42A01SE0088 2.16807 OTTO

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ASSESSMENT REPORT EBY-OTTO NE GROUP (J. REED)

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Douglas Robinson

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MAGNETIC PROFILES (J. Reed)
GROUP IN OTTO AND EBY TOWNSHIPS
Line 3265E: Total Field (Magnetic), 55-61000 Gammas
Line 3265E: Total Field (Magnetic), 57-59000 Gammas
Line 3265E: Magnetic Gradient, -400 to 400 Gammas/m

Line 3400E: Total Field (Magnetic), 57-59000 Gammas
Line 3400E: Magnetic gradient, -400 to 400 Gammas/m

Line 3650E: Total Field (Magnetic), 57-61000 Gammas
Line 3650E: Total Field (Magnetic), 57-59000 Gammas
Line 3650E: Magnetic Gradient, -3000 to 1000 Gammas/m
Line 3650E: Magnetic Gradient, -600 to 800 Gammas/m

Line 3700E: Total Field (Magnetic), 56-61000 Gammas
Line 3700E: Total Field (Magnetic), 57-59000 Gammas
Line 3700E: Magnetic Gradient, -300 to 700 Gammas/m
Line 3700E: Magnetic Gradient, -200 to 200 Gammas/m

Line 3750E: Total Field (Magnetic), 57-61000 Gammas
Line 3750E: Total Field (Magnetic), 57-59000 Gammas
Line 3750E: Magnetic Gradient, -700 to 600 Gammas/m
Line 3750E: Magnetic Gradient, -400 to 400 Gammas/m

Line 3800E: Total Field (Magnetic), 48-60000 Gammas
Line 3800E: Total Field (Magnetic), 57-59000 Gammas
Line 3800E: Magnetic Gradient, -10000 to 8000 Gammas/m
Line 3800E: Magnetic Gradient, -200 to 200 Gammas/m

Line 3850E: Total Field (Magnetic), 54-61000 Gammas
Line 3850E: Total Field (Magnetic), 57-59000 Gammas
Line 3850E: Magnetic Gradient, -6000 to 2000 Gammas/m
Line 3850E: Magnetic Gradient, -200 to 200 Gammas/m

Line 3900E: Total Field (Magnetic), 54-60000 Gammas
Line 3900E: Total Field (Magnetic), 57-59000 Gammas
Line 3900E: Magnetic Gradient, -6000 to 3000 Gammas/m
Line 3900E: Magnetic Gradient, -200 to 200 Gammas/m

Line 3950E: Total Field (Magnetic), 55-61000 Gammas
Line 3950E: Total Field (Magnetic), 57-59000 Gammas
Line 3950E: Magnetic Gradient, -4000 to 2000 Gammas/m
Line 3950E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4000E: Total Field (Magnetic), 55-61000 Gammas
Line 4000E: Total Field (Magnetic), 57-59000 Gammas
Line 4000E: Magnetic Gradient, -6000 to 9000 Gammas/m
Line 4000E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4050E: Total Field (Magnetic), 48-60000 Gammas
Line 4050E: Total Field (Magnetic), 57-59000 Gammas
Line 4050E: Magnetic Gradient, -10000 to 3000 Gammas/m
Line 4050E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4100E: Total Field (Magnetic), 57-61000 Gammas
Line 4100E: Total Field (Magnetic), 57-59000 Gammas
Line 4100E: Magnetic Gradient, -5000 to 2000 Gammas/m
Line 4100E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4150E: Total Field (Magnetic), 57-59000 Gammas
Line 4150E: Total Field (Magnetic), 57600-57900 Gammas
Line 4150E: Magnetic Gradient, -3000 to 2000 Gammas/m
Line 4150E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4200E: Total Field (Magnetic), 57-60000 Gammas
Line 4200E: Total Field (Magnetic), 57600-57800 Gammas
Line 4200E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4250E: Total Field (Magnetic), 57200-59200 Gammas
Line 4250E: Magnetic Gradient, -6000 to 1000 Gammas/m
Line 4250E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4300E: Total Field (Magnetic), 57-59000 Gammas
Line 4300E: Magnetic Gradient, -6000 to 1000 Gammas/m
Line 4300E: Magnetic Gradient, -200 to 200 Gammas/m

Line 4350E: Total Field (Magnetic), 57500-58600 Gammas
Line 4350E: Total Field (Magnetic), 57600-57800 Gammas
Line 4350E: Magnetic Gradient, -6000 to 8000 Gammas/m
Line 4350E: Magnetic Gradient, -200 to 200 Gammas/m

Line 450S: Total Field (Magnetic), 57500-58000 Gammas
Line 450S: Magnetic Gradient, -200 to 200 Gammas/m

Line 440S: Total Field (Magnetic), 57200-59200 Gammas
Line 440S: Magnetic Gradient, -200 to 200 Gammas/m

Line 000N: Total Field (Magnetic), 57-61000 Gammas
Line 000N: Total Field (Magnetic), 57-59000 Gammas
Line 000N: Magnetic Gradient, -6000 to 2000 Gammas/m
Line 000E: Magnetic Gradient, -400 to 400 Gammas/m

A. INTRODUCTION

Between August 29, 1994 and January 29, 1995, geological mapping and a magnetometer survey were performed and a technical report was prepared on Otto-Eby Township property held by James D. Reed, E. L. Reed, N. E. Reed and C. E Reed. Douglas Robinson, the author of this assessment report supervised the field work performed by Douglas Robinson, Graham Robinson, David Robinson. At this time a MaxMin EM survey was also preformed and claimed as assessment work on January 10, 1995.

The geophysics was done in conjunction with geological mapping to define target areas for advanced gold exploration. Several strong EM conductors appear to mark horizons that could host primary gold mineralization or be chemical-structural traps hosting vein gold deposits. Several out of phase anomalies on strike with strong IP and OP EM anomalies are coincident with Fe-carbonate alteration zones. The intersection EM conductors and two sets of Fe-carbonate alteration zones striking at 080° and 130-145° are prime targets for gold deposits.

B. PROPERTY

The property consists of a single group of 5 claims (8 claim units) consisting of: a single 4 unit claim in the north east quarter of Eby Township (Plan # M-345) and 4 single unit claims in Otto Township (Plan # M-379); all in the Larder Lake Mining Division.

1187002 - S 1/2 of S 1/2 of Lot 1, Conc VI, Eby Tp (4 units)
475259 - NE 1/4 of S 1/2 of Lot12, Conc VI, Otto Tp (1 unit)
475260 - SE 1/4 of S 1/2 of Lot12, Conc VI, Otto Tp (1 unit)
475261 - SW 1/4 of S 1/2 of Lot12, Conc VI, Otto Tp (1 unit)
475258 - NW 1/4 of S 1/2 of Lot12, Conc VI, Otto Tp (1 unit)

C. LOCATION

The claim group is centred at Latitude 48°05'30" and Longitude 80°08'45" (UTM Zone17: 5326500N, 564000E). Refer to the south-central portion of NTS Map Sheet 42 A/1 for the general location of these two groups (Figure 1). The bulk of the proposed work is concentrated on claims 1187002, 475258 and 475261, 700 m South of Highway 66, 10 km west of Kirkland Lake (Figure 2a).

The locations of the property is outlined in Figure 1. General Location of Claim Groups, Figure 2. Claim Map; Eby Tp, Figure 3. Claim Map; Otto Tp and Figure 4a. General Geology.

D. ACCESS

The property is best accessed from Highway 66 at a point 5.3 km west of the intersection of Highways 11 and 66. At this point, park at the Eby-Otto Township line. Walk 400 m south along the clearly cut township line to the #1 post of claim 1187002.

E. SURVEY DATES AND SUPERVISION

The magnetic survey was supervised by Douglas Robinson the author of this report. Work dates are recorded on the enclosed invoices.

F. DEPOSIT TYPE AND GEOLOGY

Gold is the primary exploration target; however potential exists for platinum or nickel-copper-platinum deposits hosted in coarse grained differentiated gabbro-diorite intrusives.

The western part of the property falls within the north eastern portion of an east-west trending 3 X 1.5 km zone of mafic rock mapped as intrusive gabbro and diorite (Map P.448). 1994 mapping (this group and a second group 1km to the west) by the author confirmed this unit and defined sub-units consisting of dark green diorite, pale coloured feldspathic rocks mapped as anorthosite and coarse grained hornblendite. These formations appear to have crosscutting relationships and are locally intercalated as alternating bands consistent with intrusive rocks. Fine grained Mg-tholeiitic flows are prominent in the north east quarter of the survey area. A chloritic unit of uncertain origin was mapped between the gabbro-diorite intrusive and the Mg-tholeiitic flows. This unit is characterized by quartz grains in a dark green chloritic matrix. The quartz grains, comprising 1-5% of the rock, range from barely visible to several mm diameter. Locally this quartz appears to be angular interstitial grains that survived chloritization of the gabbro-diorite. Locally, rocks within the chlorite unit have tuff-sediment textures. It is the opinion of the author the chloritic unit is altered rock of intrusive, volcanic and tuffaceous origin where alteration has destroyed most primary textures.

It is this chloritic unit and the extreme south edge of th Mg tholeiite that appear to host the strong EM conductors located in this exploration area.

Approximately 40 scattered outcrops of moderate to intense Fe-carbonate alteration were located and hand stripped. 14 samples were analyzed for Au, 13 containing up to 237 ppb Au averaged 63 ppb Au. The fourteenth sample ran 19749 ppb Au.

The following local geology places this property within the Kirkland Lake gold area:

1. the Kirkland Lake Break within 0.8 km to the north.
2. known carbonate-fuchsite on strike 1.8 km to the west.
3 a major carbonate zone on strike 1.6 km to the east (Queenston's Vigras Lake property).
4. visible gold at the intersection of an east trending carbonate alteration and altered oxide iron formation 0.8 km to the south.

Also the Cyprus Zone of the Amalgamated Kirkland property is an equivalent distance south of the Kirkland Lake Main Break.

G. SUMMARY OF PREVIOUS WORK

No prospecting work other than work done by James Reed is recorded in MNDM assessment files. The only evidence of older work is a pit and trench exposing a major quartz vein at 3932E-123N. This ground was staked and explored by James Reed the current clam holder. Mr. Reed mapped, power stripped overburden, conducted magnetic and VLF surveys of his claims and drilled ten drill holes (Reference: Kirkland Lake Assessment file KL-2349). This work was conducted on north-south grid lines spaced at 400 foot centres and both magnetic and VLF readings were taken at 100 foot intervals. Listed below are the holes drilled by Mr . Reed:

1. 80-1 (307 feet) northeast testing a strong graphitic conductor on the east half of claim 475260.
2. 84-1 (114 feet) drilled on claim 1187002
3. 84-2 (117 feet) drilled on claim 1187002
4. 84-3 (119 feet) drilled on claim 475258
5. 84-1 (113 feet) drilled on claim 475258
6. 84-5 (116 feet) drilled on claim 1187002
7. 84-6a(22.5feet) drilled on claim 1187002
8. 84-6b (25 feet) drilled on claim 1187002
9. 84-6c(116 feet) drilled on claim 1187002
10. 84-7 (118 feet) drilled on claim 475258

The above holes tested two target areas. Hole 80-1 tested a graphitic conductor on the southeast quarter of claim 475260. The remaining holes tested quartz veining in a restricted area near the boundary of claims 1187002 and 475258. The majority of the property remains untested by diamond drilling.

H. SUMMARY 1994 WORK

1994 exploration, including line cutting, geological mapping, a MaxMin EM survey and a total field-magnetic gradient survey. Line cutting was performed by James Reed. Detailed mapping and hand stripping with emphasis on alteration and structural lineaments were conducted by the author. A total field-vertical gradient magnetic survey and an MaxMin EM survey were supervised by the author.

I. LINE CUTTING

17.308 km of metric grid with line spacing of 50 m and 25 m station interval was cut by James Reed with assistance from Jean Reed, Ruth Reed and Nat Reed. This work included 14.783 kilometres of cross lines, 1.085 kilometres of base line and 1.440 kilometres of tie lines. Line 40+00E was tied to the Otto-Eby Township boundary at three 1 inch square iron bars located at 40+00E-4+70N (Otto) and 40+00E-4+38S (Otto) and 40+00E-4+52S (Eby). This grid was tied to the contiguous property to the west held by Douglas Robinson where it was tied to the Eby Township survey at a 1 inch square iron bar located at 24+00E-4+37S. Only line cutting on ground held by James Reed is claimed in this report.

Of the 17.308 km of lines cut; 13.150 km were previously claimed as assessment work. The remaining 4.16 km of grid lines are claimed in this as assessment credits in this report.

Total Expense Claim = $3985(4.16/17.308) = $958

J. MaxMin HORIZONTAL LOOP EM SURVEY

(See assessment report of January 10, 1995)

A metric grid with a line spacing of 50 m and 25 m station interval was used for positional control during this survey. The MaxMin EM survey was directed to locating the surface trace and character of conductive formations within the grid area. Exploration was concentrated between 36+50 east and 43+50 east as this area had excellent outcrop exposure compared to the remainder of the group which has limited outcrop. Lines 32+65 and 34+00 were cut to confirm airborne anomalies (Otto Township Airborne Electromagnetic Survey, Mp P.2268). These extra lines were cut because two lines of the airborne survey over the main grid identified no anomalies.

The survey was initiated on lines 32+65E and 34+00E at the west end of the grid where airborne anomalies were known to exist. A 200 m coil separation was used on these lines to assure sufficient depth penetration to detect the conductors. A 200 m coil separation was also used to survey Lines 37+00E and 38+00E. The remainder of the grid was surveyed by 100 m coil separation. This shorter separation was also used to reduce the influence of high noise levels from the high tension power lines that crossed through the centre of the target area.

The initial survey was conducted on alternate lines spaced at 100 metre centres. Multiple conductors were located giving ambiguous results. These could be interpreted to strike north east parallel to the regional strike and parallel to the apparent trend of the airborne anomalies. Five intermediate lines were done on December 31, 1994 and January 1, 1995. These confirmed the conductors trend northwest approximately 60° to the apparent trend of the airborne conductors and the regional stratigraphic trend to the south. A portion of line 40+00 east was surveyed using a 50 m cable in an attempt to better resolve the anomalies. No additional lines were tested using the 50 metre as penetration was reduced and the probability of short cable effects increase with shorter cables.

The summer survey was done using three frequencies on each line to establish the signature of the conductors. A greater frequency range was used for the 100 metre coil separation as the high frequencies are less sensitive to noise at shorter cable lengths. One frequency was used in the intermediate lines surveyed in the winter survey to resolve the ambiguous strike and to establish continuity of anomalies.

A MaxMin 1 rented from Apex Parametrics Limited of Durham, Ontario was used for the summer survey. The winter survey was conducted with a MaxMin 11 rented from Jim Whalen of Kirkland Lake. Excellent resolution of anomalies was achieved from both instruments.

Terrain corrections were performed by recording a running average slope of four station intervals. The coils were maintained coplanar using the average slopes determined in the field during the traverses.

Data was plotted on standard profile plots recording IP and OP curves for each frequency and terrain profile on separate graphs on a common sheet. Data for each line was plotted on a separate sheet. This presentation was used to accommodate multi-frequency data from variable coil separations used to accommodate power line noise and differing penetrations depth sought. Also data plotted in this manner is easily reproduced using standard xerox machines.

The transmitter and receiver were reversed under the power lin s to reduce noise levels.

LINE	COIL SEPARATION (m)	TRAVERSE LENGTH (m)	TOPOGRAPHY MEASURED (m)	FREQUENCY MEASURED
32+65	200	700	700	(440,880,3520 Hz)
34+00	200	850	850	(440,880,3520 Hz)
37+00	200	625	625	(440,880,3520 Hz)
38+00	200	700	700	(440,880,3520 Hz)
38+50	100	500	500	(3555 Hz)
39+00	100	675	675	(440,1760, 7040 Hz)
39+50	100	600	600	(3555 Hz)
40+00	100	625	625	(440,1760, 7040 Hz)
40+00	50	325	325	(440,1760, 7040 Hz)
40+50	100	550	550	(3555 Hz)
41+00	100	500	500	(440,1760, 7040 Hz)
41+50	100	900	900	(3555 Hz)
42+00	100	400	400	(440,1760, 7040 Hz)
42+50	100	875	875	(440,1760, 7040 Hz)
43+00	100	925	925	(3555 Hz)
43+50	100	875	875	(440,1760, 7040 Hz)
Total		10625	10625	

K. ANOMALIES

Ground EM consisting of MaxMin EM surveys were directed to locating the surface trace and character of conductive formations within the grid area. The following anomalies were identified:

Anomaly A	
A38.5	220N
A39	215N
A39.5	210N
A40	200N
A40.5	180N
A41	161N
A41.5	163N
A42	130N
A42.5	106N
A43	075N
A43.5	040N
Anomaly B	
B37	138N
B38	070N
B38.5	040N
Anomaly C	
C32.6	125N
C34	060N
Anomaly D	
D39	093N
D39.5	085N
D40	088N
D40.5	087N
Anomaly E	
E40	395N
Anomaly F	
F43.5	200N
Anomaly G	
G39	075S
Anomaly H	
41.5	127S
Anomaly I	
42.5	150S
Anomaly J	
J41.5	296S

Conductors A to J have been identified by this MaxMin survey. Of these conductors A, B, C, and D appear to be strong bedrock sources containing sulphides and/or graphite. Conductors E, F, G, H, I and J are weak to very weak and may trace wet shears, strong bedrock relief or alteration zones that could host Au mineralization.

None of the conductors are exposed in outcrop and the conductors generally follow swampy depressions. Commonly Fe-carbonate alteration and quartz filled gash fractures occur at the break of slopes bordering depressions indicating the presence of shearing and related gold style alteration zones centred in these depressions. Conductors A, B, C and D have both strong In Phase (IP) and Out of Phase (OP) responses and narrow widths indicating narrow strongly conductive bedrock sources that would overwhelm any responses from alteration zones or conductive overburden, including swamps.

Conductor A appears to occur along or near the contact between Mg-tholeiite to the north and chloritic alteration-diorite to the south. The west end of the conductor is aligned with two VLF responses from a VLF survey conducted during the early 1980's. A abrupt change of geology west of line 38+50E indicates a north trending fault may truncate the conductor at this point. If a north trending fault exists it probably also shifts alteration zones that host Au mineralization. An intrusive contact could also explain the change of geology and the termination of conductor A west of line 38+50.

Conductors B and C are strong conductors assumed to strike at 115° and 122° respectively. This assumption is tenuous and must be verified by additional survey lines. If these conductors are offsets of conductor A, two north trending faults of 200 m offsets may exist. The geology and strike direction indicate they are independent of conductor A. In either case additional survey lines would resolve much of the existing ambiguity. If these conductors are natural short conductors independent of conductor A, they have enhanced probability of being Au-sulphide, Ni-Cu-Pt or base metal deposits.

Mapping by the author indicates conductor D is located near the projection of strong shearing having an 080° azimuth and directly south of prominent Fe-carbonate alteration. This association combined with is discordant strike relative to the other conductors indicate this is a prime gold target; parallel the Larder Lake Break. If this discordant strike is real, any EM response from this conductor to the west would be masked by conductor B and similarly conductor A would mask it's response to the east.

Conductor E is an OP response less than 25 metres wide beneath 100 metres of swamp. This response appears to be caused by either a channel within the swamp or shearing and/or alteration. A long linear swamp of azimuth 120° projects directly to conductor F. The EM profiles between conductors E and F indicate a vague OP response that is to weak to classify as a conductor, however this swamp may mark a significant horizon that could host alteration and/or shearing.

Conductor F appears to be a strong bedrock response related to sulphides and/or graphite, The profiles indicate Conductor F could either be a conductor 160 metre north of Conductor A or much of the 160 metres between 040N and 200N is a broad conductive zone. The OP profiles of lines 42+50E and 43+00E between conductor A and 200N is conductive. This appears to be an area of shallow swamp over deep overburden. It is inconclusive if this conductive zone north of conductor A is a real bedrock response, however, it should be considered seriously considering the strength of conductor F on the north east edge of this response.

Conductor G is not strong, however it has sufficient IP response to indicate a bedrock source. It is also coincident with a prominent alteration Fe-carbonate alteration zone and should be considered seriously.

Conductors H, I and J are weak conductors associated with till covered ground. H and J are weak OP responses only, indicating sheared ground or alteration. Conductor I is a weak IP response, possibly detecting either a deep or very narrow sulphide or graphitic source rock. Conductor J is closely

associated with bedrock occurrences of Fe-carbonate alteration and prominent float having intense alteration. It has a high probability of being associated with the bedrock source of the prominent alteration in nearby float. Conductors H and I are on strike with conductor B and may reflect a shear extension of this conductor. It is reasonable to expect shears extending beyond the ends of certain bedrock conductors.

L. MAGNETIC SURVEY

A rented Scintrex ENVI-MAG was used to for blanket coverage of all lines. This instrument was selected because of its ability to give a high density of readings suitable for profiling. This procedure was selected to detect short wavelength and low amplitude negative magnetic anomalies associated with magnetite destruction related to carbonate alteration of magnetite and ferro-magnesium minerals. This style of destructive alteration was observed by the author on ground held by Arnold Allsopp. Here; half a kilometre to the southeast pervasive Fe-carbonate alteration crosscuts magnetite iron formation and mafic volcanics. The magnetite is totally replaced by Fe-carbonate.

Both total magnetic field and magnetic gradient were measured. The magnetic gradient is a useful tool to define a precise surface trace of total field anomalies. It also defines the relative depth of the source anomalies as magnetic gradient responds strongly to near surface features. The data was plotted on profile using Lotus 123.

The magnetic surveys established the Maxmin responses occurred in areas having low magnetic total fields with many responses being at the edge of magnetic lows located between magnetic highs. The lack of positive magnetic signatures indicate the EM responses lack significant magnetite and pyrrhotite. This indicates the strong bedrock EM responses are the result of pyrite and/or graphite mineralization. The magnetic lows associated with EM responses could be related to destructive alteration that represents gold targets. The trends of magnetic lows appear to be at low angle to the EM responses indicating

priority areas within EM responses can be identified using the magnetic survey. It is possible only portions of the EM sources have been subjected to alteration that could host gold. For example a magnetic low extending from 4100E-200N to 4000E-200N intersects conductor A at line 4000E. This mag low is coincident with intense Fe-Carbonate alteration.

In contrast Conductor D is parallel to coincident magnetic low and associated Fe-carbonate alteration. This is a prime gold target.

Magnetic lows due to alteration that lack EM responses are prime gold targets as well. For example a strong east trending Fe-carbonate alteration zone at 4100E-255N has a mag low signature.

The use of magnetic signatures is valuable tool in projecting known alteration zones and prioritizing advanced exploration targets, but the absence of an identifiable response should not exclude a target from exploration. Incomplete alteration, narrow target zones, post ore diking and magnetic till can mask identifiable responses.

M. RECOMMENDATIONS

An additional 15 lines should be cut to complete coverage of the property. A MaxMin EM survey having a 100 m coil separation should be extended to all of the grid including those lines not covered in this survey. The high density of anomalies and ambiguity resulting from a 100 m line spacing justify the recommended 50 m line density. The 100 m coil separation has been found to be the best compromise between topographic influences, penetration depth and resolution. Other coil separations can be used to resolve specific problems.

Other recommended activities include extension of detailed mapping, hand stripping and magnetic surveys to cover the proposed grid extendion. Mapping should include sampling of all

alteration zones and areas of mineralization to determine the distribution of gold. Follow up power stripping by excavator should be utilized to extend alteration zones along strike and expose the full width of alteration zones which are commonly centred in depressions with alteration exposed only at the base of slopes on either side. OP EM conductors lacking IP responses should also be power stripped to determine their source.

Diamond drilling should be employed to test the best geological and geochemical targets with emphasis on those zones having best Au values. The intersection of alteration and mineralized zones with EM conductors are also a preferred drill target.

The following table lists potential drill holes.

Collar Coordinates	Length	Azimuth	Dip	Target
3940E-045N	160m	0°	45°	Conductor D, alteration, mag low, possible extension
4000E-125N	100m	180°	45°	Intersection of Conductor D, alteration and a mag low.
4000E-160N	200m	0°	45°	Conductor A mag low, possible extension.
4200E-050N	250m	0°	45°	Conductor A and a broad mag low, possible extension.
4300E-040N	300m	0°	45°	Conductor A and a broad conductive zone that appears to be a sheared zone, possible extension
3900E-100S	100m	0°	45°	Conductor G, and the projection of a known alteration zone, possible extension.
3750E-020N	200m	0°	45°	Conductor B and the extension of alteration

zones. (location of conductor B should be verified by 100 m coil separation prior to drilling)

N. LIST OF CO-HOLDERS

James D. Reed
RR #3, Site 3, Box 2
Swastika, Ontario
P0K 1T0

Emmalene L. Reed
RR #3, Site 3, Box 2
Swastika, Ontario
P0K 1T0

Nathanael E. Reed
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Swastika, Ontario
P0K 1T0

Charles E. Reed
8 Kingsley Court
Guelph, Ontario
N1E 1E3

O. LIST OF REFERENCES

EBY TOWNSHIP

MEMOIR 131 - Canada Department of Mines
Kenogami, Round, and Larder Lake Areas, Timiskaming District, Ontario, By H. C. Cooke, 1922.

Geological Report 99 - Ontario Department of Mines Preliminary Geology of the Eby and Otto Area, District of Temiskaming
By H. L. Lovell, 1972.

Map P. 448 - Ontario Department of Mines Preliminary Geological Map No. P. 448; Eby Township.
Scale 1 inch = 1/2 mile

Map P. 903 - Preliminary Map P.903; Kirkland Lake Data Series; Eby Township.
Scale 1 : 15 840

Map P. 2268 - Ontario Geological Survey Preliminary Map P.2268 Kirkland Lake Area; Eby Township; Airborne Electromagnetic Survey.

Map P. 2268 - Ontario Geological Survey Preliminary Map P.2268; Kirkland Lake Area; Eby Township; Airborne Electromagnetic Survey; Total Field Magnetic Survey.
Scale 1 : 20 000

OTTO TOWNSHIP

Map P. 330 - Ontario Department of Mines Preliminary Geological Map No. P. 330; Otto Township (North Half)
Scale 1 inch = 1000 feet

Map No. 501 - Preliminary Map No. 501; Otto Township and Northern Part of Marquis Township.
Scale 1 inch = 1/4 mile.

Map P. 717 - Ontario Department of Mines and Northern Affairs; Preliminary Map P. 717; Geochemical Distribution of Acid Soluble Copper in Felsic Plutonic Rocks; Otto Township and Parts of Eby, Marquis and Boston Townships.
Scale 1 inch = 1/2 mile

Map P. 718 - Ontario Department of Mines and Northern Affairs; Preliminary Map P. 718; Geochemical Distribution of Acid Soluble Lead in Felsic Plutonic Rocks. Otto Township and Parts of Eby, Marquis and Boston Townships.
Scale 1 inch = 1/2 mile

Map P. 719 - Ontario Department of Mines and Northern Affairs; Preliminary Map P. 719; Geochemical Distribution of Acid Soluble Molybdenum in Felsic Plutonic Rocks. Otto Township and Parts of Eby, Marquis and Boston Townships.
Scale 1 inch = 1/2 mile

Map P. 2269 - Ontario Geological Survey Preliminary Map P.2269; Kirkland Lake Area; Otto Township; Airborne Electromagnetic Survey.

Map P. 2269 - Ontario Geological Survey Preliminary Map P.2269; Kirkland Lake Area; Otto Township; Airborne Electromagnetic Survey; Total Field Magnetic Survey.
Scale 1 : 20 000

CERTIFICATE

I, Douglas Robinson, of 24 Victoria Avenue Swastika, Ontario, hereby certify that:

1. I am a registered professional Engineer of Ontario engaged in my profession for approximately 19 years.

2. I am a graduate of Queen's University in Kingston Ontario with an Honours Bachelor of Science degree in Geological Engineering and
Northern College, School of Mines in Haileybury, Ontario with a Mining Technician Certificate.

3. I personally supervised the EM surveys claimed in this assessment report.

4. I authored this report.

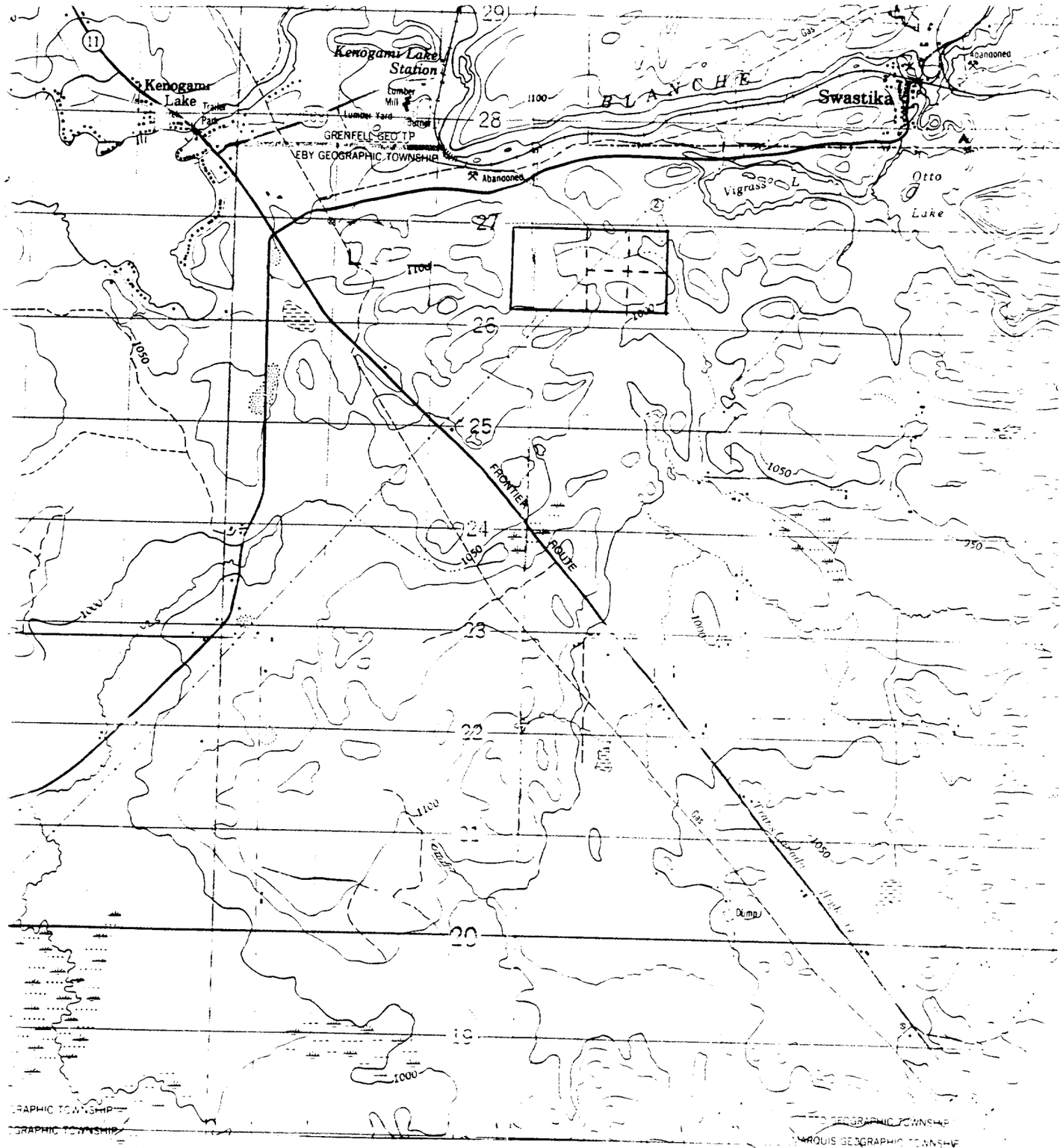
5. My knowledge exploration procedures was acquired through 20 years employment in the mining industry.

6. My knowledge of the properties was acquired by personally mapping the property and reviewing MNDM assessment reports.

Douglas Robinson

Qual. # 2.2146

Douglas Robinson, P. Eng
September 16, 1996.



KIRKLAND LAKE

TIMISKAMING DISTRICT

ONTARIO

Scale 1:50 000 Echelle

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Metres

Figure 1. General Location of Claim Groups

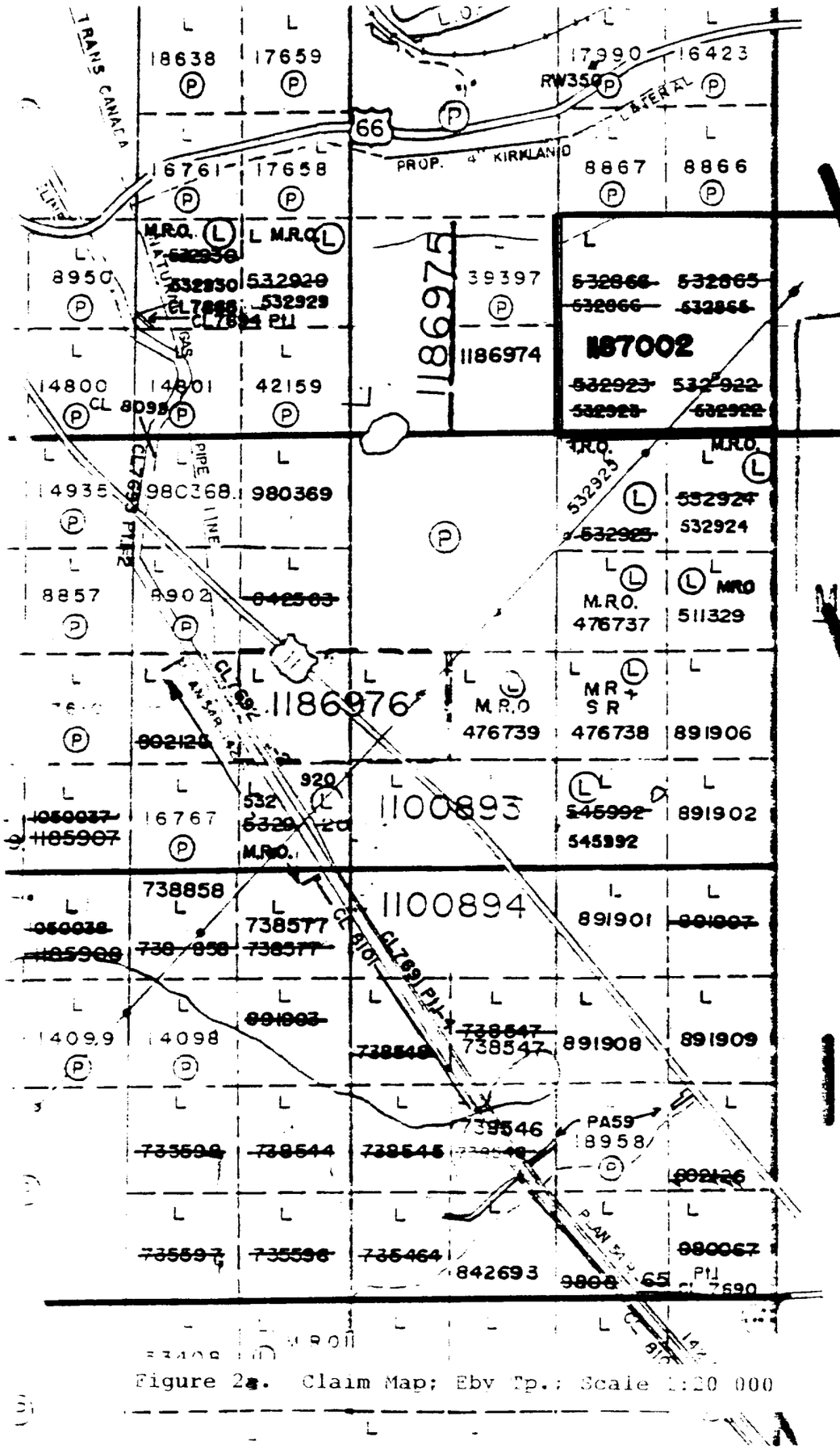


Figure 2a. Claim Map; Eby Tp.; Scale 1:20 000

DATE OF IST
MAR 15
LARDER LAKE
MINING RECORDER'S
VI
V
IV
M.379
I WD.

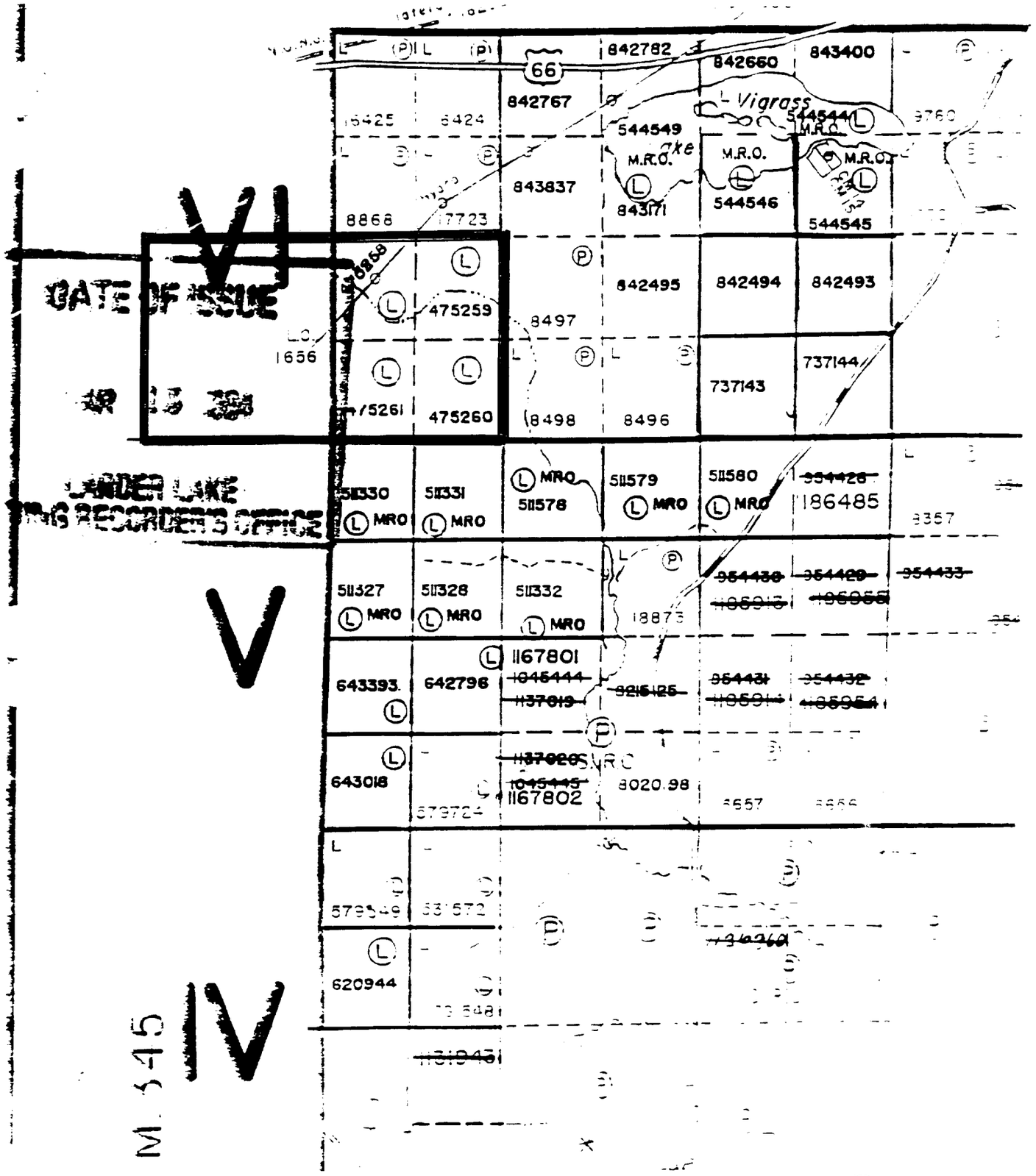


Figure 3. Claim Map; Otto Tp.; Scale 1:20 000

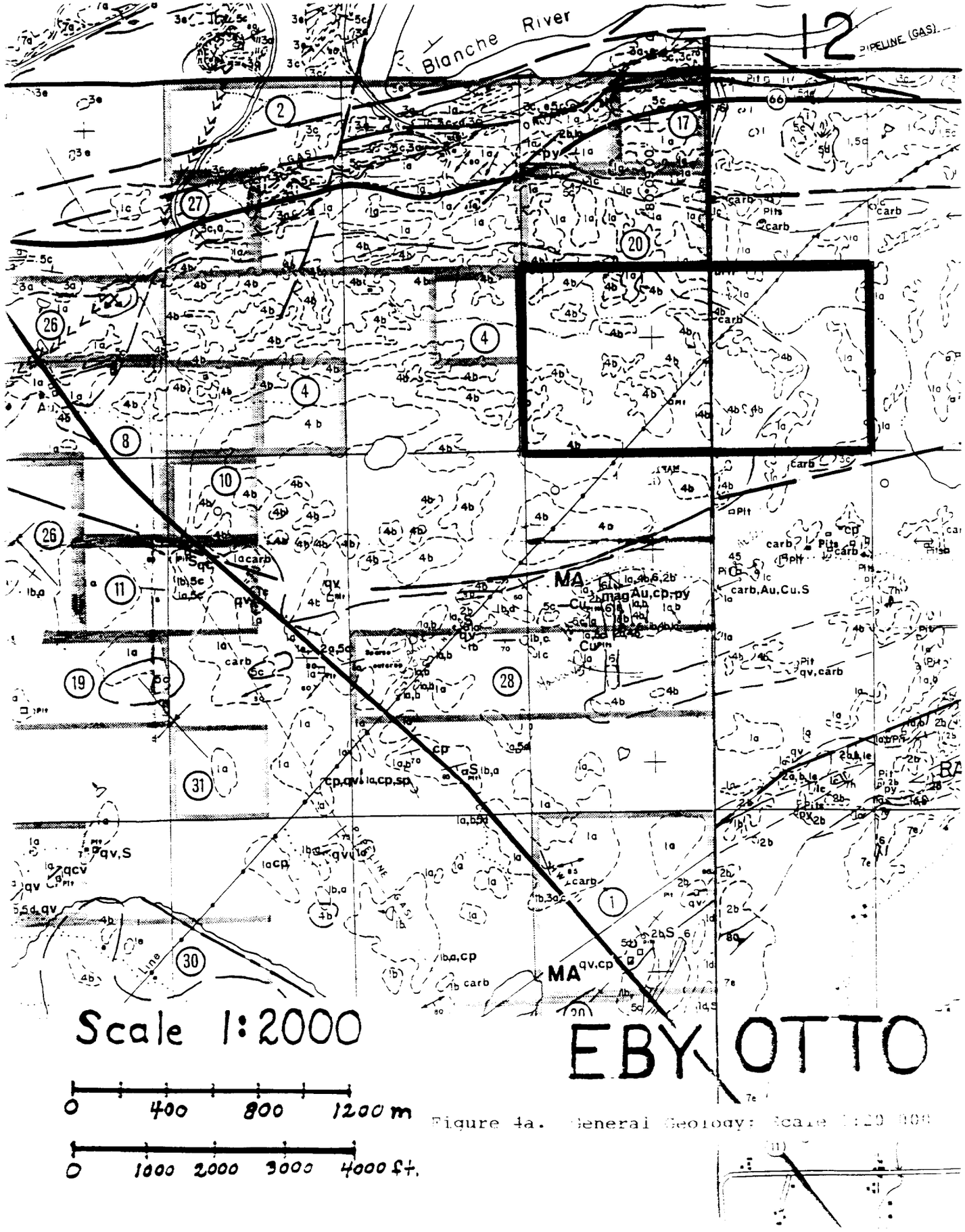


Figure 4a. General Geology: Scale 1:20 000

Map P. 448 - Ontario Department of Mines Preliminary Geological Map No. P. 448; Eby Township.
Scale 1 inch = 1/2 mile

LEGEND

PRECAMBRIAN

PROTEROZOIC

8 MAFIC INTRUSIVE ROCKS

HURONIAN

COBALT GROUP

7 GOWGANDA FORMATION

ARCHEAN

MAFIC INTRUSIVE ROCKS

6 Diabase

FELSIC INTRUSIVE ROCKS (ALGOMAN)

5c Syenite and Syenite Porphyry

5d Mafic syenite, lamprophyre, and hybrid syenite and country rocks

MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND SOME KEEWATIN)

4b Gabbro and Diorite

METASEDIMENTS (TIMISKAMING OR KEEWATIN)

3

FELSIC VOLCANIC ROCKS (KEEWATIN)

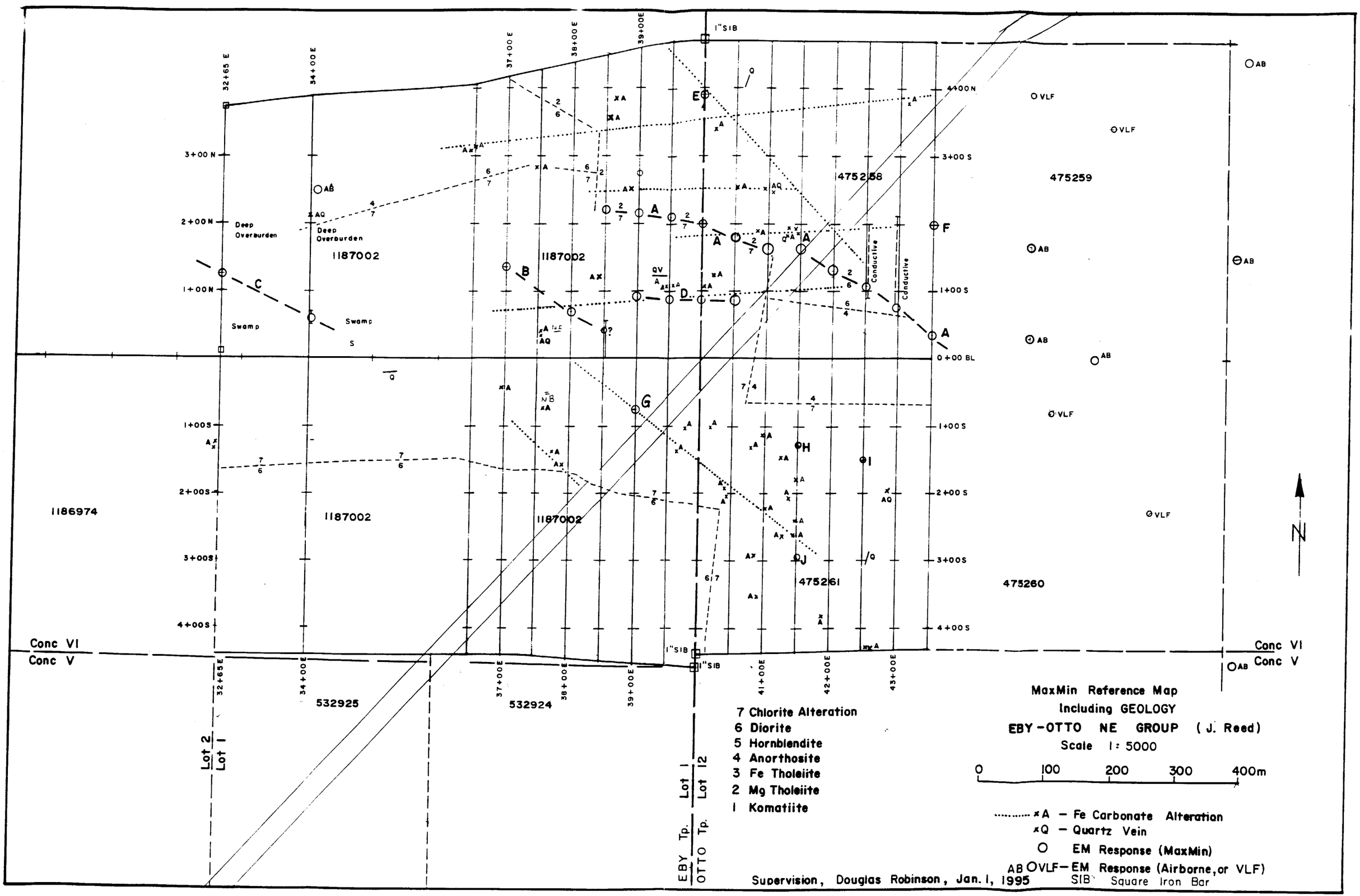
2a Rhyolite and dacite

MAFIC VOLCANIC ROCKS (KEEWATIN)

1a Basalt and andesite (pillowed and massive)

1b Mafic agglomerate and tuff

Figure 4b. General Geology: Legend


32+65 E
34+00 E
37+00 E
38+00 E
39+00E
1"SIB
41+00E
42+00E
43+00E
4+00N
3+00N
2+00N
1+00N
0+00 BL
1+00S
2+00S
3+00S
4+00S
Deep Overburden
Swamp
1187002
1186974
532925
532924
475258
475259
475260
475261
Conductive
VLF
AB
Conc VI
Conc V
Lot 2
Lot 1
Lot 12
EBY Tp.
OTTO Tp.
N
7 Chlorite Alteration
6 Diorite
5 Hornblendite
4 Anorthosite
3 Fe Tholeiite
2 Mg Tholeiite
1 Komatiite
MaxMin Reference Map
Including GEOLOGY
EBY-OTTO NE GROUP (J. Reed)
Scale 1:5000
0 100 200 300 400m
xA – Fe Carbonate Alteration
xQ – Quartz Vein
O EM Response (MaxMin)
AB O VLF – EM Response (Airborne, or VLF)
SIB Square Iron Bar
Supervision, Douglas Robinson, Jan. 1, 1995

SCINTREX

ENVI-MAG Environmental Magnetometer/Gradiometer

Locating Buried Drums and Tanks?

The NEW ENVI-MAG is the solution to this environmental problem. ENVI-MAG is an inexpensive, lightweight, portable "WALKMAG" which enables you to survey large areas quickly and accurately.

ENVI-MAG is a portable, proton precession magnetometer and/or gradiometer, for geotechnical, archaeological and environmental applications where high production, fast count rate and high sensitivity are required. It may also be used for other applications, such as mineral exploration, and may be configured as a total-field magnetometer, a vertical gradiometer or as a base station.

The ENVI-MAG

- easily detects buried drums to depths of 10 feet or more
- more sensitive to the steel of a buried drum than EM or radar
- much less expensive than EM or radar
- survey productivity much higher than with EM or radar

Main features include:

- select sampling rates as fast as 2 times per second
- "WALKMAG" mode for rapid acquisition of data
- large internal memory, expandable to 200,000 readings
- easy to read, large LCD screen displays data both numerically and graphically
- ENVIMAP software for processing and mapping data

ENVI-MAG comprises several basic modules: a lightweight console with a large screen alphanumeric display and high capacity memory, a staff mounted sensor and sensor cable, rechargeable battery and battery charger, RS-232 cable and ENVIMAP processing and mapping software.

For gradiometry applications an upgrade kit is available, comprising an additional processor module for installation in the console, and a second sensor with a staff extender.



ENVI-MAG Proton Magnetometer in operation

For base station applications a Base Station Accessory Kit is available so that the sensor and staff may be converted into a base station sensor.

Features and Benefits

"WALKMAG" Magnetometer/Gradiometer

The "WALKMAG" mode of operation (sometimes known as "Walking Mag") is user-selectable from the keyboard. In this mode, data is acquired and recorded at the rate of 2 readings per second as the operator walks at a steady pace along a line. At desired intervals, the operator "triggers" an event marker by a single key stroke, assigning coordinates to the recorded data.

True Simultaneous Gradiometer

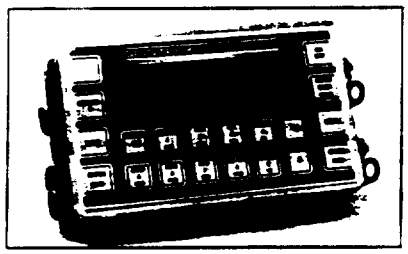
An optional upgrade kit is available to configure ENVI-MAG as a gradiometer to make true, simultaneous gradiometer measurements. Gradiometry is useful for geotechnical and archaeological surveys where small near surface magnetic targets are the object of the survey.

