



41P11NW8527 2.13521 CABOT

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MINING LANDS SECTION

REPORT ON THE GEOLOGICAL MAPPING AND GROUND MAGNETOMETER
SURVEYS ON THE CABOT PROJECT

LARDER LAKE MINING DIVISION NIS 41 P/14

Work Period 15-24 August 1990

David G. Laderoute, H.B.Sc., M.Sc.
Project Geologist

1.0 SUMMARY

During the period 14-21 August 1990, Noramco Explorations Inc. conducted a limited geological mapping program and ground magnetometer survey on a portion of Noramco Mining Corporation's (100% ownership) Cabot property, comprising three non-contiguous blocks of claims. The Cabot property is located in the extreme southwestern portion of the Abitibi Subprovince of the Superior Province of the Canadian Shield, in Cabot Township, 144 km northeast of Sudbury, Ontario, in the Larder Lake Mining Division. It consists of 21 contiguous unleased mining claims in one contiguous block. The subject program was conducted upon 6 of those claims, arranged in three non-contiguous blocks.

In the area of the property, the subprovince comprises a metavolcanic belt, consisting of a complexly interbedded series of subalkalic mafic to felsic volcanics and clastic metasediments. These have been subsequently intruded by both felsic and mafic intrusive rocks, the latter being most prominently represented by concordant gabbro sills, and later tholeiitic and alkalic diabase dykes.

Each of the three claim blocks which were the focus of the subject program exhibits a markedly different geology. On Block A (two claims), in the northwestern portion of the property, the only rock type exposed is pillowed mafic to intermediate volcanic flows, and minor massive flows of similar composition and texture. An east-striking alkalic diabase dyke apparently traverses the southern portion of this block, as determined from its magnetic signature. On Block B (one claim), in the west-central portion of the property, the only rock type exposed is feldspar porphyritic intermediate to felsic volcanic flows. A north-striking tholeiitic diabase dyke is suggested by occurrence of a magnetic anomaly on this block. Block C (three claims), in the southeastern portion of the property, exhibits the greatest variation of rock types, with massive, equigranular intermediate to felsic volcanics and massive, medium grained equigranular gabbro being exposed. A northeast-striking tholeiitic olivine diabase is exposed in the southern portion of the block. Magnetic anomalies detected correspond well to the gabbro and diabase.

Since there is no indication from either the geological or magnetometer surveys that significant economic mineralization occurs on any of the three claim blocks examined, no further work is recommended on these blocks. Other occurrences of potential economic interest elsewhere on the property are deserving of further evaluation, however.

2.0 INTRODUCTION

During the period 14-21 August 1990, Noramco Explorations Inc. conducted a limited geological mapping program and ground magnetometer survey on a portion of the Cabot property, comprising three non-contiguous blocks of claims. The Cabot property is located in the extreme southwestern portion of the Abitibi Subprovince of the Superior Province of the Canadian Shield.

2.1 PROPERTY DESCRIPTION, LOCATION AND ACCESS

The Cabot property is located in Cabot Township, 144 km northeast of Sudbury, Ontario, in the Larder Lake Mining Division. It consists of 21 contiguous unleased mining claims in one contiguous block (see Figure 2.1). The subject program was conducted upon 6 of those claims, arranged in three non-contiguous blocks. These claims are listed below and depicted in Figure 2.1:

Block A- 2 claims (LL1127904 and 1127905)

Block B- 1 claim (LL1127906)

Block C- 3 claims (LL1127907 to 1127909 inclusive)

The Cabot property is accessible by means of the Grassy Lake Road, a loose surfaced all-weather road which traverses northward from Ontario Secondary Highway 560 approximately 32 km west of Gowganda, Ontario. The Grassy Lake Road describes a broad arc, traversing approximately 50 km first north from Highway 560, then west, then southwest to the vicinity of the property. Several old logging roads traverse southward from the Grassy Lake Road onto the claim block proper.

2.2 PHYSIOGRAPHY

The property generally exhibits low relief, with the exception of an esker complex in the southeastern portion of the claim block (i.e. in the northern portion of Block C). Rarely, steep sided ridges occur, most notably in those areas underlain by rocks with greater resistance to erosion (i.e. intermediate to felsic metavolcanics, diabase and gabbro), with Blocks B and C exhibiting the greatest relief due to such features. Much of the low lying portion of the property is poorly drained, with extensive swamp cover and shallow lakes (again, most notable on Blocks B and C). The remainder of the property is gently rolling, and populated by extensive cover of young poplar, some mature poplar and lesser birch. Dry, sandy areas, such as the esker on Block C, are populated by pine and scrubby undergrowth. Wet areas are populated by black spruce and alder.

2.3 PREVIOUS WORK

That area defined by the current Cabot property has seen little past exploration work. In 1960, Jonsmith Mines Ltd. held 45 contiguous claims in the central portion of Cabot Township. This company, by means of prospecting, identified three distinct mineralization types, generally hosted within mafic intrusives, mafic metavolcanics and clastic metasedimentary rocks. In 1962, this work was followed up with ground

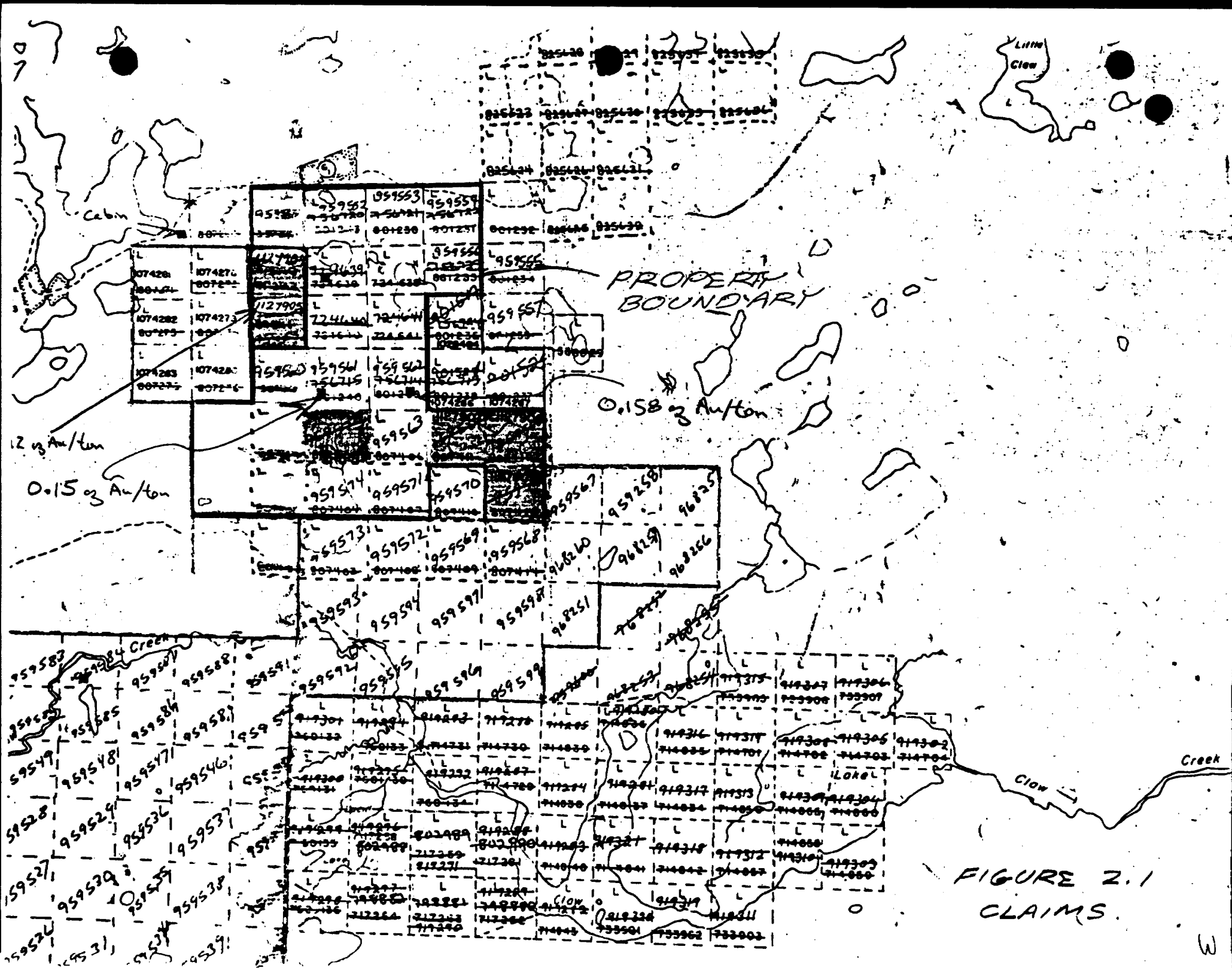


FIGURE 2.1
CLAIMS

magnetometer and EM surveys, and 1772 m of diamond drilling. Assay results from the most extensive showing, exposed in several pits and located on a mafic/felsic volcanic contact in the north-central portion of the property, were up to 0.08 oz/ton Au over narrow widths (with the exception of one 5cm quartz vein which returned 3.3 oz Au/ton), and up to 0.03 oz Au/ton over "appreciable widths" (apparently up to 6 m). Mineralization related to altered metasediments returned up to 2% Ni, 5.9% Co and 5 oz/ton Ag from selected grab samples; this is presumably Cobalt-type vein mineralization related to diabase intrusives in the area. No further work was recorded (MacVeigh, 1962).

