MAR 20000011: WABASCA-DESMARAIS

Received date: Jun 07, 2000

Public release date: Jun 25, 2001

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JUN 07 2000

REPORT OF ASSESSMENT WORK ON METALLIC AND INDUSTRIAL MINERALS PERMITS # 9398030091 AND # 9398030092

on behalf of

Sidon International Resources Corp.
700 W. Pender St., Suite 505
Vancouver, BC V6C 1G8
CANADA

by

Douglas J. Duskin
Consulting Exploration Geologist
210 Union Street
Camden, South Carolina 29020
USA

5 June 2000

DECLARATION

I, Douglas J. Duskin, an independent consulting geologist residing at [redacted], Camden, South Carolina 29020, USA, do certify that:

1. I am a graduate of: Cornell University, Ithaca, NY; M.Sc. Geology, 1969
Duke University, Durham, NC; B.Sc. Geology, 1963

2. I am a Registered Professional Geologist in the State of South Carolina, Certificate # 135, and the State of Minnesota, Certificate # 30555.

3. I have thirty-one years of experience in minerals exploration, sixteen of which were in direct diamond exploration in positions of responsibility for Kennecott Corporation and its corporate predecessors, including as Manager of USA diamond exploration, 1978-1992; Senior Geologist, Special Projects, NorthWest Territories kimberlite evaluation project, 1993-94.

4. I was personally involved and responsible on a full-time basis for management of Sidon International Resource Corp.'s diamond exploration program in Alberta during the winter of 1997-98.

5. I have provided the information in this Report of Assessment Work on the basis of data directly dealt with or obtained by myself, and of expenditures for the project, for whose budget I was responsible from December 1997 through March 1998, and with which I am directly familiar. I attest that the expenditures set forth herein in satisfaction of the Alberta assessment work requirements are in good faith and to the best of my knowledge true and accurate expenditures made on behalf of the project encompassing the Metallic and Industrial Minerals Permits which are the subject of this Report.

6. I have never directly or indirectly received, nor do I expect to receive, directly or indirectly, any ownership interest in Sidon International Resources or any of its affiliates or subsidiaries, nor in any of the property that is the subject of this report.

Camden, South Carolina
5 June 2000

Douglas J. Duskin

Table 1. **Statement of Expenditures**

Metallic and Industrial Minerals Permit Nos. 9398030091 and 9398030092

DESCRIPTION	COST	TOTAL COST
Salary and Wages		$48,600.00
Senior supervision:		
72 days @ $675/day	$48,600.00	
Field Costs		17,742.92
Travel, meals, car rental, supplies	10,884.86	
Field Office/accommodation, telecomm.	6,858.06	
Contracted Services		194,110.88
Geophysics:		
Spectra Exploration Geoscience	36,492.07	
Quantec Consulting	8,916.31	
Controlled Geophysics, Inc.	5,561.23	
Limion Geophysics	4,656.74	
Paul Lortie	2,656.48	
Eastern Geophysics, Ltd.	54,785.94	
Helicopters:		
Delta Helicopters	1,222.88	
Slave Lake Helicopters	79,819.23	
	GRAND TOTAL	**260,453.80**

Table 2. **Allocation of Expenditures**

Permit No.	Ha.	Expenditure Required	Expenditure Assigned
9398030091	9324	$46,621.00	63,529.62
9398030092	9324	46,621.00	196,924.18
TOTAL	**18,648**	**$93,242.00**	**$260,453.80**

I certify that these expenditures are valid and were incurred in conducting assessment work on the above Permits.

Douglas J. Duskin

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SUMMARY

After purchasing these two Permits from the original applicants in mid-1997, Sidon International Resources embarked on an exploration program whose objective is to find diamondiferous kimberlites within them. There are no records of previous exploration for other than petroleum on this land. The Permits lie in a remote, forested area north of Wabasca-Desmarais where the only practical means of access for reconnaissance-stage exploration is the helicopter (Figure 1). The geologic setting here within the Western Canada Sedimentary Basin consists of a variable surface cover of glacial deposits averaging 50 meters thick, overlying some 1200 meters of flat lying, non-magnetic Mesozoic and Paleozoic basin sediments floored by crystalline basement rocks of Archean age. Nearby post-Paleozoic diamondiferous kimberlites discovered in 1997 by Ashton Mining of Canada have established the region as a kimberlite province.

Because most kimberlites are magnetic, and because magnetic conditions here are theoretically ideal for detecting kimberlites, a standard and sensible initial step and key ingredient in Sidon's program was to fly a 3544-line-kilometer, close spaced, low level aeromagnetic survey. This was followed by a considerable effort in data analysis, culture checking to sort out responses from the many petroleum wells and pipelines in the area, and helicopter-supported ground magnetometer surveys and grid cutting. An unusually large number of aeromagnetic anomalies with the sought-for kimberlite-type responses was initially selected, especially on the easternmost of the two Permits. Subsequent ground magnetometer surveying and re-analysis of data indicated that most of them are caused by placer magnetite concentrated in paleodrainages in the overburden. However, a cluster of several anomalies on the Livock Fire Tower Hill

have deeper-appearing sources and may be kimberlites associated with a basement structure known as the F-9 Fault.

Of 44 anomalies on Sidon's Permits identified from the aeromagnetic survey, 6 were covered by magnetometer surveys on cut grids, 13 more were checked by tape and compass magnetometer surveying, and 25 have not yet been ground checked; 24 of these have been assigned low priority. The vast majority of the work after the initial airborne survey was focused on the easternmost Permit because of the preponderance of detected aeromagnetic anomalies occurring there. Thus, of a total of Cdn $260,453.80 expended on these two Permits for the biennium ending 10 March 2000, $63,529.62 is attributable to the western Permit (#9398030091) and $196,924.18 is attributable to the eastern Permit (#9398030092). Expenditures in both cases are well in excess of the required $46,621.00 for each of these equal-area Permits. No geochemical surveying, surface sampling, or drilling has yet been done. Sidon wishes to retain these Permits in order to do further work, and to have the respective excess expenditures applied as credits in future biennia.

FIGURE 1
ASHTON'S KIMBERLITES
K-14
K-10
K-3
SIDON'S PROJECT
BUFFALO HEAD HILLS
BIRCH MOUNTAINS
PELICAN MOUNTAINS
SWAN HILL
Buffalo Head Prairie
Carcajou
Peerless Lake
Loon Lake
Red Earth Creek
Trout Lake
Cadotte Lake
Little Buffalo
Wabasca-Desmarais
Sandy Lake
Atikameg
Gift Lake
McLennan
Grouard Mission
Grouard
High Prairie
Enilda
Joussard
Driftpile
Faust
Kinuso
Canyon Creek
Widewater
Slave Lake
Marten Beach
Marten Mtn. 1006 m
Lesser Slave Lake
Sunset House
House Mtn. 1067 m
Wallace Mtn. 1259 m
Wandering River
Breynat
Plamondon
Atmore
Hylo
Caslan
Lesser Mitsue
PROVINCE OF
Alberta
CANADA
OFFICIAL ROAD MAP
km 10 0 10 20 30 40 50 60 70 km
miles 10 0 10 20 30 40 50 miles
Scale 1:1 500 000

INTRODUCTION

This Report is written and submitted by Douglas J. Duskin on behalf of Sidon International Resources Corp., permitholder of Alberta Metallic and Industrial Minerals Permits #9398030091 and #9398030092. These permits were purchased by Sidon International from the original applicants, Rennenberg, et al, shortly after they were applied for in the spring of 1997 by said applicants. Both Permits were issued on 10 March 1998. Previous to the application by Rennenberg, et al, the identical land descriptions encompassed by these two permits were included in Permits #939080674 and #939080675, granted to Troymin Resources in August, 1993. No assessment work report was filed by Troymin, and their permits were canceled in 1995 (B. Hudson, Mineral Agreements Section, personal communication, 1998). The ground lay open from 1995 until the application by Rennenberg, et al, in 1997.

PERMIT TABULATION

Each of these two Permits covers an irregularly north-south elongate, internally contiguous block of land; these two are separated by a narrow strip of land under permit to Ashton Mining of Canada and its joint venture partners. Permit #9398030091 encompasses 23,040 acres, and will be sometimes referred to herein as the "western Permit". Permit #9398030092 also contains 23,040 acres, and will sometimes be referred to as the "eastern Permit". Figure 2 is a map showing the boundaries and location of these two Permits. The specific land descriptions for each Permit are shown on Figure 3.

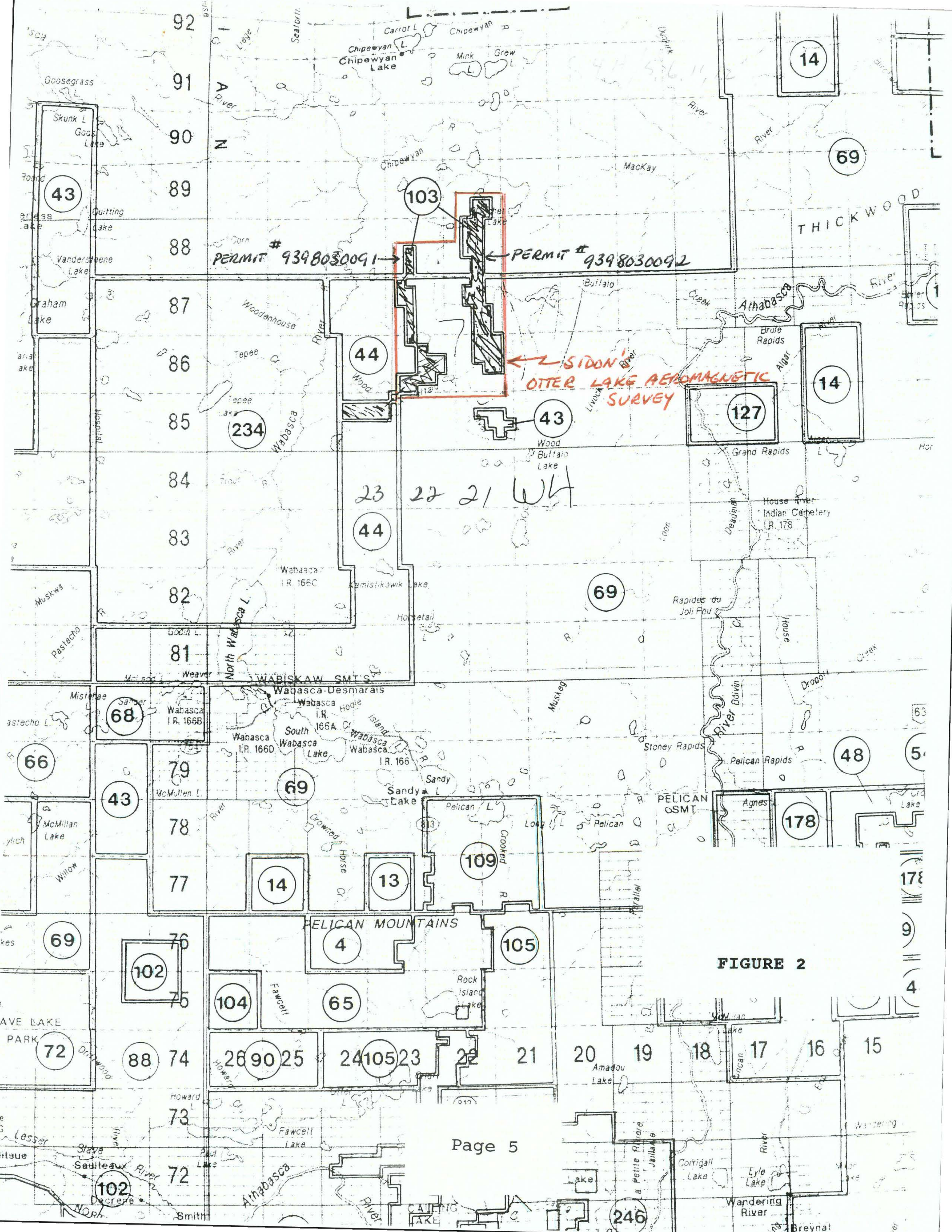

PERMIT # 9398030091
PERMIT # 9398030092
SIDON'
OTTER LAKE AEROMAGNETIC SURVEY
23 22 21 W4
THICKWOOD
Chipewyan Lake
Carrot L
Mink L
Grew L
Goosegrass L
Skunk L
Vandersteene Lake
Graham Lake
Quitting Lake
Woodenhouse
Tepee Cr
Tepee Lake
Wabasca
Wabasca I.R. 166C
Kamistikowik Lake
Horsetail
MacKay
Buffalo
Athabasca
Brule Rapids
Grand Rapids
Wood Buffalo Lake
House River Indian Cemetery I.R. 178
Rapides du Joli Fou
Stoney Rapids
Pelican Rapids
PELICAN SMT
WABISKAW SMT'S
Wabasca-Desmarais
Wabasca I.R. 166B
Wabasca I.R. 166A
Wabasca I.R. 166D
South Wabasca Lake
Wabasca I.R. 166
Sandy Lake
Pelican L.
McMillan Lake
PELICAN MOUNTAINS
Rock Island Lake
Amadou Lake
Corrigall Lake
Lyle Lake
Wandering River
Sauteaux River
Athabasca
Howard L
Fawcett Lake
Paul Lake
Slave
PARK
92
91
90
89
88
87
86
85
84
83
82
81
79
78
77
76
75
74
73
72
26 25 24 23 22 21 20 19 18 17 16 15
43
103
44
234
69
14
127
68
66
109
13
105
4
104
65
102
72
88
90
178
48
246

FIGURE 2

ENR-LSAS MINERAL RESOURCES 1998-06-16
LSEM2200 RETRIEVAL SUBSYSTEM 11:11:51
SCREEN ID: MINERAL AGREEMENT DETAIL USER ID: LSDJI41
KEY ID: 093 9398030091 METALLIC AND INDUSTRIAL MINERALS PERMIT
SPECIFIC WELL ID (OPTIONAL) ==> / - - - W /

---------- L A N D / Z O N E D E S C R I P T I O N ----------

LAND DESCRIPTION:
4-22-086: 5-10;14-16;21-23;28;32
4-22-087: 4;9;16;20;21;28;29;32
4-22-088: 4;9;16
4-23-085: 19-23;26-30;36

METALLIC AND INDUSTRIAL MINERALS

DC914172 HERE IS THE DATA YOU HAVE REQUESTED

36 SECTIONS, WESTERN PERMIT

= 23,040 acres

SCREEN ID: MINERAL AGREEMENT DETAIL USER ID: LSDJI41
KEY ID: 093 9398030092 METALLIC AND INDUSTRIAL MINERALS PERMIT
SPECIFIC WELL ID (OPTIONAL) ==> / - - - W /

---------- L A N D / Z O N E D E S C R I P T I O N ----------

LAND DESCRIPTION:
4-21-086: 14;15;21-23;26-28;33-35
4-21-087: 2;3;10;11;14;15;21;22;27;28;34
4-21-088: 3;10;15;16;21;22;27;28;33;34
4-21-089: 2;3;10;11

METALLIC AND INDUSTRIAL MINERALS

FIGURE 3

DC914172 HERE IS THE DATA YOU HAVE REQUESTED

36 SECTIONS, EASTERN PERMIT

= 23,040 acres

The assessment work expenditure required to keep the Permits in good standing for the first biennium ending 10 March 2000 is Cdn $5.00 per hectare. There are 2.471 acres per hectare. Using this conversion factor, there are 9324 hectares in each Permit, resulting in a required expenditure of Cdn $46,621 for each of the two.

SIDON'S EXPLORATION OBJECTIVE

Sidon International Resources acquired these two Permits for the purpose of conducting regional exploration to locate kimberlites similar to the diamond-bearing kimberlites discovered by Ashton Mining of Canada and publicly reported by them starting in 1997. Figure 1 is the official road map of Alberta showing the location of Sidon's Project in relation to the locations of Ashton's announced discoveries of three clusters of kimberlites, plotted as accurately as these discoveries are presently known to me. On this map the outline of Sidon's project area corresponds to the outline of an airborne geophysical survey flown by Sidon. This was an aeromagnetic survey named by the geophysical contractor for Otter Lake, the largest lake within the aeromagnetic survey block; reference to "Otter Lake" will be used synonymously with "Sidon's Project" hereafter in this Report, and will also appear on some of the appended data submitted herewith.

LOCATION, ACCESS AND PHYSICAL CONDITIONS

Sidon's project area lies in a totally unpopulated part of Alberta about 40 miles northeast of the small community of Wabasca-Desmarais. The nearest town with full amenities

is Slave Lake, another 60 miles to the southwest of this village (See Figure 1).