Selectable Sampling Rates

0.5 second, 1 second and 2 second reading rates user selectable from the keyboard.

Large-Key Keypad

The large-key keypad allows easy access for gloved-hands in cold-weather operations. Each key has a multi-purpose function.



Front panel of ENVI-MAG showing a graphic profile of data and large-key keypad

Large Capacity Memory

ENVI-MAG with standard memory stores up to 28,000 readings of total field measurements, 21,000 readings of gradiometry data or 151,000 readings as a base station. An expanded memory option is available which increases this standard capacity by a factor of 5.

Easy Review of Data

For quality of data and for a rapid analysis of the magnetic characteristics of the survey line, several modes of review are possible. These include the measurements at the last three stations, the ability to scroll through any or all previous readings in memory, and a graphic display of the previous data as profiles, line by line. This feature is very useful for environmental and archaeological surveys.

Highly Productive

The "WALKMAG" mode of operation acquires data rapidly at close station intervals, ensuring high-definition results. This increases survey productivity by a factor of 5 when compared to a conventional magnetometer survey.

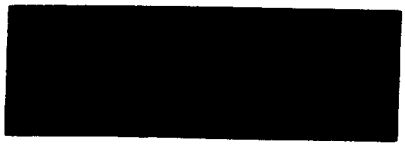
"Datacheck" Quality Control of Data

"Datacheck" provides a feature wherein at the end of each survey line, data may be reviewed as a profile on ENVI-MAG's screen. Datacheck confirms that the

allows the user to note the magnetic relief (anomaly) on the line.

Large Screen Display

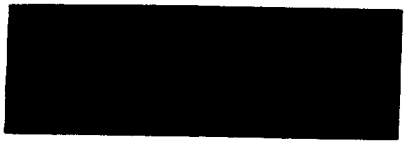
"Super-Twist" 64 x 240 dot (8 lines x 40 characters), LCD graphic screen provides good visibility in all light conditions. A display heater is optionally available for low-temperature operations below 0°C.



Close-up of the ENVI-MAG screen showing data presented after each reading

Interactive Menus

The set-up of ENVI-MAG is menu-driven, and minimizes the operator's learning time, and on-going tasks.



Close-up of display of ENVI-MAG showing interactive set-up menu

Battery Charger

An "off-the-shelf" lead-acid battery and charger are provided as standard. The low-cost "Camcorder" type battery is available from electronic parts distributors everywhere.

HELP-Line Available

Purchasers of ENVI-MAG are provided with a HELP-Line telephone number to call in the event assistance is needed with an application or instrumentation problem.

ENVIMAP Processing and Mapping Software

Supplied with ENVI-MAG, and custom designed for this purpose, is easy-to-use, very user-friendly, menu driven data processing and mapping software called ENVIMAP. This unique software appears to the user to be a single program, but is in fact a sequence of separate programs, each performing a specific task. Under the menu system, there are separate programs to do the following:

a) read the ENVI-MAG data and reformat it into a standard compatible with the ENVIMAP software

b) grid the data into a standard grid format

c) create a vector file of posted values

[illegible] allows the user to add some title information and build a suitable surround

d) contour the gridded data

e) autoscale the combined results of the posting/surround step and the contouring step to fit on a standard 8.5 ins. wide dot-matrix printer

f) rasterize and output the results of step e) to the printer

ENVIMAP is designed to be as simple as possible. The user is required to answer a few basic questions asked by ENVIMAP, and then simply toggles "GO" to let ENVIMAP provide default parameters for the making of the contour map. The user can modify certain characteristics of the output plot. ENVIMAP'S menu system is both keyboard and mouse operable. HELP screens are integrated with the menu system so that HELP is displayed whenever the user requests it.

Options Available

- True simultaneous gradiometer upgrade
- Base station upgrade
- Display heater for low temperature operations
- External battery pouch

Specifications

Total Field Operating Range
20,000 to 100,000 nT (gammas)

Total Field Absolute Accuracy
+/- 1nT

Tuning
Fully solid state. Manual or automatic, keyboard selectable

Cycling (Reading) Rates
0.5, 1 or 2 seconds, up to 9999 seconds for base station applications, keyboard selectable

Sensitivity
0.1 nT at 2 second sampling rate

Gradiometer Option
Includes a second sensor, 20 inch (½m) staff extender and processor module

"WALKMAG" Mode
0.5 second for walking surveys, variable rates for hilly terrain

Digital Display
LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumerics

Display Heater
Thermostatically controlled, for cold weather operations

Keyboard Input
17 keys, dual function, membrane type

Notebook Function
32 characters, 5 user-defined MACRO's for quick entry

Standard Memory

Total Field Measurements:	28,000 readings
Gradiometer Measurements:	21,000 readings
Base Station Measurements:	151,000 readings

Expanded Memory

Total Field Measurements:	140,000 readings
Gradiometer Measurements:	109,000 readings
Base Station Measurements:	750,000 readings

Real-Time Clock
Records full date, hours, minutes and seconds with 1 second resolution, +/- 1 second stability over 12 hours

Digital Data Output
RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off

Analog Output
0 - 999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1,000 or 10,000 nT full scale

Power Supply
Rechargeable "Camcorder" type, 2.3 Ah, Lead-acid battery.

12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer,

External 12 Volt input for base station operations

Optional external battery pouch for cold weather operations

Battery Charger
110 Volt - 230 Volt, 50/60 Hz

Operating Temperature Range
Standard 0° to 60°C
Optional -40°C to 60°C

Dimensions
Console - 10 x 6 x 2.25 inches (250 mm x 152 mm x 55 mm)
T.F. sensor - 2.75 inches dia. x 7 inches (70 mm x 175 mm)
Grad. sensor and staff extender - 2.75 inches dia. x 26.5 inches (70 mm x 675 mm)
T.F. staff - 1 inch dia. x 76 inches (25 mm x 2 m)

Weight
Console - 5.4 lbs (2.45 kg) with rechargeable battery
T. F. sensor - 2.2 lbs (1.15 kg)
Grad. sensor - 2.5 lbs (1.15 kg)
Staff - 1.75 lbs (0.8 kg)

SCINTREX

Head Office
222 Snidercroft Road
Concord, Ontario, Canada L4K 1B5
Telephone: (905) 669-2280
Fax: (905) 669-8403 or 669-5132
Telex: 06-964570

In the USA:
Scintrex Inc.
85 River Rock Drive
Unit 202
Buffalo, New York 14207
Telephone: (716) 298-1219
Fax: (716) 298-1317

ANALYSIS
J. REED PROPERTY
NORTH EAST GRID
EBY & OTTO TOWNSHIPS
SAMPLES COLLECTED 1994

SAMPLE	5967 J	5968	5969	5971	5972	5973	5974	5976
Au ppb	19749	237	21	3	75	106	48	75
Cu ppm								66
	4308E	4308E	4200E	4102E	4089E	4095E	4131E	4150E
	379N	379N	259S	348N	252N	252N	184N	188N

SAMPLE	6853	6855	6856	6857	6859	6861
Au ppm	Nil	3	182	7	51	10
	3862E	3864E	3850E	3840E	3790E	3931E
	393N	387N	359N	123N	154S	121N

NOTES

5967 Gossan

5968 Hard light green groundmass cut by stringers of pale yellow silicate alt rich in pyrite cubes.

5972 3 cm quartz vein; Py in wall rock & vein; Fe-carbonate & sericite alteration.

5973 3 cm quartz vein & wall rock; coarse Py in vein.

5976 1 cm black quartz vein & 5 cm sericite alteration; trace Cp in vein.

6853 Short 2 cm quartz-carbonate vein; pyrite xls in vein & wall rock; wall rock hard and silicified, pale buff, almost white coloured.

6855 Minor quartz-carbonate veining in schistose Fe-carbonate alteration.

6856 Fe carbonate-sericite alteration with trace fuchite, pyritic; quartz stringers.

6859 Intense wall rock alteration; white; very hard; cut by quartz stringer; coarse Py in stringer.

6861 Quartz vein with coarse Py from pit muck.

WHOLE ROCK ANALYSIS
J. REED PROPERTY
NORTH EAST GRID
EBY & OTTO TOWNSHIPS
SAMPLES COLLECTED 1994

SAMPLE	5975	5977	5978
%SiO2	41.61	38.59	29.21
%Al2O3	12.25	13.57	12.65
%Fe2O3	12.25	10.18	13.19
%CaO	8.85	11.07	13.63
%MgO	4.48	4.91	5.95
%NaO	1.32	2.14	1.75
%K2O	1.38	1.30	1.34
%TiO2	1.00	1.12	0.96
%MnO	0.25	0.22	0.33
%P2O5	0.08	0.08	0.06
%LOI	15.11	17.50	21.45
TOTAL	98.60	100.69	100.52
ppm			
Ba	160	150	150
Sr	100	100	110
Zr	50	60	50
Y	20	20	10
Sc	42	43	40
Nb	<30	<30	<30
Be	1	1	1
Ni	85	75	100
Cr	280	175	190
Cu	70	<5	<5
V	315	335	290
Co	40	40	35
Zn	75	45	45
	4131E	4150E	4150E
	184N	188N	188N

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Established 1928
Assaying - Consulting - Representation

Geochemical Analysis Certificate

4W-2199-RG1

Company: **J. Reed**
Project:
Attn: D. Robinson

Date: SEP-22-94

We hereby certify the following Geochemical Analysis of 11 Rock samples submitted SEP-19-94 by D. Robinson.

See M-3930 WRA Results to follow

Sample Number	Au PPB	Au Check PPB	Cu PPM
5967	19749	19954	-
5968	237	-	-
5969	21	17	-
5971	3	-	-
5972	75	75	-
5973	106	-	-
5974	48	-	-
5975	-	-	-
5976	75	-	66
5977	-	-	-
5978	-	-	-

Certified by G. Tebbutt

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

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Geochemical Analysis Certificate

4W-2250-RG1

Company: **J. REED**
Project:
Attn: J. Reed

Date: SEP-28-94

We hereby certify the following Geochemical Analysis of 6 Rock samples submitted SEP-23-94 by D. Robinson.

Sample Number	Au PPB
6853	Nil
6855	3
6856	182
6857	7
6859	51
6861	10

Certified by Denis Chantre

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

J. REED
ATTN: D. ROBINSON

1270 FSWSTER DRIVE, UNIT 3 MISSISSAUGA,ONTARIO L4W-1A4
PHONE #: (905)625-1544 FAX #: (905)206-0513

REPORT No. : 11930
Page No. : 1 of 1
File No. : 9P2199
Date : 95-12-21

4W-2199-RG1

I.C.A.P. TOTAL OXIDE ANALYSIS

Lithium MetaBorate Fusion

SAMPLE #	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	TiO2 %	MnO %	P2O5 %	Ba ppm	Sr ppm	Zr ppm	Y ppm	Sc ppm	Nb ppm	Be ppm	Ni ppm	Cr ppm	Cu ppm	V ppm	Co ppm	Zn ppm	LOI %	TOTAL %
75 [illegible]	41.68	12.25	12.25	8.85	4.48	1.32	1.38	1.00	0.25	0.08	160	100	50	20	42	< 30	1	85	280	70	315	40	75	15 11	98.60
77 [illegible]	59	13.57	10.18	11.07	4.91	2.14	1.30	1.12	0.22	0.08	150	100	60	20	43	< 30	1	75	175	< 5	335	40	85	17.50	100.69
78 [illegible]	29.21	12.65	13.19	13.63	5.95	1.75	1.34	0.96	0.33	0.06	150	110	50	10	40	< 30	1	100	190	< 5	290	35	65	21.45	100.52

SIGNED :

L/94

Swastika Laboratories
P.O. Box 10
Swastika, Ontario
P0K 1T0

INVOICE

NO: 30974
DATE: 09-27-94
PAGE: 1 of 1

SOLD TO:

J. Reed
R.R. #2 Site 3
Swastika, Ontario
POK1T0

SHIP TO:

Same

GST Number: R132862640

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	G	P	UNIT PRICE	AMOUNT
	8	Code 1	Au	3		8.000	64.00
	1	Code 1	Cu	3		2.500	2.50
	3	Code 1	WRA Package	3		19.000	57.00
	11	Code 4	Sample Prep	3		3.000	33.00
			Cert #4W-2199-RG1				
			3-GST @ 7 %				10.96

COMMENTS:

Net 30 Days

TOTAL ➧ 167.46

Swastika Laboratories
P.O. Box 10
Swastika, Ontario
P0K 1T0

INVOICE

NO.: 31003

DATE: 09-29-94

PAGE: 1 of 1

SOLD TO:

J. Reed
R.R. #2 Site 3
Swastika, Ontario
POK1T0

SHIP TO:

Same

GST Number: R132862640

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	G	P	UNIT PRICE	AMOUNT
	6	Code 1	Au	3		8.000	48.00
	6	Code 4	Sample Prep	3		3.000	18.00
			Cert #4W-2250-RG1				
			3-GST @ 7 %				4.62

COMMENTS:

Net 30 Days

TOTAL ➧ 70.62

LINE CUTTING EXPENSES

Line cutting Jim Reed

Date		Hr
May	13	8
	14	6
	18	7
	21	8
	24	8
	25	8
	26	8
	27	7
	28	8
	30	8
June	2	8
	3	8
	8	8
	9	8
	10	8
	11	5
	15	8
	17	7
	18	5
	20	4
	21	7
	22	7
	23	8
	24	7
	25	8
	27	7
	28	8
	30	3
July	1	4
	2	4
	6	8
	7	4
	8	8
	9	6
	10	7
	11	6
	12	6
	13	6
	14	6

continued

	15	6
	22	4
	25	8
	26	8
	29	6
Total	297 hr = 37.10 day = $3710.00	
	265 hr = 33.10 day = $3310.00	line cutting
	32 hr = 4 days = $ 400.00	prospecting

Line cutting Jean Reed

Date	Hr
June 3	8
10	8
22	7
Total	23 Hr 2.875 day @ 100.00/day = $287.50

Line cutting Ruth Reed

Date	Hr
June 3	8
10	8
22	7
Total	23 Hr 2.875 day @ 100.00/day = $287.50

Nat Reed

Date	Hr
July 2	4
July 8	4
Total	8 hr = 1 day @ $100/day = $100.00

Line cutting Expenses

Jim Reed	265 hr = 33.1 day @ $100/day =		$3310.00
Jean Reed	23 hr = 2.875 day @ $100/day =		$ 287.50
Ruth Reed	23 hr = 2.875 day @ $100/day =		$ 287.50
Nat Reed	8 hr = 1 day @ $100/day =		$ 100.00
TOTAL			$3985.00

Prospecting Expenses

Jim Reed	32 hr = 4 days @ $100/day =		$ 400.00

Addendum Report

F'. DEPOSIT TYPE AND GEOLOGY. Regional Geology (Figure 4a & 4b)

Stratigraphically the project area falls within the Larder Lake Group of ultramafic and basaltic komatiite and Mg-rick tholeiitic basalt to the south of the Temiskaming Group comprised of mafic to felsic trachyte volcanics and wacke, arkose and siltstone sediments. The Larder Lake Group is intruded by a 3.0 by 1.5 kilometre gabbro complex having associated airborne anomalies. This project is located within this gabbroic complex and the peripheral Mg tholeiitic volcanics. Refer to figures 4a and 4b for detailed regional geology.

Structurally the project falls within the Larder Lake-Kirkland Lake deformation zone. This zone consists of a series of east trending breaks with associated Fe-carbonate alteration. These deformation zones extend from the Blanche River 800 meters to the north, to at least 800 meters to the south of this project area. Within this zone are a series of smaller crosscutting structures between the longer east trending breaks. Approximately 40 outcrops of the associated Fe-carbonate alteration were identified within the project area and are documented in Map 1 and Map 2 included in this report. The breaks were not identified on the group but the author has identified strong deformation zones within the Fe-carbonate alteration along strike 800 meters to the west.

L'. MAGNETIC SURVEY

A data disk with the following format has been supplied with this report to supplement the magnetic profiles provided in this report.

East	North	nT	Noise	Time		Gradient Nt/M
3801	-875	57796.5	0.16	14.184167	0	3.9
3801	-873.214	57791.9	0.11	14.184722	0	3.4
3801	-871.429	57783.2	0.11	14.185556	0	2.8
3801	-869.643	57778.3	0.11	14.186111	0	3.8
3801	-867.857	57773.3	0.11	14.186667	0	3.7
3801	-866.071	57767.1	0.11	14.187222	0	2.6
3801	-864.286	57760.2	0.10	14.187778	0	2.7
3801	-862.5	57760.4	0.09	14.188333	0	3.7

INVOICE FOR MAGETIC TOTAL FIELD AND MAGNETIC GRADIENT CONDUCTED
AUGUST 29 AND AUGUST 30, 1994 (Report Included)

32+65E	0-275 S	
	0-372 N	
34+00E	0-475 S	
	0-387 N	
36+50E	0-339 S	
	0-400 N	
37+00	0-434 S	
	0-418 N	
37+50E	0-436 S	
	0-426 N	
38+00E	0-441 S	
	0-428 N	
38+50E	0-442 S	
	0-450 N	
39+00E	0-437 S	
	0-460 N	
39+50E	0-452 S	
	0-467 N	
40+00E	0-457 S	
	0-470 N	
40+50E	0-437 S	
	0-472 N	
41+00E	0-434 S	
	0-472 N	
41+50E	0-430 S	
	0-470 N	
42+00E	0-433 S	
	0-467 N	
42+50E	0-434 S	
	0-469 N	
43+00E	0-433 S	
	0-468 N	
43+50E	0-432 S	
	0-466 N	
SUB-TOTAL	14783 meters	14783 meters

O+OON	36+50E-43+50E	1085 meters
N.TieLine	36+16E-43+50E	734 meters
S.TieLine	36+44E-43+50E	706 meters
TOTAL		17308 meters = 17.308 km

Includes OPAP Report Preparation
17.3 km @ $200/km = $3460.00

Douglas Robinson

Douglas Robinson, P. Eng.
January 31, 1995

REGISTERED PROFESSIONAL ENGINEER
D. ROBINSON
PROVINCE OF ONTARIO

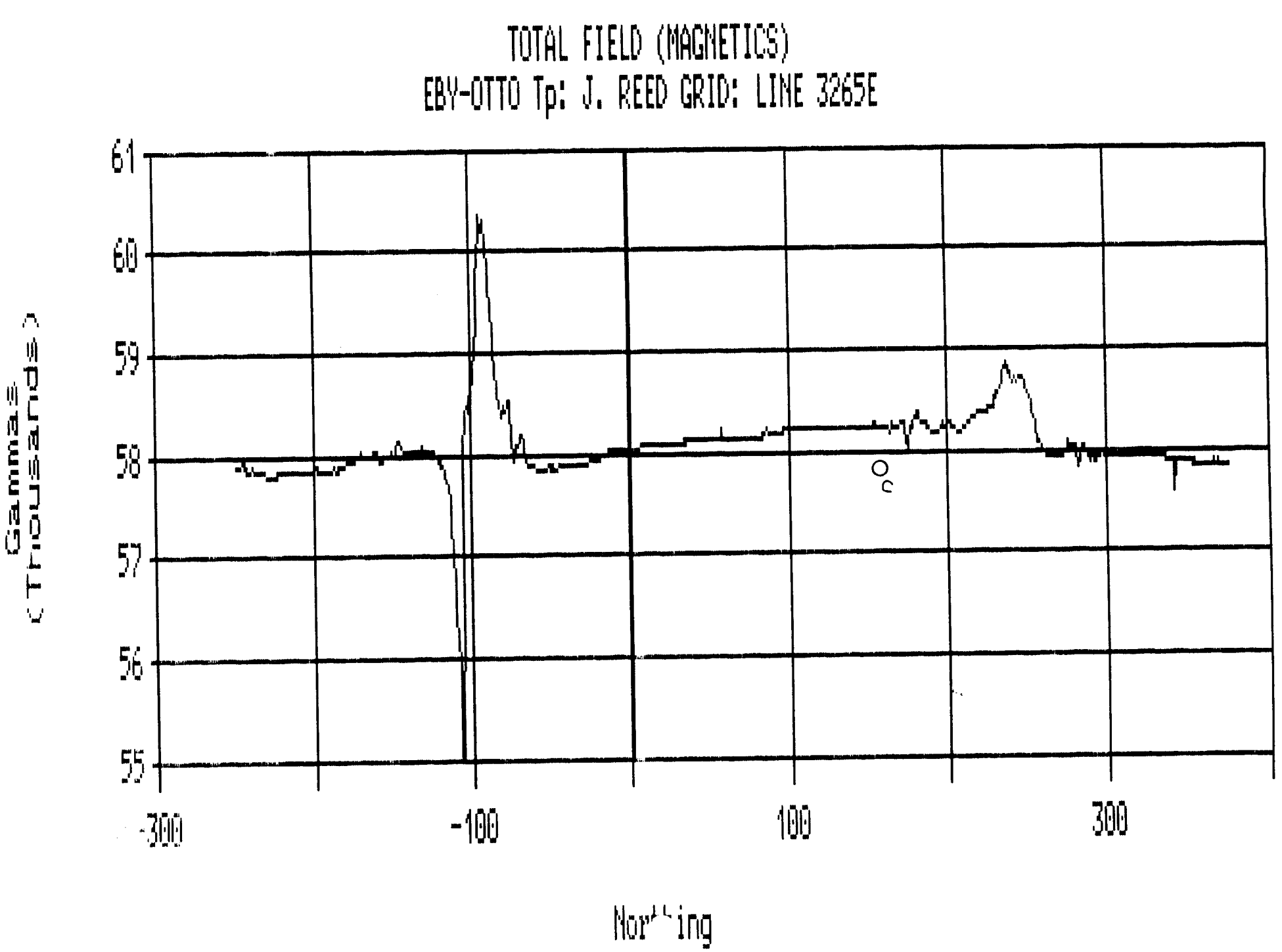
INVOICE FOR GEOLOGICAL MAPPING, HAND STRIPPING, BINOCULAR MICROSCOPE EXAMINATION, SAMPLE PREPRATION AND GEOLOGICAL DRAFTING

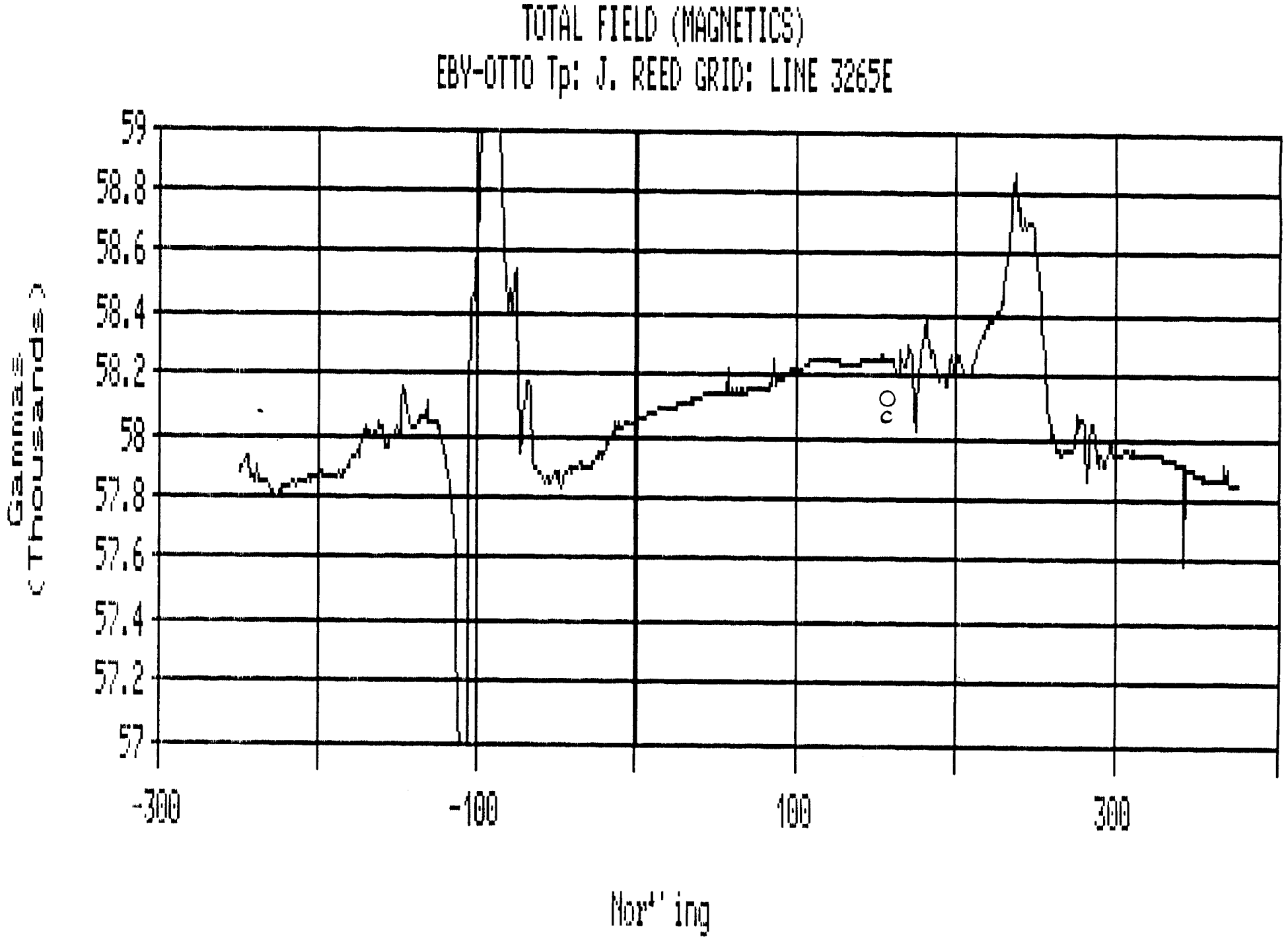
July	3	10 hr	
	4	10 hr	
	5	11 hr	
	6	9 hr	
	7	10 hr	
	8	10 hr	
	9	10 hr	
	10	8 hr	
Sept	18	9 hr	
	19	9 hr	
	20	9 hr	
	22	9 hr	
	24	8 hr	
	25	6 hr	
Oct	7	8 hr	
	8	8 hr	
	9	8 hr	No charge
	10	8 hr	No Charge
TOTAL		160 hr	
		(Charged 144 hr)	

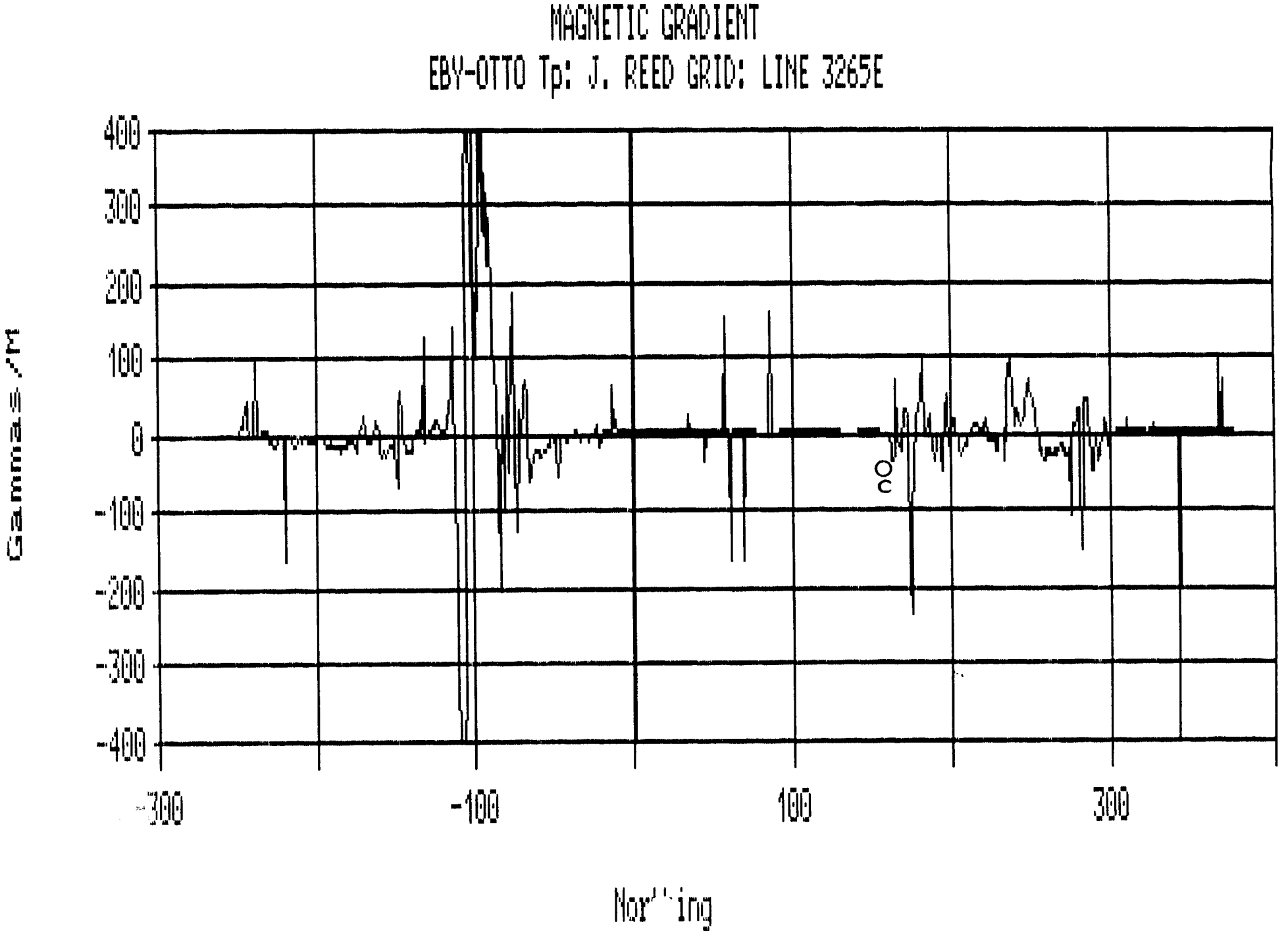
18 days @ $200/day = $3600

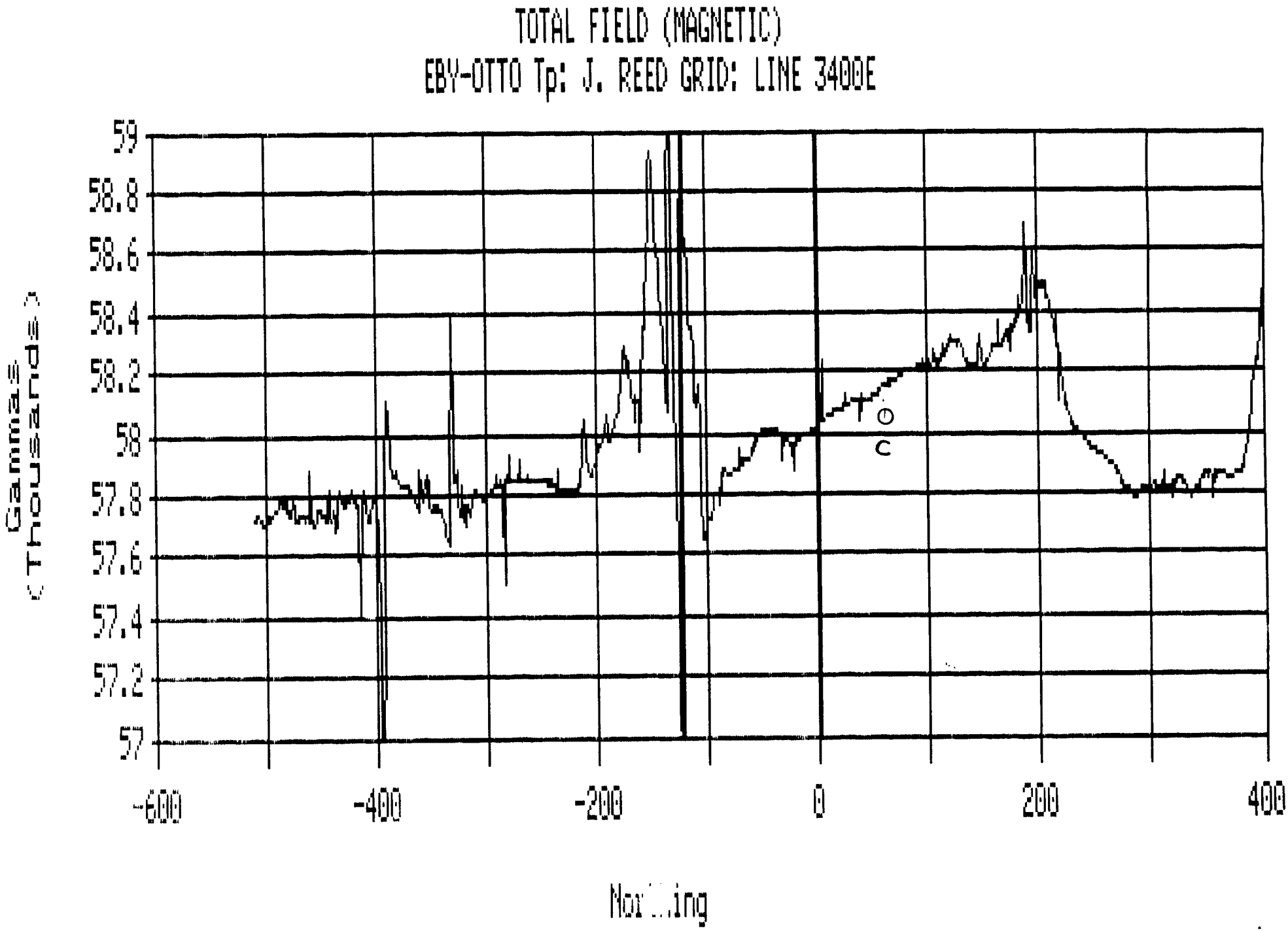
Douglas Robinson
January 30, 1995

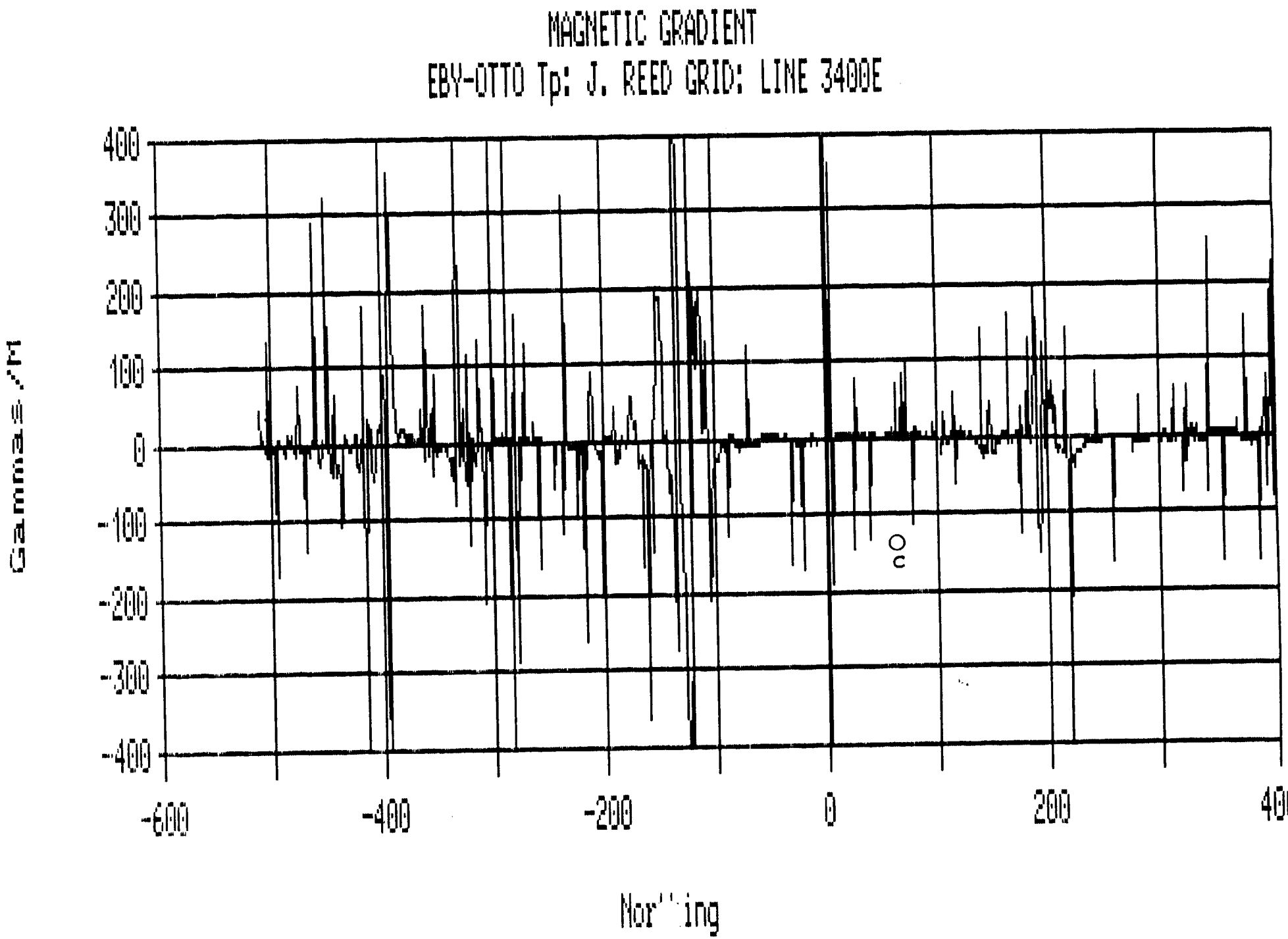
REGISTERED PROFESSIONAL ENGINEER
D. ROBINSON
PROVINCE OF ONTARIO

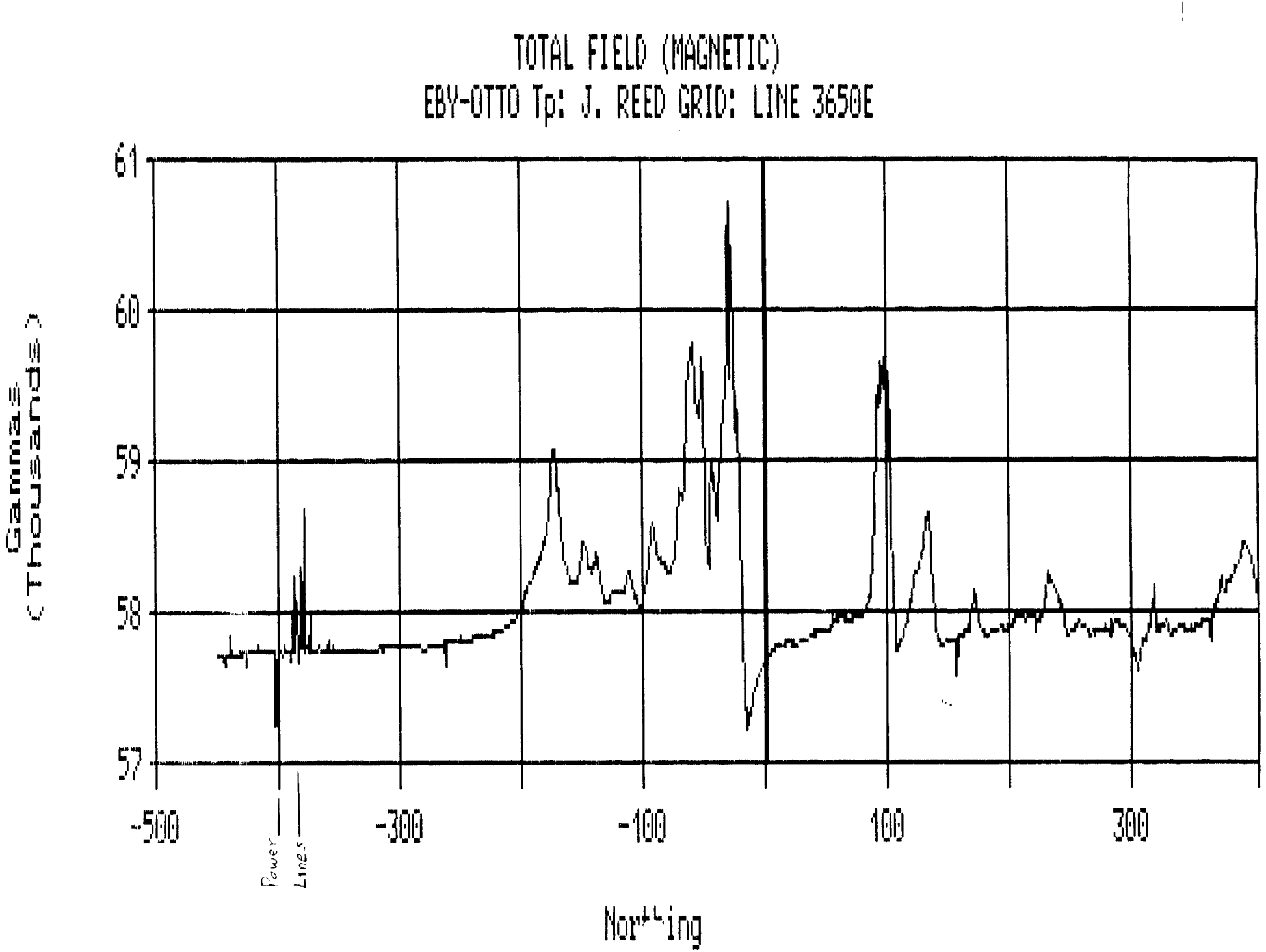

TOTAL FIELD (MAGNETICS)
EBY-OTTO Tp: J. REED GRID: LINE 3265E
Gammas (Thousands)
61
60
59
58
57
56
55
-300
-100
100
300
Northing


TOTAL FIELD (MAGNETICS)
EBY-OTTO Tp: J. REED GRID: LINE 3265E
Gamma's (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
-300
-100
100
300
Nor'ing

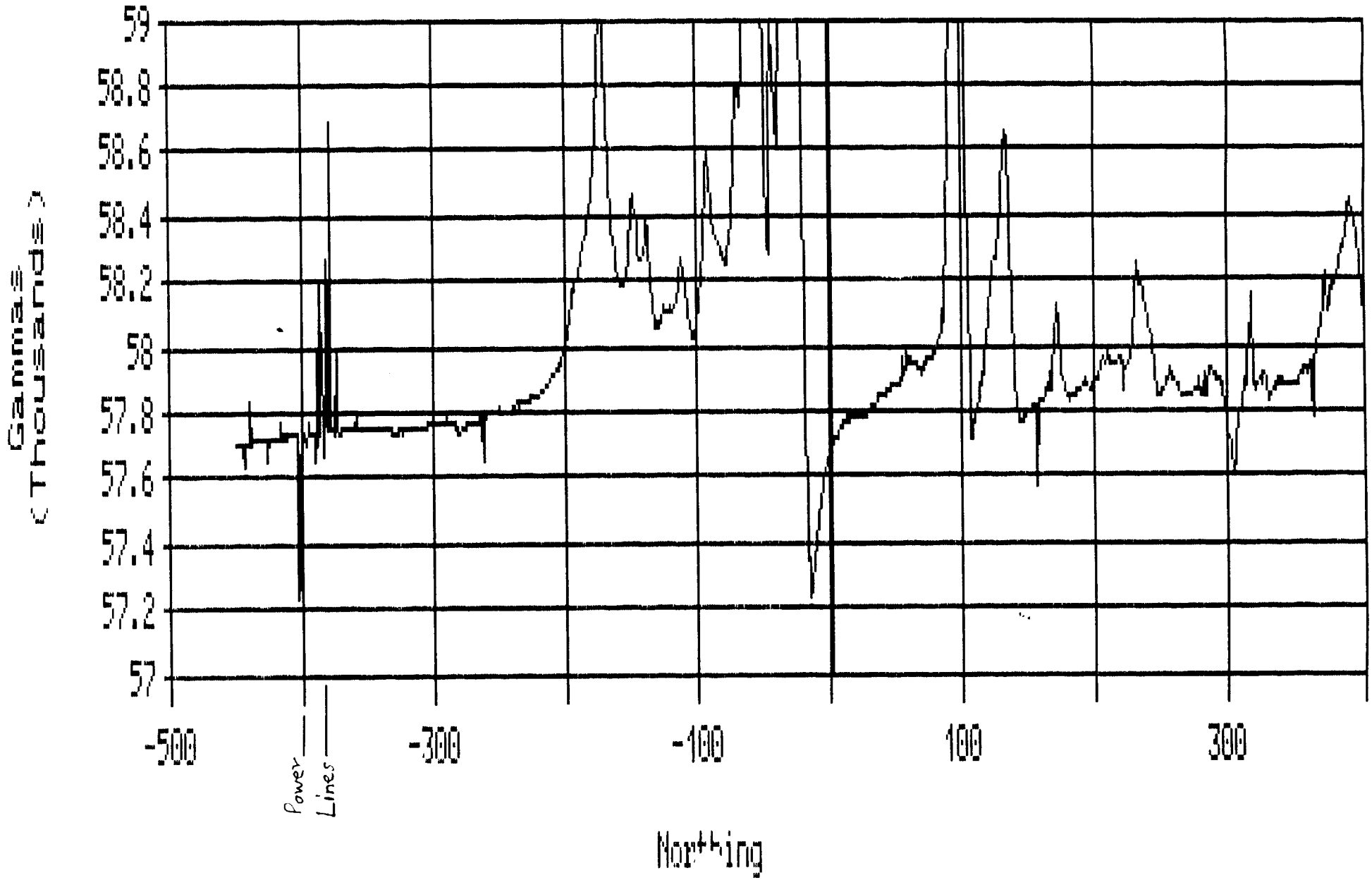

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3265E
400
300
200
100
0
-100
-200
-300
-400
Gammas/M
-300
-100
100
300
Nor''ing
OC

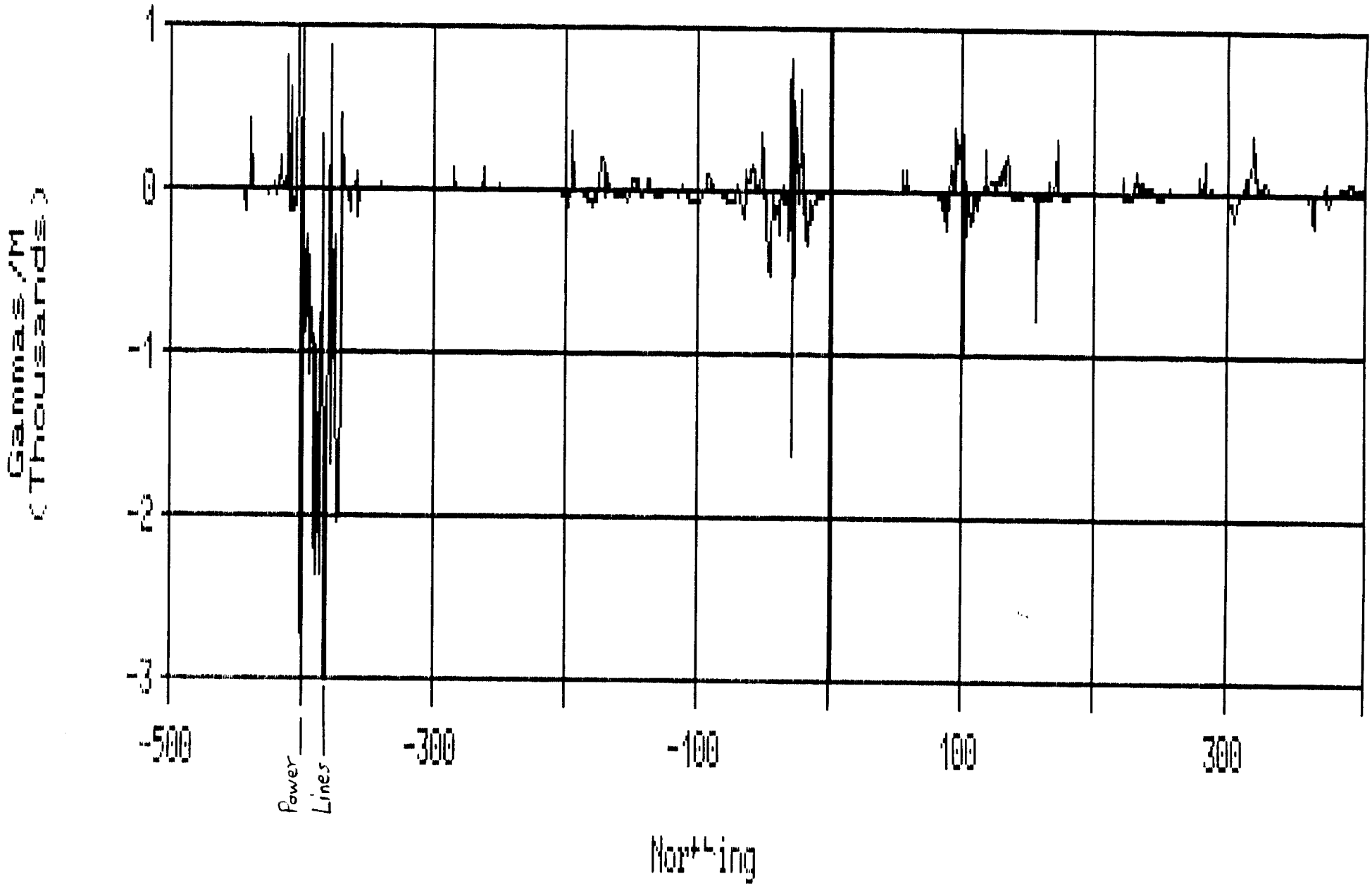

TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3400E
Gammas (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
-600
-400
-200
0
200
400
Northing


MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3400E
Gammas/M
400
300
200
100
0
-100
-200
-300
-400
-600
-400
-200
0
200
400
Northing


TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3650E
Gammas (Thousands)
61
60
59
58
57
-500
-300
-100
100
300
Power Lines
Northing

