar-Porphyry
7PF Porphyry (undifferentiated)

6 Mafic Intrusive Rocks (undifferentiated)
6D Diorite
6G Gabbro
6A Anorthosite
6U Ultramafic

5 Chemical Metasedimentary Rocks (undifferentiated)
5 cht Chert
5 IF Iron Formation
IFo Oxide facies (magnetite)
IFo Sulphide facies
5 Gf Graphite

4 Clastic Metasedimentary Rocks
4 Cg Conglomerate
4 Q Quartzite
4 Gw Greywacke
4 Arg Argillite (fine clastic, Gp-Graphite)
4 V Volcanic (mafic metasediments, tuff?)
4 ss Siltstone
4 st Sandstone

3 Felsic Metavolcanic Rocks (undifferentiated)
3R Rhyolite
3Rd Rhyodacite

2 Intermediate Metavolcanic Rocks (undifferentiated)
2D Dacite
2A Andesite

1 Mafic Metavolcanic Rocks (undifferentiated)
1B Basalt (Fl-Iron tholeiitic, m-Magnesium tholeiitic)
1U Ultramafic 1K Komatiites

Descriptions Subscripts For Metavolcanic Rocks
f fine t tuff f-bx flow breccia
agg agglomerate (c) course grained possibly intrusive
pl pillowed flows v vesicular b banded gr graphite
lap lapilli var variolitic
Db Debris Flow
Highly metamorphosed Rock Notation
prime symbol signifies high grade rock
gn gneissic
sh schistose
m migmatite

Alteration
carb carbonatization sil silicification epi epidote
ser sericitic K-spar potassic ank ankeritic
chl chloritization
shr shear/shearing
bx brecciation

SYMBOLS

- areas of outcrop
- small outcrop
- bedding with dip direction
- foliation
- gneissosity
- lineation and plunge
- pillow structure with top direction
- geological contact defined
- geological contact approximate
- geological contact assumed
- fault/shear
- anticlinal fold structure with plunge
- synclinal fold structure with plunge
- drag fold with plunge
- shear zone
- diamond drill hole
- w magnetic attraction
- serp serpentine
- py pyrite
- po pyrrhotite
- cp chalcopyrite
- sp sphalerite
- asp arsenopyrite
- mgt magnetite
- ( ) Indicate trace or minor amounts
- HEM conductors
- magnetic isoclines (anomalies)
- q quartz
- bt biotite
- f feldspar
- Massive Sulphide
- magnetic axis
- HEM Conductor
- IP Axis
- MSU massive
- SMSU semi-massive
- diss disseminated
- str stringer

020

REPORT OF EXPLORATION ACTIVITIES
on the
SYLVANITE PROPERTY
(PATRIE-STRASHIN OPTION)

DENYES TWP., NTS 41 0/15

PROJECT 107

HEMLO GOLD MINES INC.

NORANDA EXPLORATION COMPANY, LIMITED
(No Personal Liability)

JOINT VENTURE

Timmins, Ontario
January, 1993

Reno Pressacco, M.Sc.(A)
Project Geologist

TABLE OF C

Appendices

SUMMARY

The property has been found to be underlain by mafic and ultramafic volcanic units, all of which have participated in a komatiitic fractionation trend similar to that documented for the Stoughton-Roquemaure Group east of Matheson. All units have been found to strike southeasterly and dip steeply north. The southern contact of the main mafic-ultramafic assemblage has been found to contain an encouraging alteration package similar to that occurring at the Aunor-Delnite mines. Much room remains untested along this contact. Two of the four known gold showings were tested, of which Showing D appears to have better potential for being associated with gold mineralization. Occurrences of coarse and mature clastic sediments suggest a shallow subaqueous to subareal environment of deposition for the lithologies found on this property. The strong phase anomalies have been found to be caused by graphitic sediments, however, the weaker more indistinct phase anomalies seem to correlate with occurrences of disseminated sulphides.

Recommendations for further work include: 1) re-examination of existing IP data for weak, indistinct phase anomalies, 2) consideration be given to conducting a second limited IP survey along the southern mafic-ultramafic contact, and 3) additional drilling of 3-4 holes to examine the strike extensions of the southern contact and test the two remaining gold showings, B and C.

CERTIFICATION

I, Reno Pressacco, residing at 181 Christine Street, Timmins, Ontario certify the following:

1) That I am a practising geologist employed by Noranda Exploration.

2) That I hold the following degrees and diplomas:

M.Sc. (A), Mineral Exploration, 1986, McGill University
B.Sc. Geology, 1984, Lake Superior State College
Diploma in Geology Engineering Technology, 1982, Cambrian College.

3) That I am a member in good standing of the following professional associations:

The Geological Association of Canada
Porcupine Prospectors and Developers Association

4) That this report is based on information obtained from government publications, public press releases, and collected by various mining companies including Noranda Exploration Company, Limited.

January, 1993
Timmins, Ontario

Reno Pressacco
Project Geologist

SUMMARY OF EXPLORATION EXPENDITURES

ON THE

SYLVANITE PROPERTY (107)

FOR THE

PERIOD OF JANUARY 1, 1992 - DECEMBER 31, 1992

Property Acquisition	900.00	
Geophysics	9,661.35	
Geology	36,106.50	
Geochemistry	2,305.96	
Drilling	52,801.04	
Subtotal		$101,774,85
Overhead 15%		15,266.23
TOTAL EXPLORATION EXPENDITURES		**$117,041.08**

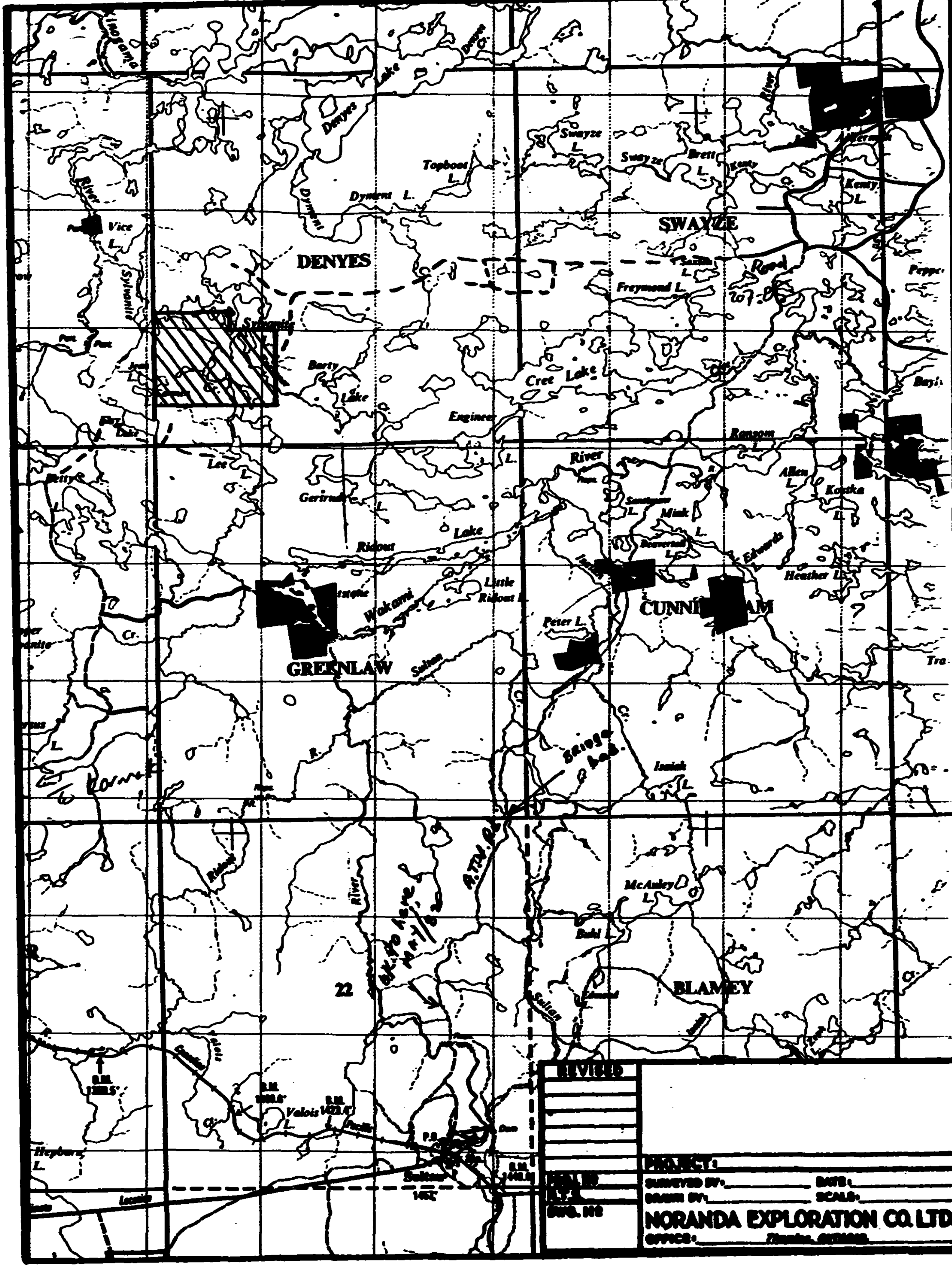
1.0 INTRODUCTION

The purpose of this document is to describe and synthesize the results of exploration activities conducted on the Sylvanite claim group during 1992. These activities consisted of geological mapping during late June, an IP survey in September and a diamond drill program conducted during late November. A surficial stripping/trenching program was attempted during August but was unsuccessful due to very bad terrain conditions. All activities were carried out under the direct field supervision of the author with assistance being provided by Jim Garber, Kim Wakeford, Hendrick Palomaki and Claude Breton. All personnel were employees of Noranda Exploration at the time.

The goal of this exploration program was to evaluate the property's potential for hosting a significant gold occurrence in a mafic-ultramafic geologic environment. To that end, the exploration was geared so as to; 1) map out and identify the distribution of the known ultramafic units, 2) re-locate, document, verify and explain the geologic setting of the known gold occurrences, 3) attempt to expose selected target areas by stripping and trenching, 4) attempt to locate by means of an Induced Polarization survey, any areas of anomalous chargeability which might represent elevated disseminated sulphide mineral abundance related to gold mineralization, and 5) drill test the most favourable targets resulting from the above activities.

2.0 LOCATION, ACCESS AND CLAIMS

The claim group is located in the southwestern quadrant of Denyes Twp., approximately 130 km southwest of Timmins, Ontario and 40 km east-southeast of Chapleau, Ontario (Figure 1). Located along the southern and eastern shores of Sylvanite Lake, access to this remote area is

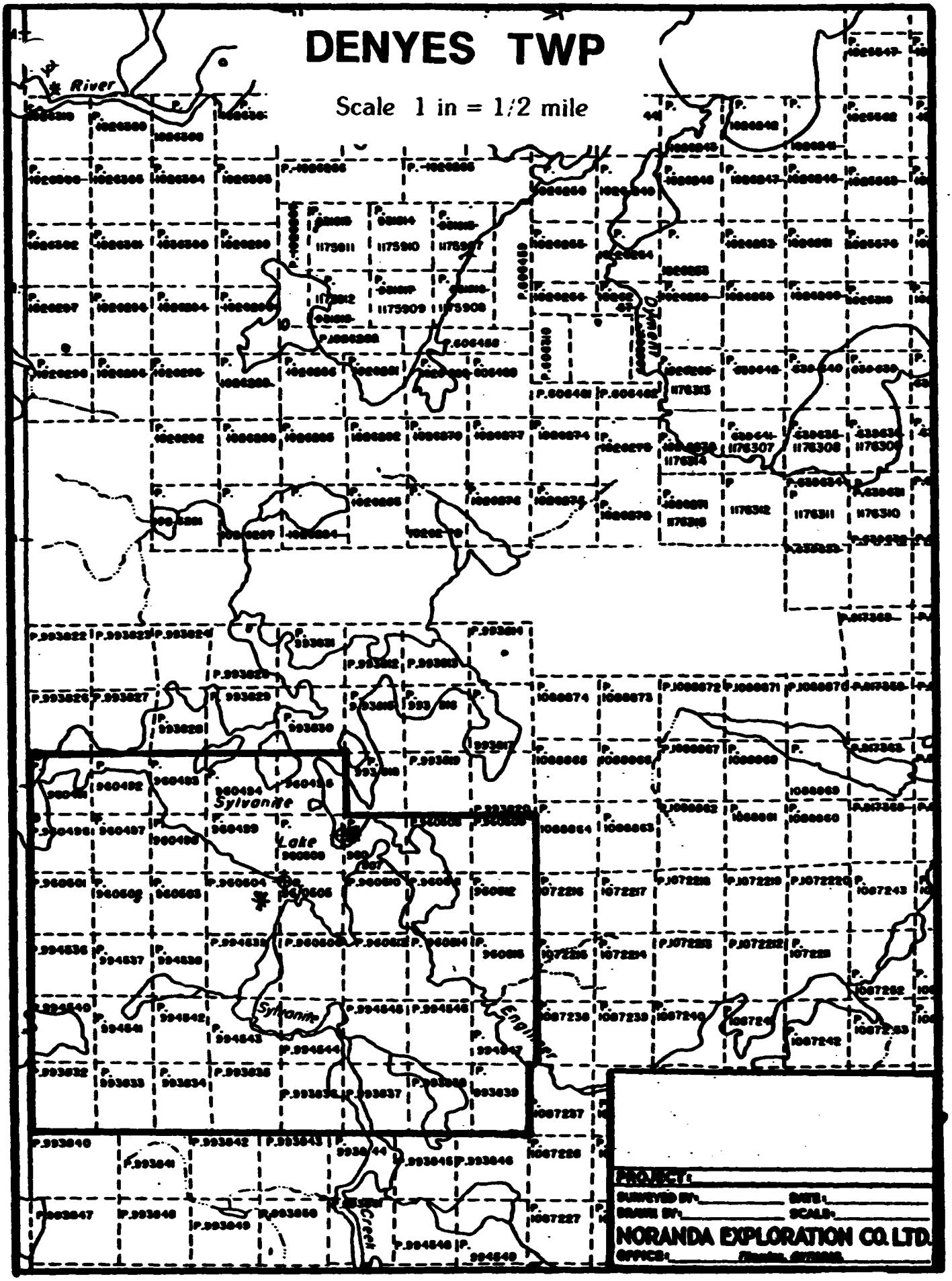

DENYES
SWAYZE
GREENLAW
BLAMEY
Swayze L.
Brett L.
Kenty L.
Topboot L.
Dyment L.
Vice L.
Freymond L.
Cree Lake
Engineer
Ransom L.
River
Allen L.
Gertrude L.
Ridout Lake
Little Ridout L.
Wakami
Peter L.
Heather L.
Isaiah L.
McAuley L.
Valois L.
Hepburn L.
Sultan
22
REVISED
PROJECT:
SURVEYED BY:
DATE:
DRAWN BY:
SCALE:
NORANDA EXPLORATION CO. LTD.
OFFICE:

difficult at best. Several methods of access are available including; 1) float-equipped aircraft to Sylvanite Lake, 2) canoe access to Sylvanite Creek via Lee Lake and the Kormak Road, 3) road and trail access to within 2 km of the southern claim boundary via the Kormak Road to Betty Lake and Elvy Lake, and 4) primarily winter road access to Sylvanite Lake and Engineer Creeks via an unnamed trail running westwards from the Dore Road in Swayze Twp. This winter road is informally known as the Denyes-Swayze Road. All these means of access are shown in Figure 1. The property currently consists of 45 unpatented mining claims as shown in Figure 2. The mineral rights of these claims currently reside with Hemlo Gold.

3.0 ENVIRONMENTAL ISSUES

Several environmentally-related issues are applicable to mineral exploration on these claims. The central issue in this area is that the fishery resources of Sylvanite Lake and Engineer Creek and the existing remote nature of this watershed including the Kinogama River have been classified to be of value by the Chapleau Branch of the Ministry of Natural Resources.

With respect to the fisheries aspect, the mouth of Engineer Creek at Sylvanite Lake has been designated as a productive spawning area. As such, any exploration activity in this area or any stream crossings of Engineer Creek must be accomplished so as to minimize any impact on these spawning grounds. This can be achieved primarily by ensuring that a minimal to no sediment load enters the waters of Engineer Creek.


DENYES TWP
Scale 1 in = 1/2 mile
River
Sylvanite
Lake
Sylvanite
Creek
PROJECT:
SURVEYED BY:
DRAWN BY:
DATE:
SCALE:
NORANDA EXPLORATION CO. LTD.
OFFICE:

With respect to the remote nature of this area, two concerns must be addressed. Firstly, access to Sylvanite Lake and vicinity must be kept to a minimum, as several existing fly-in fishing camps are present on Sylvanite Lake. Any access to Sylvanite Lake is likely to adversely affect this existing touris operation. In addition, Sylvanite Lake forms a portion of the Kinogama Canoe Route which has restricted access points, thereby providing tourist value by means of it's remote nature. Additional access points to Sylvanite Lake would downgrade this remote nature.

4.0 TOPOGRAPHY AND VEGETATION

The topography of the property and immediate area is fairly flat to gently rolling with low mounds and higher ridges providing local relief of 10-20 meters. Topography is rarely a factor in the movement of men and equipment on the property, however the presence of a major drainage channel -Sylvanite Creek - poses an obstacle. This Creek is generally too wide and deep for crossing along most of it's length from Lee Lake to Sylvanite Lake, however one short section is amenable for the passing of heavy equipment. This ford is located just downstream of the rapids on Sylvanite Creek and is a place where the stream bed is made up entirely of outcrop exposure. Here, water depths rarely exceed 30 cm, even in flood.

The vegetation of the property consists of virgin stands of mature poplar and black spruce. Some local swampy areas are host to concentrations of cedar and alders but for the most part the property is fairly dry. No forestry operations have been carried out in this area as of yet, but the area is scheduled for harvesting before 1997 according to the Pinelands Forest Management Agreement 5 year Annual Work Schedule.

5.0 PREVIOUS WORK

Nor records of previous exploration activities on the immediate claim group, aside from that performed by the vendors, are on file at the Timmins Resident Geologist's office. During the 1988-1990 period the vendors carried out a variety of field work including line cutting, VLF and magnetometer surveys, limited HEM surveys, humus sampling, geological mapping and limited mechanical stripping. Numerous hand-dug pits and trenches were dug prior to 1988 and were located in the field but no record of these have been located.

6.0 GEOLOGY

6.1 Regional Geology

The property is located in the western end of the Swayze Greenstone Belt, an Archean-aged assemblage of supracrustal rocks consisting predominantly of mafic to felsic volcanics and intrusives, and chemical and clastic sediments. Basically, nothing is known about the regional geological setting of this area, as few government geological reports have been published. The government maps available are that by Hunt (1979) who compiled the then available data for Denyes Twp. and that by Donovan (1968) who conducted regional scale mapping of Halcrow-Denyes Twps.

A synthesis of the limited knowledge available to-date suggests that the area is underlain by a northwesterly striking assemblage composed predominantly of mafic metavolcanics which contain small amounts of ultramafic material and clastic sediments. Some small accumulations of felsic volcanics are present to the south in northwestern Greenlaw Twp. All units are believed to be steeply dipping.

6.2 Local Geology

Prior to this 1992 exploration program, little was known about the detailed geological setting of the claim group. Since commencement of the field work, the local geology of the property has been shown to consist predominantly of massive and weakly pillowed mafic metavolcanics and ultramafic flows (Basaltic komatiites and komatiites). Some clastic sediments (polymictic pebble conglomerate, quartzites, mature arenites, and argillites) occur as both interflow units and as larger units/areas. All units are interpreted to strike at approximately azimuth 130 degrees and dip steeply north at roughly 65-75°. Stratigraphic tops are undetermined, as conflicting younging directions were observed during the course of the 1992 exploration program. No evidence of folding has been observed to date.

Some evidence of shearing is present in the area of Showing D located at 27+00S and Line 24+00E. Here, a wide zone of strongly developed foliation roughly parallels the overall stratigraphic attitude and may form part of a larger shear zone.

6.3 Economic Geology

A number of interesting occurrences of either gold-bearing mineralization or significant alteration have been located by the vendors. These are described below:

Showing	Location	Description
A,A-1	Lines 44W and 40W, 24+00S	Silicified-carbonatized mafic volcanics containing narrow quartz veins. Grab samples returned up to 0.11 opt Au.
B	35+50W, 45+50S	Strongly developed, foliated fuchsite alteration containing quartz veins/stockworks and weak silicification. Veins up to 1m in width. Only anomalous Au values returned to-date.

Showing	Location	Description
C	Line 0W, 31+50S	56m long, 1 m wide quartz vein hosted by weakly carbonatized ultramafics. Vein contains py-cpy-asp sulphide assemblage. Chip samples return up to 0.518 opt Au/1.0m and grab samples return up to 1.44 opt Au.
D	Line 24+00E 27+00S	Minimum 40m wide, strongly foliated to sheared ankerite-fuchsite zone contains 5-7% quartz veins. Veins at all angles to foliation and may contain a py-cpy-asp sulphide assemblage. Chip samples returned up to 0.78 opt Au/4 ft. and 0.49 opt Au/10 ft.

7.0 DESCRIPTION OF 1992 EXPLORATION PROGRAM

7.1 Geological Mapping

Geological mapping of the entire property falling south of Sylvanite Lake and Engineer Creek was carried out during the June 23-July 1, 1993 period by Jim Garber and the author. Access to the property was by canoe up Sylvanite Creek from the prospector's cabin located on the western shore of Lee Lake. During the course of this mapping all grid lines were walked and any outcrops encountered were mapped in at a scale of 1 in. = 200 ft. As well a total of 15 grab samples (numbers 2375 to 2389) of any material that might have contained gold values were taken and sent to Chemex Laboratories, Toronto for gold analysis. Sample locations are shown on Map 1 (in pocket) and further details are given in Appendix I. In addition to these gold grab samples, a total of 42 representative lithogeochemical samples of the rock types encountered during the mapping were taken and sent to Chemex Laboratories, Toronto for analysis using their classic whole rock package. These sample locations are also shown on Map 1 (in pocket) and further details are given in Appendix I.

Three main rock types were encountered. The major rock type encountered was a variably textured basalt, whose textures ranged from massive to foliated to weakly pillowed. As well, a few outcrops of what were classified as ultramafics were encountered, and these were typically moderately well foliated. These ultramafics were distinguished from the basalt units mostly on the basis of colour, hardness and texture, with the ultramafics being generally blacker, softer and exhibited a tuffaceous texture on the weathered surface. A third rock type was encountered between lines 12W and 28W, south of Center Lake. Here, there appeared to be at the time a mixed assemblage of strongly foliated/sheared sericitized basalt and dikes of feldspar porphyry and syenite. Subsequent drilling of hole SYL-92-3 showed that this area consisted of strongly altered quartzite-conglomerates and minor gabbro dikes.

No significant gold values were returned from the samples taken during this mapping program. All four of the previously known showings were located (Showings A to D), and brief descriptions of each are given on Map 1.

The results of the lithogeochemical samples are graphically presented in Appendix I by means of Jensen Cation Plots, AFM diagrams and a TiO_2-Zr binary plot. The Jensen diagram clearly shows a fractionation trend beginning with compositions equivalent to peridotitic komatiites, passing through the iron-tholeiite field and ending with samples falling in the calc-alkaline andesite field. This trend is similar to the variation within the Stoughton-Roquemaure Group east of Matheson (Jensen, 1976, Figure 7) and also similar to portions of the Blake River Group in Marriott and Dokis Twps., east of Matheson (Jensen, 1976, Figure 10). Judging by these patterns, one may easily conclude that a komatiitic fractionation trend has operated to produce many of the rocks present on the Sylvanite claim group, and these rocks contain minor amounts of intercalated calc-alkaline andesitic and basaltic

material. This conclusion is somewhat tenuous in view of the rather low sampling density. The AFM and TiO_2 Zn plots in Appendix I provide little additional information.

7.2 Trenching

A program of power stripping and trenching of selected targets identified during the mapping program was attempted during the August 14-21, 1992 period. This program was done under the direct field supervision of the author, with assistance being provided by Kim Wakeford and Hendrick Palomaki. The equipment used was a John Deere 690D power shovel contracted out on an hourly basis from Wlad and Sons of Iroquois Falls. Access to the property was to have been from the south by means of the Kormak Road to Betty Lake and from there by trails to Elvy Lake and the property. Access was gained to the eastern end of Elvy Lake, but then a wide stretch of very bad cedar swamp was encountered. This swamp was judged to be to swampy and soft to allow passage of the equipment and the program was terminated. The southern access route was preferred at the time because an equally bad swampy section on the eastern access route was judged not to be traversable.

7.3 Geophysics

7.3.1 Magnetics

Total field magnetic data collected prior to 1992 was redigitized, replotted at a scale of 1 in. = 400 ft., and re-contoured in an attempt to aid in the interpretation of the geological setting of the property. Basically one strong linear magnetic anomaly was found to stretch from Line 48E 23+00S to Line 20W, 10+00S, a distance of 7,200 ft. This anomaly has it's highest amplitude towards it's southeastern end, and extends off the end of the grid to the southeast. Initially this anomaly was considered to be caused by a magnetic diabase dike due to it's parallel relationship to another dike mapped in on the southwestern portions of the property. Subsequent drilling has shown that this

magnetic anomaly is caused by ultramafic metavolcanics, and this aids greatly in the interpretation of the overall geological setting of the property.

7.3.2 Induced Polarization

A total of 8.9 line kilometers of a phase-domain I.P. survey was conducted over selected portions of the property by Belanger Geophysics Ltd. of Evain, Quebec. The survey was done during mid to late September using a Dipole-Dipole array, an electrode spacing of 100 feet and reading the first four dipoles. The results of this survey are shown on the enclosed pseudo-sections.

Briefly, a wide range of responses were detected with the strongest phase anomaly exceeding 40 mrad in amplitude. Strong and moderate strength anomalies were detected in three general areas. The first area was in the vicinity of Showing D (Line 24E 26+00S) where two trends become apparent. The first trend is a combination of strong and moderate strength anomalies which strike roughly parallel to the high-amplitude magnetic anomaly discussed above. Subsequent drilling indicates this anomaly to be caused by a lapilli-tuff containing 3-5% disseminated pyrite. The second trend is a more erratic distribution of moderate strength anomalies in the immediate vicinity of Showing D. These are difficult to interpret with confidence, and subsequent drilling in this area suggests that the cause of these anomalies may be related to disseminated pyrite hosted by altered basalts.

The second area is located in the south-central portions of the grid, south of Center Lake. Here, both strong and moderate strength anomalies can be correlated with some confidence to stretch from Line 12W to Line 35W. Subsequent drill-testing of the strongest of these anomalies has found it to be caused by a graphitic argillite unit which is spatially associated with an assemblage of coarse and fine clastic sediments.

The third area is located in the central to west-central portions of the grid. Here, a generally poorly defined series of moderate and strong anomalies located at the northern ends of the survey lines can be traced with poor confidence from Line 12W to Line 44W. Only between Lines 40W and 44W can these anomalies be correlated with confidence, and here drilling has shown the anomaly to be caused by a narrow section of interflow graphitic argillite.

7.4 Diamond Drilling

A small diamond drilling program of 4 holes totalling 913.0m (2995 feet) was conducted by Bradley Brothers of Timmins during the November 18-29, 1992 period. This program was field supervised by the author with assistance being provided by Claude Breton. The program was designed so as to test selected targets resulting from the mapping and geophysical surveys. All core was logged by the author and any sections which may have carried gold values were split and the samples sent to Chemex Laboratories, Toronto for gold analysis. All core was transported from the camp site to the Timmins office of Noranda Exploration for storage. The drill hole locations are shown on Map 1 (in pocket), and complete drill logs with sections are given in Appendix III. A brief description of the lithologies, alteration and analytical results are given in the Summary Descriptions following.

SUMMARY DESCRIPTION

Hole No.	Co-ordinates	Dip	Azimuth	Length
SYL-92-1	24+00E 23+25S	-45°	210°	301.00 (987.5 ft.)

Meters From	Meters To	Description
0.0	4	Casing. All casing recovered.
4.0	88.15	Basalt. Weakly foliated 1-3% diss. pyrite. 5-7% qtz-ankerite veins. Moderate pervasive carbonate (ankerite) alteration.
88.15	122.70	Ultramafics. Moderate disseminated ankerite alteration, rare fuchsite. Strongly foliated.
122.70	144.94	Altered basalt. Moderate pervasive sericite-carbonate alteration throughout. Heavily altered 122.70-127.49m and 140.33-144.94m. 3-5% diss., euhedral pyrite 122.70-127.49m.
144.94	230.0	Basalt. Massive. Occasional weakly sericite-carbonate altered.
230.00	291.82	Altered polymictic conglomerate. Moderate to strong pervasive ankerite-sericite throughout. Trace diss. and stringer pyrite.
291.82	301.00	Basalt. Massive, very fine grained.
301.00		End of hole.