In 1975, Falconbridge Nickel Ltd. staked 12 claims over the area, but did not file any assessment work. This was apparently in response to a suggestion by JonSmith that "massive sulphides" occurred in a gabbroic host. The claims were allowed to lapse the following year (Oudejans, 1988).

During the period May-August, 1988, A.C.A. Howe International, Ltd., conducted a geological mapping and sampling program over a 94 claim block held over the area by Actuate Resources Ltd. (Oudejans, 1988). All 94 claims were mapped on a cut grid, 192 samples were collected and analyzed for Au, Ag, Zn and Pb, with some also being tested for Ni, Mo and Co. In addition, a ground magnetometer survey was conducted over the entire claim block. Howe identified several areas of economic interest, including "stratiform sulphide" occurrences containing highly anomalous gold values at L17E, 13+75N, at L22E, 8+90N and in "Pit V" (location not specified), and "chalcopyrite-magnetite occurrences" hosted in gabbro, containing anomalous Au and Ag values. However, due to financial difficulties, Actuate Resources conducted no follow up work, so the claims were allowed to lapse in 1989.

3.0 GEOLOGY

3.1 REGIONAL GEOLOGY

The Cabot property is located in the extreme southwestern end of the Abitibi Structural Subprovince, in the Superior Province of the Canadian Shield. This subprovince comprises supracrustal rocks, and extends for 560 km, containing the Timmins, Kirkland Lake and Val D'Or mining camps.

In the area of the property (see Figure 3.1), the subprovince comprises a metavolcanic belt, consisting of a complexly interbedded series of subalkalic mafic to felsic volcanics and clastic metasediments. These have been subsequently intruded by both felsic (i.e. the quartz diorite of the Claw Lake Stock to the south, and the porphyritic granodiorite of the Togo Batholith to the west) and mafic (e.g. gabbro, approximately north striking tholeiitic, and east-southeast striking alkalic diabase dykes) intrusive rocks (Carter, 1986).

Structurally, the area is reported by Carter (1986) to be dominated by a synclinorium in the northern half of the township. Oujedans (1988), however, indicates that no compelling evidence for such a structure occurs on the property. In the western portion of the township, the north-northwest striking Ketchiwaboose Lake Fault is the dominant structural feature. The general attitude of rocks in the belt is given by Carter (1986) as 050-75.

3.2 PROPERTY GEOLOGY

The geology of each of the claim blocks covered by the subject program is given in the following sections.

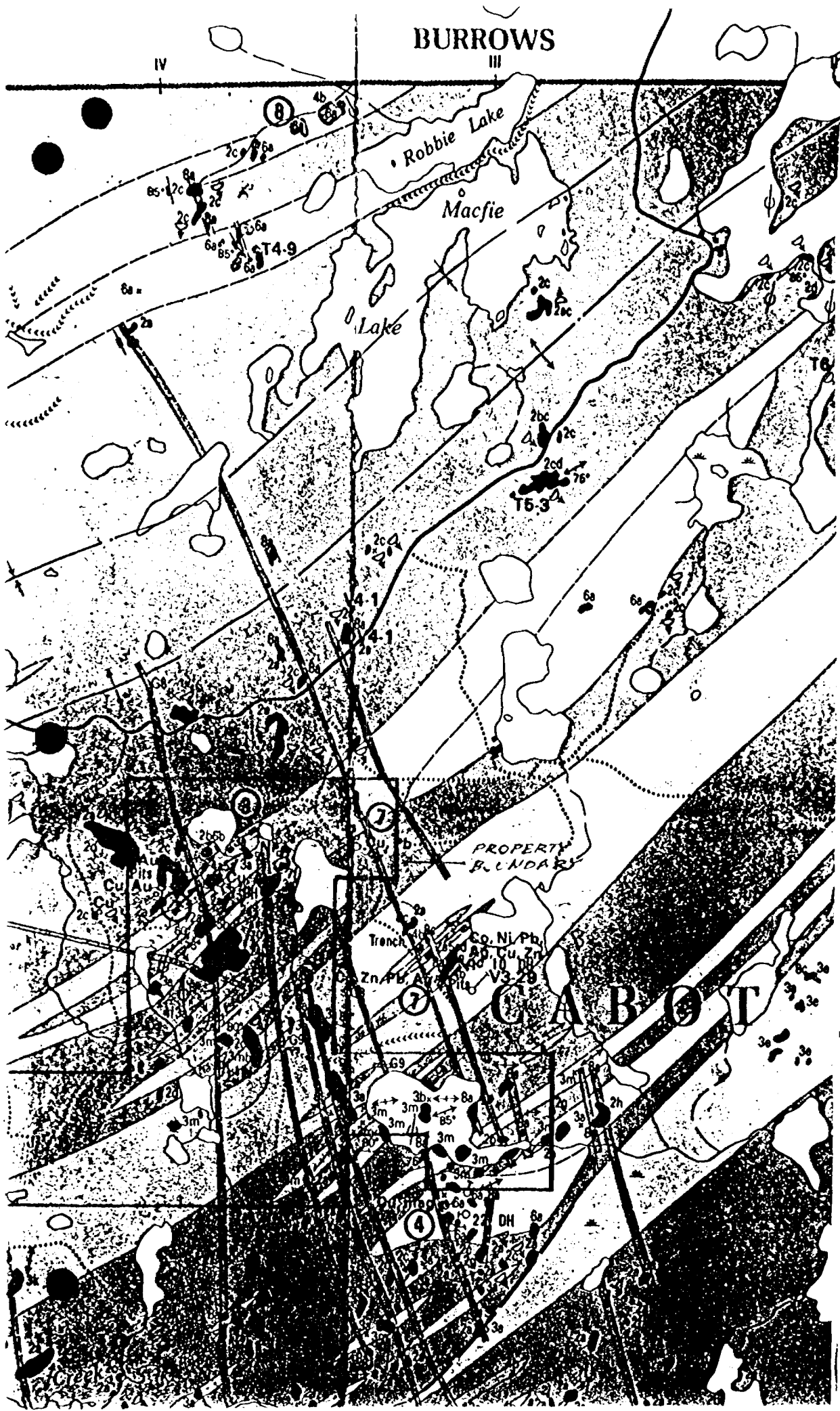
3.2.1 Block A

The only rock type exposed on this block (exposure being limited to the northern portion of the block; see Map 1 in pocket) is pillowed, and to a lesser extent massive, mafic to intermediate volcanic flows. Such rocks are generally fine to medium grained, equigranular and grey-green in colour on fresh surfaces. Weathered surfaces tend to be stained a pale red-brown, suggesting an Fe-rich composition, reflected by the release of Fe oxy-hydroxides during the weathering process. Pillows are typically 0.1 to 1.0m in size, and are defined by dark coloured, nearly aphanitic (probably hyaloclastitic) selvages. Well defined pillow cusps indicate a southerly tops direction, while the long axes of pillows are oriented generally northeasterly. Massive flows are similar in composition and texture to pillowed flows, but lack clearly defined pillow structures. These may represent lava tubes or shallowly intruded magmas. All rocks are penetrated by a pervasive foliation striking at approximately 50 degrees and dipping steeply southeast (i.e. at 60 to 70 degrees).

A.C.A. Howe Ltd. reports highly anomalous gold mineralization from an outcrop in the vicinity of L21E, 22+50N (Oujedans, 1988). However, this author, after close examination of all exposure in this area, found that the only obvious host for such mineralization was a number of small, discontinuous quartz veins resulting from in-filling of cross-fractures in

BURROWS

FIGURE 3.1
REGIONAL GEOLOGIC
(AFTER CARTER,
1986)