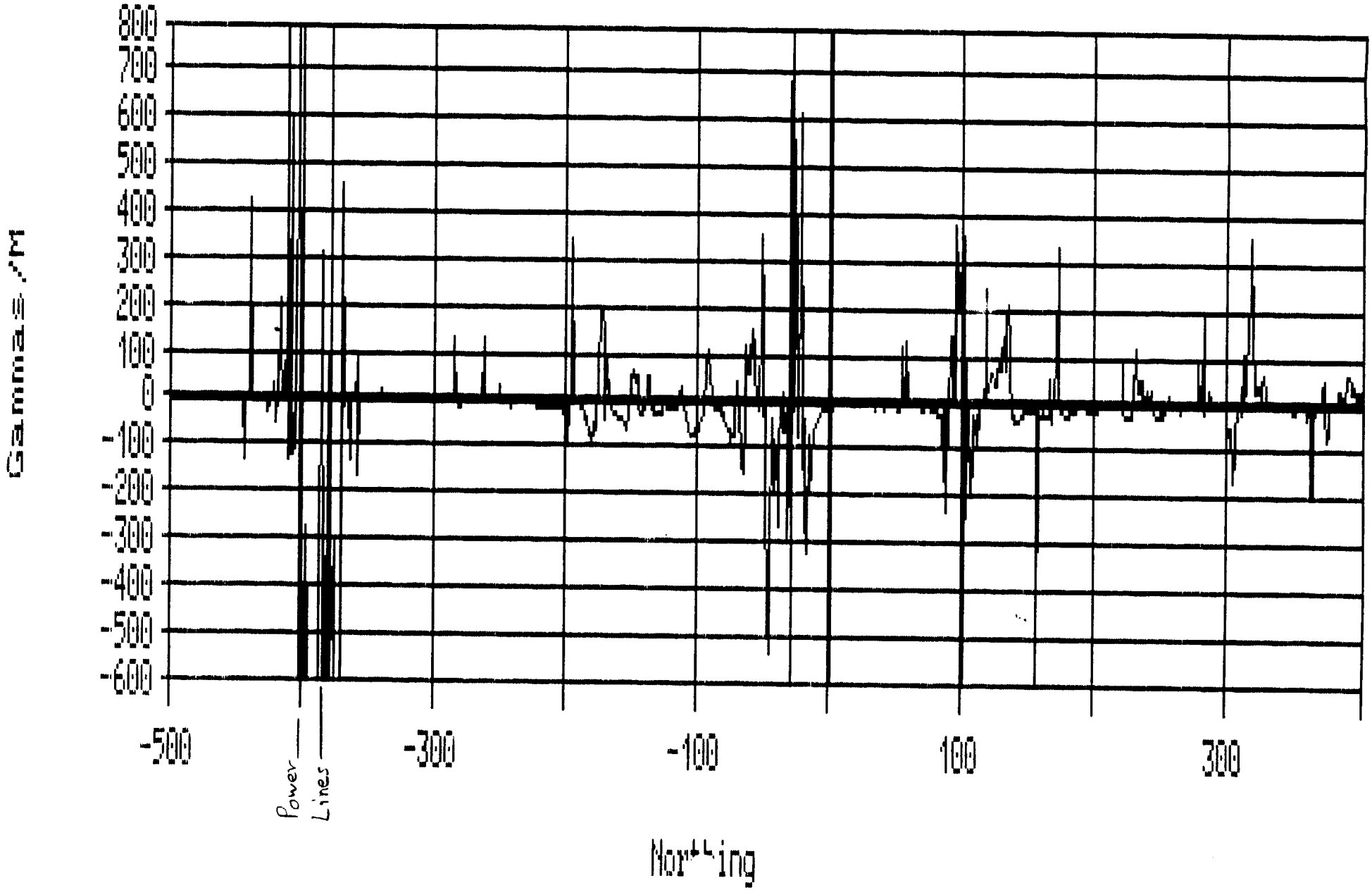
TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3650E

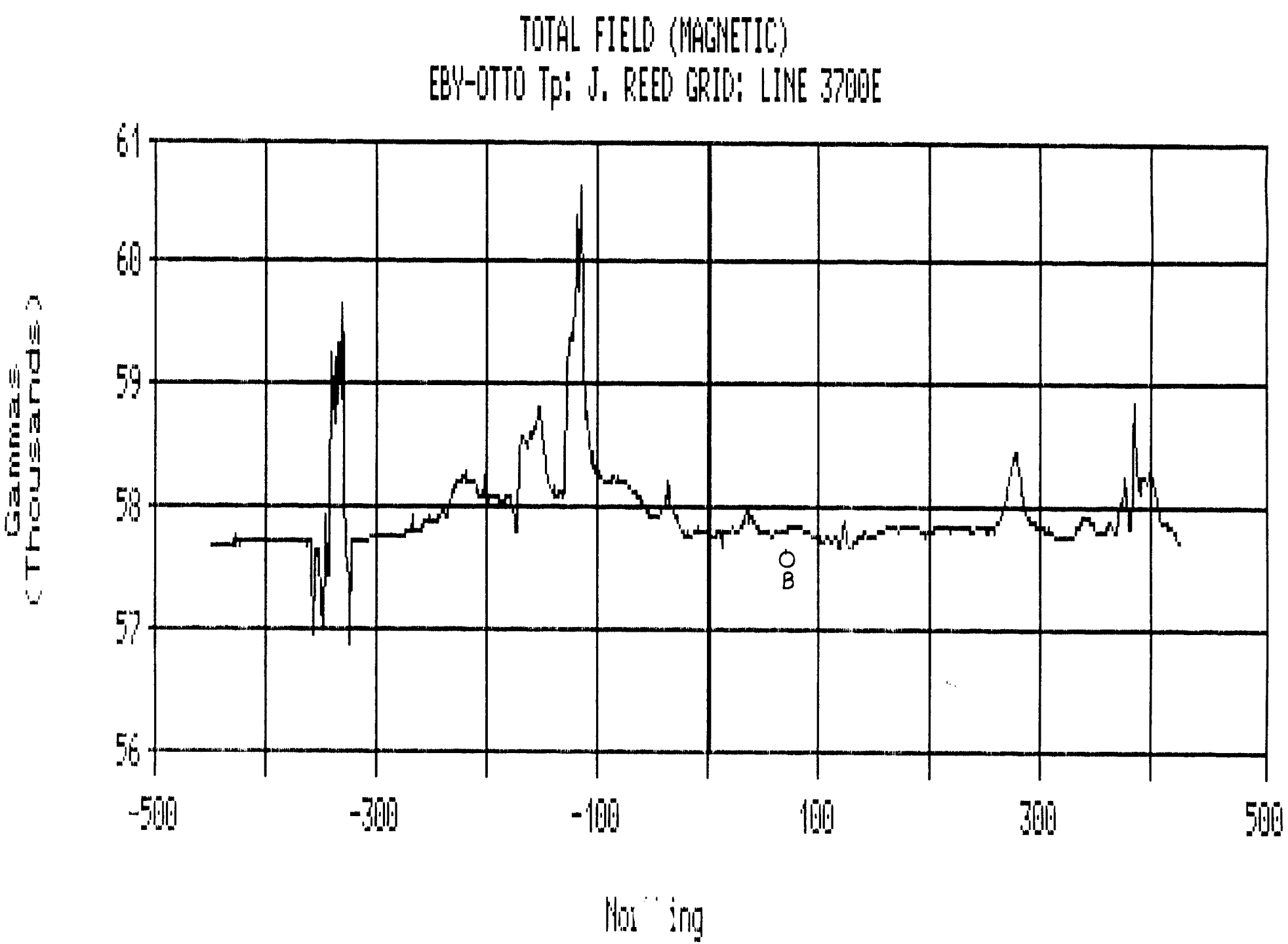


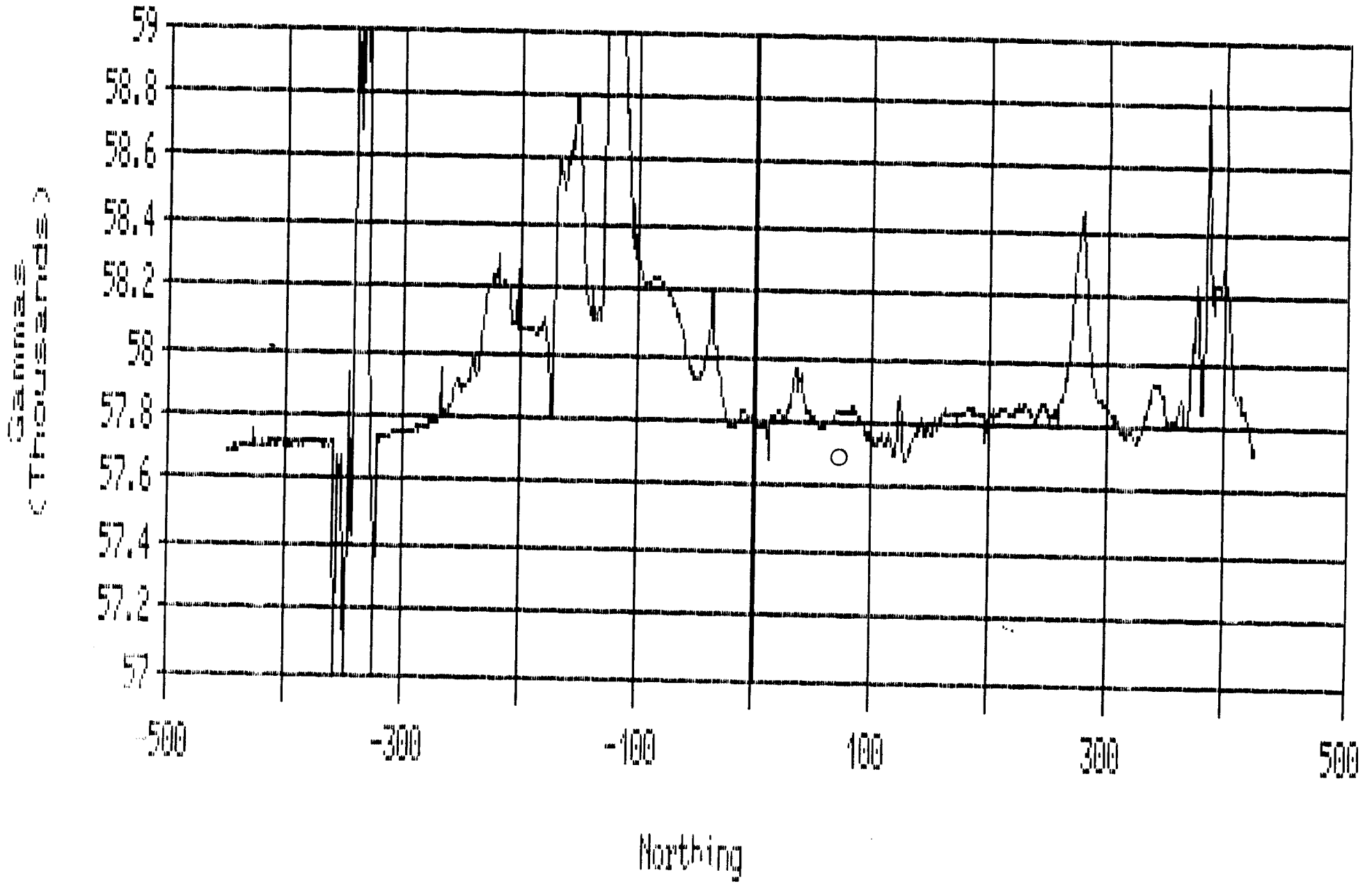

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3650E
Gammas/M
(Thousands)
1
0
-1
-2
-3
-500
-300
-100
100
300
Power
Lines
Northing

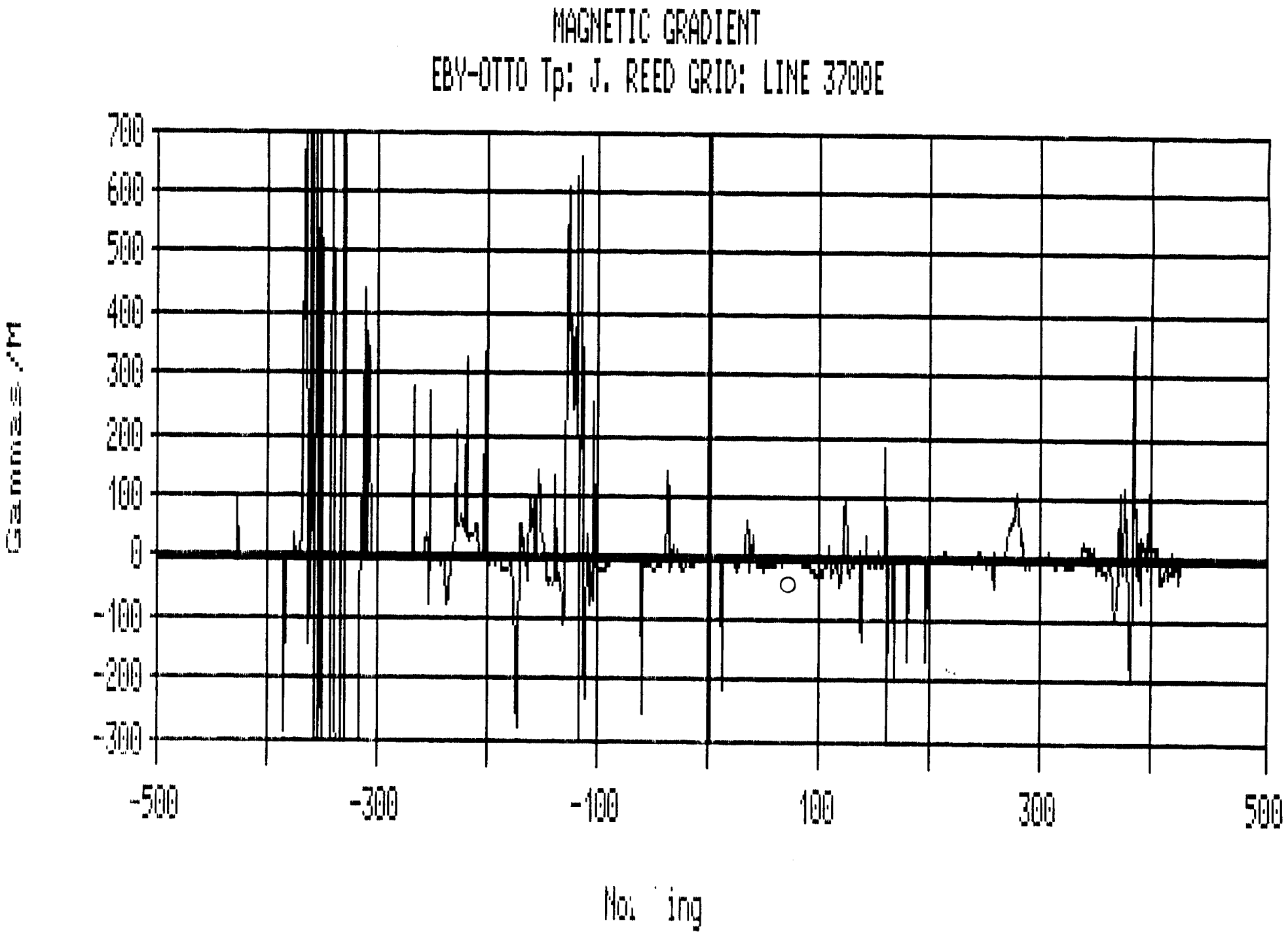
MAGNETIC GRADIENT

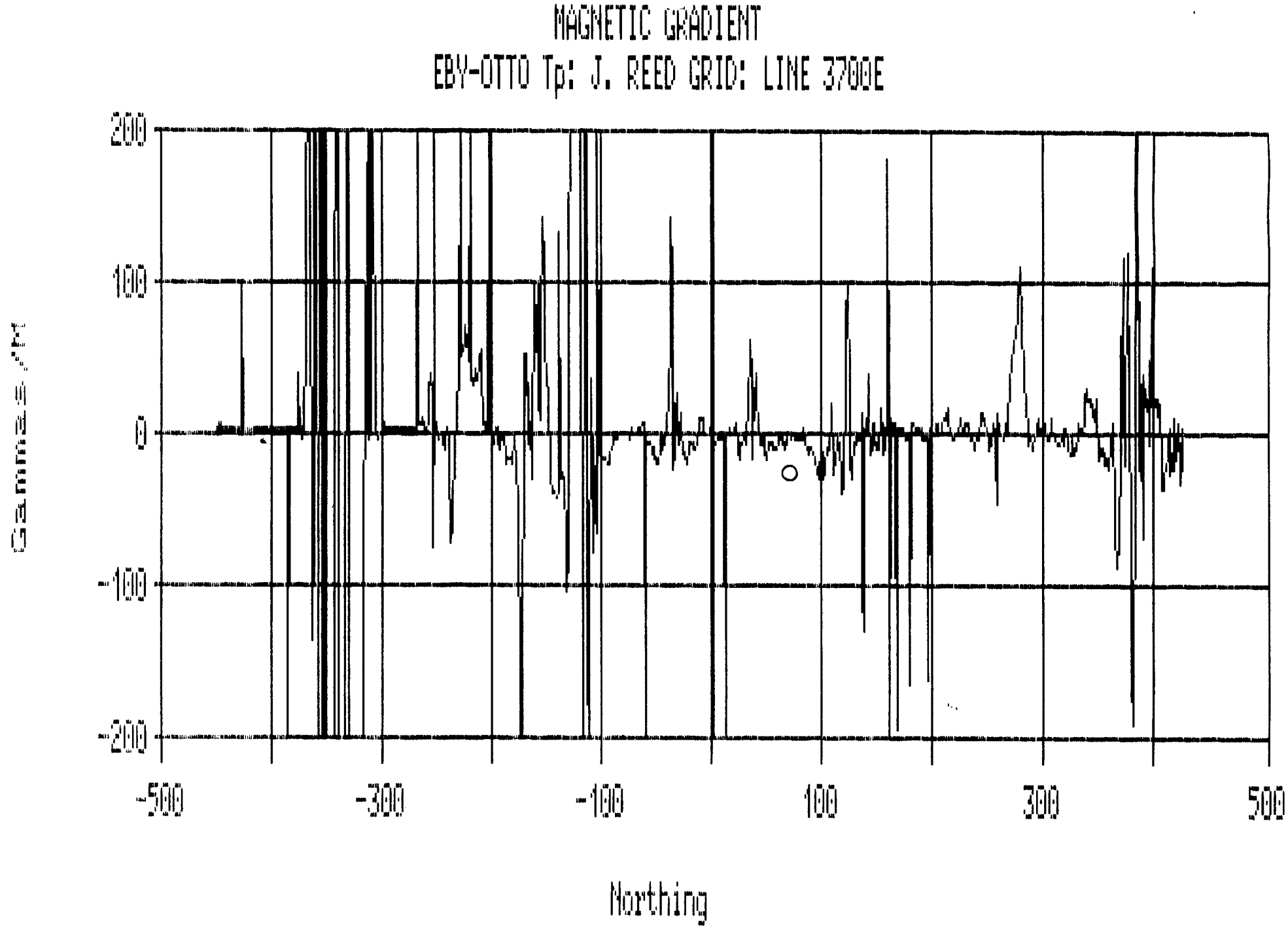
EBY-OTTO Tp: J. REED GRID: LINE 3650E

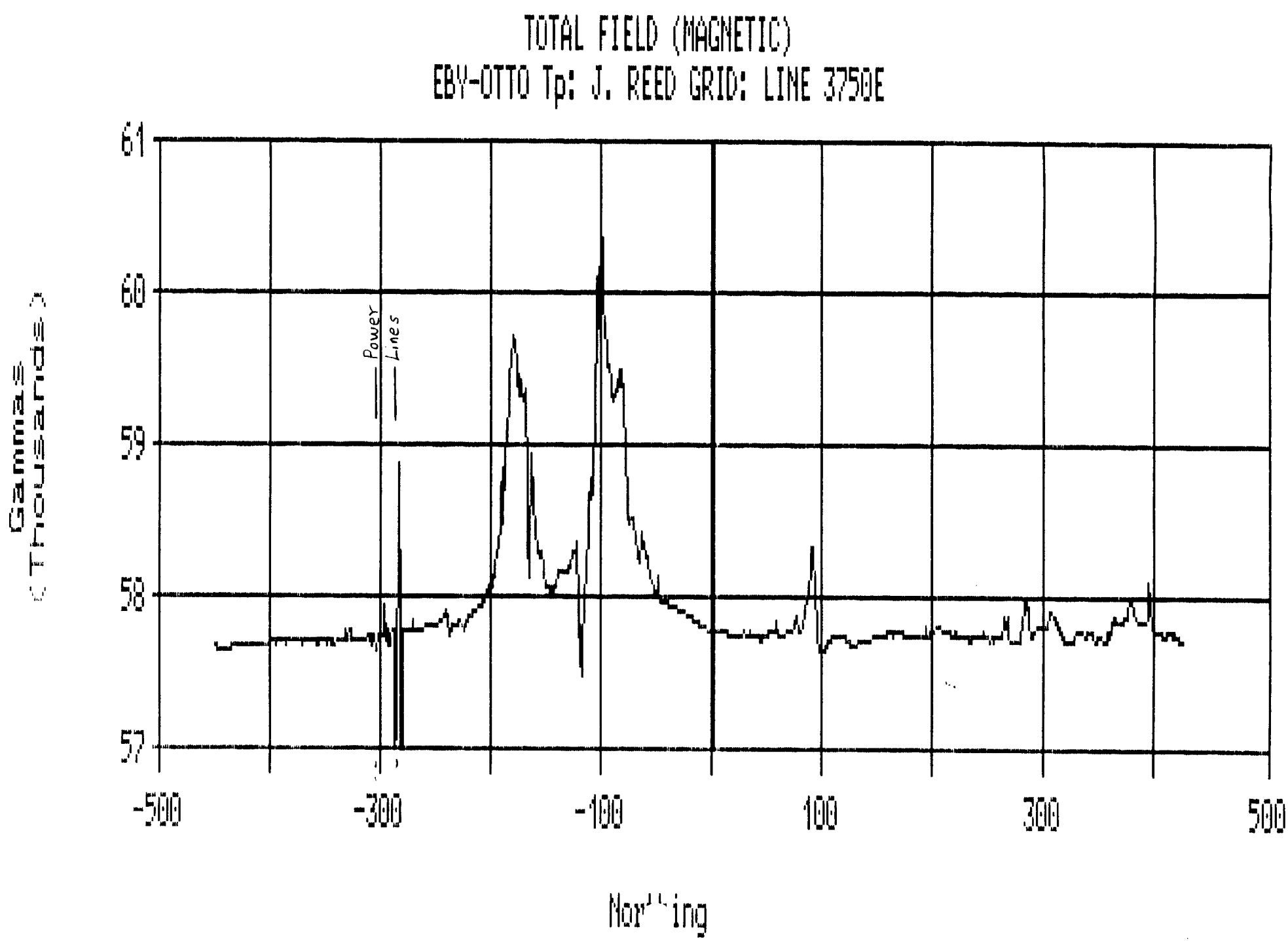


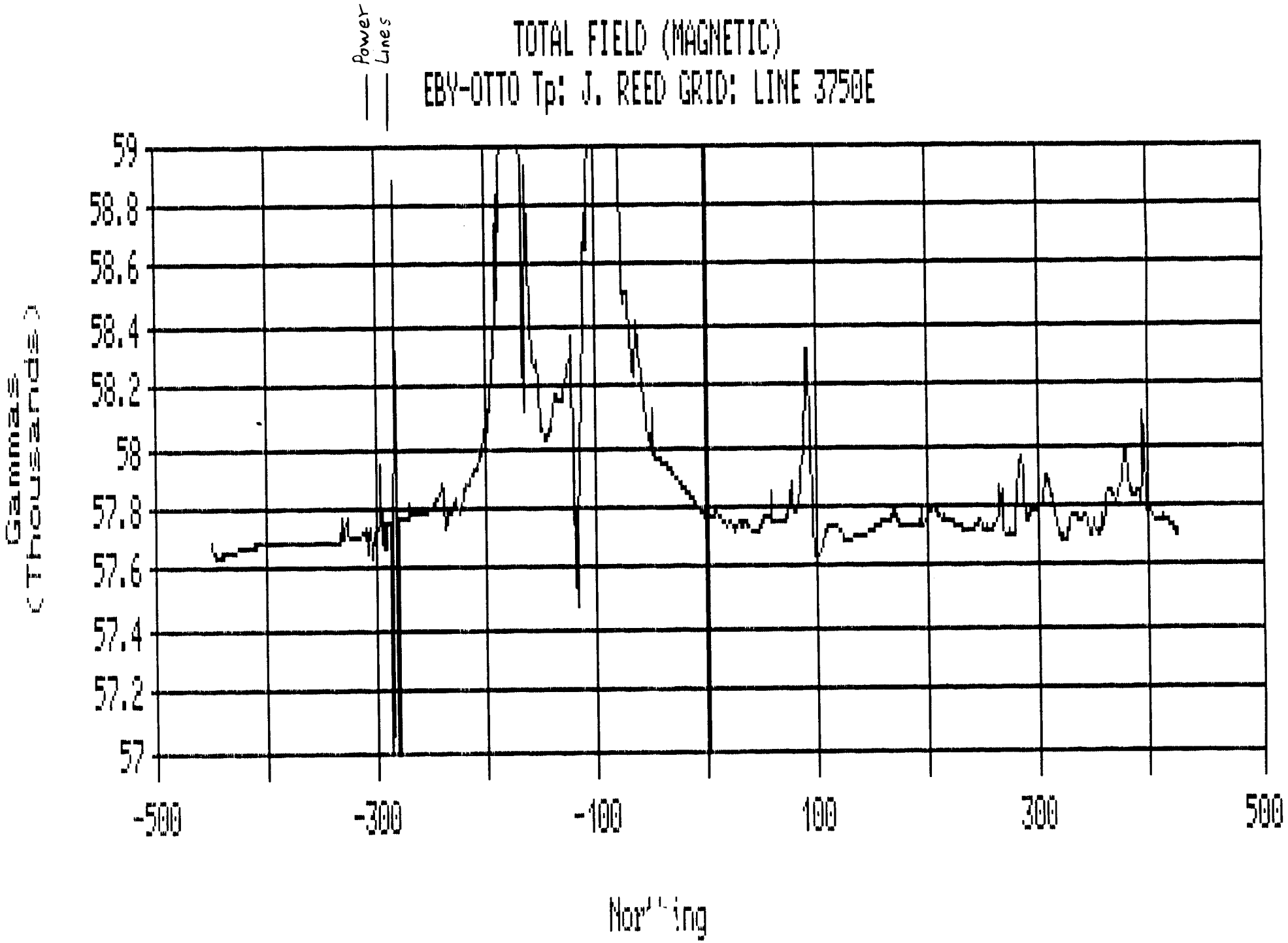

TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3700E
Gammas (Thousands)
61
60
59
58
57
56
-500
-300
-100
100
300
500
B

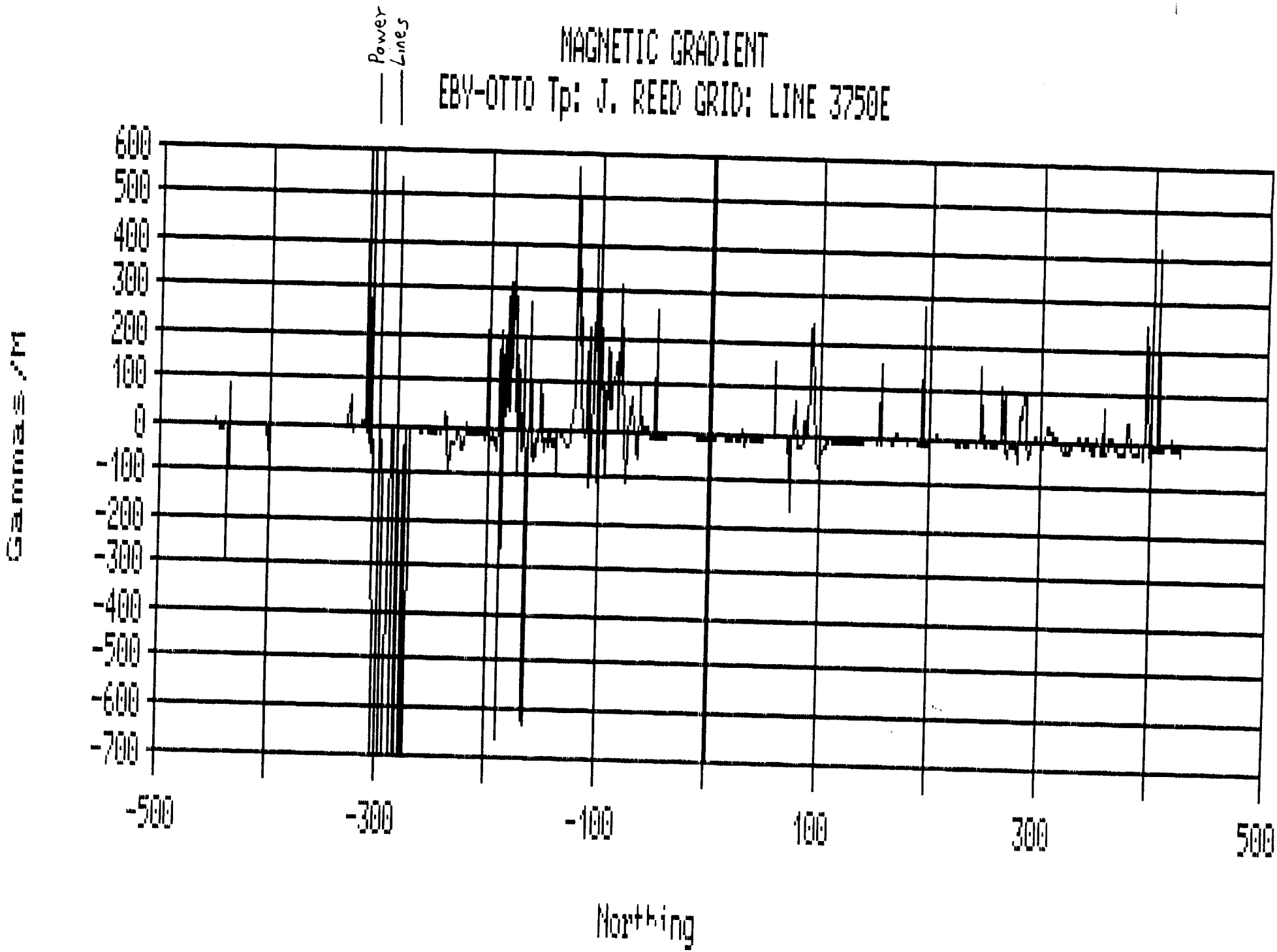

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 3700E
Gamas (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
-500
-300
-100
100
300
500
Northing

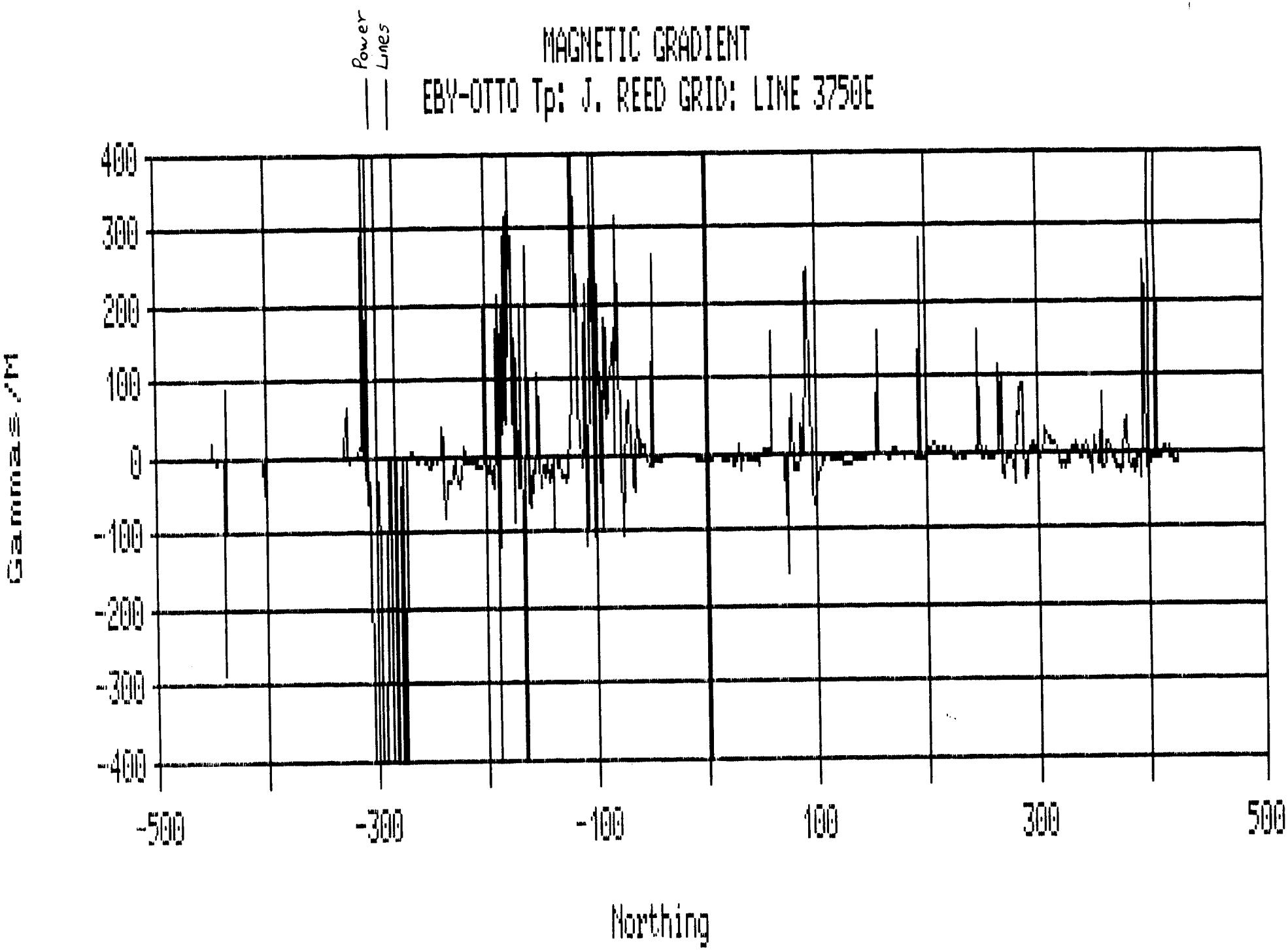

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3700E
Gammas/M
700
600
500
400
300
200
100
0
-100
-200
-300
-500
-300
-100
100
300
500
Northing


MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3700E
200
100
0
-100
-200
Gammas/Pt
-500
-300
-100
100
300
500
Northing


TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3750E
Gammas (Thousands)
61
60
59
58
57
Power Lines
-500
-300
-100
100
300
500
Northing

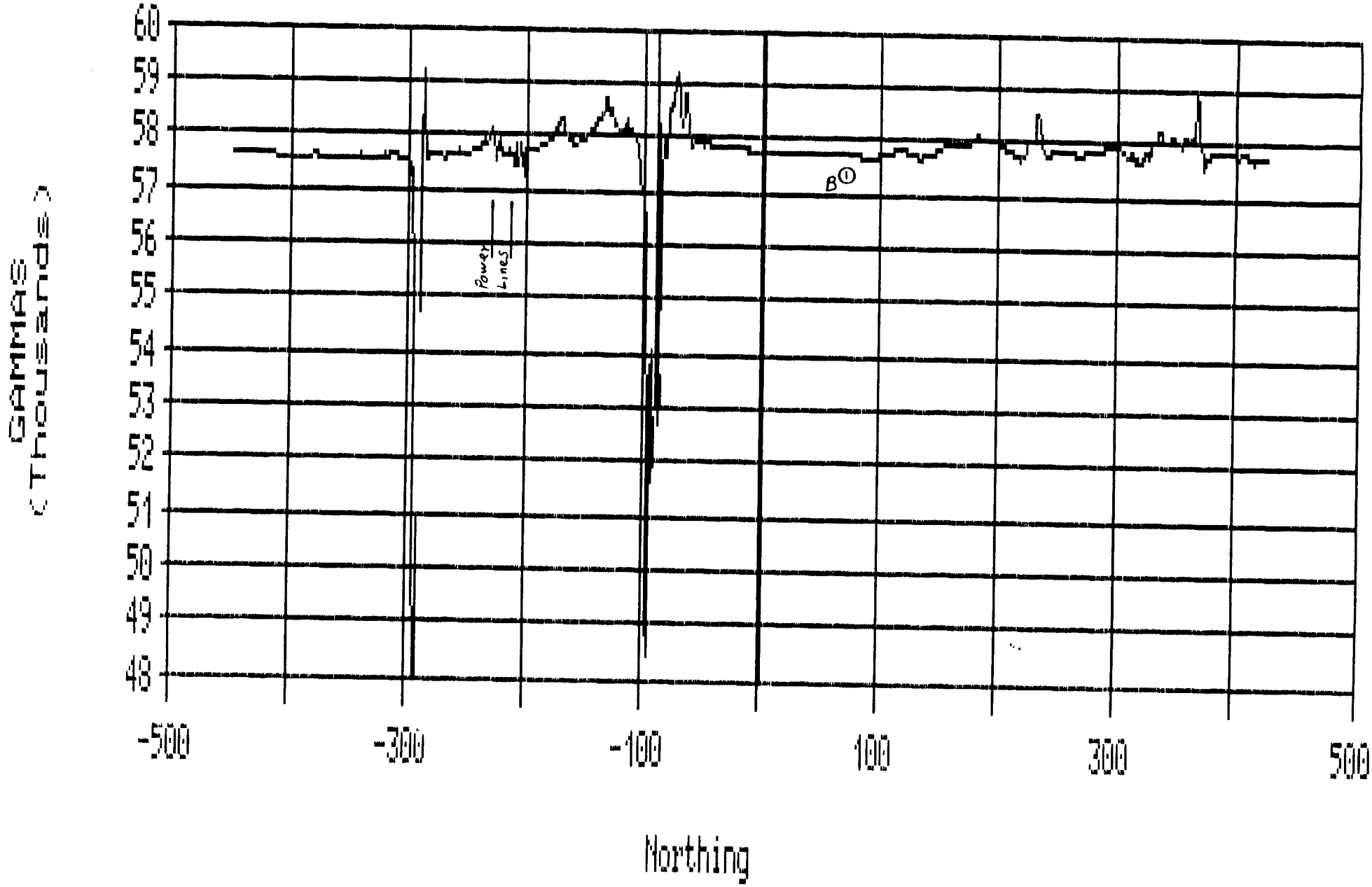

TOTAL FIELD (MAGNETIC)
EBY-OTTO Tp: J. REED GRID: LINE 3750E
Power Lines
Gammas (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
-500
-300
-100
100
300
500
Northing

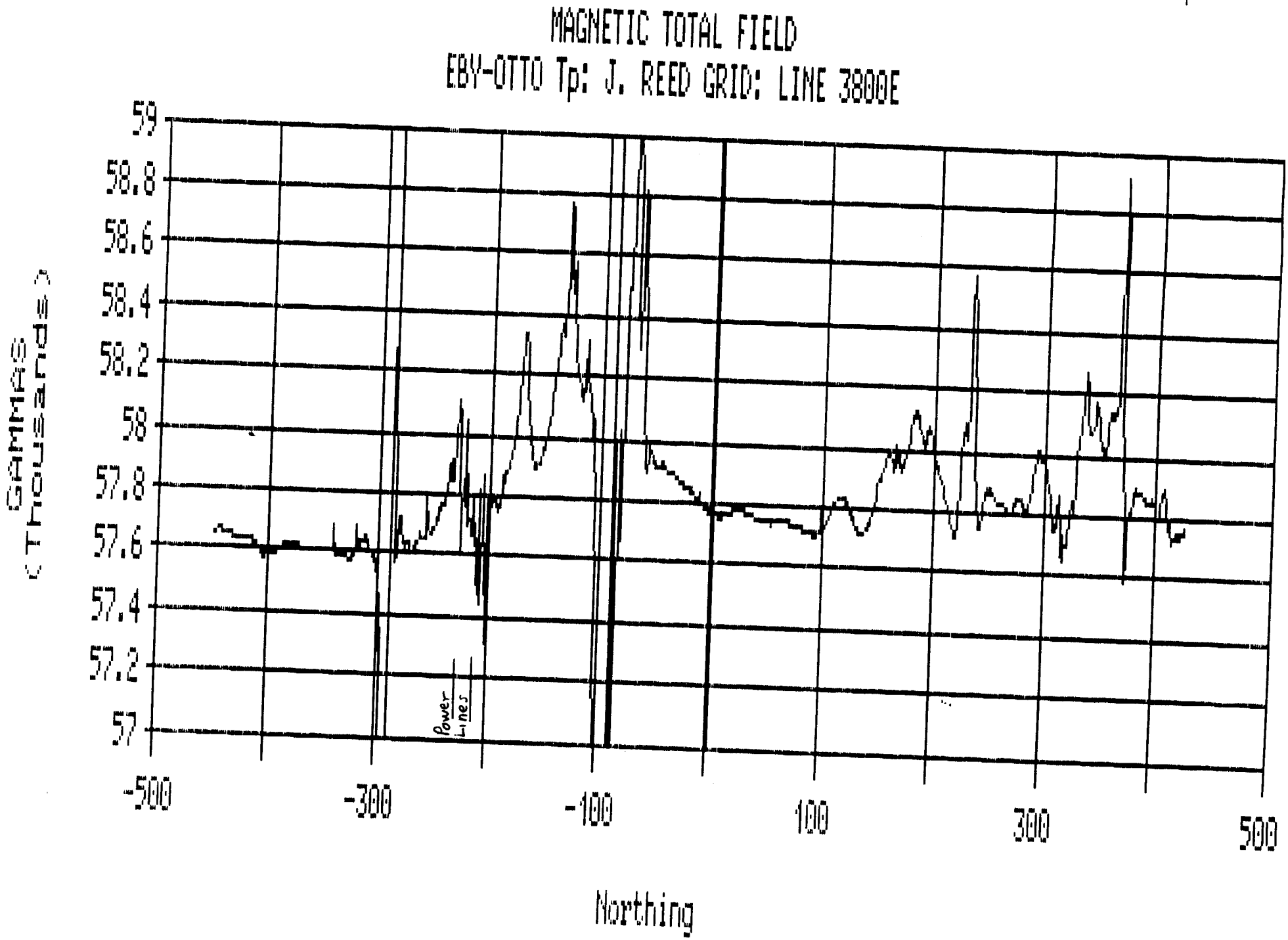

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3750E
Power Lines
600
500
400
300
200
100
0
-100
-200
-300
-400
-500
-600
-700
Gammas/M
-500
-300
-100
100
300
500
Northing


MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3750E
Power Lines
400
300
200
100
0
-100
-200
-300
-400
Gammas/M
-500
-300
-100
100
300
500
Northing

MAGNETIC TOTAL FIELD

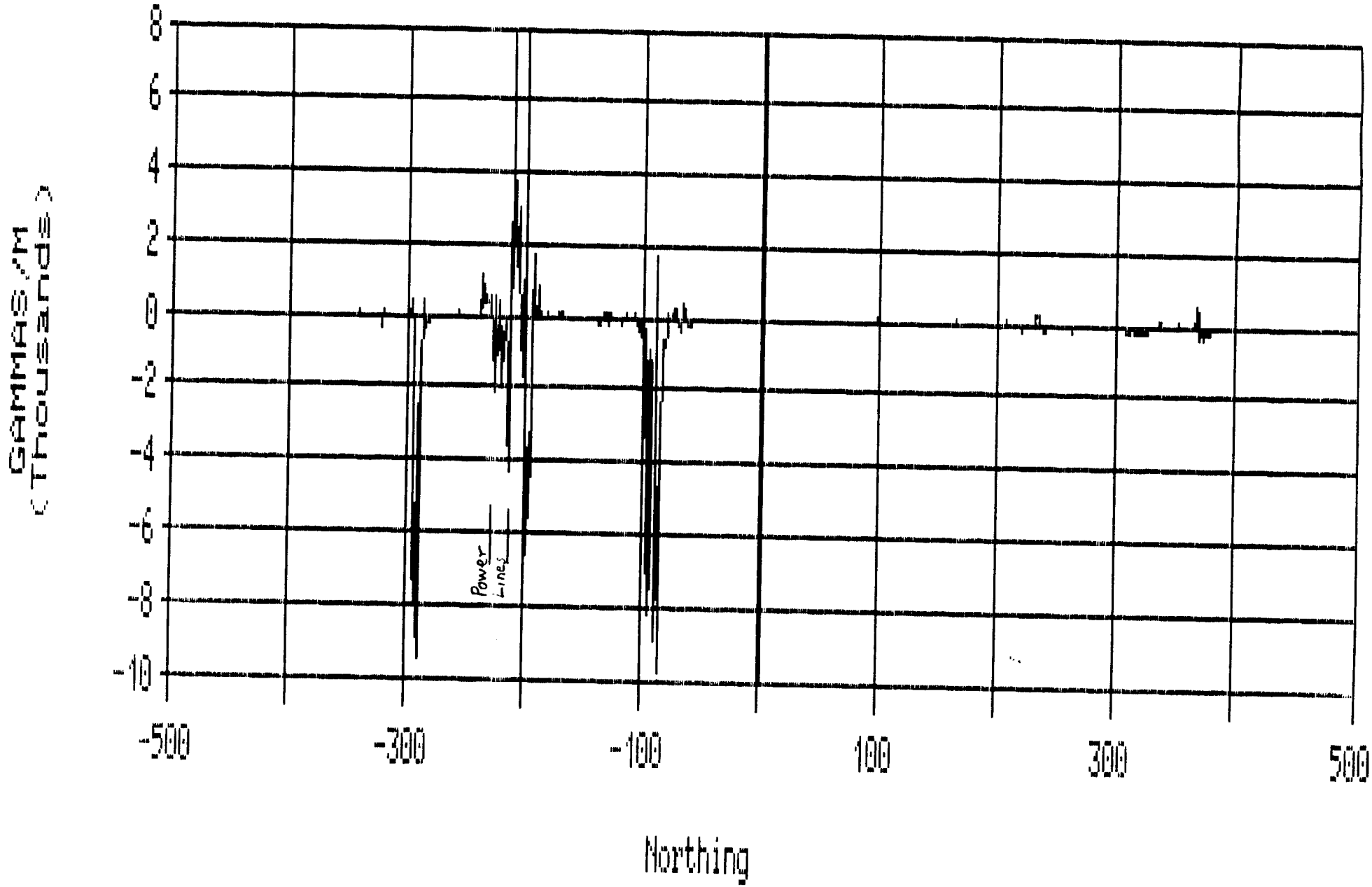
EBY-OTTO Tp: J. REED GRID: LINE 3800E

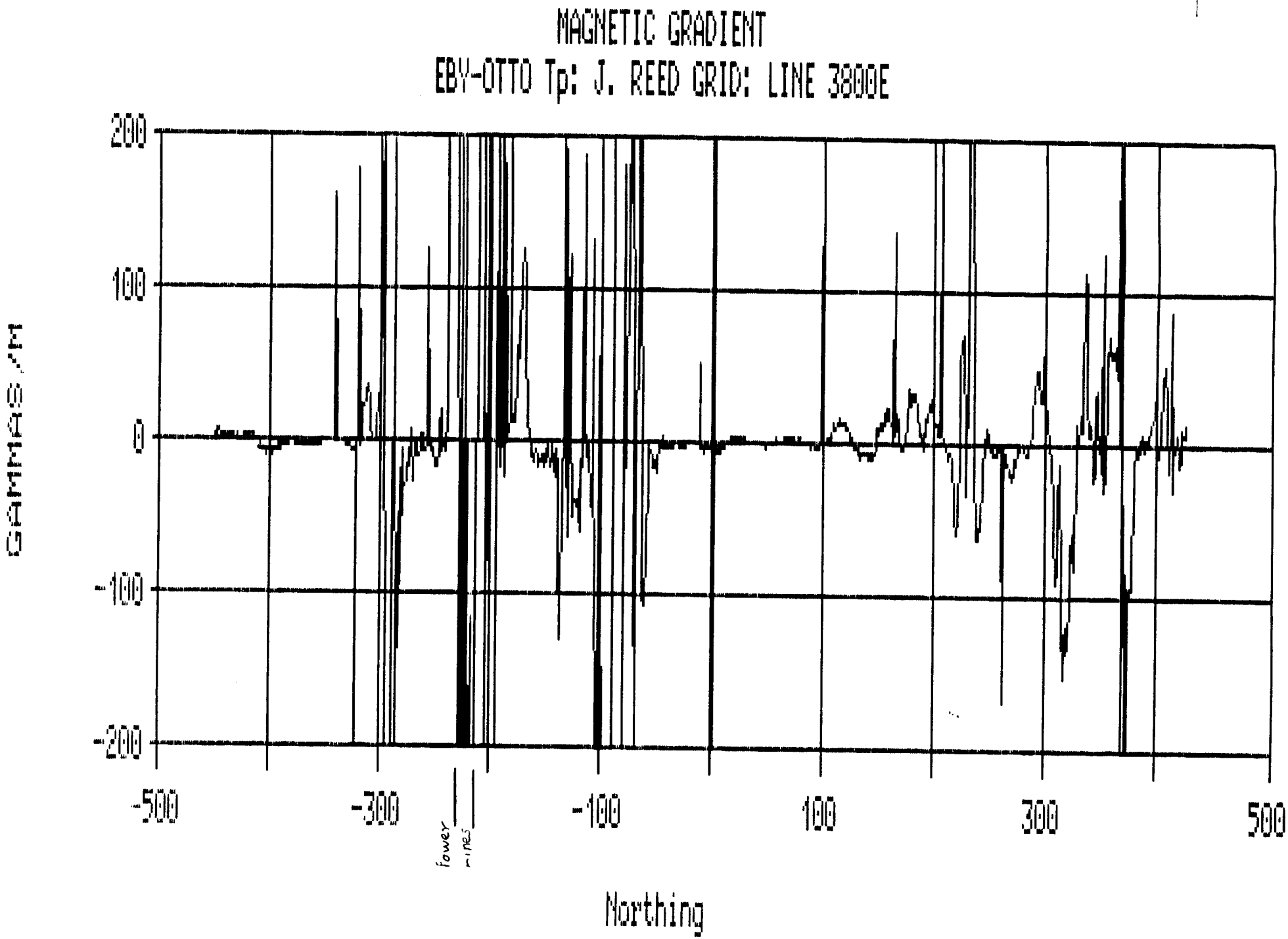


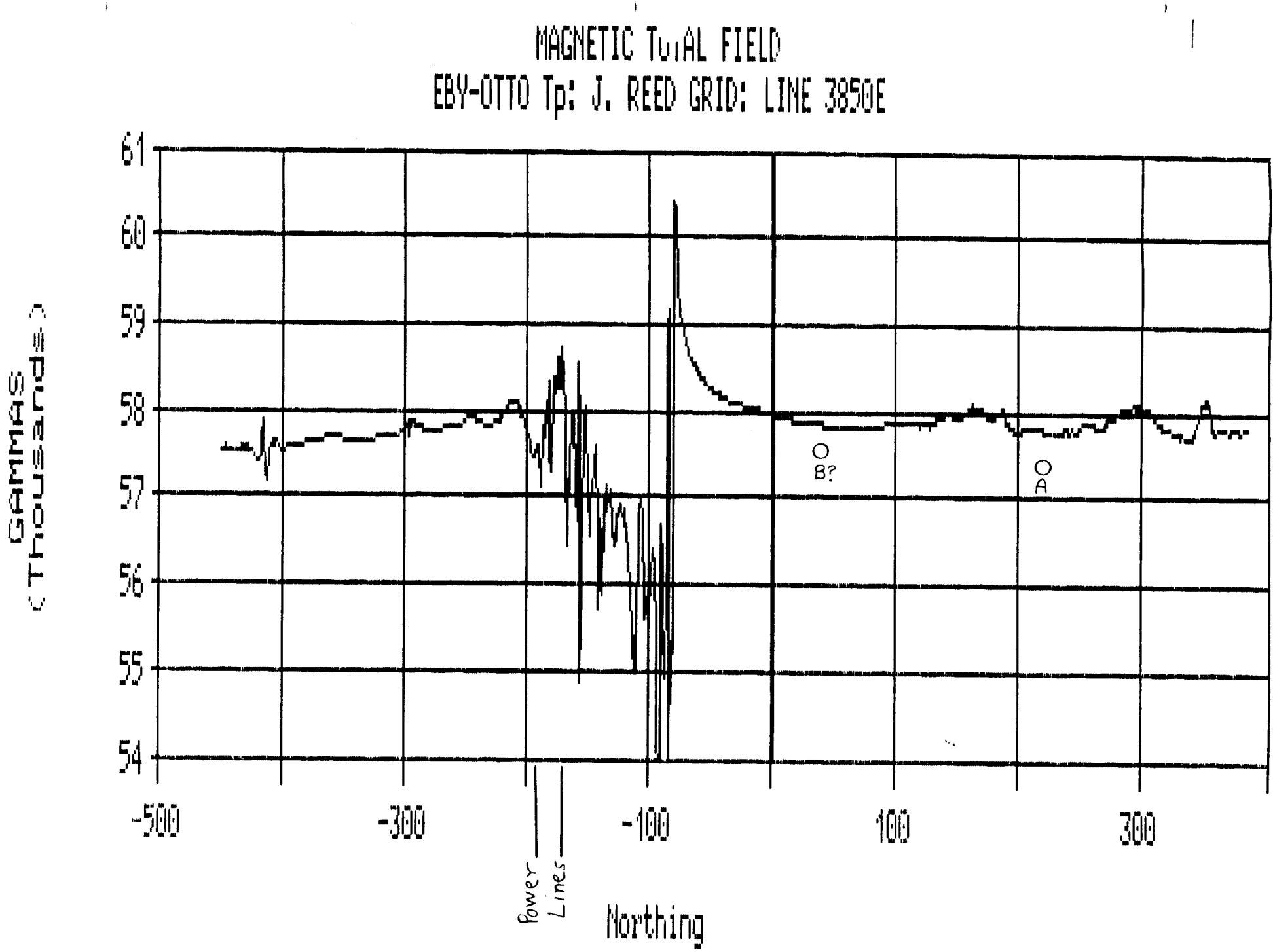

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 3800E
GAMMAS (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
Power Lines
-500
-300
-100
100
300
500
Northing