Assays:

Best results: 124.47-127.49m: 303 ppb Au/3.02m
140.33-144.94m: 164 ppb Au/4.61m
236.00-237.34m: 3.30 g/t Au/1.34m

Hole No.	Co-ordinates	Dip	Azimuth	Length
SYL-92-2	32+00E 16+75S	-45°	210°	200.00m (656.2ft.)

Meters From	Meters To	Description
0.0	10	Casing. All casing recovered.
10.0	35.92	Sheared mafic intrusive. 1-3% disseminated ankerite.
35.92	64.86	Foliated intermediate lapilli/fragmental. Monomictic. Trace disseminated pyrite.
64.86	112.40	Basalt. Massive to weakly fragmental texture. Moderate pervasive calcite alteration 64.86-76.14m.
112.40	200.00	Ultramafic volcanics. Well foliated. 5-7% quartz-ankerite veining. Magnetic.
200.00		End of hole.

Assays: No significant results.

Hole No.	Co-ordinates	Dip	Azimuth	Length
SYL-92-3	16+30W 41+50S	-45°	210°	212.0m (695.5ft.)

Meters From	To	Description
0.0	4	Casing. All casing recovered
4.0	38.00	Altered polymictic conglomerate. Strong pervasive sericite-hematite alteration. Trace diss. pyrite.
38.00	173.70	Quartzite/Greywacke. Strong pervasive sericite-hematite alteration.
173.70	212.00	Interbedded greywacke and graphitic argillite. Trace pyrite.
212.00		End of hole.

Assays: No significant results.

Hole No.	Co-ordinates	Dip	Azimuth	Length
SYL-92-4	44+00W 22+75S	-45°	240°	200.0m (656.0 ft.)

Meters From	To	Description
0.0	4.0	Casing. All casing recovered.
4.0	14.95	Sheared, sericitized basalt (?). Moderate sericite-calcite alteration.
14.95	80.00	Basalt. Weakly foliated, moderate calcite enrichment. Moderately sericitized 43.60-50.00m.
80.00	175.50	Mixed pillowed basalt and massive basalt.
175.50	183.19	Mixed graphitic argillite and greywacke. Moderate foliation, 1-3% diss. pyrite.
183.19	200.00	Pillowed basalt. Moderate to strongly sericitized.
200.00		End of hole.

Assays:

Best Result: 4.52 g/t Au/1.67m (47.00-48.67m)

8.0 DISCUSSION OF RESULTS

The mapping program showed that the property is underlain largely by mixed Mg and Fe tholeiitic basalts with minor amounts of basaltic komatiites and komatiites being exposed. All units strike in a southeasterly direction and dip steeply (70-85°) north. The Induced Polarization survey detected a number of strong discrete phase anomalies which have been found to be caused mostly by thin interbed/interflow graphitic argillite units. Some of the weaker amplitude phase anomalies were found to be caused by small amounts of disseminated pyrite (hole SYL-92-2).

The drilling program aided in understanding the geological setting of the property and returned several interesting results. Firstly, hole SYL-92-1 undercut Showing D and intersected severely altered and strongly foliated lithologies throughout most of its length. Weak gold values in the 100-700 ppb range were commonly returned from the better looking altered zones, however they lacked the quartz-chalcopyrite-arsenopyrite vein assemblage and high gold grades as seen on surface. In fact, the only elevated value of 3.30 g/t Au/1.34m was returned from a weakly veined interval in the conglomerate unit. This hole remains encouraging however, as it clearly demonstrates the presence of a wide package of favourable alteration (ankerite-sericite-pyrite) hosted within an attractive lithologic setting (mafic-ultramafic domain). This particular mafic-ultramafic contact remains untested along a minimum strike length of 6,400 feet. Hole SYL-92-2 aided in confirming the presence of a wide ultramafic unit which can be followed by its magnetic signature, and serves to provide a key marker horizon to aid in further exploration. Hole SYL-92-4 was also of interest in that it showed that numerous zones of sericite-(carbonate) alteration have affected the basaltic units in that area. A narrow veined zone returned a value of 4.52 g/t Au/1.67m and was hosted by one of these altered zones. At the moment, these altered zones do not appear to hold much promise

for hosting a significant gold occurrence because they seem to be lacking a well developed foliation or shearing, lack significant quantities of pyrite, and lack significant quantities of quartz veining and stockworking. However, it is well known that these features may develop quite rapidly over short strike lengths, and this must be taken into consideration.

9.0 CONCLUSIONS AND RECOMMENDATIONS

On the basis of the information gained as a result of the 1992 exploration program, the following conclusions may be made:

1) The property is underlain largely by mafic volcanic units containing lesser amounts of interbedded basaltic komatiites and komatiites. Lithogeochemical data shows that most of these mafic-ultramafic units all form part of a komatiitic fractionation process similar to that documented for the Stoughton-Roquemaure Group east of Matheson.

2) All units strike southeasterly and dip steeply north. To date, the southern contact of the main mafic-ultramafic assemblage has contained an encouraging alteration package similar to that one would observe at the Aunor and Delnite Mines in the Timmins Camp. Much room remains untested along this contact.

3) Two of the four known gold showings were drill-tested, and of these two, Showing D appears to have better potential for being associated with a significant gold occurrence. Showings B and C remain untested.

4) Two occurrences of polymictic conglomerate units and mature quartzites were recognized. These suggest an environment of deposition for the lithologies on this property to be shallow subaqueous to possibly subareal.

5) The strong phase anomalies detected by the IP survey have largely been found to be caused by graphitic sediments. However, the weaker, more indistinct anomalies seem to correlate with weak concentrations of stringer and disseminated pyrite.

Despite the fact that no significant or economic-grade gold values have been returned to date, the property has demonstrated the presence of a number of features typically associated with gold mineralization in mafic-ultramafic terrains. Recommendations include:

1) Examination of existing IP data for weak to moderate strength phase anomalies. These may have been overlooked or dismissed previously, and may have some importance in selecting future targets.

2) Consideration be given to a small IP survey to cover the main mafic-ultramafic terrain where not previously surveyed. Such a survey may detect anomalies representing disseminated sulphides which may be of interest, especially along the southern contact. Examination of the humus anomalies may aid in target selection.

3) Additional drilling of 3-4 holes to examine the southern contact along strike and drill-test showings B and C.

10.0 REFERENCES

Donovan, J.F., 1968, Geology of Halcrow-Ridout Lakes Area: Ontario Department of Mines Geological Report 63, 45 p., 2 maps.

Hunt, D.S., 1979, Timmins Data Series - Denyes Twp.: Ontario Geological Survey Preliminary Map P2294, Scale 1:15,840.

Jensen, L.S., 1976, A New Cation Plot For Classifying Subalkalic Volcanic Rocks; Ministry of Natural Resources Miscellaneous Paper 66, 22p.

Ontario Geological Survey, 1982, Amag & Aem Surveys of the South Swayze Area: OGS Geophysical/Geochemical Series Maps 80540 and 80541.

Signed

Reno Pressacco
Project Geologist

APPENDIX I

ANALYTICAL RESULTS (GOLD)

and

LITHOGEOCHEMICAL DETAILS

FROM	TO	WIDTH	SampleNo	Au (ppm)
12.22	14.00	1.78	68838.000	0.005
14.00	15.82	1.82	68839.000	0.005
24.45	25.96	1.51	68840.000	0.005
25.96	27.32	1.36	68841.000	0.005
28.80	30.24	1.44	68842.000	0.130
30.24	31.69	1.45	68843.000	0.030
31.69	33.14	1.45	68844.000	0.005
37.15	38.87	1.72	68846.000	0.005
63.00	63.98	0.98	68849.000	0.005
63.98	65.38	1.40	68850.000	0.005
65.38	66.86	1.48	68851.000	0.005
85.42	86.88	1.46	68853.000	0.005
86.88	88.15	1.27	68854.000	0.005
88.15	89.70	1.55	68855.000	0.005
89.70	91.11	1.41	68856.000	0.005
91.11	92.49	1.38	68857.000	0.005
92.49	93.70	1.21	68858.000	0.005
93.86	95.30	1.44	68860.000	0.005
95.30	96.70	1.40	68861.000	0.065
96.70	98.06	1.36	68862.000	0.005
98.06	99.60	1.54	68863.000	0.005
99.60	101.00	1.40	68864.000	0.230
101.00	102.46	1.46	68865.000	0.005
108.20	109.91	1.71	68867.000	0.005
110.88	112.50	1.62	68868.000	0.005
112.50	113.93	1.43	68869.000	0.005
113.93	115.40	1.47	68870.000	0.005
115.40	116.81	1.41	68871.000	0.005
116.81	118.26	1.45	68872.000	0.005
118.26	119.71	1.45	68873.000	0.260
119.71	121.15	1.44	68874.000	0.010
121.15	122.70	1.55	68875.000	0.005
122.70	123.46	0.76	68876.000	0.040
123.46	124.47	1.01	68877.000	0.005
124.47	125.18	0.71	68878.000	0.715
125.18	126.00	0.82	68879.000	0.225
126.00	127.49	1.49	68880.000	0.150
133.95	135.65	1.70	68881.000	0.005
135.65	136.66	1.01	68882.000	0.060
136.66	137.74	1.08	68883.000	0.005
137.74	138.58	0.84	68884.000	0.010
138.58	140.33	1.75	68885.000	0.005
140.33	141.96	1.63	68886.000	0.285
141.96	143.37	1.41	68887.000	0.140
143.37	144.94	1.57	68888.000	0.060
147.34	147.94	0.60	68889.000	0.045
148.75	149.55	0.80	68890.000	0.190
180.28	181.30	1.02	68891.000	0.080
181.30	182.72	1.42	68892.000	0.030
182.72	184.15	1.43	68893.000	0.640

FROM	TO	WIDTH	SampleNo	Au (ppm)
231.35	231.64	0.29	68894.000	0.320
235.14	236.00	0.86	68895.000	0.010
236.00	237.34	1.34	68896.000	3.295
237.34	238.40	1.06	17193.000	0.100
238.40	239.40	1.00	17194.000	0.185
239.40	240.63	1.23	17195.000	0.090
240.63	242.27	1.64	68897.000	0.040
242.30	243.20	0.90	17196.000	0.005
248.86	250.34	1.48	68898.000	0.025
254.62	256.04	1.42	68899.000	0.005
258.90	260.32	1.42	68900.000	0.005
260.32	261.75	1.43	68901.000	0.005
261.75	262.76	1.01	68902.000	0.005
262.76	264.30	1.54	68903.000	0.005

** BORSURV **.

AS⁻Y LOG
PRU EFTY: sylvanite
HOLE No.: sv192-2

FROM	TO	WIDTH	SampleNo	Au (ppm)
35.92	36.88	0.96	68904.000	0.095
36.88	38.30	1.42	68905.000	0.020
38.30	39.58	1.28	68906.000	0.005
45.50	46.12	0.62	68907.000	0.005
60.85	62.00	1.15	68906.000	0.010
62.00	63.35	1.35	68909.000	0.005
63.35	64.86	1.51	68910.000	0.005
113.91	115.60	1.69	68911.000	0.005
115.60	117.20	1.60	68912.000	0.005
117.20	117.87	0.67	68913.000	0.005
119.42	120.88	1.46	68914.000	0.005
133.77	135.19	1.42	68915.000	0.005
165.90	167.00	1.10	68916.000	0.030
173.98	175.52	1.54	68917.000	0.005
178.45	180.12	1.67	68918.000	0.005
185.55	187.04	1.49	68919.000	0.010

** BORSURV **

ASSAY LOG

PROPERTY: sylvanite

HOLE No.: sv192-3

FROM	TO	WIDTH	SampleNo	Au (ppm)
14.23	15.70	1.47	68920.000	0.040
15.70	17.18	1.48	68921.000	0.050
58.82	59.42	0.60	68922.000	0.010
139.16	140.57	1.41	68923.000	0.005
140.57	141.94	1.37	68924.000	0.005

ASSAY LOG
PROPERTY: sylvanite
HOLE No.: sv192-4

FROM	TO	WIDTH	SampleNo	Au (ppm)
7.10	8.50	1.40	68925.000	0.005
8.50	9.89	1.39	68926.000	0.005
9.89	11.27	1.38	68927.000	0.010
11.27	12.75	1.48	68928.000	0.005
12.75	14.14	1.39	68929.000	0.005
26.94	27.80	0.86	68930.000	0.025
44.06	45.53	1.47	68931.000	0.005
45.53	47.00	1.47	68932.000	0.005
47.00	48.67	1.67	68933.000	4.520
48.67	49.88	1.21	68934.000	0.040
49.88	51.26	1.38	68935.000	0.025
49.88	51.26	1.38	68935.000	0.025
51.26	52.69	1.43	68936.000	0.010
51.26	52.69	1.43	68936.000	0.010
130.70	132.09	1.39	68961.000	0.005
132.09	133.42	1.33	68962.000	0.005
133.42	134.66	1.24	68963.000	0.005
173.00	174.28	1.28	68964.000	0.005
174.28	175.50	1.22	68965.000	0.005
175.50	177.00	1.50	68966.000	0.005
177.00	178.60	1.60	68967.000	0.005
178.60	180.14	1.54	68968.000	0.005
180.14	181.56	1.42	68969.000	0.005
181.56	183.19	1.63	68970.000	0.005
187.48	188.90	1.42	68971.000	0.005
188.90	190.40	1.50	68972.000	0.005
190.40	191.85	1.45	68973.000	0.005
191.85	193.28	1.43	68974.000	0.005
193.28	194.70	1.42	68975.000	0.005
194.70	196.13	1.43	68976.000	0.005
196.13	197.54	1.41	68977.000	0.005
197.54	198.90	1.36	68978.000	0.005
198.90	200.00	1.10	68979.000	0.005

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD CC: ROGER DAHN

Page Number :1
Total Pages :2
Certificate Date: 04-DEC-92
Invoice No. :I9225802
P.O. Number :
Account :DHG

CERTIFICATE OF ANALYSIS A9225802

SAMPLE	PREP CODE		Au ppb FA+AA	Au check
68838	205	274	< 5	-----
68839	205	274	< 5	-----
68840	205	274	< 5	-----
68841	205	274	< 5	-----
68842	205	274	130	-----
68843	205	274	30	-----
68844	205	274	< 5	-----
68846	205	274	< 5	-----
68849	205	274	< 5	-----
68850	205	274	< 5	-----
68851	205	274	< 5	-----
68853	205	274	< 5	-----
68854	205	274	< 5	-----
68855	205	274	< 5	-----
68856	205	274	< 5	-----
68857	205	274	< 5	-----
68858	205	274	5	-----
68860	205	274	< 5	-----
68861	205	274	65	-----
68862	205	274	< 5	-----
68863	205	274	< 5	-----
68864	205	274	230	-----
68865	205	274	< 5	-----
68867	205	274	< 5	-----
68868	205	274	< 5	-----
68869	205	274	< 5	-----
68870	205	274	< 5	-----
68871	205	274	< 5	-----
68872	205	274	< 5	-----
68873	205	274	260	-----
68874	205	274	10	-----
68875	205	274	< 5	-----
68876	205	274	40	-----
68877	205	274	< 5	-----
68878	205	274	780	650
68879	205	274	225	-----
68880	205	274	150	-----
68881	205	274	< 5	-----
68882	205	274	60	-----
68883	205	274	< 5	-----

CERTIFICATION: Adriana Alexandru

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD CC: ROGER DAHN

Certificate Date: 04-DEC-92
Invoice No. : I9225802
P.O. Number :
Account : DHG

CERTIFICATE OF ANALYSIS A9225802

SAMPLE	PREP CODE		Au ppb FA+AA	Au check
68884	205	274	10	-----
68885	205	274	< 5	-----
68886	205	274	285	-----
68887	205	274	140	-----
68888	205	274	60	-----
68889	205	274	45	-----
68890	205	274	190	-----
68891	205	274	80	-----
68892	205	274	30	-----
68893	205	274	640	-----
68894	205	274	320	-----
68895	205	274	10	-----
68896	205	274	3230	3360
68897	205	274	40	-----
68898	205	274	25	-----
68899	205	274	< 5	-----
68900	205	274	< 5	-----
68901	205	274	< 5	-----
68902	205	274	< 5	-----
68903	205	274	< 5	-----
68904	205	274	95	-----
68905	205	274	20	-----
68906	205	274	< 5	-----
68907	205	274	< 5	-----
68908	205	274	10	-----
68909	205	274	< 5	-----
68910	205	274	< 5	-----
68911	205	274	< 5	-----
68912	205	274	< 5	-----
68913	205	274	< 5	-----
68914	205	274	< 5	-----
68915	205	274	< 5	-----

CERTIFICATION: Adriana Alexandru

Laboratoires Chemex Ltee.

Essayeurs * Geochimistes * Chimistes Analytique
175 Boul, Industriel C.P. 284, Rouyn,
Quebec, Canada J9X 5C3
PHONE: 819-797-1922

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :1
Total Pages :1
Certificate Date: 08-DEC-92
Invoice No. :I9225996
P.O. Number :
Account :

CERTIFICATE OF ANALYSIS A9225996

SAMPLE	PREP CODE		Au ppb FA+AA
68916	205	274	30
68917	205	274	< 5
68918	205	274	< 5
68919	205	274	10
68920	205	274	40
68921	205	274	50
68922	205	274	10
68923	205	274	< 5
68924	205	274	< 5
68925	205	274	< 5
68926	205	274	< 5
68927	205	274	10
68928	205	274	< 5
68929	205	274	< 5
68930	205	274	25
68931	205	274	< 5
68932	205	274	< 5
68933	205	274	4520
68934	205	274	40
68935	205	274	25
68936	205	274	10

CERTIFICATION: Adriana Alexandre

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :1
Total Pages :1
Certificate Date: 13-JAN-93
Invoice No. :I9310197
P.O. Number :
Account :DHG

CERTIFICATE OF ANALYSIS A9310197

SAMPLE	PREP CODE		Au ppb FA+AA
68961	205	274	< 5
68962	205	274	< 5
68963	205	274	< 5
68964	205	274	< 5
68965	205	274	< 5
68966	205	274	< 5
68967	205	274	< 5
68968	205	274	< 5
68969	205	274	< 5
68970	205	274	< 5
68971	205	274	< 5
68972	205	274	< 5
68973	205	274	< 5
68974	205	274	< 5
68975	205	274	< 5
68976	205	274	< 5
68977	205	274	< 5
68978	205	274	< 5
68979	205	274	< 5

CERTIFICATION: Adriana Ruzsa

HEMLO GOLD MINES LTD.
SYLVANITE PROPERTY (107)

ANALYTICAL RESULTS 1992

LAB NO.	FIELD NO.	CO-ORDINATES	AU (ppb)
2375	REP-92-5	4+10E 27+00S	5
2376	REP-92-7	10+00W 14+10S	5
2377	REP-92-9	11+50W 56+50S	5
2378	REP-92-10	16+00W 43+00S	5
2379	REP-92-11	16+00W 43+00S	5
2380	REP-92-12	24+00W 44+50S	5
2381	REP-92-13	24+00W 44+50S	140
2382	REP-92-14	23+50W 44+50S	5
2383	REP-92-18	35+60W 45+00S	5
2384	REP-92-19	35+60W 45+00S	5
2385	JG-92-12	8+00W 48+00S	5
2386	JG-92-18	28+00W 42+00S	5
2387	JG-92-23	28+00W 27+10S	5
2388	JG-92-28	36+00W 28+20S	5
2389	JG-92-31	44+00W 23+70S	20

ANALYTICAL RESULTS 1991

LAB NO.	FIELD NO.	CO-ORDINATES	AU (ppb)
17302	REP-92-1	Chip Sample. Showing D	11.2 gpt/4 ft.
17303	REP-92-2	Chip Sample. Showing D	18.0 gpt/4 ft.
17304	WC-91-1A	Chip Sample. Showing D	2.1 gpt/10 in.
17305	WC-91-1B	Chip Sample. Showing D	14 ppb/2 ft.
17306	WC-91-1C	Chip Sample. Showing D	741 ppb/1 ft.
17307	WC-91-2A	Chip Sample. Showing C	49.5 gpt/4 in.
17308	WC-91-2B	Chip Sample. Showing C	1.9 gpt/2 ft.
17309	WC-91-3	Chip Sample. Showing C	80 ppb/4 ft.
17310		Grab. Showing C	93 ppb
77646		Chip Sample. Showing D	1 ppb/6 ft.
77647		Chip Sample. Showing D	41 ppb/3 ft.
77648		Chip Sample. Showing D	120 ppb/3 ft.
77649		Chip Sample. Showing D	21 ppb/2 ft.
77650		Chip Sample. Showing D	1 ppb/4 ft.
77651		Chip Sample. Showing D	10 ppb grab
77652		Chip Sample. Showing D	7 ppb grab
77653		Chip Sample. Showing D	21 ppb/4 ft.
77654		Chip Sample. Showing D	4.94 gpt/3 ft.
77655		Chip Sample. Showing D	1 ppb/3 ft.
77656		Grab Sample	110 ppb

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :1
Total Pages :1
Certificate Date: 08-JUL-92
Invoice No. : I9217082
P.O. Number :
Account : DHG

CERTIFICATE OF ANALYSIS A9217082

SAMPLE	PREP CODE		Au ppb FA+AA
2375	205	274	< 5
2376	205	274	< 5
2377	205	274	< 5
2378	205	274	< 5
2379	205	274	< 5
2380	205	274	< 5
2381	205	274	140
2382	205	274	< 5
2383	205	274	< 5
2384	205	274	< 5
2385	205	274	< 5
2386	205	274	< 5
2387	205	274	< 5
2388	205	274	< 5
2389	205	274	20

CERTIFICATION: Adriana Alexandru

HEMLO GOLD MINES LTD.
SYLVANITE PROPERTY (107)

LITHOGEOCHEMISTRY

LAB NO.	FIELD NO.	CO-ORDINATES	ROCK TYPE
2390	JG-92-3	24+00E 27+00S	Basaltic Komatiite
2391	JG-92-4	24+00E 27+00S	Basaltic Komatiite
2392	JG-92-5	22+20E 26+80S	Basaltic Komatiite
2393	JG-92-6	22+60E 25+80S	Fe-Tholeiitic Basalt
2394	JG-92-7	16+00E 21+20S	Basaltic Komatiite
2395	JG-92-8	9+00E 18+00S	Gabbro (Mg-Tholeiite)
2396	JG-92-9	10+00E 18+60S	Mg-Tholeiitic Basalt
2397	JG-92-10	7+80W 10+00S	Mg-Tholeiitic Basalt
2398	JG-92-12	8+00W 48+00S	Mg-Tholeiitic Basalt
2399	JG-92-13	L0E 59+00S	Fe-Tholeiitic Basalt
2400	JG-92-14	1+50W 63+00S	Mg-Tholeiitic Basalt
2401	JG-92-14A	1+50W 63+00S	Mg-Tholeiitic Basalt
2402	JG-92-15	8+30W 56+00S	Feldspar-Porphyry Dike (Syenite)
2403	JG-92-16	8+30W 56+00S	Mafic Dike
2404	JG-92-17	18+75W 46+00S	Felsic-Porphyritic Dike (Syenite)
2405	JG-92-19	28+00W 42+00S	Feldspar-Porphyry Dike (Syenite)
2406	JG-92-20	28+00W 45+00S	Feldspar-Porphyry Dike (Syenite)
2407	JG-92-21	27+90W 62+00S	Mg-Tholeiitic Basalt
2408	JG-92-22	12+00W 44+50S	Syenite Dike
2409	JG-92-24	27+00W 30+00S	Calc-Alkaline Basalt
2410	JG-92-25	27+70W 36+00S	Mg-Tholeiitic Basalt
2411	JG-92-26	36+00W 37+50S	Mg-Tholeiitic Basalt
2412	JG-92-27	36+00W 36+00S	Mg-Tholeiitic Basalt
2413	JG-92-28	36+00W 28+20S	Tholeiitic Andesite
2414	JG-92-29	20+00W 11+00S	Mg-Tholeiitic Basalt
2415	JG-92-30	36+00W 16+00S	Fe-Tholeiitic Basalt
2416	JG-92-01	32+00E 7+70S	Calc-Alkaline Andesite
2417	JG-92-02	23+60E 17+00S	Calc-Alkaline Andesite
2418	JG-92-11	0+30E 16+00S	Calc-Alkaline Andesite
2419	JG-92-32	44+20W 26+50S	Fe-Tholeiitic Basalt
2420	JG-92-33	44+20W 39+00S	Fe-Tholeiitic Basalt
2421	REP-92-1	28+30E 17+20S	Calc-Alkaline Andesite
2422	REP-92-2	20+00E 27+00S	Mg-Tholeiitic Basalt
2423	REP-92-3	19+80E 26+00S	Basaltic Komatiite
2424	REP-92-4	4+50E 29+50S	Fe-Tholeiitic Basalt
2425	REP-92-6	3+80W 30+00S	Calc-Alkaline Andesite
2426	REP-92-7	10+00W 14+10S	Mg-Tholeiitic Basalt
2427	REP-92-8	3+50W 61+00S	Calc-Alkaline Basalt
2428	REP-92-15	23+50W 43+00S	Calc-Alkaline Andesite
2429	REP-92-16	31+50W 49+00S	Mg-Tholeiitic Basalt
2430	REP-92-17	34+00W 40+00S	Basaltic Komatiite
2431	REP-92-20	0+90E 31+60S	Basaltic Komatiite
80839		21+50E 26+70S	Mg-Tholeiitic Basalt
80840		21+50E 26+70S	Fe-Tholeiitic Basalt

SYLVANITE

Lithogeochemistry - Continued

Sample Number	Location	Rock Type
68845	SYL-92-1, 35.65M	Basaltic Komatiite
68847	SYL-92-1, 44.97m	Mg Tholeiite
68848	SYL-92-1, 56.35m	Mg Tholeiite
68852	SYL-92-1, 77.15m	Fe Tholeiite
68859	SYL-92-1, 93.70m	Komatiite
68866	SYL-92-1, 106.58m	Komatiite

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :1
Total Pages :1
Certificate Date: 14-DEC-92
Invoice No. :I9225995
P.O. Number :
Account :DHG

CERTIFICATE OF ANALYSIS A9225995

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Nb ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm
68845	208	274	13.82	5.52	0.03	11.25	0.33	11.91	0.16	0.85	0.02	40.53	0.97	12.83	98.22	70	< 10	11	60	20	50
68847	208	274	16.39	4.23	0.03	12.49	0.86	8.08	0.12	1.36	0.03	43.90	1.06	10.37	98.92	180	< 10	22	60	20	40
68848	208	274	15.77	8.78	0.03	10.50	0.22	6.48	0.18	3.46	0.01	42.17	0.93	10.47	99.00	80	< 10	6	80	20	40
68852	208	274	13.85	11.72	0.03	10.99	0.04	3.95	0.22	3.81	0.02	41.48	0.95	11.90	98.96	10	< 10	< 5	100	20	50
68859	208	274	6.02	12.01	0.26	8.15	< 0.01	14.53	0.15	< 0.01	< 0.01	34.20	0.30	22.38	98.03	< 10	< 10	< 5	150	40	10
68866	208	274	6.92	6.08	0.37	9.45	< 0.01	16.88	0.14	0.17	0.01	37.30	0.39	20.43	98.15	10	< 10	< 5	100	50	180

CERTIFICATION: Thai D'Ma

Laboratoires Chemex Ltee.