LEGEND

- PHANEROZOIC**
- CENOZOIC**
- QUATERNARY**
- PLEISTOCENE AND RECENT**
- Sand, gravel, swamp and alluvial deposits
- PRECAMBRIAN***
- EARLY TO LATE PRECAMBRIAN**
- MAFIC INTRUSIVE ROCKS**
- ALKALIC DIABASE DIKES**
- 8 Unsubdivided
 - 8a Porphyritic diabase
 - 8b Leucocratic diabase
- INTRUSIVE CONTACT**
- THOLEIITIC DIABASE DIKES**
- 8 Unsubdivided
 - 8a Diabase
 - 8b Diabase with pink feldspar
 - 8c Porphyritic diabase
 - 8d Leucocratic diabase
- INTRUSIVE CONTACT**
- EARLY PRECAMBRIAN**
- FELSIC INTRUSIVE ROCKS**
- 7a Biotite granodiorite
 - 7b Porphyritic biotite granodiorite
 - 7c Aplite
 - 7d Leucogranodiorite
 - 7e Porphyry
 - 7f Porphyry with quartz and/or feldspar phenocrysts
 - 7g Biotite monzonites
 - 7h Quartz diorite
- INTRUSIVE CONTACT**
- METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS**
- 6a Quartz gabbro gabbro
 - 6b Olivine gabbro
 - 6c Serpentine
- INTRUSIVE CONTACT**
- METAVOLCANICS AND METASEDIMENTS**
- METASEDIMENTS**
- 5 Unsubdivided
 - 5a Wacke chert
 - 5b Wacke banded
 - 5c Wacke
 - 5d Chert
 - 5e Argillite chert
 - 5f Argillite
 - 5g Hematite chert rhyolite
- METAVOLCANICS**
- FELSIC METAVOLCANICS**
- 4 Unsubdivided
 - 4a Aphanitic flows
 - 4b Porphyritic flows
 - 4c Fossiliferous flows
 - 4d Agglomerate
 - 4e Lapilli tuff
 - 4f Tuff
- INTERMEDIATE METAVOLCANICS**
- 3 Unsubdivided
 - 3a Aphanitic flows
 - 3b Porphyritic flows
 - 3c Pillow flows
 - 3d Tuff
 - 3e Lapilli tuff
 - 3f Tuff chert
 - 3g Pillow breccia
 - 3h Amphibolite flows
 - 3i Tuff breccia
 - 3j Medium to coarse grained flows
 - 3k Agglomerate
 - 3l Flows with quartz amygdules
- MAFIC METAVOLCANICS**
- 2 Unsubdivided
 - 2a Flows aphanitic
 - 2b Porphyritic flows (feldspar phenocrysts)
 - 2c Pillow flows
 - 2d Medium to coarse grained flows
 - 2e Pillow breccia
 - 2f Amphibolite flows
 - 2g Agglomerate
 - 2h Lapilli tuff
 - 2i Tuff breccia
 - 2j Varolitic flows
 - 2k Light grey flows
 - 2l Tuff
- ULTRAMAFIC METAVOLCANICS**
- 1a Serpentine
 - 1b Green carbonate rock
 - 1c Yellow carbonate rock
 - 1d Serpentine breccia
 - 1e Varolitic serpentine
- Ag Silver**
Atb Atbesta
Au Gold
Co Cobalt
Cu Copper
Gr Grapite
Mag Magnesite
Me Molybdenum
Ni Nickel
Pb Lead
Py Pyrite
Qc Quartz carbonate
Qz Quartz
Zn Zinc

the volcanics. If the mineralization reported by Howe is related to these, then it has little potential for significant continuity.

3.2.2. Block B

Exposure on this block is limited to the northeastern portion of the claim (see Map 2 in pocket). The exposed rock consists of a one or more remarkable porphyritic intermediate to felsic flows. This comprises 10 to 20% subhedral pale yellow-green feldspar phenocrysts up to 1 cm in size, and 5-10% chlorite grains or aggregates of similar size. Whether these chlorite grains are pseudomorphous after some primary mafic phase, or are porphyroblasts, is problematical. The remainder of the rock is a fine grained to aphanitic, relatively siliceous groundmass. Other than a pervasive foliation striking at 045 to 050 degrees, and dipping nearly vertically, no fabrics are observed, so the flow or flows are generally massive. Large (i.e. up to 10 cm) felsic "fragments" observed in an outcrop at 16+05W, 11+30N, may be glomero-phenocrysts.

3.2.3 Block C

This block (see Map 3 in pocket) exhibits the greatest variety of rock types of the three claim blocks. The dominant rock type is an intermediate to felsic flow, with possible inclusion of tuffaceous material of similar composition. This is generally similar to the porphyritic volcanics exposed on Block B, but with little or no phenocryst content. In the southern portion of the block (i.e. south of the lake), a massive, medium grained equigranular gabbro occurs. On L20W at 0+50S, it is in contact with the volcanics. It apparently forms an east-west striking sill-like body which can be traced at least to L22W both in outcrop exposure, and by its magnetic signature (see 4.0 Geophysics). Other than traces of fine grained disseminated pyrite, no mineralization is observed in this unit. On L20W at 1+10N (i.e. on the lake shore) a tholeiitic olivine diabase, which is medium grained, massive and highly magnetic, is exposed, forming a cross-cutting dyke.

4.0 GEOPHYSICS

A ground magnetometer survey, which was conducted upon the three subject claim blocks, is discussed below.

4.1 SURVEY PARAMETERS

The survey was conducted by Noramco Explorations Inc. personnel, using an EDA OMNI IV magnetometer, reading total magnetic field strength at 12.5m intervals on the existing grid (cut in 1988 by A.C.A. Howe Ltd.). A total of 4.4 line km were surveyed, broken down as follows:

Block A- 1.2 line km

Block B- 1.1 line km

Block C- 2.1 line km

Data were corrected for diurnal drift by tying each line back into a previously measured point on a tie line, then utilizing the internal correction feature of the instrument to make the appropriate corrections. Corrected data were posted (see Maps 4A, 5A and 6A), and contoured (see Maps 4B, 5B and 6B).

4.2 RESULTS

4.2.1 Block A

The only significant magnetic relief on this block is in the southern portion of claim 1127904 (see Map 4B). An anomaly ranging from 815 to 1146 nT above the background datum (i.e. 58,400 nT) appears to strike nearly east-west through the central portion of the block. Since the relatively magnetic tholeiitic diabase dykes strike generally northwards, and since this anomaly apparently cross-cuts the stratigraphy (albeit at a shallow angle), it is suggested that this represents the alkalic diabase dyke known to traverse the property.

4.2.2 Block B

The only significant magnetic relief on this block is in the northeastern portion of the claim. Here, an anomaly appears to strike nearly north-south, down the eastern side of the claim. This corresponds well with a tholeiitic diabase dyke located by government mapping (Carter, 1986), although no surface exposure of this dyke was located during the mapping program (see 3.2.2 above).

4.2.3 Block C

A high magnetic relief (generally >1000 nT above the background datum) exists south of the lake, apparently reflecting the gabbro sill which occurs here; the surface exposure of the gabbro, and the magnetic anomaly occurring between L20W and L22W, are in close correspondence. A similarly strong anomaly (up to 2036 nT above the background datum) occurs over the tholeiitic diabase exposed on the lake shore at L20W, 1+00N.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

The following conclusions can be drawn from the subject program:

a) The geology as observed is generally in good agreement with that determined from previous work (e.g. Carter, 1986; Oujedans, 1988);

b) No economically significant mineralization occurs on any of the three claim blocks covered by the subject mapping program; and

c) All of the magnetic anomalies detected during the subject ground magnetometer program can be explained by lithology, and therefore do not appear to reflect economically interesting mineralization.

5.2 RECOMMENDATIONS

Because of the lack of any suggestion of economically interesting mineralization, no further work is recommended on the three subject claim blocks. However, it is suggested that other occurrences of potential economic interest elsewhere on the property (most notably the auriferous sulphide zone of Jonsmith Mines Ltd., occurring on a mafic/felsic volcanic contact in the north-central portion of the claim block) be further evaluated.

LIST OF REFERENCES

Carter, M.W., 1986. Geology of Cabot and Kelvin Townships, District of Sudbury. OGS Geological Report 249. Accompanied by Map 2470, Scale 1:31,680 or 1" to 1/2 mile.

MacVeigh, E.L., 1962. Report on Geological, Electromagnetic and Magnetometer Surveys of Parts of Jonsmith and Glenburk Mining Properties, Cabot Township, Gogama, Ontario. Proprietary Report.

Oujedans, M., 1988. Geological Report on the Mapping and Sampling Program of Cabot Township Property, Larder Lake Mining Division, Province of Ontario. Proprietary Report for Actuate Resources Ltd.

CERTIFICATE OF QUALIFICATION

I, David G. Laderoute, of the City of Thunder Bay, Ontario, do hereby certify:

1. That I am a geologist with the firm of Noramco Explorations Inc., 1275 Main Street West, North Bay, Ontario, P1B 2W7;
2. That I am a graduate of the geology program of Lakehead University in Thunder Bay, Ontario, and that I hold the degrees of Honours Bachelor of Science and Master of Science in Geology;
3. That I have six and one-half years of experience in my field, not including three summer terms of experience prior to my graduation;
4. That I have no interest, direct or indirect, in the property which has been described in this report, nor do I expect to receive any interest, direct or indirect, in this property;
5. That this report is based on a personal study of those portions, and existing reports dealing with those portions, of the property described in this report.

Dated in Thunder Bay, Ontario, this 30th day of July, 1990.



David G. Laderoute, H.B.Sc., M.Sc.
Project Geologist



m. l.

DOCUMENT No.
W9008-263



41P11NW8527 2.13521 CABOT

Mining Act Report of Work
(Geophysical, Geological and Geochemical)

Type of Survey(s) Geological Geophysical	Mining Division Larder Lake	Township or Area Cabot
Recorded Holder(s) Noramco Mining Corporation	<i>2.13521</i>	Prospector's Licence No. T-4825
Address 1275 Main Street West, North Bay, Ontario P1B 2W7		Telephone No. 705-476-4003
Survey Company Noramco Explorations Inc. 1275 Main Street West, North Bay, Ontario P1B 2W7		
Name and Address of Author (of Geo-Technical Report) David Laderoute 1275 Main Street West, North Bay, Ont.		Date of Survey (from & to) 15 08 90 24 08 90

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For each additional survey using the same grid: Enter 20 days (for each)	Geological	20
	Geochemical	
Man Days	Geophysical	Days per Claim
Airborne Credits	Electromagnetic	
	Magnetometer	
Note: Special provisions credits do not apply to Airborne Surveys.		