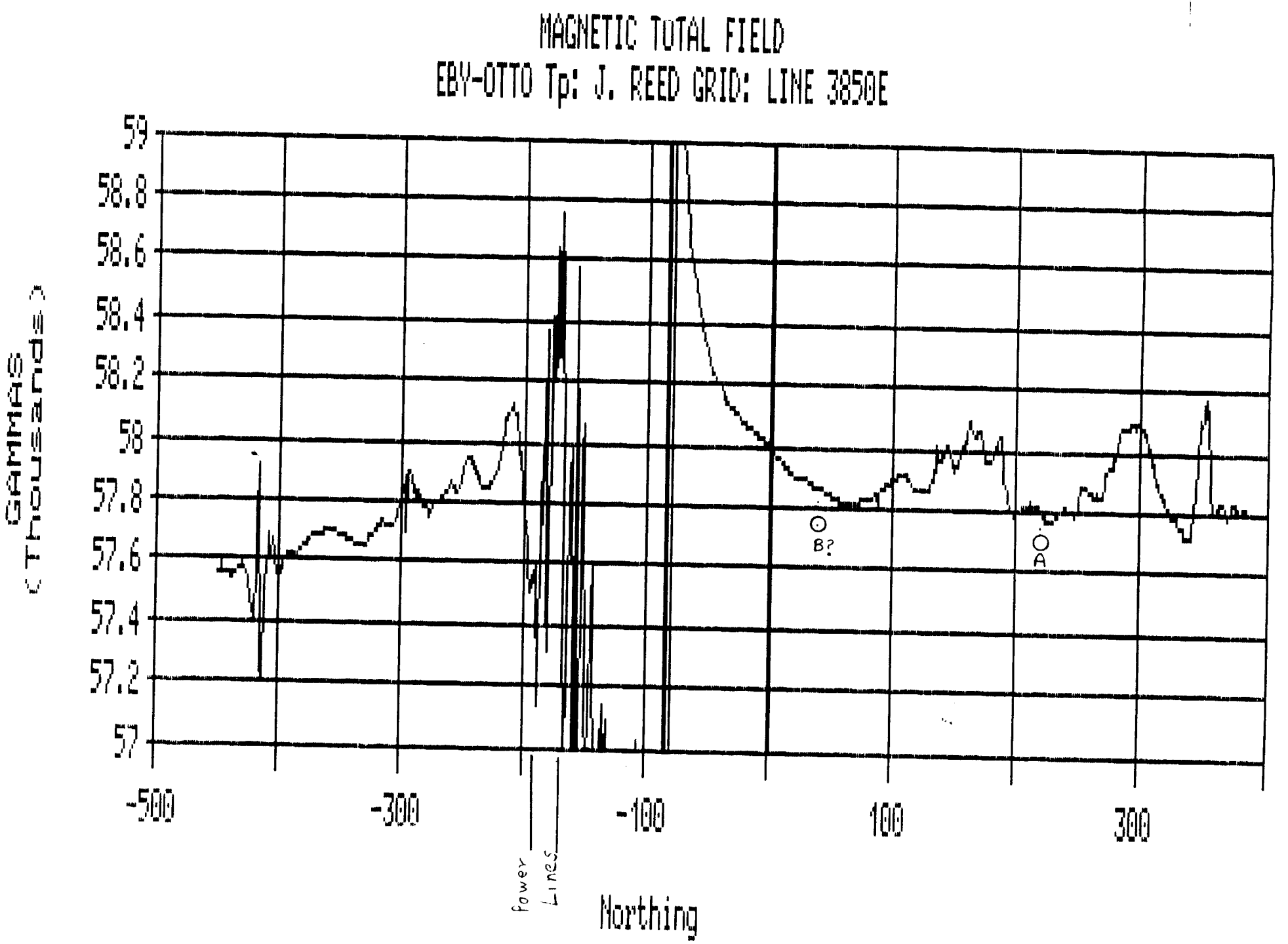
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 3800E



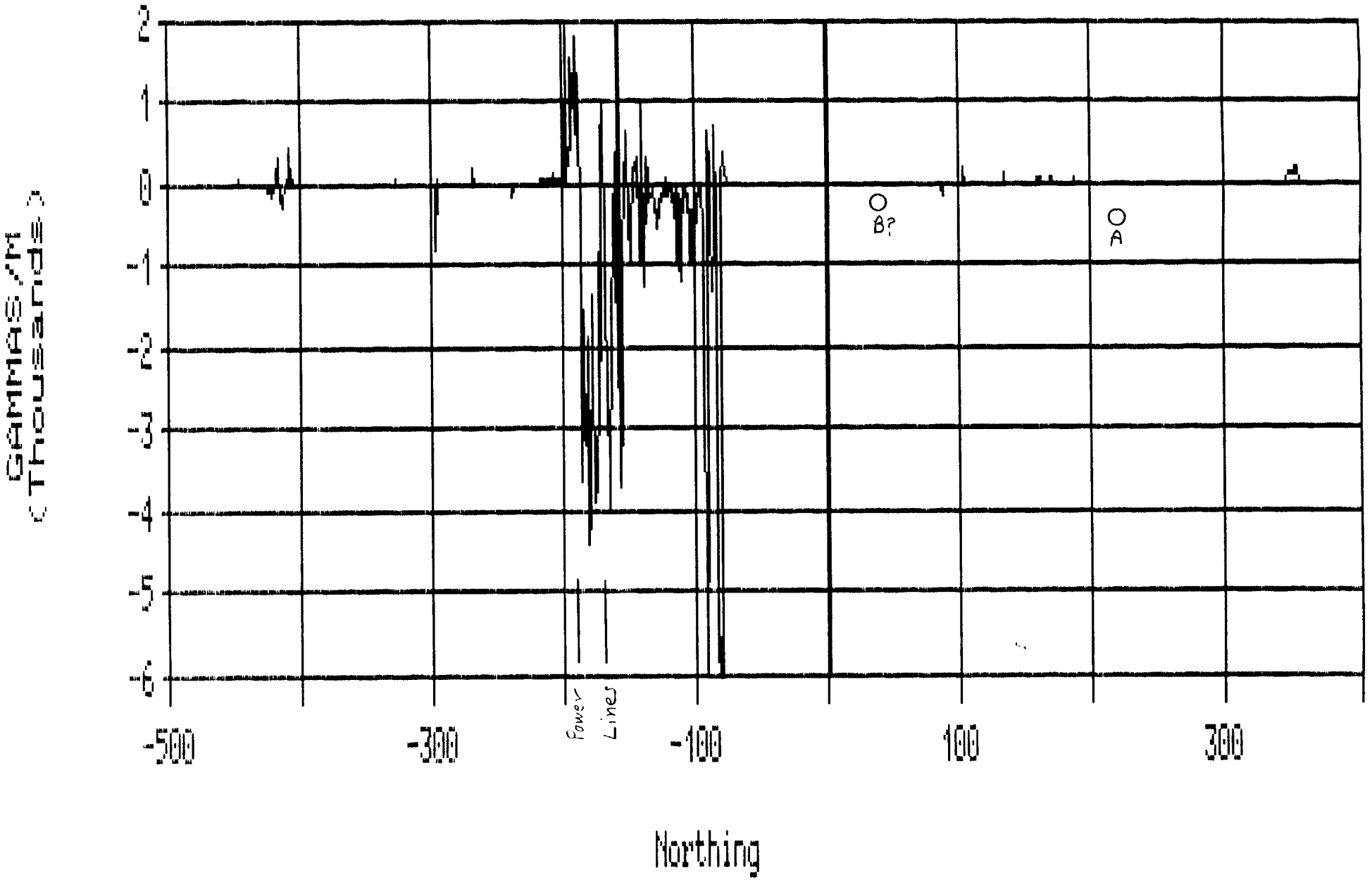

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3800E
200
100
0
-100
-200
Gamma's /M
-500
-300
-100
100
300
500
power lines
Northing

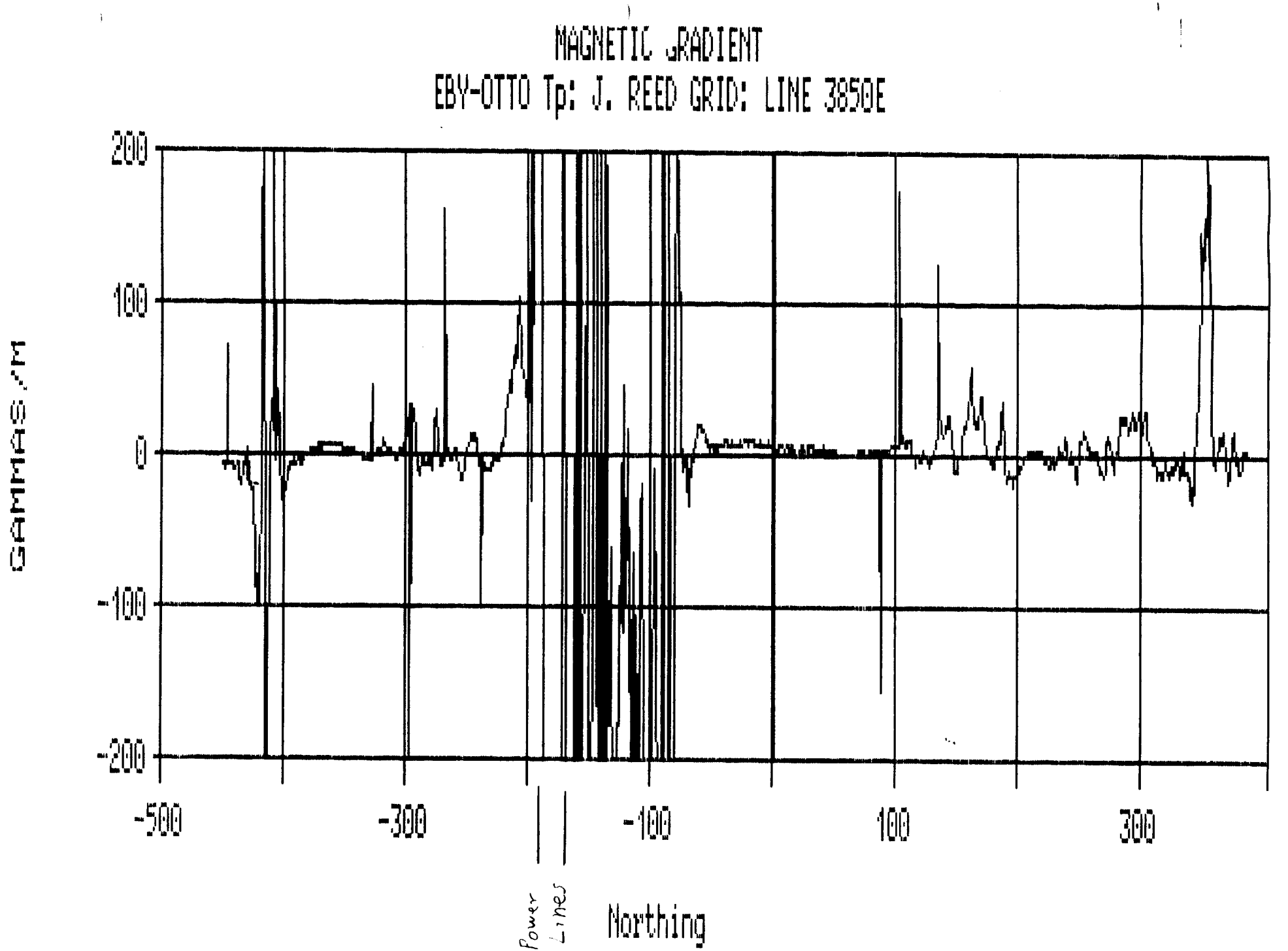

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 3850E
GAMMAS
(Thousands)
61
60
59
58
57
56
55
54
-500
-300
-100
100
300
Power Lines
Northing
B?
A


MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 3850E
GAMMAS (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
-500
-300
-100
100
300
B?
A
Power Lines
Northing

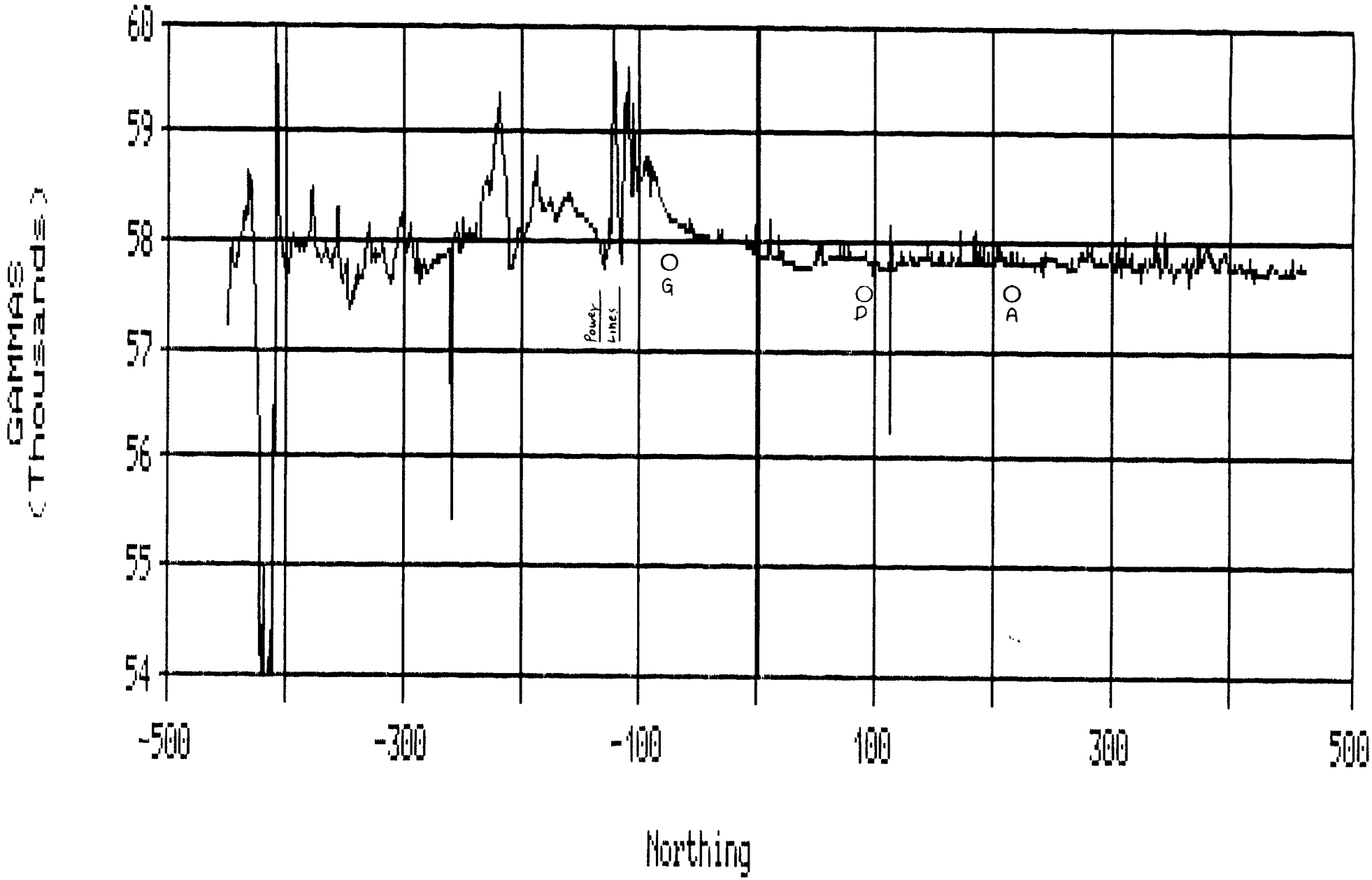
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 3850E



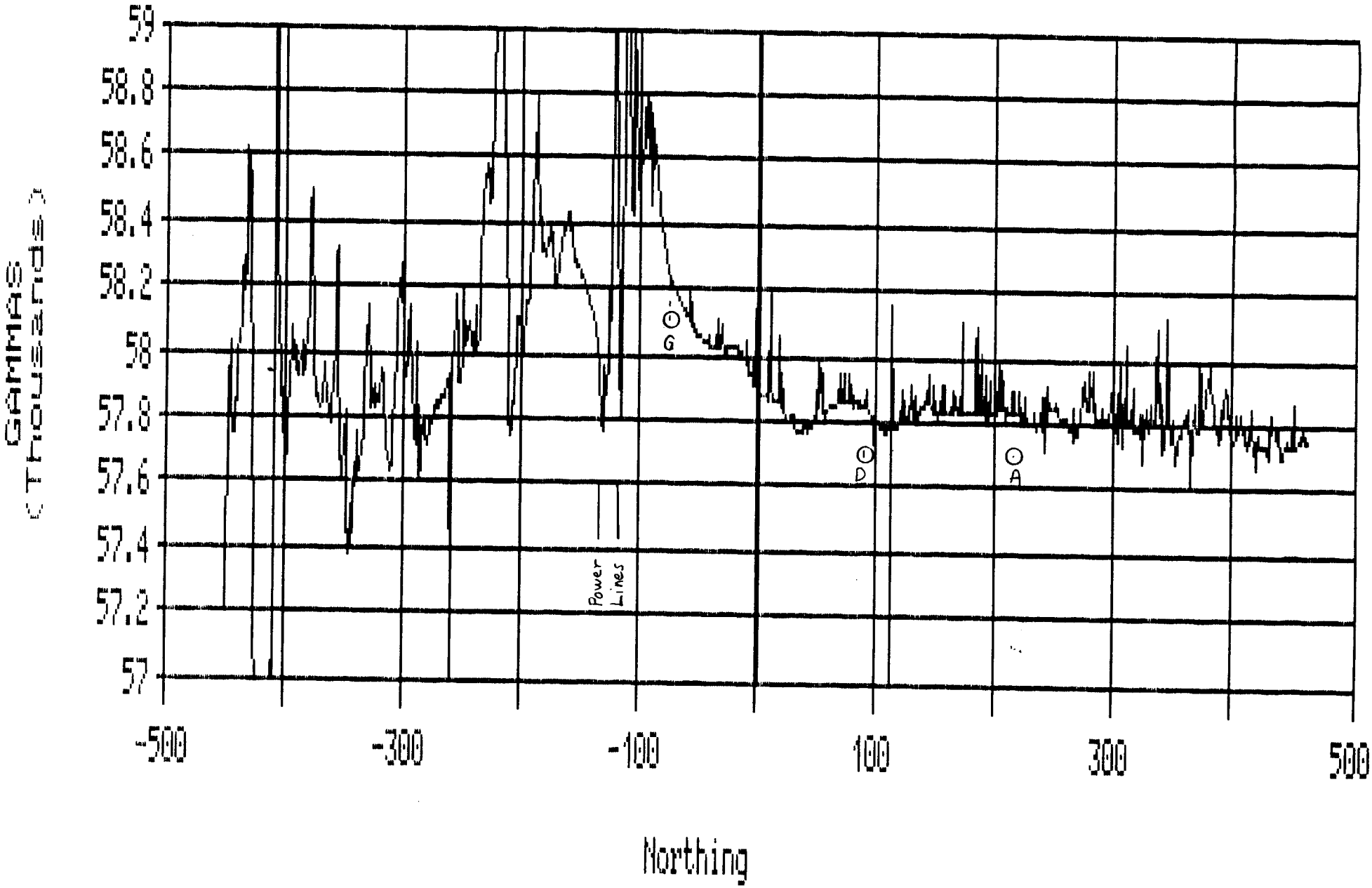

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3850E
GAMMAS/M
200
100
0
-100
-200
-500
-300
-100
100
300
Power Lines
Northing

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 3900E



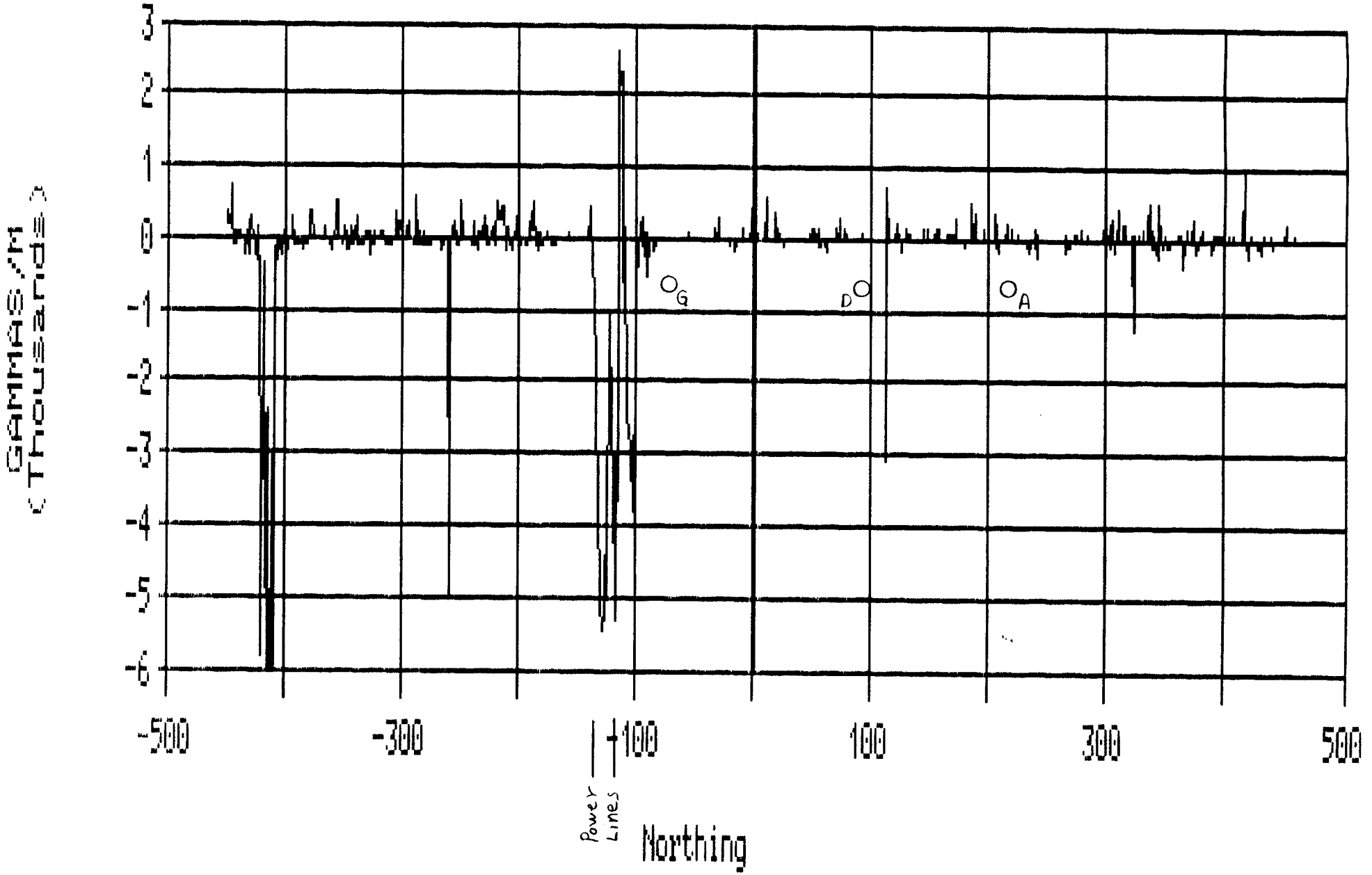
MAGNETIC TOTAL FIELD

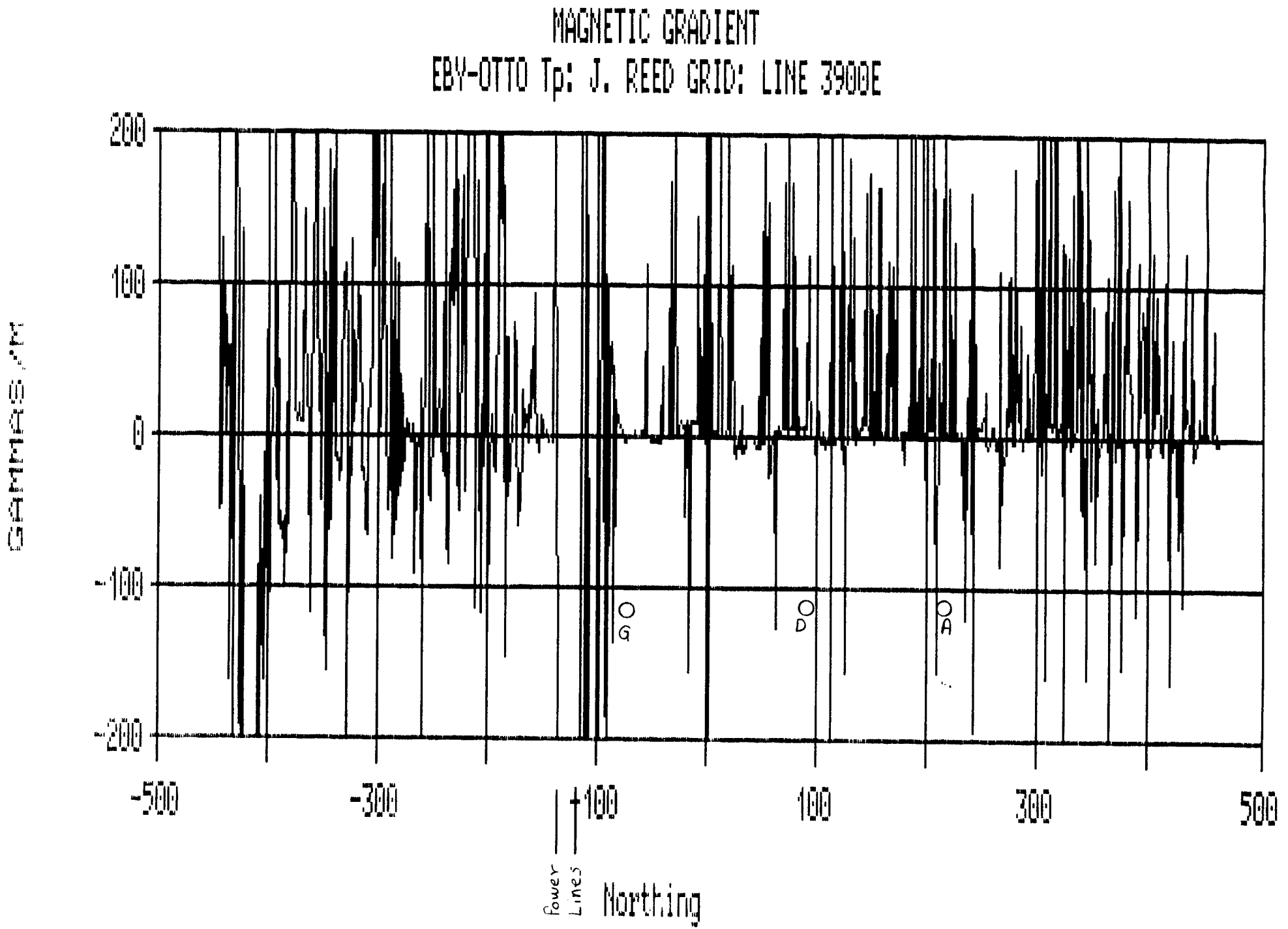
EBY-OTTO Tp: J. REED GRID: LINE 3900E



MAGNETIC GRADIENT

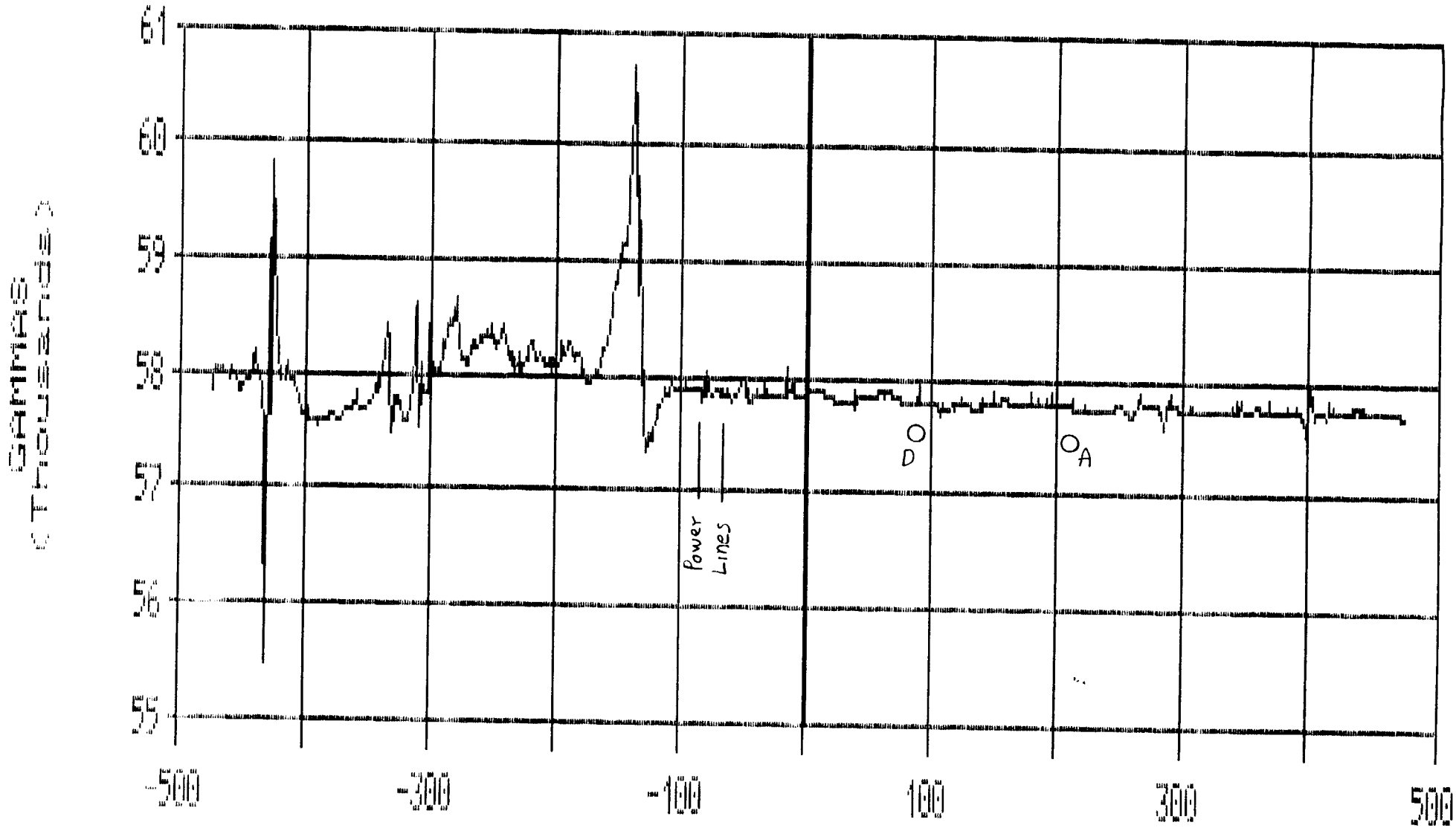
EBY-OTTO Tp: J. REED GRID: LINE 3900E




MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 3900E
GAMMAS /M
200
100
0
-100
-200
-500
-300
-100
100
300
500
G
D
A
Power Lines
Northing

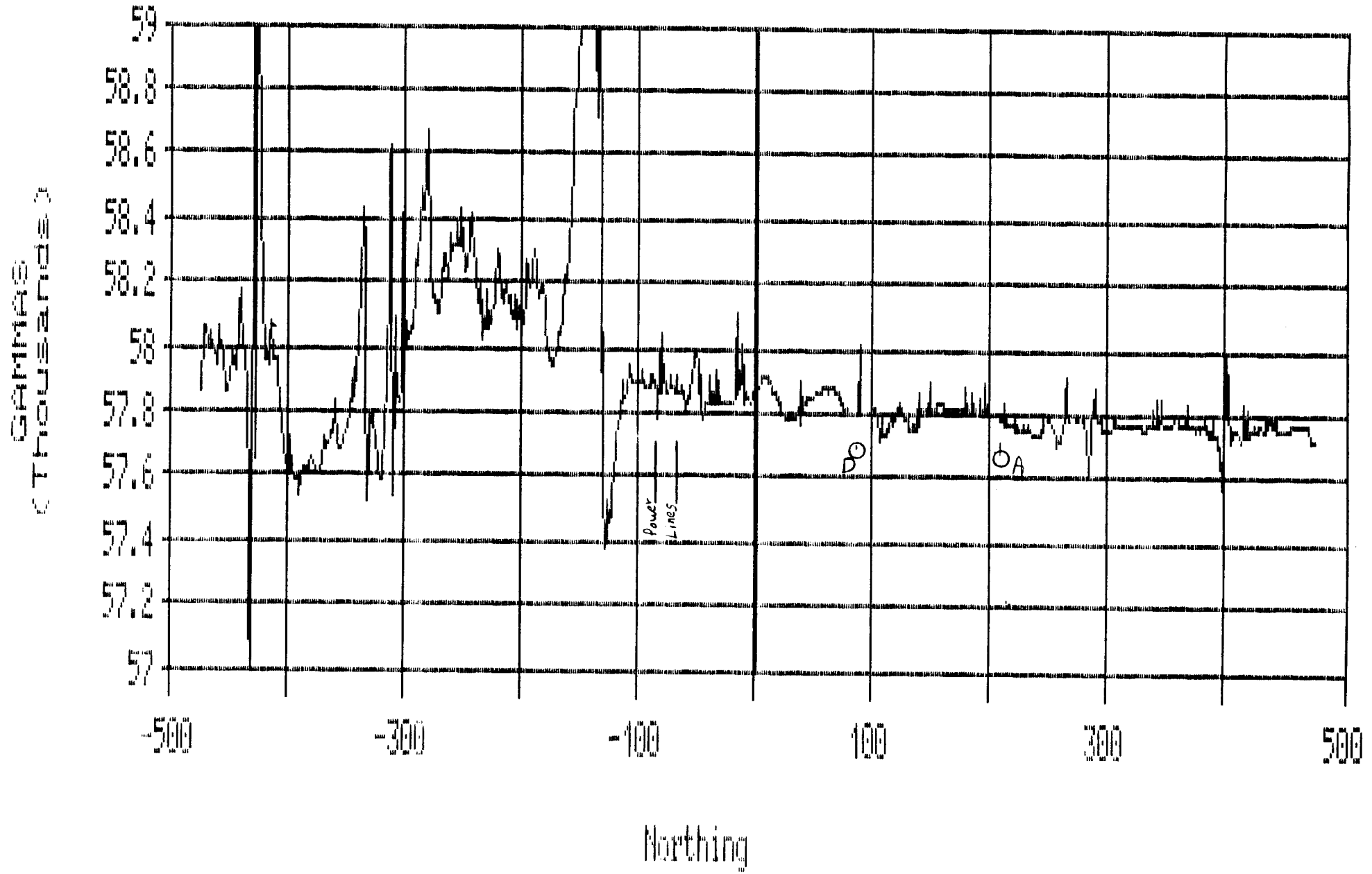
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 3950E



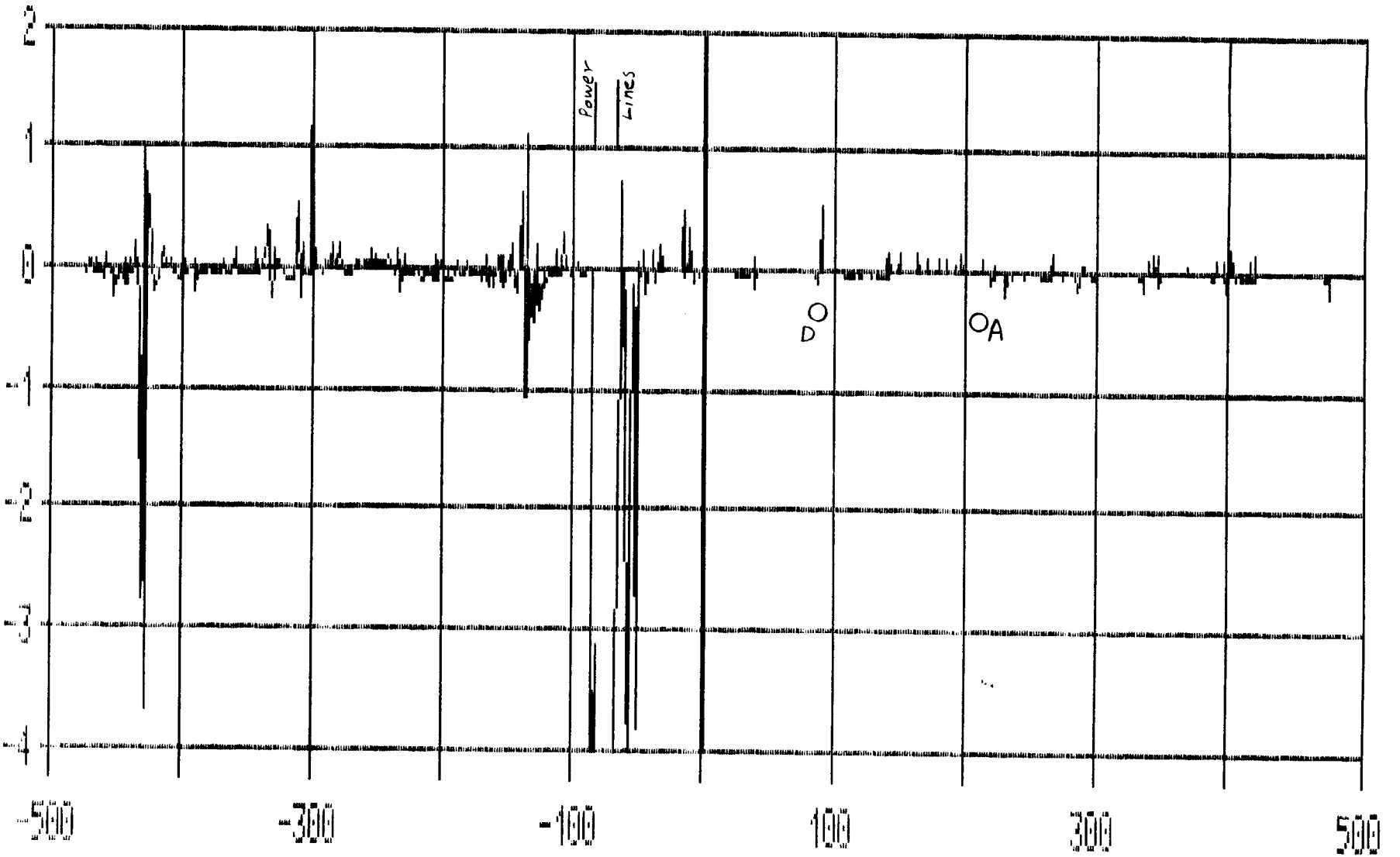
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 3950E



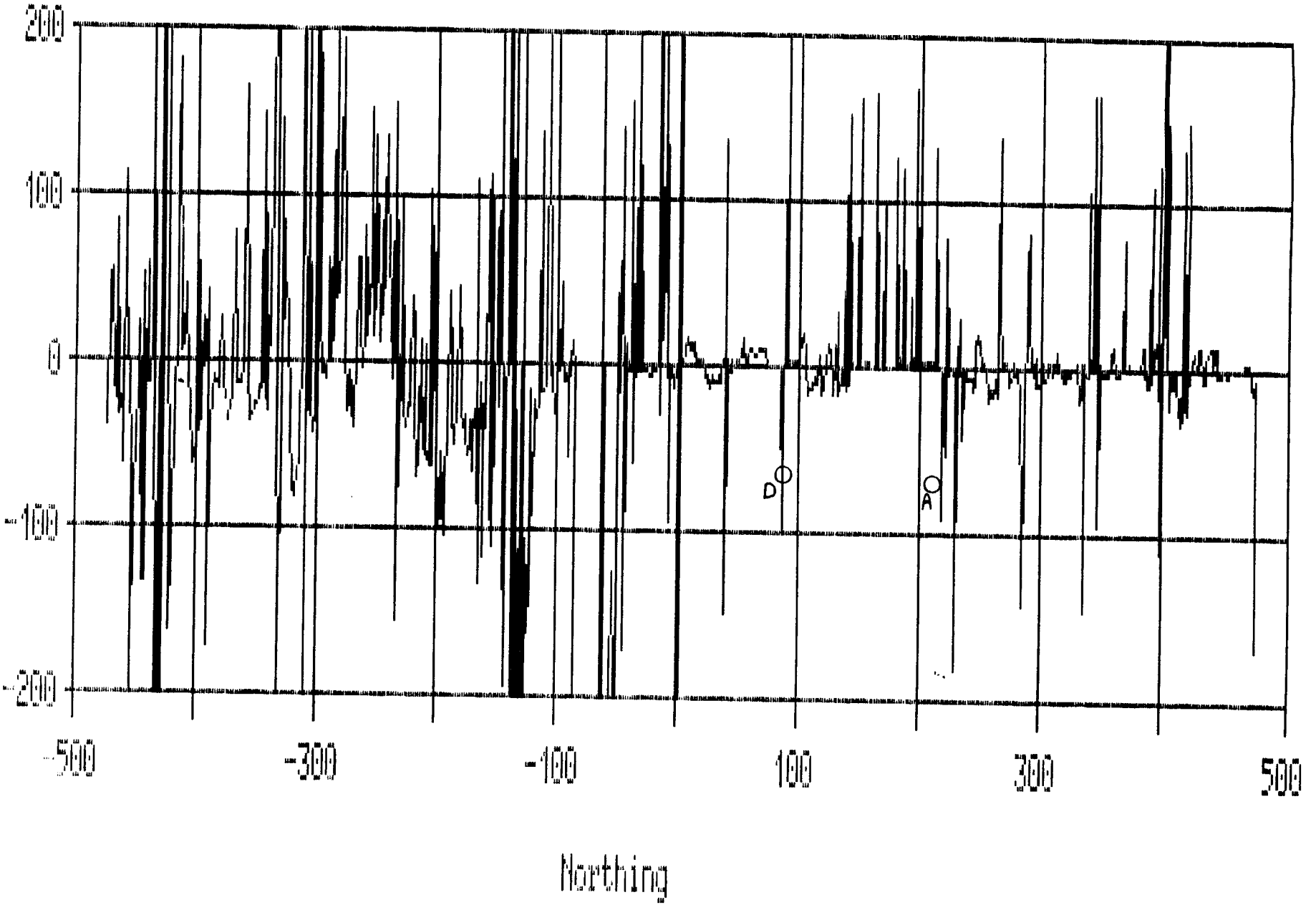
MAGNETIC GRADIENT

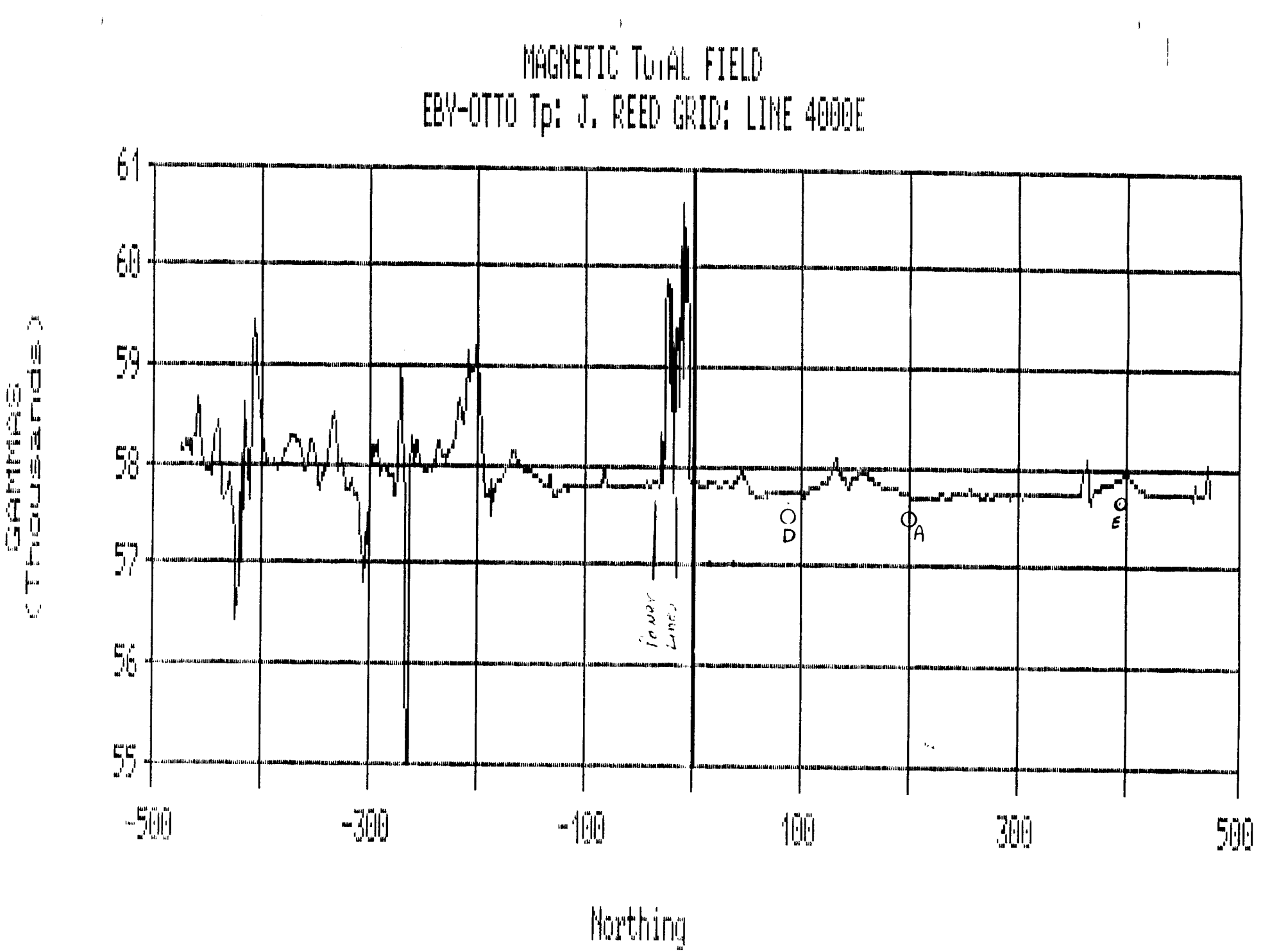
EBY-OTTO Tp: J. REED GRID: LINE 3950E



MAGNETIC GRADIENT

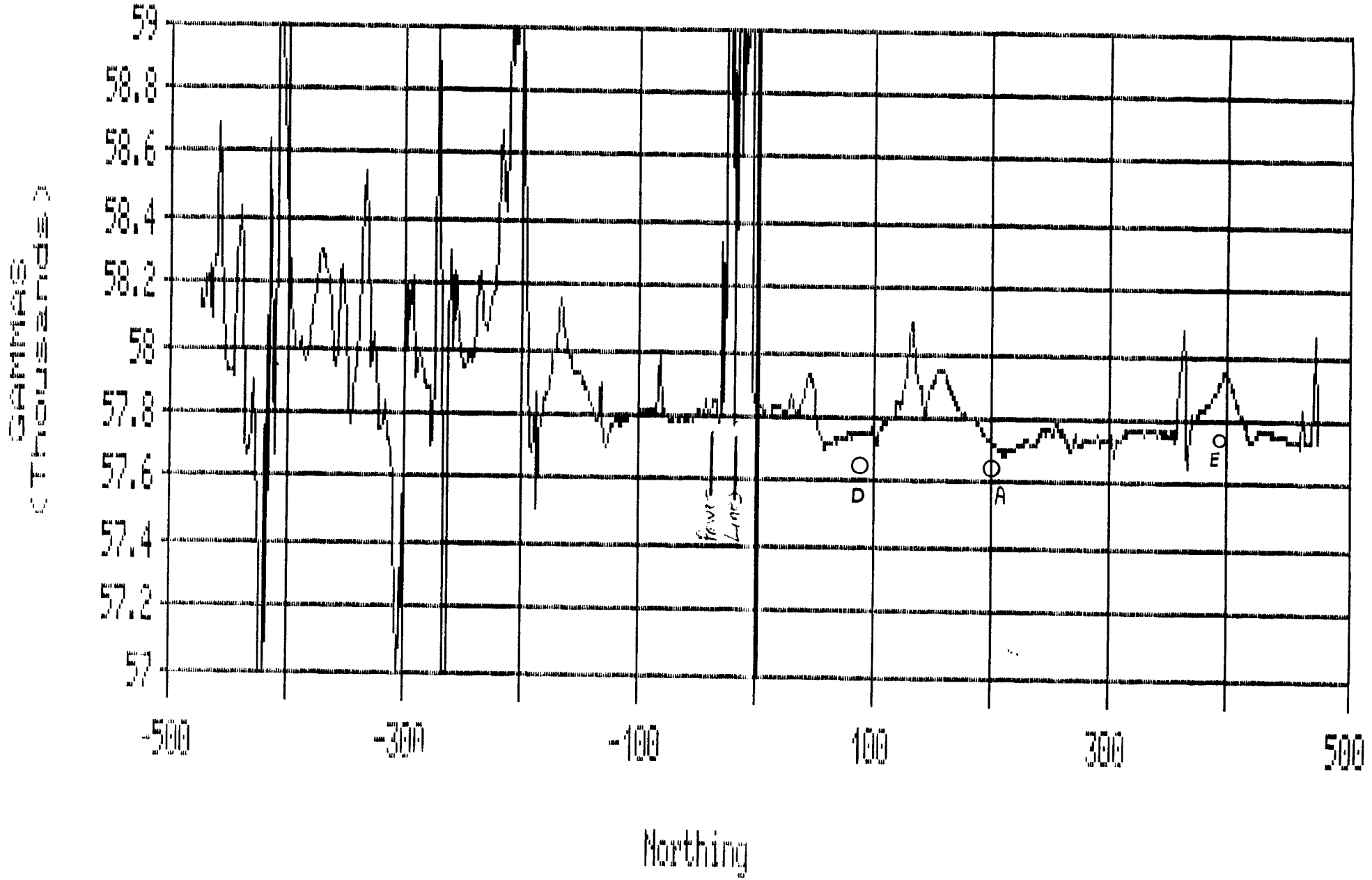
EBY-OTTO Tp: J. REED GRID: LINE 3950E




MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 4000E
61
60
59
58
57
56
55
Gammas
-500
-300
-100
100
300
500
Northing
D
A
E