Essayeurs * Geochimistes * Chimistes Analytique
175 Boul. Industriel C.P. 284, Rouyn,
Quebec, Canada J9X 5C3
PHONE: 819-797-1922

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :1
Total Pages :2
Certificate Date: 14-JUL-92
Invoice No. :19217086
P.O. Numb.
Account :DHG

CERTIFICATE OF ANALYSIS A9217086

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Nb ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm
2390	208	274	7.37	6.41	0.32	10.49	0.02	16.69	0.15	0.03	< 0.01	37.05	0.38	19.77	98.69	20	< 10	16	40	< 10	20
2391	208	274	6.13	2.41	0.28	11.53	1.44	18.56	0.15	0.24	< 0.01	26.25	0.44	27.18	96.61	250	< 10	60	40	10	30
2392	208	274	7.45	9.26	0.22	9.87	0.02	11.85	0.18	0.03	< 0.01	43.69	0.42	16.59	99.57	10	< 10	16	50	10	30
2393	208	274	15.60	6.10	0.02	12.15	1.62	5.84	0.18	1.89	0.01	42.40	0.99	11.86	98.65	210	< 10	60	40	20	50
2394	208	274	6.96	11.58	0.13	9.13	0.11	12.12	0.17	< 0.01	< 0.01	37.30	0.37	20.61	98.51	30	< 10	16	50	10	20
2395	208	274	15.50	6.29	0.11	9.73	0.17	7.47	0.12	4.19	0.06	51.52	0.84	2.95	98.95	120	< 10	16	160	20	90
2396	208	274	12.55	6.71	0.05	10.81	0.02	9.46	0.13	2.13	0.01	48.24	0.69	7.94	98.74	40	< 10	16	60	10	50
2397	208	274	13.67	7.27	0.02	12.01	0.02	7.20	0.20	2.26	< 0.01	46.27	0.81	9.76	99.49	30	< 10	16	160	20	40
2398	208	274	12.12	6.58	0.05	9.74	0.12	7.86	0.14	2.71	0.29	50.15	0.74	8.78	99.28	100	< 10	22	200	10	90
2399	208	274	13.99	4.46	< 0.01	14.10	0.03	4.87	0.16	3.38	0.05	50.26	1.41	6.66	99.38	20	< 10	22	110	30	80
2400	208	274	16.23	3.91	0.02	12.42	0.23	6.80	0.18	1.17	< 0.01	47.09	0.76	9.76	98.59	80	< 10	22	90	10	40
2401	208	274	15.26	8.08	0.02	12.01	0.04	7.01	0.17	2.56	< 0.01	42.38	0.70	10.23	98.47	10	< 10	22	50	10	30
2402	208	274	14.73	2.09	< 0.01	3.84	0.85	1.45	0.04	5.90	0.11	68.18	0.31	2.69	100.20	290	< 10	44	260	< 10	100
2403	208	274	14.71	8.73	< 0.01	14.01	0.15	3.91	0.16	2.92	0.09	44.46	1.35	7.63	98.13	140	< 10	22	260	30	120
2404	208	274	14.60	3.83	0.01	3.90	3.01	1.91	0.05	4.13	0.28	62.83	0.40	5.96	100.90	800	< 10	82	390	10	160
2405	208	274	14.80	2.74	0.01	4.26	2.09	2.38	0.04	4.77	0.26	65.45	0.40	3.70	100.90	520	< 10	71	490	10	170
2406	208	274	13.56	2.11	0.01	2.63	1.35	0.89	0.03	4.52	0.10	72.85	0.29	3.10	101.45	240	< 10	50	230	< 10	100
2407	208	274	13.48	10.19	0.01	13.54	0.05	7.48	0.19	2.77	< 0.01	47.56	0.87	2.24	98.38	10	< 10	27	90	20	50
2408	208	274	14.87	4.33	< 0.01	4.75	0.60	2.50	0.07	6.59	0.29	61.08	0.44	4.35	99.87	610	< 10	33	990	10	180
2409	208	274	17.09	6.86	0.03	10.08	0.30	3.86	0.20	3.44	0.05	50.52	1.14	5.72	99.27	140	< 10	27	140	20	60
2410	208	274	14.73	9.13	0.02	12.54	0.06	6.79	0.20	3.02	0.01	45.57	0.98	5.20	98.24	50	< 10	16	100	20	50
2411	208	274	16.36	6.86	0.02	12.03	0.06	8.72	0.18	2.16	< 0.01	46.02	0.80	4.67	98.69	60	< 10	22	230	20	40
2412	208	274	16.39	6.54	0.03	11.31	0.57	9.31	0.17	2.38	< 0.01	45.44	0.81	5.07	98.02	170	< 10	33	90	20	40
2413	208	274	13.25	12.31	0.02	10.36	0.59	3.23	0.34	2.07	0.02	36.42	0.84	18.73	98.18	80	< 10	33	100	20	40
2414	208	274	10.92	7.30	0.09	11.86	0.05	8.95	0.16	2.10	0.01	47.61	0.56	8.48	98.09	20	< 10	16	80	10	40
2415	208	274	15.45	4.77	0.03	13.21	0.03	4.96	0.28	4.01	0.02	47.51	1.01	6.51	97.79	20	< 10	16	50	20	50
2416	208	274	14.46	2.14	0.02	5.60	0.43	3.67	0.06	4.82	0.08	63.59	0.38	4.09	99.33	110	< 10	27	150	< 10	80
2417	208	274	15.95	1.94	0.04	5.13	1.00	3.42	0.06	4.70	0.15	62.59	0.58	4.50	100.05	230	< 10	38	220	10	110
2418	208	274	17.54	1.67	0.01	8.16	1.20	3.18	0.07	5.11	0.13	57.66	0.64	3.45	98.83	190	< 10	49	40	10	130
2419	208	274	15.61	7.64	0.04	12.26	0.04	4.61	0.26	2.76	0.04	51.11	1.01	5.30	100.70	20	< 10	16	120	20	50
2420	208	274	14.92	8.76	0.02	12.23	0.22	4.39	0.25	2.82	0.03	51.09	0.97	3.31	99.00	160	< 10	22	110	20	50
2421	208	274	18.60	1.79	0.02	6.32	0.86	3.40	0.05	5.28	0.19	58.97	0.92	3.76	100.15	220	< 10	38	160	20	140
2422	208	274	14.88	8.12	0.03	12.32	0.02	7.12	0.20	1.88	0.02	44.86	0.99	7.56	97.98	10	< 10	16	110	20	50
2423	208	274	9.02	7.10	0.15	10.56	0.01	15.22	0.19	1.16	< 0.01	43.63	0.42	11.10	98.56	20	< 10	16	30	10	30
2424	208	274	12.58	8.94	0.01	13.91	0.01	5.77	0.19	1.40	0.09	50.51	1.73	3.13	98.26	20	< 10	22	110	30	80
2425	208	274	22.36	3.09	0.01	6.26	4.52	5.98	0.09	0.29	0.02	47.17	0.70	7.39	99.89	400	< 10	109	20	10	30
2426	208	274	10.95	8.23	0.02	10.48	1.36	5.90	0.21	1.22	0.02	45.81	0.71	13.68	98.59	160	< 10	49	50	10	30
2427	208	274	17.40	8.70	0.03	11.24	0.04	5.20	0.17	2.41	0.05	47.75	1.06	4.45	98.50	20	< 10	22	200	20	60
2428	208	274	14.63	4.61	< 0.01	5.56	1.39	3.86	0.08	5.67	0.41	58.53	0.50	4.56	99.80	760	< 10	49	960	10	160
2429	208	274	12.49	4.60	0.08	8.92	0.13	9.50	0.13	5.69	0.34	53.34	0.68	2.87	98.77	350	< 10	22	150	20	120

CERTIFICATE

Laboratoires Chemex Ltee.

Essayeurs * Geochimistes * Chimistes Analytique
175 Boul. Industriel C.P. 284, Rouyn,
Quebec, Canada J9X 5C3
PHONE: 819-797-1922

To: NORANDA EXPLORATION

P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 107
Comments: ATTN: JOHN WAKEFORD

Page Number :2
Total Pages :2
Certificate Date: 14-JUL-92
Invoice No. : 19217086
P.O. Numb.
Account :DHG

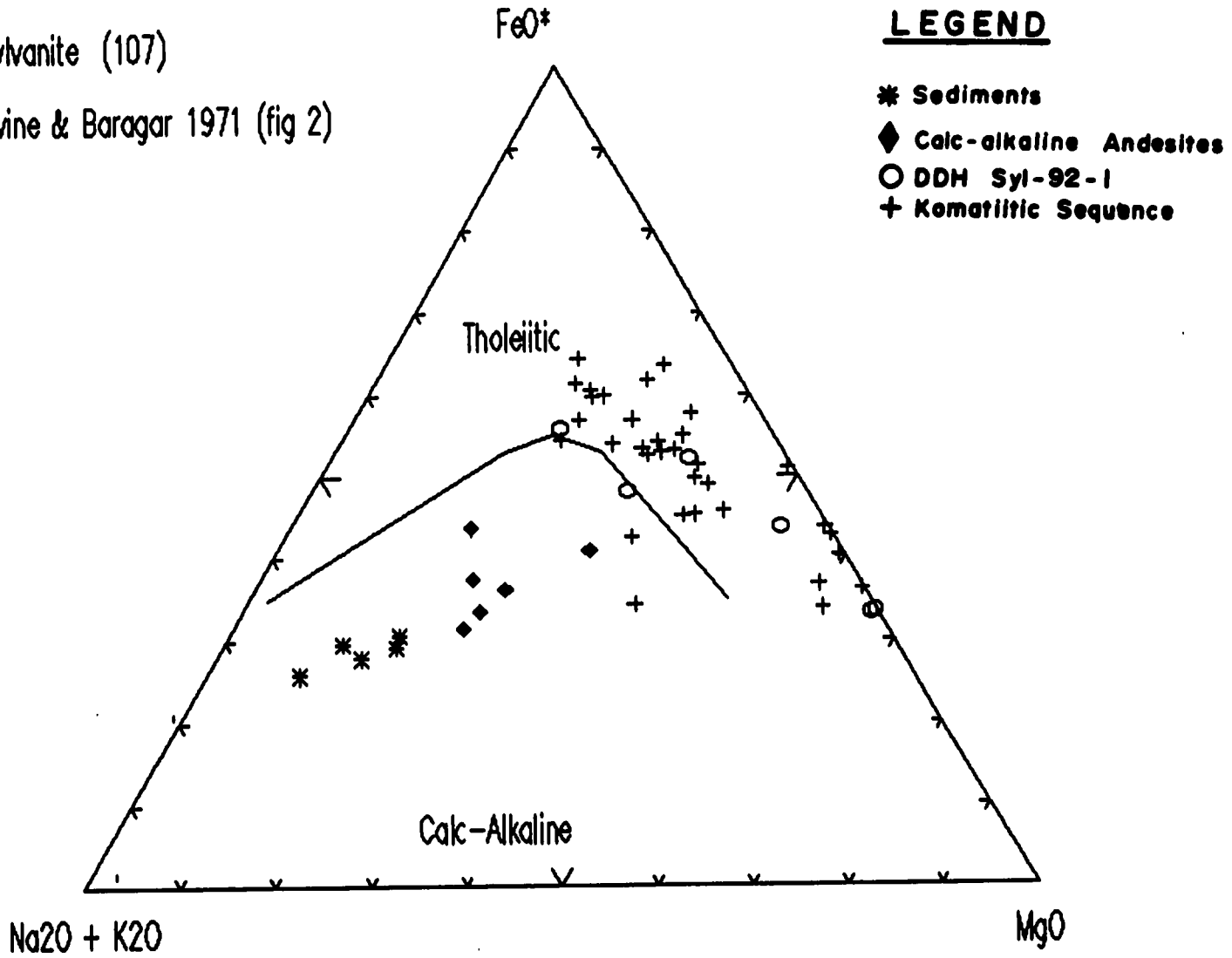
CERTIFICATE OF ANALYSIS A9217086

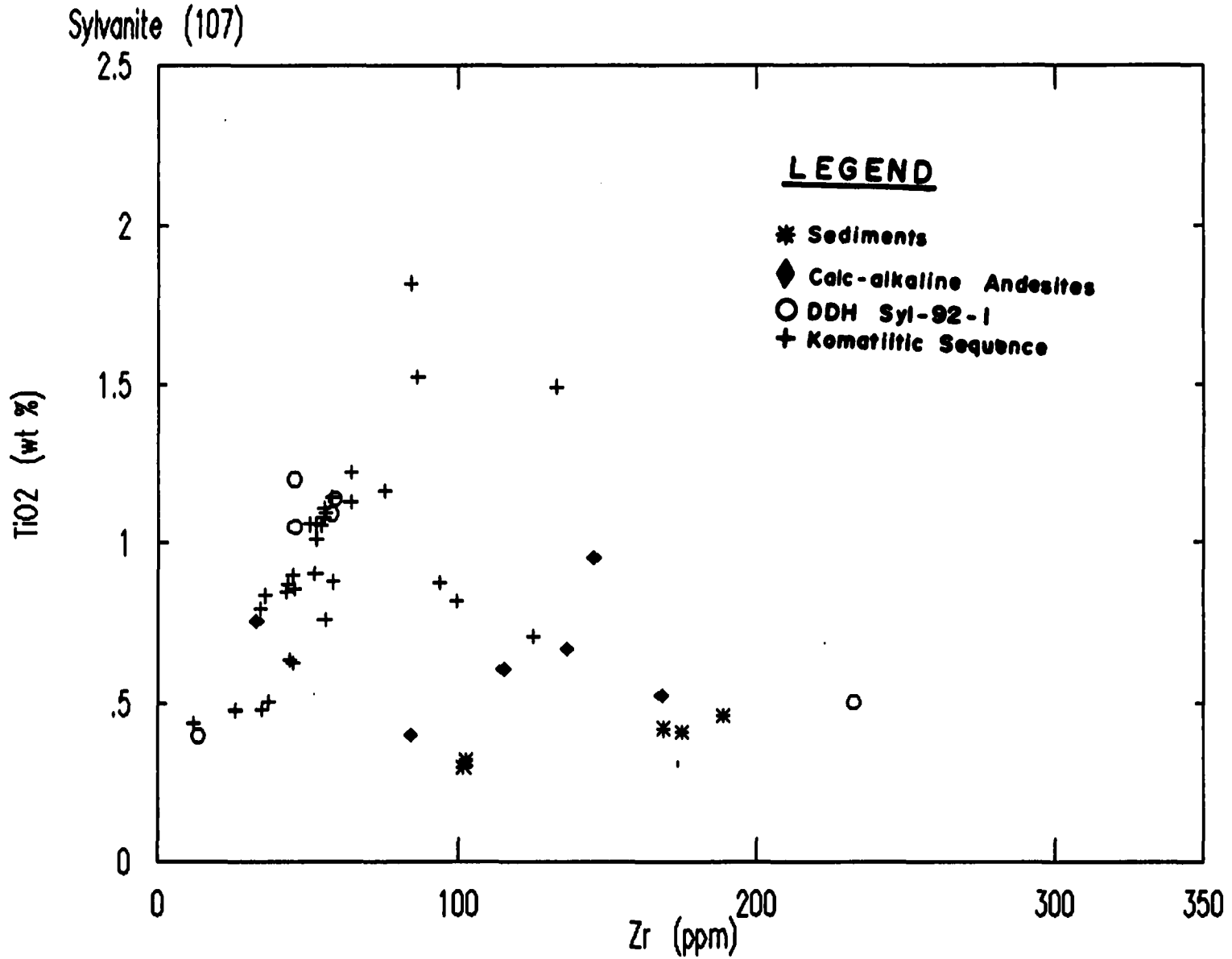
SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Nb ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm
2430	208	274	14.33	6.17	0.33	16.74	0.02	14.27	0.30	0.14	< 0.01	33.62	0.76	12.15	98.83	30	< 10	22	120	10	50
2431	208	274	13.99	5.71	0.03	12.27	< 0.01	14.18	0.16	0.08	< 0.01	39.66	0.38	11.55	98.01	10	< 10	22	10	< 10	10

CERTIFICATION: Adriana Fleurquin

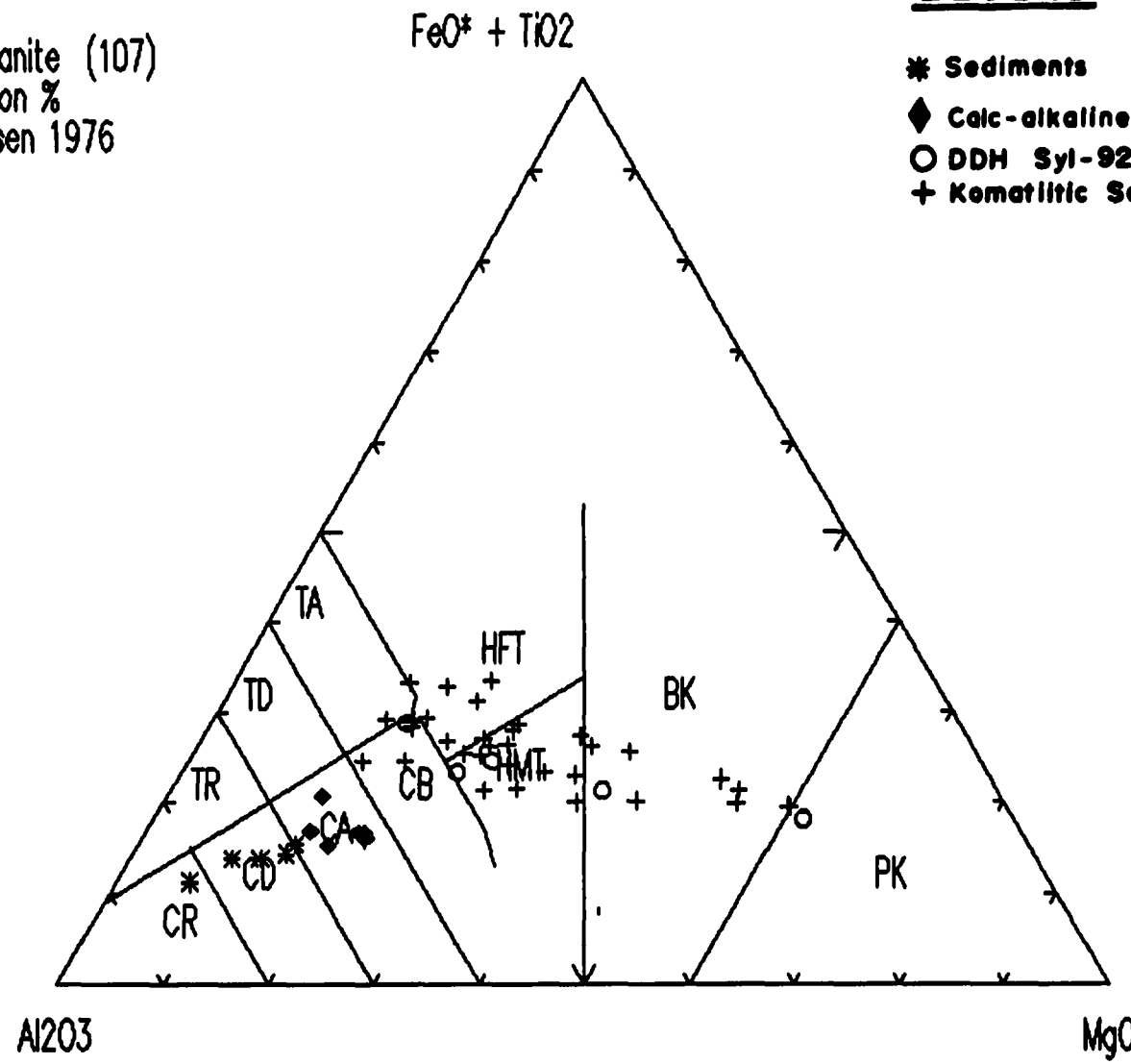
Sylvanite (107)

Irvine & Baragar 1971 (fig 2)




Sylvanite (107)
2.5
2
1.5
1
.5
0
TiO2 (wt %)
0
100
200
300
350
Zr (ppm)
LEGEND
Sediments
Calc-alkaline Andesites
DDH Syl-92-1
Komatiitic Sequence

Sylvanite (107)
Cation %
Jensen 1976



LEGEND

- Sediments
- Calc-alkaline Andesites
- DDH Syl-92-1
- Komatiitic Sequence

- taken from Jensen, 1976

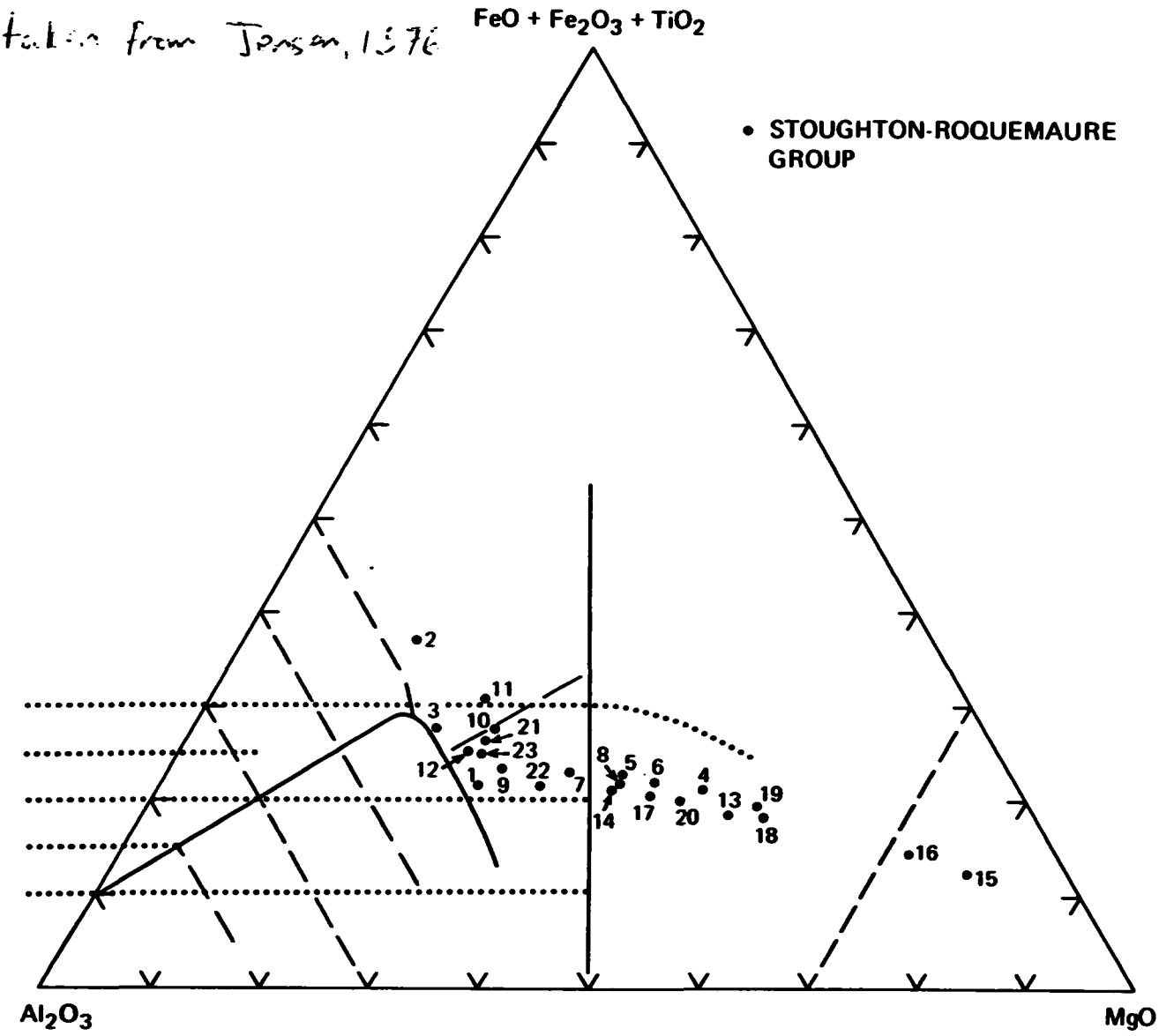
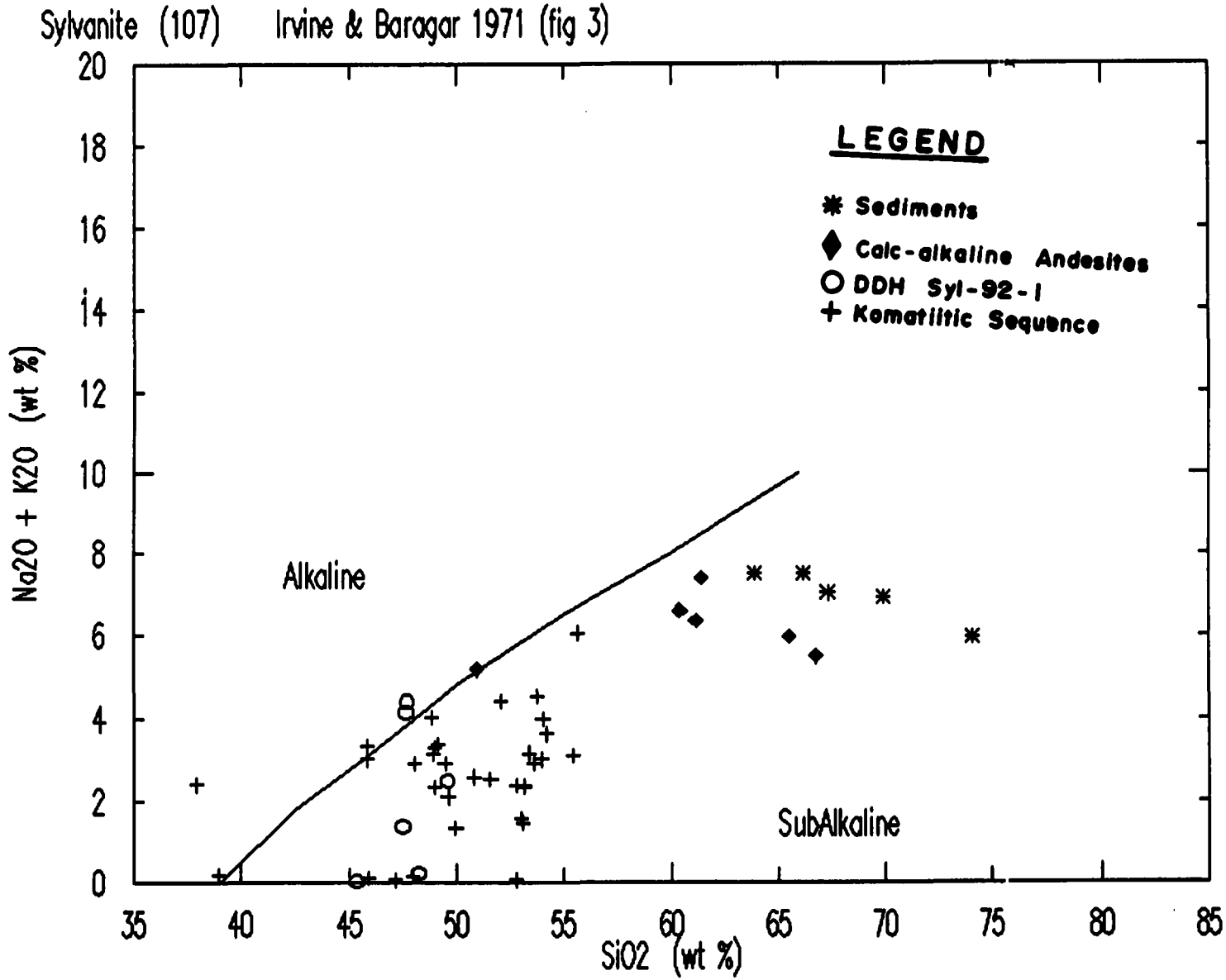
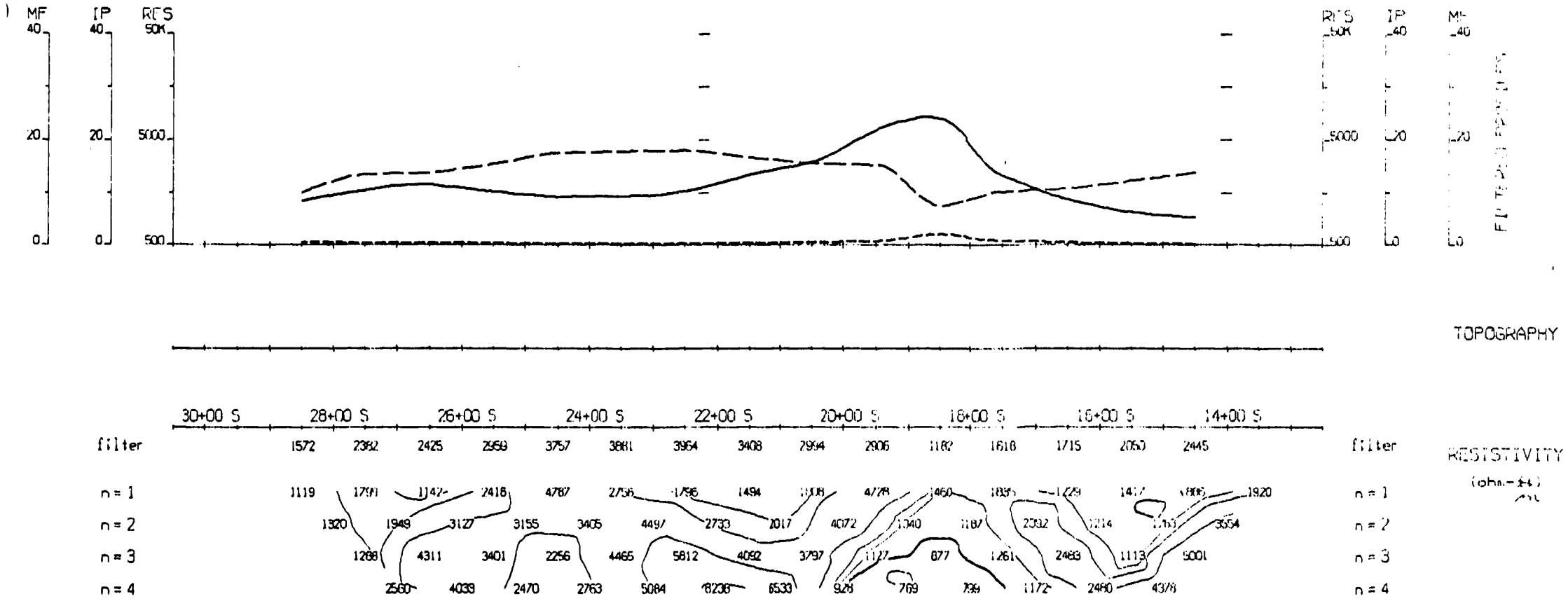


Figure 7 — Jensen Cation Plot showing pattern of variation in Stoughton-Roquemaure Group. Samples 1 to 23 are shown in Figure 4 and Table 1.