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
L	1127904				
L	1127905 ✓				
L	1127906 ✓				
L	1127907 ✓				
L	1127908 ✓				
L	1127909 ✓				

RECEIVED
SEP 24 1990
MINING LANDS SECTION

Total number of mining claims covered by this report of work. **6**

Total miles flown over claim(s):
Date: *Sept 14/1990* Recorded Holder or Agent (Signature): *[Signature]*

Certification Verifying Report of Work

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

Name and Address of Person Certifying
Arthur Murdy, Noramco Explorations Inc. 1275 Main Street West, North Bay, Ont

P1B 2W7 Telephone No. **705-476-4003** Date **September 14/90** Certified By (Signature): *[Signature]*

For Office Use Only

Total Days Cr. Recorded 240	Date Recorded <i>Sept 17/90</i>	Mining Recorder <i>[Signature]</i>
	Date Approved as Recorded <i>see revised work statement</i>	Provincial Manager, Mining Lands

Received Stamp
RECEIVED
LARDER LAKE
MINING DIVISION
SEP 17 1990
TIME *9:59 am*



Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
159 Cedar Street, 4th Floor
SUDBURY, Ontario
P3E 6A5

Telephone: (705) 670-7264
Fax: (705) 670-7262

Your File: W9008.263
Our File : 2.13521

November 7, 1990

Mining Recorder
Ministry of Northern Development and Mines
4 Government Road East
KIRKLAND LAKIE, Ontario
P2N 1A2

Dear Madam/Sir:

RE: Notice of Intent dated September 28, 1990 for Geophysical
(Magnetometer) and Geological Surveys submitted on Mining
Claims L 1127904 et al in Cabot Twp.

The assessment work credits, as listed with the above
mentioned Notice of Intent have been approved as of the above
date.

Please inform the recorded holder of these mining claims and
so indicate on your records.

Yours sincerely

R. C. Gashinski
A/Provincial Manager, Mining Lands
Mines and Minerals Division

LJ/dvl
Enclosure

cc: Mr. W. D. Tieman
Mining and Lands Commissioner
Toronto, Ontario

Resident Geologist
Kirkland Lake, Ontario

Noranco Mining Corporation
North Bay, Ontario



Recorded Holder
Noramco Mining Corporation

Township or Area
Cabot Twp.

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer <u>13.7</u> days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological <u>13.7</u> days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	L 1127904 - 909 incl.

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument EOA OMNI IV

Accuracy - Scale constant _____

Diurnal correction method Self-corrected tie-line

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method Time Domain Frequency Domain

Parameters - On time _____ Frequency _____

- Off time _____ Range _____

- Delay time _____

- Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

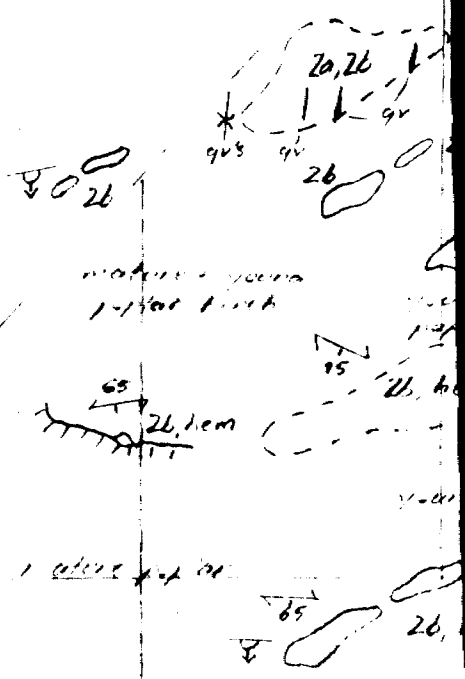
Analytical Method _____

Reagents Used _____

General _____

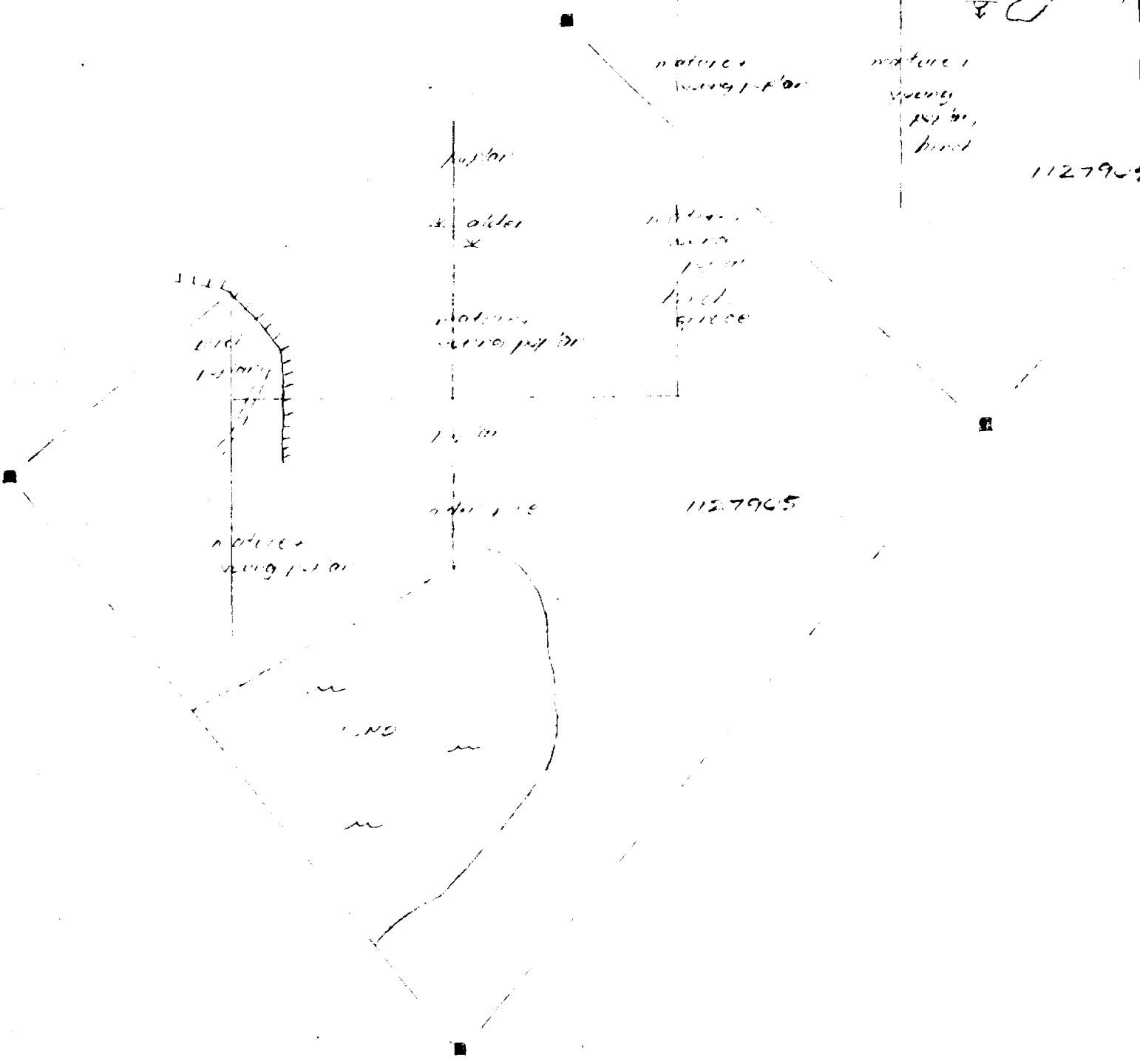


n. area



197E

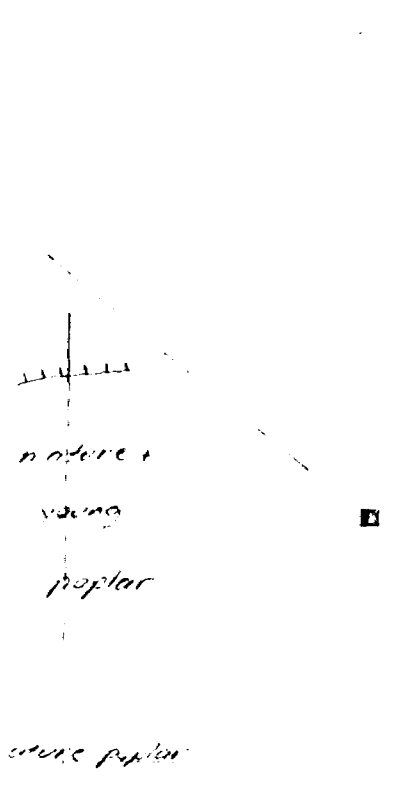
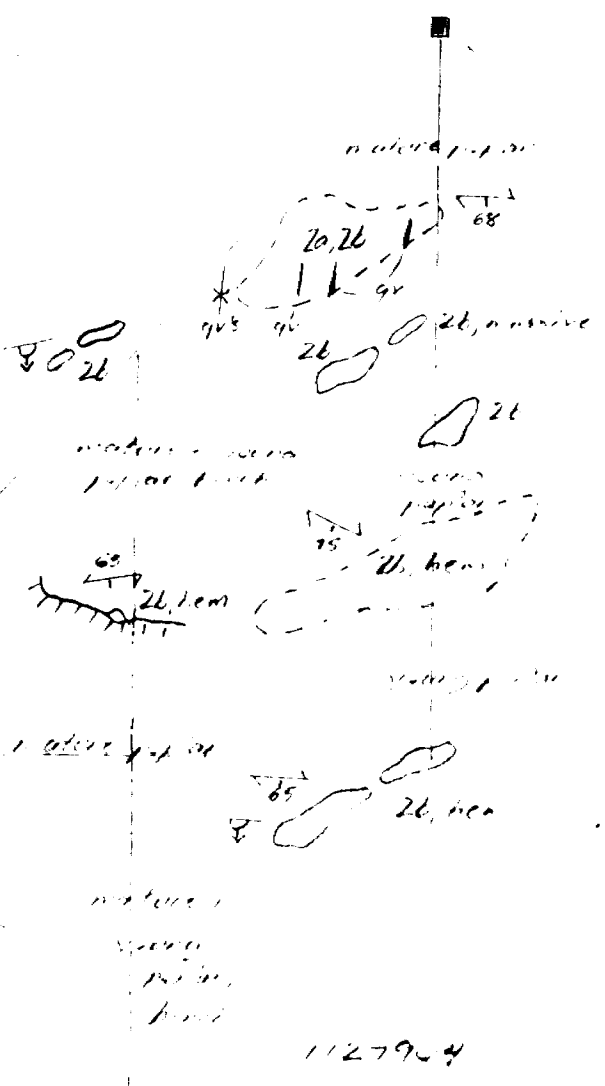
198E