Although there are no regular roads to the project area, there are substantial timber harvesting and oil and gas exploration activities throughout it. Basic access to the western part of the area is provided by a private road maintained by Alberta-Pacific Corp., which charges a monthly fee for its use. Further access by snowmobile off the Alberta-Pacific road can get one to most parts of the project area via pipeline rights-of-way and the numerous cleared seismic lines that criss-cross the whole region. However, the pipelines and seismic lines cannot be used except during winter freeze-up, so vehicle access at any other time of the year is not an option. The area is about an hour by helicopter from the nearest base, Slave Lake. As a practical matter, in a reconnaissance exploration stage, helicopters are the most cost-effective means of transport, even in winter.

The entire landscape consists of lakes, woods and swamps; mostly swamps. The terrain is typical of a glaciated region dominated by glacio-fluvial deposition. It is very flat and featureless except for a unique isolated north-south hill in the southeastern part of the project area, atop the southern end of which sits the Livock fire lookout tower.

GEOLOGIC SETTING

Sidon's project area is located in the Western Canada Sedimentary Basin, a huge sediment-filled intra-continental structural depression that occupies most of Alberta. The floor of this Basin consists of ancient Precambrian crystalline rocks, which are overlain by a sequence of younger De-

vonian through Tertiary sedimentary beds, mostly of marine origin. In post-Tertiary time these beds were covered by successive deposits left behind by several advances of Late Quaternary continental glaciers that moved across the area from the north, northeast, and northwest. These glacial deposits are collectively termed "drift".

In the area of both Sidon's and Ashton's projects there was non-deposition in the Tertiary; the glacial drift was laid down on an eroded surface of the next-oldest strata, the Late Cretaceous La Biche Formation (Mossop and Shetsen, 1994), which thus forms the bedrock immediately underlying the glacial overburden. The La Biche is a thick sequence of soft mudstone with minor thin interbedded limestones. Because it is erosionally recessive in the first place and covered by glacial drift in the second, outcrops of the La Biche bedrock in this area of the Basin are very rare.

However, because this Basin is a major producer of oil and gas, there have been thousands of wells drilled throughout it, quite a number of them even penetrating down into the crystalline basement rocks, which lie about 4000 feet (1200 meters) below the surface in the area of interest here. A vast geological database has thus been developed, studied and published upon.

Studies of basement drill samples have shown that this area is underlain by a large crustal block that is of the oldest Precambrian age: Archean (Dufresne, et al, 1996). This crustal block is known as the Buffalo Head sub-Craton. This is geologically important, because few of the world's kimberlites lie outside of the ancient Archean cratons, and all of its diamond producing kimberlites lie within them. This empirical observation was first developed as "Clifford's Rule" in Africa many years ago (Clifford, 1966),

and has since held true through subsequent studies of the geologic settings of kimberlites in China, Russia and now, Canada.

The important factor that localizes the emplacement of kimberlites within Archean cratons is the presence or not of major deep seated faults that have broken up the Archean blocks and allowed the ascent of molten kimberlite from the Earth's Upper Mantle up through them to the surface. Ashton's kimberlites plot above a large northeast-trending basement structural zone that is evident from drillholes to basement, depositional changes in the much-drilled Paleozoic sediments that overlie the basement, and geophysical maps. This well known zone is the Peace River Arch (Dufresne, et al, 1966). Ashton's discoveries are along the broad central axis of this Arch, and Sidon's diamond project area is on its southeastern flank; part of Sidon's claims lie on a major Arch-parallel northeasterly basement structure that will be discussed further on in this report.

SIDON'S EXPLORATION APPROACH

Kimberlites are very rare small bodies of ultramafic rock that usually occur in clusters whose locations are controlled by deep seated structures as described above. Although not all kimberlites are magnetic, most of them are, and one of the standard approaches in regional exploration for them is to fly close spaced, low level aeromagnetic surveys in an area of interest. Such surveys have the dual advantage of being able to pick up the subtle low amplitude magnetic signatures of these small bodies of rock, as well as providing an overall magnetic picture of deeper crystalline basement rocks in the case of Alberta. Conditions for successful aeromagnetic detection of kimberlites here are theoretically ideal; in this Basin the 1200 meters of non-

magnetic sedimentary rocks act as a distance filter from the magnetically noisy crystalline basement rocks.

Sidon, using Quantec Consulting, Inc. as its geophysical consultant, flew a close spaced, low level aeromagnetic survey over its project area in the summer of 1997. This survey was designed to provide coverage of both its eastern and western Permits, as well as the intervening strip of ground, in order to obtain a coherent magnetic picture of the basement and its structures for the entire area to aid in evaluation of specific targets that might develop. This aeromagnetic survey formed the basis for all further work on the Permits.

WORK PERFORMED AND ALLOCATION OF EXPENDITURES

Aeromagnetic Survey

Figure 2 is a map showing the boundaries of the permits in relation to the boundaries of the aeromagnetic survey flown in August 1997 by Spectra Exploration Geoscience Corp. (Spectra Job #9709). Flight lines were north-south, 200-meter line spacing, aircraft/magnetic sensor altitude 100 meters, east-west tie lines flown at 1 km. spacing, Global Positioning Satellite (GPS) control for flight lines. A total of 3544 line kilometers was flown, counting tie lines. Acting solely as a geophysical services contractor, Spectra provided the raw digital data, analog chart recordings, tracking camera videos, flight line plots, and several computer-corrected derivative magnetic products to Sidon and its consultant, Quantec. Spectra also provided an end-of-job Operations Report, attached as Appendix I. The cost for this survey was Cdn $36,492.07, allocable equally to the eastern and western Permits, or Cdn $18,246.03 each. Verification of this expenditure can be obtained from:

Spectra Exploration Geoscience Corp.
Suite 2610, 520-5th Ave. SW
Calgary, Alberta T2P 3R7
Attn.: Jim Genereux, Managing Director

Quantec Geophysical Study and Report

Using the data provided by Spectra, in the fall of 1997 Quantec Consulting submitted a report on structural interpretation of magnetics, computer-aided depth-to-source modeling and a composite map showing interpreted structures and preliminary anomaly picks. A northeast-striking basement fault, hereinafter termed the "F-9 Fault", was shown (but not named) on Quantec's map, cutting across the southern part of Sidon's eastern Permit (Legault and Plazek, 1997). A copy of Quantec's report attached as Appendix II.

Including its oversight of the aeromagnetic survey and this post-survey report, Quantec was paid a total of Cdn $8,916.31, allocable equally between the eastern and western Permits, or Cdn $4,458.16 each. Corroboration of this expenditure can be obtained from:

Quantec Consulting, Inc.
101 King
Porcupine, Ontario P0N 1C0
Attn.: Robert Gordon, General Manager

Field Office in Slave Lake, Alberta

In late fall 1997 Sidon realized that it needed to establish an on-site presence near the project and to conduct further follow-up with the aid of professionals specifically experienced in kimberlite exploration. I was engaged in December 1997 to set up an office in Slave Lake and supervised

the next steps: identification, ranking and development of potential kimberlite drill targets from the aeromagnetic data.

At the height of the winter oil and gas activity season, accommodations and office space in Slave Lake were scarce. An arrangement was therefore made with Montello Resources, Ltd. to share a duplex apartment, used as an office by both. Sidon was an occupant here from December 1997 through February 1998. Rent and basic utilities were paid by Sidon on a pro-rata basis, and specifically identifiable office costs such as telephone and fax were paid on an itemized basis. These office costs were reimbursed to Montello, the lessee responsible for the premises and the communications links. The total amount of this office cost for the period was Cdn $6,858.07. This amount is one third allocable to the western Permit and two thirds to the eastern Permit, where the preponderance of field follow-up of the aeromagnetic survey became concentrated as the work developed: Cdn $2,286.02 for the western Permit, and Cdn $4,572.05 for the eastern Permit.

Confirmation of the amount paid to Montello as reimbursement for costs of sharing this field office can be obtained from:

Montello Resources, Ltd.
Suite 1473, Three Bentall Centre
595 Burrard Street
Vancouver, BC V7X 1C4
Attn.: Thomas Yingling, Treasurer

Aeromagnetic Data Reprocessing

Although the basic data obtained by Spectra was excellent and Quantec's initial analysis was quite useful, much

further work was needed to develop specific, meaningful and locatable targets for ground follow-up. There was a 150-meter Spectra GPS geographical plotting error affecting all flight lines, and the analog charts were of a compressed scale unusable for line-by-line picking of the small, subtle magnetic anomalies typical of kimberlites. All 98 flight line and all 34 tie line magnetics were re-processed at a scale of 1:25000 to enable careful line-by-line anomaly selection and depth-to-source estimation, as well as to aid in discrimination of magnetic responses caused by culture (oil wells, pipelines, etc.). The reprocessing was done by a geophysical data specialist firm, Controlled Geophysics, Inc. Besides the voluminous 1:25000 reprocessed analog chart records, Controlled Geophysics also produced a corrected flight line plot, a Total Magnetic Field contour map, a contoured Vertical Gradient map, and a special side-illuminated gray-tone shadow map of the Vertical Gradient in cooperation with geophysical consultant Limion Geophysics, all at a scale of 1:50000, matching the NTS topographic maps. Copies of these last four products are attached hereto as Plates I, II, III, and IV, respectively. Controlled Geophysics was paid Cdn $5,561.23 for its work, allocable equally between the western and the eastern Permit: Cdn $2,780.61 each.

Confirmation of this expenditure can be obtained from:

Controlled Geophysics, Inc.
189 Clark Ave.
Thornhill, Ontario L3T 1T3
Attn.: Chris Vaughn, President

Anomaly Selection and Culture Checking

All work in this category was done by myself. Basics included analyzing the general geologic setting and the

overburden conditions through literature and oil well records research, arranging for data reprocessing, and structural interpretation of aeromagnetic map products. This showed that Precambrian basement rocks lie at an average depth of about 4000 feet, or about 1200 meters, the overlying Paleozoic and Mesozoic cover rocks are expectably non-magnetic, and the veneer of glacial drift averages about 50 meters deep in the area of Sidon's Project. The most obvious, and likely most important structure in the Precambrian basement is a northeast striking fault, the F-9 Fault, named by Dufresne, et al, (1996). This fault was originally recognized 40 years earlier by oilfield geophysicists Garland and Bower (1959). There are several other basement linears, some of which may only be linear contacts between basement rock units of contrasting magnetic intensity.

Concurrent with structural interpretation, specific anomalies with aeromagnetic signatures typical of kimberlites were selected by line-by-line examination of the analog chart records, culture checked by reviewing the aircraft belly camera tracking video, plotted on field maps, given easy-to-remember names, and priority ranked for follow-up. As a final culture check, several anomaly target sites were inspected in the field by helicopter, using Delta Helicopters out of its base in Slave Lake. The cost for this was Cdn $1,222.88, allocable equally to the western and the eastern Permit, or Cdn $611.44 each. Verification can be obtained from:

Delta Helicopters, Ltd.
Box 1, Site 6, RRI
St. Albert, Alberta T8N 1M8

Ground Follow-up of Anomalies

In the process of selecting aeromagnetic anomalies two things became apparent. First, there were far fewer anomalies in the western Permit area than in the eastern Permit. Second, there was an unusually large number of shallow signature aeromagnetic anomalies in the northeastern part of the project area, especially on Sidon's eastern Permit. But these anomalies had long arcuate shapes not typical of kimberlites, even though anomaly amplitudes and rule-of-thumb-calculated depths were.

A total of 44 anomalies lying wholly or partially within Sidon's permits were selected for follow-up; these included 7 previously selected by Quantec. Some of the strongest of these (up to 8 nT in the aeromagnetic records) were directly in what was eventually realized to be a meandering paleodrainage pattern within or at the base of the glacial drift overburden and attributable to placer magnetite. Plate V is a plot of all these named anomalies with their aeromagnetic values, plotted at 1:50000 scale on the reprocessed flight line map. Appendix III is a copy of the status sheets listing the characteristics and results of ground work on them as of the cessation of field work on 5 March 1998.

A 2-man magnetometer crew from Eastern Geophysics, Ltd. arrived at the Project in the first week of February 1998. The ground follow-up method employed was to send the recon crew by helicopter to make compass-and-tape traverses fully across the plotted position of an aeromagnetic anomaly to confirm its location and existence, and to obtain profiles of its characteristics. This was to be followed by full detailed magnetics on a cut-in grid where warranted. Very early in the work professional oversight that improved data collection, base station control and data plotting was pro-

vided by an outside geophysical consultant who visited the Project, Paul Lortie. He made several helpful recommendations that were quickly implemented and also reviewed the selection of targets from the airborne data. A copy of his report is attached as Appendix IV. Cost for this visit and report was Cdn $2,656.48, allocable equally between the two Permits; Cdn $1,328.24 each. Verification of the amount expended can be obtained from:

Paul Lortie, Consulting Geophysicist
681, Boullé
Beloeil, Quebec J3G 3T2

It was becoming evident from the recon work on both the western and the eastern Permits that ground magnetic responses from many of the selected anomalies were extremely spiky, erratic from line to line, and lacking in the typical ovoid shapes characteristic of kimberlites. These were suspected as having emanated from sources in the overburden. As a final confirmation, when the recon crew was augmented by a 2-man linecutting crew from Eastern Geophysics in mid-February, a full grid was brushed in and covered with detailed magnetics on the most typical such anomaly, "Creekside". This showed a patchy erratic linear anomaly closely following a present-day creek, not at all typical of kimberlites. Several other anomalies of similar characteristics and patterns had already been reconned and were downgraded along with Creekside.

After that the major effort was in reconning, grid cutting and doing detailed ground magnetics on the cluster of aeromagnetic anomalies on the Livock Fire Tower Hill near the F-9 Fault. A full grid showed that "Pingo", "Maybe" and "Hilltop" are all one anomaly with values up to 25 nT, later referred to as simply Pingo. A tape and compass grid off a cut baseline at "Darkhorse" showed a broad, deep-looking re-

sponse of up to 13nT. "Tower", very near the highest peak of the hill, gave a similar broad, strong, non-spiky response in 2 recon lines across it. A vague, very low amplitude anomaly was found out in the flats at "Airstrip"; "West Hill" and "Can Do" couldn't be found in the first pass recon. A large grid was cut in on "Propeller" for a length of 2 km directly along the F-9 Fault. The anomalies in this cluster appear to be emanating from shallow bedrock sources rather than from the overburden.

For the record, of the 44 identified anomalies in Sidon's Permits, 6 were covered by grids, 13 more were checked by tape and compass recon magnetometer lines, and 25 have not yet been ground checked; 24 of these 25 are of the paleodrainage type and have been assigned very low priority. Plates VI and VII are 1:50000 topo maps with the grid lines plotted. Appendix V includes the magnetic profiles of those anomalies which were covered only by recon lines, and contoured magnetic plan maps for those which were covered by grids. Only 4 of the 19 anomalies checked by ground magnetometer surveying lie on the western Permit, and in these four cases, only a couple of recon lines each were done. By far, the preponderance of this helicopter-supported field work was done on the eastern Permit. Therefore my estimate of the cost allocation for the funds expended on this ground follow-up stage of the work is 10% for the western Permit and 90% for the eastern Permit. Expenditures consisted of payments to Eastern Geophysics, Ltd. for field work and crew travel/subsistence, as well as the helicopter support. A total of Cdn $54,785.94 was paid to Eastern Geophysics, with Cdn $5,478.60 allocable to the western Permit, and with Cdn $49,307.35 allocable to the eastern Permit.

Verification of the funds paid to Eastern Geophysics can be obtained from:

Eastern Geophysics, Ltd.
PO Box 119
West Pubnico, Nova Scotia B0W 3S0
Attn.: Brian d'Entremont, President

Helicopter support was provided by Slave Lake Helicopters at a total cost of Cdn $79,819.23 allocable at Cdn $7,981.92 to the western Permit, and Cdn $71,837.31 to the eastern Permit. For verification:

Slave Lake Helicopters, Ltd.
Box 1160
Slave Lake, Alberta T0G 2A0
Attn.: George Kelham, President-Pilot

Limion Geophysical Report

Upon completion of the initial ground magnetic follow-up, it was decided to further study the results in hand before proceeding to next steps. In April 1998 consulting geophysicist Heikki Limion made a study of seven ground-surveyed anomalies in the eastern Permit, including a comparison with their predicted aeromagnetic signatures, confirming that the methods used to disciminate bedrock versus overburden sources were valid, and recommending further methods to refine the ground magnetic survey methods. A copy of his report is attached as Appendix VI. A total of Cdn $4,656.74 was paid to Limion Geophysics, allocable Cdn $530.32 to the western Permit and Cdn $4,126.42 to the eastern Permit. For verification, contact:

Limion Geophysics
Suite 711, 25 Adelaide St. E.
Toronto, Ontario M5C 1Y2
Attn.: Heikki Limion, Geophysicist

Project Supervision, Logistics and Reporting

A total of US [redacted] was paid to me for services rendered to Sidon's Project during the biennium, including post-aeromagnetic survey direction and supervision, management of logistics, budget control, and reporting. I was also reimbursed US [redacted] for out-of-pocket expenditures on supplies, subsistence, air travel and car rental.