Sylvanite (107) Irvine & Baragar 1971 (fig 3)
LEGEND
Sediments
Calc-alkaline Andesites
DDH Syl-92-1
Komatiitic Sequence
Alkaline
SubAlkaline
Na2O + K2O (wt %)
SiO2 (wt %)
0
2
4
6
8
10
12
14
16
18
20
35
40
45
50
55
60
65
70
75
80
85

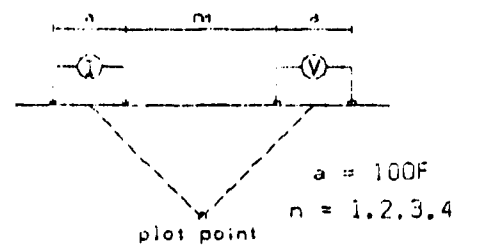
APPENDIX II

GEOPHYSICAL RESULTS



Line 3200 E

Dipole-Dipole Array



Filtered Profiles

Resistivity
Polarization
Metal Factor

filter
*
* *
* * *
* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

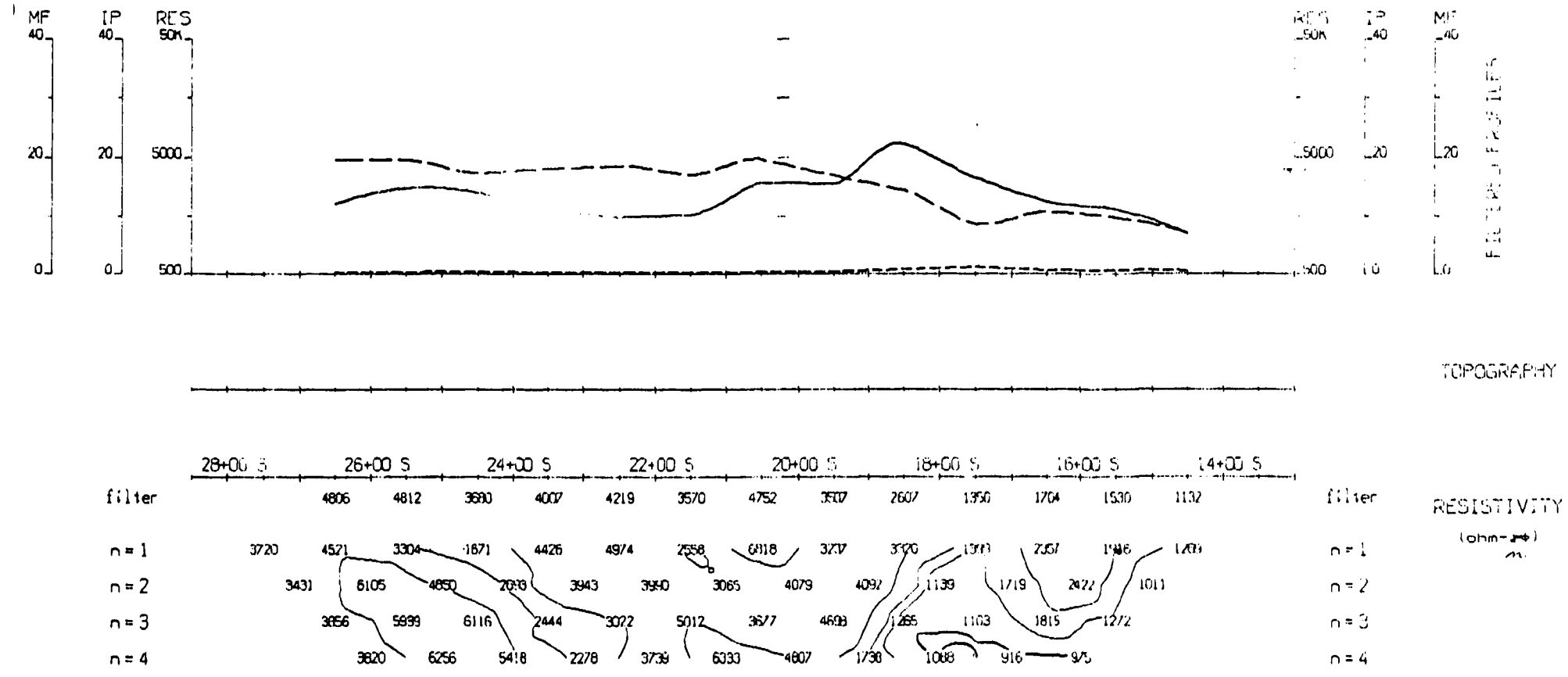
NORANDA EXPL CO. LTD.

INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.
DENYES TWP.

Date: <92/07/20> N.T.S.:
Interpretation by:M. R PINEAULT.
Scale: 1 : 2500

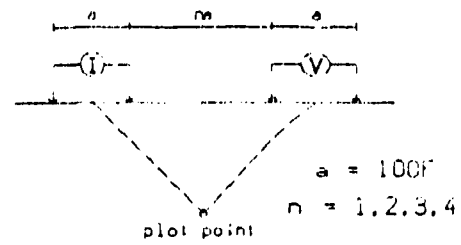
BELANGER GEO LTD.



GEOSOFT (tm) Software for the Earth Sciences, Toronto, Canada

Line 2800 E

Dipole-Dipole Array



Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

NORANDA EXPL CO. LTD.

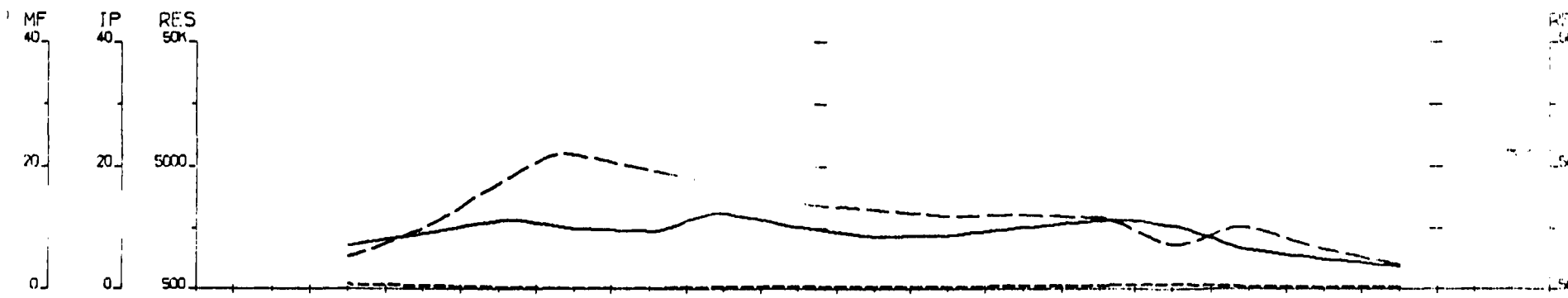
INDUCED POLARIZATION & RES.

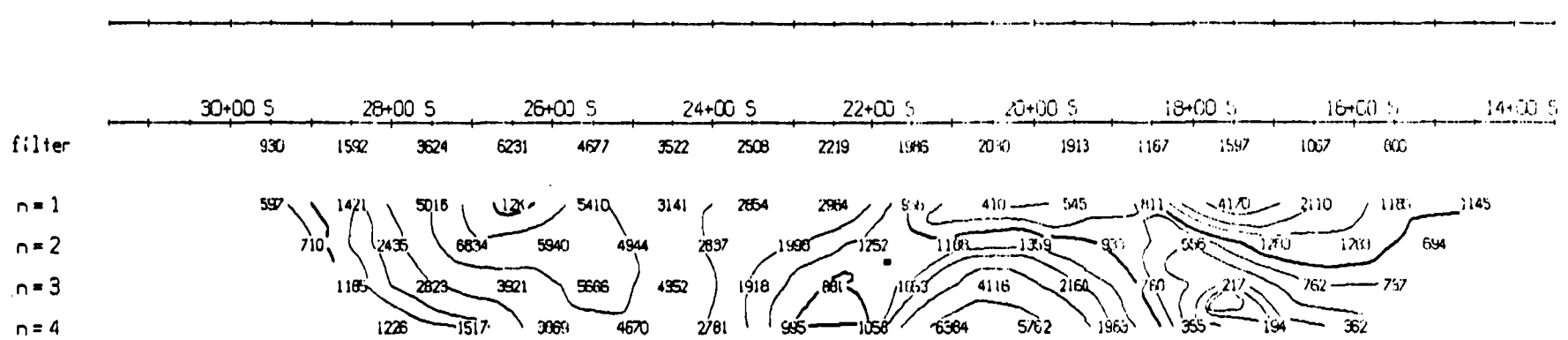
SYLVANITE PROPERTY.

DENYES TWP.

Date: <92/07/29> N.T.S.:
Interpretation by:M. R PINEAULT.
Scale: 1 : 2500

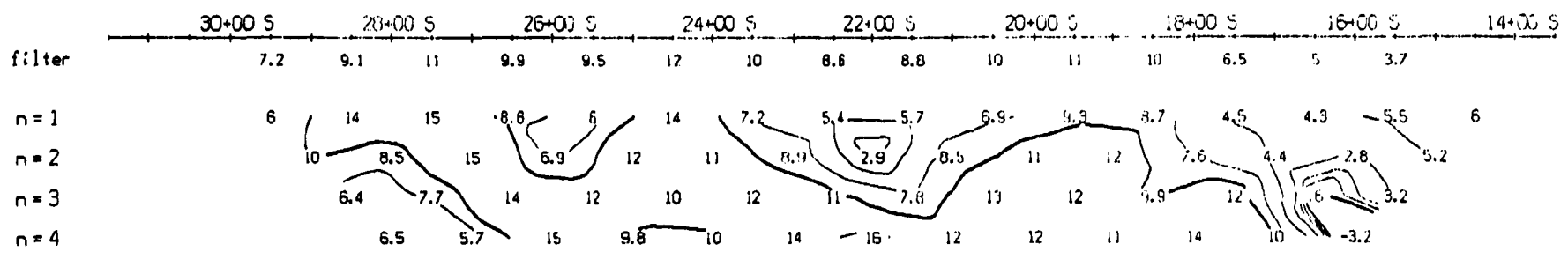
BELANGER GEO LTD.





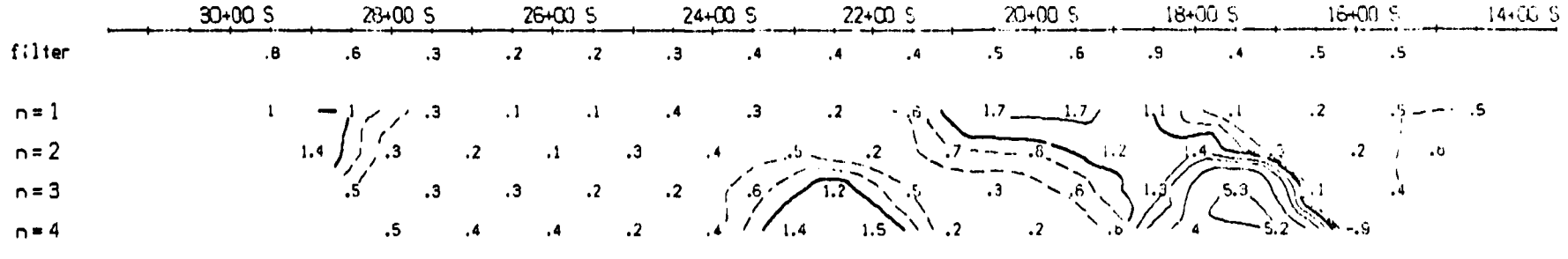
TOPOGRAPHY

RESISTIVITY
(ohm-ft)



PHASE
(mrad)

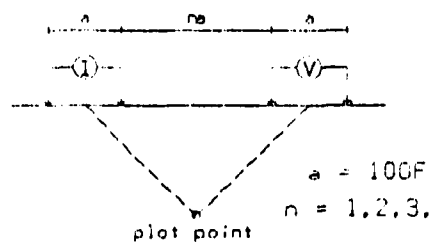
INTERPRETATION



METAL FACTOR
(ip/res * 100)

Line 2400 E

Dipole-Dipole Array



Filtered Profiles

Resistivity
Polarization
Metal Factor

filter
*
* *
* * *
* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

NORANDA EXPL CO. LTD.

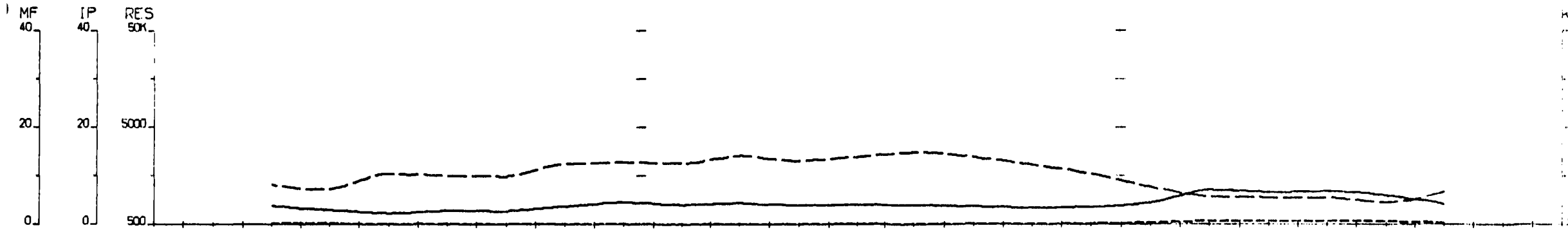
INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.

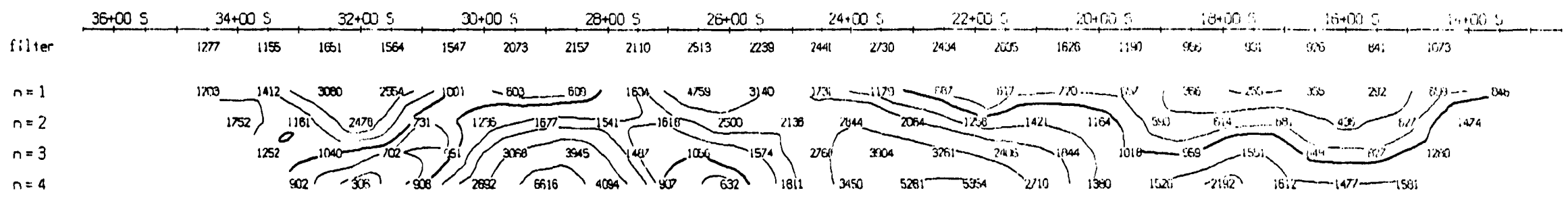
DENYES TWP.

Date: <92/07/29> N.T.S.:
Interpretation by:M. R PINEAULT.
Scale: 1 : 2500

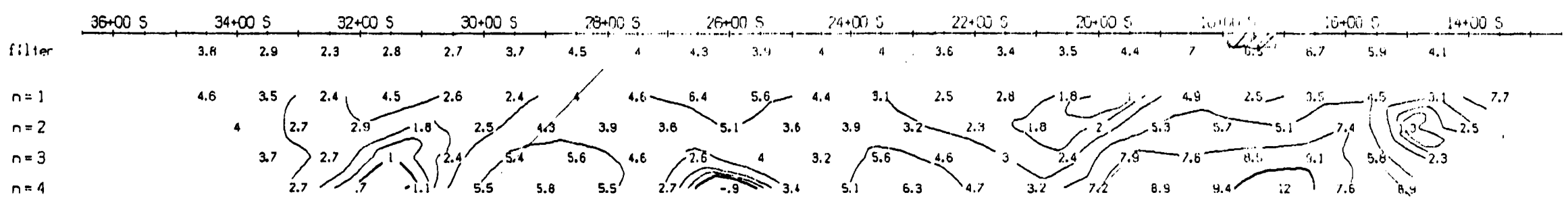
BELANGER GEO LTD.



TOPOGRAPHY

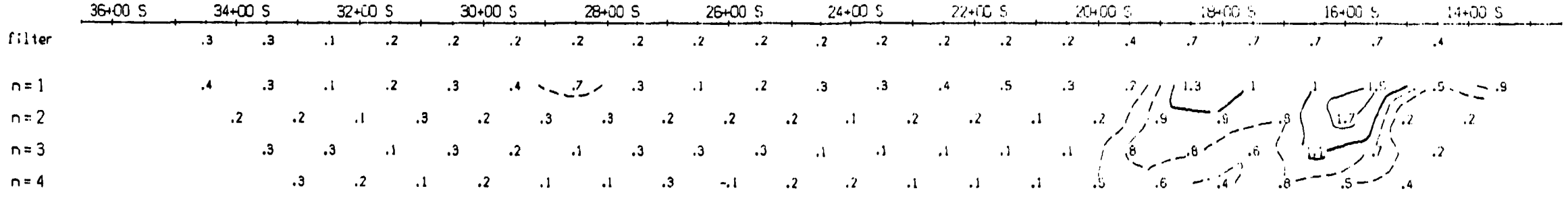


RESISTIVITY (ohm-feet)



PHASE (mrad)

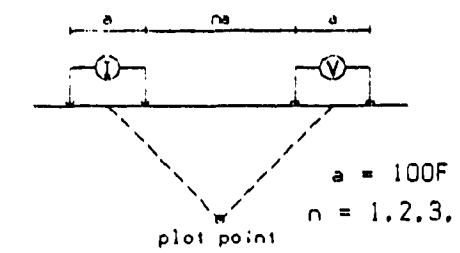
INTERPRETATION



METAL FACTOR (ip/res * 100)

Line 2000 E

Dipole-Dipole Array



a = 100F
n = 1,2,3,4

Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

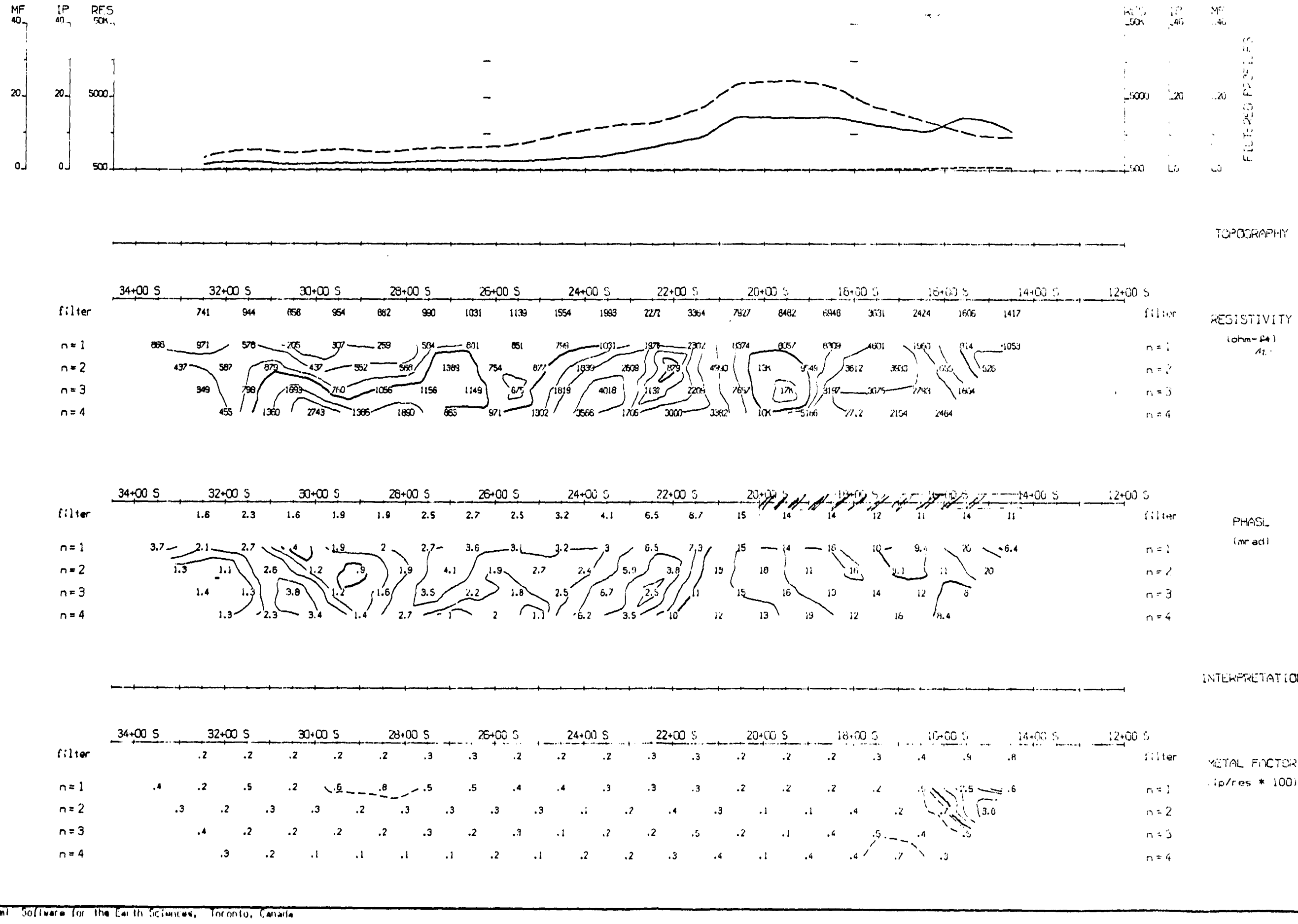
NORANDA EXPL CO. LTD.

INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.
DENYES TWP.

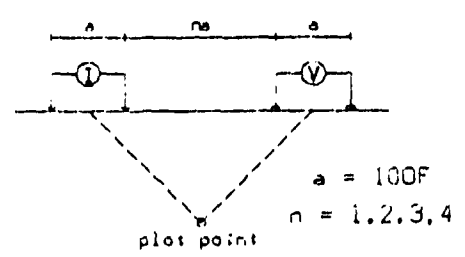
Date: <92/07/29> N.T.S.:
Interpretation By:M. R PINEAULT.
Scale: 1 : 2500

BELANGER GEO LTD.



Line 1600 E

Dipole-Dipole Array



Filtered Profiles

		filter
Resistivity	————	*
Polarization	————	* *
Metal Factor	- - - - - - - -	* * *
		* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPTI, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

NORANDA EXPL CO. LTD.

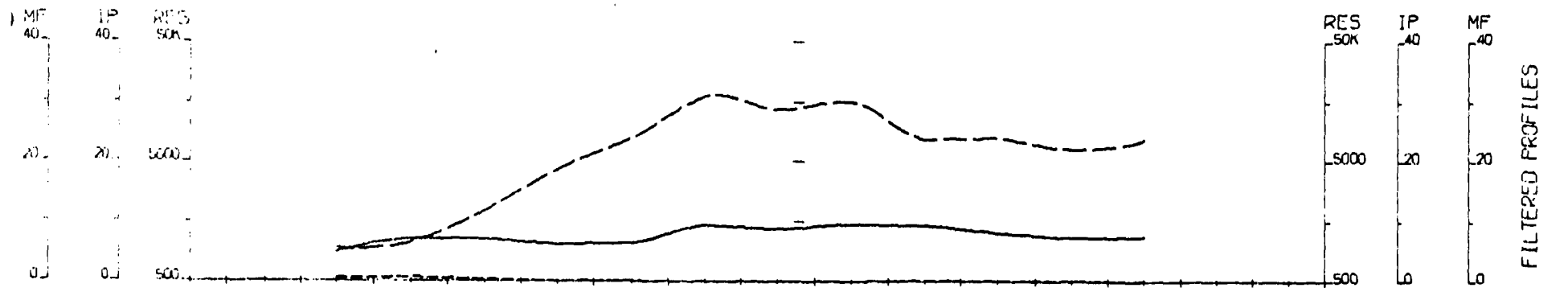
INDUCED POLARIZATION & RES.

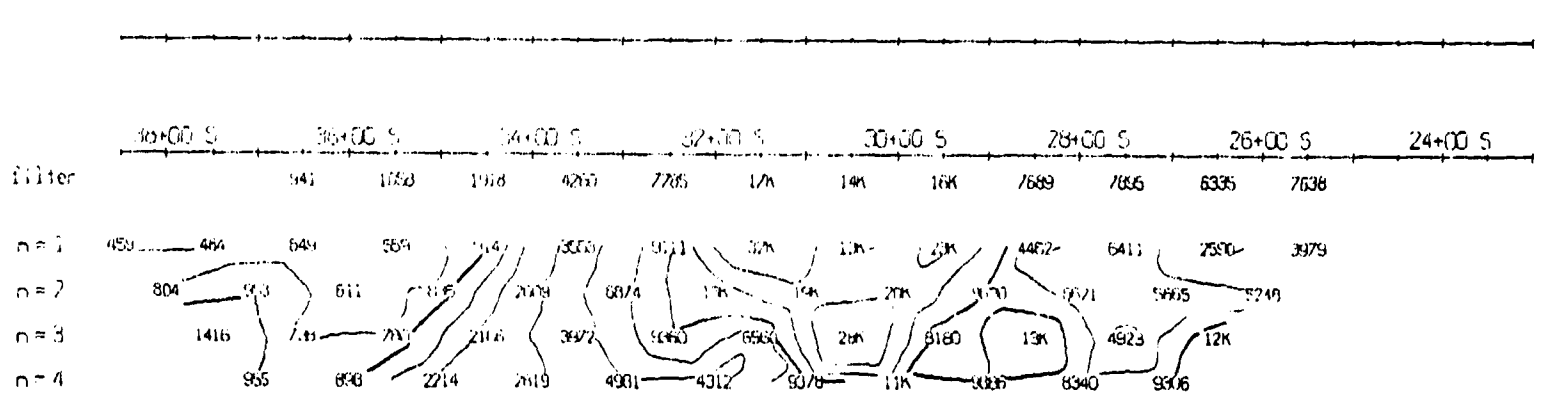
SYLVANITE PROPERTY.
DENYES TWP.

Date: <92/07/29> N.T.S.:
Interpretation by:M. R PINEAULT.
Scale: 1 : 2500

BELANGER GEO LTD.