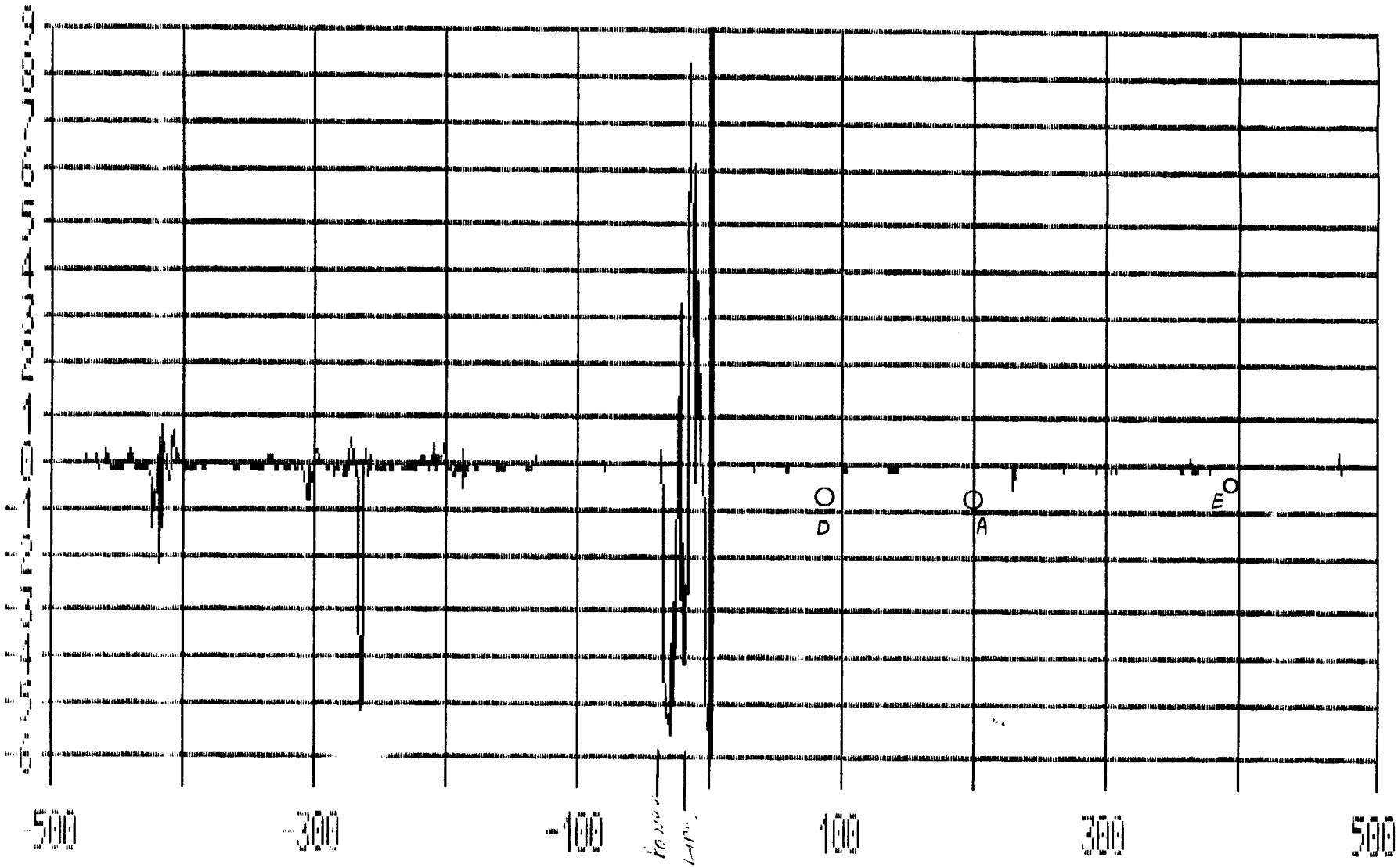
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4000E



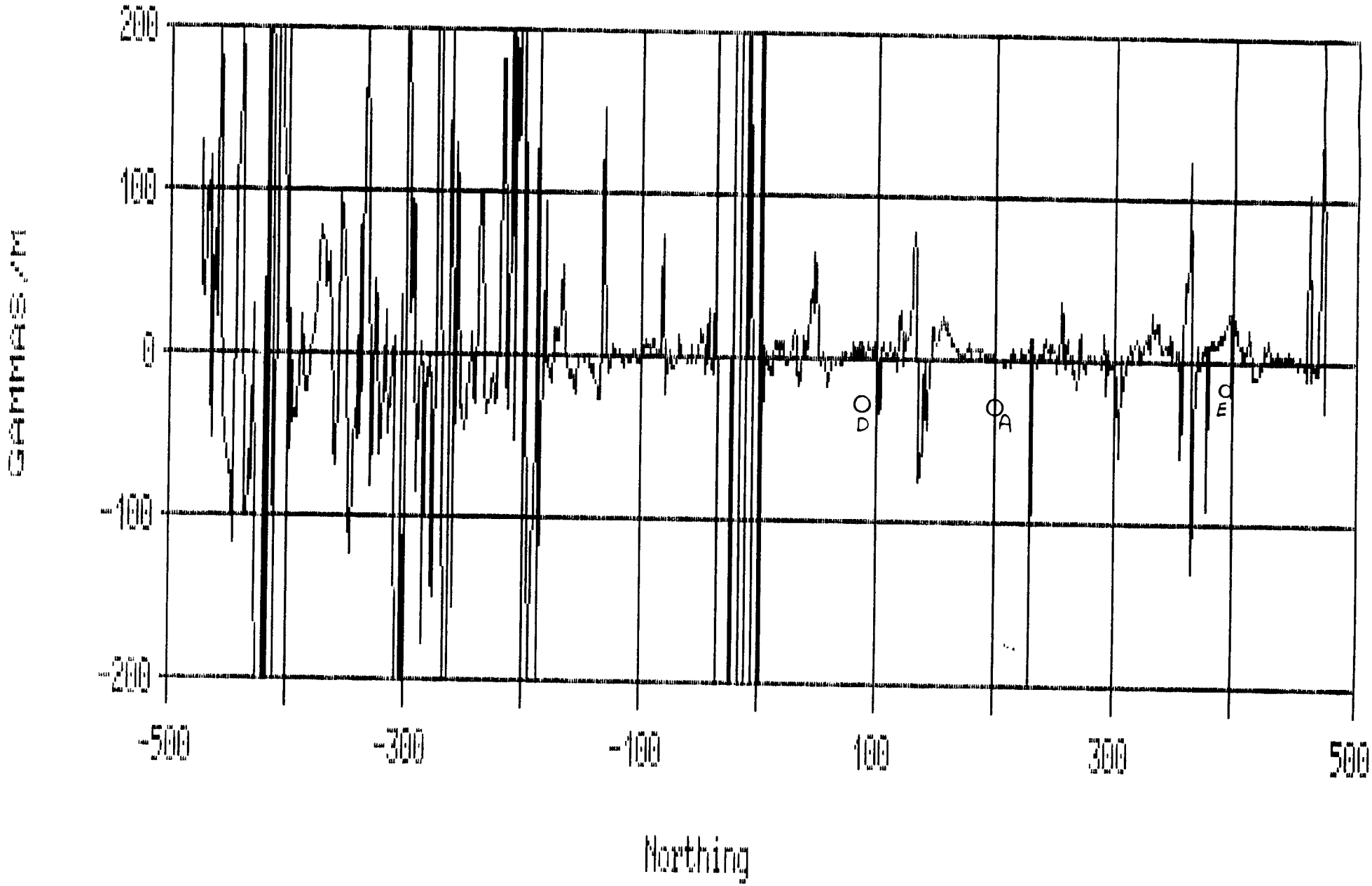
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4000E



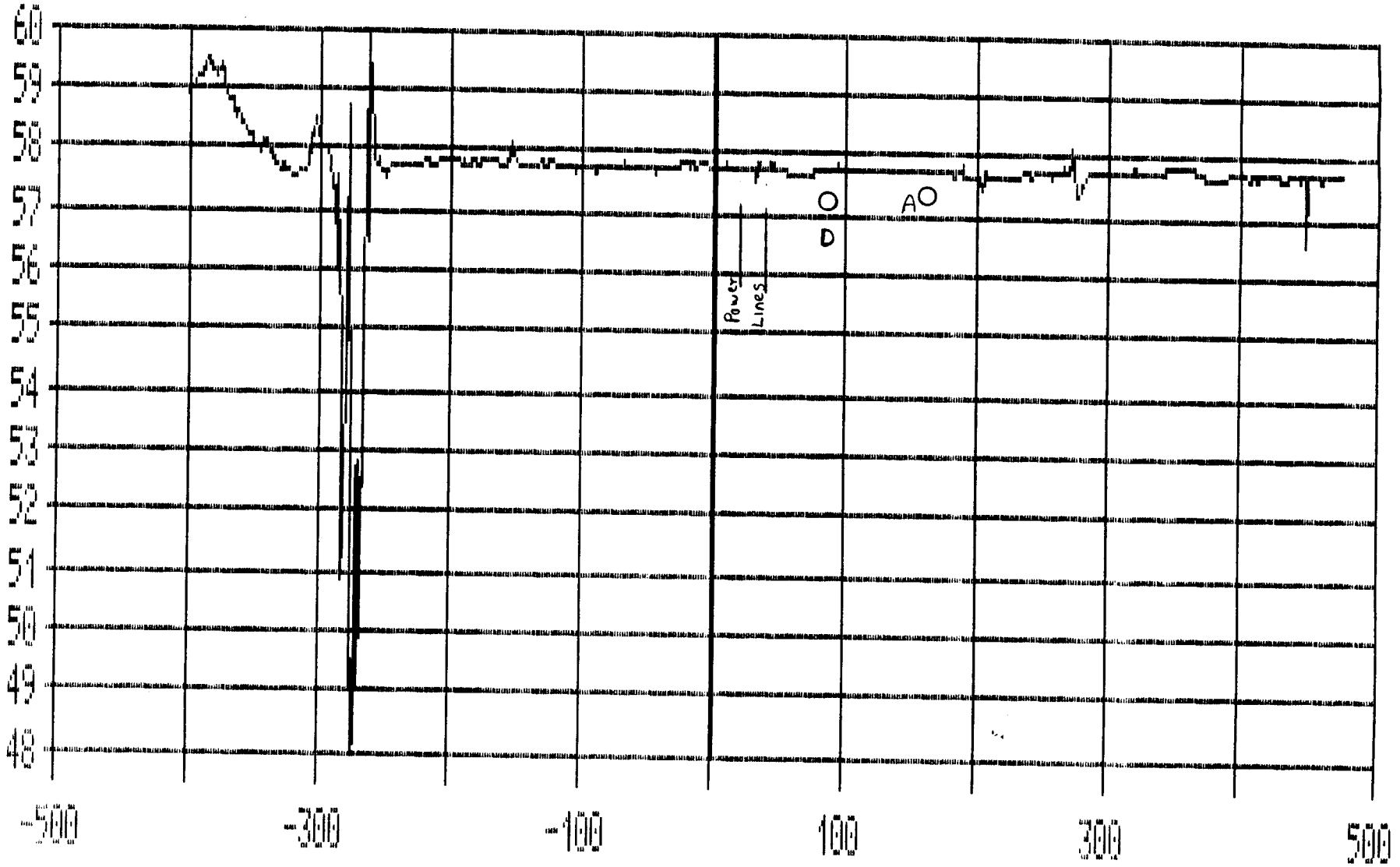
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4000E

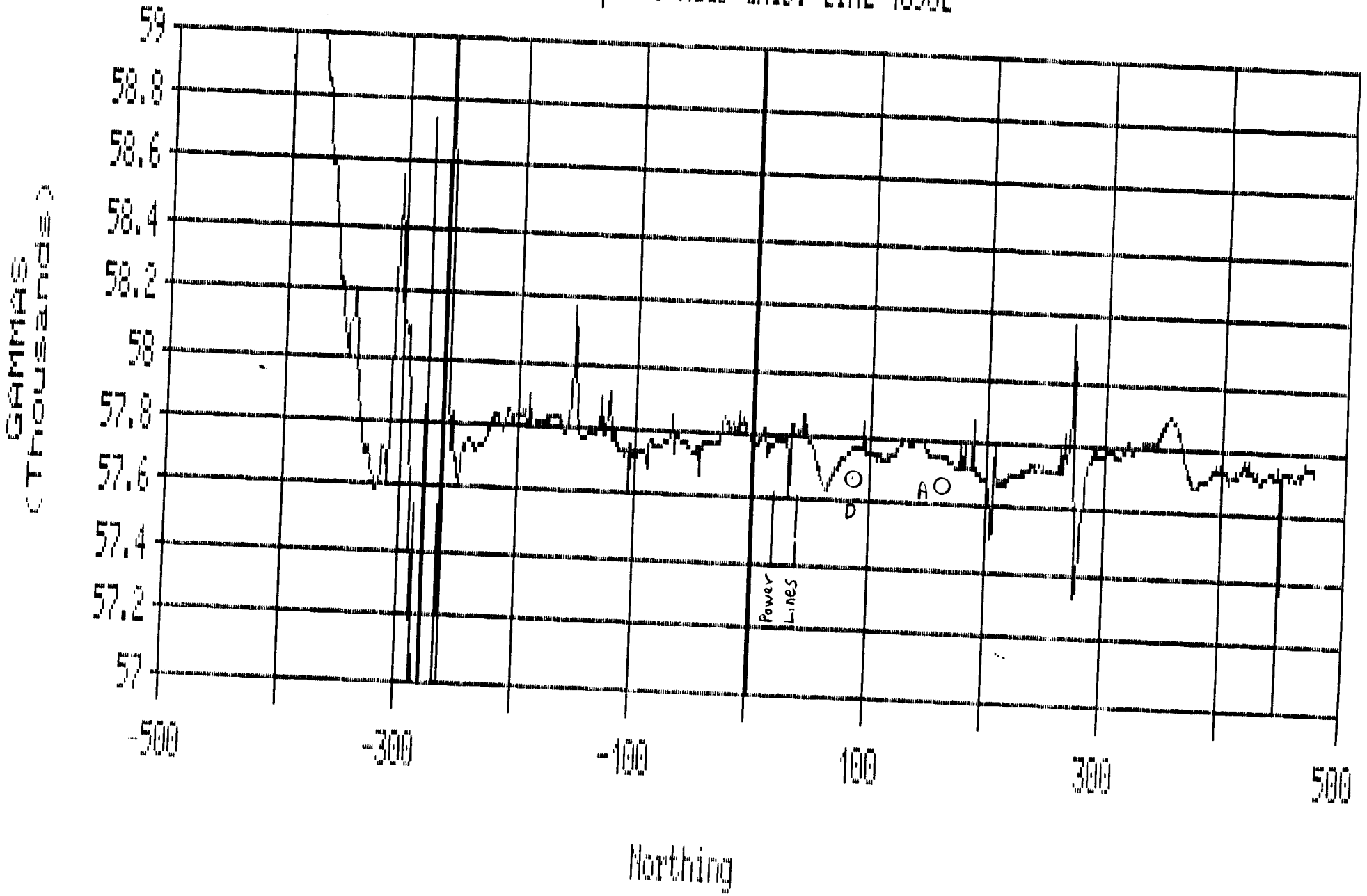


MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4050E

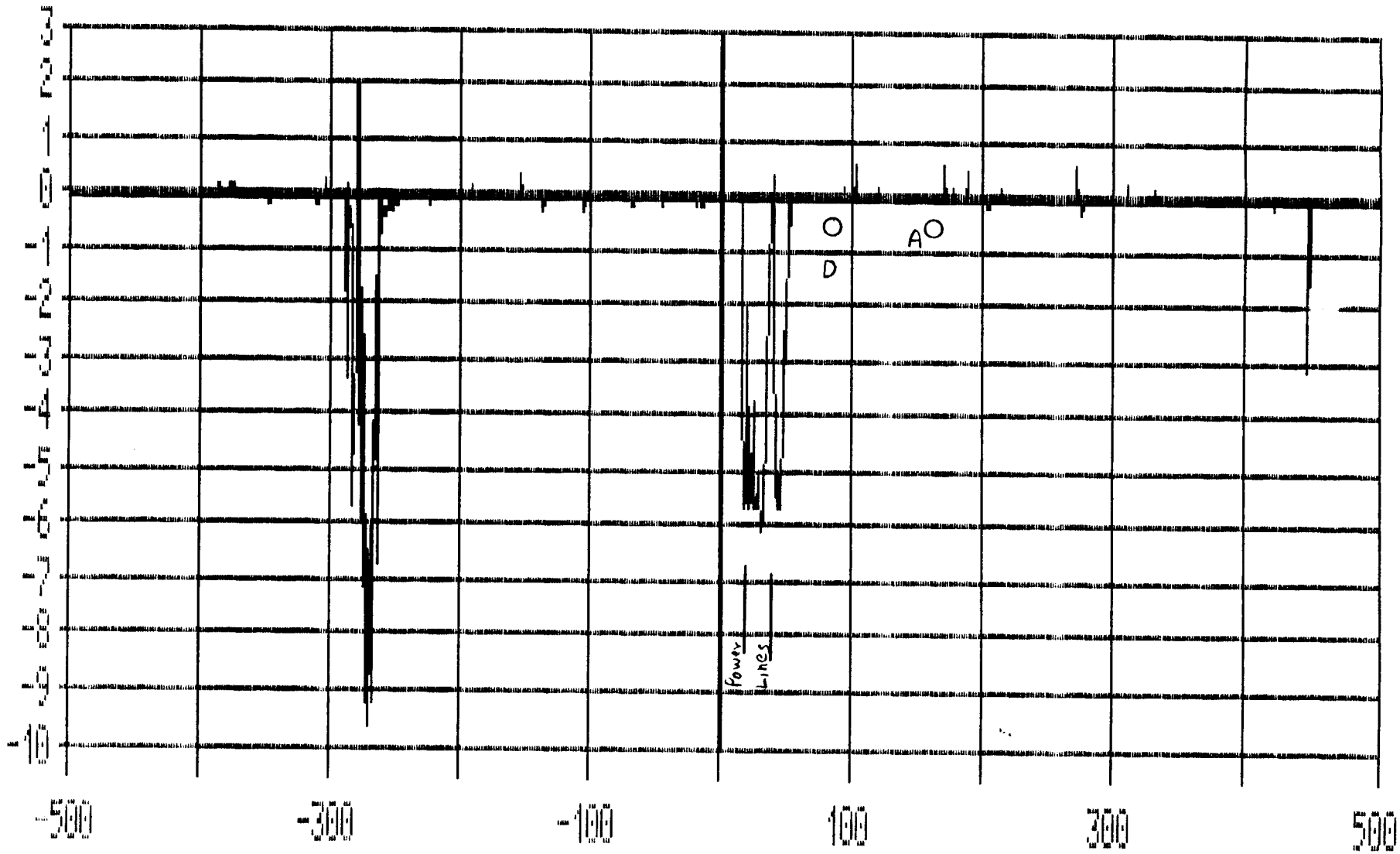


MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 4050E



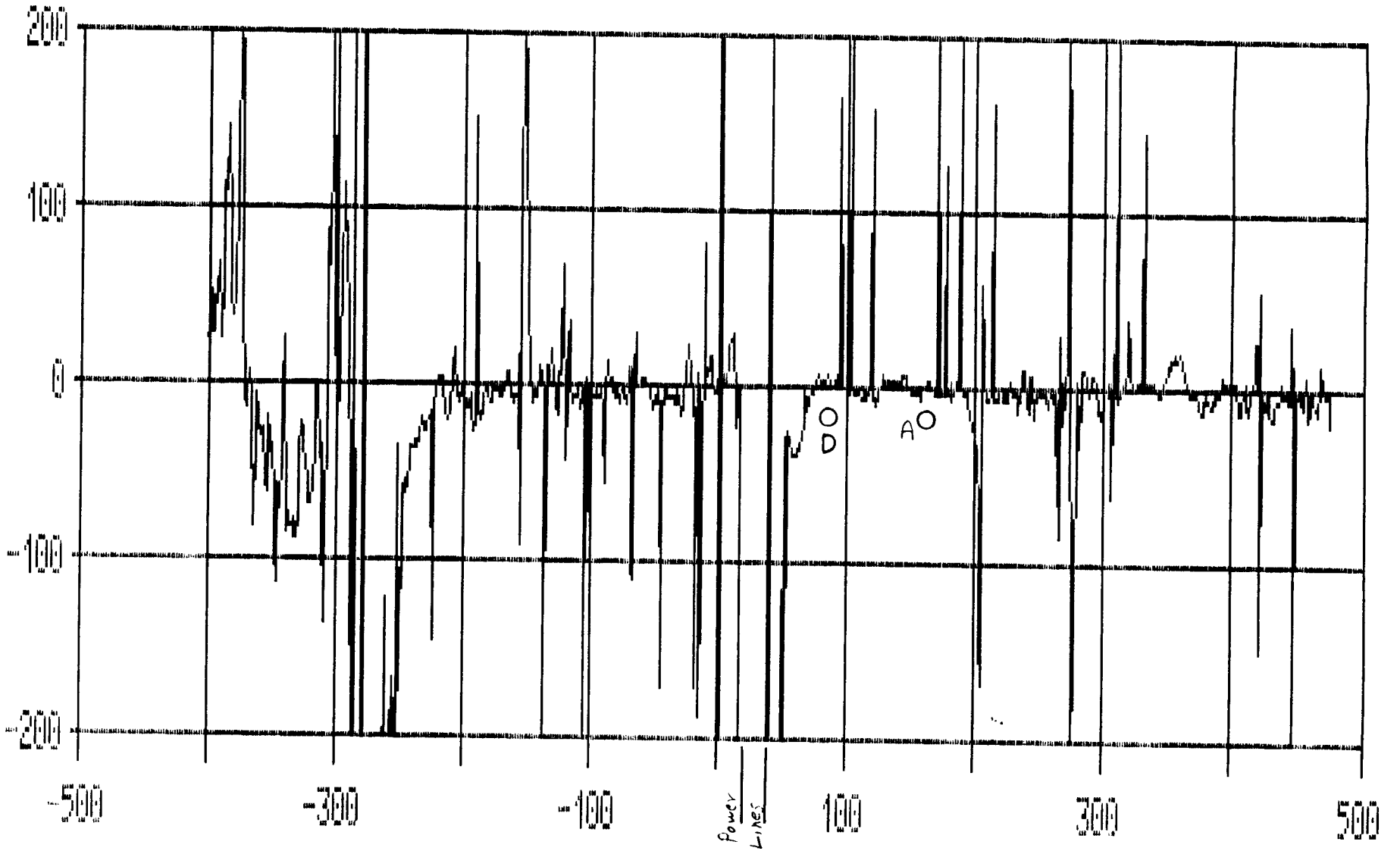
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4050E



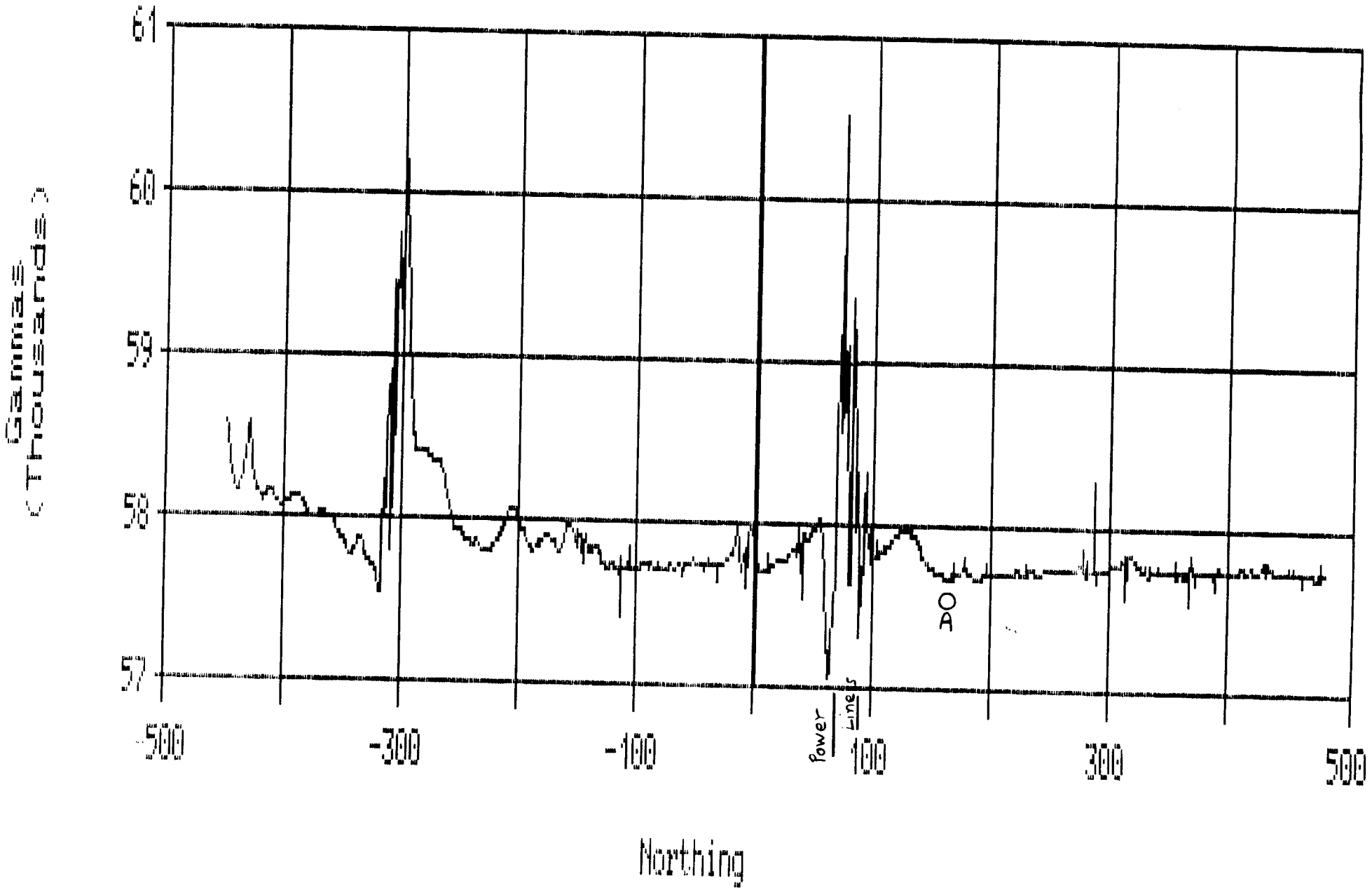
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4050E



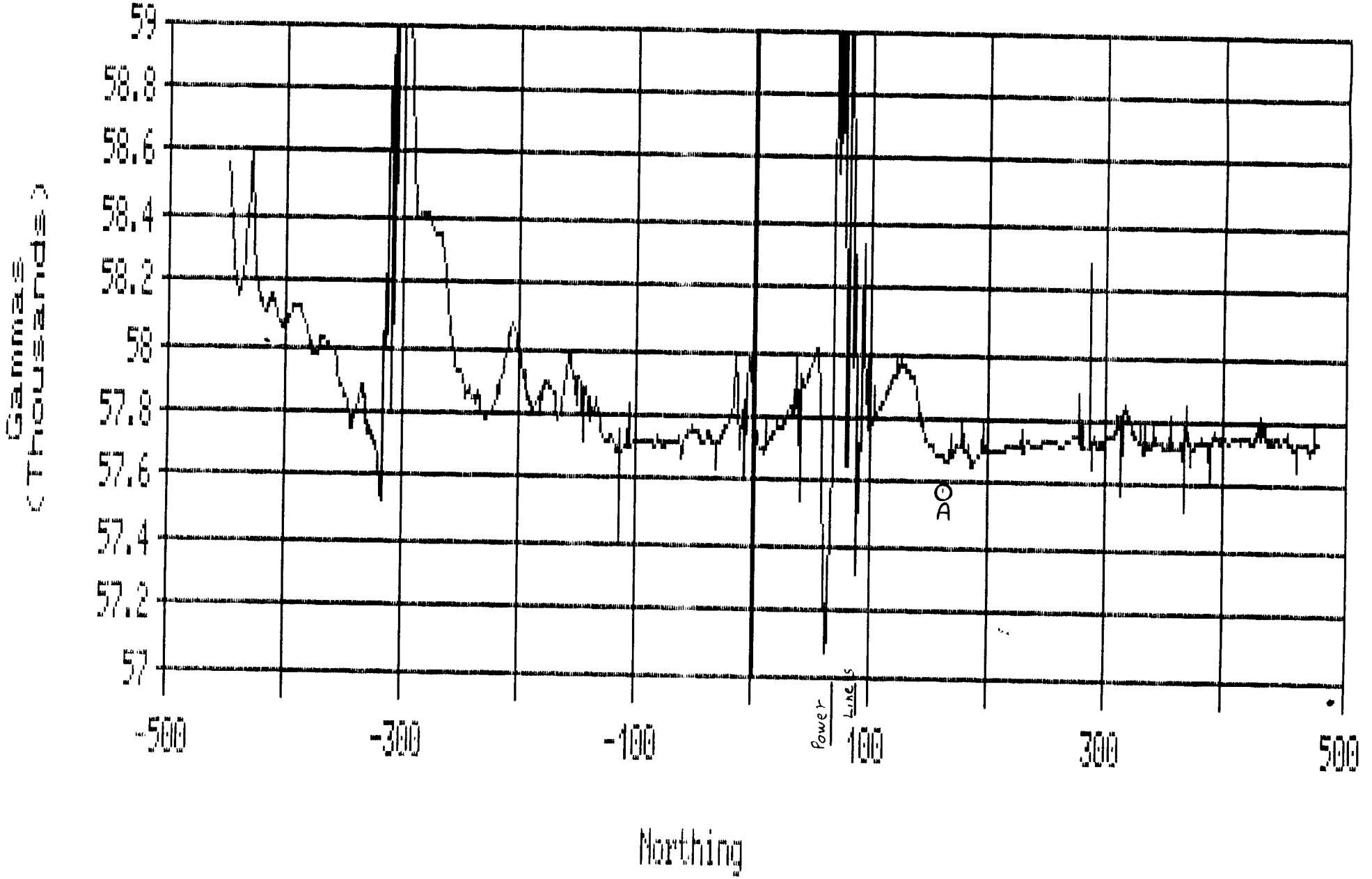
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4100E



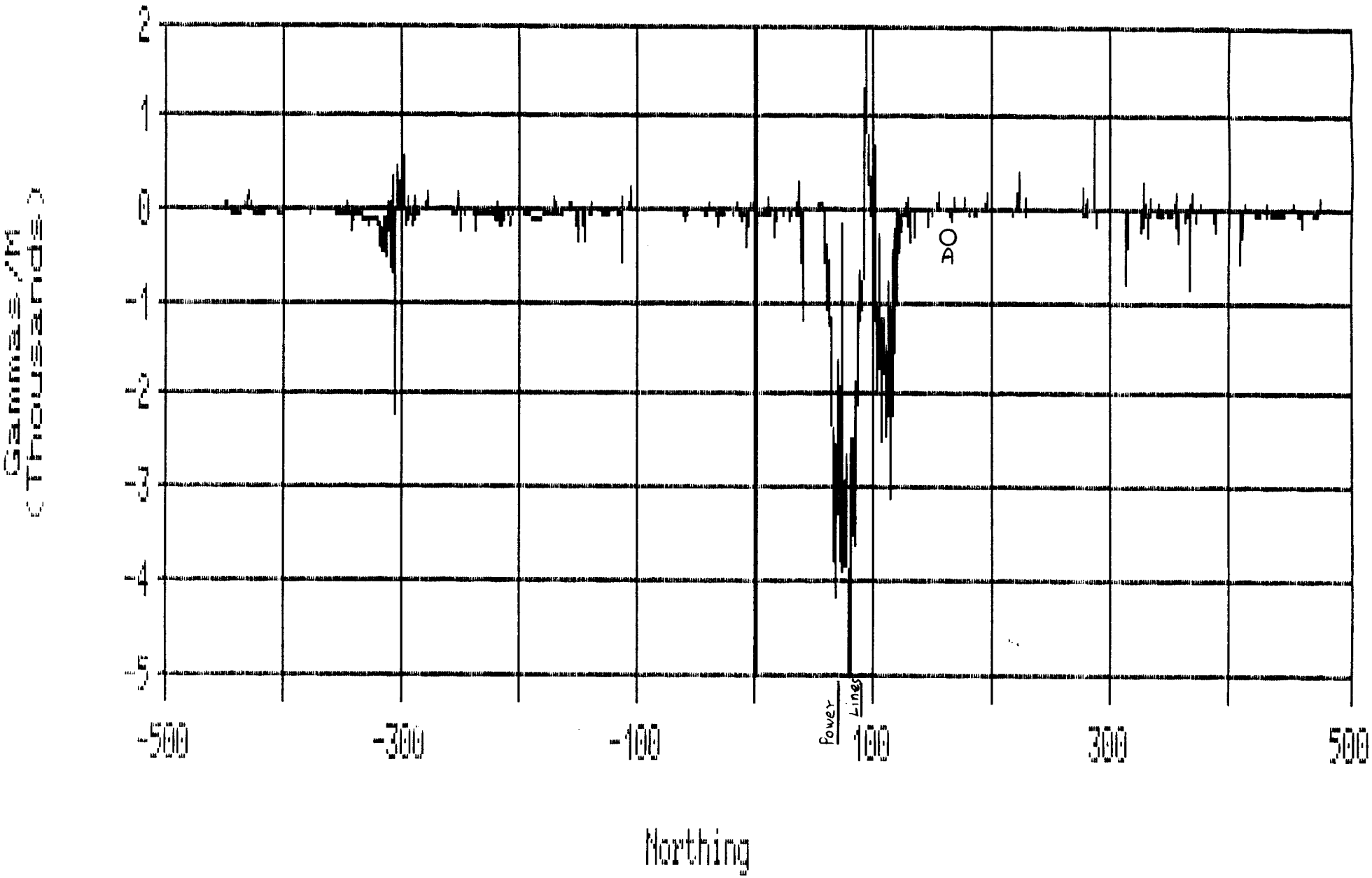
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4100E



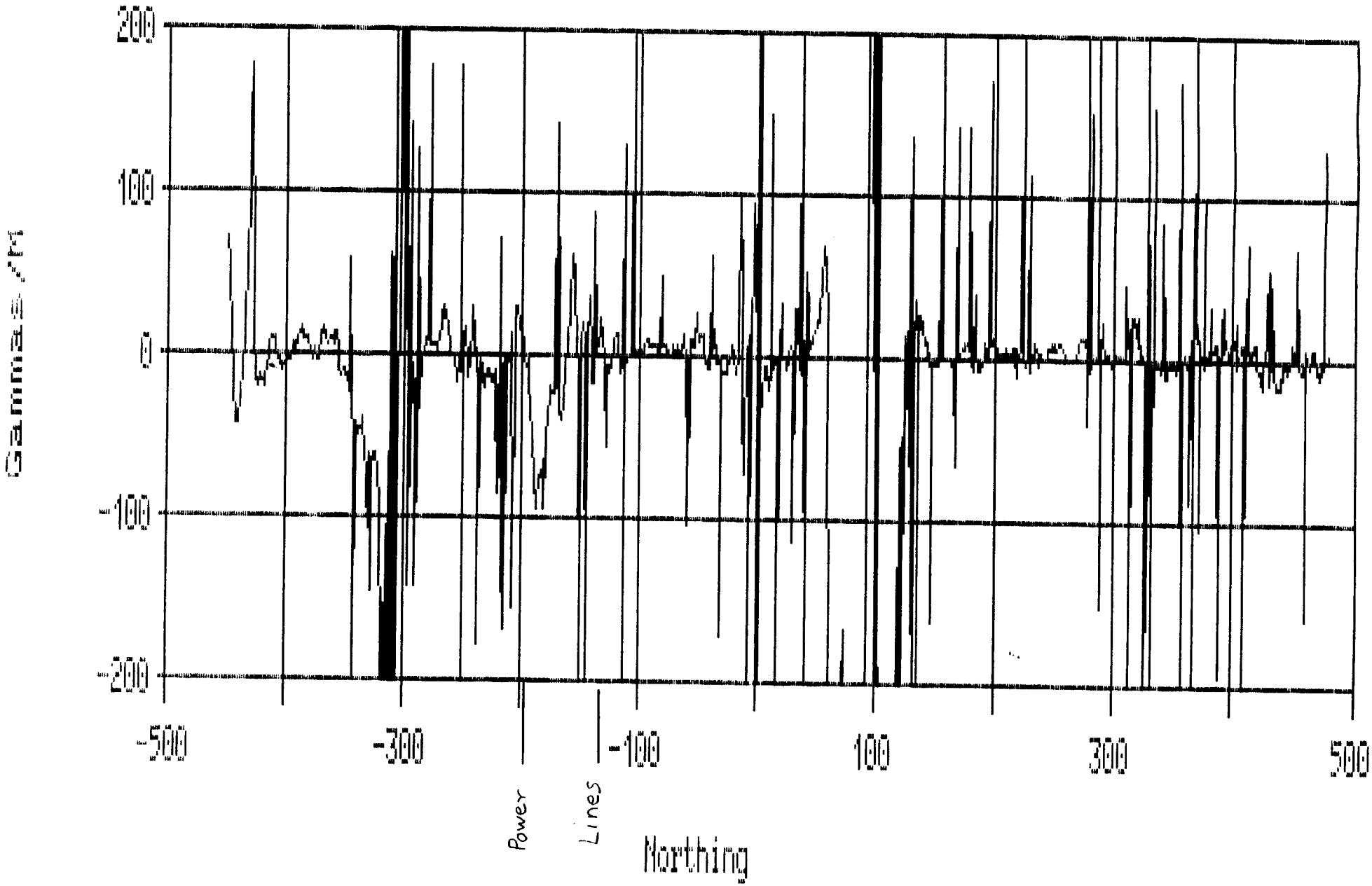
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4100E



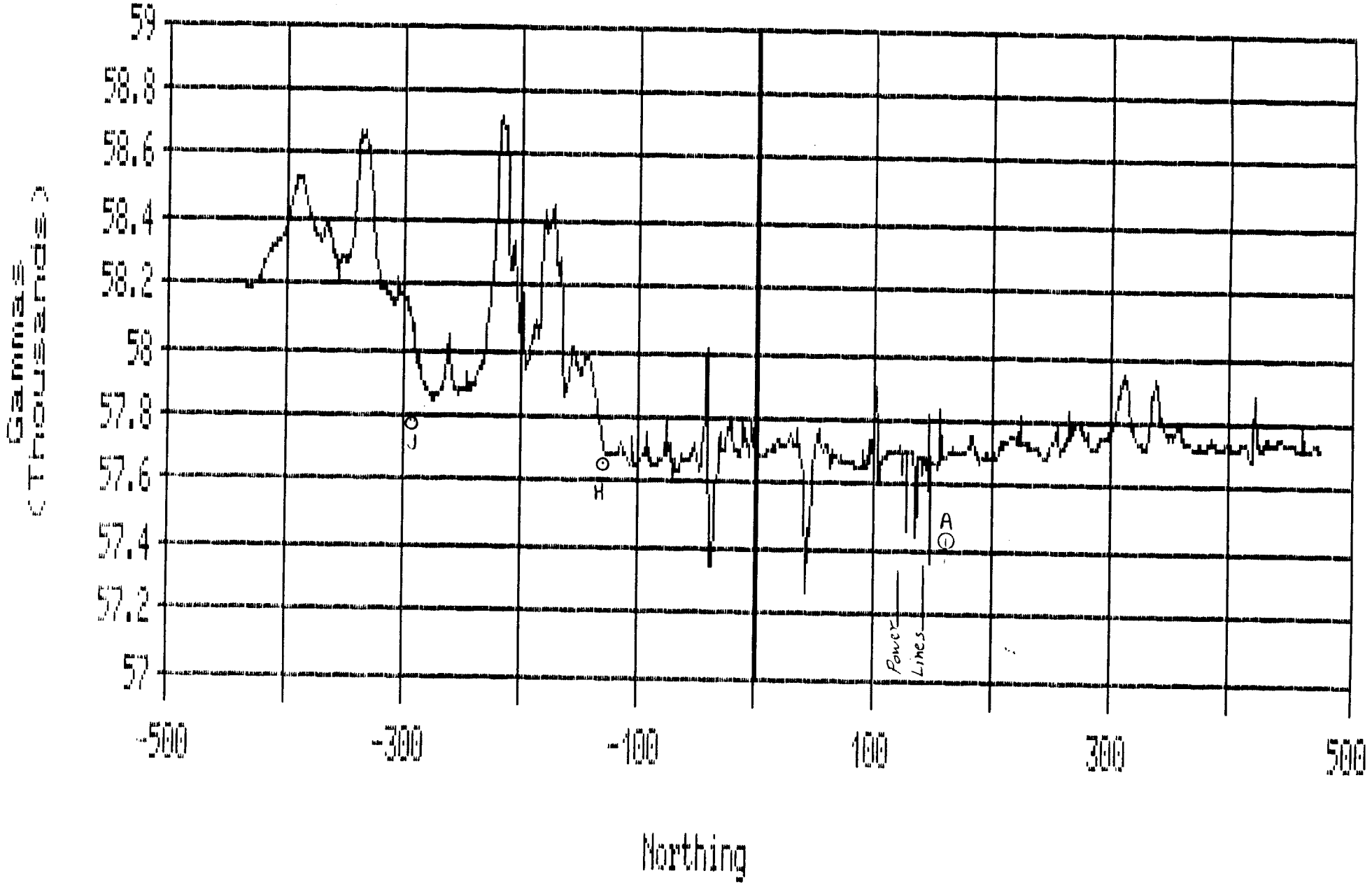
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4100E



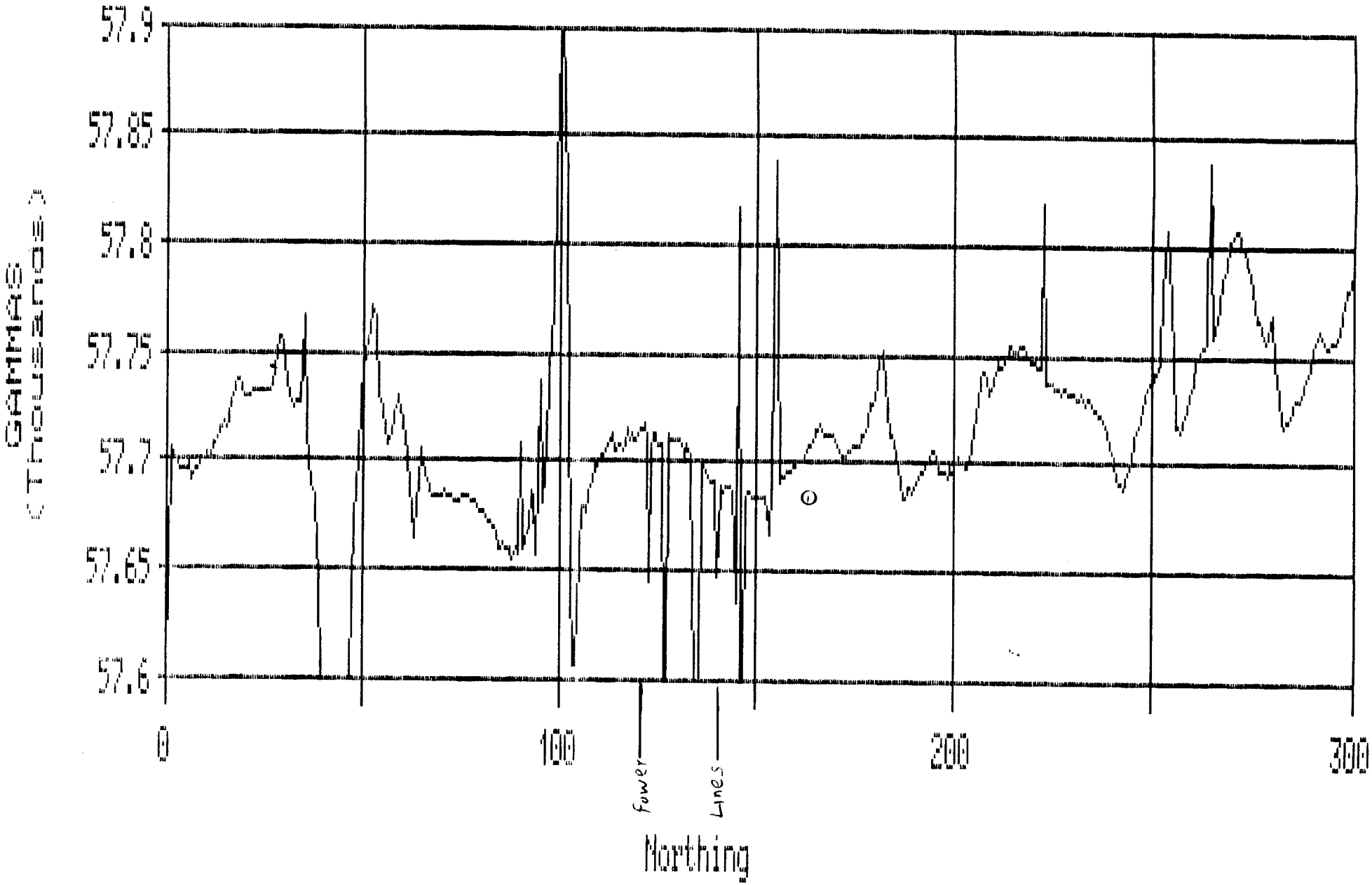
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4150E

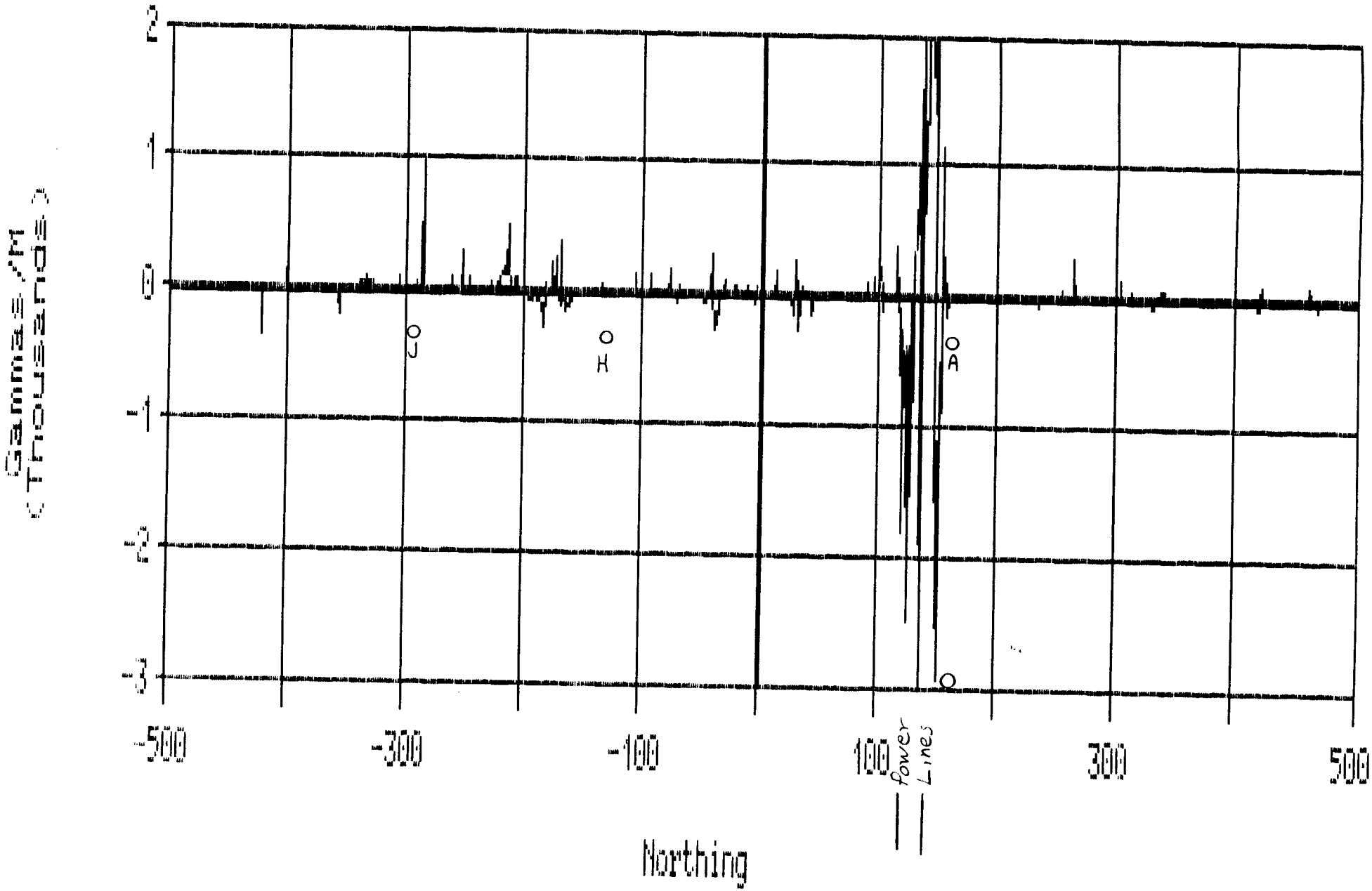


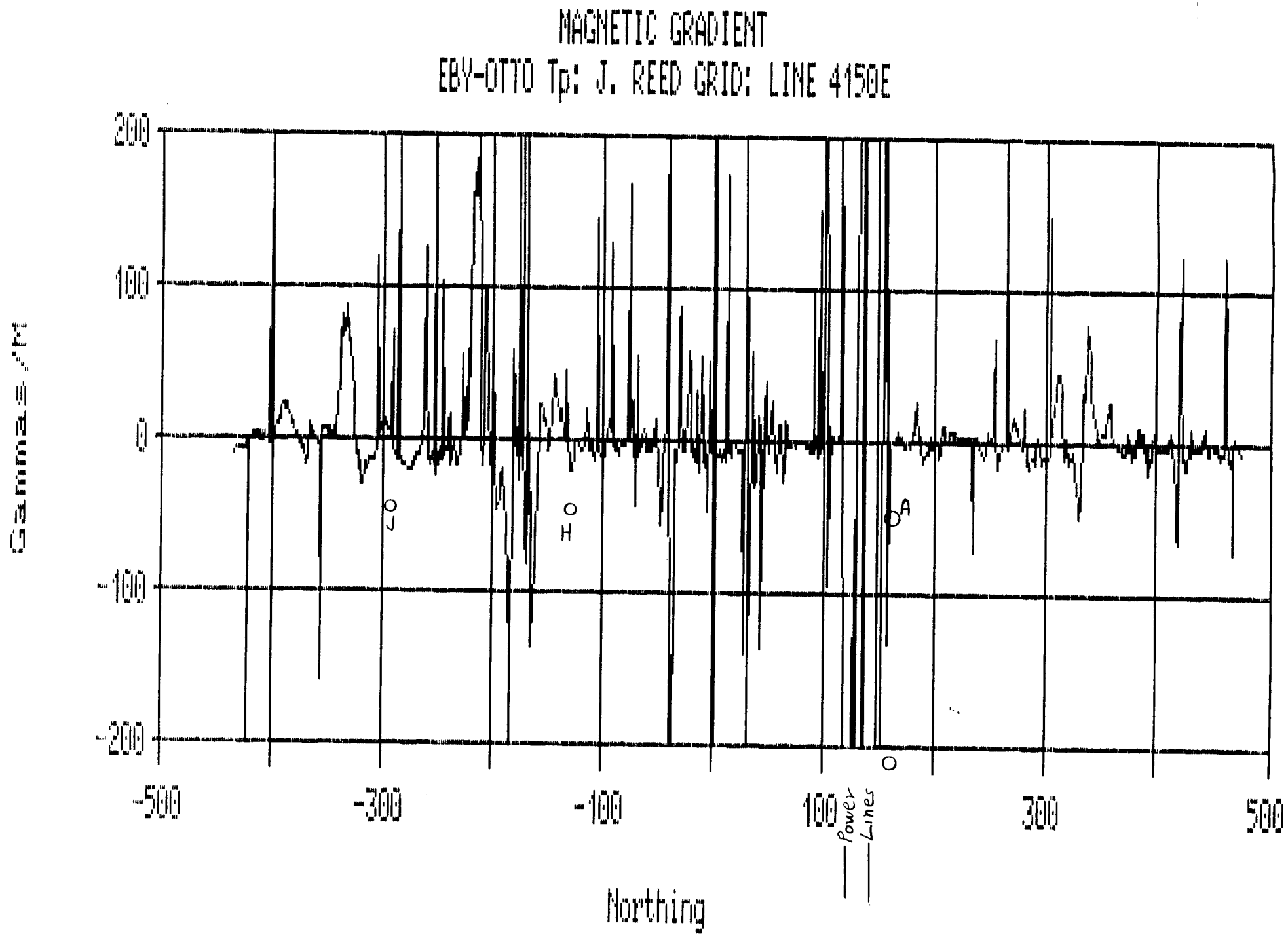
MAGNETIC TOTAL FIELD

EBY-OTTO Tp: J. REED GRID: LINE 4150E



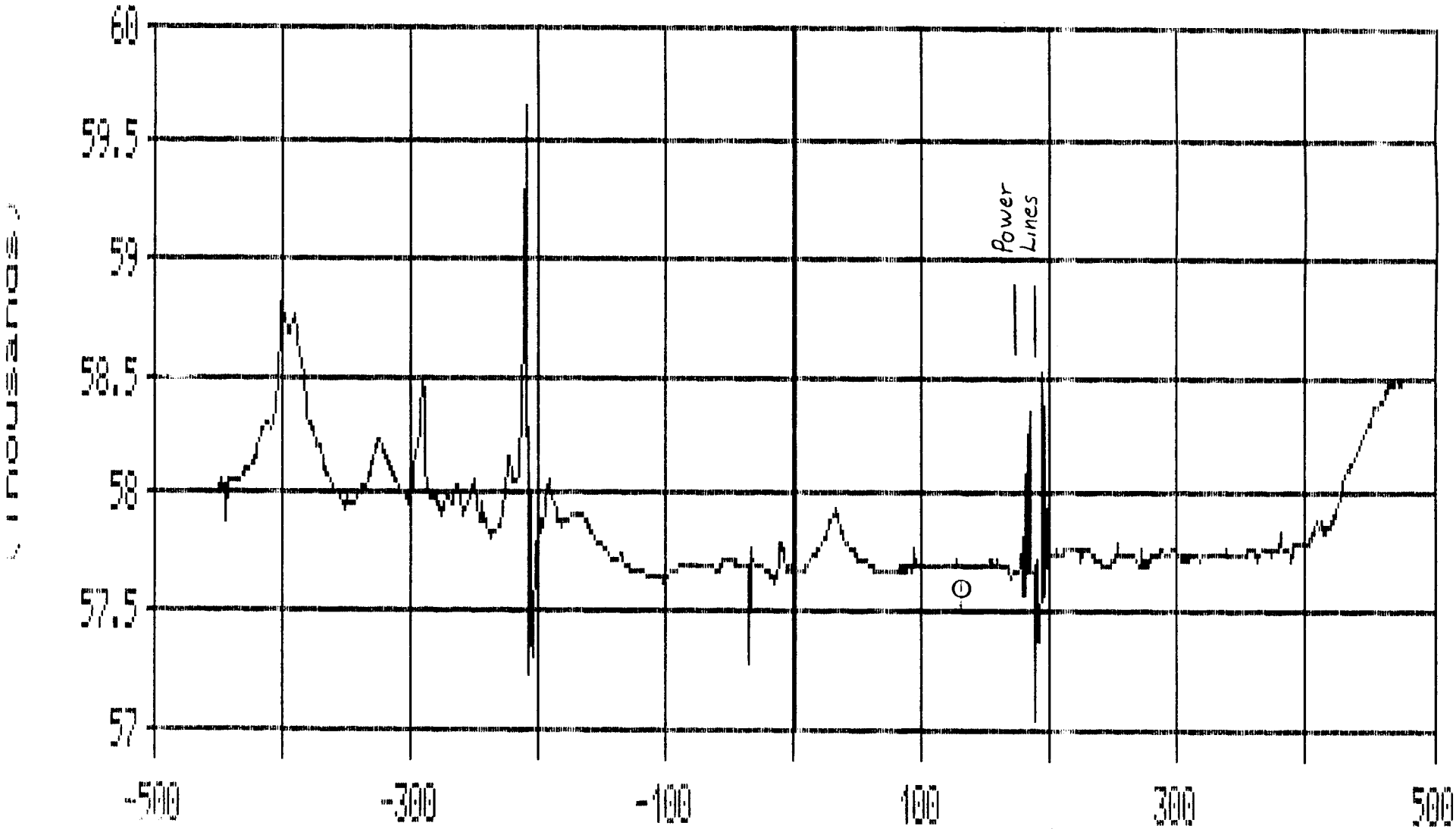
MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 4150E