This is a total of US [redacted] expended for project management with respect to these two Permits. The average exchange rate at the time was US $1.00 = Cdn $1.50, making this a total of [redacted]. Like the expenditure for the field office, my best judgment is that this amount is allocable one third to the western Permit ([redacted]) and two thirds to the eastern Permit ([redacted]) because of the preponderance of activity that developed on the eastern Permit as the work progressed.

Sidon International does not desire to allocate any of its corporate office and overhead costs to the assessment work requirements for these Permits.

Table 1 is a statement of the above-documented work expenditures, totaling Cdn $260,453.80. Table 2 shows the allocation between the two Permits as hereinabove documented: Cdn $63,529.62 for Permit #9398030091, and Cdn $196,924.18 for Permit #9398030092.

CONCLUSIONS

Sidon International's aeromagnetic survey over its two Permits and the immediately surrounding land was a customary and appropriate initial step in exploration for diamondiferous kimberlites. Although imperfections existed in the resultant data, as is nearly always the case with such surveys, it formed the basis for a rational follow-up program that focused on the development of specific targets by means of anomaly selection by experienced geophysicists and a kimberlite exploration specialist. An unusually large number of shallow-sourced magnetic anomalies resulted from the aeromagnetic survey. Through ground follow-up magnetometer surveys and re-analysis of all data, both airborne and ground, it is concluded that many of these anomalies, especially in the northeastern part of the project area, represent placer magnetite-bearing paleodrainage channels either within the 50-meter-thick glaciofluvial overburden, or at the base of this drift in the post-Tertiary erosional surface of the La Biche Formation bedrock.

However, a cluster of several anomalies falling on a large hill at the Livock Fire Tower on Sidon's eastern Permit seems to be derived from shallow bedrock sources and may represent kimberlite that are partially responsible for the hill's existence because of post-Tertiary erosional resistance. This cluster of anomalies lies above and near a regional northeasterly basement fault, the F-9 Fault, that parallels the Peace River Arch.

No surface sampling or drilling has yet been done, but Sidon is considering these options. Given the geologically short distance between Sidon's project area and known kimberlites discovered by other companies in the region, further work is warranted. Sidon has spent more than the required assessment work expenditures on its two Permits,

wishes to hold them, and wishes to have its excess expenditures carried over as credit against the requirements for future biennia.

Respectfully submitted,

Douglas J. Duskin
Consulting Exploration Geologist
South Carolina License # 135
Minnesota License # 30555

REFERENCES

Clifford, T. N., 1966; Tecton-metallogenic units and metallogenic provinces of Africa: Earth and Plan. Sci. Lett., Vol.1, p. 421-434.

Dufresne, M. B., D. R. Eccles, B. McKinstry, D. R. Schmitt, M. M. Fenton, J. G. Pawlowicz and W. A. D. Edwards, 1996; The diamond potential of Alberta: Alberta Geol. Surv. Bull. 63, 158pp.

Garland, G. D., and M. E. Bower, 1959; Interpretation of aeromagnetic anomalies in northeastern Alberta: 5th World Petrol. Congress, Section 1, Paper 42, pp. 787-800.

SIDON INTERNATIONAL RESOURCES

ADJUSTED FLIGHT PATH

Projection Datum: Canada 1927

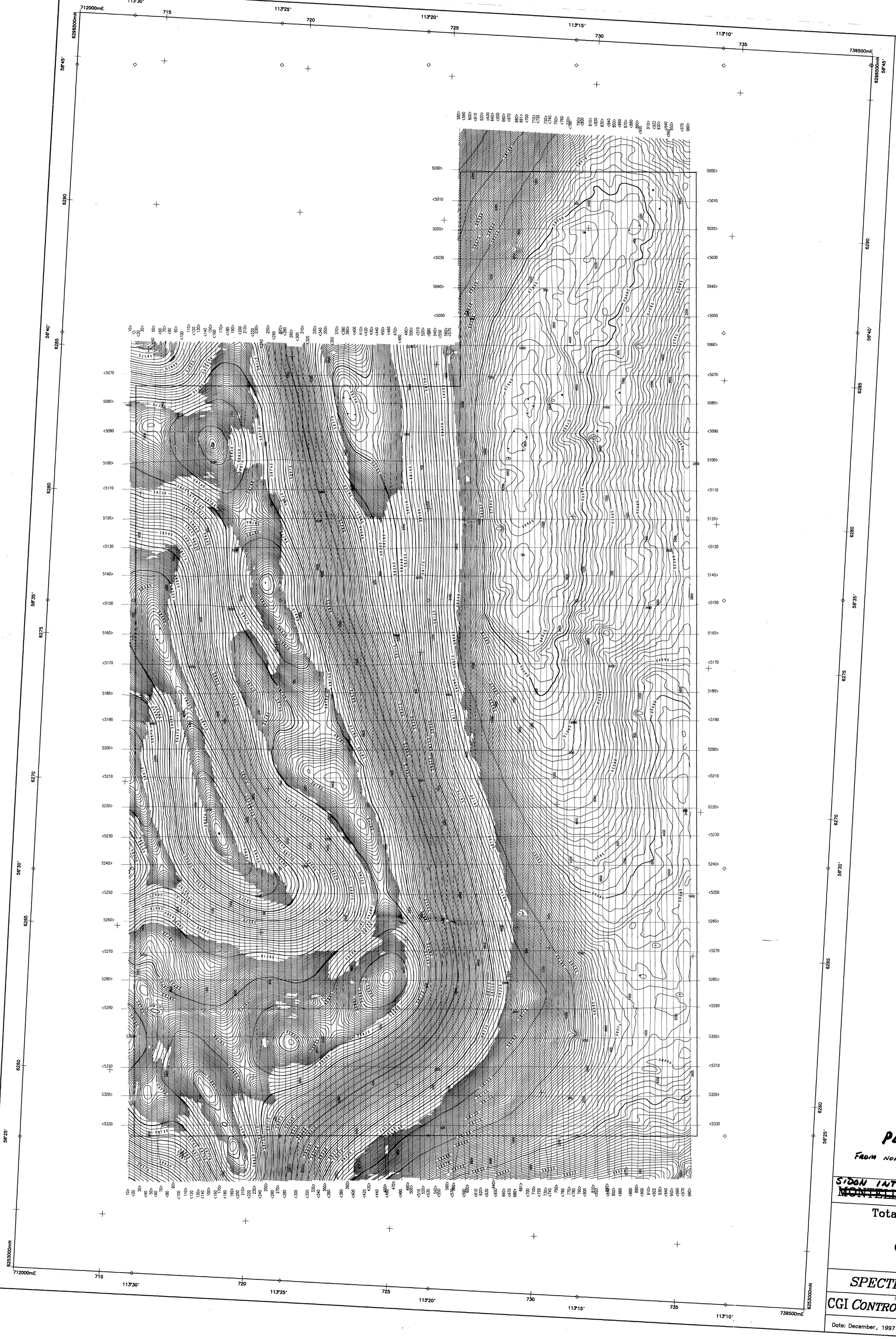
Note: The Original Clark 1866 Flight Path has been shifted 150m East.

CGI Controlled Geophysics Inc. Thornhill, CANADA

PLATE I. 1:50,000
FLIGHT LINE PLOT

Scale 1:50000

1000 0 0 1000 2000 3000 (meters)



Scale 1:50000

1000 0 1000 2000 3000 4000 (metres)

2500 0 2500 5000 7500 10000 12500 15000 (feet)

OPERATIONAL INFORMATION

CONFIGURATION: TAIL STINGER
SENSOR: SCINTREX CESIUM VAPOUR
FLIGHT PLAN: 200 METRE LINE SPACING
NOMINAL TERRAIN CLEARANCE: 100 METRES

NAVIGATION: GLOBAL POSITIONING SYSTEM (G P S)

50 metres Grid Cell Size
Contour Intervals (nT)

2
10
50
250

PLATE II

FROM NON-CULTURE-EDITED DATA SET

SIDON INT'L ~~MONTELLO~~ RESOURCES LTD.

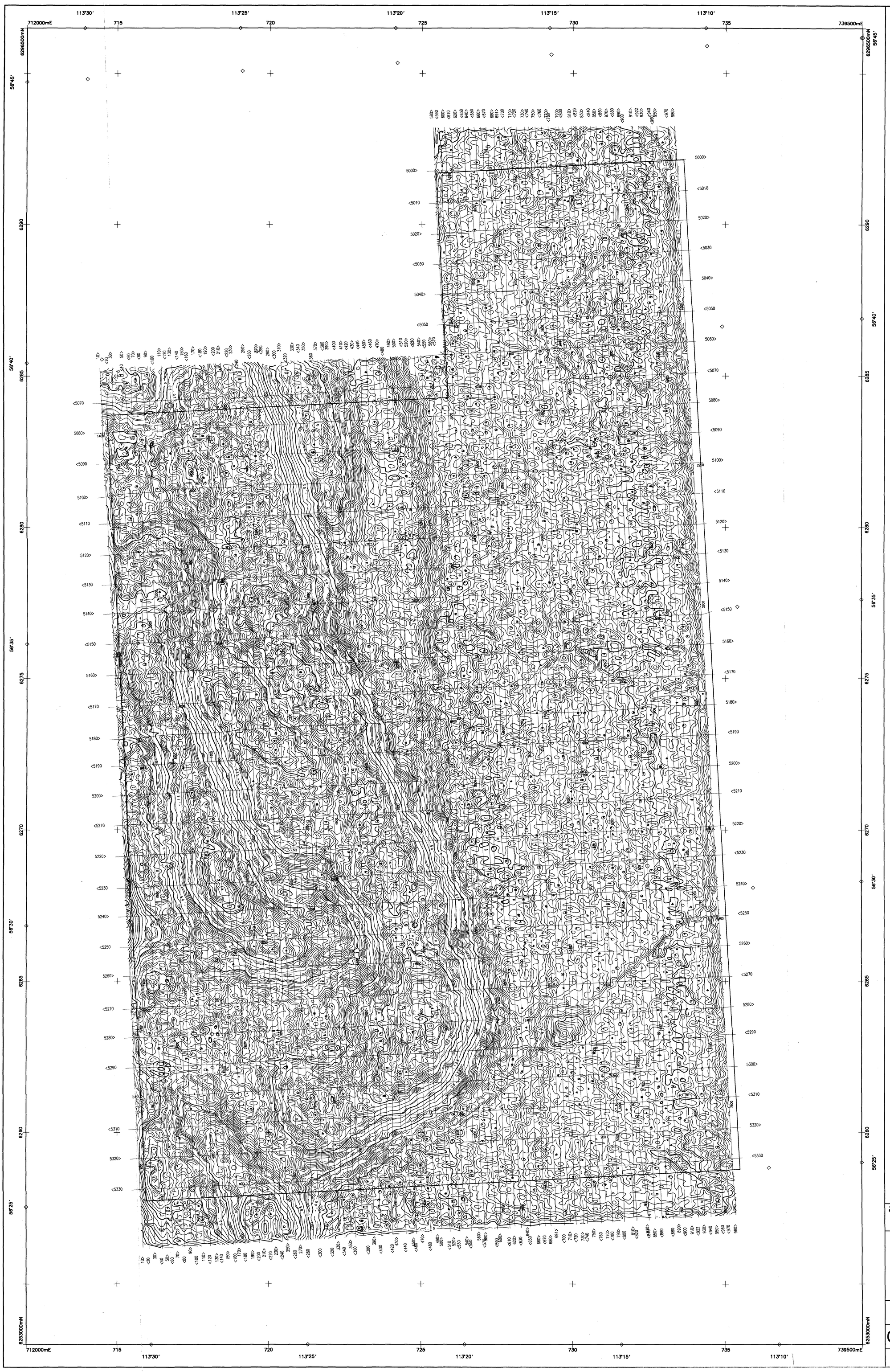
Total Magnetic Field Contours
OTTER LAKE, ALBERTA

Surveyed by
SPECTRA EXPLORATION
Calgary, CANADA

Data Compiled and Plotted by
CGI CONTROLLED GEOPHYSICS Inc.
Thornhill, CANADA

Date: December, 1997

CGI Project # 6160



Scale 1:50000

1000 0 1000 2000 3000 4000
(metres)
2500 0 2500 5000 7500 10000 12500 15000
(feet)

OPERATIONAL INFORMATION

CONFIGURATION: TAIL STINGER
SENSOR: SCINTREX CESIUM VAPOUR
FLIGHT PLAN: 200 METRE LINE SPACING
NOMINAL TERRAIN CLEARANCE: 100 METRES

NAVIGATION: GLOBAL POSITIONING SYSTEM (G P S)

50 metres Grid Cell Size
Contour Intervals (nT/m)

0.005
0.025
0.100
0.500

PLATE III

FROM NON-CULTURE-EDITED DATA SET

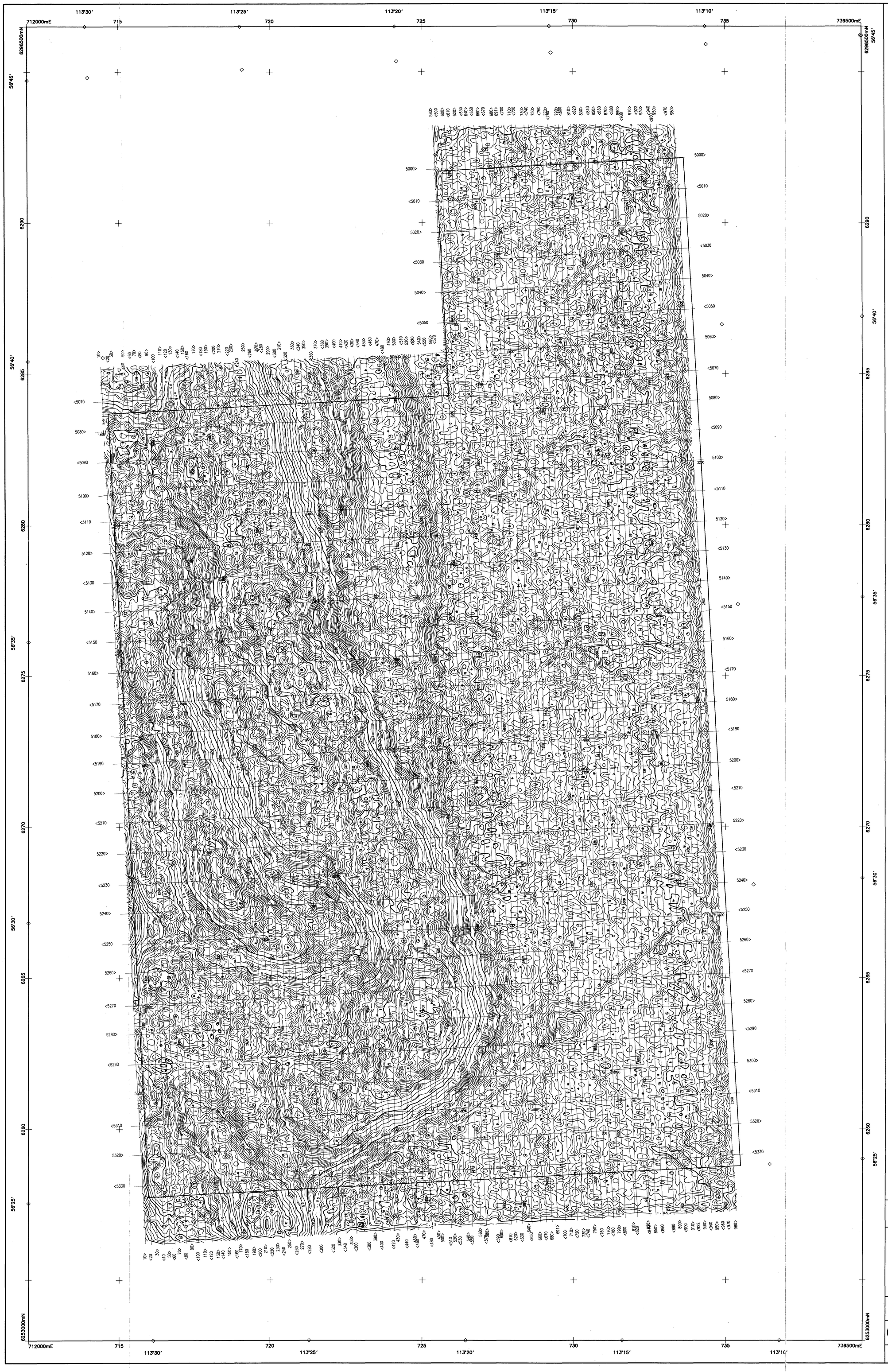
SIDON INT'L ~~MONTELLO~~ RESOURCES LTD.