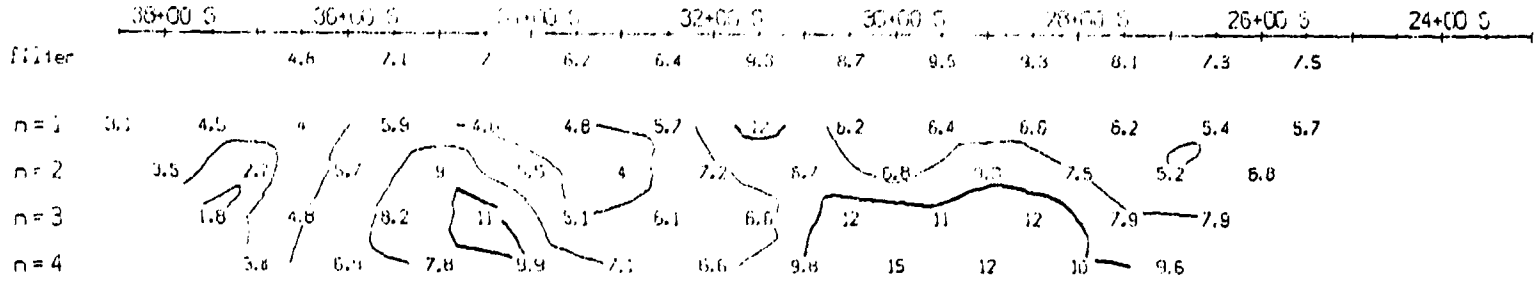
OE





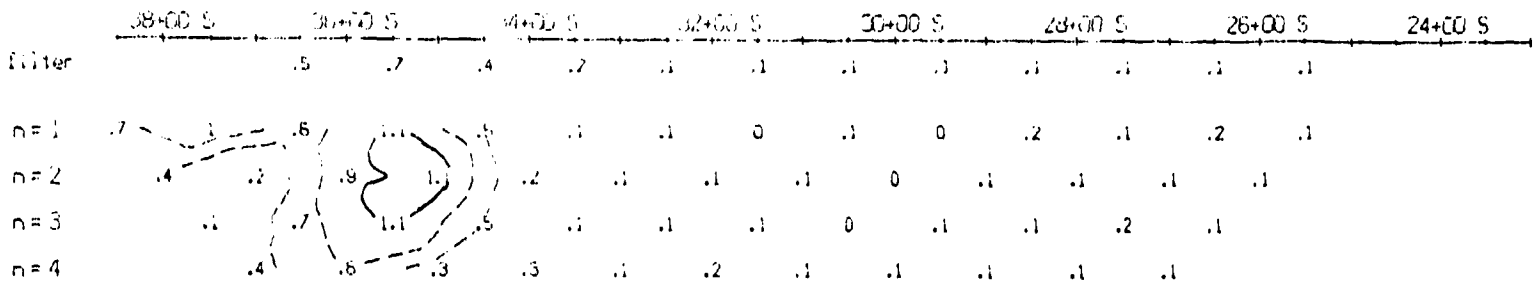
TOPOGRAPHY

RESISTIVITY
(ohm-ft)



PHASE
(mrad)

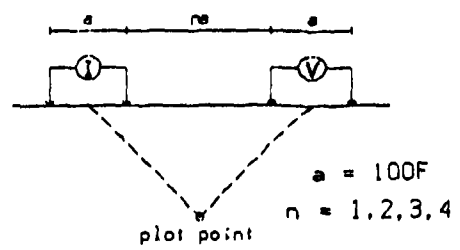
INTERPRETATION



METAL FACTOR
(ip/res * 100)

Line ~~600~~ E

Dipole-Dipole Array



Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,....

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

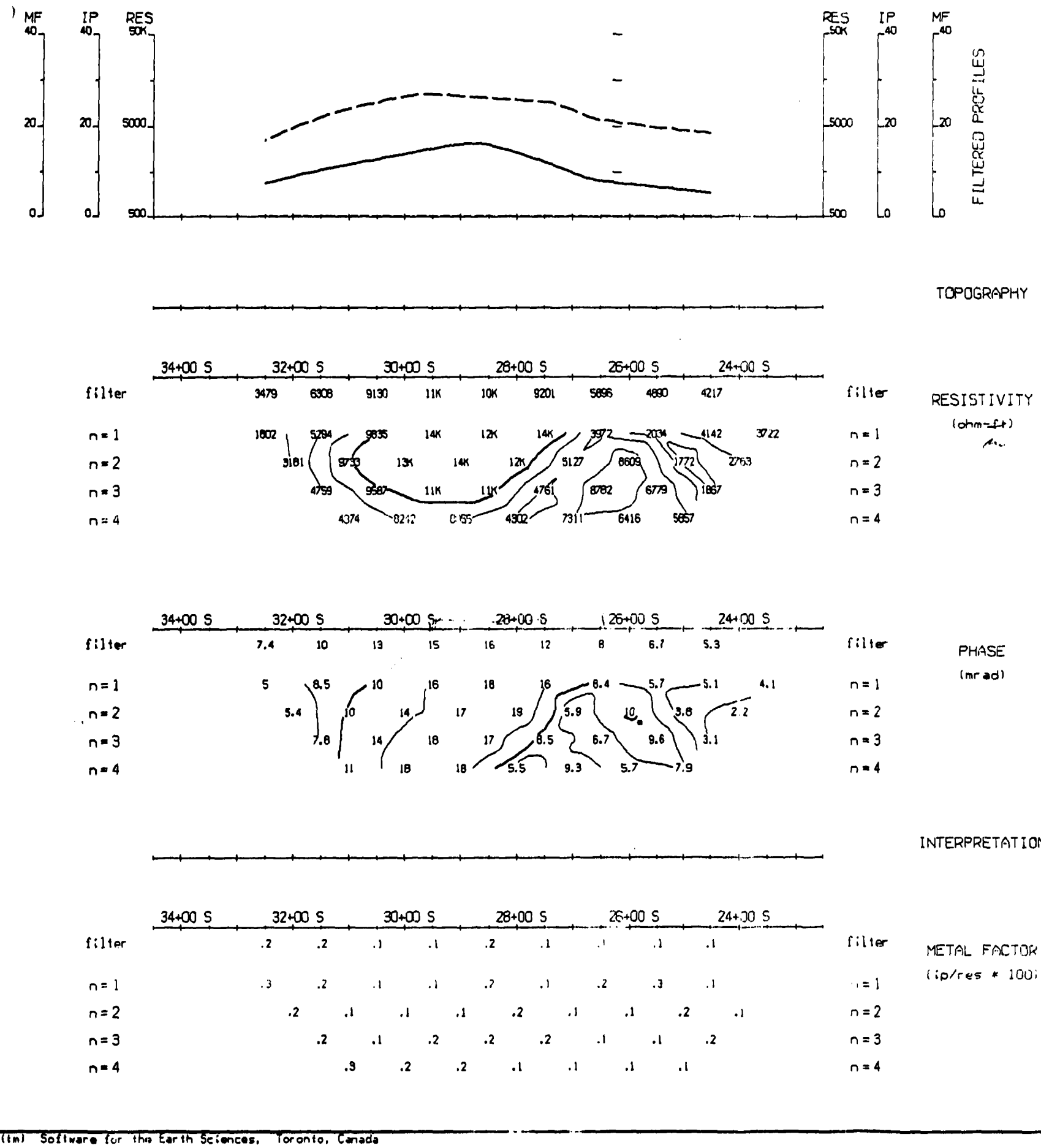
NORANDA EXPL CO. LTD.

INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.
DENYES TWP.

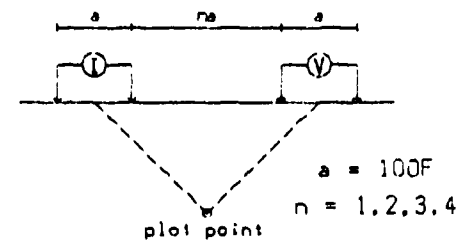
Date: <92/07/29> N.T.S.:
Interpretation By:M. R PINEAULT.
Scale: 1 : 2500

BELANGER GEO LTD.



Line 400 E

Dipole-Dipole Array



a = 100F
n = 1,2,3,4

Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

NORANDA EXPL CO. LTD.

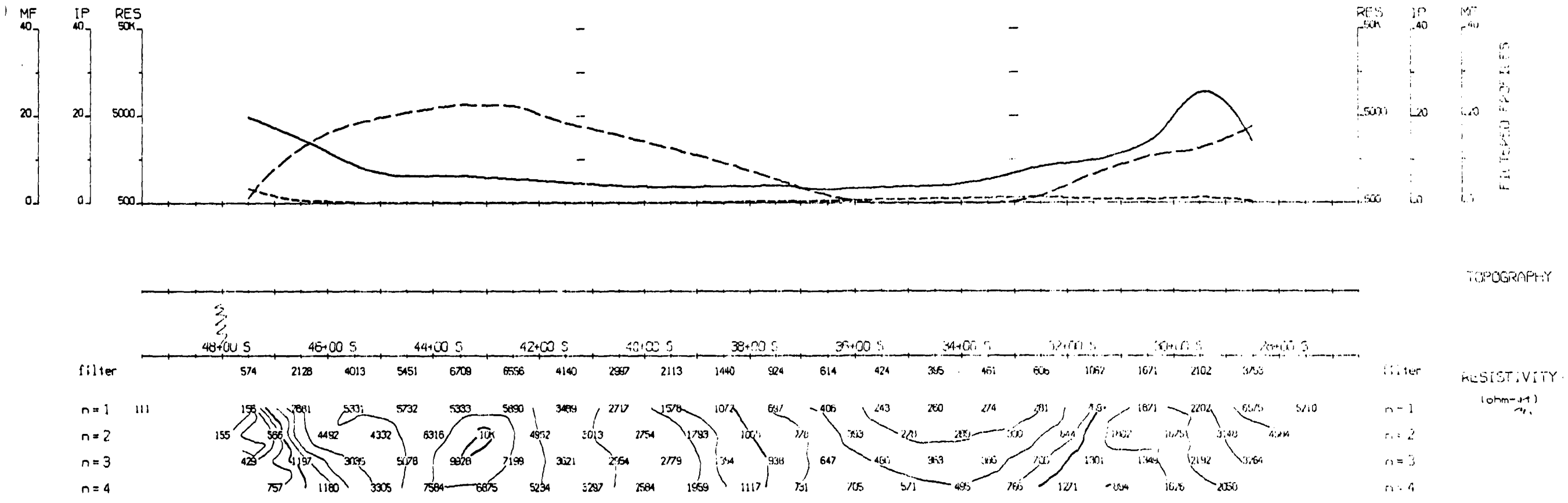
INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.

[illegible] TWP.

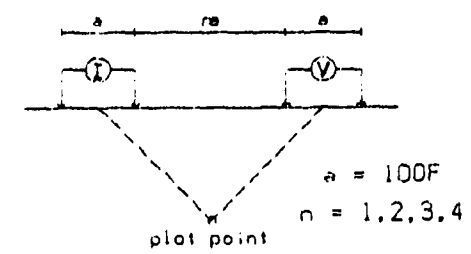
Date: <92/07/29> N.T.S.:
Interpretation By:M. R PINEAULT.
Scale: 1 : 2500

BELANGER GEO LTD.



Line 1200 W

Dipole-Dipole Array



a = 100F
n = 1,2,3,4

Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

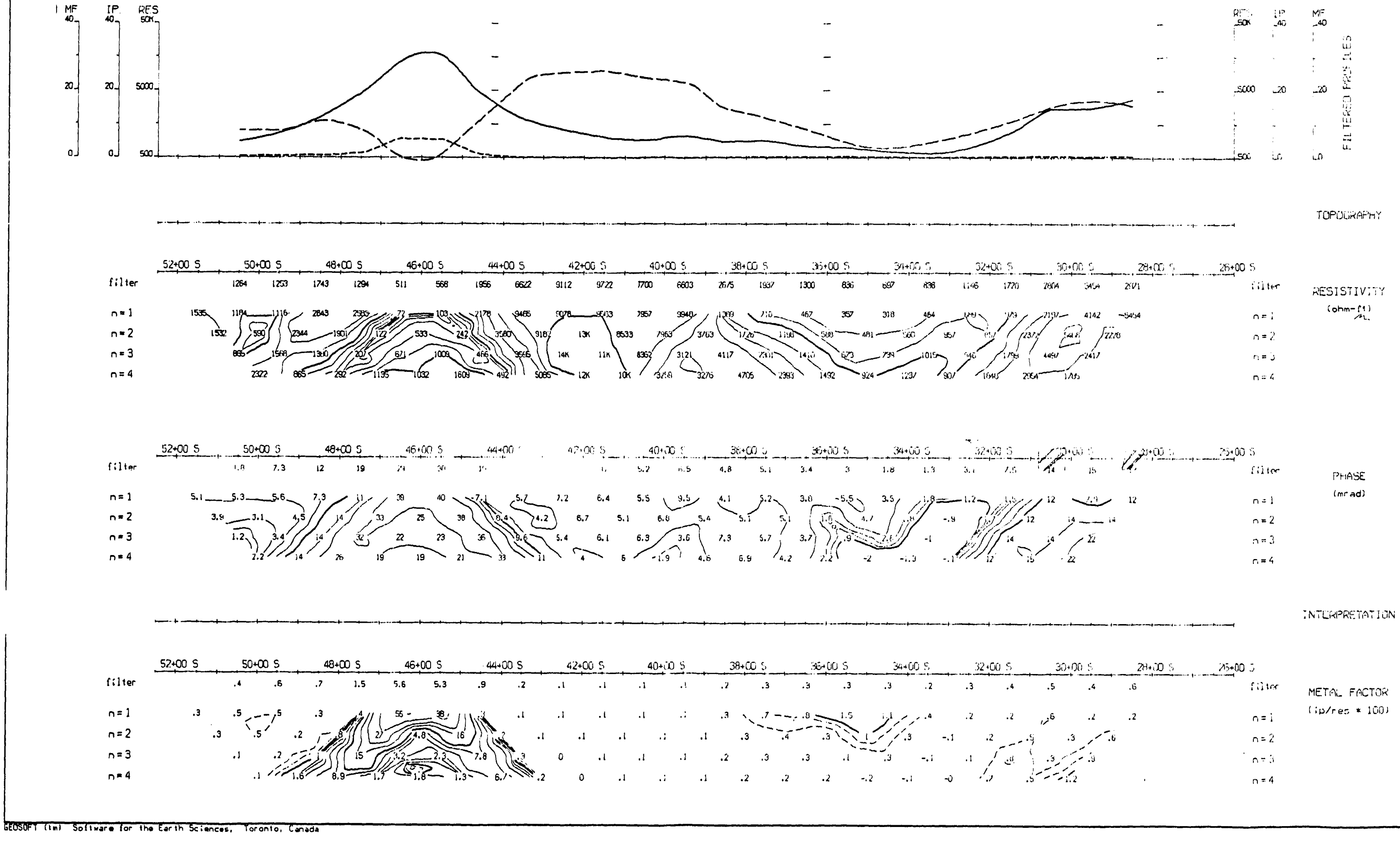
NORANDA EXPL CO. LTD.

INDUCED POLARIZATION & RES.

SYLVANITE PROPERTY.
DENYES TWP.

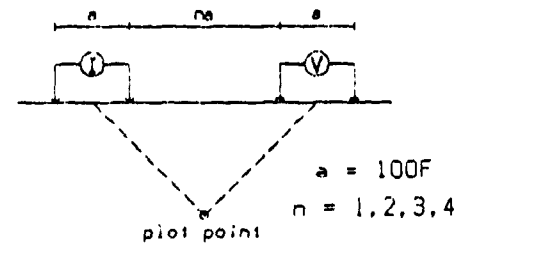
Date: <92/07/29> N.T.S.:
Interpretation By:M. R PINEAULT.
Scale: 1 : 2500

BELANGER GEO LTD.



Line 1600 W

Dipole-Dipole Array



Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * *
	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPTI, IPV4
Frequency: 1 Hz
Operator : Ghislain Belanger

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

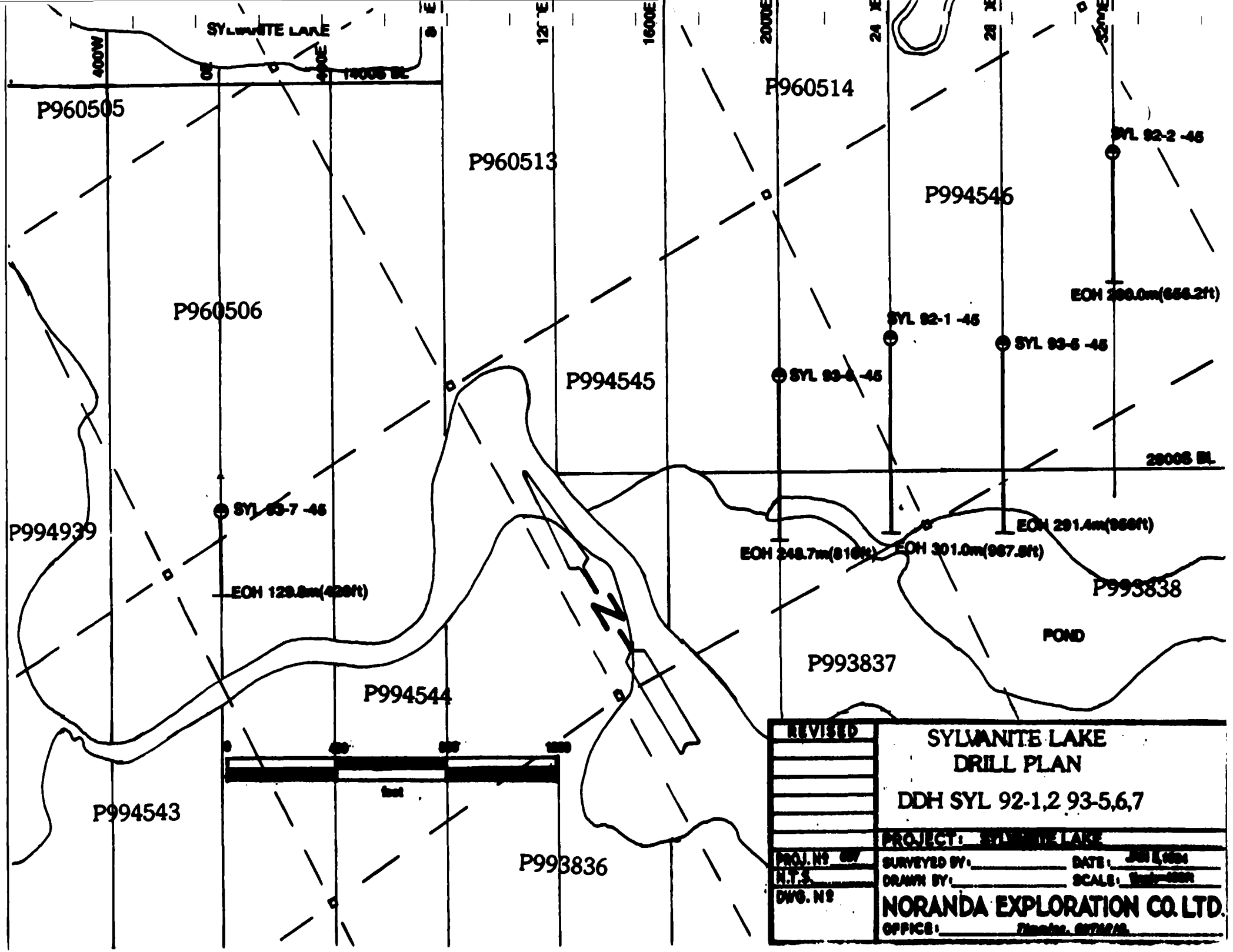
NORANDA EXPL CO. LTD.

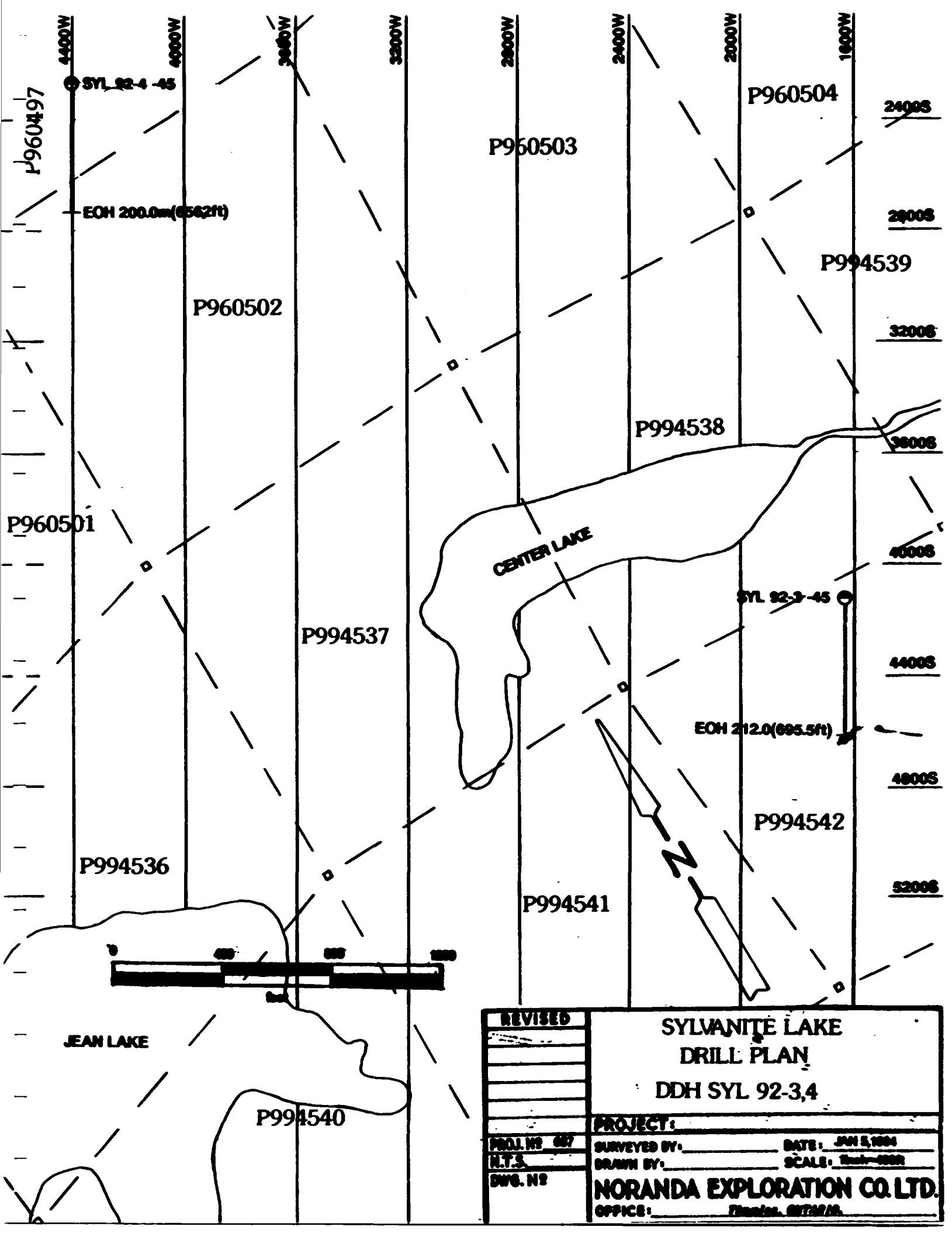
INDUCED POLARIZATION & RES.

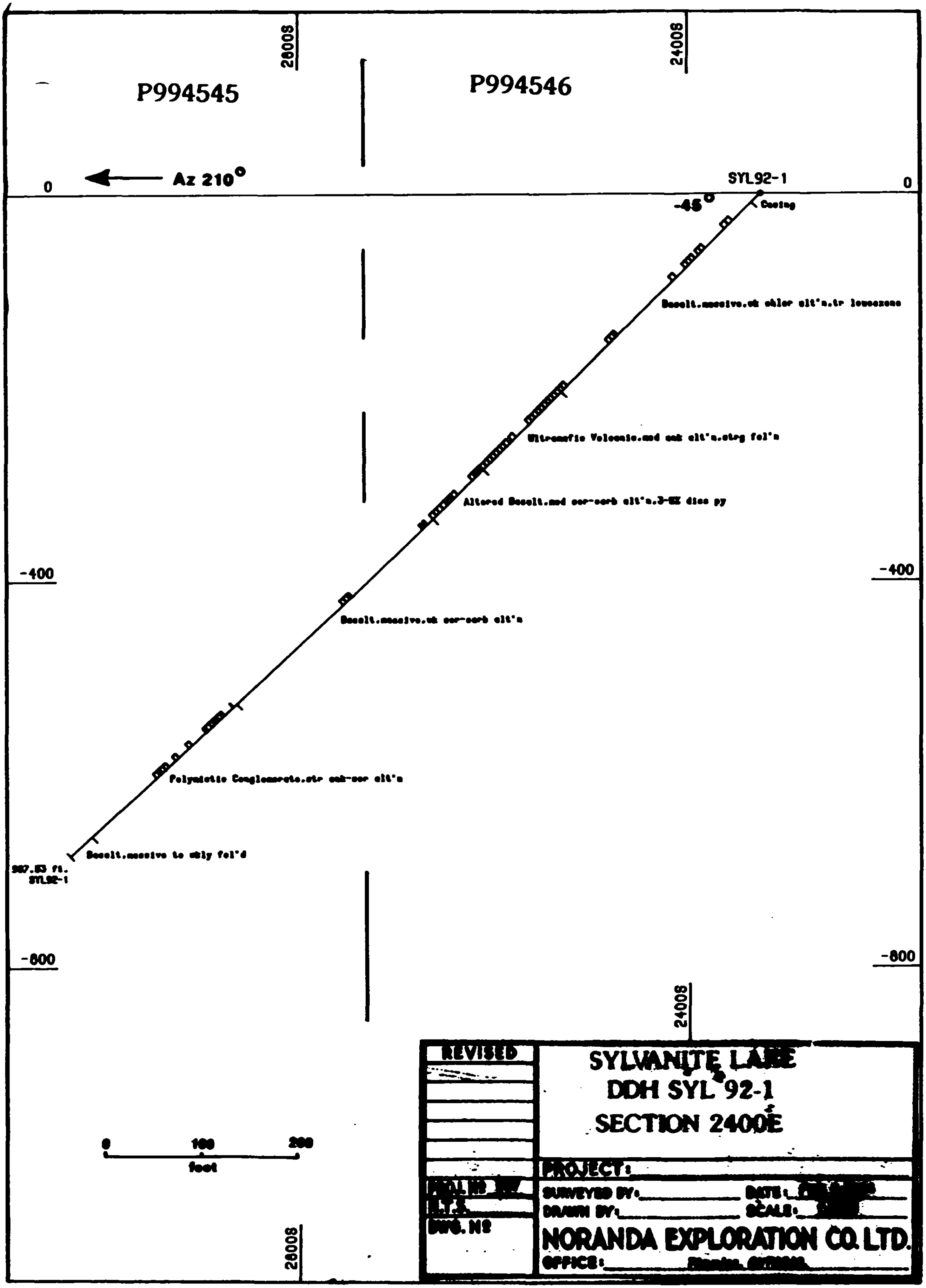
SYLVANITE PROPERTY.
DENYES TWP.

