010

REPORT on

MAGNETIC, VLF ELECTROMAGNETIC and SELF-POTENTIAL SURVEYS

for mag and em approval see 2.13745 Feb05/91 RJS

LADY LOU PROPERTY

BOMPAS TOWNSHIP

LARDER LAKE MINING DIVISION

ONTARIO

2.13728

M. Leahy
Kirkland Lake, Ontario
October, 1990

Qual 2.2689

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INTRODUCTION

The property herein described consists of one unpatented mining claim, L-1110266, located about 1 1/4 mile north of the SE corner of Bompas Township, Larder Lake Mining Division, Ontario . The claim lies just west of the north end of Kenogami Lake and 1/2 mile northwest of Hotchkin (Little Kenogami) Lake. The town of Kirkland Lake lies about 11 miles to the east.

ACCESS

Grenfell Road leads west from Highway 11 at Kenogami and passes within 2000' of the property along the eastern boundary of Bompas Twp. The road is maintained year-round for about 3 miles from the Trans-Canada where it becomes passable only by pickup truck. A blazed line leads from Grenfell road to the property.

HISTORY

The property covers the old Lady Lou shaft area which was first discovered and worked around 1940. At that time, two shallow shafts (50'?) were sunk and some surface trenching was done.

GEOLOGY - REGIONAL

The property lies near Kirkland Lake in the Abitibi super-group of steeply dipping Archean metavolcanics and metasediments which straddles the Ontario - Quebec border. The famed E-W striking Larder - Cadillac break passes about 2 1/2 miles to the south. The property lies on a thin, 5 mile wide, N-S trending outlier of flat lying Huronian sediments bound on the east by mafic Kinojevis metavolcanics and on the west by the Watabeag batholith (Algoman).

GEOLOGY - LADY LOU CLAIM

The property is underlain by Huronian sediments 1/4 mile west of the eastern edge of the above mentioned Huronian outlier. Mineralization and geology were described by Lovell, 1980.

> "Mineralized rock in dumps consists of quartz veins cutting Cobalt Group Gowganda Formation Coleman Member feldspathic sandstone (arkose). The quartz veins are vuggy in places, with euhedral crystals of quartz as drusy linings of gas spaces. Metallic minerals in the veins are chalcopyrite, pyrite, sphalerite and gold.
>
> Quartz veins of an aggregate width of about 0.6m (2') strike N 30° W and dip 75 SW, and cut

GEOLOGY - LADY LOU CLAIM, cont'd.

Cobalt Group arkose. The veins contain pyrite, chalcopyrite and gold. A brecciated fracture zone containing pyrite, chalcopyrite and galena strikes across about perpendicular to the quartz band."

GEOPHYSICAL SURVEYS

During the summer of 1990, 1.7 miles of picket lines were cut on the property by M. Leahy, A. Black and P. Midtskogen. A base line 1650' long with a bearing of 45° was cut, joining the #1 and #3 posts. One and four tenths miles of transverse lines were cut at 200' intervals with a bearing of 135° and stations were established at 100' intervals. (Grid orientation was designed to cut the regional magnetic trend at 90° with transverse lines.) Readings for all surveys were taken at 50' intervals and plotted on maps with a scale of 1" = 200'. Magnetic and Self-Potential readings were corrected for diurnal variations and contoured. VLF readings were plotted as profiles and contours using the Fraser method.

SELF POTENTIAL METHOD

On July 7,8,9, 1990, a self potential survey was carried out over the property using the fixed base station technique. The ground (-) pot was based at BL +8 and all the other readings are potentials relative to the base value at that point. The pots used were of the porcelain type with metal handles, all salvaged from McPhar SP-1 spare parts. A single reel of wire was sufficient to reach all stations on the grid without moving the base station. A total of 177 readings (1.5 miles of line), were taken at 50' intervals. The instrument used was a Micronta Digital Multimeter (22-185A) with an accuracy of +/- 0.6 Mv. Conductors respond as strong negative readings on high ground and as weaker negative readings in wet ground.