Vertical Gradient Contours
OTTER LAKE, ALBERTA

Surveyed by
SPECTRA EXPLORATION
Calgary, CANADA

Data Compiled and Plotted by
CGI CONTROLLED GEOPHYSICS Inc.
Thornhill, CANADA

Date: December, 1997 | CGI Project # 6160



Scale 1:50000

1000 0 1000 2000 3000 4000
(metres)

2500 0 2500 5000 7500 10000 12500 15000
(feet)

OPERATIONAL INFORMATION

CONFIGURATION: TAIL STINGER
SENSOR: SCINTREX CESIUM VAPOUR
FLIGHT PLAN: 200 METRE LINE SPACING
NOMINAL TERRAIN CLEARANCE: 100 METRES

NAVIGATION: GLOBAL POSITIONING SYSTEM (G P S)

50 metres Grid Cell Size
Contour Intervals (nT/m)

0.005
0.025
0.100
0.500

PLATE III

FROM NON-CULTURE-EDITED DATA SET

SIDON INT'L ~~MONTELLO~~ RESOURCES LTD.

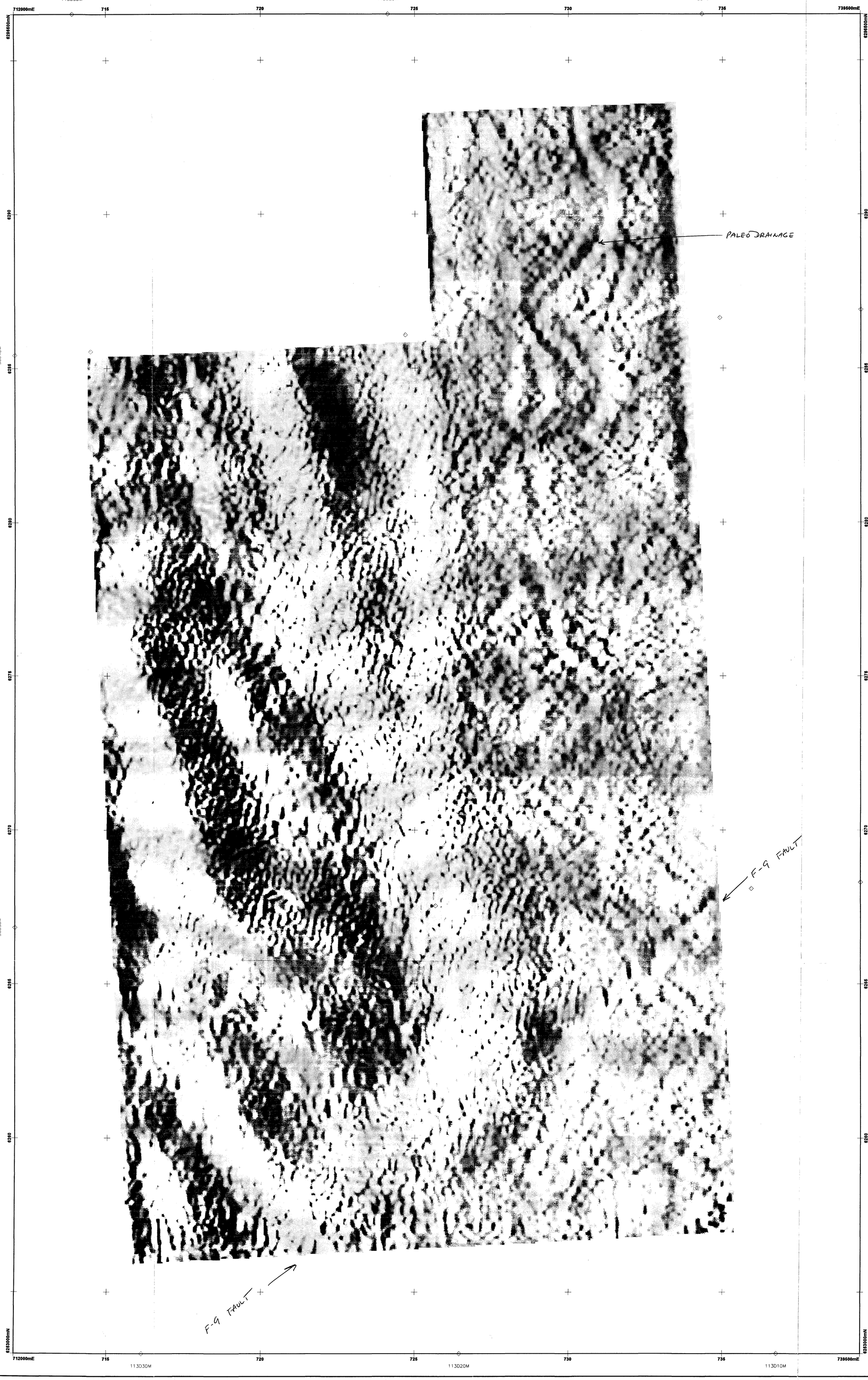
Vertical Gradient Contours

OTTER LAKE, ALBERTA

Surveyed by
SPECTRA EXPLORATION
Calgary, CANADA

Data Compiled and Plotted by
CGI *CONTROLLED* GEOPHYSICS Inc.
Thornhill, CANADA

Date: December, 1997 | CGI Project # 6160



Scale 1:50000

1000 0 1000 2000 3000 4000
(metres)
2500 0 2500 5000 7500 10000 12500 15000
(feet)

OPERATIONAL INFORMATION

CONFIGURATION: TAIL STINGER
SENSOR: SCINTREX CESIUM VAPOUR
FLIGHT PLAN: 200 METRE LINE SPACING
NOMINAL TERRAIN CLEARANCE: 100 METRES

NAVIGATION: GLOBAL POSITIONING SYSTEM (G P S)

50 metres Grid Cell Size
Artificial Illumination
Incl.=30 Decl.=90

PLATE IV

SIDON INTERNATONAL RES.

De-Cultured Vertical Gradient Shadowed Image
OTTER LAKE, ALBERTA

Surveyed by
SPECTRA EXPLORATION
Calgary, CANADA

Data Compiled and Plotted by
CGI CONTROLLED GEOPHYSICS Inc.
Thornhill, CANADA

Date: February, 1998 | CGI Project # 6160

PLATE V. 1:50,000 PLOT OF AEROMAGNETIC ANOMALIES SELECTED FROM ANALOG CHART RECORDS

— — = FAULT INTERPRETED FROM TOTAL FIELD AEROMAGNETICS

— — = APPROX. SIDON PERMIT BOUNDARIES

NON-CULTURE ANALOG ANOMALY PICK

(2 2 1 2 4 5 4 2 1)

WITH γ VALUE ON FLIGHT LINE FIDUCIAL (NAMED, IF ON SIDON)

LAKESIDE
TOPSIDER
TWO STEP
LONG SHOT
SHORTY
CHARLIE
STRETCH OUT
VALENTINE
BEAVER
PIPELINE
CHINOOK
FOREST
OFFSIDER
WELLSIDE
CARIBOU
ASPEN
TUNDRA
LITHOLOGIC CONTACT
CIRCLE POND
SURPRISE
LOOKALIKE
SOMBRERO
CORNER
SPLIT
SIDECLIMBER
OUT EAST
ONE SHOT
CREEKSIDE
RANGER
METO
SPOT
ANGLE
LOW BOY
EASTSIDE
OIL PATCH
CAN DO
WEST HILL
MAYBE
DARKHORSE
PINGO
HILLTOP
PROPELLER
OLYMPIC (V-DEEP)
AIRSTRIP
TOWER
F-9 FAULT
SLIM JIM
SOUTASIDE

Scale 1:50000

1000 0.0 1000 2000 3000

(meters)

SIDON INTERNATIONAL RESOURCES

ADJUSTED FLIGHT PATH
Projection Datum: Canada 1927

Note: The Original Clark 1866 Flight Path has been shifted 150m East.

CGI Controlled Geophysics Inc., Thornhill, CANADA

84 A/11

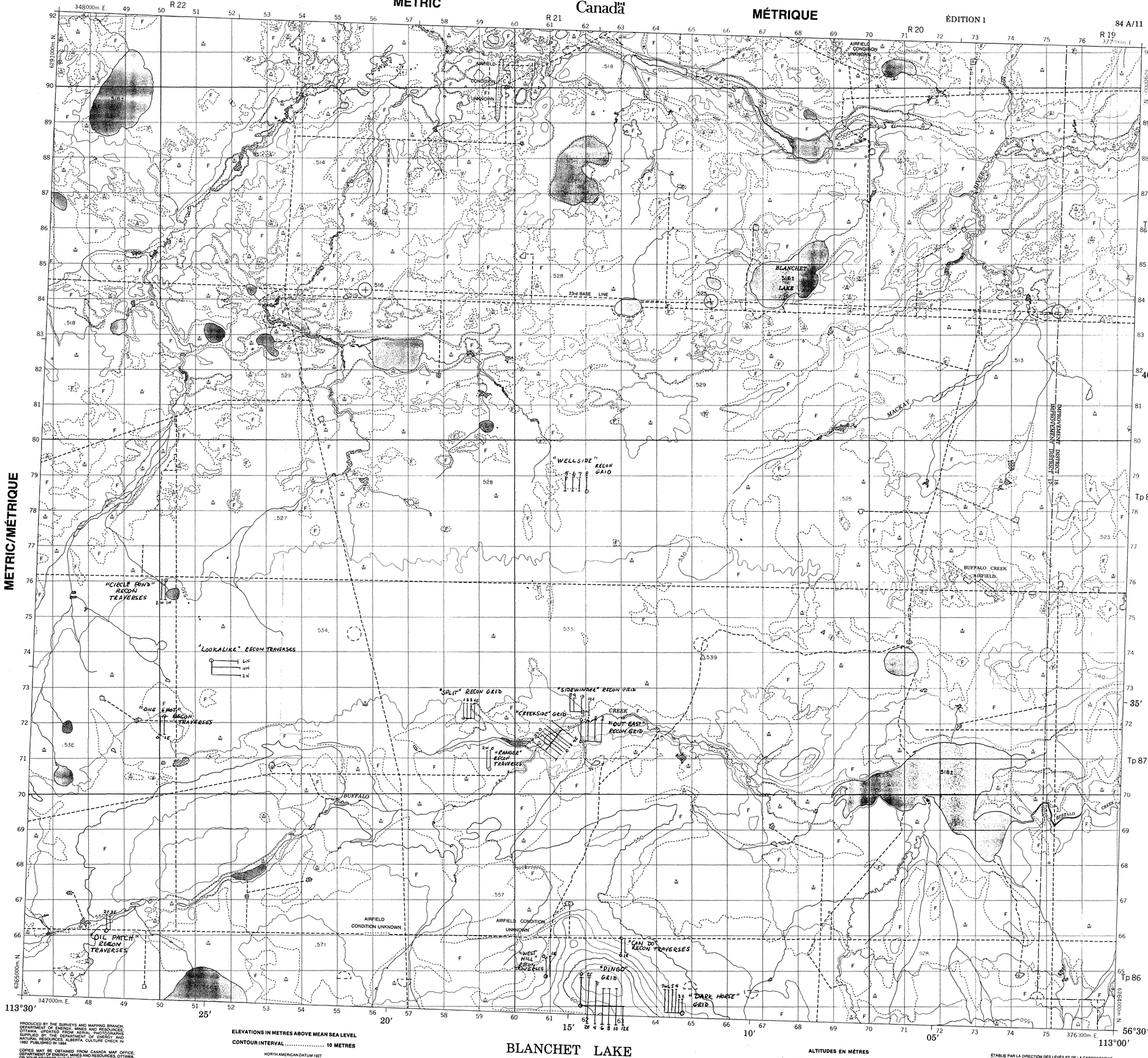
EDITION 1

METRIC Canada **MÉTRIQUE**

ÉDITION 1

84 A/11

METRIC/MÉTRIQUE



Military users, refer to this map as: / Référence de cette carte pour usage militaire:	SERIES A701 SÉRIE MAP 84 A/11 CARTE EDITION 1 MCE EDITION

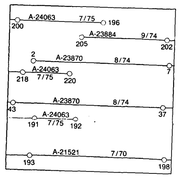
LEGEND - LÉGENDE

ROAD, HARD SURFACE, ALL WEATHER	ROUTE, SURFACE DURCIE, TOUTES SAISONS
ROAD, LOOSE SURFACE	ROUTE, SURFACE DE GRAVIER
CART TRACK, WINTER ROAD	CHEMIN DE CHARROI, ROUTE D'HIVER
TRAIL, CUT LINE, PORTAGE	SENTIER, PERCÉE OU PORTAGE
BUILT-UP AREA	AGGLOMÉRATION
RAILWAY; SIDING; STATION; STOP	CHEMIN DE FER; VOIE D'ÉVITEMENT; STATION; ARRÊT
BRIDGE	PONT
SEAPLANE BASE; SEAPLANE ANCHORAGE	BASE D'HYDRAVIONS; ANCRAGE D'HYDRAVIONS
HOUSE; BARN	MAISON; GRANGE
CHURCH; SCHOOL; POST OFFICE	ÉGLISE; ÉCOLE; BUREAU DE POSTE
TOWER; FIRE; COMMUNICATION	TOUR; FEU; COMMUNICATION
WELL; OIL, GAS; TANK; WATER	PUITS; PÉTROLE, GAZ; RÉSERVOIR; EAU
POWER TRANSMISSION LINE	LIGNE DE TRANSPORT D'ÉNERGIE
MINE; GRAVEL PIT	MINE; CARRIÈRE DE GRAVIER
CUTTING; EMBANKMENT	DÉBLAI; REMBLAI
INTERNATIONAL, PROVINCIAL BOUNDARY WITH MONUMENT	FRONTIÈRE INTERNATIONALE, LIMITE PROVINCIALE AVEC BORNE
PROVINCIAL BOUNDARY, UNSURVEYED	FRONTIÈRE PROVINCIALE, NON ARPENTÉE
COUNTY, DISTRICT BOUNDARY	LIMITE DE COMTÉ OU DE DISTRICT
TOWNSHIP, PARISH BOUNDARY	LIMITE DE CANTON, DE PAROISSE
MUNICIPALITY BOUNDARY	LIMITE DE MUNICIPALITÉ
RESERVE, SANCTUARY, PARK, ETC. BOUNDARY	LIMITE DE RÉSERVE, SANCTUAIRES, PARCS, ETC.
OUTLINED LANDMARK AREA BOUNDARY APPROXIMATE, ETC.	LIMITE DE SURFACE REPÉRE, LIMITE APPROXIMATIVE, ETC.
D.L.S. TOWNSHIP CORNER: SURVEYED; UNSURVEYED	COIN DE CANTON (A.T.C.): ARPENTÉ; NON ARPENTÉ
D.L.S. SECTION CORNERS	COINS DE SECTION (A.T.C.)
HORIZONTAL CONTROL POINT	POINT DE CONTRÔLE PLANIMÉTRIQUE
BENCH MARK WITH ELEVATION (365)	REPÈRE DE NIVELLEMENT AVEC COTE
SPOT ELEVATION, PRECISE (397)	POINT COTÉ, PRÉCIS
STREAM OR SHORELINE; INDEFINITE	COURS D'EAU OU RIVE; IMPRÉCIS
LAKE; INTERMITTENT LAKES	LAC; LACS INTERMITTENTS
FLOODED LAND	TERRAIN INONDÉ
MARSH; SWAMP (WOODED); STRING BOG	MARAIS; BOISE MARÉCAGEUX; FONDRIÈRE À FILAMENTS
DRY RIVER BED WITH CHANNELS	LIT DE RIVIÈRE ASSÉCHÉ AVEC CHENAUX
RAPIDS; FALLS; RAPIDS	RAPIDES; CHUTES; RAPIDES
FORESHORE FLATS, SAND IN WATER; ROCKS	ÉTRANS, SABLE SOUS L'EAU; ROCHES
TUNDRA: LAKES IN TUNDRA; POLYGONS (LT PG)	TOUNDRA: LACS EN TOUNDRA; POLYGONES DE TOUNDRA
PALSA BOG (PA)	FONDIÈRE DE PALSE
DAM; WHARF	BARRAGE; QUAI
ICEFIELD (GLACIER); MORAINE (GL M)	CHAMP DE GLACE (GLACIER); MORAINE
PINGO	PINGO
DITCH	FOSSÉ
CONTOURS (400)	COURBES DE NIVEAU
APPROXIMATE CONTOURS	COURBES DE NIVEAU APPROXIMATIVES
DEPRESSION CONTOUR	COURBE DE CUVETTE
CLIFF	FALAISE
SPOT ELEVATION, APPROXIMATE; LAND; WATER (965 590)	POINT COTÉ, APPROXIMATIF; SUR TERRE ;SUR L'EAU
ESKER	ESKER
SAND, SAND DUNES, RAISED BEACHES	SABLE, DUNES DE SABLE ; PLAGES SURÉLÉVÉES
HISTORIC SITE	LIEU HISTORIQUE
WOODED AREA, FOREST; CLEARED AREA (F C)	SURFACE BOISÉE, FORÊT, ESPACE DÉNUDÉ, CLAIRIÈRE