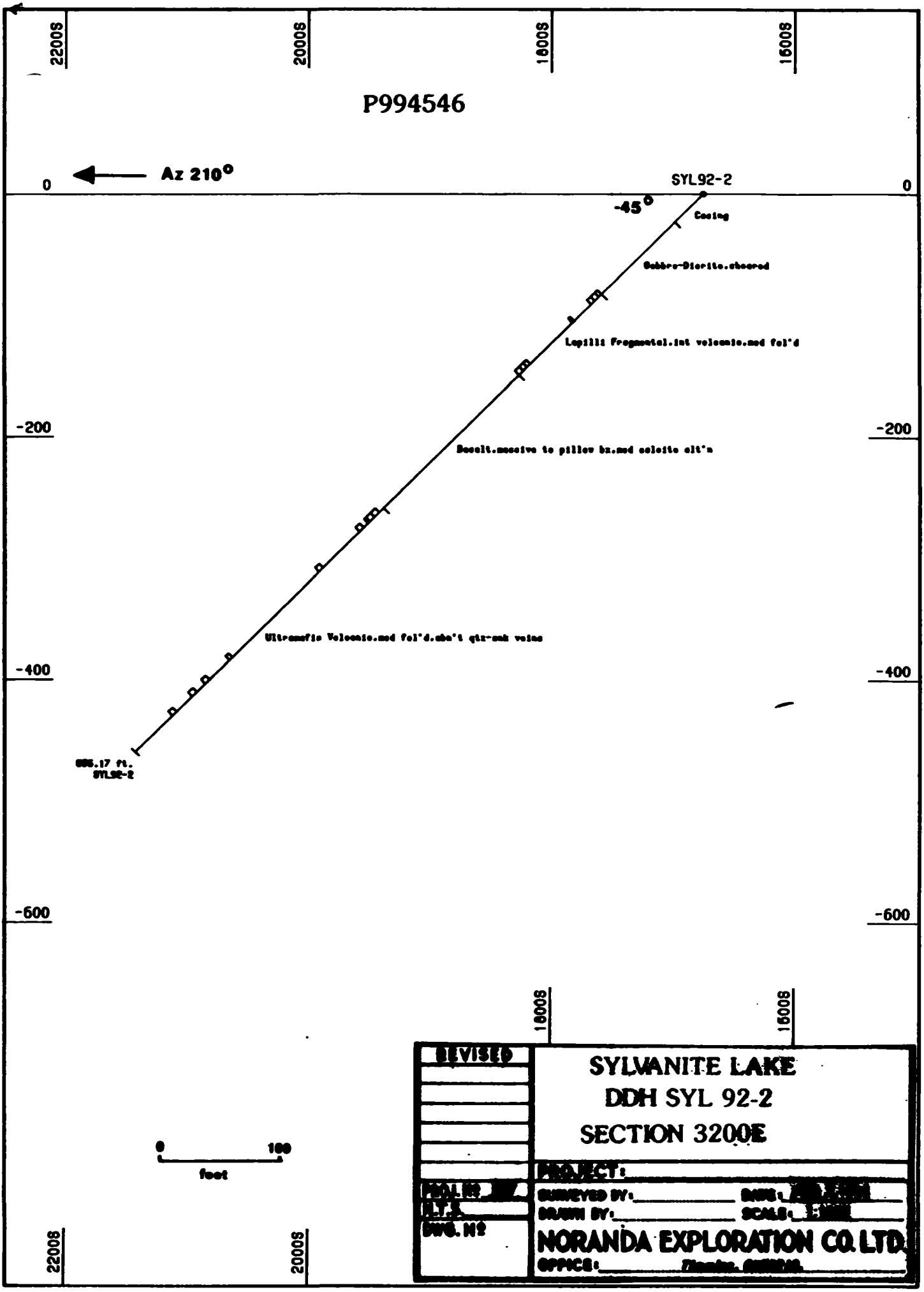
Date: <92/07/29> N.T.S.:
Interpretation By:M. R PINEAULT.
Scale: 1 : 2500

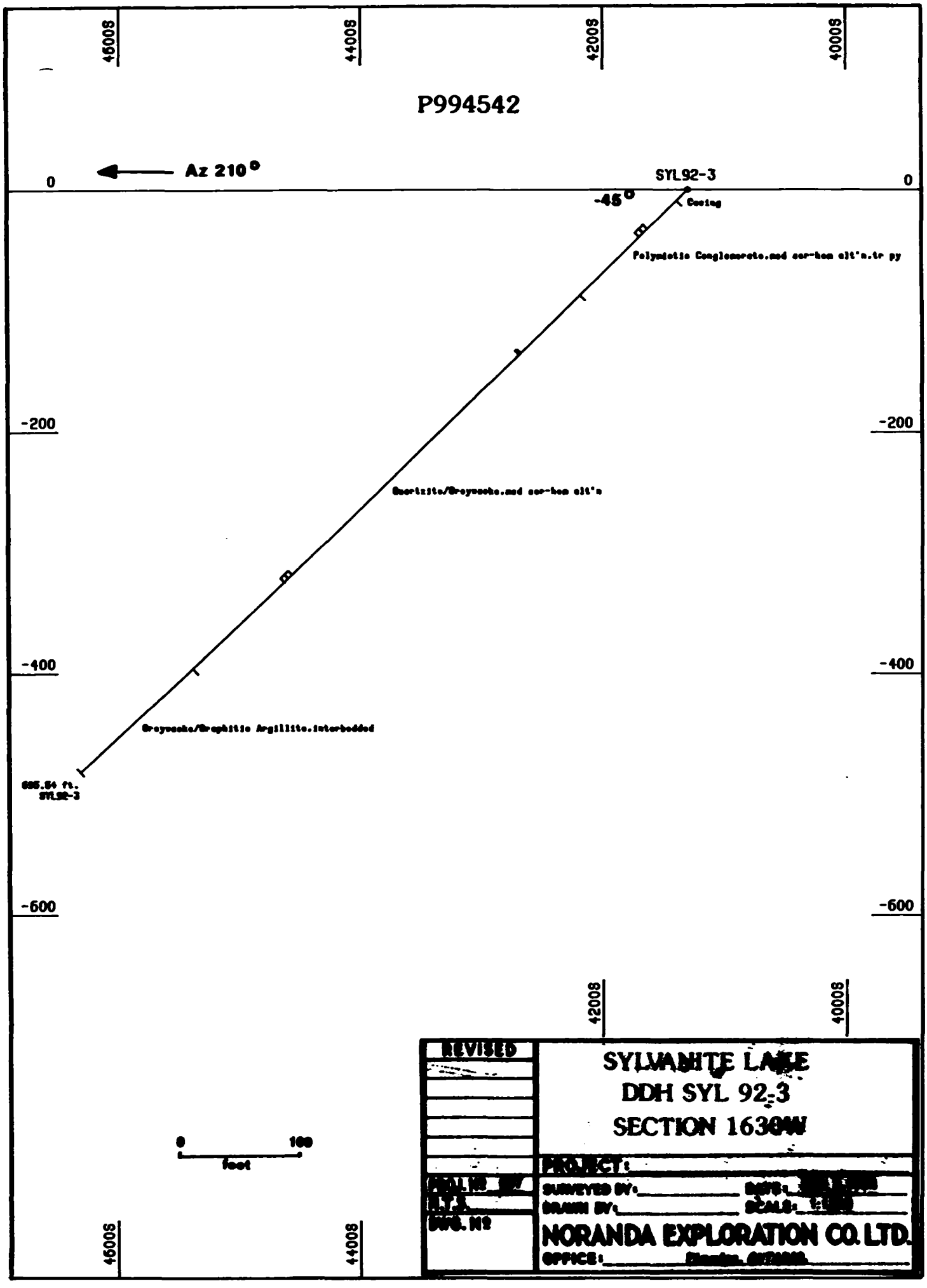
BELANGER GEO LTD.

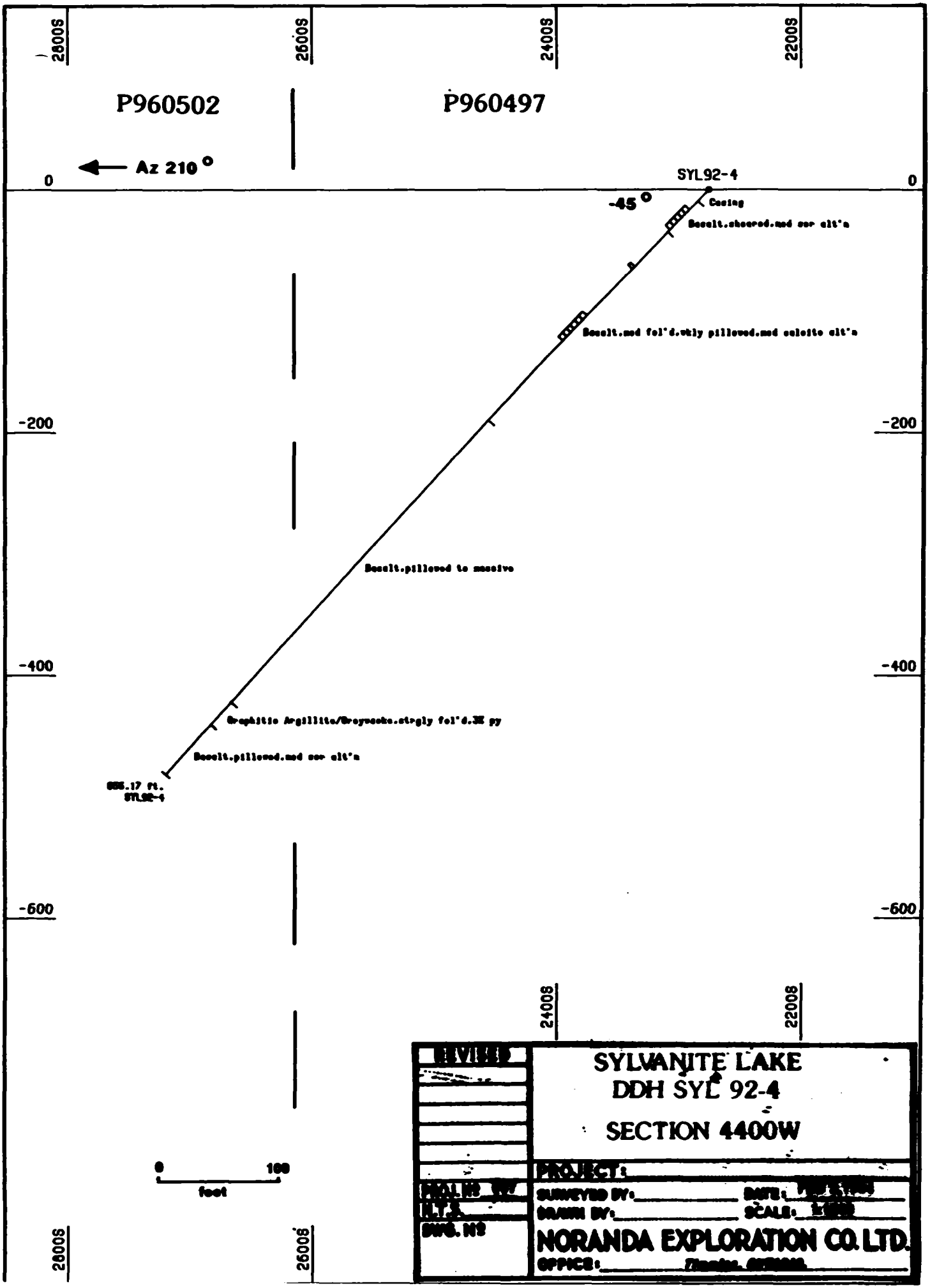

SYLVANITE LAKE
400W
800E
1200E
1600E
2000E
2400E
2800E
3200E
P960505
P960514
P960513
P994546
P960506
P994545
P994939
P994544
P994543
P993836
P993838
P993837
POND
SYL 92-2 -45
EOH 290.0m(656.2ft)
SYL 92-1 -45
SYL 93-5 -45
SYL 93-6 -45
SYL 93-7 -45
EOH 129.8m(426ft)
EOH 248.7m(816ft)
EOH 301.0m(987.5ft)
EOH 291.4m(956ft)
2800S BL
0
400
800
1200
feet
N
REVISED
SYLVANITE LAKE
DRILL PLAN
DDH SYL 92-1,2 93-5,6,7
PROJECT: SYLVANITE LAKE
PROJ. N° 697
N.T.S.
DWG. N°
SURVEYED BY:
DATE: JUNE,1994
DRAWN BY:
SCALE: 1inch=400ft
NORANDA EXPLORATION CO. LTD.
OFFICE: Timmins, ONTARIO


4400W
4000W
3600W
3200W
2800W
2400W
2000W
1600W
SYL 92-4 -45
EOH 200.0m(656.2ft)
P960497
P960504
P960503
2400S
2800S
P994539
P960502
3200S
P994538
3600S
P960501
CENTER LAKE
4000S
SYL 92-3 -45
P994537
4400S
EOH 212.0(695.5ft)
4800S
P994542
P994536
P994541
5200S
JEAN LAKE
P994540
REVISED
SYLVANITE LAKE
DRILL PLAN
DDH SYL 92-3,4
PROJECT:
PROJ. NO. 667
N.T.S.
DWG. NO
SURVEYED BY:
DRAWN BY:
DATE: JAN 5,1994
SCALE:
NORANDA EXPLORATION CO. LTD.
OFFICE:


2600S
2400S
P994545
P994546
Az 210°
0
SYL92-1
0
-45°
Casing
-400
-400
-800
-800
2400S
2600S
0
100
200
feet
REVISED
SYLVANITE LAKE
DDH SYL 92-1
SECTION 2400E
PROJECT:
SURVEYED BY:
DATE:
DRAWN BY:
SCALE:
DWG. Nº
NORANDA EXPLORATION CO. LTD.
OFFICE:


2200S
2000S
1800S
1600S
P994546
Az 210°
0
SYL92-2
0
-45°
Casing
Gabbro-Diorite.sheared
Lapilli Fragmental.int volcanic.mod fol'd
-200
-200
Basalt.massive to pillow bx.mod calcite alt'n
Ultramafic Volcanic.mod fol'd.abn't qtz-ank veins
-400
-400
-600
-600
885.17 ft.
SYL92-2
1800S
1600S
0
100
feet
2200S
2000S
REVISED
SYLVANITE LAKE
DDH SYL 92-2
SECTION 3200E
PROJECT:
SURVEYED BY:
DRAWN BY:
SCALE:
DWG. N°
NORANDA EXPLORATION CO. LTD.
OFFICE:


4600S
4400S
4200S
4000S
P994542
Az 210°
0
SYL92-3
0
-45°
Casing
Polymictic Conglomerate.mod car-hem alt'n.tr py
-200
-200
Quartzite/Greywacke.mod car-hem alt'n
-400
-400
Greywacke/Graphitic Argillite.interbedded
885.84 ft.
SYL92-3
-600
-600
4200S
4000S
0
100
feet
4600S
4400S
REVISED
SYLVANITE LAKE
DDH SYL 92-3
SECTION 1630W
PROJECT:
SURVEYED BY:
DRAWN BY:
DWG. NO
NORANDA EXPLORATION CO. LTD.
OFFICE:


2800S
2600S
2400S
2200S
P960502
P960497
Az 210°
0
SYL92-4
0
-45°
Casing
Basalt.sheared.md ser alt'n
Basalt.md fol'd.vbly pillowed.md calcite alt'n
-200
-200
Basalt.pillowed to massive
-400
-400
Graphitic Argillite/Greywacke.strgly fol'd.3% py
Basalt.pillowed.md ser alt'n
885.17 ft.
SYL92-4
-600
-600
2400S
2200S
0
100
feet
2600S
2600S
REVISED
SYLVANITE LAKE
DDH SYL 92-4
SECTION 4400W
PROJECT:
PLOTTED BY:
SURVEYED BY:
DATE:
N.T.S.
DRAWN BY:
SCALE:
DWG. NO
NORANDA EXPLORATION CO. LTD.
OFFICE:

GEOLOGICAL LEGEND

10 Paleozoic (undifferentiated)

Sedimentary Rocks

10 Ls Limestone

10 Ss Sandstone

9 Proterozoic (undifferentiated)

9I Intrusive Rocks

8 Diabase dykes (all ages)

7 Archean
Felsic Intrusive Rocks (undifferentiated)
7A Aplite — 7P Pegmatite
7G Granite — 7F Felsic Dyke
7S Syenite — 7Q Quartz Porphyry
7GD Grandiorite (trondjhemite) — 7QF Quartz-Feldspar-Porphyry
7PF Porphyry (undifferentiated)

6 Mafic Intrusive Rocks (undifferentiated)
6D Diorite
6G Gabbro
6A Anorthosite
6U Ultramafic

5 Chemical Metasedimentary Rocks (undifferentiated)
5 cht Chert
5 IF Iron Formation
IFo Oxide facies (magnetite)
IFo Sulphide facies
5 Gf Graphite

4 Clastic Metasedimentary Rocks
4 Cg Conglomerate
4 Q Quartzite
4 Gw Greywacke
4 Arg Argillite (fine clastic, Gp-Graphite)
4 V Volcanic (mafic metasediments, tuff?)
4 ss Siltstone
4 st Sandstone

3 Felsic Metavolcanic Rocks (undifferentiated)
3R Rhyolite
3Rd Rhyodacite

2 Intermediate Metavolcanic Rocks (undifferentiated)
2D Dacite
2A Andesite

1 Mafic Metavolcanic Rocks (undifferentiated)
1B Basalt (fl-Iron tholeiitic, m-Magnesium tholeiitic)
1U Ultramafic 1K Komatiites

Descriptions Subscripts For Metavolcanic Rocks
f fine — t tuff — f-bx flow breccia
agg agglomerate (a) course grained possibly intrusive
pl pillowed flows v vasicular b banded gr graphite
lap lapilli var variolitic
Db Debris Flows
Highly metamorphosed Rock Notation
prime symbol signifies high grade rock
gn gneissic
sh schistose
m migmatite

Alteration
carb carbonatization — sil silicification — epi epidote
ser sericitic K-spar potassic ank ankeritic
chl chloritization
shr shear/shearing
bx brecciation

SYMBOLS

areas of outcrop

small outcrop

bedding with dip direction

foliation

gneissosity

lineation and plunge

pillow structure with top direction

geological contact defined

geological contact approximate

geological contact assumed

fault/shear

anticlinal fold structure with plunge

synclinal fold structure with plunge

drag fold with plunge

shear zone

diamond drill hole

m magnetic attraction

serp serpentine

py pyrite

po pyrrhotite

cp chalcopyrite

sp sphalerite

asp arsenopyrite

mgt magnetite

( ) indicate trace or minor amounts

HEM conductors

magnetic isoclines (anomalies)

q quartz

bi biotite

f feldspar

Massive Sulphide

magnetic axis

HEM Conductor

IP Axis

MSU massive

SMSU semi-massive

diss disseminated

str stringer

LATITUDE 23+25S

DEPARTURE 24+00E

ELEVATION Surface

DIP AT COLLAR -45° BEARING 210°

TOTAL DEPTH 301.00 CORE SIZE BQ

CORE STORAGE Aunor Minesite-Timmins

REMARKS

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Test Depth	Dip	Magnetic Bearing	Corrected Bearing
-60m	-45°		
-120	-45°		
-180	-43°		
-240	-43°		
-299	-42°		

Sheet No. 1 OF 9

Project No. 107 Hole No. SYL-92-1

Property Sylvanite

NTS 410/15 TWP. Denyes Claim No P994545 P994546

Date started Nov. 21/92 completed Nov. 23/92

Contractor Bradley Bros. - Timmins

Logged by Reno Pressacco

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
0-4	Casing. All casing recovered on termination of hole.			
4-88.15 BASALT	Colour light grey-green, moderately soft, non-magnetic, non-calcareous. Overall weakly to moderately, well developed sheared texture, good C-S fabric observed 24-28m. 5-7% quartz-ankerite veinlets developed throughout, generally highly irregular and patchy in shape, at times giving a fragmental texture to core. Quartz-ankerite veins are ankerite-rich at times and up to 5cm in width. Core Angle: 50° to CA at 18m. Foliation Core Angle: 60° to CA at 42.1m. Foliation Carbonate species in the quartz veins changes from ankerite above roughly 50m to calcite below 50m, approximately concurrently with the colour change in the core. Quartz veining/stockwork is roughly 3-5% (locally 7-10%) in abundance below 50m. The veins occur as discrete veins to 3-5cm in width, but commonly also as small lenses, irregular patches and randomly oriented stockworks. Traces	Some weak chloritized sections in the 10-15m section. 3-5% leucoxene present through remainder of core. Weakly developed chloritization containing 1-3% diss. f.g. leucoxene observed in 47-64m section. This is marked by a change in colour from light grey to medium green.	1-3% diss. euhedral fine grained-medium grained pyrite observed 14-15.5m section. 1-3% patchy pyrite observed in the 37.45-38.87m interval. Pyrite occurs with a weakly sheared quartz breccia or fragmental-textured quartz interval (20-25% quartz fragments). Traces of very thin, very fine grained stringer pyrite observed in the 63.5-65.0m section.	

FAP - 14084

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	of hematite impart a pinkish colour to the quartz in the 63-67m interval. Core Angle: 45° to CA to 59.7m. Foliation. <u>77-60-85.30m:</u> Massive to very weakly foliated, leucoxene-bearing interval. Colour darker green than surrounding host rock, possibly due to chloritization. 1-3% very fine leucoxene. Trace 1% disseminated, very fine to fine grained pyrite. Gradational contacts. Narrow section (5-10cm) of possible fault gouge present at 84.90m. The host rock above and below this massive interval consists of a light green, very fine grained basalt which has been weakly to moderately fractured. These fractures (5-7% abundance) are up to 1-2mm in thickness, randomly oriented, and are filled with a dark green to black, very fine grained granular material. Some fractures are filled with quartz. <u>85.30-88.15m:</u> Section contains 7-10% quartz veining and stockwork. Abundant carbonate is present in veins and is ankerite. Weakly developed sericite alteration is associated with the vein walls, and forms an envelope up to 1-2cm from the vein contact. Trace	Light grey colour possibly due to pervasive carbonatization of the host rock. Generally light grey colour prevails from 4-47m.		

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No. SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	-1% disseminated, very fine, and fine grained subhedral pyrite is found with this sericitic halo.			
88.15-122.70 ULTRAMAFIC (BASALTIC KOMATIITE)	Colour variable from black to light green-grey, depending on alteration strength, non-magnetic, non-calcareous, very soft. Strongly foliated texture with bands and elongated "fragments" defining the foliation planes. Quartz-ankerite veining is roughly 5-7% in abundance, occurring as discrete veins (cross-cutting) and patches/fragments. Core Angle: 75° to CA at 93m. Foliation Core Angle: 70° to CA at 101m. Foliation Core Angle: 70° to CA at 113m. Shearing Foliation parallel quartz veining and a quartz breccia/fragmental textured quartz is present throughout this ultramafic unit in roughly 1-3% abundance. Quartz becomes heavier in abundance concurrent with ankerite, becoming 7-10-15% locally (eg. 97-98m). Generally a very strong foliation accompanies this alteration, taking on a sheared texture at times (eg. 113m). Trace fuchsite observed with quartz at 114.5m and 117.3m.	Moderate-strong ankerite enrich-ment observed in the 88.15-103m section. Ankerite occurs as discrete fine grained spots and as irregular, discontinuous bands. Overall, ankerite abundance is roughly 20-30%. Some narrow zones of weakly developed fuchsite observed at 93.20 and 93.50m. Rare pyrite is observed with fuchsite at 93.70m. 107-122.70m: strong foliation with quartz-ankerite veining developed. Quartz and ankerite are subequal in abundance in veined intervals. Moderate pervasive ankerite enrichment occurring as foliation-parallel	Trace 1% very fine grained pyrite occurs throughout the ultramafic section.	

PAP - E1560

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	30cm wide milky quartz vein observed at 99.9m. 109.91-110.88m: Weakly ankeritized dioritic dike. Colour light grey, moderately hard, non-magnetic. Weakly developed foliated texture. Quartz veining increases in abundance at the expense of ankerite below roughly 117m to the end of the section. Lower contact is difficult to pick out, and is chosen as the first appearance of significant sericite-pyrite.	bands to 1cm wide.		
122.70-144.9[illegible] ALTERED BASALT	Colour variable from light yellow-green to light beige-buff depending on sericite-carbonate abundance, soft, non-magnetic, non calcareous. Overall a weakly developed foliated texture alternates with sections of massive weakly altered basalt. Alteration is weak to moderate overall, with local sections being heavily altered to sericite (eg. 124-127.49m). Quartz veining is 1-3% in abundance overall, but can become quite heavy in local sections (eg. 122.7-125m), occurring both as discrete veins and strongly silicified sections. Individual veins can be up to 10cm in width. Ankerite, to 5-10% abundance, is typically present in the quartz veins.	Pervasive sericite carbonate (?) throughout. 122.70-127.49m: heavily altered zone. Strongly sericitized with white and black quartz veining 122.7-123.6m, nearly massive silica 123.6-124.5m, strongly sericitized 124.5-126m. Quartz section 122.7-123.6m has a banded/	122.7-127.49m: overall 3-5% disseminated, fine to medium grained, subhedral pyrite. Locally can get to 25% disseminated fine pyrite intimately associated with sericite (24.9m).	

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	127.49-140.33m: weakly to moderately altered basalt, containing only a few short sections of sericite-pyrite-quartz alteration at 135.65-136.66m, and 138.27-138.58m. The basalt is generally well fractured with the fractures being filled with a dark green, very fine material. Rare, weakly developed, small pillows are observed at 130.8 and 134.8m. In general, the groundmass of this basalt appears to have been altered by a fine mass of sericite-carbonate which imparts a yellowish colour to the core. Core Angle: 65° to CA at 136.0m shearing. 140.33-144.94m: Section of moderate to strongly sericitized basalt containing 4-5 quartz-ankerite veins to 10cm in width. The core is a yellow beige colour where the sericite is most abundant. 3-5% pyrite (locally smsv over 3-5cm) occurs with the stronger sericite, as small disseminated patches and subhedral to anhedral grains to 1-2mm in size. Sericite alteration gradually decreases below roughly 143m to 144.94.	brecciated texture with alternating, .5mm wide bands of white and black quartz and strongly sericitized basalt.		
144.94-230.00 **BASALT**	Colour medium green-grey,soft, non-magnetic, non-calcareous. Massive to weakly foliated, very fine grained granular texture. 3-5% quartz-ankerite veinlets/stockworks are present and rarely exceed 1-2cm in width. Ankerite	occasional short sections of sericite-carbonate-quartz-pyrite alteration are present, especially within	Trace 1% disseminated fine grained anhedral pyrite.	

PAP-E1588

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	can constitute up to 50% of any given vein. Some veins have weakly sericitized vein walls, where the alteration penetrates only 1-2mm into the host rock. 1-3% disseminated very fine grained leucoxene becomes apparent below approximately 158m to 173m. Core Angle: 65° to C.A. at 162m. Foliation. 175.26-180.28m: weakly altered interval. Pervasive, weak-moderate sericite-carbonate alteration is present throughout the groundmass of the host unit, locally strong in the vicinity of quartz veins (eg. 175.80m). 5-7% pyrite is present over short lengths with stronger sericite alteration. 180.28-184.15m: interval of moderate to strong sericite-(pyrite) alteration and quartz veining. The sericite seems to show a spatial relationship to quartz veining, and can contain 3-5% (locally) disseminated pyrite. Overall sulphide abundance 1-3%. Quartz-ankerite vein abundance 20-30% in this section, occurring mostly as veins to 0.5m in width. Larger veins show ribbon textures. Two quartz generations are clearly observed from cross-cutting veins. A large vein at 186.5m contains sub-equal amounts of white and black quartz. Upper and lower contacts are gradational.	5-10m of upper contact (eg. 147.34-147.90m and 148.75-149.55m).		

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	184.15-195.57m: Weakly to moderately well sericitized basalt. Weak sericite alteration occurs as a pervasive replacement of the host groundmass and local moderate to strongly sericitized sections are developed in vicinity of quartz-ankerite veins. A change in carbonate species is noted at 194.3m. Above this point, ankerite is present in the veins. below this point, calcite is present with the quartz veins. Core Angle: 60° to CA at 214.8m. Foliation The carbonate species changes back to ankerite again below approximately 230m. 3-5% disseminated, fine grained leucoxene is present in the 228-230m section.		184.15-195.57m: Trace to 1% disseminated pyrite occurs principally with better developed sericite-quartz alteration.	
230.00-291.82 **ALTERED POLYMITIC CONGLOMERATE**	Colour variable from light yellow-green to beige-buff, depending on strength of alteration. Soft, non-magnetic. Overall a weak to moderately well developed foliated and sheared texture, is present throughout the unit. Upper contact is gradational, as alteration strength increases slowly down the hole over roughly 1m. 3-5% quartz-ankerite veins overall, occurring as foliation parallel veins to 5cm ,foliation parallel knots of quartz-ankerites, amorphous patches and ptygmatic veins which parallel CA.	Pervasive ankerite-sericite alteration is present through entire section to varying degrees. Weakly altered sections are a light-yellow green colour, while the most strongly altered sections consist of 100% sericite-ankerite in subequal amounts.	Trace -1% disseminated and rare stringer pyrite intimately associated with the more strongly sericited-ankeritized sections. Pyrite is present only in upper third of this unit.	

PAP - E1568

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	Well developed anastomosing shear textures are common throughout the interval. Core Angle: 60° to CA at 243m. Shearing. The more strongly altered sections are as follows: 231.35-231.64: Mixed quartz-sericite with 1-3% diss. pyrite. 235.14-237.34: sericite-ankerite with trace pyrite. 240.63-251.0: mixed sericite-ankerite-quartz/silica-chlorite (sheared). 243.20-244.83: altered dike 251.0-262.76: chlorite-ankerite dominated shear zones, minor quartz/silicification. Core Angle: 55° to CA at 251.0m. Shearing Core Angle: 55° to CA to 264.0m. Shearing Shearing strength and textures increases gradually down the hole. Above roughly 251m, the core is strongly foliated, but displays no well developed shear planes, aside from some short 5-10cm sections. Below 251m to 262.7m, corresponding with a chlorite-ankerite altered zone, shearing becomes quite strong and individual shear planes are easily observed. The shear planes are filled with a dark green aphanitic material which outline and define lensoids or "fragments" of lighter coloured ankeritized material. This imparts a definite fragmental texture to the core.			