12-E

12-1

12-2



23N

22N

21.2N

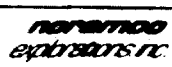
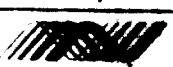
20N

19N

18N

2. 13521

MAP 1

 	
COMPANY NAME RAMCO MINING CORP.	
PROPERTY NAME L-307 IWP.	
GEOLOGY Block A	
EXECUTED BY	COMPILED BY
DATE AUG. 1990	RTS
SCALE 1:2500	PROJECT NO 4064
	DRAWN BY J.L.

L15E

L16E

1127956

no live cut
mostly black
spruce

native
+ young
maple
birch

open
area

31/101
fossil fragments

young
maple

open
area
young
maple

21/101

black
spruce,
sphagnum

black
spruce


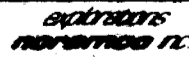


COMPANY NAME
PROPERTY NAME
EXECUTED BY
DATE
SCALE



2. 13521

MAP 2

			
COMPANY NAME: NORAMCO MINING CORP.			
PROPERTY NAME: CF30 TWP.			
GEOLOGICAL BLOCK B			
EXECUTED BY:		COMPILED BY:	
DATE:	LUG 1990	BY:	J.L.
SCALE:	1:2500	PROJECT NO.:	4064
		WORKSHEET:	

geology reference-COBALT
RESIDENT GEO.

Burrows Twp. - M.69I

THE TOWNSHIP
OF

CABOT

DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS

LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
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	Ⓧ
CANCELLED	C.

NOTES

400 surface rights reservation along the shores of all lakes and rivers.

Flooding rights on Mattagami Lake to contour elev. 1070' to Northern Ont. Power Co. Ltd. L.O. 7199. File. 36881.

SAND and GRAVEL

■ MNR GRAVEL RESERVE 3C22

■ Trapline Cabin

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.