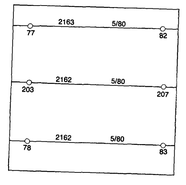
GLOSSARY - GLOSSAIRE

AIRFIELD	TERRAIN D'AVIATION
CONDITION UNKNOWN	CONDITION INCONNUE
23rd BASE LINE	23e LIGNE DE BASE

PHOTOGRAPHY COMPILATION — PHOTOGRAPHIE RESTITUTION

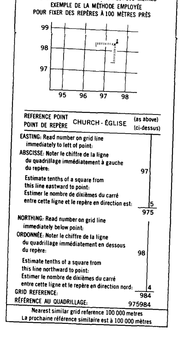


REVISION — REVISION



GRID ZONE DESIGNATION DÉSIGNATION DE LA ZONE DU QUADRILLAGE.	100 000 m SQUARE IDENTIFICATION IDENTIFICATION DU CARRÉ DE 100 000 m
12V	UT

EXAMPLE OF METHOD USED TO GIVE A REFERENCE TO NEAREST 100 METRES
EXEMPLE DE LA MÉTHODE EMPLOYÉE POUR FIXER DES REPÈRES À 100 MÈTRES PRÈS



ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 12
QUADRILLAGE DE MILLE MÈTRES
TRANSVERSE UNIVERSEL DE MERCATOR

84 A/13	84 A/14	84 A/15
84 A/12	84 A/11	84 A/10
84 A/5	84 A/6	84 A/7

The 1984 MAGNETIC BEARING is 24°25' (434 mils) EAST of GRID NORTH.

ANNUAL CHANGE DECREASING 14.0'

GRID NORTH is 1°53' (33 mils) WEST of TRUE NORTH for centre of map.

Le RÉPÈRE MAGNÉTIQUE en 1984 est à 24°25' (434 mils) à l'EST du NORD DU QUADRILLAGE.

VARIATION ANNUELLE DÉCROISSANTE 14.0'

Le NORD DU QUADRILLAGE est à 1°53' (33 mils) à l'OUEST du NORD GÉOGRAPHIQUE au centre de la carte.

MAP TOWN
10315 - 100 Ave. N.W.
Edmonton, AB T5J 4X4
Tel. 429-5500

PRODUCED BY THE SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES, OTTAWA. UPDATED FROM AERIAL PHOTOGRAPHS SUPPLIED BY THE DEPARTMENT OF ENERGY AND NATURAL RESOURCES, ALBERTA. CULTURE CHECK IN 1982. PUBLISHED IN 1984.

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DEPARTMENT OF ENERGY, MINES AND RESOURCES.

ELEVATIONS IN METRES ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL ..... 10 METRES

NORTH AMERICAN DATUM 1927

TRANSVERSE MERCATOR PROJECTION

INFORMATION CONCERNING BENCH MARKS AND HORIZONTAL SURVEY MONUMENTS CAN BE OBTAINED FROM GEODETIC SURVEY, SURVEYS AND MAPPING BRANCH, OTTAWA.

BLANCHET LAKE

ALBERTA

WEST OF FOURTH MERIDIAN — OUEST DU QUATRIÈME MÉRIDIEN

Scale 1:50 000 Échelle

Miles 1 — 0 — 1 — 2 — 3 Miles

Metres 1000 — 0 — 1000 — 2000 — 3000 — 4000 Metres

ALTITUDES EN MÈTRES

ÉQUIDISTANCE DES COURBES ..... 10 MÈTRES

SYSTÈME DE RÉFÉRENCE GÉODÉSIQUE NORD-AMÉRICAIN 1927

PROJECTION TRANSVERSE DE MERCATOR

POUR TOUT RENSEIGNEMENT CONCERNANT LES REPÈRES ET BORNES ALTIMÉTRIQUES, S'ADRESSER AUX LEVÉS GÉODÉSIQUES, DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, OTTAWA.

ÉTABLIE PAR LA DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, OTTAWA. MISE À JOUR À L'AIDE DE PHOTOGRAPHIES AÉRIENNES PROVENANT DU MINISTÈRE DE L'ÉNERGIE ET DES RESSOURCES NATURELLES, ALBERTA. VÉRIFICATION DES OUVRAGES EN 1982. PUBLIÉE EN 1984.

CES CARTES SONT EN VENTE AU BUREAU, DES CARTES DU CANADA, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, OTTAWA, OU CHEZ LE VENDEUR LE PLUS PRÈS.

© 1984, SA MAJESTÉ LA REINE DU CHEF DU CANADA
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES.

CONVERSION SCALE FOR ELEVATIONS
ÉCHELLE DE CONVERSION DES ALTITUDES

Metres 30 20 10 0 — 50 — 100 — 150 — 200 — 250 — 300 Mètres

Feet 100 50 0 — 100 — 200 — 300 — 400 — 500 — 600 — 700 — 800 — 900 — 1000 Pieds

PLATE VI. PLOT OF GROUND MAGNETIC SURVEY GRIDS

BLANCHET LAKE
84 A/11
EDITION 1 EDITION

Energy, Mines and Resources Canada — Énergie, Mines et Ressources Canada

84 A/6 EDITION 1 METRIC Canada MÉTRIQUE ÉDITION 1 84 A/6

R 23 R 22 R 21 R 20 R 19

347000m. E. 376000m. E.

6243000m. N. 6238000m. N.

56°30′ 25′ 20′ 15′ 10′ 05′ 56°15′

113°30′ 25′ 20′ 15′ 10′ 05′ 113°00′

Tp 86 Tp 85 Tp 84

"PROPELLER" GRID

baseline

"OLYMPIC" RECON TRAVERSE

AIRFIELD CONDITION : UNKNOWN

"TOWER" RECON GRID

"AIRSTRIP" RECON GRID

"SOUTHSIDE" RECON TRAVERSES

AIRFIELD CONDITION UNKNOWN

IMPROVEMENT DISTRICT 24

WOOD BUFFALO RIVER

BUFFALO RIVER

2ND BASE LINE

WOOD BUFFALO LAKE

LIVOCK RIVER

METRIC/MÉTRIQUE

Military users, refer to this map as: / Référence de cette carte pour usage militaire:	SERIES / SÉRIE A701
	MAP / CARTE 84 A/6
	EDITION / ÉDITION 1 MCE

LEGEND - LÉGENDE

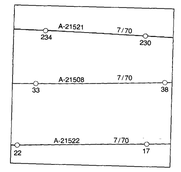
- ROAD, HARD SURFACE, ALL WEATHER ..... ROUTE, SURFACE DURCIE, TOUTES SAISONS
- ROAD, LOOSE SURFACE ..... ROUTE, SURFACE DE GRAVIER
- CART TRACK, WINTER ROAD ..... CHEMIN DE CHARROI, ROUTE D'HIVER
- TRAIL, CUT LINE, PORTAGE ..... SENTIER, PERCÉE OU PORTAGE
- BUILT-UP AREA ..... AGGLOMÉRATION
- RAILWAY: SIDING; STATION; STOP ..... CHEMIN DE FER: VOIE D'ÉVITEMENT; STATION; ARRÊT
- BRIDGE ..... PONT
- SEAPLANE BASE; SEAPLANE ANCHORAGE ..... BASE D'HYDRAVIONS; ANCRAGE D'HYDRAVIONS
- HOUSE; BARN ..... MAISON; GRANGE
- CHURCH; SCHOOL; POST OFFICE ..... ÉGLISE; ÉCOLE; BUREAU DE POSTE
- TOWER; FIRE; COMMUNICATION ..... TOUR; FEU, COMMUNICATION
- WELL: OIL, GAS; TANK; WATER ..... PUITS: PÉTROLE, GAZ; RÉSERVOIR: EAU
- POWER TRANSMISSION LINE ..... LIGNE DE TRANSPORT D'ÉNERGIE
- MINE; GRAVEL PIT ..... MINE; CARRIÈRE DE GRAVIER
- CUTTING; EMBANKMENT ..... DÉBLAI; REMBLAI
- INTERNATIONAL, PROVINCIAL BOUNDARY WITH MONUMENT ..... FRONTIÈRE INTERNATIONALE, LIMITE PROVINCIALE AVEC BORNE
- PROVINCIAL BOUNDARY, UNSURVEYED ..... FRONTIÈRE PROVINCIALE, NON ARPENTÉE
- COUNTY, DISTRICT BOUNDARY ..... LIMITE DE COMTÉ OU DE DISTRICT
- TOWNSHIP, PARISH BOUNDARY ..... LIMITE DE CANTON, DE PAROISSE
- MUNICIPALITY BOUNDARY ..... LIMITE DE MUNICIPALITÉ
- RESERVE, SANCTUARY, PARK, ETC. BOUNDARY ..... LIMITE DE RÉSERVE, SANCTUAIRES, PARCS, ETC.
- OUTLINED LANDMARK AREA,BOUNDARY APPROXIMATE, ETC. ..... LIMITE DE SURFACE REPÉRE, LIMITE APPROXIMATIVE, ETC.
- D.L.S. TOWNSHIP CORNER: SURVEYED; UNSURVEYED ..... COIN DE CANTON (A.T.C.): ARPENTÉ; NON ARPENTÉ
- D.L.S. SECTION CORNERS ..... COINS DE SECTION (A.T.C.)
- HORIZONTAL CONTROL POINT ..... POINT DE CONTRÔLE PLANIMÉTRIQUE
- BENCH MARK WITH ELEVATION ..... 365 → REPÈRE DE NIVELLEMENT AVEC COTE
- SPOT ELEVATION, PRECISE ..... .397 ..... POINT COTÉ, PRÉCIS
- STREAM OR SHORELINE; INDEFINITE ..... COURS D'EAU OU RIVE; IMPRÉCIS
- LAKE; INTERMITTENT LAKES ..... LAC; LACS INTERMITTENTS
- FLOODED LAND ..... TERRAIN INONDÉ
- MARSH; SWAMP (WOODED); STRING BOG ..... MARAIS; BOISÉ MARÉCAGEUX; FONDRIÈRE À FILAMENTS
- DRY RIVER BED WITH CHANNELS ..... LIT DE RIVIÈRE ASSÉCHÉ AVEC CHENAUX
- RAPIDS; FALLS; RAPIDS ..... RAPIDES; CHUTES; RAPIDES
- FORESHORE FLATS, SAND IN WATER; ROCKS ..... ESTRANS, SABLE SOUS L'EAU; ROCHES
- TUNDRA: LAKES IN TUNDRA; POLYGONS ..... LT PG ..... TOUNDRA: LACS EN TOUNDRA; POLYGONES DE TOUNDRA
- PALSA BOG ..... PA ..... FONDRIÈRE DE PALSE
- DAM; WHARF ..... BARRAGE; QUAI
- ICEFIELD (GLACIER); MORAINE ..... GL M ..... CHAMP DE GLACE (GLACIER); MORAINE
- PINGO ..... PINGO
- DITCH ..... FOSSÉ
- CONTOURS ..... 400 ..... COURBES DE NIVEAU
- APPROXIMATE CONTOURS ..... COURBES DE NIVEAU APPROXIMATIVES
- DEPRESSION CONTOUR ..... COURBE DE CUVETTE
- CLIFF ..... FALAISE
- SPOT ELEVATION, APPROXIMATE: LAND; WATER ..... .965 ..... .590 ..... POINT COTÉ, APPROXIMATIF: SUR TERRE ;SUR L'EAU
- ESKER ..... ESKER
- SAND; SAND DUNES, RAISED BEACHES ..... SABLE, DUNES DE SABLE ; PLAGES SURÉLEVÉES
- HISTORIC SITE ..... LIEU HISTORIQUE
- WOODED AREA, FOREST; CLEARED AREA ..... F C ..... SURFACE BOISÉE, FORÊT; ESPACE DÉNUDÉ, CLAIRIÈRE

GLOSSARY - GLOSSAIRE

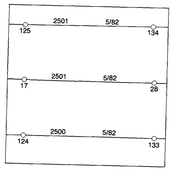
AIRFIELD CONDITION UNKNOWN	TERRAIN D'AVIATION CONDITION INCONNUE
22ND BASE LINE	22e LIGNE DE BASE

PHOTOGRAPHY PHOTOGRAPHIE

COMPILATION RESTITUTION



REVISION REVISION



GRID ZONE DESIGNATION DÉSIGNATION DE LA ZONE DU QUADRILLAGE.	100 000 m SQUARE IDENTIFICATION IDENTIFICATION DU CARRÉ DE 100 000 m
12V	UT

EXAMPLE OF METHOD USED TO GIVE A REFERENCE TO NEAREST 100 METRES
EXEMPLE DE LA MÉTHODE EMPLOYÉE POUR FIXER DES REPÈRES À 100 MÈTRES PRÈS

REFERENCE POINT / POINT DE REPÈRE	CHURCH - ÉGLISE	(as above) (ci-dessus)
EASTING: Read number on grid line immediately to left of point. ABSCISSE: Noter le chiffre de la ligne du quadrillage immédiatement à gauche du repère.		97
Estimate tenths of a square from this line eastward to point. Estimer le nombre de dixièmes du carré entre cette ligne et le repère en direction est.		.5
		975
NORTHING: Read number on grid line immediately below point. ORDONNÉE: Noter le chiffre de la ligne du quadrillage immédiatement en dessous du repère.		98
Estimate tenths of a square from this line northward to point. Estimer le nombre de dixièmes du carré entre cette ligne et le repère en direction nord.		.4
		984
GRID REFERENCE. RÉFÉRENCE AU QUADRILLAGE.		975984

Nearest similar grid reference 100 000 metres
La prochaine référence similaire est à 100 000 mètres

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 12
QUADRILLAGE DE MILLE MÈTRES
TRANSVERSE UNIVERSEL DE MERCATOR

84 A/12	84 A/11	84 A/10
84 A/5	84 A/6	84 A/7
84 A/4	84 A/3	84 A/2

The 1984 MAGNETIC BEARING is 24°14′ (431 mils) EAST of GRID NORTH.

ANNUAL CHANGE DECREASING 13.9′

GRID NORTH is 1°52′ (33 mils) WEST of TRUE NORTH for centre of map.

Le REPÈRE MAGNÉTIQUE en 1984 est à 24°14′ (431 mils) à l'EST du NORD DU QUADRILLAGE.

VARIATION ANNUELLE DÉCROISSANTE 13.9′

Le NORD DU QUADRILLAGE est à 1°52′ (33 mils) à l'OUEST du NORD GÉOGRAPHIQUE au centre de la carte.

MAP TOWN
10315 - 100 Ave. N.W.
Edmonton, AB T5J 4X4
Tel. 429-2600

PRODUCED BY THE SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES, OTTAWA. UPDATED FROM AERIAL PHOTOGRAPHS NOT BY THE DEPARTMENT OF ENERGY AND NATURAL RESOURCES, ALBERTA. CULTURE CHECK IN 1982. PUBLISHED IN 1984.

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DEPARTMENT OF ENERGY, MINES AND RESOURCES.

ELEVATIONS IN METRES ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL ..... 10 METRES

NORTH AMERICAN DATUM 1927

TRANSVERSE MERCATOR PROJECTION

INFORMATION CONCERNING BENCH MARKS AND HORIZONTAL SURVEY MONUMENTS CAN BE OBTAINED FROM GEODETIC SURVEY, SURVEYS AND MAPPING BRANCH, OTTAWA.