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Project No. 107 Hole No. SYL-92-1

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	Additional altered sections are: 267.5-270.70m: mixed sericite-ankerite, trace hematite toward end of sub-unit. 270.70-286.05: strong sericite-ankerite with hematite giving a pink colouration to core. Some chloritic shearing. Some sections are granular and fragmental textured suggesting this sub-unit may be an altered (felsic??) dike. 286.05-291.82: moderate ankerite-sericite alteration, local sections of strong sericite alteration. Core Angle: 60° to CA at 272.0m. Foliation. Core Angle: 60° to CA at 285.0m. Foliation.			Note: A similar unit was intersected at the beginning of hole SYL-92-3 where it has been logged as a polymictic conglomerate. These two units may be correlatable. The rock name of this unit was changed upon viewing the core from hole SYL-92-3.
291.82-301.00 BASALT	Colour medium to dark green, soft, non-magnetic, non-calcareous. Massive to very weakly foliated, very fine grained texture. 1-3% quartz-calcite veinlets containing traces of hematite. Carbonate species changes from ankerite above 291.82m to calcite below 291.82m.			
301.00	End of Hole.			

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 1 OF 4

LATITUDE 16+75S
DEPARTURE 32+00E
ELEVATION Surface
DIP AT COLLAR -45° BEARING Az. 210°
TOTAL DEPTH 200.00m CORE SIZE BQ
CORE STORAGE Aunor Minesite - Timmins
REMARKS

Test Depth	Dip	Magnetic Bearing	Corrected Bearing
60m	-44°		
120m	-45°		
200m	-44°		

Project No. 107 Hole No. SYL-92-2
Property Sylvanite
NTS. 41 O/15 TWP. Denyes Claim No. P994946
Date started Nov. 24, 1992 completed Nov. 25, 1992
Contractor Bradley Bros.
Logged by R. Pressacco

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
0-10	Casing. All casing recovered on termination of hole.			
10-35.92 SHEARED MAFIC INTRUSIVE (GABBRO-DIORITE)	Colour variable from dark green to a light grey-green, variably hard from hard (lighter coloured material) to soft (dark green material), non-magnetic, non-calcareous. Moderately well developed foliated and porphyritic texture. Phenocryst composition is dominated by a dark green chloritic material (7-10% abundance), with minor amounts of plagioclase and quartz phenocrysts also present. 1-3% ankeritic clots to 5mm in size are present in the more heavily sheared sections. Core Angle: 65° to CA to 24.5 on shearing. 1-3% thin quartz-calcite veins/veinlets are present throughout interval. 24.5-29.5m: plagioclase-porphyritic section. 7-10% rounded plagioclase phenocrysts are set in an aphanitic, sheared matrix. The carbonate species changes from ankerite above 35.92m to calcite below 36.92m.			

FAP - 1004

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 2 OF 4

Project No. 107 Hole No SYL-92-2

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
35.92-64.86 FOLIATED, INTERMEDIATE LAPILLI/ FRAGMENTAL	Colour dull medium grey, soft, non-magnetic non-calcareous. Moderately to well developed foliated texture. Fragments to 1-3 cm in size are present throughout the section. Fragments are generally sub-angular and are basically monolithic, consisting of a light, aphanitic to very fine grained, felsic material. Rare quartz-calcite veinlets do not exceed 1-2cm in width. 35.92-39.5m: Moderately to well sheared section. Shear planes are marked by the presence of epidote-sericite-chlorite. Trace 1% disseminated, very fine grained, anhedral pyrite observed 37.5-38.0m. Core Angle: 60° to CA 48.5m foliation. 60.85-64.86m: section of darker coloured lapilli/fragmental, possibly due to incipient chloritization. Upper contact of sub-unit is gradational over 30-50cm. Fragment abundance drops off to 3-5%, and the core becomes less foliated, becoming almost massive in texture. Some narrow interval of a black graphitic argillite are interspersed through the lower half of sub-unit and account for roughly 5-7% abundance. A 2cm and 10Cm interval of graphitic argillite are present at 64.66 and 64.75m respectively. Core Angle: 65° to CA at 63.5m foliation.		Trace-1% diss. pyrite observed with a sheared interval at 46.10-46.40m. 60.85-64.86m: overall pyrite abundance 1-3% occurring as diss. fine grained sub-hedral grains, and patches of fine crystal aggregates to 1-2cm in size. Heaviest pyrite concentration is in the 63.44-64.00m section (7-10% pyrite).	Probable IP anomaly 60.85-64.86m.

PAP - E 1958

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No 3 OF 4

Project No 107 Hole No. SYL-92-2

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
64.86-112.40 **BASALT**	Colour variable from light beige-yellow to medium green, soft to moderately hard, variably calcareous. Variable texture from massive, aphanitic to weakly developed fragmental texture (pillow breccia?). 1-3% quartz-calcite veinlets are oriented to all angles to CA. Weakly developed pillow textures observed in some short sections (eg. 85m). 103.80-105.00m: moderately well developed hyaloclastite-bearing section. 105.56-108.19m: Gabbro dike. Colour dark green, moderately hard, non-magnetic. Massive, porphyritic texture with 10-15%, 1-3mm sized chloritic phenocrysts set in an aphanitic matrix. 3-5% very fine leucoxene present. Core Angle: 50° to CA at 93.0m foliation.	64.86-76.14m: moderate to strongly developed pervasive carbonitization (calcite). This alteration imparts a light yellow-beige colour to core. Alteration gradually decreases in strength down the hole, and is virtually absent below 83m.		
112.40-200.00 **ULTRAMAFIC VOLCANICS**	Colour black to dark green, very soft, weakly to moderately magnetic, non-calcareous. Moderately to well developed foliated, very fine grained texture. Abundant quartz-(ankerite?) veining/ stockwork at all orientations to CA. Quartz veining abundance 5-7% overall, but can reach 10-15% locally. 114.35-114.60m: narrow zone of fault gouge.	113.0-117.2m: serpentinized interval. Moderate to strong alteration imports whitish colour to the core. Some quartz veining is mixed into this interval.	117.2-117.87m: Trace to 1% disseminated and patchy pyrite is hosted by what appears to be a silicified section.	

PAP-E1568

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 4 OF 4

Project No. 107 Hole No. SYL-92-2

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	Core Angle: 45° to CA at 117.0m. Foliation. Core Angle: 50° to CA at 135.0m. Foliation. 122.06-129.66m: section contains fresh, perhaps weakly pillowed mafic volcanics 1-3% quartz veinlets contain calcite as the carbonate species. Ultramafics gradually become less magnetic down the hole, being non-magnetic below roughly 150m. Core Angle: 60° to CA at 144.2 m. Foliation. 157.20-165.90m: Gabbro dike. Colour dark green, non-magnetic, moderately soft. Massive to weakly foliated texture. Trace quartz-calcite veinlets, 1-3% disseminated leucoxene observed in lower half of interval. Core Angle: 65° to CA at 166.0m. Foliation. Core Angle: 65° to CA at 186.5m. Foliation. Ultramafics take on a very black colour below 193m, roughly concurrent with a decrease in ankerite alteration.	128.66-157.20m: weak to moderately well developed, pervasive, disseminated ankerite enrichment. Ankerite occurs as small spots and patches diss. through the interval. 165.90-167.0m: mod. well sericited section contains 7-10% quartz veining and 1-3% diss. very fine grained pyrite. 167.00-200m: weak pervasive ankerite alteration present, similar to that above 157.20m. 178.45-180.12m: mod. well developed sericite-fuchsite-carb. alteration contains trace -1% diss. pyrite.		
200.00	End of Hole.			

PAP - E1568

LATITUDE 41+30S

DEPARTURE 16+30W

ELEVATION Surface

DIP AT COLLAR -45° BEARING Az. 210°

TOTAL DEPTH 212.00m CORE SIZE BQ

CORE STORAGE Aunor Minesite - Timmins

REMARKS

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Test Depth	Dip	Magnetic Bearing	Corrected Bearing
60m	-44°		
120m	-44°		
180m	-43°		

Project No. 107 Hole No. SYL-92-3

Property Sylvanite

NTS 41 O/15 TWP. Denyes Claim No P994942

Date started Nov. 25, 1992 completed Nov. 27, 1992

Contractor Bradley Bros. - Timmins

Logged by R. Pressacco

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
0-4	Casing. Casing removed on termination of hole.			
4-38.00 **ALTERED POLYMICTIC CONGLOMERATE**	Colour variable from medium green to beige to pinkish-red depending on alteration style and intensity, moderately hard, non-magnetic, non-calcareous. Very weakly foliated, fragmental texture containing variably sized, rounded clasts are heterolithic in composition with at least 3 rock types being identified in the clasts. Clasts are clast-supported for the most part, but some sections of mostly matrix and fine clasts are present. 3-5% quartz-ankerite veinlets are at all angles to CA; those that parallel CA are generally folded in a ptygmatic fashion. Core Angle: 65° to CA at 21.0m. Bedding. Clast abundance gradually decreases down the hole. Lower contact chosen subjectivity.	4-23m: weak to mod. well developed sericite alteration imparts a beige colour to the core. 23-27m: mod. to strong hematite alteration turns the core a pink-red colour, hematization seems to affect the clasts preferentially. 27-32m: weak pervasive hematization, with moderate sericite alteration.	Trace to 1% very fine diss. pyrite observed in the 11-18m section.	

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 2 OF 3

Project No. 107 Hole No. SYL-92-3

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
38.00-173.70 QUARTZITE/ GREYWACKE	Colour variable from medium grey-green, through pinkish-red to beige depending on alteration, moderately hard, non-magnetic, non-calcareous. Massive to very weakly foliated, very fine grained granular texture. 3-5% quartz-ankerite veinlets. Occasional conglomerate clast and short sections are present (eg. 46-437m, 69.5m) 10cm wide quartz-tourmaline vein present at 59.00m. Conglomerate clast abundance gradually increases down the hole, becoming 5-7% in overall abundance. 131.16-132.38m: Gabbroic dike. Colour medium green, moderately soft, non-magnetic. Massive to weakly developed foliated and porphyritic texture. Trace quartz-ankerite veinlets. 143-164m: Conglomerate-rich section. Clast abundance is up to 25-30% locally, and clasts reach 7-10cm in size, all supported in a medium grey matrix. Weak to moderate pervasive hematization throughout, but seems to prefer the clasts over matrix. Trace quartz-ankerite veinlets.	38-44m: strong pervasive, sericite alteration with minor hematization. 55-74m: moderate to strong, pervasive sericitization. 74-87m: weak to moderate hematization with weak sericitization.		

PAF - E1568

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 3 OF 3

Project No. 107 Hole No. SYL-92-3

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	164-173.70m: Host quartzite becomes a light beige in colour and shows a weakly developed foliation, possibly indicating a weak sericitization. Well developed granular texture throughout. Rare diss. pyrite. Core Angle: 40° to CA at 168.5m. Foliation.			
173.70-212 **INTERBEDDED GREYWACKE & GRAPHITIC ARGILLITE**	Colour variable from medium grey to black, moderately soft, non-magnetic, non-calcareous. Well developed bedded texture with some short 10-20cm sections exhibiting a fragmental and/or cross-bedded texture. Greywackes are volumetrically dominant above roughly 182m, graphitic argillites are more abundant below. Rare quartz-rich veinlets. Narrow bed of quartzite present in the 178.67-179.91m section. Core Angle: 50° to CA at 170.0m bedding. Core Angle: 60° to CA at 183.5m bedding. Core Angle: 45° to CA at 193.5m bedding. Core Angle: 55° to CA at 206.2m bedding.		Trace to 1% pyrite observed in the 180-183m interval. Pyrite occurs as thin, mm-scale beds and small patches to 5mm in size. 197-210m: Trace 1% pyrite modules and thin bed.	
212.00	End of Hole.			

PAP - E 1558

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

LATITUDE 22+75S
DEPARTURE 44+00W
ELEVATION Surface
DIP AT COLLAR -45° BEARING Az. 210°
TOTAL DEPTH 200.00 CORE SIZE BQ
CORE STORAGE Aunor Minesite - Timmins
REMARKS

Test Depth	Dip	Magnetic Bearing	Corrected Bearing
60m	-47°		
120m	-48°		

Sheet No. 1 OF 5
Project No. 107 Hole No. SYL-92-4
Property Sylvanite
NTS. 410/15 TWP. Denyes Claim No. P960497 P960502
Date started Nov. 27, 1992 completed Nov. 29, 1992
Contractor Bradley Bros. - Timmins
Logged by R. Pressacco

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
0-4	Casing. Casing removed on termination of hole.			
4-14.95 SHEARED, SERICITIZED BASALT (??)	Colour medium yellow-grey, moderately hard, non-magnetic, weakly calcareous. Moderate sheared/foliated texture. Very fine grained overall, but some short sections are weakly fragmental. 1-3% quartz-calcite veinlets. Core Angle: 55° to CA at 13.0m. Shearing.	Weak, pervasive calcite enrichment of groundmass. Yellowish colour suggests weak-moderate sericiti-zation. Gradational lower contact suggests that this is an altered basalt.	Trace -1% very fine disseminated pyrite.	
14.95-80.00 BASALT	Colour medium to dark green, moderately hard, non-magnetic, moderately calcareous. Moderate to weakly developed foliation, very fine grained granular texture. Some possible weakly developed pillow breccia and pillow selvages observed in the 14.95-27m interval. 3-5% thin quartz-calcite veinlets are at all angles to CA. Core Angle: 60° to CA at 17.0m. Foliation. 1-3% disseminated fine grained leucoxene observed in the 27.5-31m section.	Moderate pervasive calcite enrichment of groundmass.	20cm section of 10-15% patchy pyrite present at 27.0m. Pyrite is associated with minor quartz veining and weak sericitization.	

FAP - 14264

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 2 OF 5

Project No. 107 Hole No. SYL-92-4

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	43.60-50.0m: Moderately weak well sericitized interval. The core gradually becomes more and more yellow-green in colour through 43.60m. Abundant very fine hairlike fractures stockwork accompany this sericitization. These fractures are less than 1mm in width and can contain either quartz or chlorite. Some quartz veins to 5cm wide are present, and these carry 3-5(-7%) disseminated anhedral, medium grained pyrite. The strength of alteration is somewhat stronger in the vicinity of these larger quartz veinlets. Core Angle: 55° to CA at 40.0m. Foliation. The abundance of the hairlike fractures described above decreases to nil below roughly 52.5m. Sericitization strength remains approximately constant at moderate down to approximately 72m. Weakly developed, fine network of irregular quartz veinlets/stockwork is present with this sericitization. Core Angle: 55° to CA at 60m. Foliation. A 50cm wide interval of quartz-calcite veining and narrow fault gouge is present at 72.20m. Rare amount of a brown biotite mica present in this vein. The gouge zones are less than 10cm wide and are approximately 10° to CA.		Minor diss. py.	

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 3 OF 5

Project No. 107 Hole No. SYL-92-4

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	73-77m: Moderately well foliated, leucoxene-bearing interval. 5-7% fine grained diss. leucoxene are hosted within moderately foliated, weakly sericitized basalt. Minor quartz veining and patches. Core Angle: 55° to CA at 74m. Foliation. Lower contact is chosen subjectively as the first appearance of recognizable pillow structures.			
80.00-175.50 PILLOWED BASALT AND MASSIVE MEDIUM GRAINED BASALT	Colour light green-grey, moderately hard non-magnetic, weakly to moderately calcareous. weakly developed pillowed texture can be easily observed, with narrow hyaloclastic sections being spaced on the order of 10cm-1m apart. This interval may possibly be a mixture of pillows and pillow breccia, as some textures are clearly brecciform. Trace -1% quartz-calcite veinlets are at all angles to CA, gradually decreasing in abundance down-hole from 80m. 104.10-105.26m: Diabase dike. Colour black, moderately magnetic, fine grained crystalline texture. Lower contact at 45° to CA. The main unit gradually becomes less well pillowed and more massive down hole, through roughly 137-143m. Below 143m the basalt becomes more massive and coarser grained to roughly 153m, becoming fine grained massive to 175.50m. Last 3m of section (172.5-175.5) appears to be weakly sericitized.			

PAF - E1508

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 4 OF 5

Project No. 107 Hole No. SYL-92-4

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
	130.70-134.66m: section of darker coloured pillow basalt/pillow breccia. Colour medium to dark grey, very hard, non-magnetic. This colour change probably due to weak-moderate silicification. 1-3% quartz-calcite veinlets. Moderate, pervasive calcite enrichment throughout the groundmass of the unit. Trace -1% disseminated anhedral fine to medium grained pyrite. Gradational upper and lower contacts. A 50cm interval of blocky, broken core is present starting at 173.9m. The overall sequence of this unit, pillow basalt, massive coarse center, fine grained lower contact, suggests that stratigraphic tops are towards the top of the hole (north).			
175.50-183.19 **MIXED GRAPHITIC ARGILLITE AND GREYWACKE**	Colour black to very dark grey, moderately soft, non-magnetic, moderate pervasive calcite enrichment of matrix. Moderately well developed foliated texture, bedding evidence is indistinct at best. 1-3% quartz-calcite veinlets at the top of the section give way to mixed quartz-calcite/ankerite veinlets within 3m of lower contact. Core Angle: 70° to CA at 177m. Foliation.		1-3% pyrite occurs as disseminated, five grained to very fine grained euhedral crystals 175.5-177.5m and as rare beds (?) and foliation-parallel patches. 177.5-183.19m.	Unit likely the cause of strong IP anomaly.

PAP - E 1568

NORANDA EXPLORATION COMPANY LIMITED

DIAMOND DRILL CORE LOG

Sheet No. 4 OF 5

Project No. 107 Hole No. SYL-92-4

Property SYLVANITE

Depth & Lithology	Description (colour, grain size, texture, structure, etc.)	Alteration	Mineralization	Remarks
183.19-200.0 PILLOWED BASALT	Colour variable from medium yellow-grey to tan-beige, soft, non-magnetic, moderately calcareous (calcite). Textures variable from weakly foliated 183.19-186m to massive and pillowed 186-200m. 5-7% quartz-calcite veinlets are at all angles to CA, and generally do not exceed 3-5mm in width. A larger vein is present 198.30-198.50m.	Weak pervasive sericite-carb. alteration present 183.19-186m, becoming moderate-strong 186-200m.	Trace -1% diss. pyrite in the 194-197m section.	
200.00	End of Hole.			

PAP - E1568

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

[redacted] W9460.00003

Personal information collected on this form is obtained under the authority of the Mi this collection should be directed to the Provincial Manager, Mining Lands, Mini Sudbury, Ontario, P3E 6A5, telephone (705) 670-7284.

41O15SW0005 2.15430 DENYES

900

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s)		Client No.
Hemlo Gold Mines Inc.		143550
Address		**Telephone No.**
c/o PO Box 1205 Timmins, Ont P4N 7J5		(705) 268-9600
Mining Division	**Township/Area**	**M or G Plan No.**
Porcupine	Denyes	M-758
Dates Work Performed From: June 15, 1992	To: January 29, 1993	067112

RECEIVED
MAY 17 1994
MINING LANDS BRANCH
RECORDED
APR 11 1994
Receipt _____

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	Geology, Rock Geochem & grab sampling, IP
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs $ 29,523.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Belanger Geo. Ltd (IP)	PO Box 40, Evain, Quebec J0Z 1Y0
Rene Prasseco (Author)	c/o PO Box 1205, Timmins, Ont P4N 7J5
J. Gerber, C. Gerber, K. Wakefield, H. Palonski	Ditto
Rejean Pinsonnault (IP Interpretation)	c/o 152 Murdoch Ave, Suite 203-201, Rouyn-Noranda, Quebec J9X 1E2

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

	Date	Recorded Holder or Agent (Signature)
I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Feb 8/94	

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: Roger Daoust c/o PO Box 1205 Timmins Ont P4N 7J5

Telepone No.	Date	Certified By (Signature)
(705) 268-9600	Feb 8 1994	Roger J. Daoust

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Revision
$29,523.	Apr. 11, 1994	S. White	
	Deemed Approval Date: July 10, 1994	Date Approved	
	Date Notice for Amendments Sent		

RECEIVED
"C"
APR 11 1994
@ 3:00 pm
PORCUPINE MINING DIVISION

0241 (03/91)

Work Report# for Applying Reserve	Claim Number (see note 2)	# of Claim Units	Value of Assesment Work Done on this Claim	Value Applied to this Claim	Values Assigned from this Claim	Reserve:Work to be Claimed at a Future Date
	P 0,960,491	1	145.00	1,407.00		
	P 0,960,492	1	489.00	1,407.00		
	P 0,960,493	1	44.00	1,743.00		
	P 0,960,494	1	0.00	1,743.00		
	P 0,960,495	1	0.00	1,743.00		
	P 0,960,496	1	516.00		516.00	
	P 0,960,497	1	1,228.00		1,228.00	
	P 0,960,498	1	440.00		440.00	
	P 0,960,499	1	200.00	1,407.00		
	P 0,960,500	1	0.00	1,743.00		
	P 0,960,501	1	1,049.00		1,049.00	
	P 0,960,502	1	1,741.00		1,741.00	
	P 0,960,503	1	942.00		942.00	
	P 0,960,504	1	762.00		762.00	
	P 0,960,505	1	253.00	1,357.00		
	P 0,960,506	1	856.00		856.00	
	P 0,960,507	1	0.00	1,743.00		
	P 0,960,508	1	0.00	1,743.00		
	P 0,960,509	1	0.00	1,743.00		
	P 0,960,510	1	339.00	1,407.00		
	P 0,960,511	1	97.00	1,407.00		
	P 0,960,512	1	0.00	1,407.00		
	P 0,960,513	1	859.00		859.00	
	P 0,960,514	1	781.00	967.00		
	P 0,960,515	1	387.00	1,387.00		
	P 0,993,832	1	566.00	609.00		
	P 0,993,833	1	725.00	725.00		
	P 0,993,834	1	496.00	496.00		
	P 0,993,835	1	770.00	770.00		
	P 0,993,836	1	623.00	623.00		
	P 0,993,837	1	302.00		302.00	
	P 0,993,838	1	345.00		345.00	
	P 0,993,839	1	335.00		335.00	
	P 0,994,536	1	1,353.00	1,360.00		
	P 0,994,537	1	1,905.00		1,905.00	
	P 0,994,538	1	1,108.00		1,108.00	
	P 0,994,539	1	1,054.00		1,054.00	
	P 0,994,540	1	339.00	339.00		
	P 0,994,541	1	1,270.00		1,270.00	
	P 0,994,542	1	1,616.00		1,616.00	
	P 0,994,543	1	657.00		657.00	
	P 0,994,544	1	851.00		851.00	
	P 0,994,545	1	1,709.00		1,709.00	
	P 0,994,546	1	2,124.00		2,124.00	
	P 0,994,547	1	247.00	247.00		

Work Reports for Applying Reserve	Claim Number (see note 2)	# of Claim Units	Value of Assesment Work Done on this Claim	Value Applied to this Claim	Values Assigned from this Claim	Reserve:Work to be Claimed at a Future Date
	45		29,523.00	29,523.00	21,669.00	0.00
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse affects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (x) one of the following:

1. [ ] Credits are to be cut back starting with the claims listed last, working backwards.

2. [ ] Credits are to be cut back equally over all claims contained in this report of work.

3. [ ] Credits are to be cut back as priorized on the attatched appendix.

4. [x] Credits are to be cut back starting with the claims that have reserve credits.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option payments, memorandum of agreements, etc., with respect to the mining claims.
Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed. Signature Date

Ministry of Northern Development and Mines
Ontario

ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre	15,651.00	
	Field Supervision Supervision sur le terrain		15,651.00
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type IP Survey	9,047.00	
			9,047.00
Supplies Used Fournitures utilisées	Type		
			[illegible]
Equipment Rental Location de matériel	Type		
			[illegible]
		Total Direct Costs Total des coûts directs	24,698.00

RECEIVED
APR 11 1994
@ 3:00 p.m.
PORCUPINE MINING DIVISION

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type Rental truck & Gas	969.00	
	Fixed Wing	2463.00	
			[illegible]
Food and Lodging Nourriture et hébergement	Camp Costs	1393.00	[illegible]
Mobilization and Demobilization Mobilisation et démobilisation			[illegible]
		Sub Total of Indirect Costs Total partiel des coûts indirects	[illegible]
		Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)	[illegible]
		Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)	29,533.00

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit		Total Assessment Claimed
	× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation		Évaluation totale demandée
	× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Lands/Project Coordinator I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de ____________________ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature: [signature] Date: Feb 6/94

0212 (04/91)

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

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

M.L.

Transaction Number: W9460.00062

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 1 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.15430

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s): Hemlo Gold Mines Inc.		Client No.: 143550
Address: c/o PO Box 1205 Timmins, Ont P4N 7J5		Telephone No.: (705) 268-9600
Mining Division: Porcupine	Township/Area: Deroche	M or G Plan No.: M-758
Dates Work Performed — From: July 8, 1992	To: December 23, 1993	

Work Performed (Check One Work Group Only)

40 7/13

	Work Group	Type
	Geotechnical Survey	
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	Rock Geochem (48 samples), grabs (65 samples), core (288 samples)
	Assignment from Reserve	

RECORDED
APR 11 1994
Receipt

Total Assessment Work Claimed on the Attached Statement of Costs $ 3450.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Chemex Labs Ltd.	212 Brooksbank Ave, North Vancouver, BC V7J 2C1
Swastika Laboratories	PO Box 10, Swastika, Ont. P0K 1T0

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date: Feb 8/94	Recorded Holder or Agent (Signature):

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: Roger Dehn c/o PO Box 1205 Timmins Ont P4N 7J5

Telepone No.	Date	Certified By (Signature)
(705) 268-9600	Feb 8 1994	Roger Dehn

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	RECEIVED
$3,450	Apr. 11, 1994	S White	"C" APR 11 1994
	Deemed Approval Date: July 10, 1994	Date Approved	PORCUPINE MINING DIVISION
	Date Notice for Amendments Sent		

0241 (93/01)

Work Report# for Applying Reserve	Claim Number (see note 2)	# of Claim Units	Value of Assesment Work Done on this Claim	Value Applied to this Claim	Values Assigned from this Claim	Reserve:Work to be Claimed at a Future Date
	P 0,960,498	1	0.00	568.00		
	P 0,960,497	1	116.00	128.00		
	P 0,960,498	1	20.00	128.00		
	P 0,960,501	1	20.00	568.00		
	P 0,960,502	1	194.00	128.00	66.00	
	P 0,960,503	1	28.00	128.00		
	P 0,960,504	1	20.00	128.00		
	P 0,960,505	1	47.00	50.00		
	P 0,960,506	1	39.00	128.00		
	P 0,960,513	1	39.00	128.00		
	P 0,960,515	1	20.00	20.00		
	P 0,993,834	1	105.00	105.00		
	P 0,993,835	1	19.00	19.00		
	P 0,993,837	1	0.00	122.00		
	P 0,993,838	1	315.00	122.00	193.00	
	P 0,993,839	1	0.00	122.00		
	P 0,994,537	1	121.00	82.00	39.00	
	P 0,994,538	1	39.00	82.00		
	P 0,994,539	1	20.00	82.00		
	P 0,994,541	1	59.00	122.00		
	P 0,994,542	1	105.00	122.00		
	P 0,994,543	1	0.00	122.00		
	P 0,994,544	1	47.00	82.00		
	P 0,994,545	1	789.00	82.00	707.00	
	P 0,994,546	1	1,286.00	82.00	1,206.00	
	25		3,450.00	3,450.00	2,211.00	0.00
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse affects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (x) one of the following:

1. [ ] Credits are to be cut back starting with the claims listed last, working backwards.

2. [ ] Credits are to be cut back equally over all claims contained in this report of work.

3. [ ] Credits are to be cut back as priorized on the attatched appendix.

4. [x] Credits are to be cut back starting with the claims that have reserve credits.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option payments, memorandum of agreements, etc.. with respect to the mining claims.

Note 2: If work was been performed on patented or leased land, please complete the following.

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed. (Signature) (Date)

Ontario

Ministry of Northern Development Mines

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W9460.00062

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Mininge Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type: Assaying	3450.00	
			3450.00
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
	Total Direct Costs Total des coûts directs		3450.00

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		
	Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) / Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)		3450.00

RECEIVED
APR 11 1994
PORCUPINE MINING DIVISION

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentée.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
x 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
x 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Lands/Project Coordinator (Recorded Holder, Agent, Position in Company) I am authorized to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé à faire cette attestation.

Signature	Date
	Nov 6/94

Nota : Dans cette formule, lorsque des personnes le masculin est utilisé au sens neutre

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Office
933 Ramsey Lake Rd., 6th Flr
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Our File: 2.15430
Transaction #: W9460.00062
W9460.00063

July 4, 1994

Mining Recorder
Timmins

Dear Mr. White:

RE: Approval of Assessment Work on mining claims P 0960496 et. al. in Denyes Township.

The assessment credits for Geology and Geophysics, sections 12 and 14 of the Mining Act Regulations, as listed on the original Report of Work, have been approved as of July 4, 1994.

Please indicate this approval on the claim record sheets.

If you have any questions concerning this submission please contact Dale Messenger at 670-5858.