DATE OF ISSUE
AUG 7 1980
LARDER LAKE
MINING RECORDER'S OFFICE

#1

PLAN NO - **M.695**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

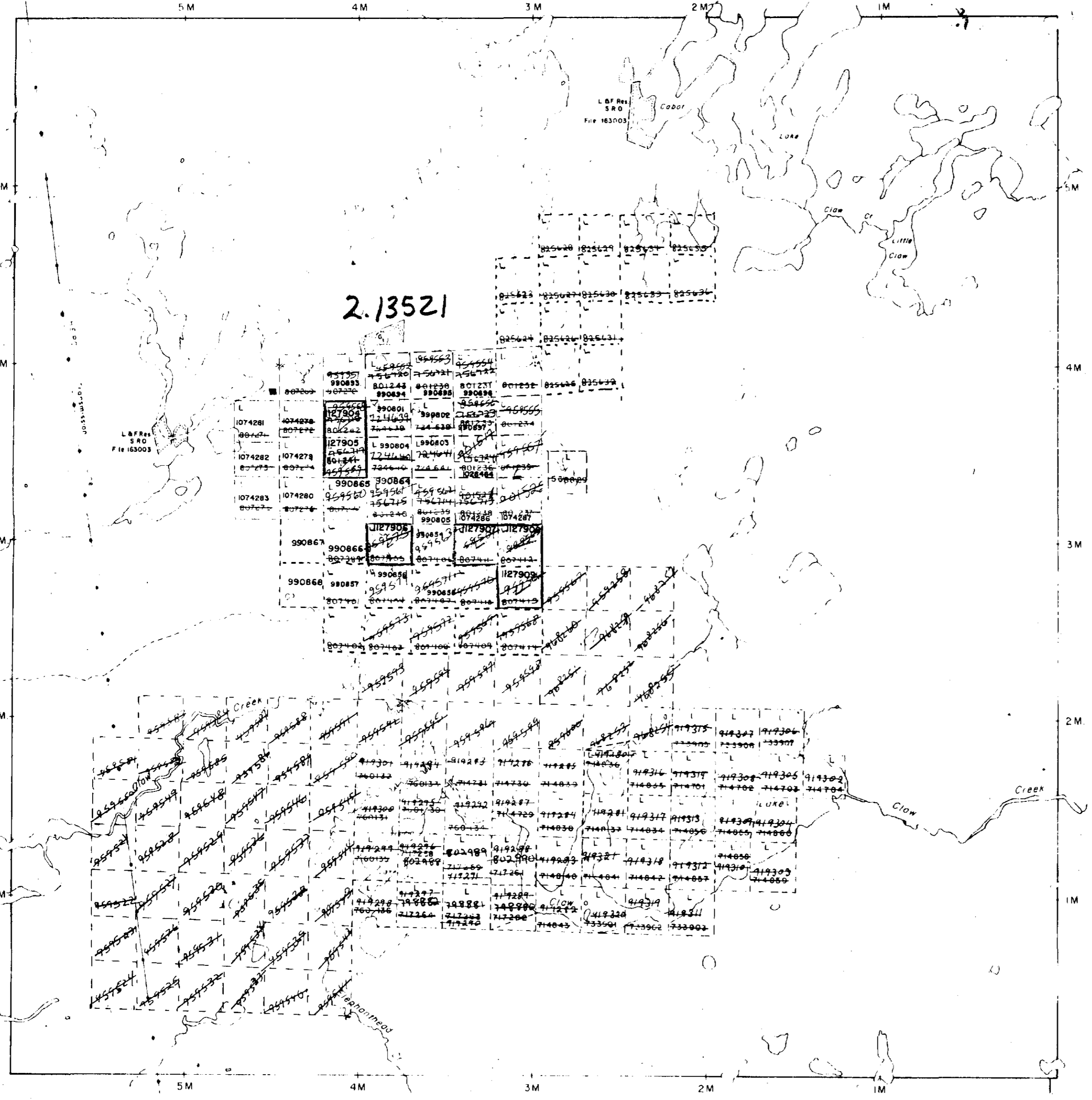
Togo Twp. - M.1158

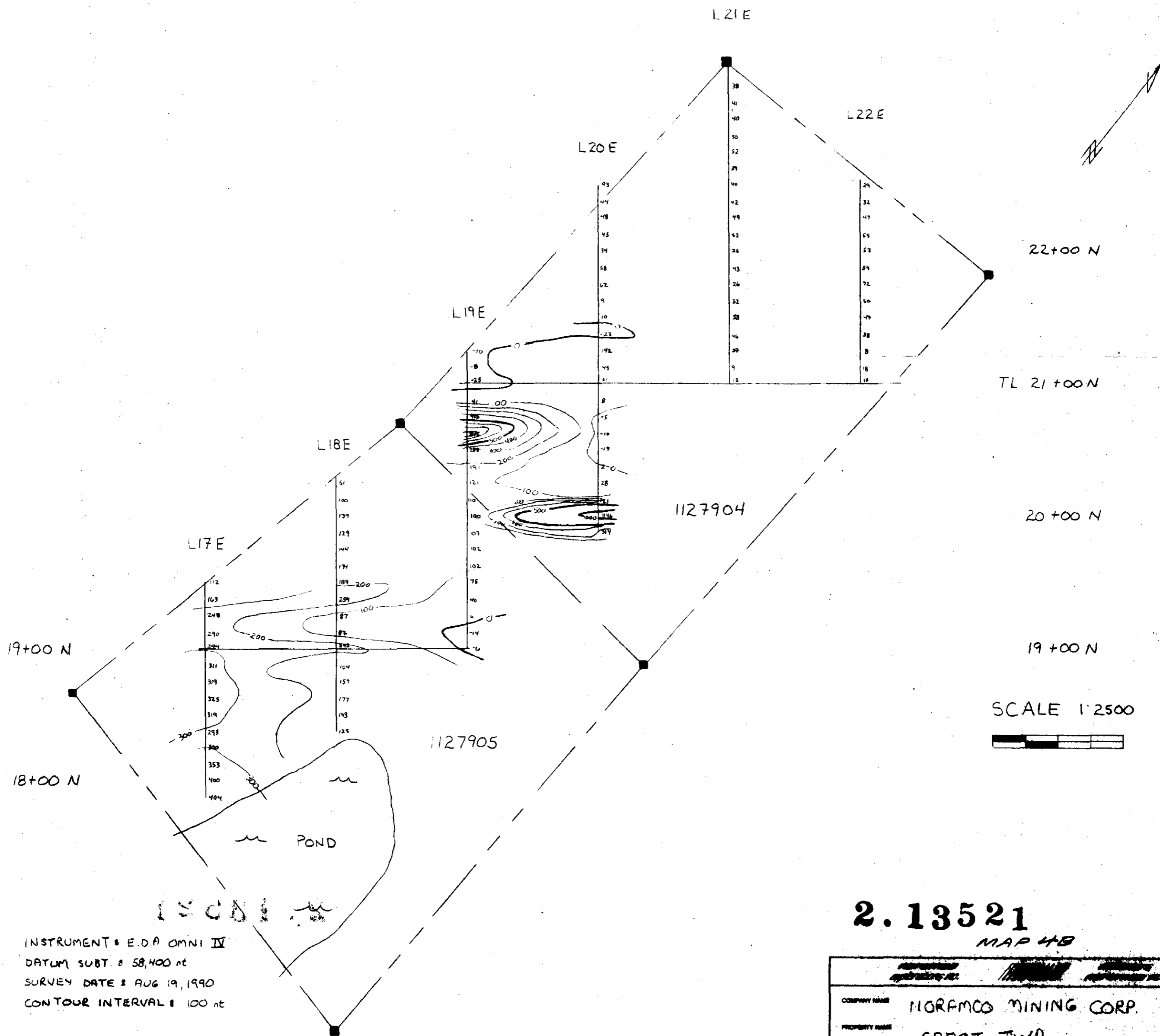
Kelvin Twp. - M.964

Connaught Twp. - M.730



RECEIVED August 14-1984





INSTRUMENT: E.O.A. OMNI IV
 DATUM SUBT. @ 58,400 ft
 SURVEY DATE: AUG 19, 1990
 CONTOUR INTERVAL: 100 ft



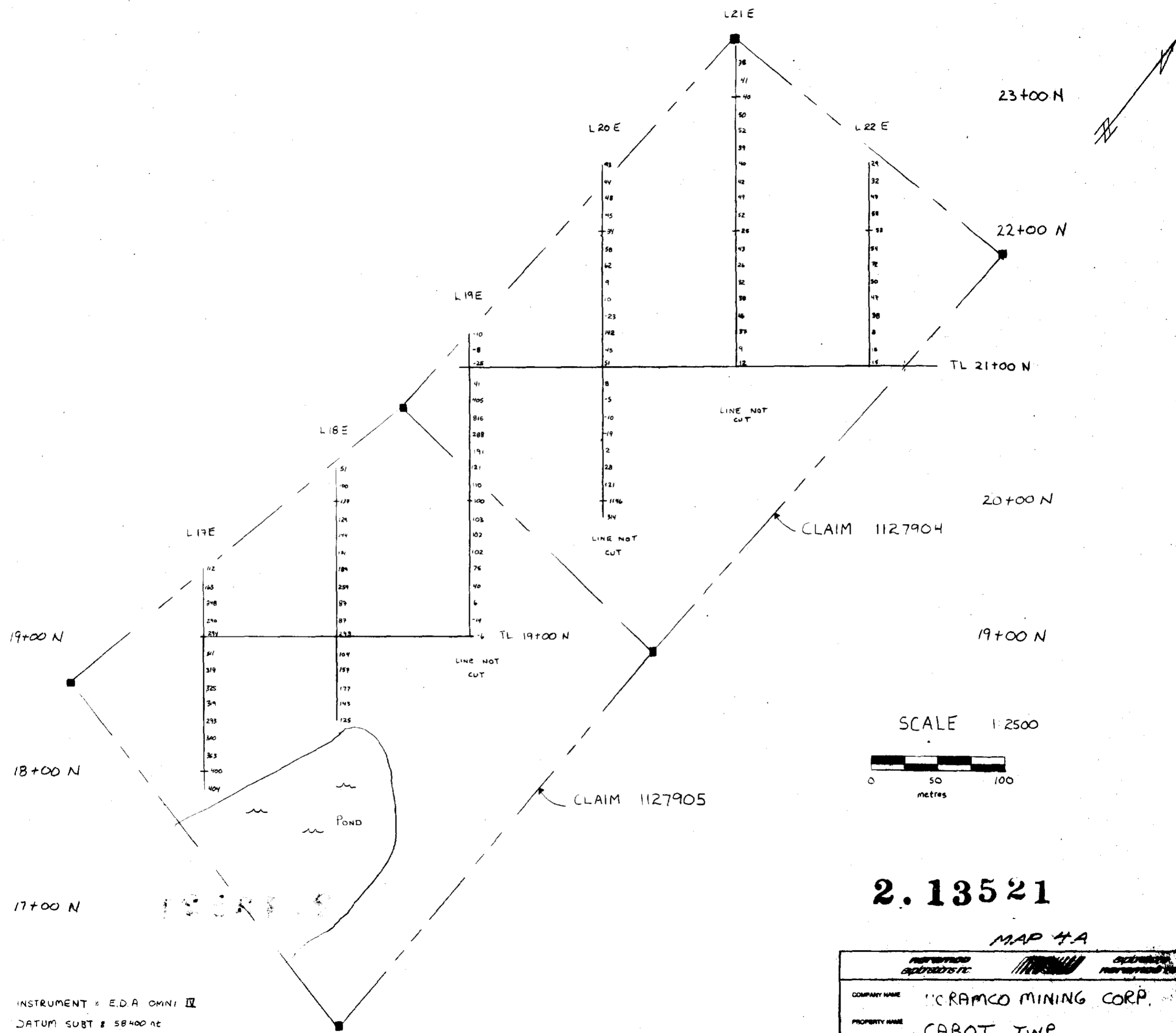
41P11NW8527 2.13521 CABOT

220

2.13521

MAP 4B

COMPANY NAME	NORAMCO MINING CORP.		
PROPERTY NAME	CABOT TWP.		
TITLE	TOTAL FIELD MAG. - CONTOURS		
DATE	AUG 21, 1990	BY	
SCALE	1:2500	DATE	90W