WOOD BUFFALO LAKE

ALBERTA

WEST OF FOURTH MERIDIAN OUEST DU QUATRIÈME MÉRIDIEN

Scale 1:50 000 Échelle

Miles 1 0 1 2 3 Milles

Mètres 1000 0 1000 2000 3000 4000 Mètres

ALTITUDES EN MÈTRES

ÉQUIDISTANCE DES COURBES ..... 10 MÈTRES

SYSTÈME DE RÉFÉRENCE GÉODÉSIQUE NORD-AMÉRICAIN 1927

PROJECTION TRANSVERSE DE MERCATOR

POUR TOUT RENSEIGNEMENT CONCERNANT LES REPÈRES ET BORNES ALTIMÉTRIQUES, S'ADRESSER AUX LEVÉS GÉODÉSIQUES, DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, OTTAWA.

ÉTABLIE PAR LA DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, OTTAWA. MISE À JOUR À L'AIDE DE PHOTOGRAPHIES AÉRIENNES NON PAR LE MINISTÈRE DE L'ÉNERGIE ET DES RESSOURCES NATURELLES, ALBERTA. VÉRIFICATION DES OUVRAGES EN 1982. PUBLIÉE EN 1984.

CES CARTES SONT EN VENTE AU BUREAU DES CARTES DU CANADA, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, OTTAWA, OU CHEZ LE VENDEUR LE PLUS PRÈS.

© 1984. SA MAJESTÉ LA REINE DU CHEF DU CANADA
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES.

CONVERSION SCALE FOR ELEVATIONS
ÉCHELLE DE CONVERSION DES ALTITUDES

Metres 30 20 10 0 50 100 150 200 250 300 Mètres

Feet 100 50 0 100 200 300 400 500 600 700 800 900 1000 Pieds

PLATE VII: PLOT OF GROUND MAGNETICS GRIDS

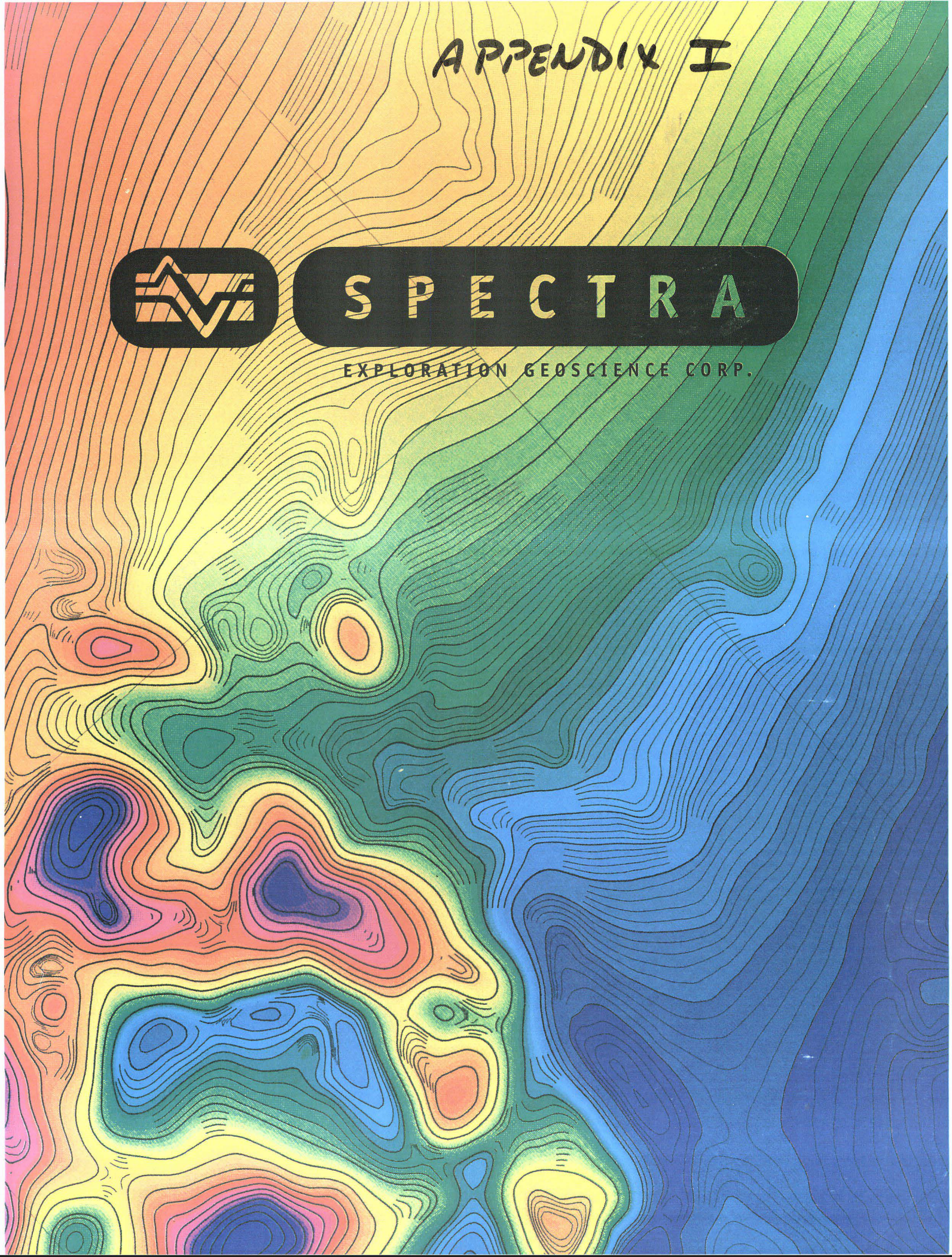
WOOD BUFFALO LAKE
84 A/6
EDITION 1 EDITION

Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada

APPENDIX I

SPECTRA

EXPLORATION GEOSCIENCE CORP.



OPERATIONS REPORT

OTTER LAKE
HIGH RESOLUTION AEROMAG SURVEY

for

SIDON INTERNATIONAL RESOURCES CORP.

by

SPECTRA EXPLORATION GEOSCIENCE CORP.
Calgary, Alberta

September 30, 1997

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2.0 SURVEY AREA	1
3.0 EQUIPMENT SPECIFICATIONS	1
3.1 AIRCRAFT	1
3.2 AIRBORNE GEOPHYSICAL EQUIPMENT	2
3.3 MAGNETIC BASE STATION	3
3.4 GPS BASE STATION	4
3.5 IN-FIELD COMPUTING FACILITIES	5
4.0 SURVEY SPECIFICATIONS	7
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4.2 TOLERANCES	7
4.3 NAVIGATION AND RECOVERY	7
4.4 OPERATIONAL LOGISTICS	8
5.0 DATA PROCESSING	9
6.0 SUMMARY	11

APPENDIX

SURVEY AREA PLAT MAP
SPECTRA SURVEY AIRCRAFT; C-FZHG
SUMMARY OPERATIONS REPORTS - WEEKS 1 and 2
C-FZHG FIELD OPERATIONS REPORTS
QUANTEC RELEASE LETTER
SIDON OTTER LAKE TIE AND TRAVERSE LINE GRID QC REPORT
OTTER LAKE LINE PLOT
LINE LISTING FOR OTTER LAKE LEVELLING
OTTER LAKE COLOUR PLOT - TMI, SURVEY LINES
OTTER LAKE COLOUR PLOT - RADAR ALTITUDE, SURVEY LINES
OTTER LAKE COLOUR PLOT - GPSZ TOPO MAP FROM SURVEY LINES

1.0 INTRODUCTION

This report describes the specifications and operations of an airborne geophysical survey carried out for SIDON INTERNATIONAL RESOURCES CORP., having an office in the city of Everett, Washington. The survey was performed by Spectra Aviation Services Corp., a wholly owned subsidiary of Spectra Exploration Geoscience Corp. located at 2610, 520 - 5th Avenue SW, Calgary, Alberta T2P 3R7. Telephone (403) 777-9280 and fax (403) 777-9289.

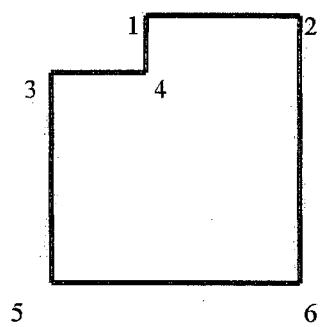
The purpose of a survey of this type is to acquire high resolution, high sensitivity aeromagnetic data in order to map both the near surface and basement rocks and structures in the survey area according to their magnetic signatures. The end result of the processing was to provide detailed maps to assess the area for anomalies and magnetic features pertaining to potential Kimberlite bodies.

To achieve this purpose the survey area was systematically traversed by an aircraft carrying geophysical instruments along parallel flight lines (traverses) spaced at even intervals in a north-south alignment at 200 meters, with tie-lines flown normal to the traverses spaced at 1000m (aligned so as to intersect the regional geology and structure in a way to provide the optimum contour patterns of geophysical data). The flying height was 100 meters above the terrain surface.

2.0 SURVEY AREA

The survey area is located in north-central Alberta, and is bounded by the following latitude/longitude coordinates:

1) N56° 43' / 113° 19W
2) N56° 43' / 113° 11W
3) N56° 39' / 113° 30W
4) N56° 39' / 113° 19W
5) N56° 25' / 113° 30W
6) N56° 25' / 113° 11W



3.0 EQUIPMENT SPECIFICATIONS

3.1 AIRCRAFT

The survey was carried out using Spectra's Piper Navajo PA31-310 aircraft, registration C-FZHG, which carries a high sensitivity magnetometer and full on-board real time compensation recording computer, and related equipment. It is a twin engine aircraft with full avionics and GPS (real time).

The aircraft has been extensively modified to support a tail stinger and a VLF-EM assembly. Considerable effort has been made to remove all ferruginous materials near the sensors and to ensure that the aircraft electrical system does not create any noise. With these modifications this aircraft represents one of the quietest magnetic platforms in the industry with a figure of merit of approximately 8nT uncompensated and 0.80 nT compensated at this survey location using G.S.C. standards.

The aircraft is owned and operated by Spectra Aviation Services Corp. under full M.O.T approval and certification for specialty flying including airborne geophysical surveys. The aircraft is maintained at base

operations by a regulatory AMO Facility, Baker Aviation Inc. and in the field by a Spectra Aviation Services Corp. AME in association with Baker Aviation, AMO.

3.2 AIRBORNE GEOPHYSICAL EQUIPMENT

The airborne geophysical system has one high sensitivity, cesium vapor magnetometer. Ancillary support equipment include tri-axial fluxgate magnetometer, video camera, video recorder, radar altimeter, barometric altimeter, GPS receiver and a navigation system which includes a left/right indicator and a screen showing survey area with real time flight path. All data is collected and stored by the data acquisition system. The following provides the detailed equipment specifications.

Cesium Vapor Magnetometer:

Model	CS-2
Manufacturer	Scintrex
Resolution	0.001 nT counting @ 0.1 per second
Sensitivity	+/-0.005 nT
Dynamic Range	15,000 to 100,000 nT
Fourth Difference	0.02 nT

Tri-Axial Magnetic Field Sensor (for compensation, mounted in the forepart of the tail stinger):

Model	MAG-03MC
Manufacturer	Bartington Instruments Ltd.
Internal Noise	at 1 Hz - 1 kHz; 0.6 nT rms
Bandwidth	0 to 1 kHz maximally flat, -12 dB/octave roll off beyond 1 kHz
Frequency Response	1 HZ - 100 Hz: +/- 0.5%
	100 Hz - 500 Hz: +/- 1.5%
	500 Hz - 1 kHz: +/- 5.0%
Calibration Accuracy:	+/- 0.5%
Orthogonality	+/- 0.5% worst case
Package Alignment	+/- 0.5% over full temperature range
Scaling Error	absolute: +/= 0.5%
	between axes: +/- 0.5%

Video Camera (camera mounted in belly of aircraft):

Model	VDC-2982 (colour)
Manufacturer	Sanyo
Serial Number	698000-30
Specifications	1/2", 470 hr, 1.3LX. 12VDC, C/CS,EI/ES, backlite comp
Lens	Rainbow, 2/3", 4.87 mm, F1.8-360, auto iris,

Video Recorder (strapped to computer rack/floor plate):

Model	AG 2400 (commercial grade)
Manufacturer	Panasonic
Serial Number	C8TA00281

Radar Altimeter:

Model	KA-131, KRA-10A
Manufacturer	King
Serial Number	071-1114-01, 066-1061-03
Accuracy	5% up to 2,500 feet
Calibrate Accuracy	1%
Output	Analogue for pilot; Converted to digital for data acquisition

Barometric Altimeter:

Model	LX18001AN
Manufacturer	Sensym
Source	Coupled to aircraft pitot static system

Differential GPS Receiver (# 511 aircraft certified antenna mounted on top of the cabin roof):

Model	Novatel Card for magnetic system; King KLN-89B for pilot (interfaced)
Manufacturer	Novatel
Serial Number	GPS 511
Type	Continuous tracking, L1 frequency, C/A code (SPS), 12 channel (independent)
Position Sensitivity	once per second
Accuracy	position (SA implemented) 100 meters, position (no SA) 30 m, velocity 0.1 knot, time recovery 1 pps, 100 nsec pulse width
Data Recording	all GPS data and positional data logged by PDAS 1000

Navigation Interface (with pilot and operator readouts):

Model	PNAV 2001
Manufacturer	Picodas Group Inc.
Data Input	Real time processing of GPS output data
Pilot Readout	Left/Right indicator
Operator Readout	Screen modes: map, survey and line
Data Recording	All data recorded in real time by PDAS 1000

Data Acquisition System :

Model	PDAS 1000
Manufacturer	Picodas Group Inc.
Operating System	MS-DOS
Microprocessor	80486dx - 66 CPU
Coprocessor	Intel 8048dx
Memory	On board up to 8 MB, page interleaving, shadow RAM for BIOS, support EMS 4.0
Clock	real time; hardware implementation of MC14618 in the integrated peripherals controller
I/O Slots	5 AT and 3 PC compatible slots
Display	Electro-luminscent 640x400 pixels
Graphic Display	Scrolling analog chart simulation with up to 5 windows operator selectable; freeze display capability to hold image for inspection
Recording Media	Standard 540 Mbyte hard disk with extra shock mounts; Standard 1.44 Mbyte floppy disk; Standard tape backup
Sampling	Selectable for each input type; 1, 0.5, 0.25, 0.2 or 0.1 seconds
Inputs	12 differential analog input with 16 bit resolution
Serial Ports	2 RS-232C (expandable)
Parallel Ports	Ten definable 8 bit I/O; Two definable 8 bit outputs

The PDAS 1000 also contains the magnetometer processor boards, one for each cesium vapor magnetometer installed (as we have the capability to record from wing tip magnetometers)

Model	PCB
Manufacturer	Picodas Group Inc.
Input Range	20,000 - 100,000 nT
Resolution	0.001 nT
Bandwidth	0.7, 1 or 2 Hz

Microprocessor	TMS 9995
Firmware	8 Kbit EPROM board resident
Internal Crystal	18,432 kHz
Absolute Crystal Accuracy	<0.01%
Host Interfacing	8 Kbyte dual port memory
Address Selection	Within 20 bit addressing in 8 Kbyte software selectable steps
Input Signal	TTL, CMOS, Open collector compatible or sine wave with decoupler
Input Impedance	TTL>1KOhm

Magnetic compensation for aircraft and heading effects is done in real time. Raw magnetic values are also stored and thus if desired, compensation with different variables can be run at a later time.

Other Boards:

Analog Processor	PCB - provides separate A/D converter for each analog input with no multiplexing; each channel is sampled at a rate of 1,000 samples per second with digital processing applied.

Power Supplies:

1) PC6B converter to convert the 13.75 volt aircraft power to 27.5 volts DC.
2) Power Distribution Unit manufactured by Picodas Group Inc. interfaces with the aircraft power and provides filtered and continuous power at 13.75 and 27.5 vDC to all components.
3) The PDAS-1000A contains a 32 volt DC cesium sensor switching power supply for the cesium vapor magnetometers in conjunction with real time magnetometer compensation; also enables interfacing the fluxgate magnetometer and the barometric altimeter; also provides clean power for radar altimeter and ancillary equipment (PC notebook, printer)

3.3 MAGNETIC BASE STATION

High sensitivity base station data are provided by a cesium vapor magnetometer, data logging onto a PC 486sx notebook and time synchronization with ground GPS receiver.