Yours sincerely,

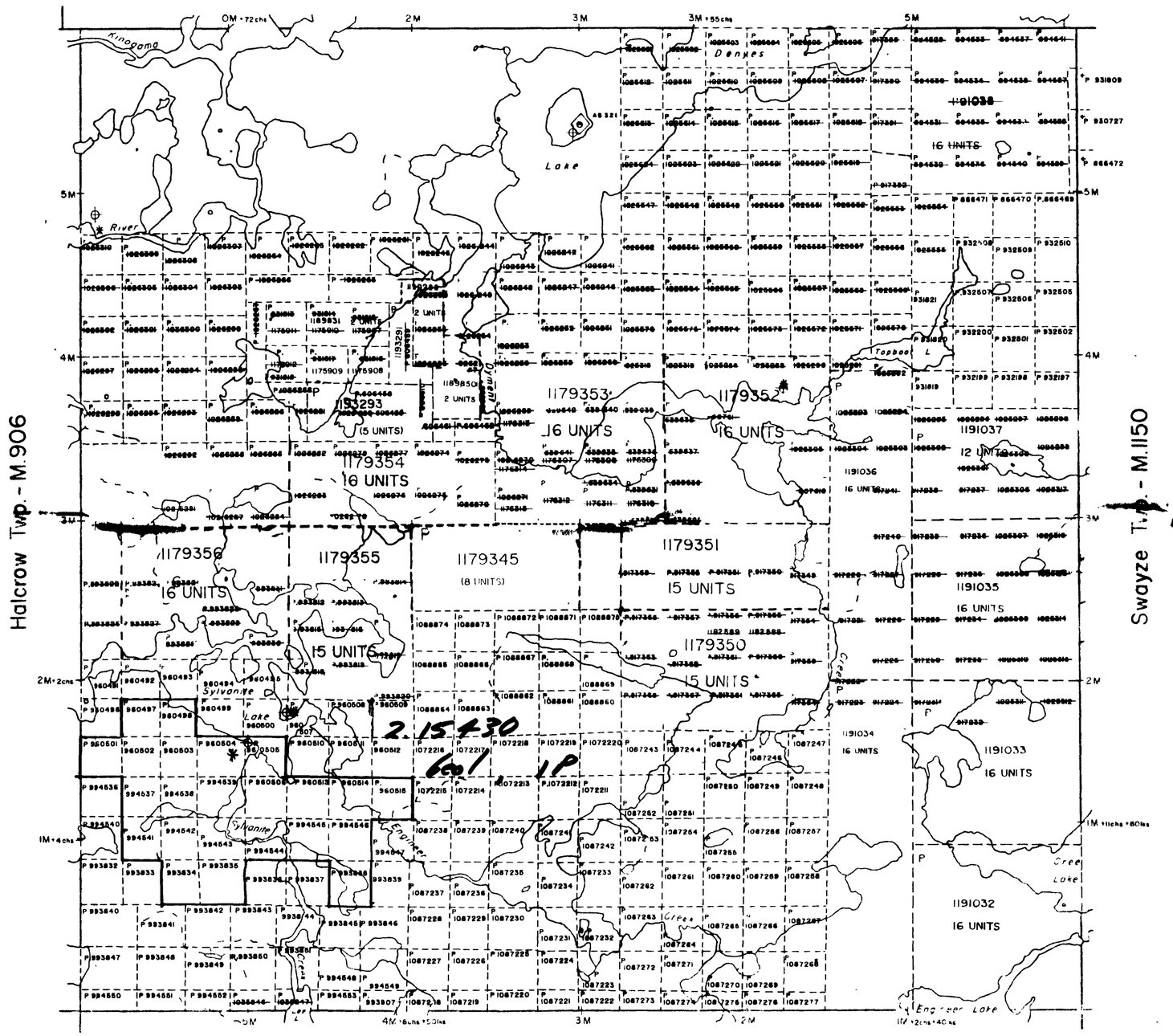
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

DEM/dm
Enclosures:

cc: Assessment Files Office
Sudbury, Ontario

Resident Geologist
Timmins, Ontario

Raney Twp. - M.1069



THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

THE TOWNSHIP OF

DENYES

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
PATENTED FOR S.R.O.	

NOTES

200' surface rights reserved on along the shores of all lakes and rivers

* L.U.P

⊕ REMOTE TOURIST CAMPS

IN 1994

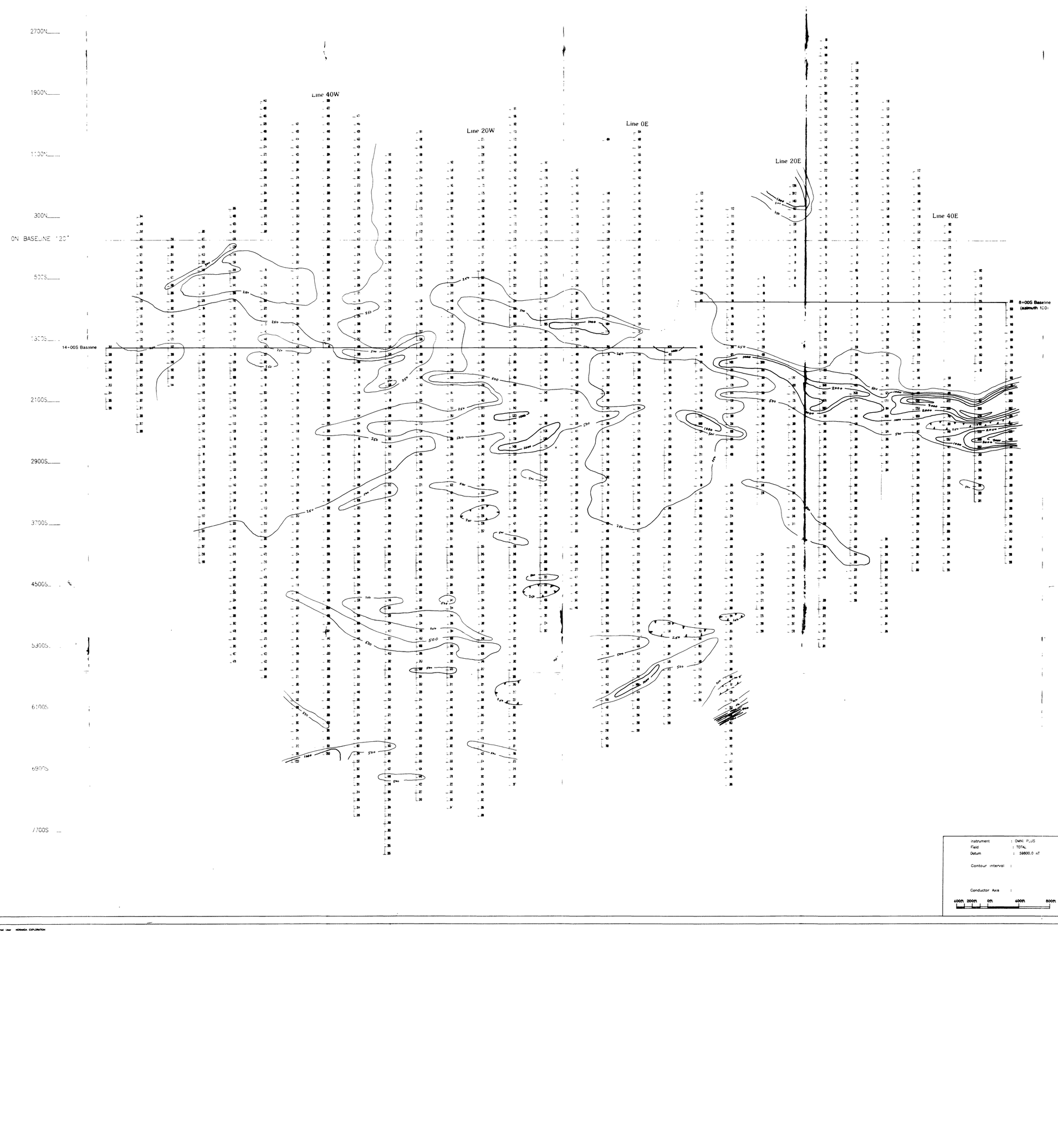
IN SERVICE OCT 31/89 CHECKED BY R BAILEY

PLAN NO. G-1107

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



2.15430

Instrument	: OMNI PLUS
Field	: TOTAL
Datum	: 59800.0 nT
Contour interval	:
Conductor Axis	:

400ft 200ft 0ft 400ft 800ft

SYLVANITE

MAGNETOMETER SURVEY

PROJECT: SYLVANITE PROJECT # : 107
BASELINE AZIMUTH : 120 Deg.

SCALE = 1 : 4800 / 1" = 400ftDATE : 10/26/92
SURVEY BY : Quad : 41-0-15
FILE: M107SYL

NORANDA EXPLORATION

SYLVANITE LAKE

SHOWING A
alt-carb-sil altered volcanics containing narrow quartz veins (1 pyr-apy-sap) -to 0.11opt Au, grab

SHOWING A 1

SHOWING B
Str hematite with qtz veining/stockwork wk epid-chl-sap alt - veins 1- 7cm wide mod-Fe carbonate alteration str foliation

SHOWING C
qtz veh, to 60cm dimension, containing pyr-apy-sap 0.51opt Au/1.0m chip - 1.44opt Au/grab

SHOWING D
40cm wide (minimum) altered dacite/ fluvitite zone with 5-7% qtz veins (1 pyr-apy-sap) chip samples 1x 0.76opt Au/4ft and 0.48opt Au/10ft

Old trenches on 0.5-1m wide rusty shear

Open Swamp

Ultramafics

Basalt

Ultramafics

Basalt

Sediments

Basalt

LEGEND

ROCK TYPES

6G	Gabbro
B	Diabase
1b	Basalt
1U	Ultramafics
6D	Diorite
cg	coarse grained
mg	medium grained
fg	fine grained
vfg	very fine grained
tr	trace
diss	disseminated
msv	massive
fol	foliated, foliation
ser	sericite, sericitic
carb	carbonate, carbonatized
sil	silicification, silicified
chl	chloritized

SYMBOLS

- foliation
- shearing
- trench/pit
- claim post
- outcrop
- swamp
- magnetic axis
- vlf axis
- trail
- Au in humus, with value (>10ppb)
- Drill Hole
- IP Phase Anomaly

2.15430

Feet 0 400

Revised Feb 1993	Sylvanite Property Geology/Compilation
PROJECT	
Proj # 107	NTS 41-O-15
Surveyed by R.L.P	Date Aug 1992
Drwg #	Drawn by L.A.W	Scale
HEMLO GOLD MINES INC.	

41O15SW0005 2.15430 DENYES


SYLVANITE LAKE
Center Lake
Jean Lake
Camp
Ultramafics
Basalt
Sediments
SHOWING A
SHOWING A-1
SHOWING C
SHOWING D
Showing "D"
B.L. 14+00S
Az 120
B.L. 8+00S
Az 120
T.L. 34+00S
LEGEND
ROCK TYPES
6G Gabbro
8 Diabase
1b Basalt
1U Ultramafics
6D Diorite
cg coarse grained
mg medium grained
fg fine grained
vfg very fine grained
tr trace
diss disseminated
msv massive
fol foliated, foliation
ser sericite, sericitic
cart carbonate, carbonatized
sil silicification, silicified
chl chloritized
SYMBOLS
foliation
shearing
trench pit
claim post
outcrop
swamp
magnetic axis
vlf axis
trail
Au in humus, with value (>10ppb)
Drill Hole
IP Phase Anomaly
2.15430
Feet
0 400

Revised	Sylvanite Property Geology/Compilation	
Jan 04 1994	PROJECT	
Dwg #	Proj # 107	N T S 41-O-15
2SYL-GP1	Surveyed by R F P	Date Aug 1992
	Drawn by L A W	Scale

HEMLO GOLD MINES INC.

41O15SW0005 2.15430 DENYES

230

P960510

0960505

P960514

P994547

P960513

P960506

P994546

P994545

P994544

P994543

P993838

P993837

P993836

Trail

1b(?),3%qtz pebbles,fragments

JG-92-01

1b

Camp

B.L. 8+00S
Az 120

10+00S

20+00S

30+00S

T.L. 34+00S

12+00E
16+00E
20+00E
24+00E
28+00E
32+00E
36+00E
40+00E
44+00E
4+00W
00
4+00E
8+00E

JG-92-10
1b
112
Cabin

1b
JG-92-11

1b
6D JG-92-08
80
110

1b, 1%py
JG-92-09

1b, mod-str fabric,
wk sericite alteration
REP-92-01
old trenches on
0.5-1m wide
rusty shear

Str Schistosity, Fragmental
appearance

1b,wk-mod carb
JG-92-02

1b,cht

SYL92-2
Sheared
6G
2lap
1b
1U

Open Swamp

1U,str carb-chl
alteration(Fe-carb)
JG-92-07

1U(?)

10cm pillows or
polysutured at 110
tops to south

1b,wk carb alteration
old trench

SYL92-1

SYL93-5

SYL93-6

Ultramafics

mg-cg
6G

6G,mg-cg

1U,foliated
REP-92-03
65
127

JG-92-06
80
140
(avg)

JG-92-05

1U,carb

1U Showing "D"

Alt'd 1b
JG-92-03,04

1b/1U,wk ser alt'n
REP-92-02

80839
80840

4cg

Basalt

1b?,wk ser alteration
str. foliation
REP-92-6
SYL93-7
85
116

6G/6D(?)
mg-cg

1U
REP-92-20
QV
150

1b,tr vfg py, wk
carb alteration
REP-92-05

1b,wk ser
alteration
REP-92-04

ob

SHOWING C
--qtz vein,1x56m dimension,
containing py-cpy-asp
-0.518opt Au/1.0m chip
-1.44opt Au/grab

SHOWING D
--40m wide (minimum) sheared ankerite-
fuchsite zone with 5-7% qtz veins
(± py-cpy-asp)
chip samples to 0.78opt Au/4ft.
and 0.49opt Au/10ft.

Ultramafics

Basalt

VLF (Fraser)

Sediments

Pond

2.15430

74
110
1U, str fol
(?)

Feet
0
400

Map 1

Revised	Sylvanite Property Geology/Compilation	
	PROJECT:	
Dwg #	Proj.#: 107	NTS: 41-0-15
	Surveyed by R.E.P	Date Aug 1992
	Drawn by: L A W	Scale
	HEMLO GOLD MINES INC.	

41C15SW0005 2.15430 DENYES

240

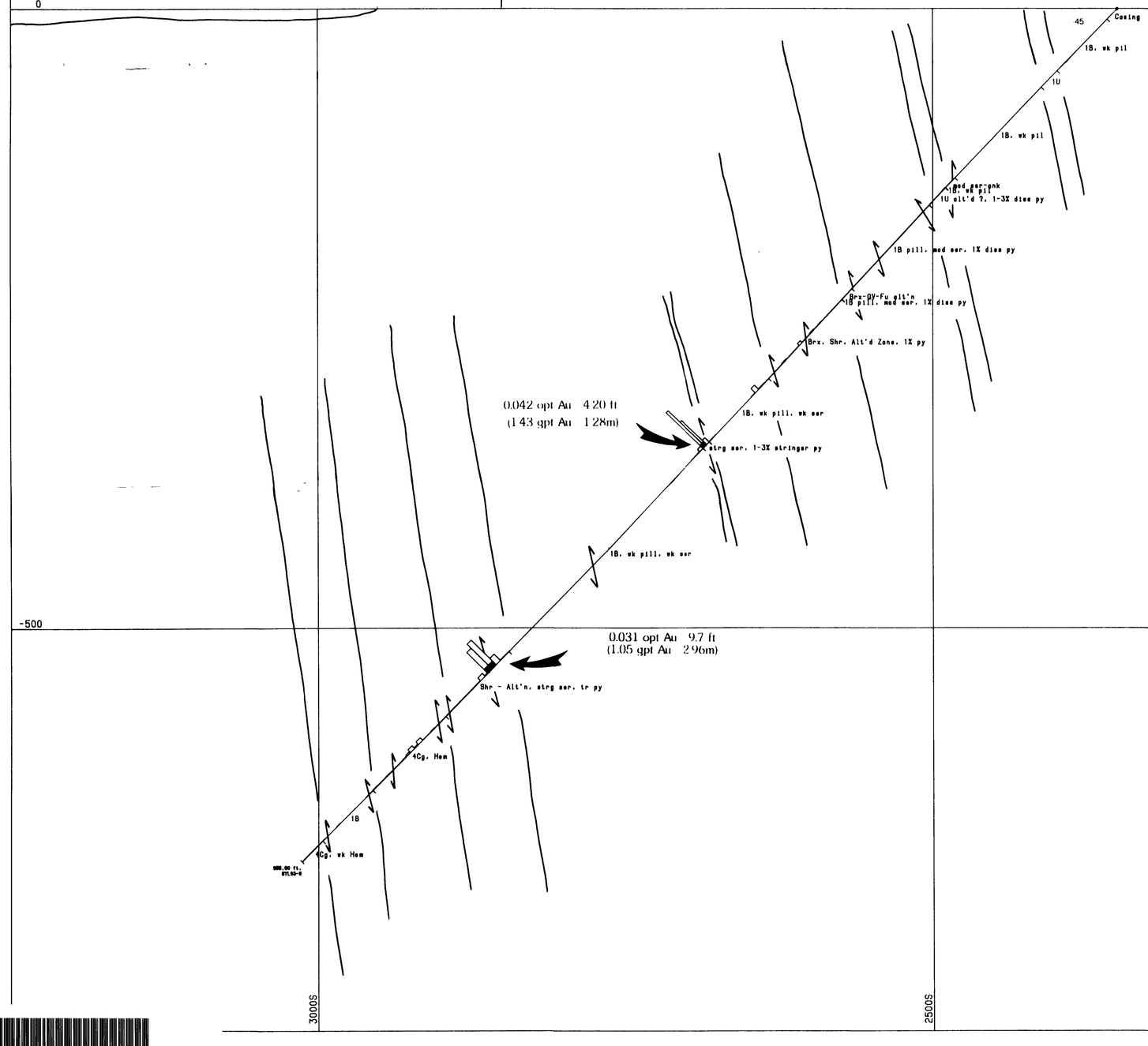
3000S | 2500S | 2000S

2800E | SYL93-5 | 2800E

S (az 210) | **N (az 030)**

Pond | Claim P993838 | Claim P994546

0 | 0



-500 | -500

GEOLOGICAL LEGEND

10 Paleozoic (undifferentiated)

Sedimentary Rocks

10 Ls Limestone

10 Ss Sandstone

9 Proterozoic (undifferentiated)

9I Intrusive Rocks

8 Diabase dykes (all ages)

7 Archean
Felsic Intrusive Rocks (undifferentiated)
7A Aplite — 7P Pegmatite
7G Granite — 7F Felsic Dyke
7B Bynnite — 7Q Quartz Porphyry
7QD Granodiorite (trond)hemite) — 7QF Quartz-Feldspar Porphyry
7PF Porphyry (undifferentiated)

6 Mafic Intrusive Rocks (undifferentiated)
6D Diorite
6G Gabbro
6A Anorthosite
6U Ultramafic

5 Chemical Metasedimentary Rocks (undifferentiated)
5 cht Chert
5 IF Iron Formation
IFo Oxide facies (magnetite)
IFo Sulphide facies
5 Gf Graphite

4 Clastic Metasedimentary Rocks
4 Cg Conglomerate
4 Q Quartzite
4 Gw Greywacke
4 Arg Argillite (fine clastic, Gp-Graphite)
4 V Volcanic (mafic metasediments, tuff?)
4 ss Siltstone
4 st Sandstone

3 Felsic Metavolcanic Rocks (undifferentiated)
3R Rhyolite
3Rd Rhyodacite

2 Intermediate Metavolcanic Rocks (undifferentiated)
2D Dacite
2A Andesite

1 Mafic Metavolcanic Rocks (undifferentiated)
1B Basalt (Bl-iron tholeiitic, m-Magnesium tholeiitic)
1U Ultramafic 1K Komatiites

Descriptors Subscripts For Metavolcanic Rocks
f fine — t tuff — f-bx flow breccia
agg agglomerate — (pl) course grained possibly intrusive
pl pillowed flows — v vesicular — b banded — gr graphite
lap lapilli var variolite
Db Debris Flow
Highly metamorphosed Rock Notation
prime symbol signifies high grade rock
gn gneissic
sh schistose
m migmatite

Alteration
carb carbonatization — sil silicification — epi epidote
ser sericitic K-spar potassic — ank ankeritic
chl chloritization
shr shear/sheering
bx brecciation

SYMBOLS

- areas of outcrop
- small outcrop
- bedding with dip direction
- foliation
- gneissosity
- lineation and plunge
- pillow structure with top direction
- geological contact defined
- geological contact approximate
- geological contact assumed
- fault/shear
- anticlinal fold structure with plunge
- synclinal fold structure with plunge
- drag fold with plunge
- shear zone
- diamond drill hole
- m magnetic attraction
- serp serpentine
- py pyrite
- po pyrrhotite
- cp chalcopyrite
- sp sphalerite
- asp arsenopyrite
- mgt magnetite
- ( ) Indicate trace or minor amounts
- HEM conductors
- magnetic isoclines (anomalies)
- q quartz
- bi biotite
- f feldspar
- Massive Sulphide
- magnetic axis
- HEM Conductor
- IP Axis
- MASV massive
- SPASV semi massive
- diss disseminated
- str stringer

2.15430

SYLVANITE PROJECT

SECTION 2800E

SCALE: 1" = 50'

Au Assays

BAR: 0.5 in = 1 ppm Au

NORANDA EXPLORATION

3500S | 3000S | 2500S

0E | SYL93-7 | 0E

S (az 210) | **N (az 030)**

Claim P994543 | Claim P994544 | Claim P960506

Sylvanite Creek

Showing C

1 x 56m QV + py - cpy - asp
0.58 opt Au / 1.0m (chip)
1.44 opt Au (gab)

0 | -500

45 | Casing | 1U | 6Q | 1U | 6Q

468.00 ft. SYL93-7

GEOLOGICAL LEGEND

10 Paleozoic (undifferentiated)
10 Ls Limestone
10 Ss Sandstone
9 Proterozoic (undifferentiated)
8I Intrusive Rocks
8 Diabase dykes (all ages)
7 Archean
Felsic Intrusive Rocks (undifferentiated)
7A Aplite — 7F Pegmatite
7G Granite — 7P Felsic Dyke
7Q Quartz Porphyry
7QP Quartz-Feldspar Porphyry
7FP Porphyry (undifferentiated)
6 Mafic Intrusive Rocks (undifferentiated)
6D Diorite
6G Gabbro
6A Amphibolite
6U Ultramafic
5 Chemical Metasedimentary Rocks (undifferentiated)
5 ch Chert
5 IF Iron Formation
IFo Oxide facies (magnetite)
IFs Sulphide facies
5 Gr Graphite
4 Clastic Metasedimentary Rocks
4 Cg Conglomerate
4 Q Quartzite
4 Gw Greywacke
4 Ag Argillite (Bla slate, Gp-Graphite)
4 V Volcanic (mafic metasediments, tuff)
4 ss Siltstone
4 ss Sandstone
3 Felsic Metavolcanic Rocks (undifferentiated)
3R Rhyolite
3Rd Rhyodacite
2 Intermediate Metavolcanic Rocks (undifferentiated)
2D Dacite
2A Andesite
1 Mafic Metavolcanic Rocks (undifferentiated)
1B Basalt (Diabase equivalent)
1Bm Amphibolite (Metabasalt)
1U Ultramafic 1K Komatiites

Descriptors Subscripts For Metavolcanic Rocks
[illegible]
[illegible] var variolitic
Dt Debris flow
Highly metamorphosed Rock Notation
prime symbol signifies high grade rock
gn gneissic
sh schistose
m migmatitic

Alteration
carb carbonatization ab albitization ept epidotes
ser sericite K-spar potassic ank ankerite
chl chloritization
slic silicification
tal talcification

SYMBOLS

- trace of outcrop
- small outcrop
- bedding with dip direction
- foliation
- gradational
- lineation and plunge
- pillow structure with top direction
- geological contact defined
- geological contact approximate
- geological contact assumed
- fault/shear
- antiformal fold structure with plunge
- synformal fold structure with plunge
- drag fold with plunge
- shear zone
- diamond drill hole
- M magnetic attraction
- serp serpentine
- py pyrite
- po pyrrhotite
- cp chalcopyrite
- sp sphalerite
- sm arsenopyrite
- mgt magnetite
- ( ) indicate trace or minor amounts
- --- HEM conductors
- [illegible]
- q quartz
- bt biotite
- f feldspar
- Massive Sulphide
- magnetic axis
- HEM Conductor
- IP Axis
- MSU massive
- SMSU Semi-massive
- diss disseminated
- str stringer

-500

3500S | 3000S | 2500S

SYLVANITE PROJECT

SECTION 0E

SCALE: 1" = 50'

2.15430

NORANDA EXPLORATION

41O15SW0005 2 15430 DENYES

3000S | 2500S | 2000S

2000E | SYL93-6 | 2000E

S (az 210) | **N (az 030)**

Creek | Claim P994545 | Claim P994546

0 | 0

-45

Casing

1U

1B pil. vk ser

0.015 opt Au / 9.5 ft
(0.53 gpt Au / 2.90m)

1B chr. mod ser-(carb), tr py

1B??, mod-strg sil-ser-chl

4Cg Hem. 3-5% chl stringers

616.00 ft.
SYL93-6

-500 | -500

3000S | 2500S | 2000S

GEOLOGICAL LEGEND

10 Paleozoic (undifferentiated)

Sedimentary Rocks

10 La Limestone

10 Ss Sandstone

9 Proterozoic (undifferentiated)

8I Intrusive Rocks

8 Diabase dykes (all ages)

7 Archean
Felsic Intrusive Rocks (undifferentiated)
7A Aplite — 7P Pegmatite
7B Granite — 7F Felsic Dyke
7E Syenite — 7Q Quartz Porphyry
7BD Granodiorite — 7CF Quartz-Feldspar Porphyry
(porphyritic) — 7PF Porphyry (undifferentiated)

6 Mafic Intrusive Rocks (undifferentiated)
6D Diorite
6G Gabbro
6A Amphibolite
6U Ultramafic

5 Chemical Metasedimentary Rocks (undifferentiated)
5 cht Chert
5 IF Iron Formation
IFo Oxide facies (magnetite)
IFs Sulphide facies
5 Gr Graphite

4 Clastic Metasedimentary Rocks
4 Cg Conglomerate
4 Q Quartzite
4 Gw Greywacke
4 Arg Argillite (fine clastic, Gp-Graphite)
4 V Volcanic (mafic metasediments, tuff)
4 ls Siltstone
4 st Sandstone

3 Felsic Metavolcanic Rocks (undifferentiated)
3R Rhyolite
3Rd Rhyodacite

2 Intermediate Metavolcanic Rocks (undifferentiated)
2D Dacite
2A Andesite

1 Mafic Metavolcanic Rocks (undifferentiated)
1B Basalt (Bl-iron Rich Bslt, m-Magnesium Rich Bslt)
1U Ultramafic 1K Komatiites

Descriptions Subscripts For Metavolcanic Rocks
f flow — t tuff — bx flow breccia
agg agglomerate ag course grained possibly intrusive
pl pillowed flows v vesicular b banded gr graphite
py ?pyll var variable
Db Debris Flow
Highly metamorphosed Rock Notation
prime symbol signifies high grade rock
gt gneissic
sh schistose
m migmatite

Alteration
carb carbonatization sil silicification epi epidote
ser sericite K-spar potassic anh anhydrite
chl chloritization
dol dolomitization
bx brecciation

SYMBOLS

- area of outcrop
- small outcrop
- bedding with dip direction
- foliation
- gneissosity
- lineation and plunge
- pillow structure with top direction
- geological contact defined
- geological contact approximate
- geological contact assumed
- fault/shear
- anticlinal fold structure with plunge
- synclinal fold structure with plunge
- drag fold with plunge
- shear zone
- diamond drill hole
- magnetic orientation
- serp serpentine
- py pyrite
- po pyrrhotite
- sp sphalerite
- mgt magnetite
- ( ) Indicate trace or minor amounts
- Hillmi conductors
- magnetic lowlines (anomalies)
- q quartz
- bi biotite
- f feldspar
- Massive Sulphide
- magnetic axis
- Hillmi Conductor
- IP Axis

MSU massive
SMSU Semi-massive
diss disseminated
str stringer

2.15430

SYLVANITE PROJECT

SECTION 2000E

SCALE: 1" = 50'

Au Assays

BAR: 0.5 in = 1 ppm Au

NORANDA EXPLORATION