SCALE 1:2500
 0 50 100
 metres

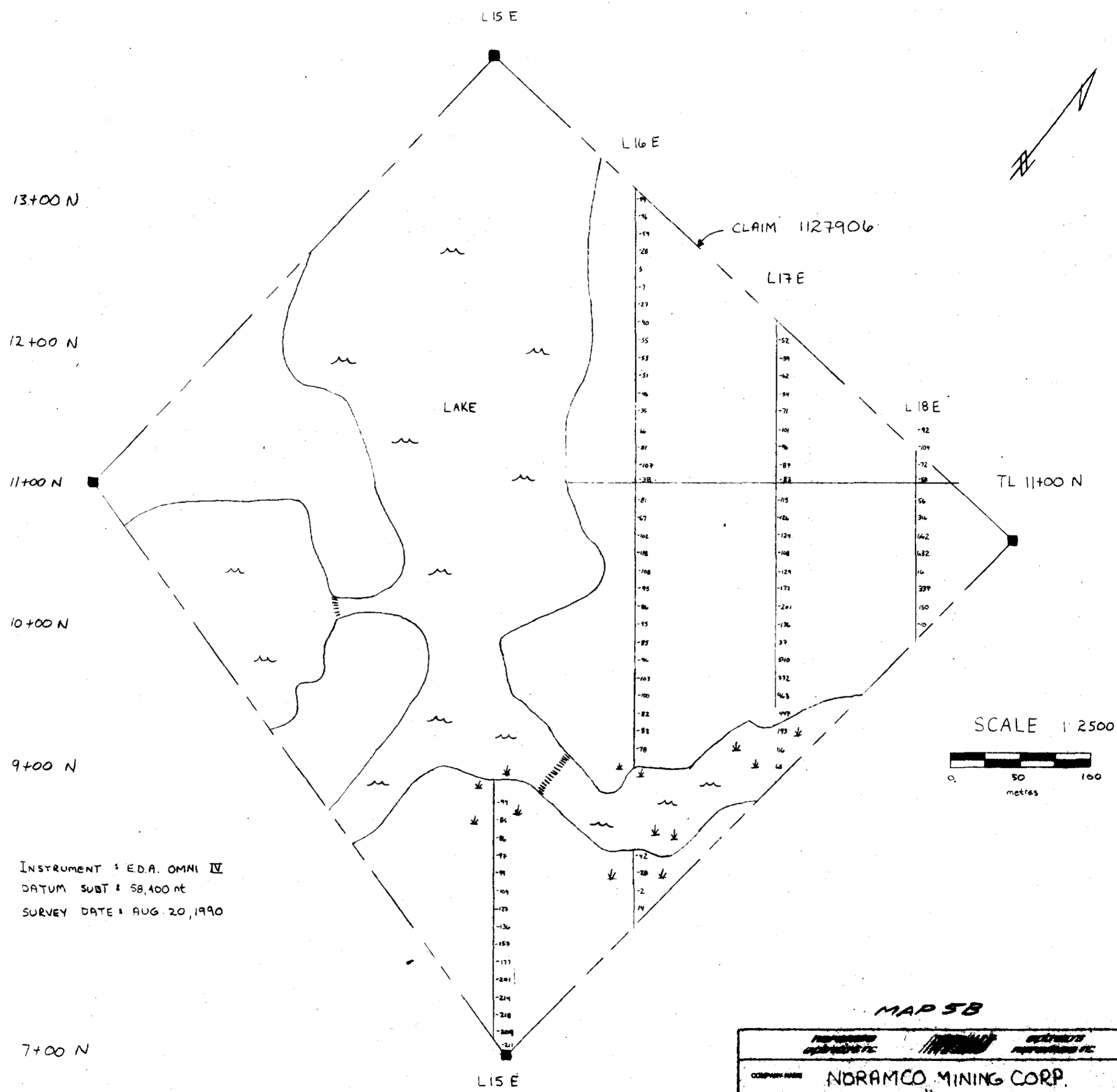
2.13521

MAP 4A

INSTRUMENT * E.D.A. OMNI IV
 DATUM SUBT # 58400 ac
 SURVEY DATE # AUG 19, 1990



COMPANY NAME	MC RAMCO MINING CORP.
PROPERTY NAME	CABOT TWP.
TOTAL FIELD MAG - VALUES	
DATE	AUG. 21, 1990
SCALE	1:2500



INSTRUMENT : E.D.A. OMNI IV
 DATUM SUBST : 58,400 mt
 SURVEY DATE : AUG 20, 1990

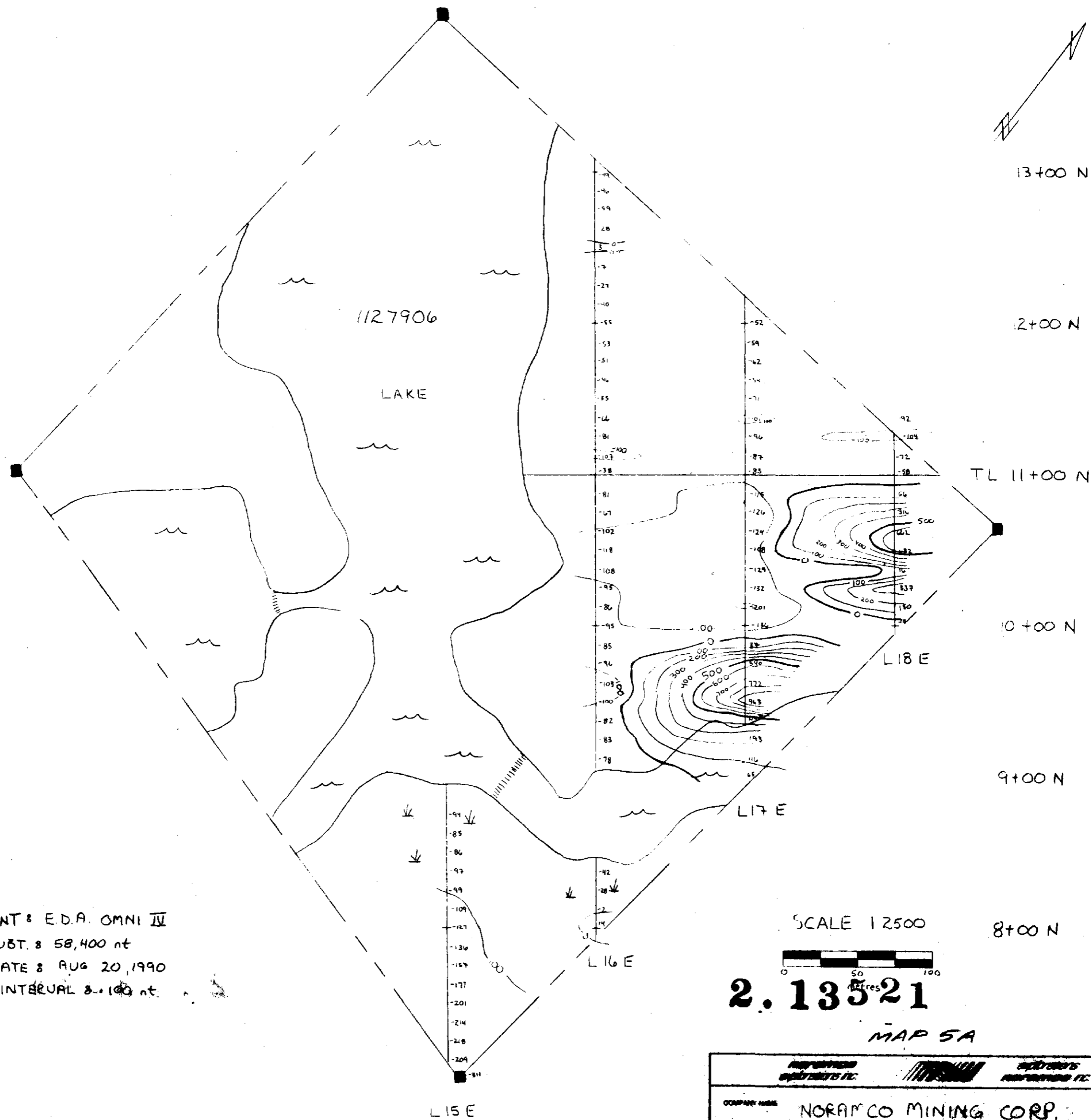
SCALE 1:2500
 0 50 100
 metres

MAP 58

COMPANY NAME	NORAMCO MINING CORP.
PROPERTY NAME	CABOT TWP.
TOTAL FIELD MAG - VALUES	
310000	
DATE	AUG 21, 1990
SCALE	1:2500