Magnetic Sensor:

identical to magnetometer in aircraft

Magnetic Processor:

Model	MEP-710 by Picodas Group Inc.
Input range	20,000 - 100,000 nT
Resolution	0.001 nT
Resolution (fdd)	1 pt
Bandwidth	0.7, 1 or 2 Hz
Microprocessor	TMS 9995
Firmware	8 Kbit EPROM board resident
Internal Crystal	18,432 kHz
Absolute Crystal Accuracy	<0.01%
Host Interfacing	8 Kbyte dual port memory
Address Selection	within 20 bit addressing in 8 Kbyte software selectable steps
Input Signal	TTL, CMOS, Open collector compatible or sine wave with decoupler
Input Impedance	TTL> 1kohm
Clock Stability	2 ppm per year
Absolute accuracy correction	+/- 999x10e-6

Logging Software:

Logging software by Picodas Group Inc. version 5.02 to IBM compatible PC with RS 232 input; supports real time graphics, automatic startup, compressed data storage, selectable start/stop times, automatic disk swapping, plotting of data to screen or printer at user selected scales, and fourth digital difference and diurnal quality flags set by user.

3.4 GPS BASE STATION

Ground GPS data was collected to perform post flight differential correction to the flight path. The ground GPS base station equipment is described below:

Model	Novatel Card
Manufacturer	Novatel
Type	Continuous tracking, L1 frequency, C/A code (SPS), 10 channel (independent)
Position Update	once per second
Accuracy	with SA implemented 100 meters, no SA 30 meters, velocity 0.1 knot, time recovery 1 pps, 100 nsec pulse width
Data Recording	all GPS raw and positional data logged by PDAS 1000

3.5 IN-FIELD COMPUTING FACILITIES

The following equipment was supplied for infield preliminary processing including base station logging and GPS differential calculations:

- one 266MHz and two 486DX/66 desk-tops, and two 386SX/25 notebooks, External Colorado tape drive, writeable CD.
- one color and two black and white printers

Software included C3NAV by Picodas Group Inc. for GPS differential corrections, Oasis suite of software by Geosoft Inc. to provide binary database functions, tie line levelling, mapping and imaging.

4.0 SURVEY SPECIFICATIONS

4.1 LINES AND DATA

Survey area coverage	survey lines	2953.6 line km (98 lines)
	tie lines	590.4 km (34 ties)
	total	3544 line km
Line Direction	360 degrees azimuth	
Line Interval	200 meters	
Tie Line Interval	1.0 kilometers (1000 meters) - flown orthogonal to survey lines	
Terrain Clearance	100 meters, drape mode	
Average ground speed	70-80 meters/second	
Data point interval:	Magnetic: 7-8 meters relative ground spacing per sample point	

4.2 TOLERANCES

Line spacing: Any gaps wider than 10% of the nominal line spacing for a distance of more than 12 kilometers. Also at no point shall the traverse or control lines deviate more than +/- 100 meters from the pre-plot line locations.

Terrain clearance: In general the true flight altitude must be less than +/- 15 meters for a distance of over 5 kilometers from the norm drape level of the survey. This survey has specific requirements with regard to altitude control; the critical element is the difference in altitude

between the survey line and the control line, referred to as elevation misties. The misties must be less than +/-10 meters absolute.

Diurnal magnetic variation: A maximum deviation of +/- 2.50 nT from a curvilinear mean within the time span required to acquire 10 line kilometers of data at the specified minimum sampling interval.

4.3 NAVIGATION AND RECOVERY

The satellite navigation system was used to ferry to the survey site and to survey along each line using latitude/longitude coordinates. The coordinates of the survey outline for navigation purposes and flight path recovery were supplied by the client.

The navigation accuracy is variable depending on the number and condition of the satellites, however it is generally less than twenty five meters and typically in the ten to fifteen metre range. Post flight differential correction of the flight path, which corrects for satellite range errors, improves the accuracy of the flight path recovery to approximately within one to three meters.

The navigational and flight path recovery positioning is based on the 1:50,000 NTS maps which are NAD 1927. The datum shift from WGSS84 to local is North American 1927, Canada, Clarke 1866.

A video camera recorded the ground image along the flight path. A video screen in the cockpit enabled the operator to monitor the accuracy of the flight path during the survey. This system also provided a backup system and verification for flight path recovery.

4.4 OPERATIONAL LOGISTICS

The main base of operations with the base station magnetometer and GPS equipment was at Peace River, Alberta, adjacent to the Highland helicopter hanger (at the Peace River airport). The coordinates for the base station were: 56^0 13' 47.94"N, 117^0 27; 2.5"W; 556m ASL.

The crew stayed at the Peace Valley Inn.

The crew consisted of:
Mark Watts - Field Processing Geophysicist
Simon Watson - Senior Survey Pilot
Kim Brown - Survey Pilot
Laura Hamilton - Equipment Operator
Dave Mortenson - Aircraft Mechanical Engineer

The survey crew arrived in Peace River (under a separate project) ; the first flight was on August 5, 1997. The next survey flight was on August 6, with a series of acqiusition flights from Ausust 10 with the surveying completed on August 13, 1997. The weather was fair to good throughout the survey.

There were a total of 9 flights, including compensation, scrubbed, inspection and reflights. The figure of merit (FOM) was measured at 0.80 nT.

A specialized technique was used to provide a constant mean terrain clearance, such that the misties (elevation differences between the tie and survey lines) were kept to minimum and with contract specifications. The tie lines were flown first, processed, and the mean terrain clearances were gridded and contoured. From this data set a table was created of mean terrain clearances at all pre-planned intersections of the tie and survey lines. This table was used in flight by the operator to inform the pilot of the exact mean terrain clearance for each intersection 10 seconds before arriving at each intersection to allow specific

corrective action for each intersection (however, with the ground being quite flat, this did not pose too much of a problem).

Each line of data was presented in paper profile format displaying Rawmag, groundmag, noise, 4th difference RA, barometric altimeter, Lat./Long. These, with the digital review, were the basis for the data QC.

5.0 DATA PROCESSING

Initially in-field processing was performed by our field geophysicist (Mark Watts), checking on all parameters and procedures. Once a satisfactory level was achieved the geophysicist shipped the data to the office and Erwin Ebner, our technical consultant, downloaded the survey and GPS corrected data after each flight by use of an FTP site (and data written to CD). The preliminary in field processing during the survey consisted of the following:

1) Software program C3NAV (by Picodas) was applied to the base and aircraft GPS data in order to provide post-flight compensated GPS location of the flight path.
2) Program C3NAV2TBL (by Geosoft) to produce two table files (UTM-X -Y -Z, and LAT/LON)
3) Use BASEDUMP (Picodas on raw binary base (diurnal) magnetic data to create GNDMAG table.
4) Create job file database in OASIS (Geosoft) for airborne data and import corrected flight path and GNDMAG.
5) Edit GNDMAG channel to remove any occasional spikes and linearly interpolate across the gaps. (Occasionally we filter the GNDMAG with a low pass filter to remove high frequency near surface and local disturbances; this was specifically requested not to be performed).
6) Establish table of mean terrain clearances at intersection locations from tie line data to provide elevation guidance for survey line navigation. Grid differences in elevations at intersections of tie and survey lines to provide quality check on elevation control and tag any for reflight.
7) Edit flight path channels to remove any spikes and linearly interpolate gaps.
8) Edit RAWMAG channel to remove any spikes and linearly interpolate gaps.
9) Create new channel as RMAGDC = RAWMAG - GNDMAG + base constant.
10) Perform lag correction to RMAGDC channel: lag is 0.5 seconds
11) Perform tie line levelling using all the survey line data to level the tie lines
12) Perform survey line levelling using the leveled tie lines; final leveled channel is labeled LEVMAGDC
13) All data were viewed on the screen on a line by line basis using the interactive OASIS database to inspect for quality, required tolerances and data integrity.
14) Produce preliminary flight path map and gridded magnetic intensity map including shadowing.
15) Plot analog charts of RAWMAG and MAGDC in output format, for data quality.

Following quality control and de-mobilization, the data were subjected to more advanced level of processing and levelling as follows. The final levelling and inspection were carried out by a senior geophysicist (Erwin Ebner) and furthermore in Toronto by an independent consultant.

1) Plot survey line and tie line flight paths and profiles for quality control inspection.
2) Prepare grid of final field leveled tie line data and shadow it at low sun angle to check quality of tie line co-levelling.
3) Prepare grid of final leveled survey line data, shadow it at low sun angle and calculate a horizontal gradient grid, both used to check the quality of tie line level corrections.
4) In OASIS inspect raw, diurnal corrected and final leveled mag simultaneously on each line to determine cause of any poor tie line levelling. (Using LCT software, same steps were taken but LCT levelling software could not appropriately handle the gradient changes.)

5) Eliminate tie/survey intersections that are not useable due to excessive tie line diurnal noise and/or culture.
6) Eliminate duplicated data from reflights if required.
7) Prepare new levelling correction table and apply it.
8) Repeat steps 3) to 6) as often as is necessary to achieve highest quality data set.
9) Normally the noise and/or culture that interferes with the final product is filtered or edited; however in this case neither were performed as requested by Jim Genereux, Spectra, as detailed video-viewing and culture-editing was done on the entire dataset, with all non-geologic "spikes" removed (by Erwin Ebner).
10) Micro-level final total field grid to remove shall line level errors (this was not done in this survey).
11) Prepare Reduction to pole, selected band-pass and gradient filter maps at scale on the Total Field grid.
12) Contour and plot.
13) Data archived on Exabyte tape and on CD-ROM.

6.0 SUMMARY

An airborne high sensitivity, high resolution magnetic survey has been carried out at 100 metre terrain clearance, 200 metre line intervals and with data sample stations at 7 -8 metres along the lines. Tie lines were spaced at 1.0 kilometer. A high sensitivity base magnetic station recorded the diurnal activity throughout the survey and a base GPS station was used to correct range errors in the GPS flight path recovery. Airborne recorded data included one fully compensated magnetometer located in rear stinger, radar altimeter, barometric altimeter and all attendant GPS data. The magnetic data have been processed, gridded and provided on Exabyte tape format and CD-ROM. Cultural effects have been edited out.

SPECTRA EXPLORATION GEOSCIENCE CORP.

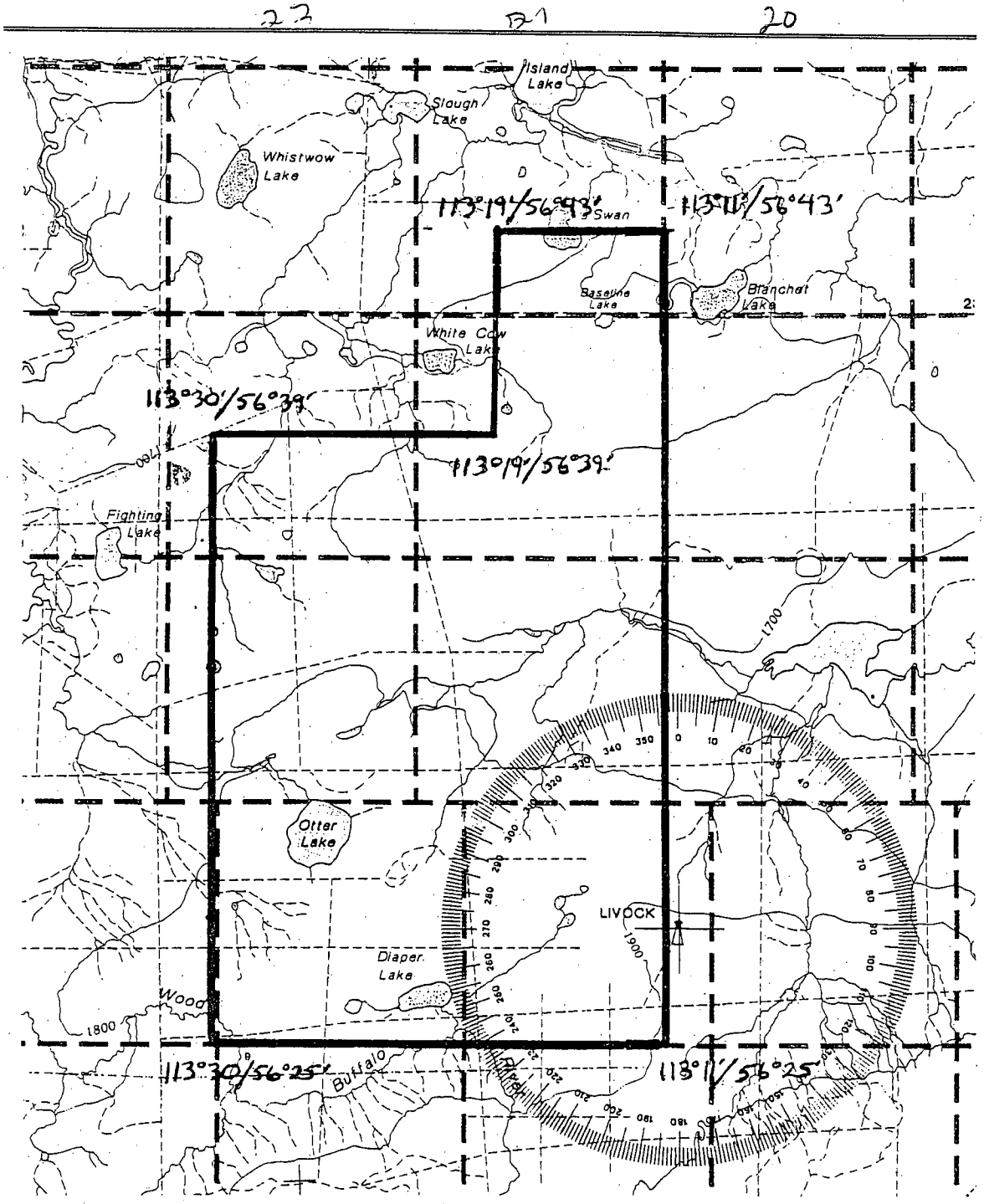
Jim Genereux
Managing Partner

APPENDIX:

SURVEY AREA PLAT MAP
SPECTRA SURVEY AIRCRAFT; C-FZHG
SUMMARY OPERATIONS REPORTS - WEEKS 1 and 2
C-FZHG FIELD OPERATIONS REPORTS
QUANTEC RELEASE LETTER
SIDON OTTER LAKE TIE AND TRAVERSE LINE GRID QC REPORT
OTTER LAKE LINE PLOT
LINE LISTING FOR OTTER LAKE LEVELLING
OTTER LAKE COLOUR PLOT - TMI, SURVEY LINES
OTTER LAKE COLOUR PLOT - RADAR ALTITUDE, SURVEY LINES
OTTER LAKE COLOUR PLOT - GPSZ TOPO MAP FROM SURVEY LINES

SCHEDULE "A"

attached to and forming part of an Agreement made as of the 30 day of june, 1997 between Spectra Exploration Geoscience Corp. and SIDON INTERNATIONAL RESOURCES CORP.



HRAM Survey area; Area highlighted green is area to be flown.

HA

a:\contract\sidoncon.doc

SPECTRA

Spectra Exploration Geoscience Corp.

Suite 2610, 520 - 5th Avenue S.W.
Calgary, Alberta
T2P 3R7

Phone (403) 777-9280
Fax (403) 777-9289
E-mail: spectra@nucleus.com

SPECTRA EXPLORATION GEOSCIENCE CORP. - "OTTER LAKE"
EXCLUSIVE
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AEROMAGNETIC SURVEY
WEEKLY REPORT #1 (AUGUST. 4 - AUGUST 10, 1997)

DATE	WEATHER	GEOMAG FIELD	FLIGHTS/ DATA ACQ.	COMMENTS
Monday, Aug. 4	OK	Active	C-FZHG NONE	No flights due to Active Diurnal.
Tuesday, Aug. 5	OK	Quiet	C-FZHG FLT 09138	Flew 308 LKM. Start dayof project. Jim Genereux on site.
Wednesday, Aug. 6	OK	Quiet to mod.	C-FZHG FLT 09139	Flew 270 LKM . Jim Genereux was on site for the start up.
Thursday, Aug. 7	Bad Strong winds	Active	C-FZHG NONE	No flight due to active diurnal and very strong winds.
Friday, Aug. 8	Low cloud rain/wind	Quiet	C-FZHG NONE	No flights due to weather low cloud, rain and wind.
Saturday, Aug. 9	OK	Active	C-FZHG NONE	No flights today due to active diurnal.
Sunday, Aug. 10	OK high winds	Active	C-FZHG FLT 09142/143	Flew 624 LKM. Landed in Fort McMurray to refuel.

PROJECT SIZE: 3600 LINE KM (Approx.)

TOTAL FLOWN TO DATE: Gross this week; 1182.0 line km. (Reflights)
Gross km 1182.0 to date (32.8 % of total).
Remaining 2418. line km

C-FZHG - Piper Navajo

OTHER: Had an average production week to start the survey. All lines should be flown for late Wednesday early Thursday.