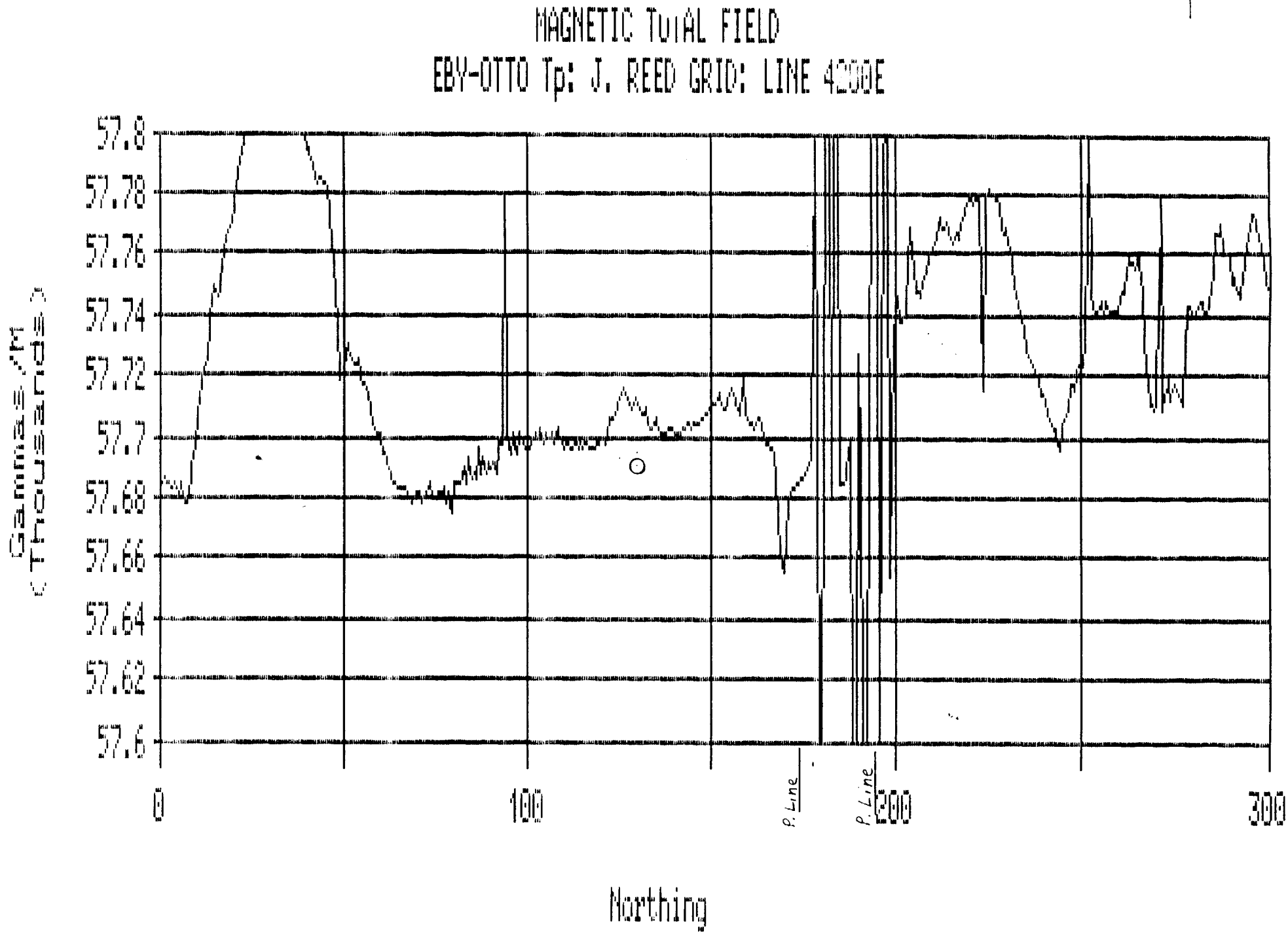



MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 4150E
200
100
0
-100
-200
Gammas/M
J
H
A
-500
-300
-100
100
300
500
Power Lines
Northing

MAGNETIC TOTAL FIELD

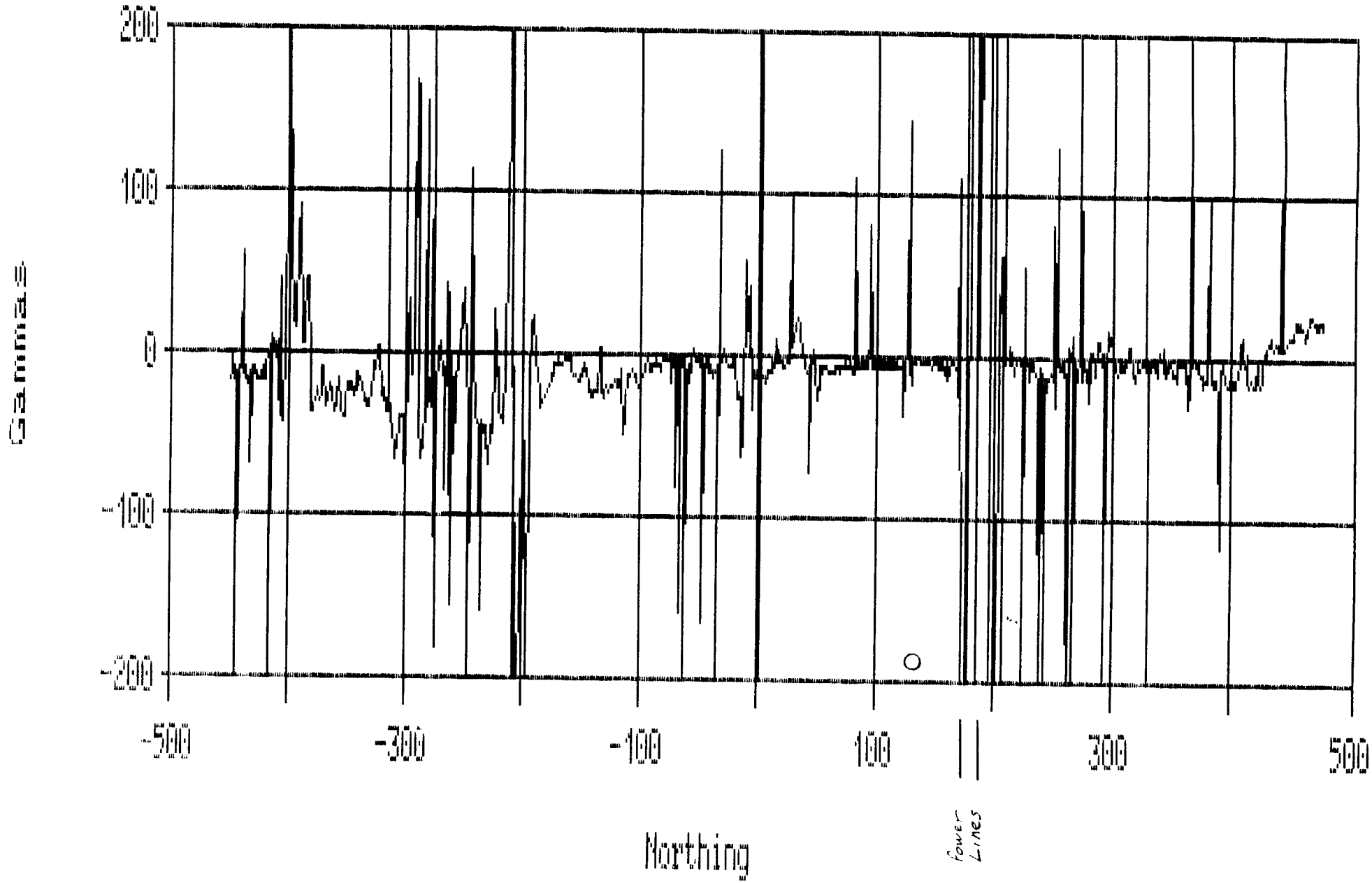
EBY-OTTO Tp: J. REED GRID: LINE 4200E




MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 4200E
57.8
57.78
57.76
57.74
57.72
57.7
57.68
57.66
57.64
57.62
57.6
Gamma (N Thousands)
0
100
P. Line
P. Line
200
300
Northing

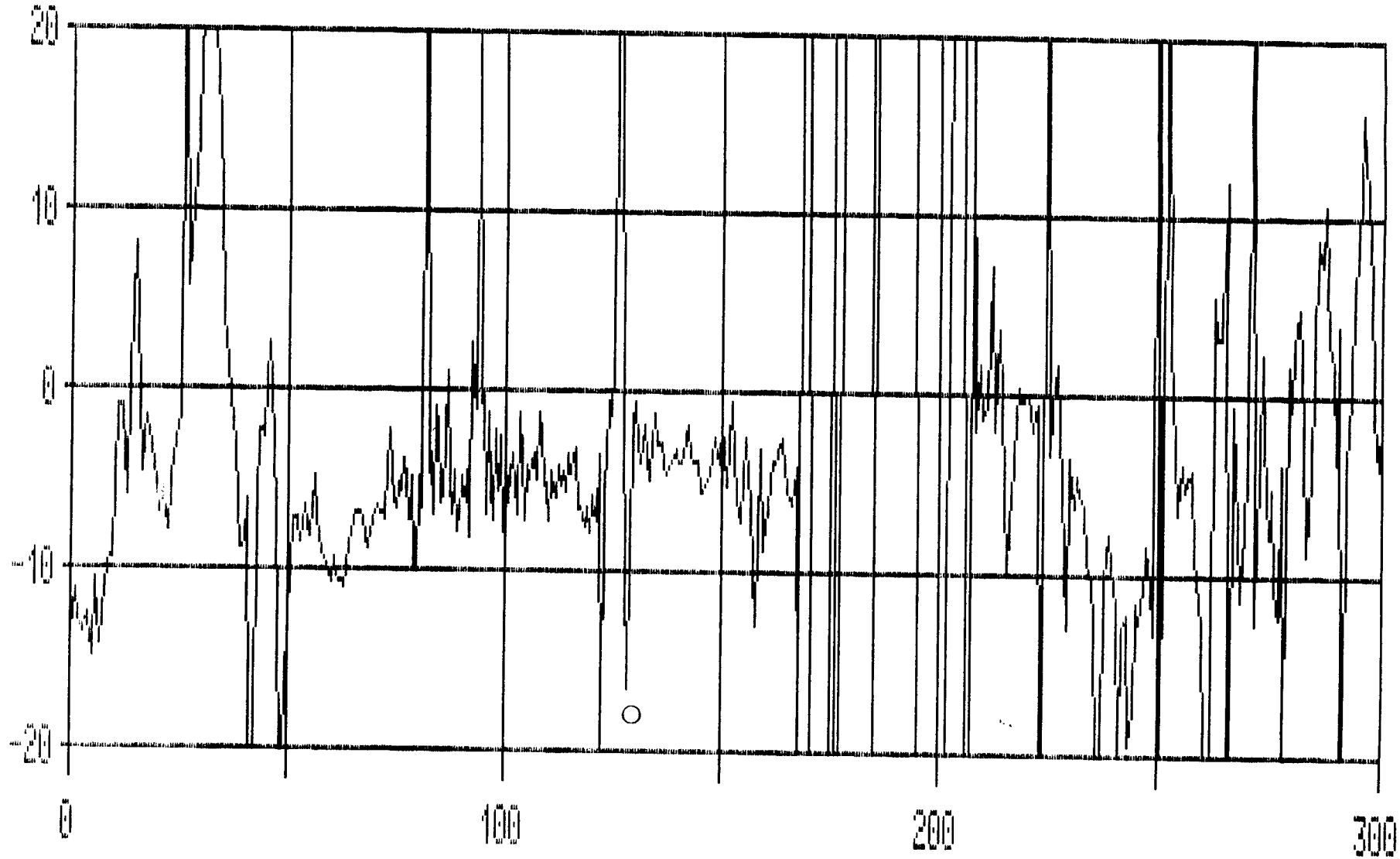
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4200E



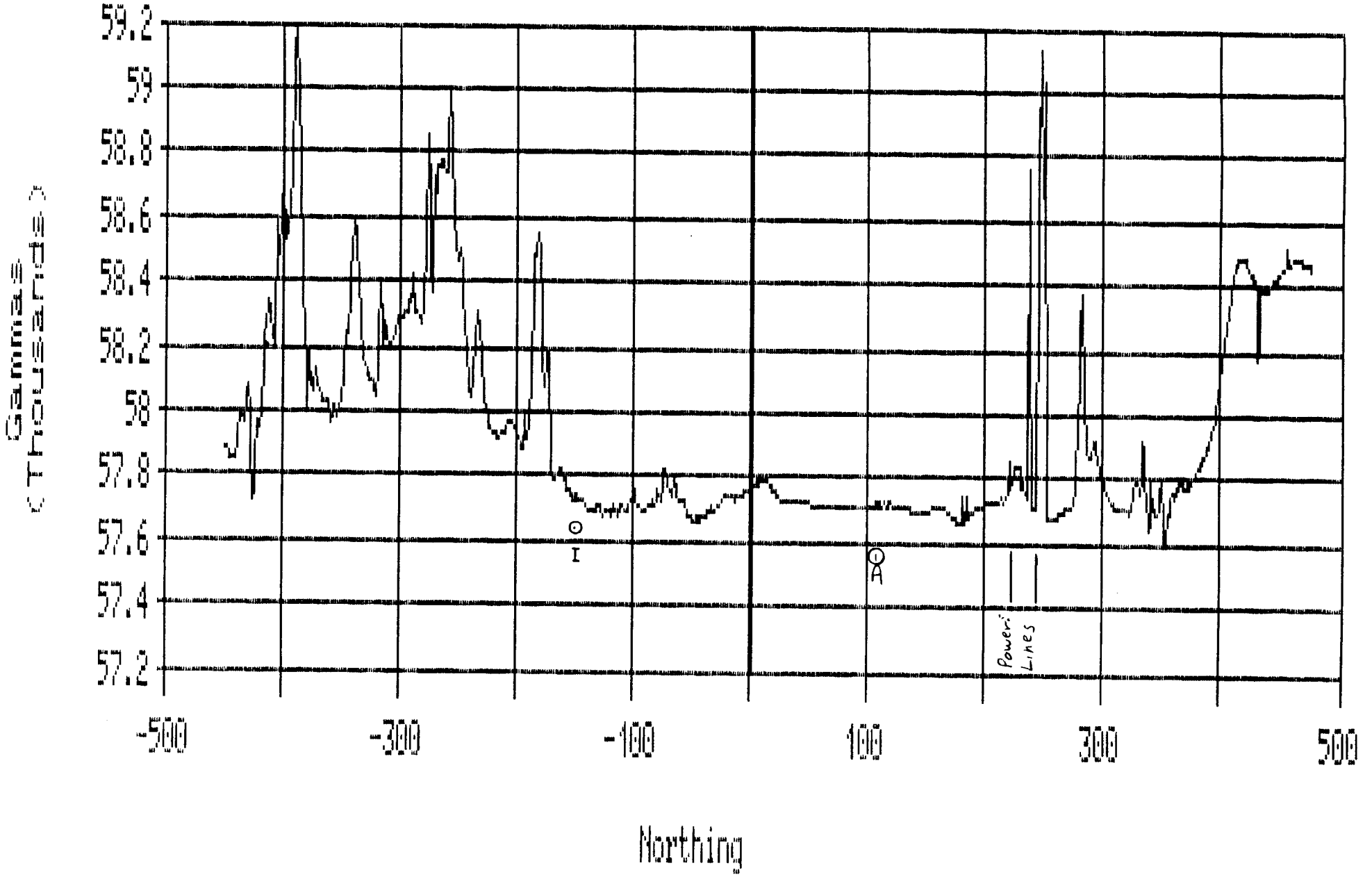
MAGNETIC GRADIENT

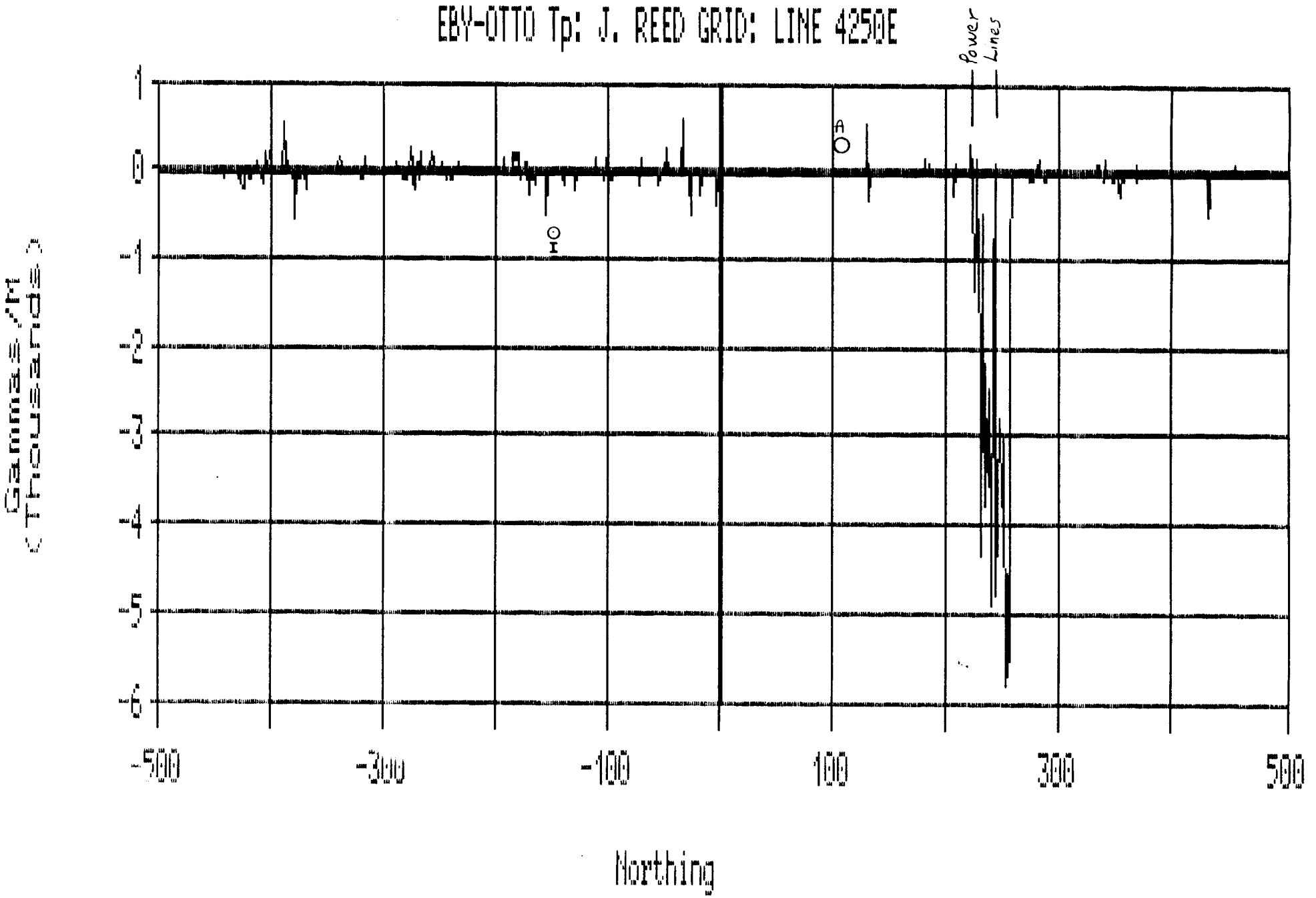
EBY-OTTO Tp: J. REED GRID: LINE 4200E



MAGNETIC TOTAL FIELD

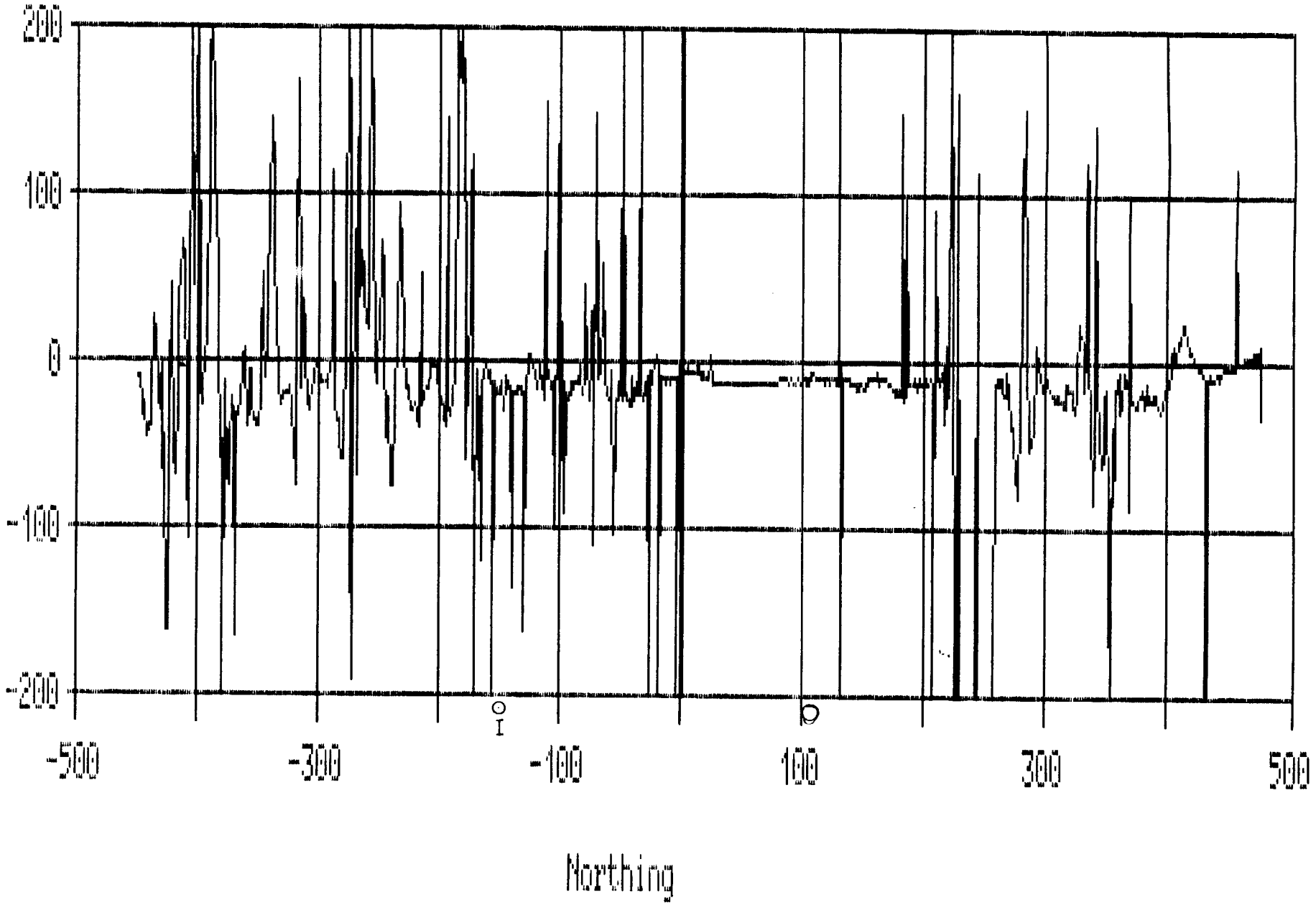
EBY-OTTO Tp: J. REED GRID: LINE 4250E




MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 4250E
Power Lines
A
I
1
0
-1
-2
-3
-4
-5
-6
Gammas/ht
Thousands
-500
-300
-100
100
300
500
Northing

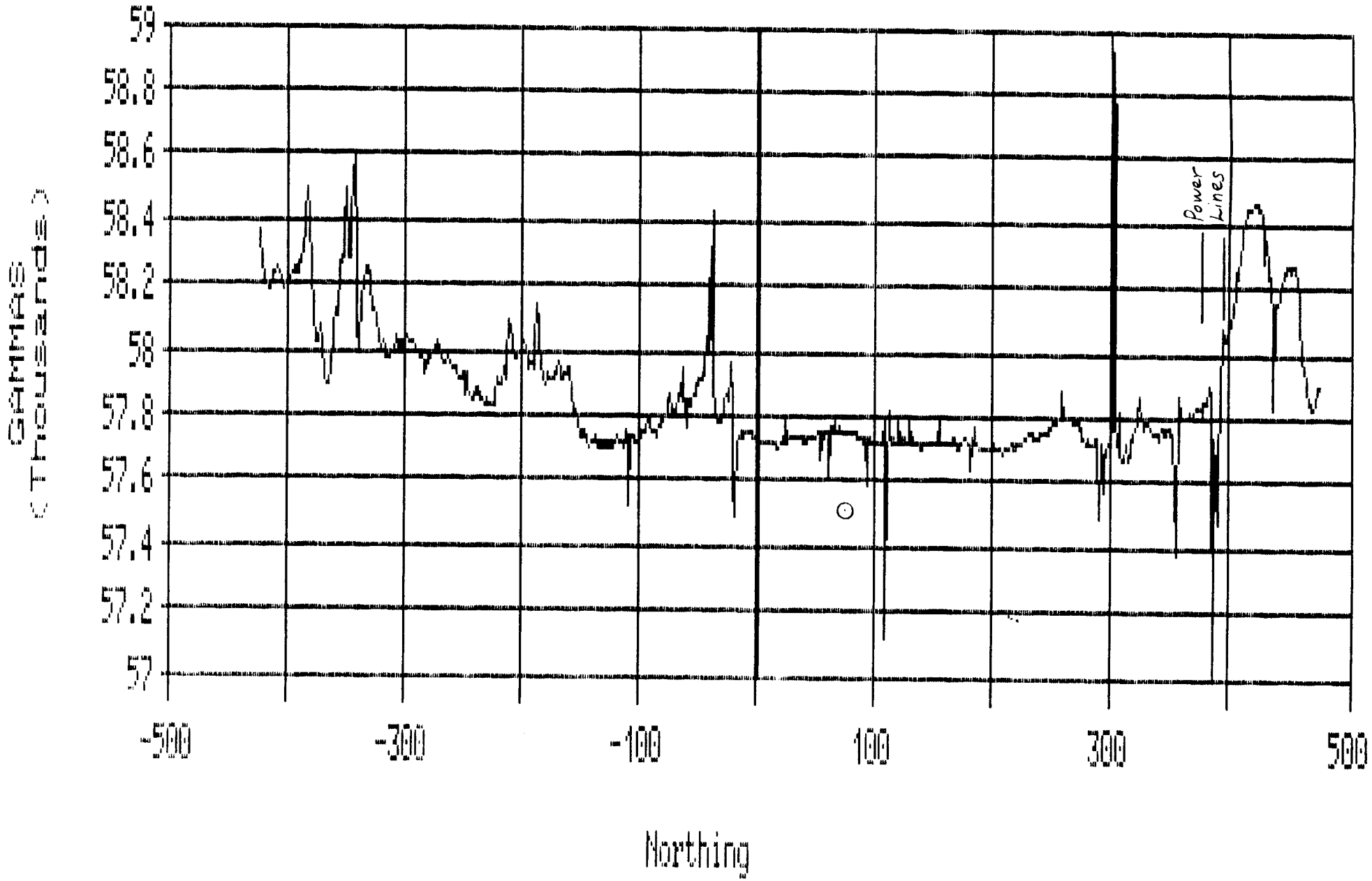
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4250E



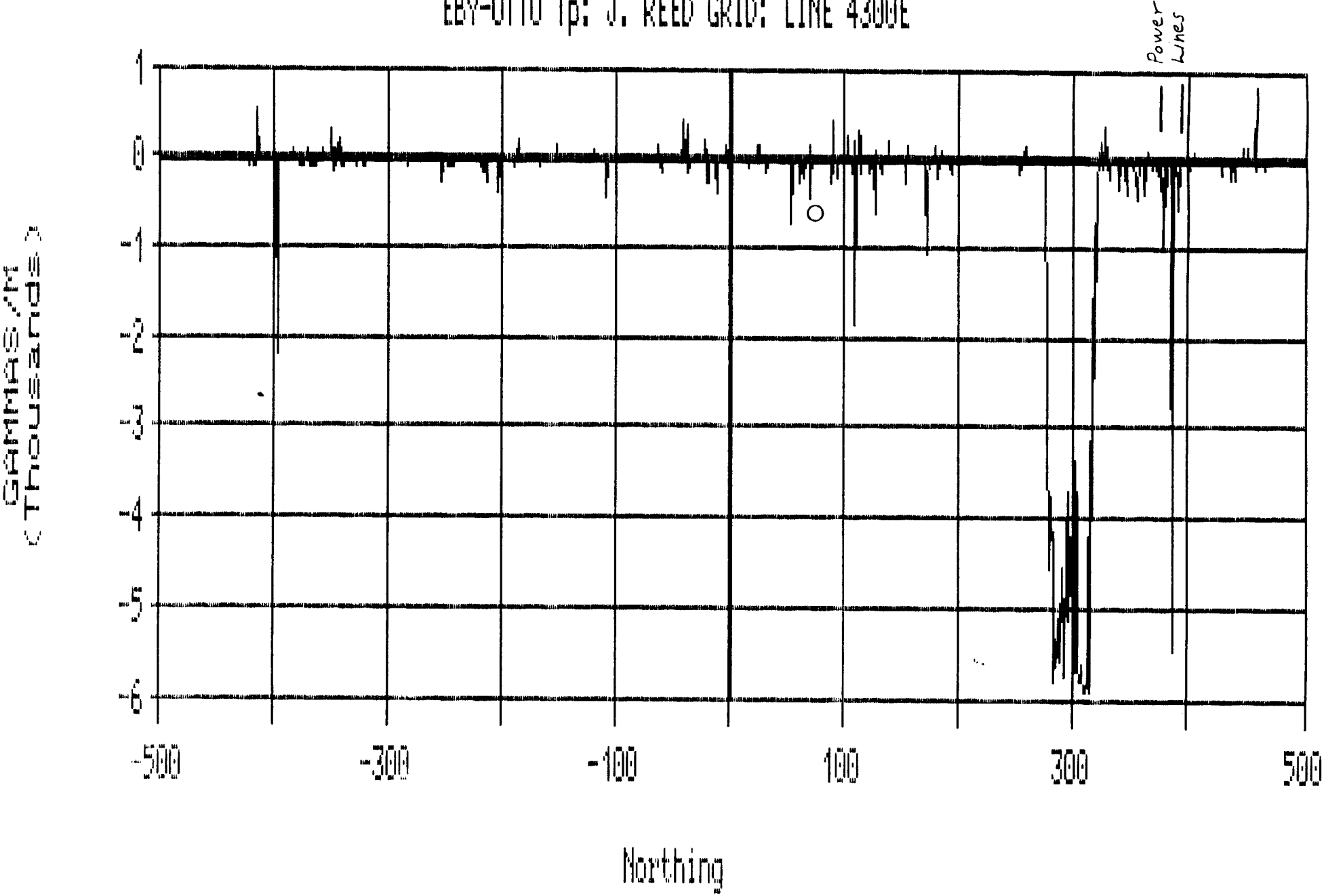
MAGNETIC TOTAL FIELD

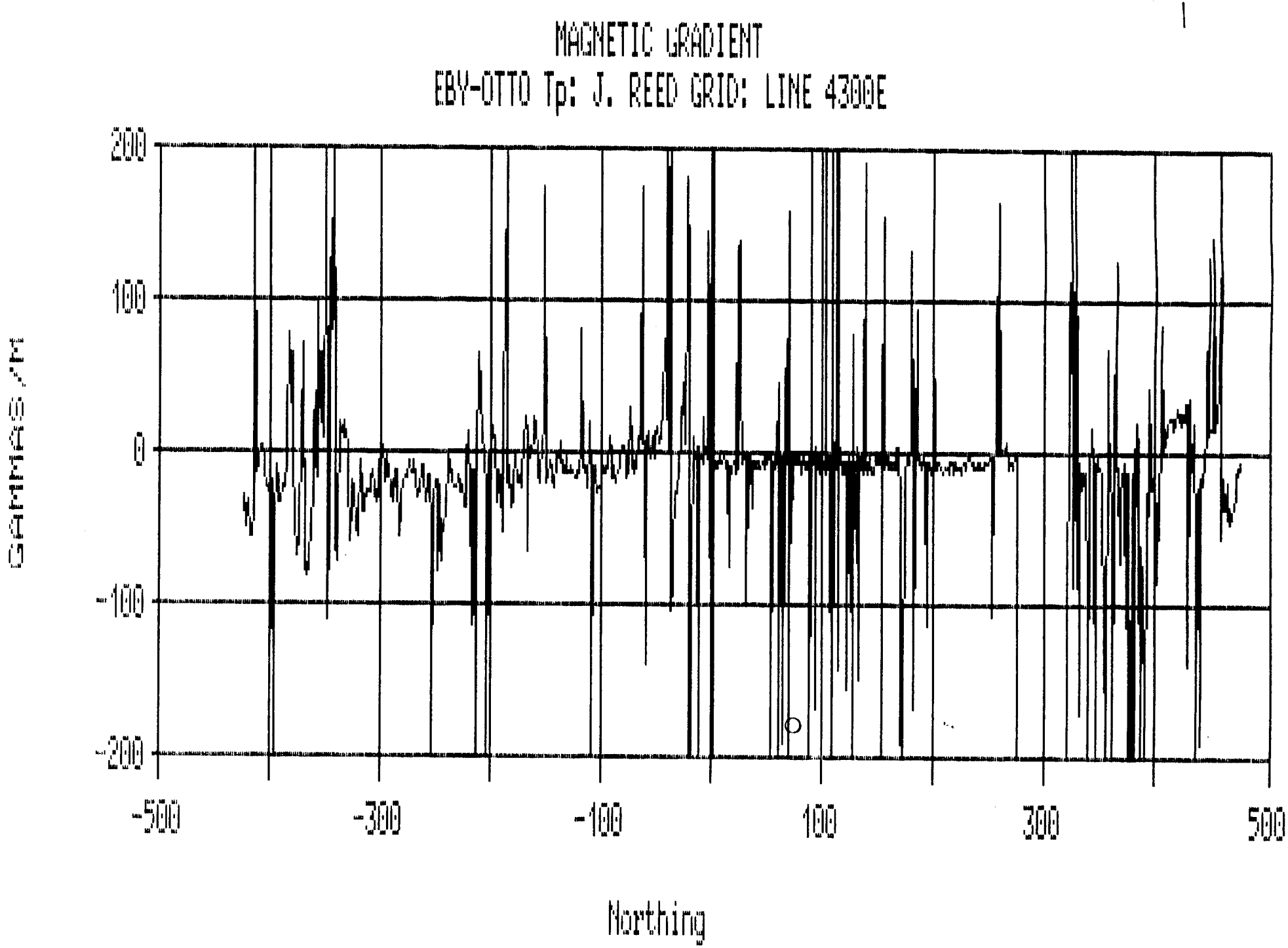
EBY-OTTO Tp: J. REED GRID: LINE 4300E



MAGNETIC GRADIENT

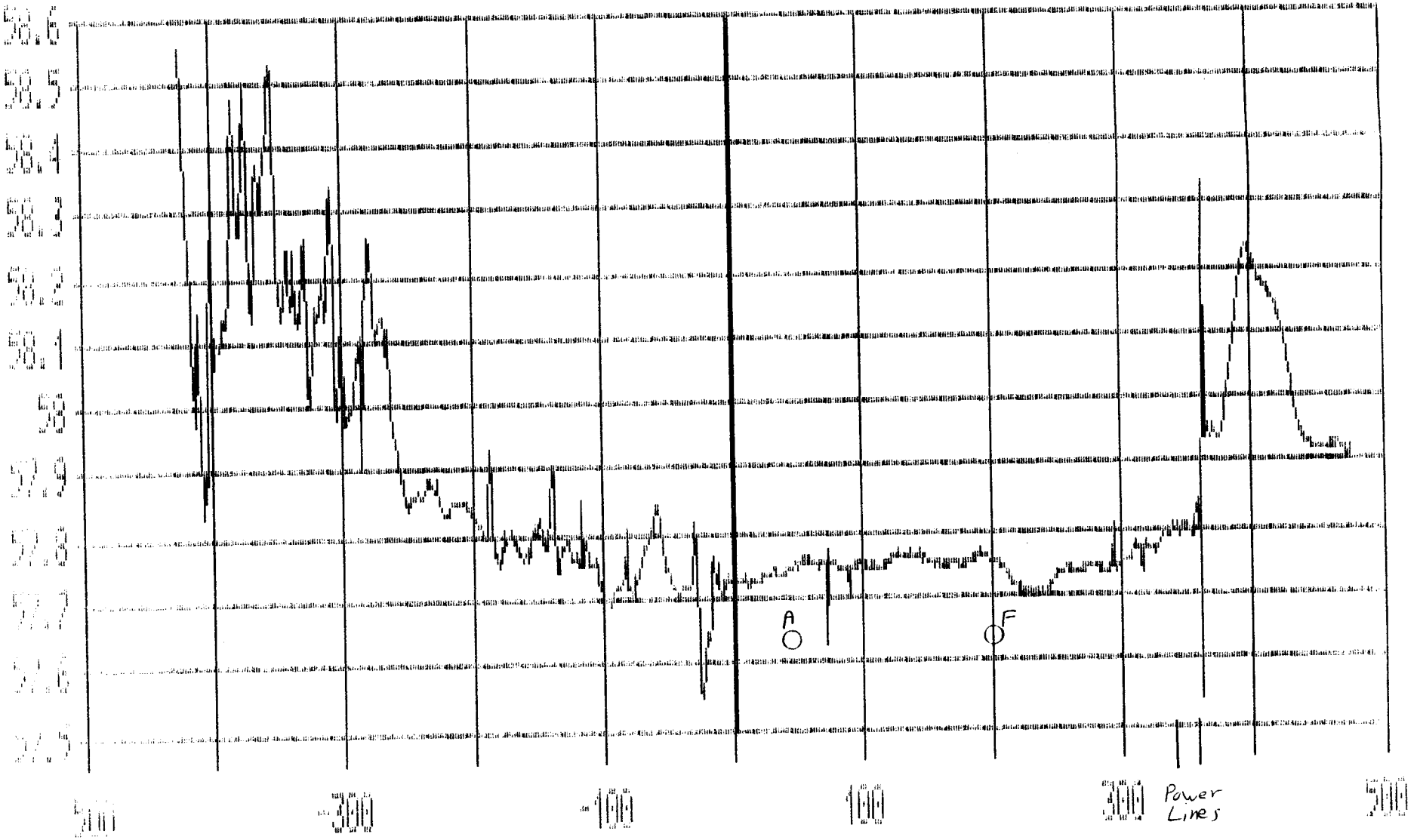
EBY-OTTO Tp: J. REED GRID: LINE 4300E



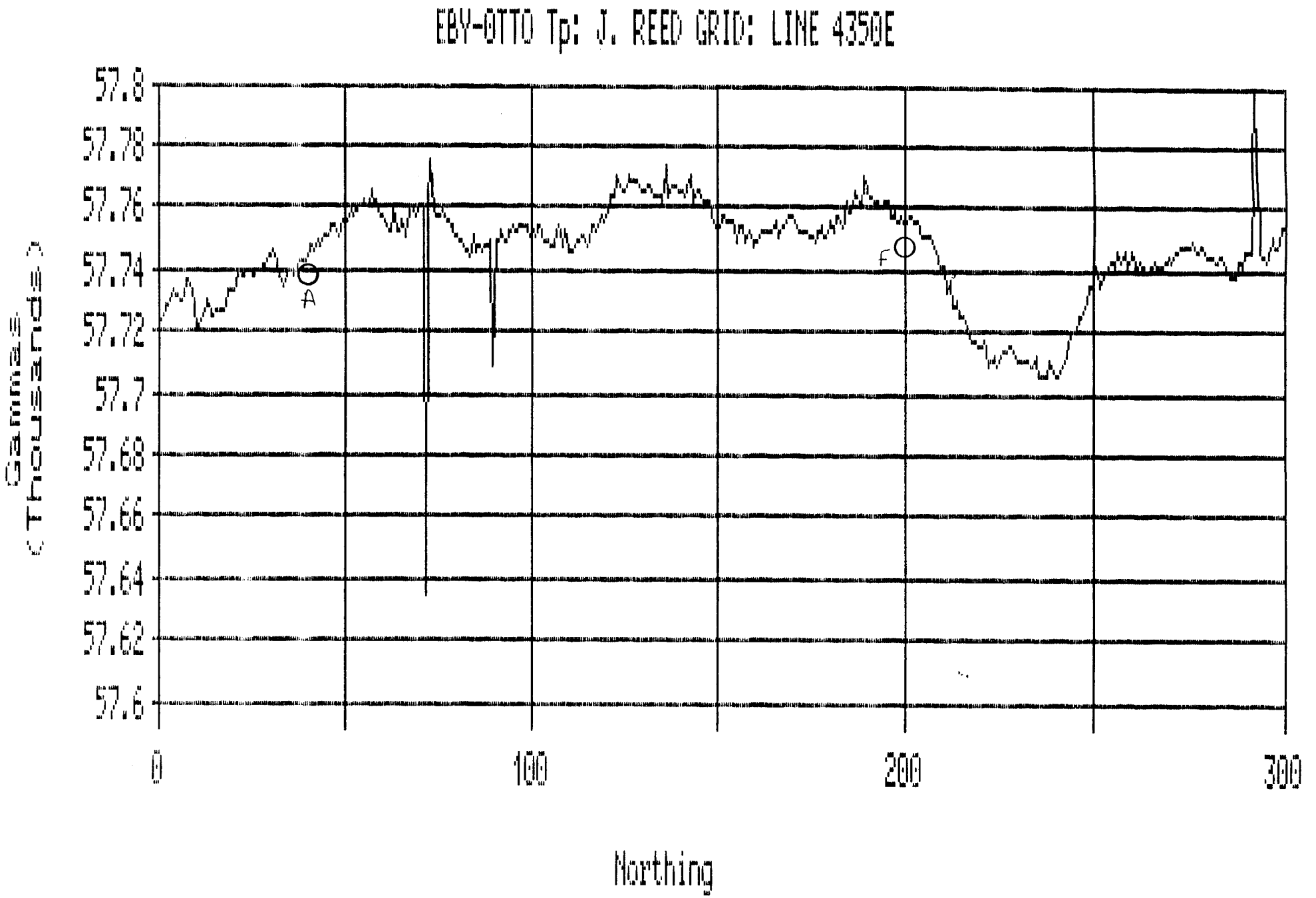

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 4300E
200
100
0
-100
-200
Gamma's /ft
-500
-300
-100
100
300
500
Northing

MAGNETIC TOTAL FIELD

EBY-GITO Tps 1, REED GRID: LINE 4350E

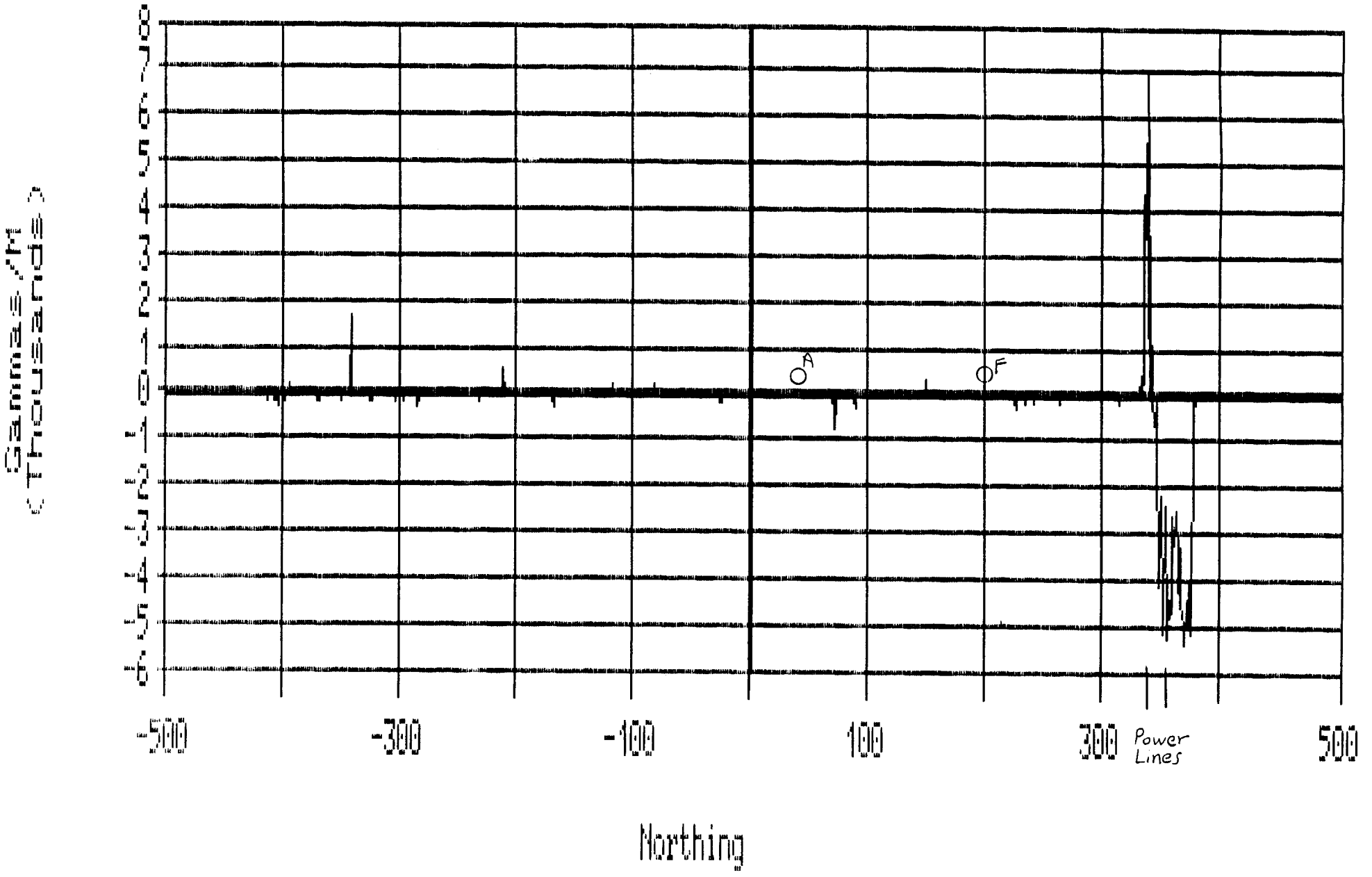


Northing


MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 4350E
57.8
57.78
57.76
57.74
57.72
57.7
57.68
57.66
57.64
57.62
57.6
Gammas
(Thousands)
A
F
0
100
200
300
Northing