RESULTS OF SELF POTENTIAL SURVEY

Nearly all the readings taken were between +50 MV and -50 Mv. An area of wet ground along the creek west of L8 conforms very nearly with the zone of low positive readings bound by the 0 contour. Most of the higher ground gave low negative readings. Only two anomalies were outlined by the survey. The first is a weak one-line anomaly just west of the shaft. The second is slightly stronger and runs between L12 and L8, two to three hundred feet west of the base line.

MAGNETIC SURVEY

On October 8, 1990, a magnetic survey was carried out over the property with readings taken at fifty foot intervals. The instrument used was a McPhar GP-81 Magnetometer with an accuracy of +/- 1 gamma. (A total of 1.7 miles of line were traversed and 157 readings were taken.) The sensor was mounted on a five foot aluminum pole which was held against the picket at each station. Contours were drawn at 50 gamma intervals. Two readings (in brackets, on map) in the shaft area are suspect due to the scrap iron pipe, etc. littered about, and were not contoured.

RESULTS OF MAGNETIC SURVEY

Magnetic relief over the property varies from 58,315 gammas to 58,636 gammas with numerous, small, one-line highs and lows. The regional trend appears to parallel the base line with one cross fault indicated between L6 and L8 west of the base line. Since no stripping or drilling was performed the responses recorded cannot be attributed to either the Huronian or underlying Archean rocks. A string of isolated highs (500 - 600 gammas) parallel to the south boundary may be a linear feature that is not contourable because it cuts the lines obliquely. Narrow Matachewan Diabase dikes, common in the area, normally strike N-S, although magnetic diabase was observed by Lovell in dump material near L12 + 200S near one of the small isolated highs near the south boundary.

VLF - EM SURVEY

On October 8, 1990, a VLF electromagnetic survey was conducted over the property. Readings were taken at fifty foot intervals, facing south. The station used was Cutler, Maine. A total of 1.5 miles of line were read and 189 readings were taken. Both dip angles (%) and quadrature readings were noted and plotted with a vertical scale of 1" = 50%. Dip angle readings were also contoured on a separate map using the Fraser method. The instrument used was a Ronka VLF - EM16.

RESULTS OF VLF - EM

Several zones of weak to moderate electromagnetic conductivity were outlined by the survey. Two parallel zones of moderate conductivity near BL + L4 split and weaken along their southerly extensions. A weak, discontinuous conductor striking NE - SW traverses lines 6, 8 and 12 near the northwest corner of the property. When interpreting these results, it should be noted, the grid orientation did not allow proper station to baseline alignment.

CONCLUSIONS

Both positive and negative conclusions can be drawn from the results of the surveys performed. Among the positive conclusion are: a) two self potential anomalies were identified, b) both SP anomalies are associated with weak VLF conductors, (probably not graphitic), and c) the SP anomaly on L12 at 150'-200' S is in an area of known sulphide mineralization.

The negative conclusions are: a) VLF station to conductor angle is poor, b) VLF conductors without SP response are probably overburden effects, (wet ground along creek), and c) complex, weak magnetic responses do not clearly define the geology.

RECOMMENDATIONS

1/ Cut detailed grids over SP anomalies - lines 50' or 100' apart - about 2500', total.

2/ Read detailed grids with SP.

3/ Read L4, 6, 8, 10, 12 with Max Min II to better define EM conductors.

4/ Read Mag over detailed grids and shaft area.

5/ Strip and wash showings at and near shaft - 10 hours with 2-yard hoe.

6/ Map and sample stripped areas.

7/ Strip and wash SP anomaly north of baseline - 5 hours with 2-yard hoe.

Michael Leahy

REFERENCES

1/ " A Guide to Prospecting by the Self Potential Method" , S.V. Burr, OGS, MP 99, 1982.

2/ "Spontaneous Polarization, or Self Potential Method", Sherwin F. Kelly, Mining Geophysics, pg 53-59.

3/ "Lady lou Au Occurrence", Howard Lovell, 1981, Kirkland Lake Resident Geologist files.

Appendix i

CERTIFICATE

THIS IS TO CERTIFY:

1. I am a graduate in Prospecting Techniques from the Northern College of Applied Arts and Technology, Haileybury campus, 1976. I have been active as a prospector and exploration contractor since 1974.