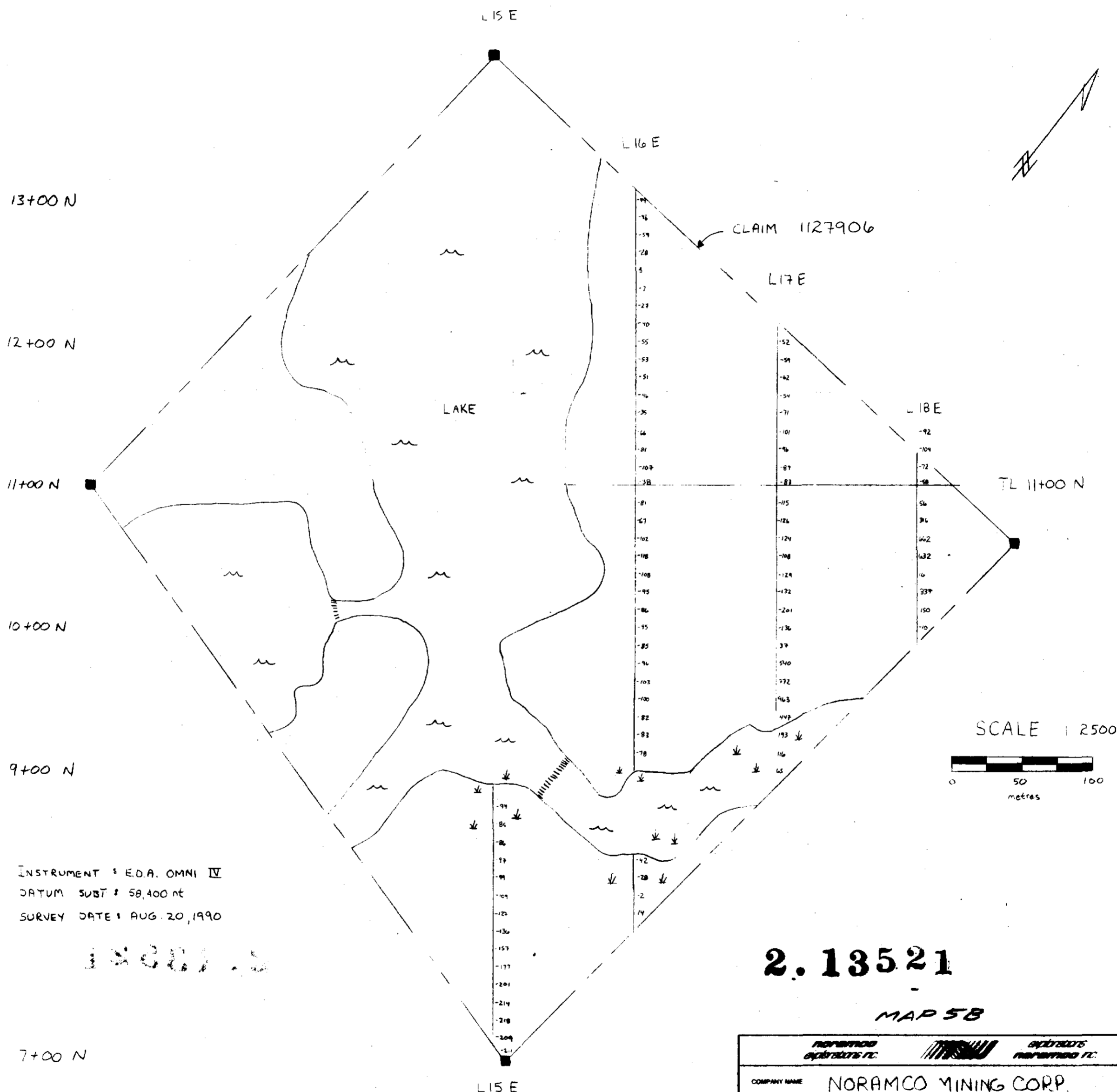


41P11N08527 2.13521 CABOT



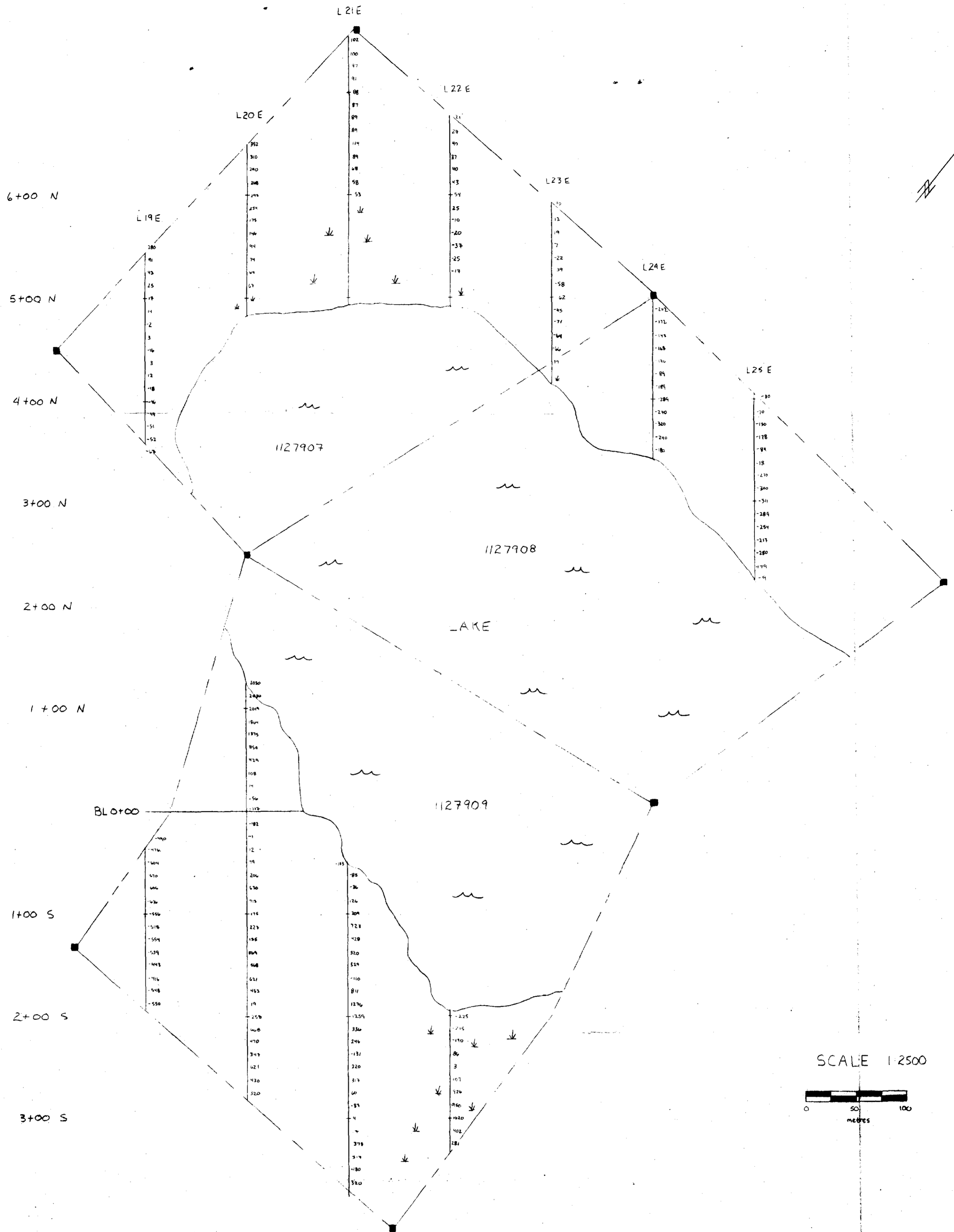
COMPANY NAME	NORAMCO MINING CORP.
PROPERTY NAME	CABOT TWP.
TOTAL FIELD MAG. - CONTOURS	
BY: SLICK B	
DRAWN BY	DATE
SCALE	DATE
1:2500	AUG 21, 1990
PROJECT NO.	4064
REVISION NO.	02





41P11NW8527 2.13521 CABOT

260



INSTRUMENT : EDA. OMNI IV
 DATUM SUBT. : 58,400 nt
 SURVEY DATE : AUG. 20, 1990

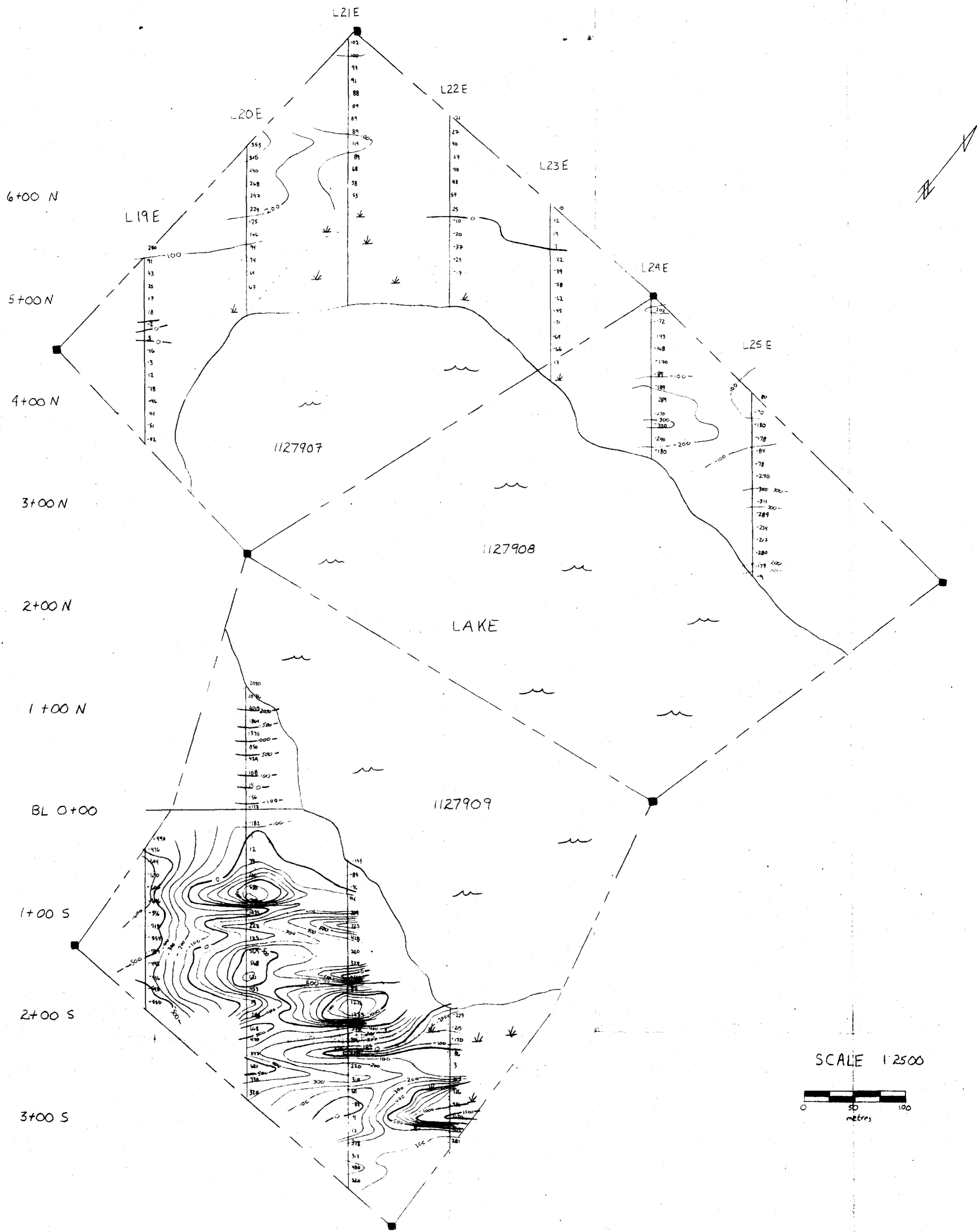
2.13521

MAP 6A

<small>REGISTERED PROFESSIONAL ENGINEER</small> <small>REGISTERED PROFESSIONAL SURVEYOR</small>	
COMPANY NAME	MORANCO MINING CORP.
PROPERTY NAME	CABOT TWP
TOTAL FIELD MAG. VALUES	
54004 C	
DATE	AUG. 20, 1990
SCALE	1:2500
BY	WJH
CHECKED BY	LDK



41P11NW6527 2.13521 CABOT



INSTRUMENT: E.D.A. OMNI II
 DATUM SUBT: 8 58,400 nt
 SURVEY DATE: 8 AUG 20, 1990
 CONTOUR INTERVAL: 8 100 nt

2.13521
 MAP 6B

<small>NOVEMBER 1988</small> <small>OPERATORS LTD.</small>		<small>NOVEMBER 1988</small> <small>OPERATORS LTD.</small>	
COMPANY NAME	NORAMCO MINING CORP.		
PROPERTY NAME	CABOT TWP.		
	TOTAL FIELD MAGNETICS - CONTOURED		
	BLOCK C		
DATE	AUG 20, 1990	BY	TJK
SCALE	1:2500	DATE	4064



41P11NW8527 2.13521 CABOT