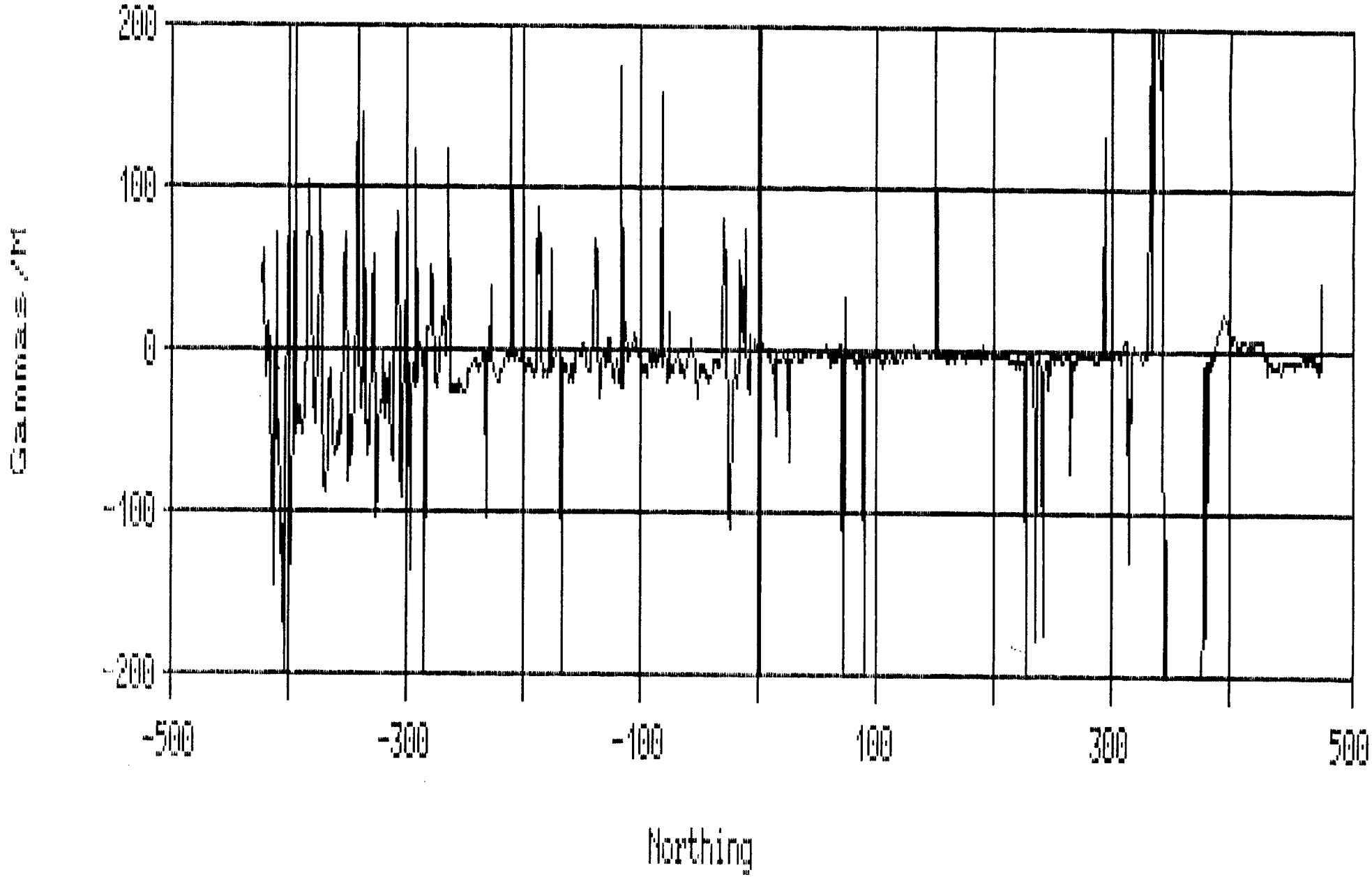
MAGNETIC GRADIENT

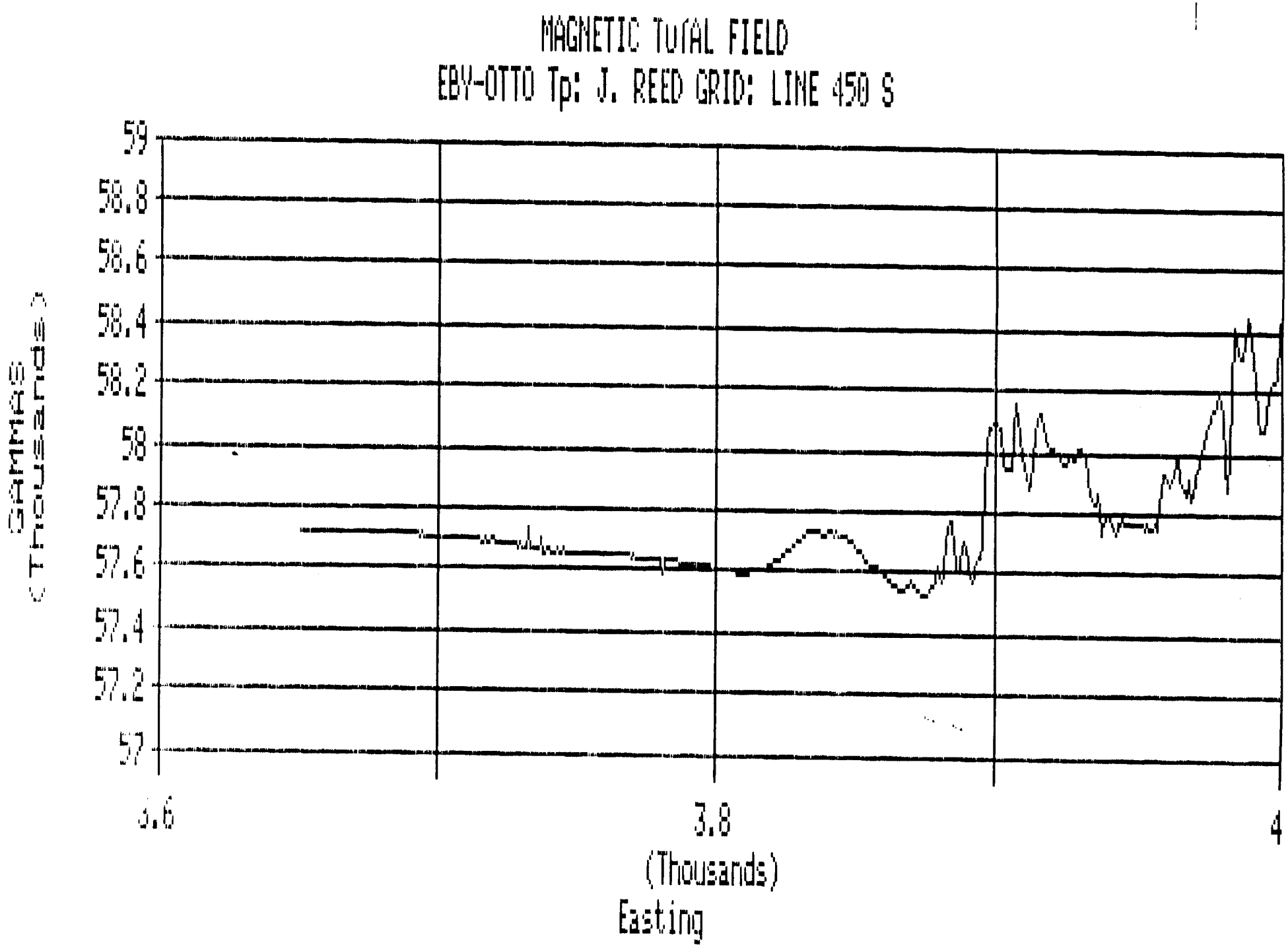
EBY-OTTO Tp: J. REED GRID: LINE 4350E

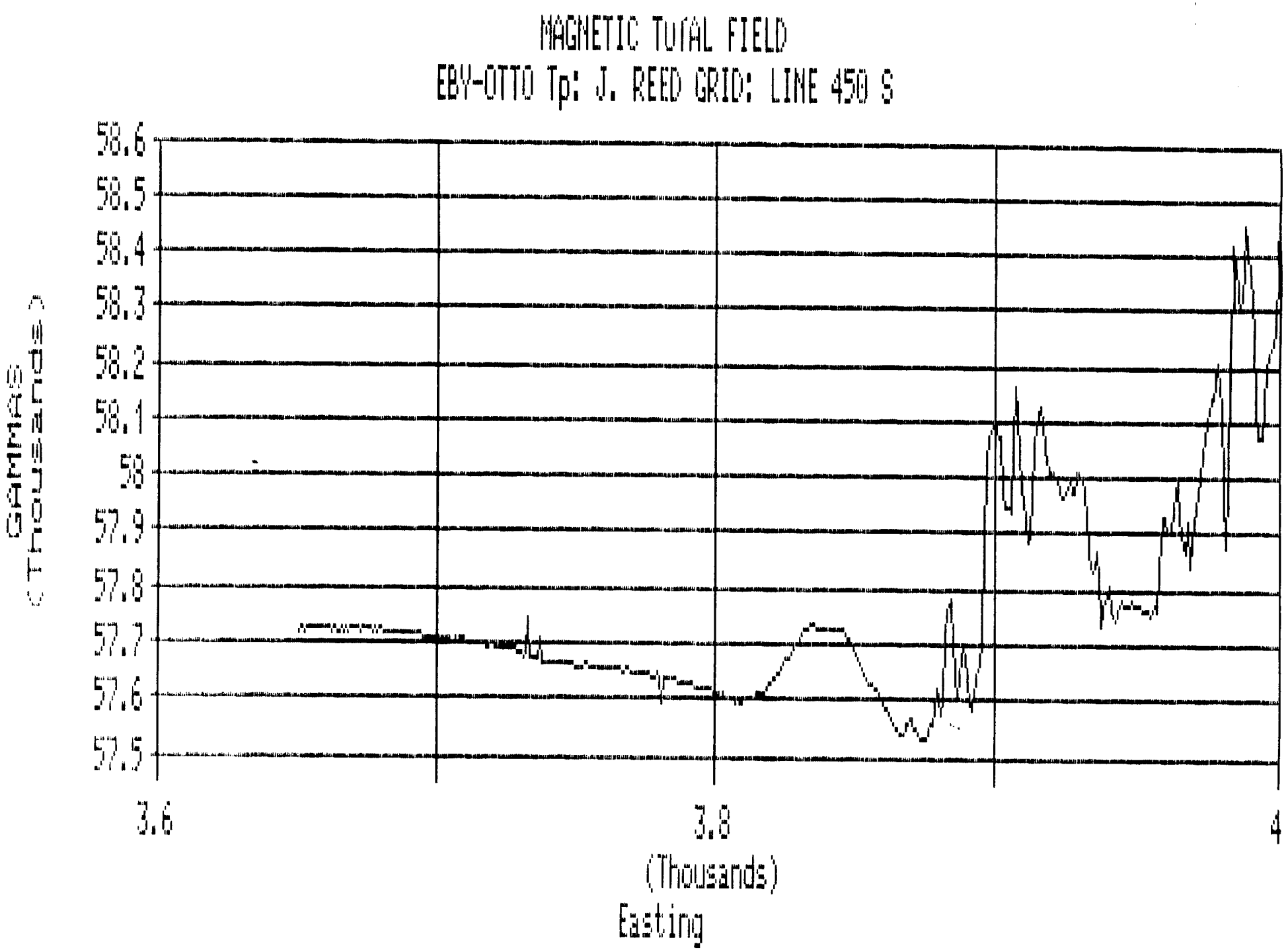


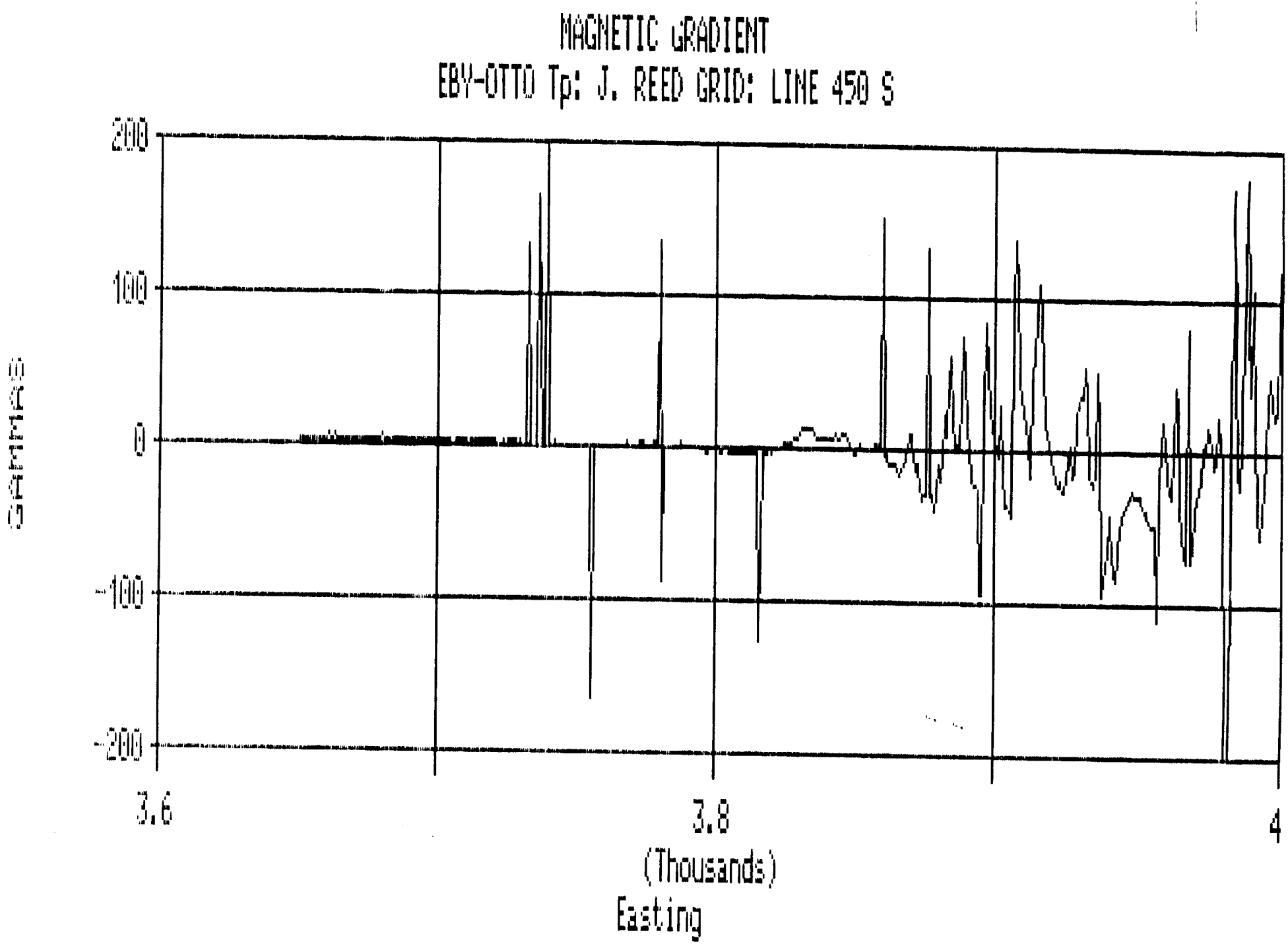
MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 4350E



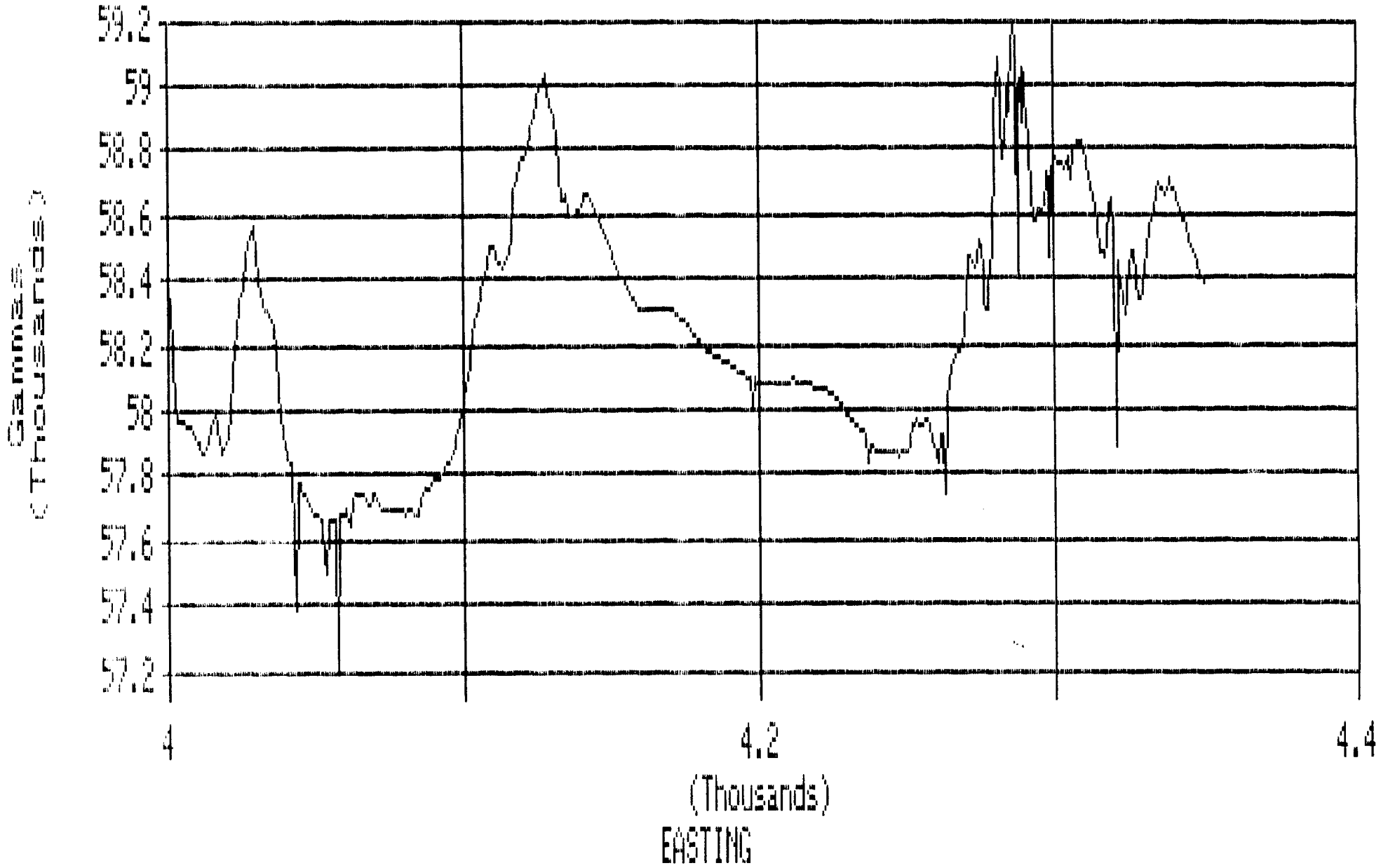

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 450 S
GAMMAS
(Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
3.6
3.8
4
(Thousands)
Easting

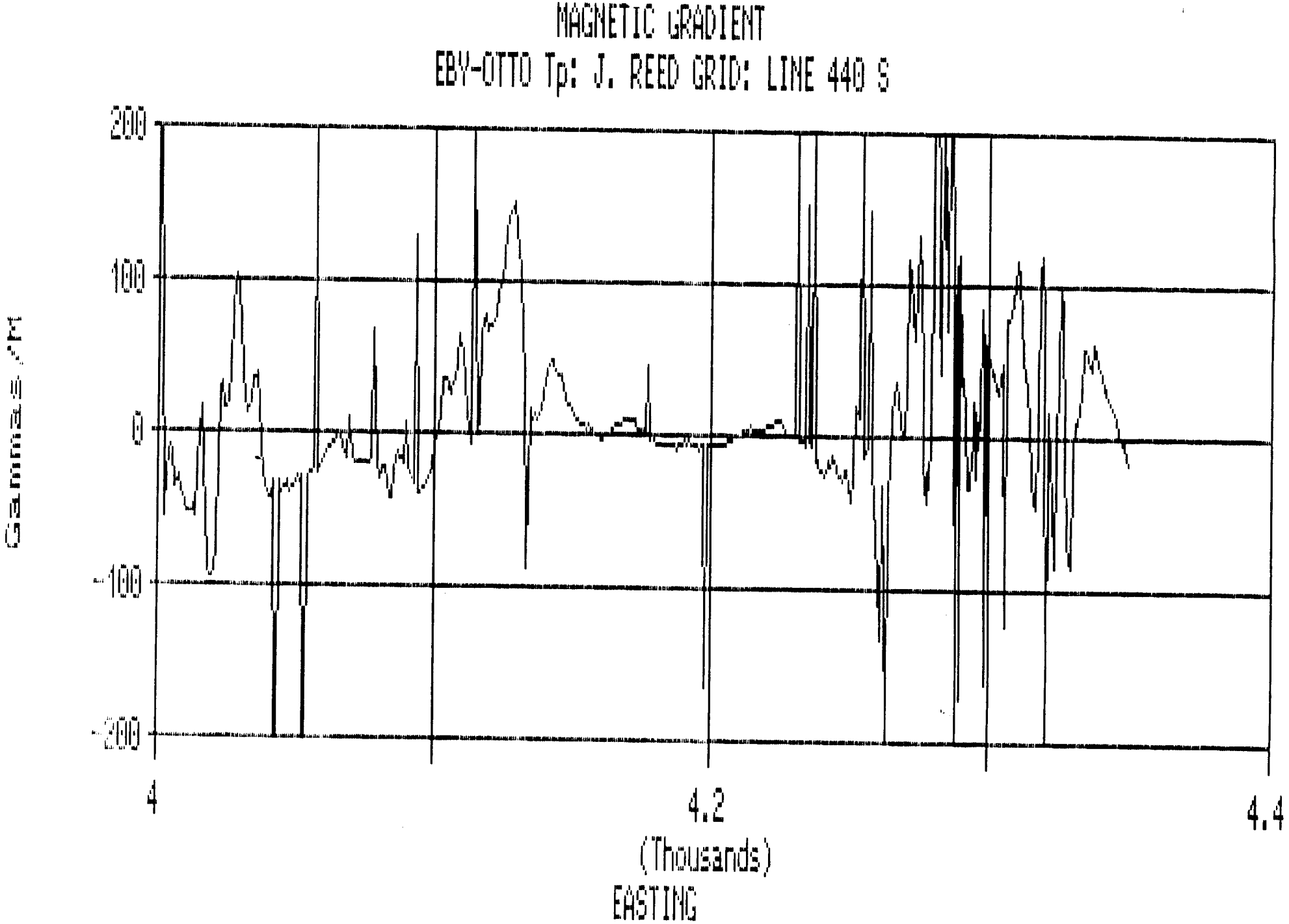

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 450 S
GAMMAS
(Thousands)
58.6
58.5
58.4
58.3
58.2
58.1
58
57.9
57.8
57.7
57.6
57.5
3.6
3.8
4
(Thousands)
Easting

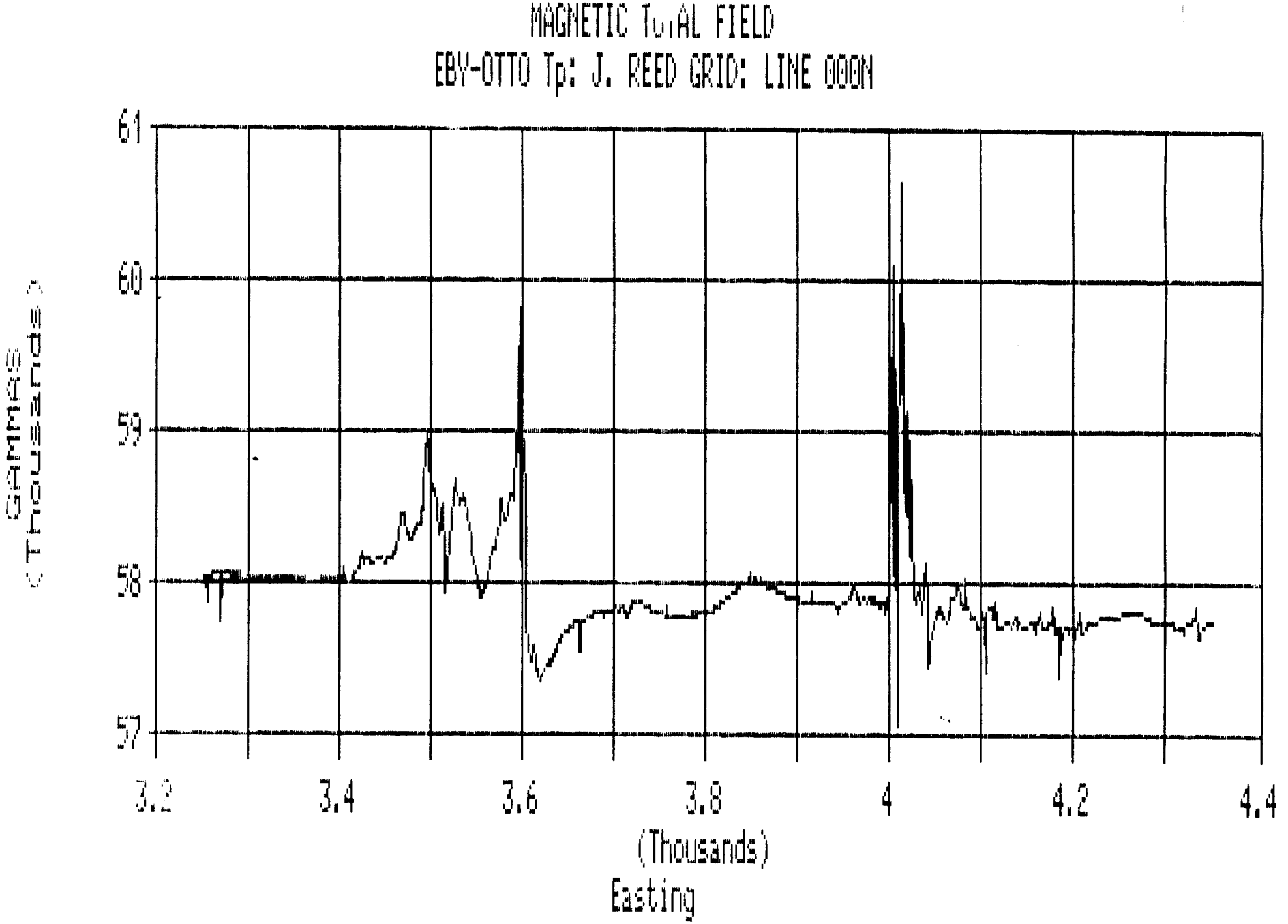

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 450 S
200
100
0
-100
-200
Gamma
3.6
3.8
4
(Thousands)
Easting

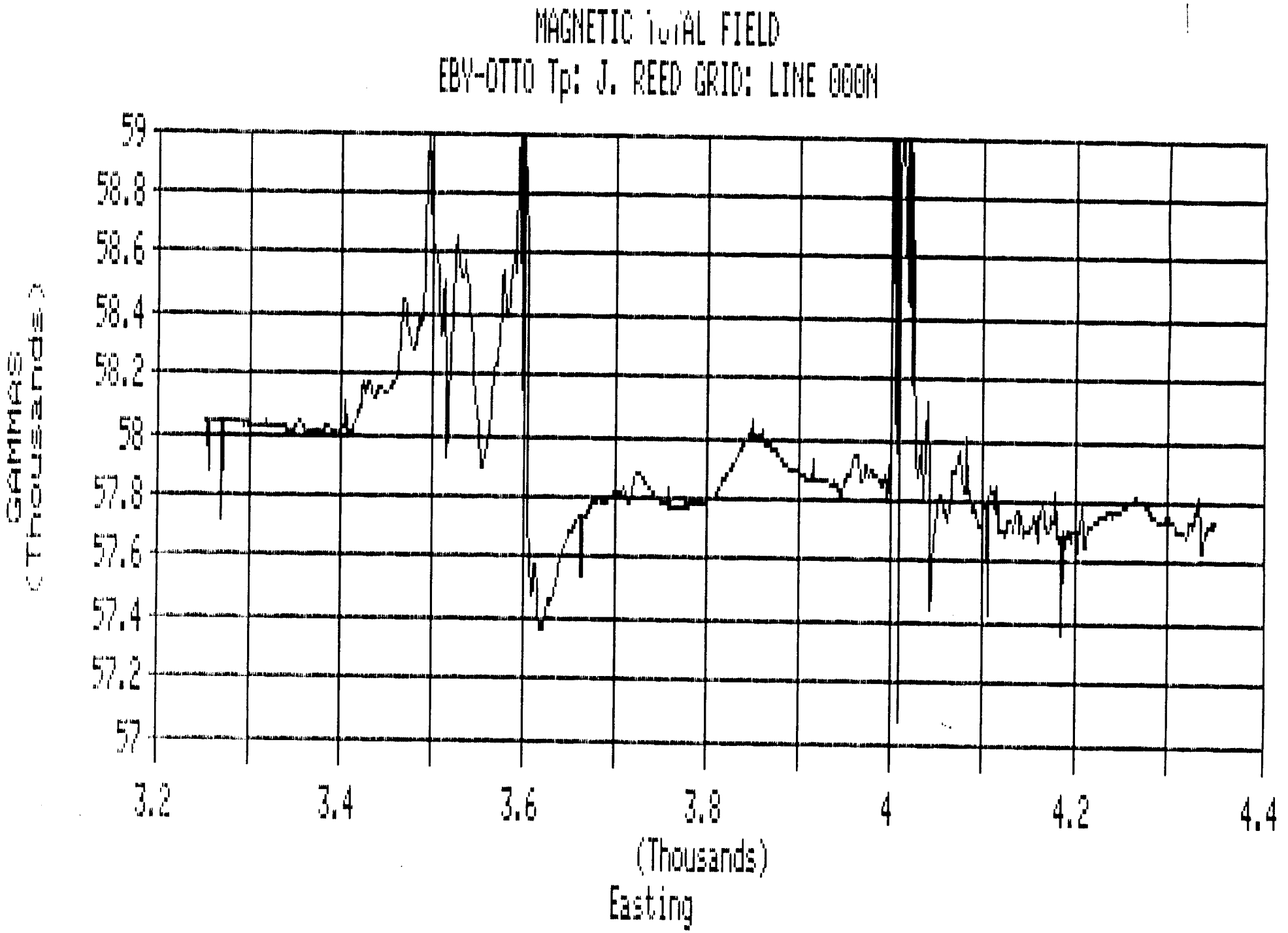
MAGNETIC TOTAL FIELD

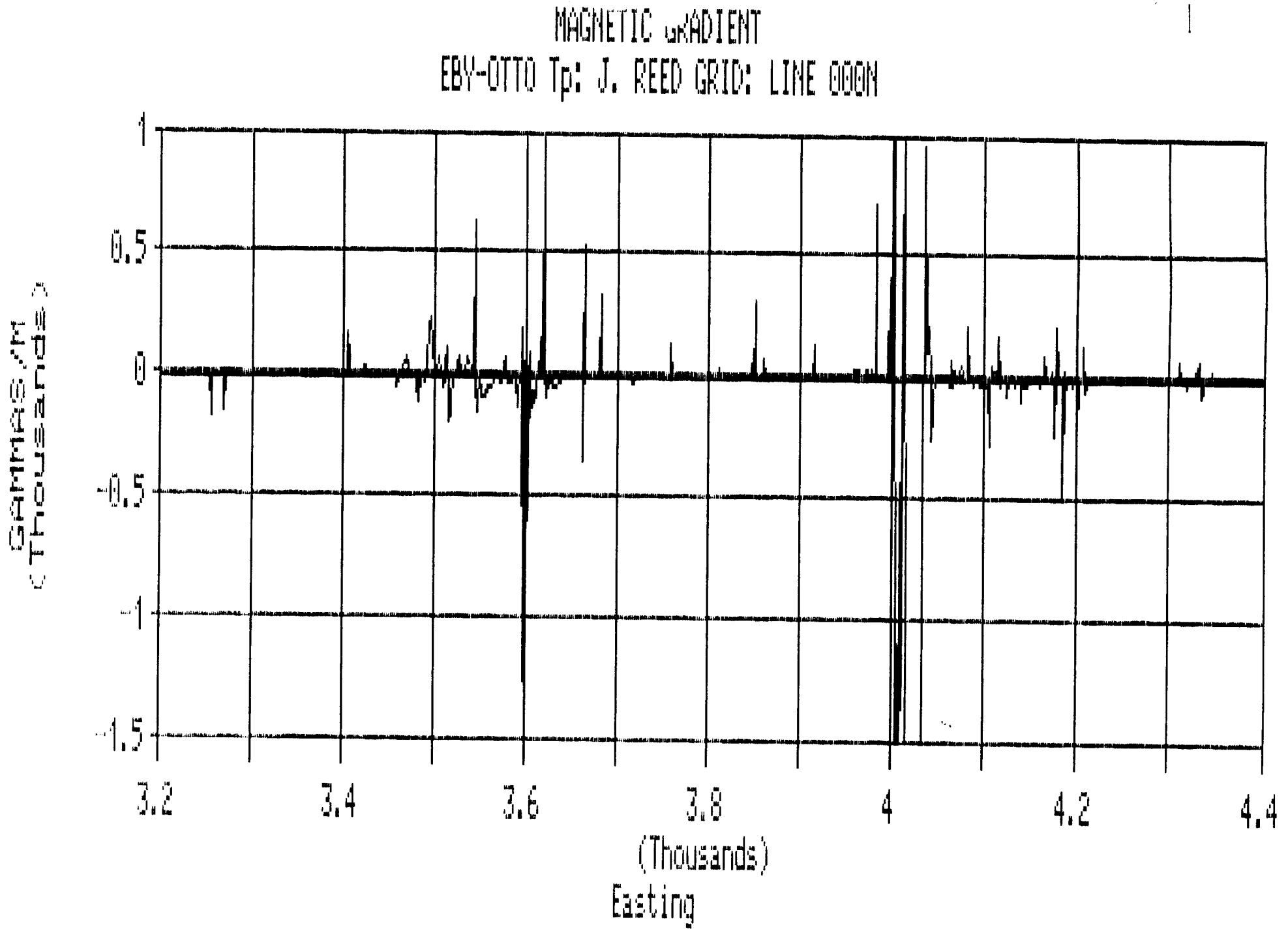
EBY-OTTO Tp: J. REED GRID: LINE 440 S

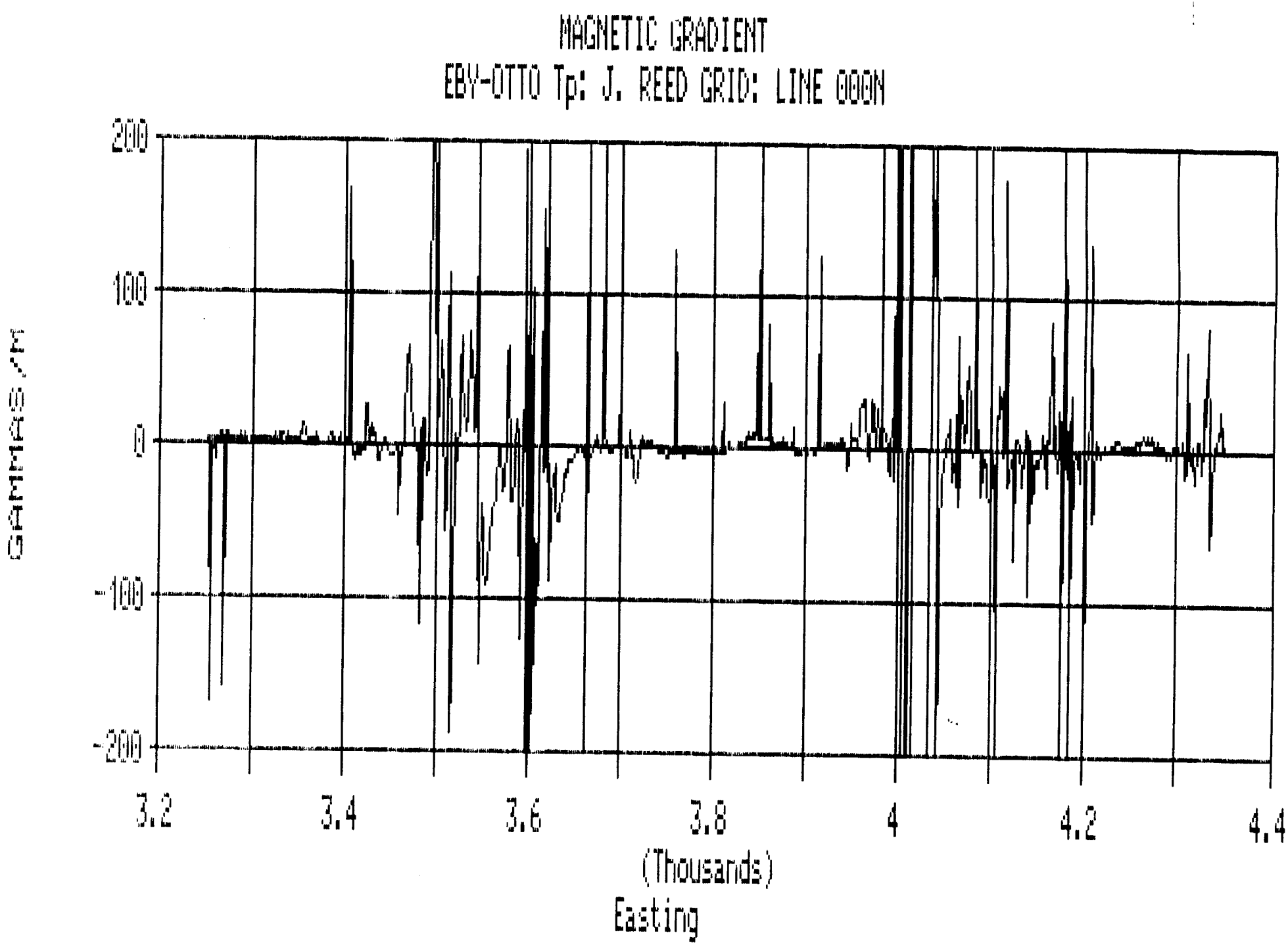


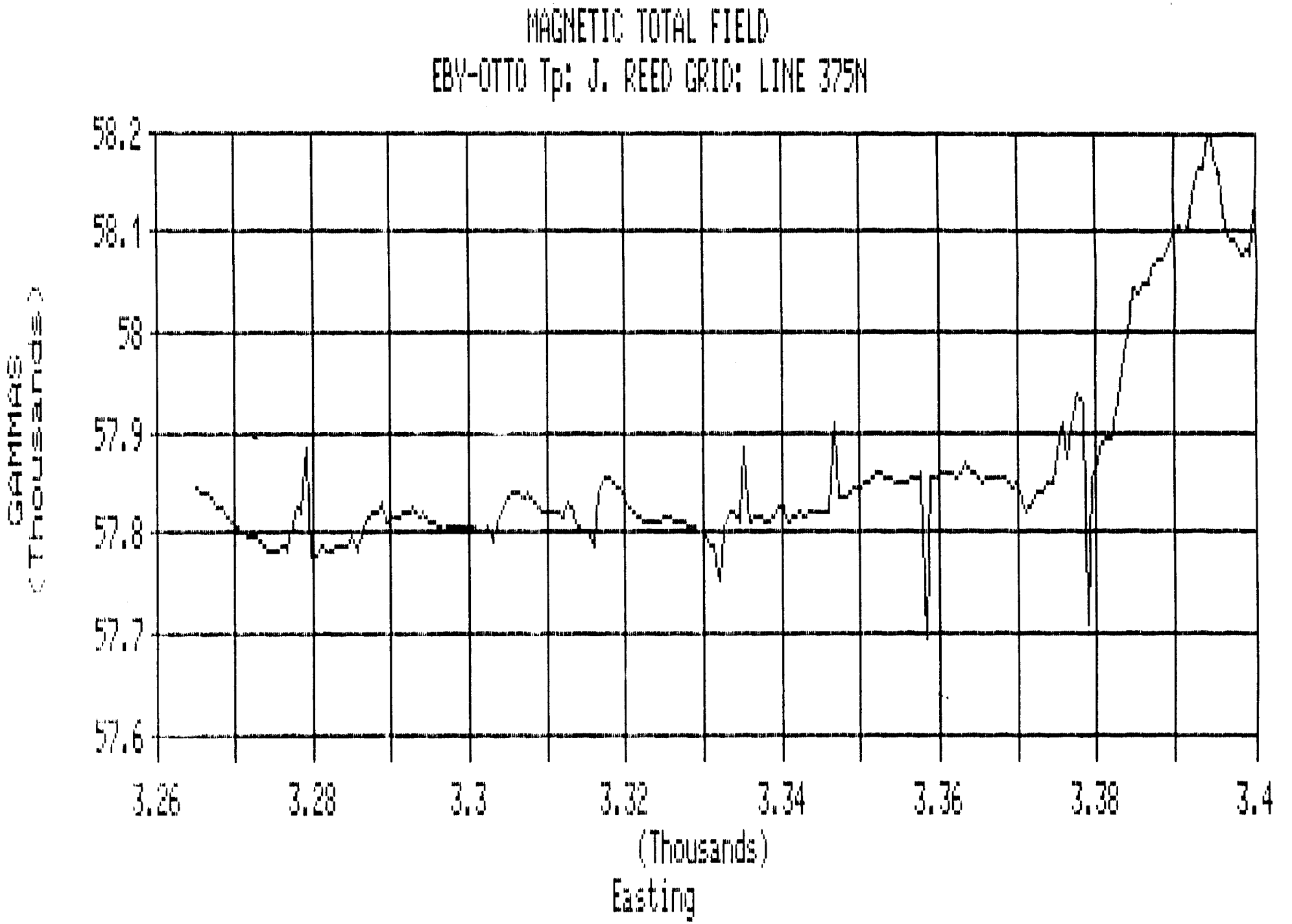

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 440 S
200
100
0
-100
-200
Gammas
4
4.2
4.4
(Thousands)
EASTING

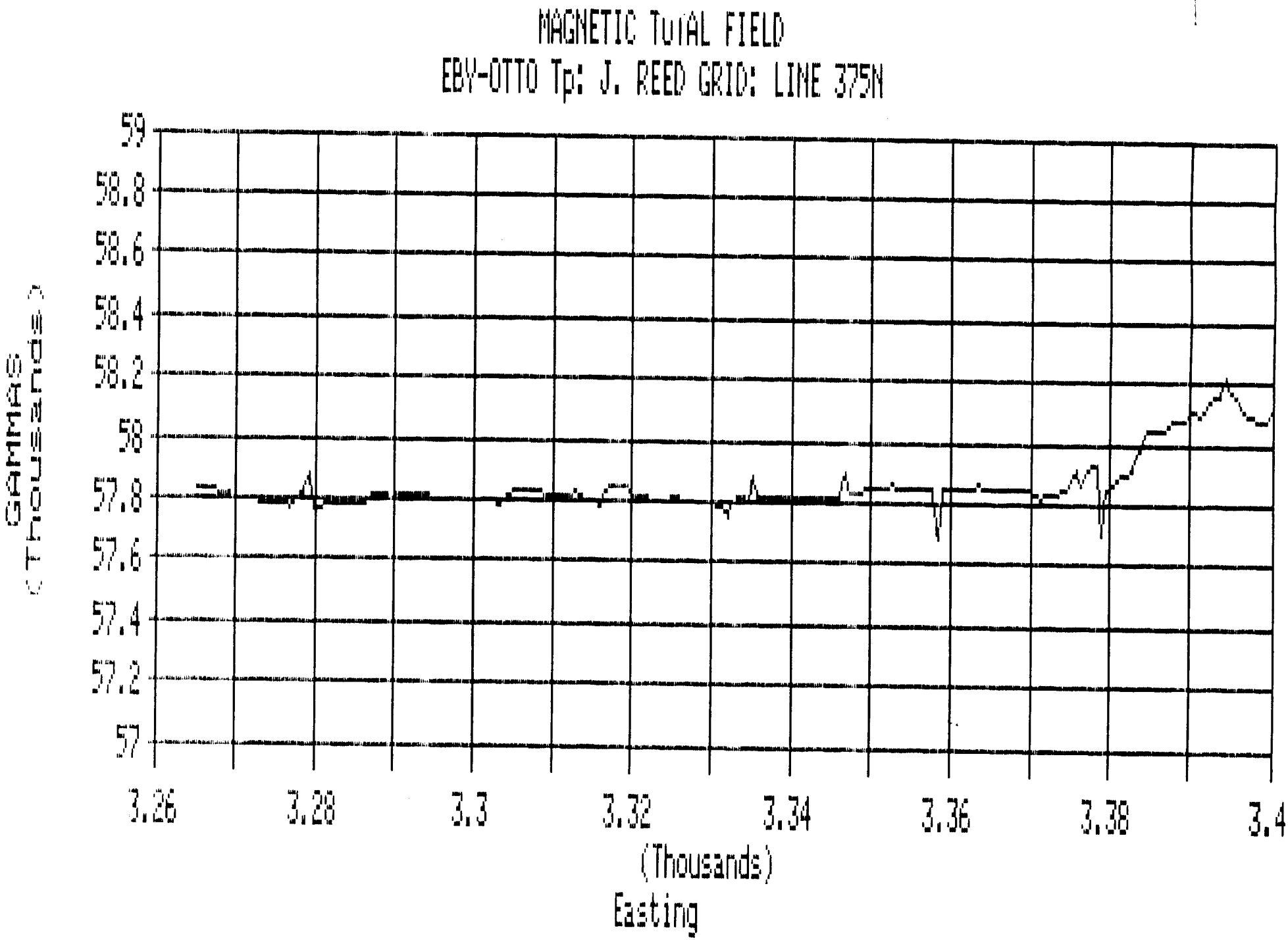

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 000N
61
60
59
58
57
Gammas
(Thousands)
3.2
3.4
3.6
3.8
4
4.2
4.4
(Thousands)
Easting

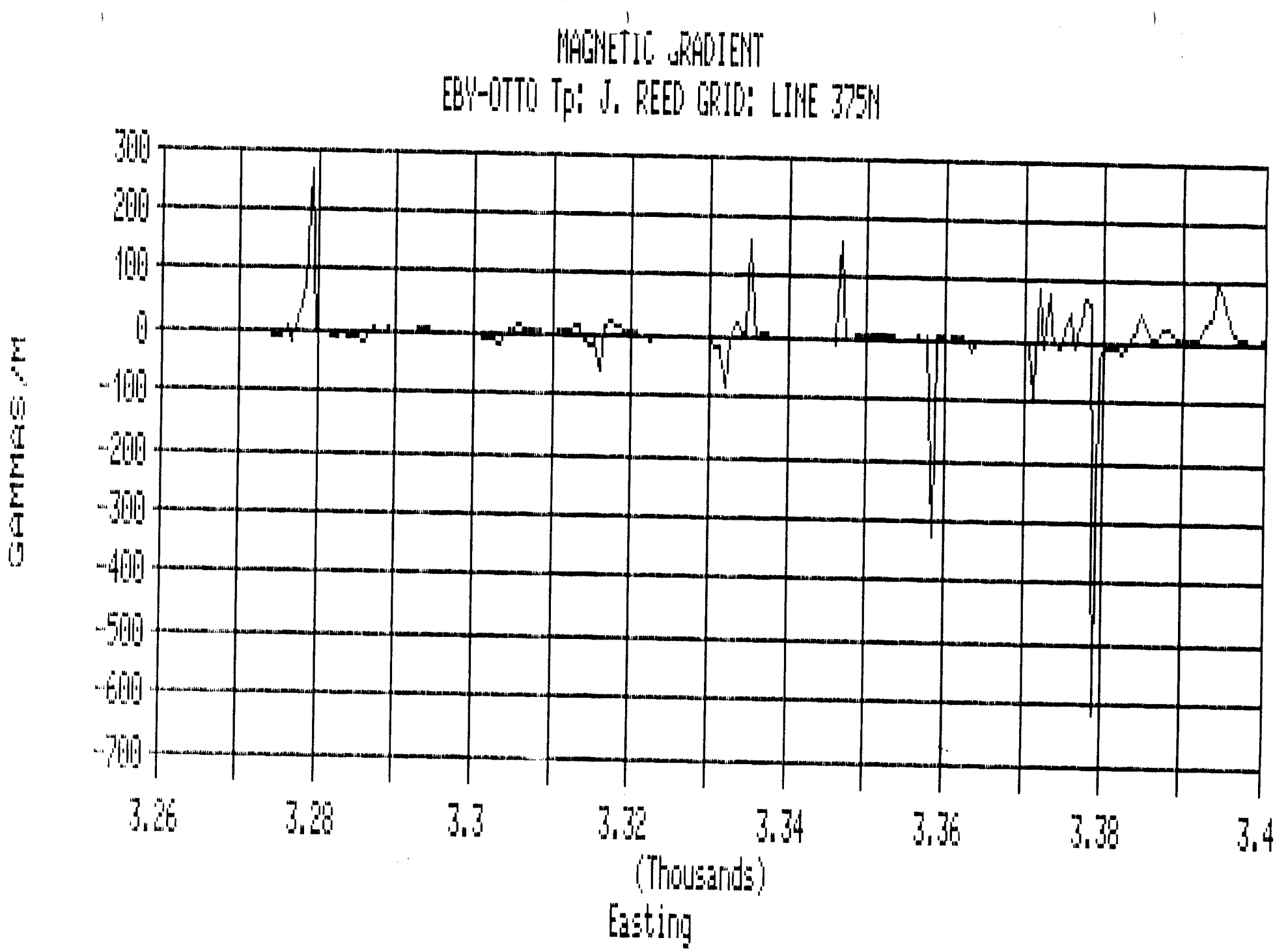

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 000N
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
GAMMAS
(Thousands)
3.2
3.4
3.6
3.8
4
4.2
4.4
(Thousands)
Easting

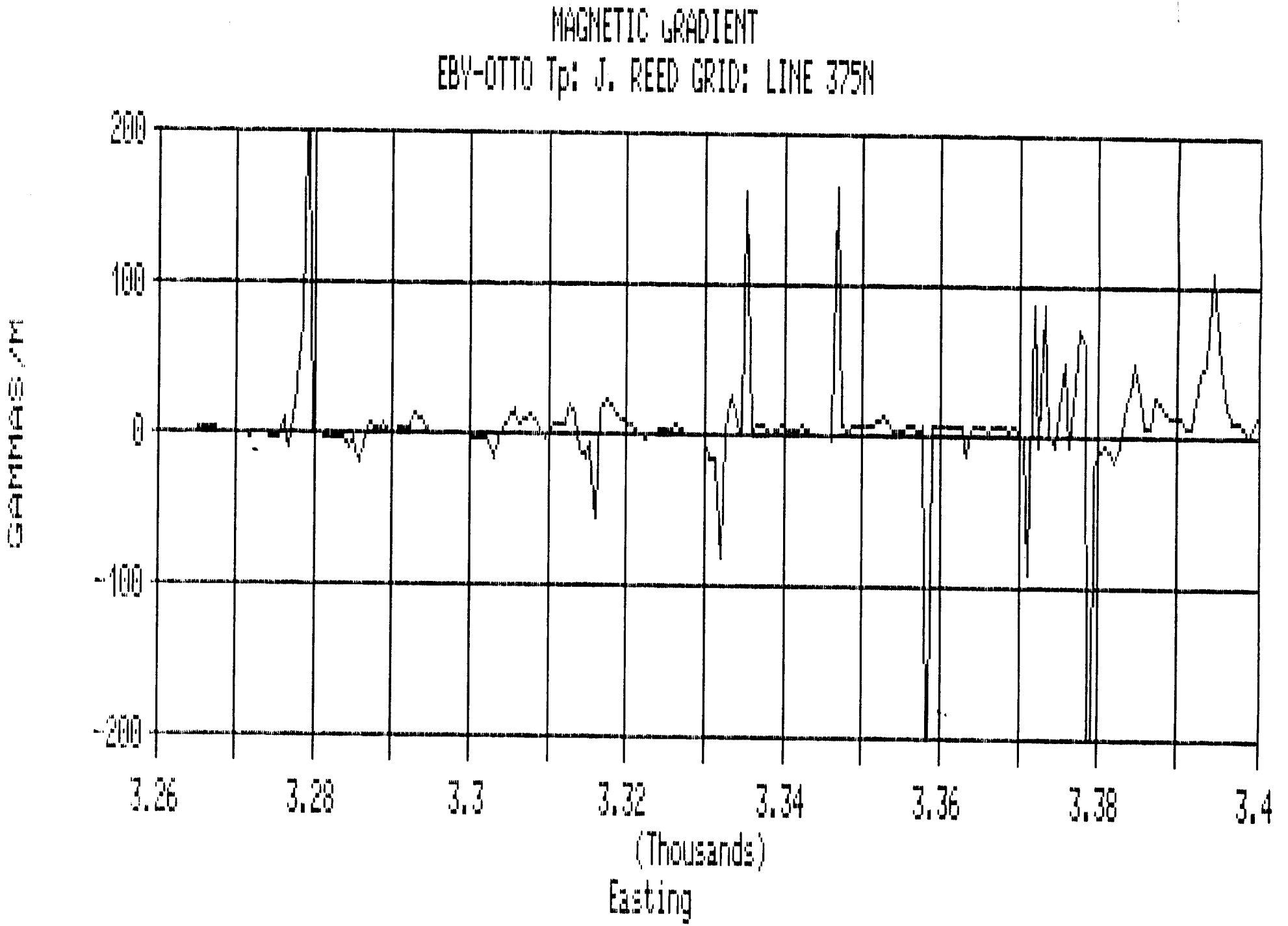

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 000N
GAMMAS/M
(Thousands)
1
0.5
0
-0.5
-1
-1.5
3.2
3.4
3.6
3.8
4
4.2
4.4
(Thousands)
Easting