2. I have completed the Haileybury School of Mines, Geophysical Field School, June, 1990

3. I am a member in good standing of the P.D.A., C.I.M.M., and I am president of the N.P.A. and a director of O.M.E.F.

4. I reside and hold office at 139 Carter Ave., Kirkland Lake, Ontario.

5. I have a 50% interest in the Lady Lou Property.

6. My report is based upon having personally performed the Self Potential and VLF-EM Surveys and having supervised the Magnetic Survey, a review of published information on the property and upon my familiarity and experience as a prospector in the Kirkland Lake camp.

Michael Leahy

Michael Leahy
Prospector
Kirkland Lake, Ontario
October, 1990

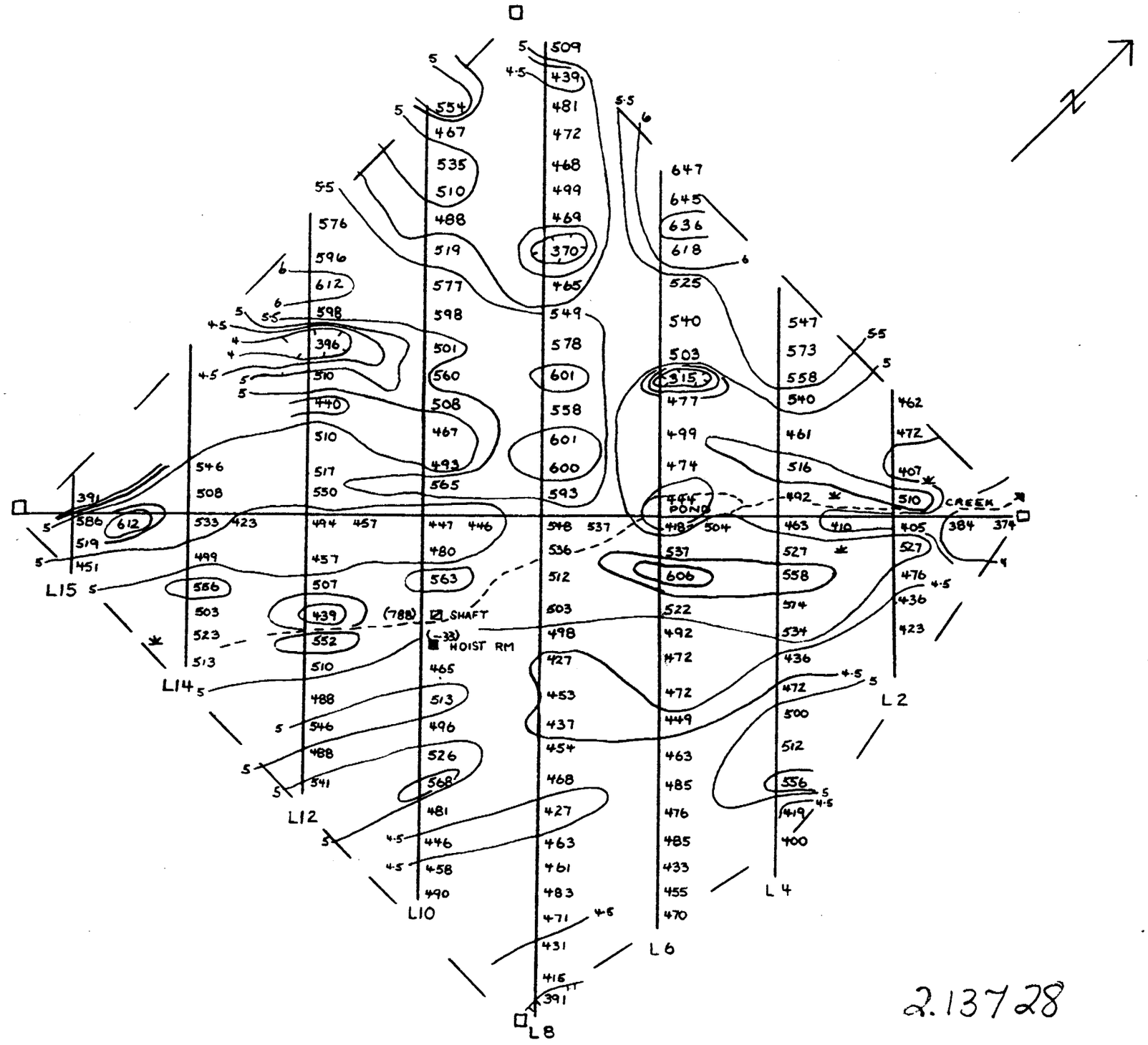
Qual. 2.2689

MAGNETIC SURVEY

LADY LOU PROPERTY

BOMPAS TWP

1" = 200'



LEGEND

- SHAFT ⊠
- CLAIM POST □
- CLAIM LINE —— ——
- CREEK - - - - -
- CONTOUR INTERVAL 50 γ
- * ADD 58,000 γ TO ALL READINGS

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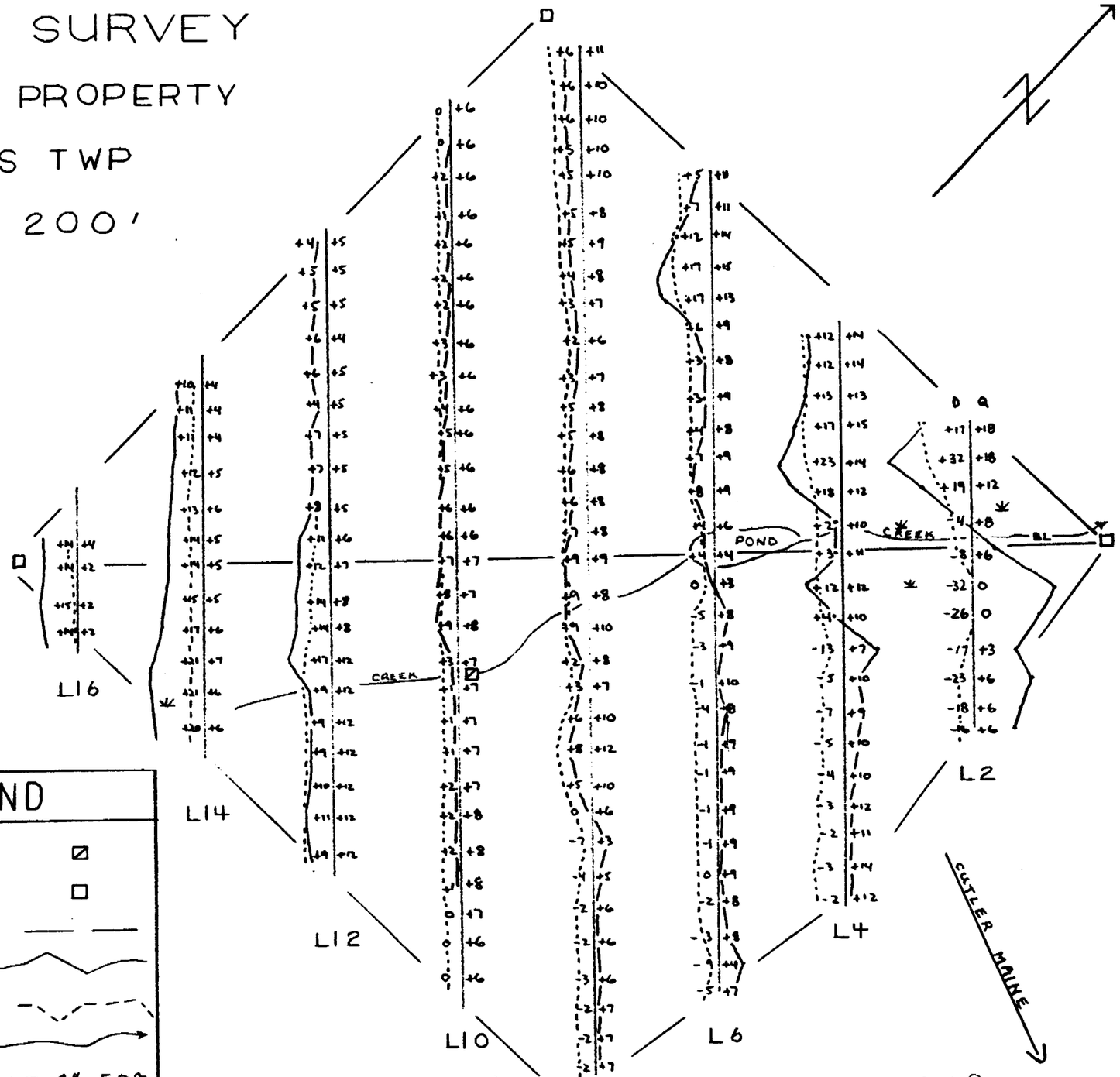
VLF-EM SURVEY

LADY LOU PROPERTY

BOMPAS TWP

1" = 200'



LEGEND

- SHAFT
- CLAIM POST
- CLAIM LINE
- DIP ANGLE
- QUADRATURE
- CREEK
- VERTICAL SCALE 1"=50%
- STATION - CUTER MAINE

2.13728

Michael Leahy

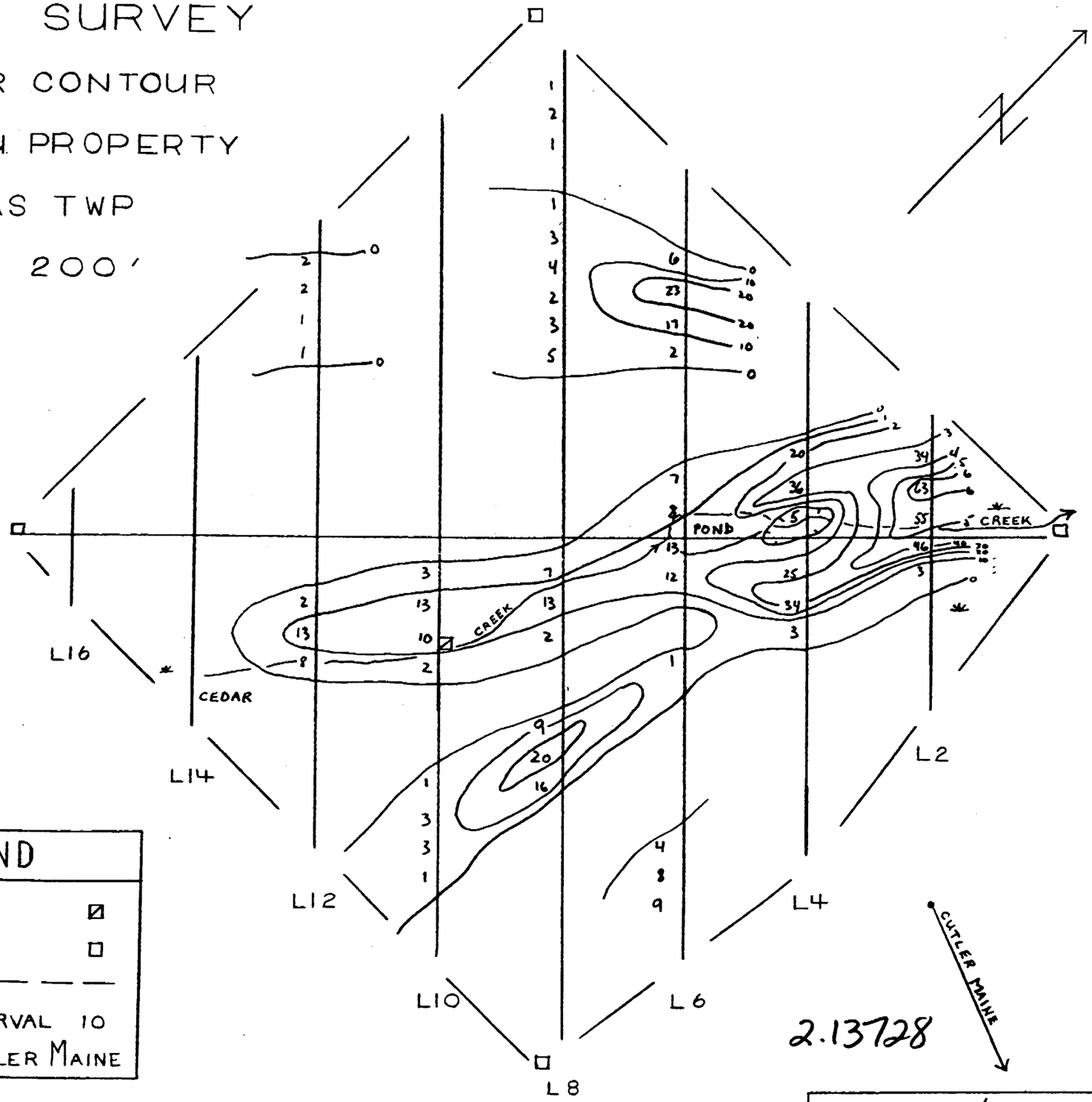
VLF-EM SURVEY

FRASER CONTOUR

LADY LOU PROPERTY

BOMPAS TWP

1" = 200'



LEGEND	
SHAFT	⊠
CLAIM POST	□
CLAIM LINE	— — —
CONTOUR INTERVAL	10
STATION - CUTLER MAINE	

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Michael Leahy

[redacted] M.L.

Ministry of Northern Development and Mines

W9008.275

DOCUMENT W9008

42A01NW0041 2.13728 BOMPASS

900

Report of Work

Mining Act

(Geophysical, Geological and Geochemica

2.13728

Type of Survey(s): Self. Potential (SP)	Mining Division: [illegible]	Township or Area: BOMPAS Twp
Recorded Holder(s): Michael LEAHY		Prospector's Licence No.: K18263
Address: 139 CARTER Ave Kirkland Lake Ont. P2N 2A1		Telephone No.: 705-567-4696
Survey Company: M. Leahy 139 Carter Ave., Kirkland Lake Ont P2N 2A1		
Name and Address of Author (of Geo-Technical Report): M. Leahy	2.13728	Date of Survey (from & to): 07 Day 07 Mo. 90 Yr. — 09 Day 07 Mo. 90 Yr.

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Other (SP)	40
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Other	

Total miles flown over claim(s): 1.7

Date: Sept 19/90 — Recorded Holder or Agent (Signature): Michael Leahy

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number
L	1110266				

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
FEB 12 1991
RECEIVED

RECEIVED
SEP 24 1990
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 1

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: Michael LEAHY 139 CARTER Ave Kirkland Lake Ont P2N2A1