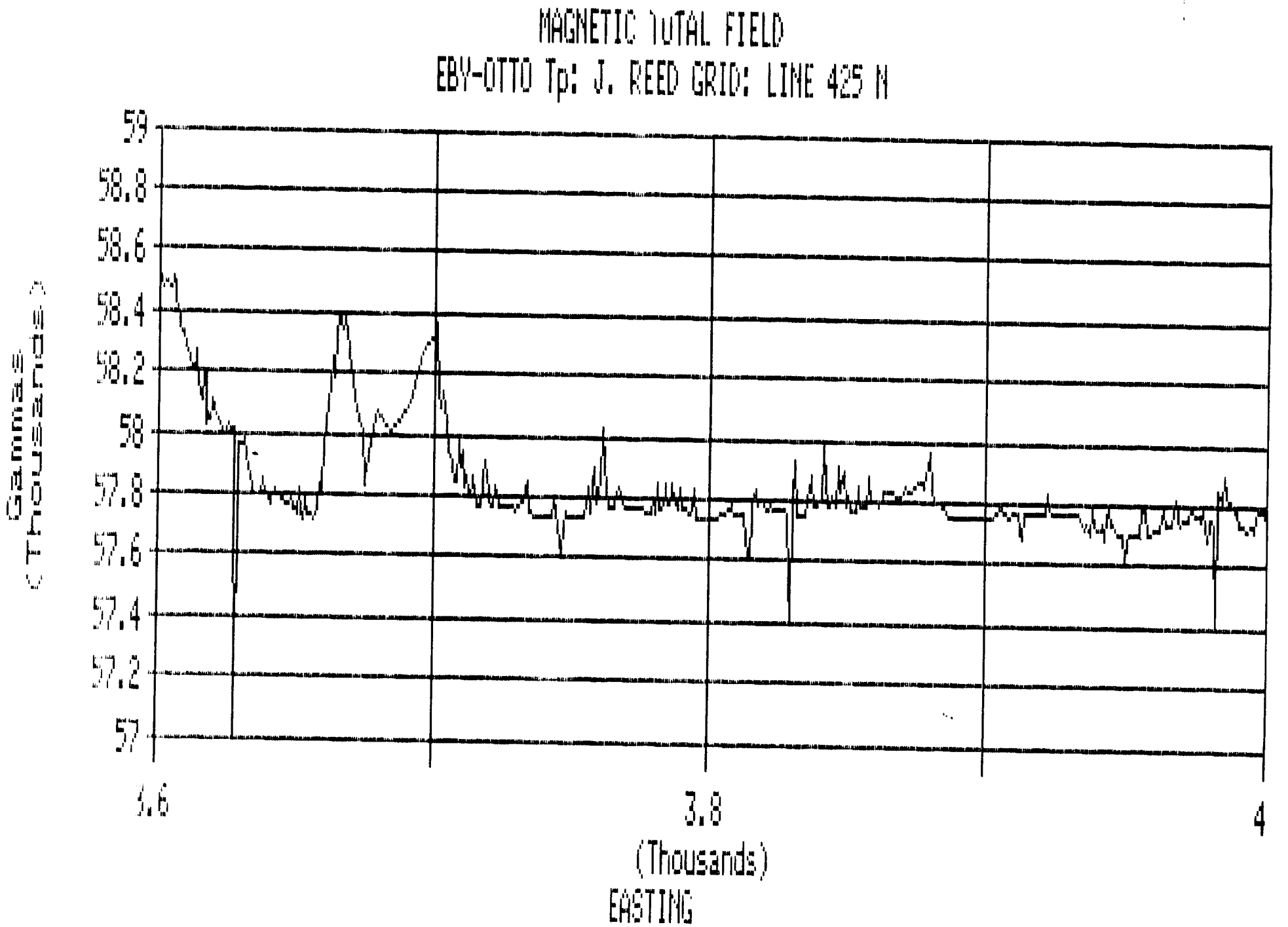

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 000N
200
100
0
-100
-200
GAMMAS/M
3.2
3.4
3.6
3.8
4
4.2
4.4
(Thousands)
Easting

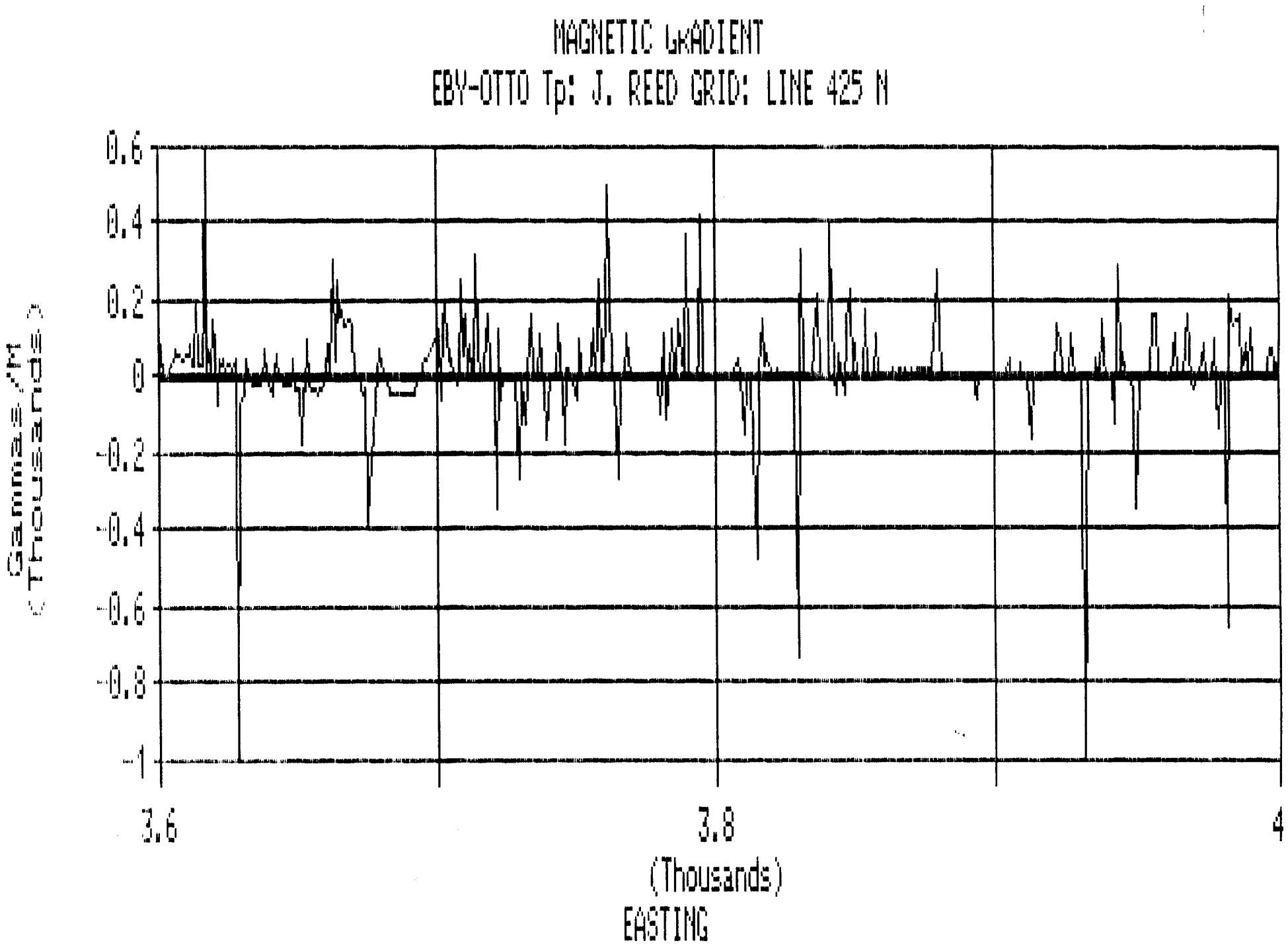

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 375N
58.2
58.1
58
57.9
57.8
57.7
57.6
GAMMAS
(Thousands)
3.26
3.28
3.3
3.32
3.34
3.36
3.38
3.4
(Thousands)
Easting


MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 375N
GAMMAS (Thousands)
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
3.26
3.28
3.3
3.32
3.34
3.36
3.38
3.4
(Thousands)
Easting


MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 375N
GAMMAS/M
300
200
100
0
-100
-200
-300
-400
-500
-600
-700
3.26
3.28
3.3
3.32
3.34
3.36
3.38
3.4
(Thousands)
Easting

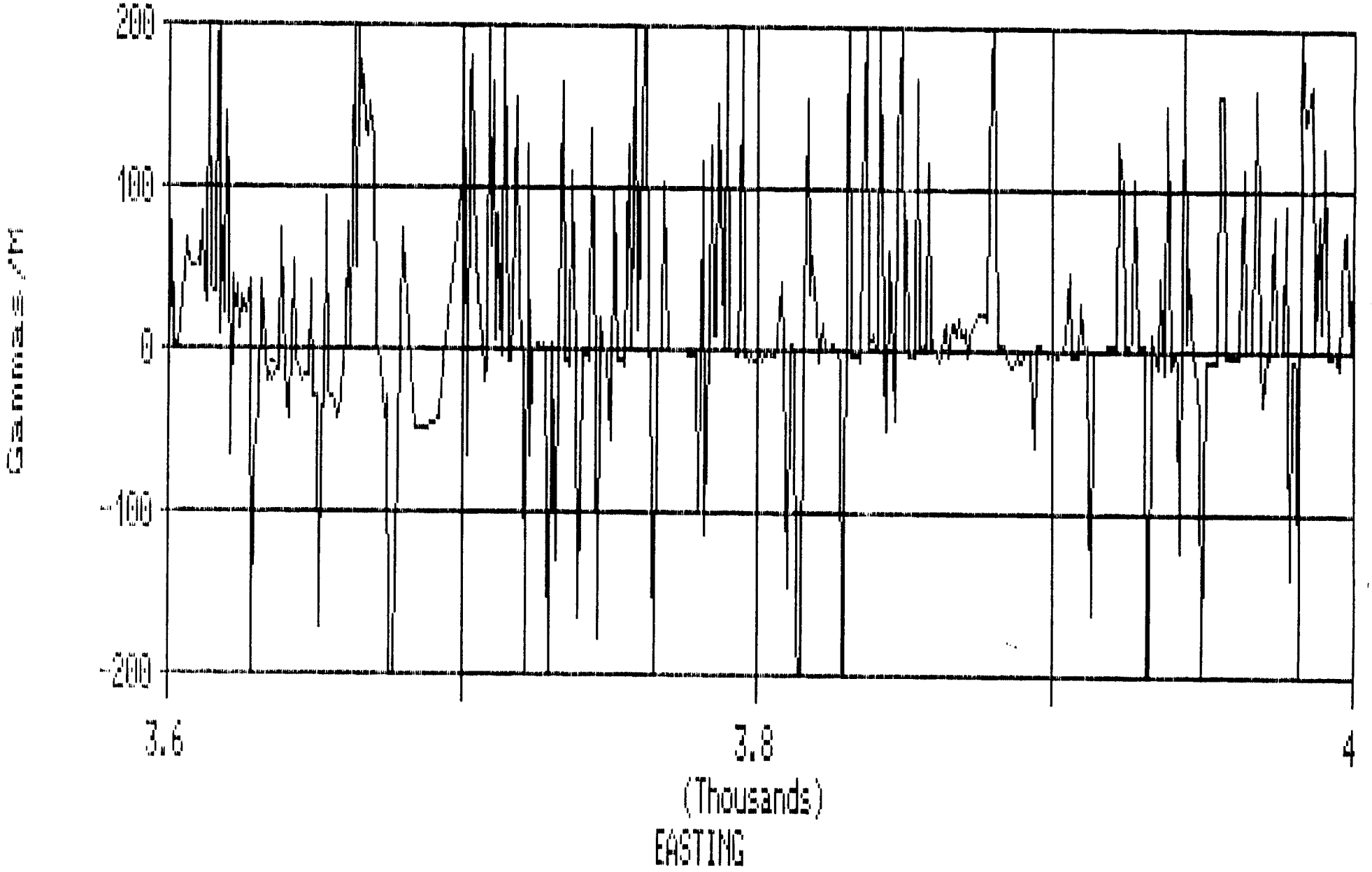

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 375N
GAMMAS/M
200
100
0
-100
-200
3.26
3.28
3.3
3.32
3.34
3.36
3.38
3.4
(Thousands)
Easting

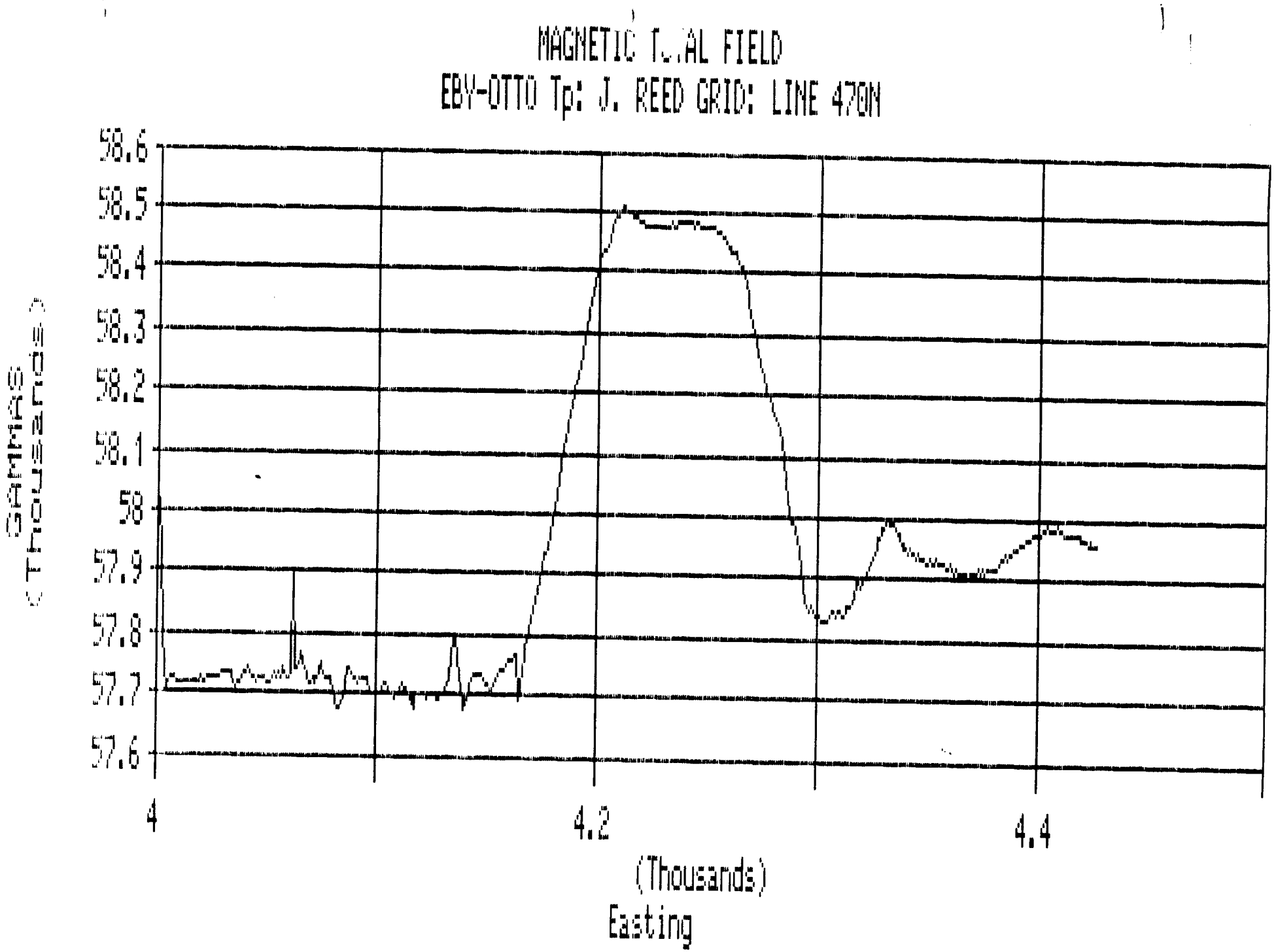

MAGNETIC TOTAL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 425 N
59
58.8
58.6
58.4
58.2
58
57.8
57.6
57.4
57.2
57
Gamma (Thousands)
3.6
3.8
4
(Thousands)
EASTING

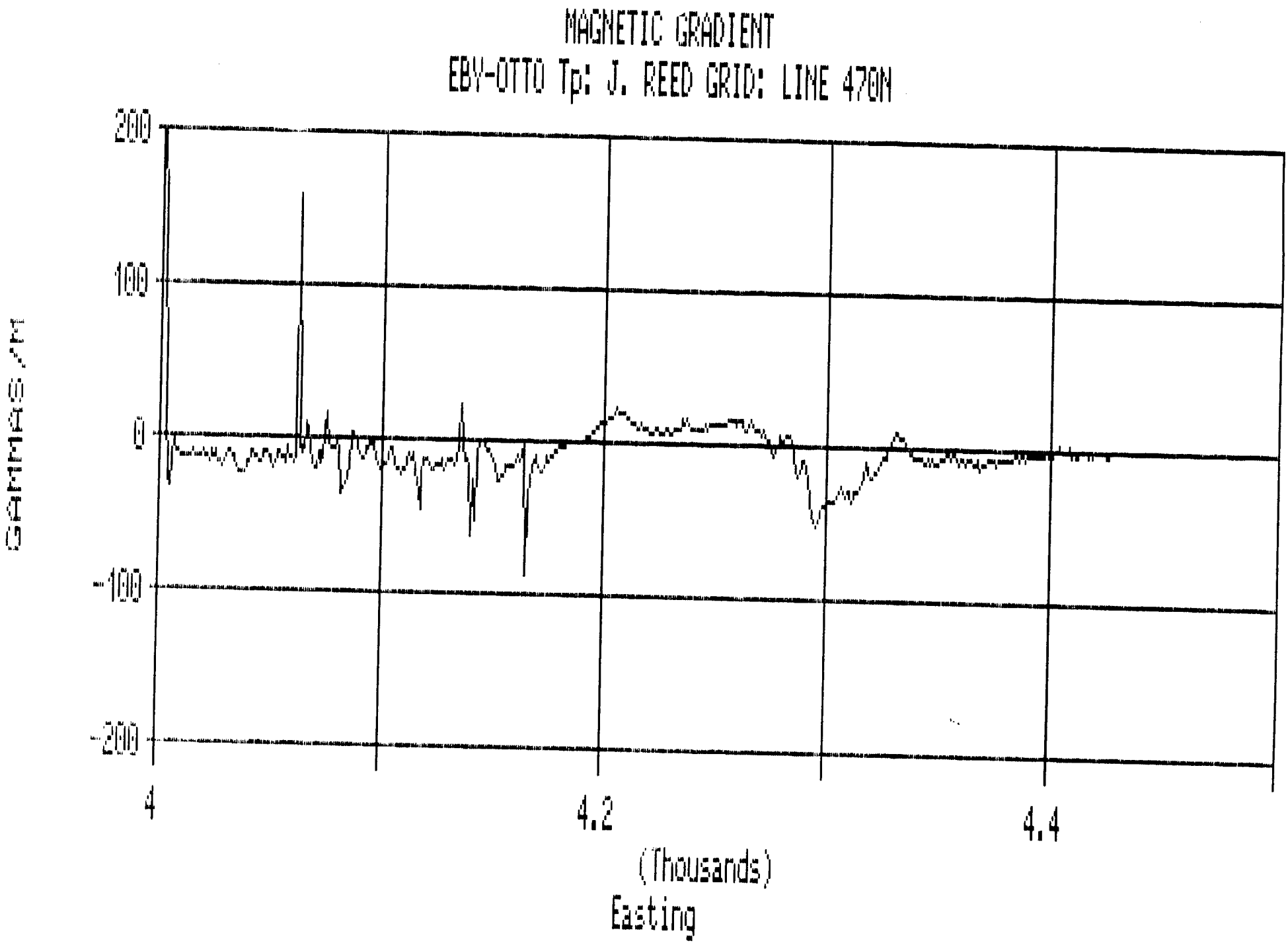

MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 425 N
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
Gammas/M
(Thousands)
3.6
3.8
4
(Thousands)
EASTING

MAGNETIC GRADIENT

EBY-OTTO Tp: J. REED GRID: LINE 425 N




MAGNETIC T..AL FIELD
EBY-OTTO Tp: J. REED GRID: LINE 470N
58.6
58.5
58.4
58.3
58.2
58.1
58
57.9
57.8
57.7
57.6
GAMMAS
(Thousands)
4
4.2
4.4
(Thousands)
Easting


MAGNETIC GRADIENT
EBY-OTTO Tp: J. REED GRID: LINE 470N
200
100
0
-100
-200
GAMMAS/M
4
4.2
4.4
(Thousands)
Easting

...evelopment

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: DOCUMENT No. W9680.00457

...on collected on this form is obtained under the authority o... ...bout
...ould be directed to the Provincial Manager, Mining Lar... ...eet,
...o, P3E 6A5, telephone (705) 670-7264.

42A01SE0088 2.16807 OTTO

900 g

...ns: - Please type or print and submit in duplic...
- Refer to the Mining Act and Regulations 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.

2.16807

Recorded Holder(s)	Client No.
James D. Reed, E.L Reed, N.E. Reed, C.E. Reed	186441
Address	**Telephone No.**
RR#3 Site 3, Box 2, Swastika, Ontario P0K-1T0	705-642-3573
Mining Division / **Township/Area**	**M or G Plan No.**
Larder Lake / Eby, or OTTO Tl.	M345, M379

Dates Work Performed From: May 13, 1994 (Linecutting) To: January 30, 1995 Mag EM Report

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	linecutting, Geological Mapping, ~~Hand Stripping~~ PRE. surveys, Mag + Gradiometer
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

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Total Assessment Work Claimed on the Attached Statement of Costs $ 8018

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
J.E. Reed Linecutting	RR#3 Site 3, Box 2 Swastika, ONT P0K-1T0
Report Douglas Robinson	Box 218 Swastika Ontario, P0K-1T0
All other Work Douglas Robinson	Box 218 Swastika, Ontario, P0K-1T0

(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.	Sept 16/96	J.D. Reed

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		
Douglas Robinson Box 218 Swastika ONT P0K-1T0		
Telepone No.	**Date**	**Certified By (Signature)**
705-642-9153		Douglas Robinson

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
appl 1600 Rese 641 8	96 Sep 17		SEP 17 96
	Deemed Approval Date: Dec 16/96	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
1187002	4	DRR 4018	1600	1600	2418
Case # 106732 part of lease: 475258, 475259, 475260, 475261	4	4000	0	0	4000
Anniversary Date June 1, 1991					
64717HA					
This lease recorded 25%, 25%, 25% and 25%					
in Names of Idnes Reed					
Emmalene L Reed					
Nathanael E Reed					
Charles E. Reed					
See list of coholders included					
Total Number of Claims		Total Value Work Done: 8018	Total Value Work Applied: 1600	Total Assigned From: 1600	Total Reserve: 6418

41 (03/91)

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

1. ☒ Credits are to be cut back starting with the claim 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 attached appendix.

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

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MINING LANDS BRANCH

Note 1: **Examples of beneficial interest are unrecorded transfers, option agreements, 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: Douglas Robinson	Date: Sept 16/96

N. LIST OF CO-HOLDERS

Client # 18644

James D. Reed
RR #3, Site 3, Box 2
Swastika, Ontario
P0K 1T0

Emmalene L. Reed
RR #3, Site 3, Box 2
Swastika, Ontario
P0K 1T0

Nathanael E. Reed
Box 85
Swastika, Ontario
P0K 1T0

Charles E. Reed
8 Kingsley Court
Guelph, Ontario
N1E 1E3

2.16807

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MINING LANDS BRANCH

...lopment
...du
...pement du Nord
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

...nformation collected on this form is obtained under the authority ...ning Act. This information will be used to maintain a record and ... status of the mining claim(s). Questions about this collection should ...ected to the Provincial Manager, Minings Lands, Ministry of Northern ...lopment and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario ... 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 quesiton sur la collece 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.

. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Line cutting Main-d'oeuvre	958	
	Field Supervision Supervision sur le terrain		958
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Geology	3600	
	Gradiometer Total Field Magnetic	3460	
			7060
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
	Total Direct Costs Total des coûts directs		8018

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)		

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SEP 20 1996
MINING LANDS BRANCH

...te: 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.

...ling Discounts

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

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

...tal 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 =	

...rtification Verifying Statement of Costs

...ereby certify:
...at the amounts shown are as accurate as possible and these costs ...re incurred while conducting assessment work on the lands shown the accompanying Report of Work form.

...t as J. D. C. Reid (Recorded Holder, Agent, Position in Company) I am authorized

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	Date
J. D. C. Reid	Sept 16, 1996

...2 (04/91)

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

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

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

December 10, 1996

Roy Spooner
Mining Recorder
4 Government Road East
Kirkland Lake, ON
P2N 1A2

Dear Sir or Madam:

Submission Number: 2.16807

Subject: Transaction Number(s): W9680.00457

After reviewing the Work Report(s) we have prepared this letter and the attached summary, which lists the results of our review. Requirements of the Assessment Work Regulation may not have been fully met. Please examine the summary to determine the next course of action concerning the identified Work Report(s).

NOTE: The 90 day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, is no longer in effect for this submission.

PLEASE NOTE ANY REQUESTED REVISIONS MUST BE SUBMITTED IN DUPLICATE.

If the anniversary dates for the mining claims affected by this correspondence have not passed, a number of options are available. Please contact the Mining Recorder to discuss these options.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705)670-5858.

Yours sincerely,

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Correspondence ID: 10417
Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.16807

Date Correspondence Sent: December 10, 1996 **Assessor:** Lucille Jerome

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9680.00457	1187002	EBY, OTTO	Approval After Notice	December 06, 1996

Section:

14 Geophysical MAG
12 Geological GEOL

Correspondence to:

Mining Recorder
Kirkland Lake, ON

Resident Geologist
Kirkland Lake, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Douglas Robinson
SWASTIKA, ONTARIO, CANADA

JAMES DAVID REED
SWASTIKA, Ontario

Correspondence ID: 10417

42A01SE0088 2.16807 OTTO

M.379 OTTO

THE TOWNSHIP OF OTTO

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

TECK TP. - M.392

EBY TP. - M.345

BOSTON TP. - M.332

MARQUIS TP. - M.362

VI

V

IV

III

II

I

2.16807
GEOL, MAG

12 11 10 9 8 7 6 5 4 3 2 1

LEGEND

PATENTED LAND	● or (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.
ROAD	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	
PATENTED S.R.O.	

NOTES

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

(R) SURFACE AND MINING RIGHTS WITHDRAWN FROM STAKING SEC. 36/80, W.9/86, JAN. 24, 1986
O-L26-90 NR OPENS W9/86 DEC. 14, 1990

✳ APPLICATION UNDER THE PUBLIC LANDS ACT SEC. 31 (b) OF THE MINING ACT

CL.5029 DISPOSITION OF CROWN LAND
Surface Rights Withdrawn under Sec. 36,
The Mining Act R.S.O. 1980, ORDER NO. W-01/91/ONT.
(Trans Canada Pipeline Right of Way and Buffer Zone particularly 40.25 meters or 132 ft. on either side of centre line of right of way)

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE _____ TIMISKAMING MANAGEMENT UNIT

AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: P.O. BOX 129
SWASTIKA, ONT.
P0K 1T0
705-642-3222

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.

PLAN NO. M-379

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

CIRCULATED NOV.3/88
ARCHIVED ON JUNE 01/95

M.379

TRIM LINE

TRIM LINE
42A01SE0088 2.16807 OTTO
210

W.343

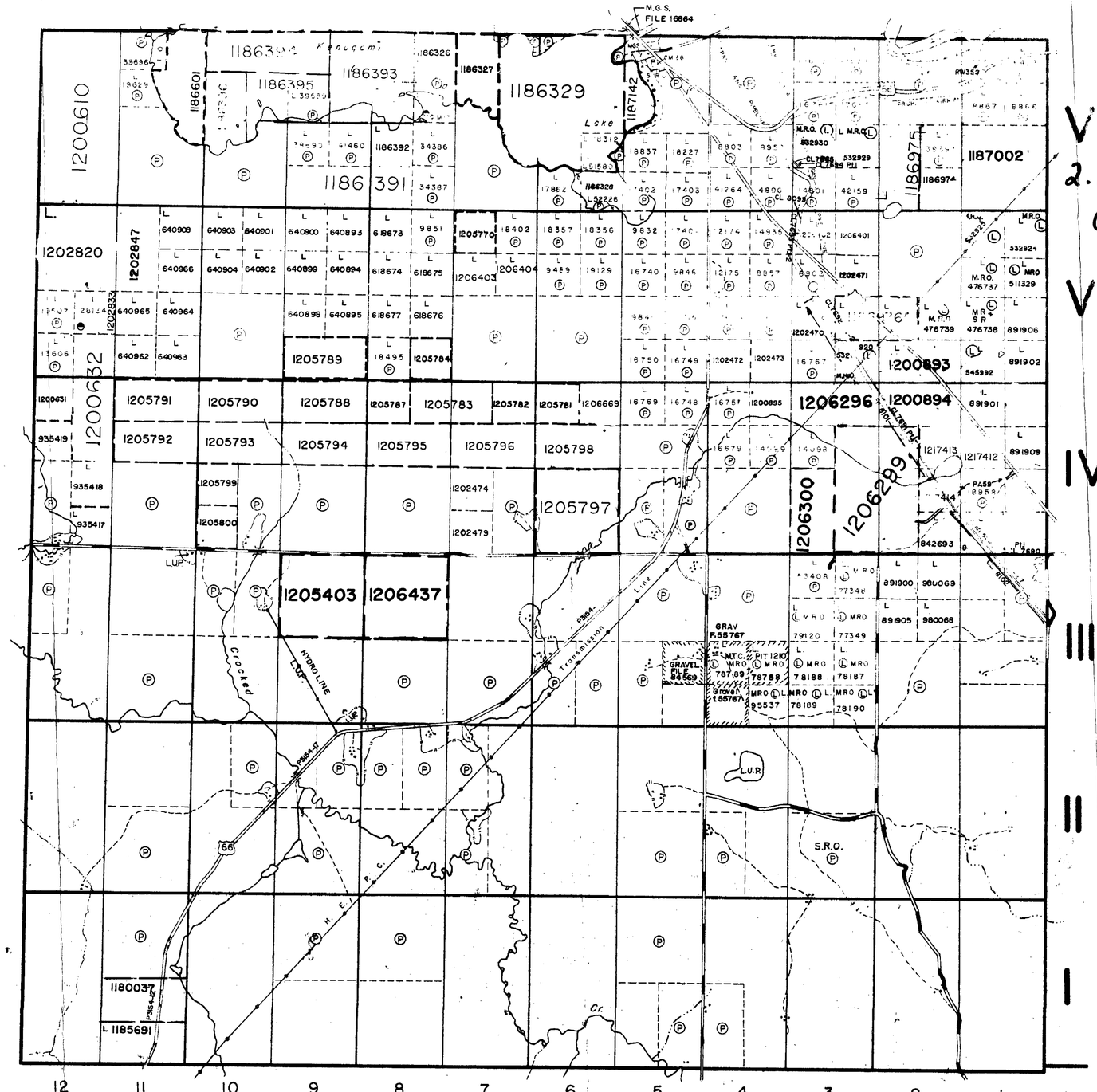
EBY TWP

Grenfell Twp. M.351

Burt Twp. M.334

Otto Twp. M.379

Blain Twp. M.418



THE TOWNSHIP OF

EBY

DISTRICT OF TIMISKAMING

LARDER LAKE 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	C.
CANCELLED	

NOTES

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

AREAS WITHDRAWN FROM STAKING

2.16807

Surface Rights Withdrawn under Sec. 36, The Mining Act R.S.O. 1980, ORDER NO. W-01/91/ONT (Trans Canada Pipeline Right of Way and Buffer Zone particularly 40.25 meters or 132 ft. on either side of centre line of right of way)

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.

(RS) PLAN NO. M-345

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

2.16807 GEOL. MAG.

COPY OF THIS MYLAR ARCHIVED APR.27/92
ARCHIVED JANUARY 26, 1995
ARCHIVED ON JUNE 01/95
ARCHIVED JULY 19, 1996

K. Kalamov

Rec'd Jan. 25/89

W.342

TRIM LINE

Map 1 of 2

42A01SE0068 2.16807 OTTO

220

2.16807

GEOLOGY

EBY-OTTO NE GROUP (J. Reed)

SCALE 1:1000

0 20 40 60 80 100 m

GRID TRUE NORTH
Mag. Declination 10 W

EBY Twp.

7 Chloritic Alteration (Prominent Quartz Grains) dark green

6 Diorite (intrusives + volcanics)

5 Hornblendite (intrusives related to Unit 4?)

4 Anorthositic Unit, pale colour

3 Fe Tholeiitic Volcanics

2 Mg Tholeiitic Volcanics

1 Komatiite

a very fine Grained
b maximum grain size 0.5 mm
c maximum grain size 1.5 mm
d maximum grain size 1.5 mm

XXXX Negative Magnetic Anomaly

O100 MaxMin Response (100 m Coil Separation)

OVLF VLF Response

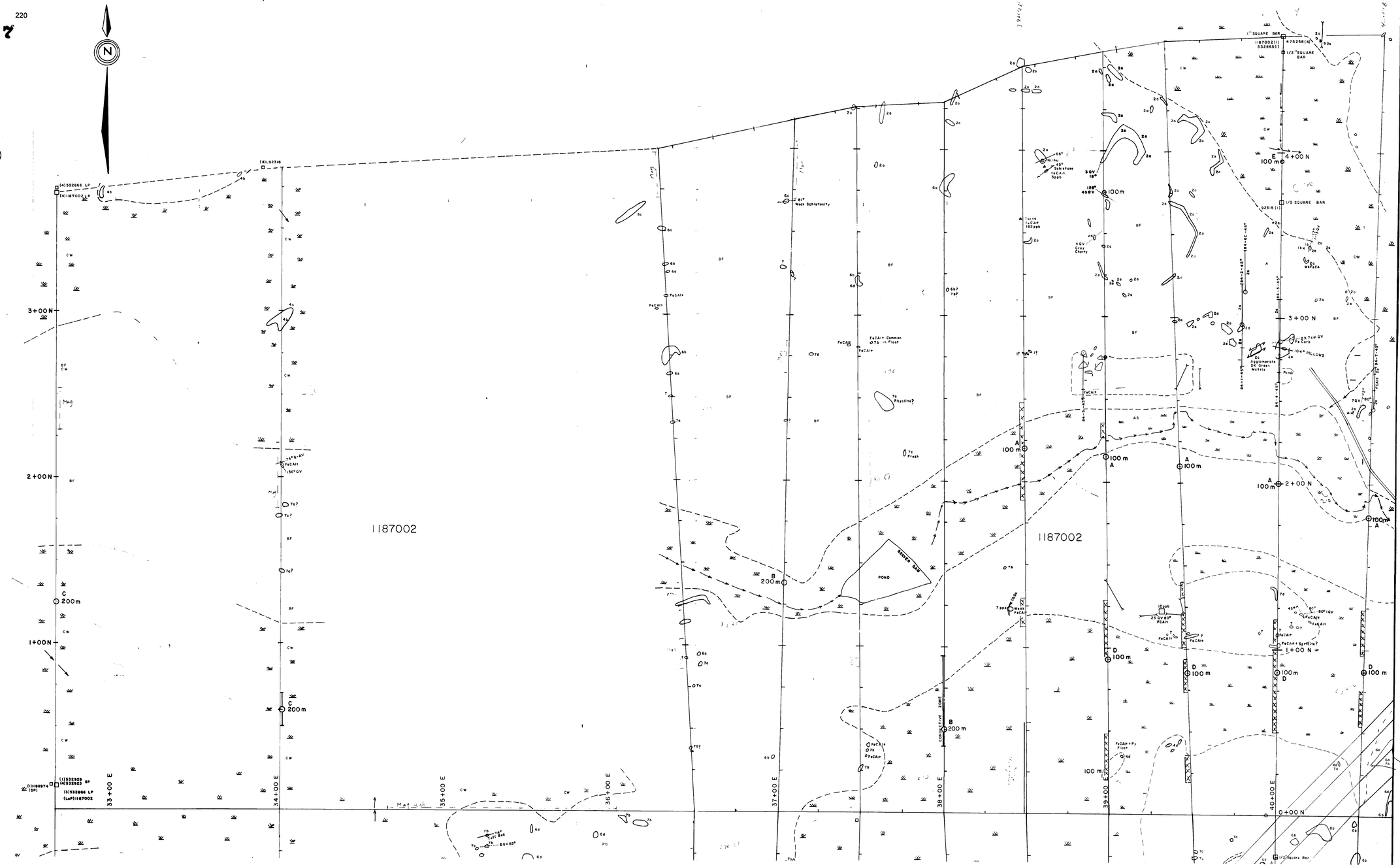
OAB Airborne EM Response

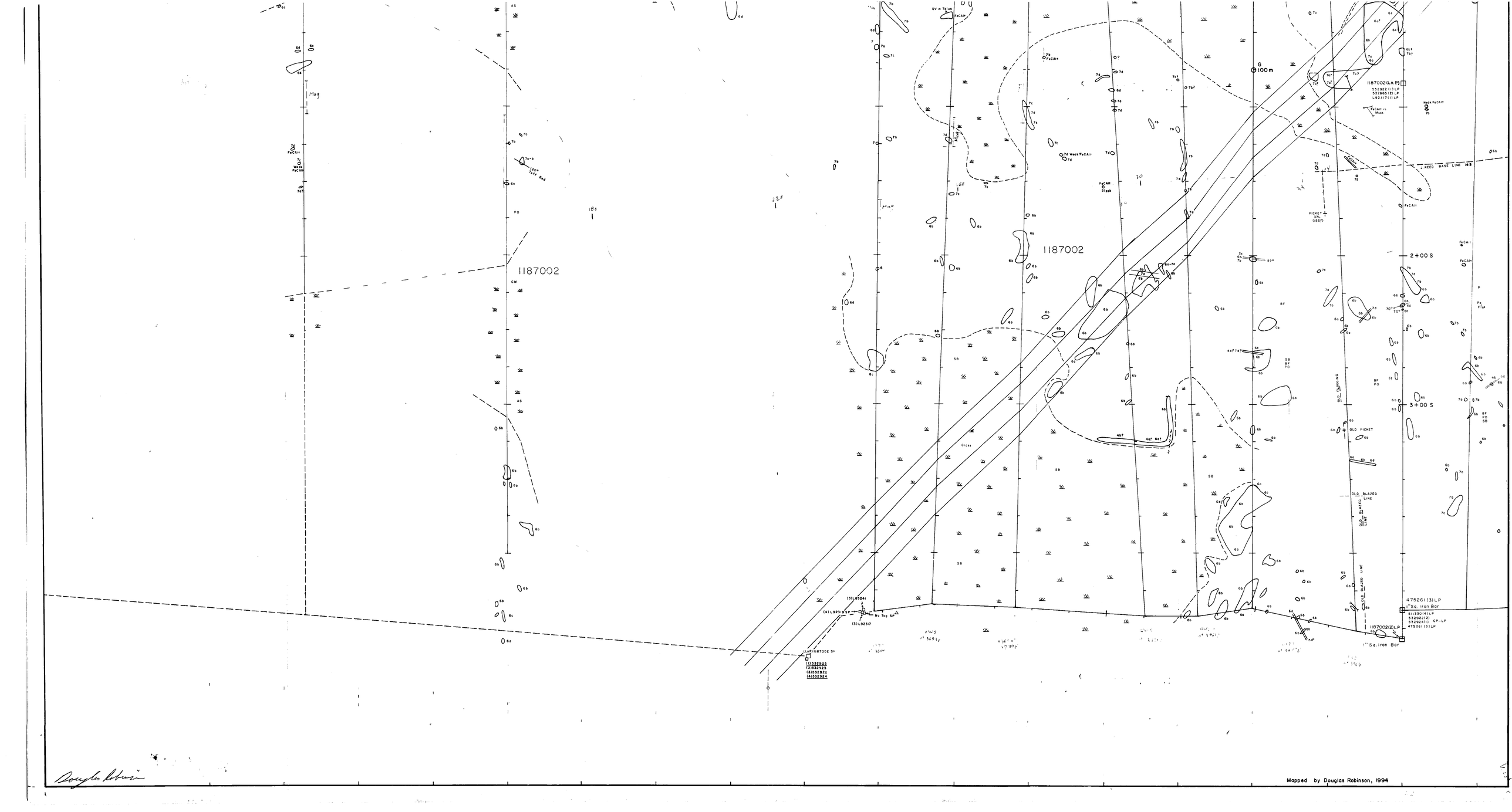
FeCAlt Iron Carbonate and/or Siliceous Alteration

5QV Quartz Vein (5 cm)

Claim Post (LP = Loose Post, SP = Stump Post
LnP = Line Post)

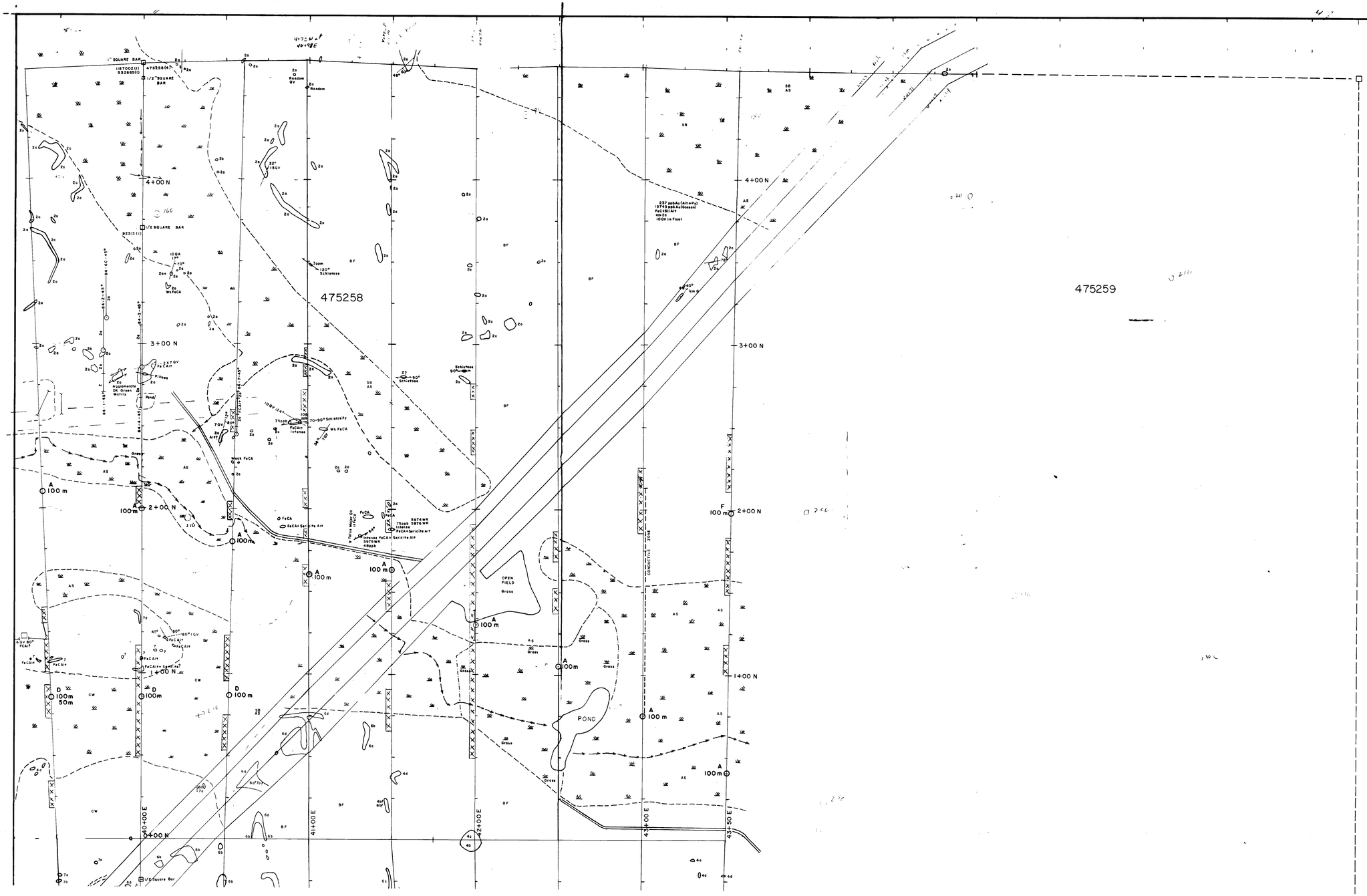
SB Black Spruce
CW White Cedar
BF Second Growth Balsam Fir
PO Poplar
AS Alder

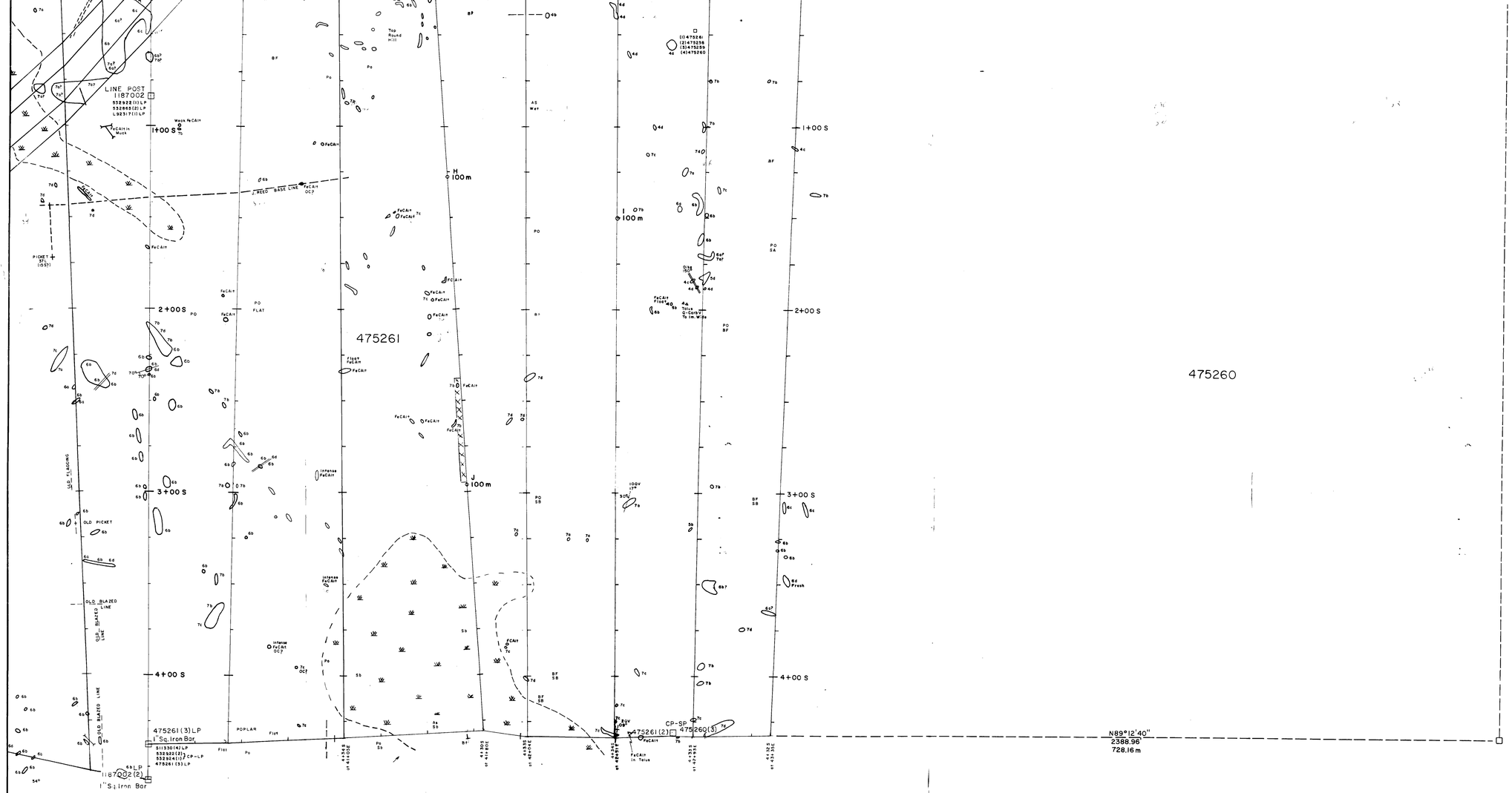



1187002
1187002
1187002
1187002 (Ln P)
532922 (1) LP
532865 (2) LP
532317 (1) LP
G
100 m
2+00 S
3+00 S
OLD PICKET
OLD BLAZED LINE
OLD FLAGGING
REED BASE LINE 14S
PICKET 37% (1537)
1" Sq. Iron Bar
1187002 (2) LP
47526' (3) LP
51-330 (4) LP
532922 (2)
532924 (1)
CP-LP
(1) 532925
(2) 532923
(3) 532922
(4) 532924
(3) L 92524
(4) L 92518 SP
(3) L 92517
No Tag SP
(LnP) 1187002 SP
Douglas Robinson
Mapped by Douglas Robinson, 1994

42A01S65086 2.16807 OTTO

2.16807





GEOLOGY

EBY-OTTO NE GROUP (J. Reed)

SCALE 1:1000

0 20 40 60 80 100 m

GRID TRUE NORTH
Mag. Declination 10 W

OTTO Twp.

7 Chloritic Alteration (Prominent Quartz Grains) dark green

6 Diorite (intrusives + volcanics)

5 Hornblendite (intrusives related to Unit 4?)

4 Anorthositic Unit, pale colour

3 Fe Tholeiitic Volcanics

2 Mg Tholeiitic Volcanics

1 Komatiite

a very fine Grained
b maximum grain size 0.5 mm
c maximum grain size 1.5 mm
d maximum grain size > 1.5 mm

O_{100} MaxMin Response (100 m Coil Separation)
O_{VLF} VLF Response
O_{AB} Airborne EM Response
FeCaIt Iron Carbonate and/or Siliceous Alteration
5 QV Quartz Vein (5 cm)
XXXX Negative Magnetic Anomaly

Claim Post (LP= Loose Post, SP= Stump Post
LnP= Line Post)

SB Black Spruce
CW White Cedar
BF Second Growth Balsam Fir
PO Poplar
AS Alder

Mapped by Douglas Robinson, 1994

Map 2 of 2