Telephone No.: 705-567-4696

Date: Sept 19/90

Certified By (Signature): Michael Leahy

Received [illegible] LAKE MINING DIVISION

'90 SEP 19 PM 2 36

RECEIVED

For Office Use Only

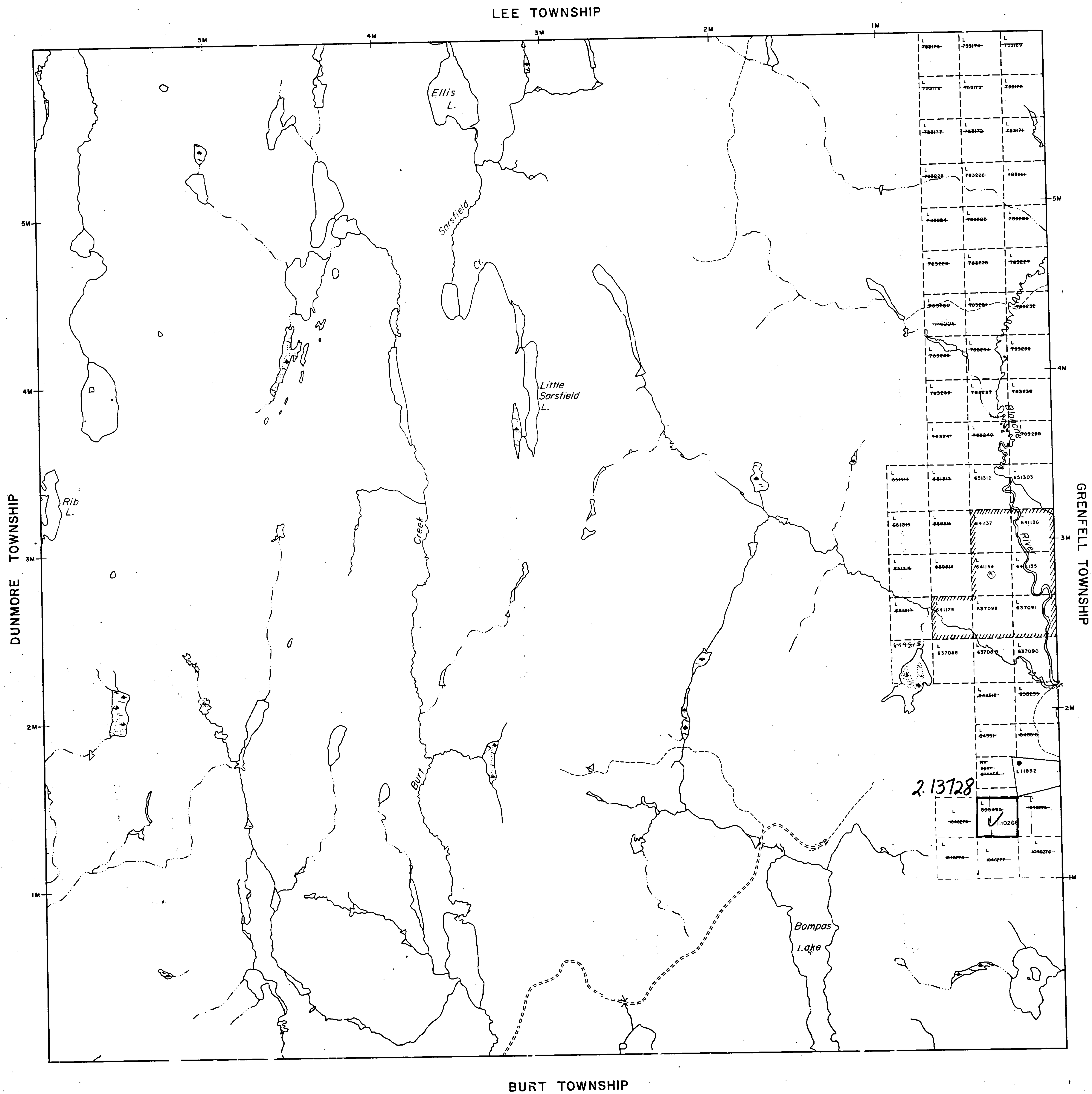
Total Days Cr. Recorded	Date Recorded	Mining Recorder
40	Sept 19/90	for
	Date Approved as Recorded: Jan 30/91	Provincial Manager, Mining Lands: Tom C Gashinski

1362 (89/06)

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
(R1) SEC. 36/80	W9 / 86	24/01/86	M + S	



LEGEND

HIGHWAY AND ROUTE No
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES, ETC
LOTS, MINING CLAIMS, PARCELS, ETC
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON-PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

Metres 500 0 1000 Metres
Chains 10 0 10 20 30 40 50 60 70 Chains
Feet 500 0 1000 2000 4000 5000 Feet

SCALE 1:20 000

DATE OF ISSUE
OCT 1 1990
LARDER LAKE
MINING RECORDER'S OFFICE

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.

TOWNSHIP
BOMPAS

M.N.R. ADMINISTRATIVE DISTRICT
KIRKLAND LAKE
MINING DIVISION
LARDER LAKE
LAND TITLES / REGISTRY DIVISION
TIMISKAMING

Ontario Ministry of Natural Resources
Ministry of Northern Development and Mines

Date AUGUST, 1986
Number G-3605

42A01NW0041 2.13728 BOMPAS

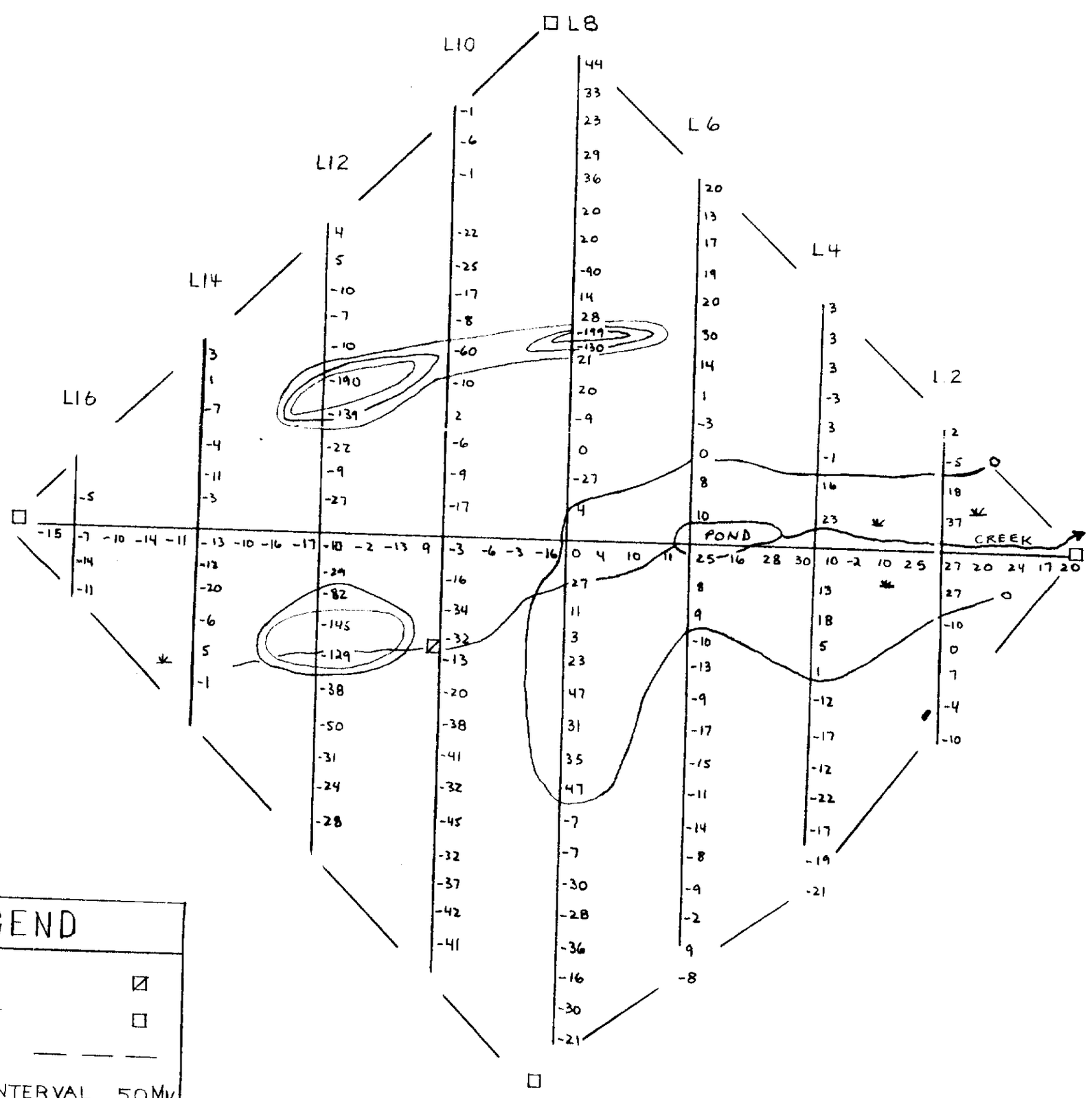
200

SELF POTENTIAL SURVEY
LADY LOU PROPERTY

BOMPAS TWP

1" = 200'

2.13728



LEGEND

- SHAFT ☑
- CLAIM POST □
- CLAIM LINE — — —
- CONTOUR INTERVAL 50Mv
- CREEK ~~~→

Michael Leahy No 190