SPECTRA

Spectra Exploration Geoscience Corp.

Suite 2610, 520 - 5th Avenue S.W.
Calgary, Alberta
T2P 3R7

Phone (403) 777-9280
Fax (403) 777-9289
E-mail: spectra@nucleus.com

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AEROMAGNETIC SURVEY
WEEKLY REPORT #2 (AUGUST. 11- AUGUST 17, 1997)

DATE	WEATHER	GEOMAG FIELD	FLIGHTS/ DATA ACQ.	COMMENTS
Monday, Aug. 11	OK	Active	C-FZHG FLT 09144/145	Active diurnal in AM. Flew 729 LKM in PM.
Tuesday, Aug. 12	Fog	Quiet	C-FZHG FLT 09146/147	Fog in AM, delayed flight, landed in Fort McMurray for the night. Flew 995 LKM in PM.
Wednesday, Aug. 13	OK	Active	C-FZHG FLT 09148	Flew 405 LKM in AM. Active diurnal in PM.
Thursday, Aug. 14	Rain showers, low cloud, high winds	Quiet	C-FZHG NONE	No flight today due to weather , processed data.
Friday, Aug. 15	Low cloud rain/wind	Quiet	C-FZHG NONE	No flights due to weather low cloud, rain and wind.
Saturday, Aug. 16	OK	Quiet	C-FZHG FLT 09149	Flew 231 LKM in reflights.
Sunday, Aug. 17	OK high winds	Quiet	C-FZHG FLT Z150	Flew to SPRINGBANK Airport. Survey complete.

PROJECT SIZE: 3544 LINE KM (Approx.)

TOTAL FLOWN TO DATE: Gross this week; 2362. line km. (including Reflights)
Gross km 3544.0 to date (100.0 % of total).
Remaining 0.00. line km

C-FZHG - Piper Navajo

OTHER: We will be processing plus undertaking cultural editing over the next 3 weeks or so. I will produce some prelim color plots as soon as I've got the data prelim leveled in advance of de-culturing.

SPECTRA

Spectra Aviation Services Corp., a division of Spectra Exploration Geoscience Corp., is pleased to announce the introduction of our new High Resolution Aeromagnetic (HRAM) service aircraft, to meet your survey requirements. This service combines a dedicated aircraft with a complete field data processing capability for optimum efficiency and quality control. Spectra's strong project management and industry-proven data products round out this unique service capability to the mining and petroleum exploration community.

PIPER PA-31 NAVAJO AIRCRAFT SPECIFICATIONS

Twin-engine turbocharged piston	
Service Ceiling	24,000 feet
Cruise Speed (ISA)	165 KTAS
	300 km/hr
Nominal Survey Speeds	120-165 KIAS
	220-300 km/hr
Cruise Endurance	7.5 hours

MTOW	6,730 lbs
Available Payload	1,500 lbs
Certified for Day, Night, IFR, VFR Operations	
Survey Avionics	Novatel GPS
	Radar Altimeter
Survey Endurance	6.7 hours

Special Modifications

Tailboom for magnetometer
Extended-range fuel tanks
Survey AC and DC Power Distribution Panel

Survey Configuration

Airborne Geophysics Surveys
Picodas PNAV-101 System
Scintrex CS-2 cesium sensor

C-FZHG

WEEKLY OPERATIONS REPORT

FIELD BASE ADDRESS	CREW MOTEL ADDRESS:	ROOM #'S
PEACE AIR LTD.	PEACE VALLEY INNS	316 - MARK
PEACE RIVER AIRPORT	PEACE RIVER, AB	313 - KIM
PH# 624 - 3060	PH: 624 - 2020	312 - LAURA
FAX#	FAX: 624 - 2099	307 - SAM

REPORTING PERIOD AUG. 4 TO AUG. 10/97
PROJECT NAME. 9709 TOTAL SIZE 3544 KM
PROD. THIS WK 1182 TOTAL TO DATE 1182 KM
COMPLETION % 33.3 %

1272 lkm → reflights on 9706
1182 lkm → new on 9709

DATE	FLIGHT NO.	FLT HOURS FERRY	PROD	OTHER	TOTAL	PROD. KM #	FLOWN	ACCEPTED	UNSERVICEABLITY A/C	EQUI	DIUR	WX	REMARKS
MONDAY	09135	1.2	1.9		3.1	7	(308)						Fog early a.m.; Flights went
AUG.4	09136	1.2	1.8		3.0	7	(324)						well.
TUESDAY	09137	1.0	1.4		2.4	9	(180)						Fog early a.m.; worked on
AUG.5	09138	1.2	2.6		3.8	20	308	Sutton					9706 reflights; started new
													grid (9709)
WEDNESDAY													Fog early a.m.; flew boss to
AUG.6	09139	1.8	1.7		3.5	12	240	Sutton					Red Earth.
	09140	1.0	1.9		2.9	5	(270)						
THURSDAY													Active diurnal in a.m.; bad
AUG.7	06141A		0	0.2	0.2	0	—				✓	✓	weather (strong winds) remainder
													of the day.
FRIDAY													Low cloud, rain & wind in a.m.;
AUG.8	06141	0.9	0.9		1.8	2	(190)		✓			✓	leaking liquid in A/C, All reflights
													completed for 9706.
SATURDAY													No flights today due to
AUG.9	—	—	—	—	—	—	—	—			✓		active diurnal.
SUNDAY													Fog in a.m.; high winds over
AUG.10	09142	1.5	1.7		3.2	13	337	Sutton					grid; landed in Fort McMurray
	09143	1.6	1.7		3.3	11	297	Sutton					for fuel.
PROJECT #									PILOT:				
TOTAL FOR THE WEEK									SENSOR OPERATOR				
TOTALS TO DATE									OTHER CREW MEMBERS:				

PROJECT # 9706							
TOTAL FOR THE WEEK		5.5	7.9		13.4	30	1272
TOTALS TO DATE		68.3	148.1		216.4	105	30,602

PILOT: K. BROWN
SENSOR OPERATOR L. HAMILTON / SAM T.
OTHER CREW MEMBERS: M. WATTS

PROJECT # 9709							
TOTAL FOR THE WEEK		6.1	7.7		13.9	56	1182
TOTALS TO DATE		6.1	7.7		13.9	56	1182

PILOT: K. BROWN
SENSOR OPERATOR L. HAMILTON / SAM T.
OTHER CREW MEMBERS: M. WATTS

C-FZHG

WEEKLY OPERATIONS REPORT

FIELD BASE ADDRESS	CREW MOTEL ADDRESS:	ROOM #'S
PEACE AIR LTD.	PEACE VALLEY INN	MARK - 316
PEACE RIVER ALBERTA	PEACE RIVER, AB	SAM - 307
PH# 624 - 3060	PH: 624 - 2020	LAURA - 312
FAX#	FAX: 624 - 2099	KIM - 313

REPORTING PERIOD AUG. 11 TO AUG. 17/97
PROJECT NAME. 9709 TOTAL SIZE 3544 KM
PROD. THIS WK 2129 TOTAL TO DATE 3544 KM
COMPLETION % 100 % %

2129 New → 231 refly → 84 Red Deer reflight

DATE	FLIGHT NO.	FLT HOURS FERRY	PROD	OTHER	TOTAL	PROD. KM #	FLOWN	ACCEPTED	UNSERVICEABLITY A/C	EQUI	DIUR	WX	REMARKS
MONDAY													Active diurnal in a.m.
AUG. 11	09144	1.5	2.8		4.3	19	513				✓		
	09145	1.5	1.0		2.5	8	216						
TUESDAY													Fog in a.m. delayed flight; landed
AUG. 12	09146	1.5	2.9		4.4	19	590					✓	in Fort McMurray for the night
	09147	1.0	2.5		3.5	15	405						
WEDNESDAY													Active diurnal in p.m.
AUG. 13	09148	1.5	2.6		4.1	15	405				✓		
THURSDAY													Processing data; no flights due
AUG. 14	—	—	—		—	—	—					✓	to low cloud, rain showers &
													high winds.
FRIDAY													
AUG. 15	—	—	—		—	—	—					✓	No flight today due to
													weather
SATURDAY													
AUG. 16	09149	2.0	1.2		3.2	7	(231)						Reflights done on 9709
SUNDAY													
AUG. 17	2150	0.7	0.3		1.0	1	(84)						Reflight done on Red Deer
													(A977)
PROJECT #													
TOTAL FOR THE WEEK													
TOTALS TO DATE													

PILOT:
SENSOR OPERATOR
OTHER CREW MEMBERS:

PROJECT #	9709							
TOTAL FOR THE WEEK		9.7	13.3		23.0	84	2129	(231)R
TOTALS TO DATE							3544	

PILOT: K. BROWN
SENSOR OPERATOR L. HAMILTON / SAM T.
OTHER CREW MEMBERS: M. WATTS

PROJECT #	~~A97~~						
TOTAL FOR THE WEEK							
TOTALS TO DATE							

PILOT:
SENSOR OPERATOR
OTHER CREW MEMBERS:

Quantec Consulting Inc.

PO Box 1170, 35 Main Street, Suites 33 & 34
Waterdown, Ontario L0R 2H0
www.quantec.com

August 17, 1997

SPECTRA EXPLORATION GEOSCIENCES CORP.

Dear Jim Genereux:

Spectra has completed, within contract specification, all the data acquisition and field processing for the Otter Lake high resolution aeromagnetic survey on behalf of Sidon International Resources Ltd. This phase of the above mentioned project was completed in a timely fashion and requires no additional work by Spectra.

Sincerely,

[redacted]

Paul J. Plazek

Quality Control Geophysicist

Quantec Consulting Inc.

SIDON
TIE LINES

SEPTEMBER 22/97

LINE	FLT	DATE	DIURNAL	NOISE	COMMENTS
5000	9138	8/5/97	OK	OK	OK
5010	9138	8/5/97	OK	OK	OK
5020	9138	8/5/97	OK	OK	OK
5030	9138	8/5/97	OK	OK	OK
5040	9138	8/5/97	OK	OK	OK
5050	9138	8/5/97	OK	OK	OK
5060	9138	8/5/97	OK	OK	OK
5070	9138	8/5/97	OK	OK	OK
5080	9138	8/5/97	OK	OK	OK
5090	9138	8/5/97	OK	OK	OK
5100	9138	8/5/97	OK	OK	OK
5110	9138	8/5/97	OK	OK	OK
5120	9138	8/5/97	OK	OK	OK
5130	9138	8/5/97	MARG	OK	OK
5140	9138	8/5/97	OK	OK	OK
5150	9138	8/5/97	OK	OK	OK
5160	9138	8/5/97	OK	OK	OK
5170	9138	8/5/97	OK	OK	OK
5180	9138	8/5/97	OK	?	OK
5190	9138	8/5/97	OK	OK	OK
5200	9139	8/6/97	OK	OK/MNR	OK
5210	9139	8/6/97	OK	OK/MNR	OK
5220	9139	8/6/97	OK	OK	OK
5230	9139	8/6/97	OK	OK	OK
5240	9139	8/6/97	OK	OK	OK
5250	9139	8/6/97	OK	OK	OK
5260	9139	8/6/97	OK	OK/MNR	OK
5270	9139	8/6/97	OK	OK	OK
5280	9139	8/6/97	OK	OK	OK
5290	9139	8/6/97	OK	OK	OK
5300	9139	8/6/97	OK	OK/MNR	OK
5310	9139	8/6/97	OK	OK	OK
5320	9142	8/10/97	OK	OK	OK

SIDON
TIE LINES

SEPTEMBER 22/97

5330	9142	8/10/97	OK	OK	OK

FLIGHT LINES

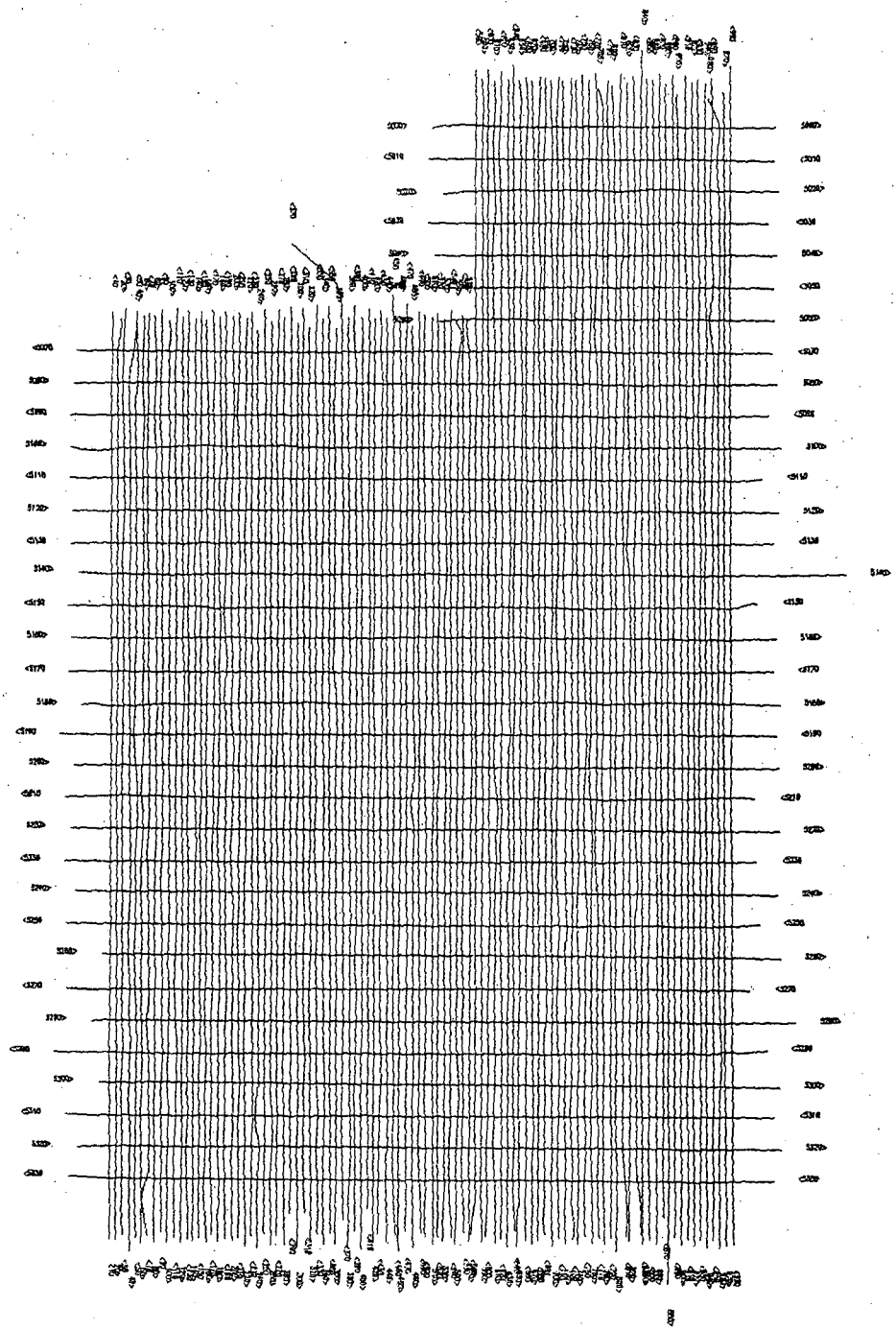
LINE	FLT	DATE	DIURNAL	NOISE	COMMENTS
L10	9142	8/10/97	OK	SOME	OK CHECK 700-720
L20	9142	8/10/97	OK	OK/MNR	OK
L30	9142	8/10/97	OK	MNR	OK
L40	9142	8/10/97	OK	OK/MNR	OK
L50	9142	8/10/97	OK	OK/MNR	OK
L60	9142	8/10/97	OK	OK.MNR	OK
L70	9142	8/10/97	OK	MNR	OK
L80	9142	8/10/97	OK	OK/MNR	OK
L90	9142	8/10/97	OK	OK/MNR	OK
L100	9142	8/10/97	OK	OK/MNR	OK
L110	9142	8/10/97	OK	OK	OK
L120	9143	8/10/97	OK	OK	OK
L130	9143	8/10/97	OK	OK	OK
L140	9143	8/10/97	OK	MNR	OK
L150	9143	8/10/97	OK	OK/MNR	OK
L160	9143	8/10/97	OK	SOME	OK
L170	9143	8/10/97	OK	OK	OK
L180	9143	8/10/97	OK	MNR	OK
L190	9143	8/10/97	OK	MNR	OK
L200	9143	8/10/97	OK	MNR	OK
L210	9143	8/10/97	OK	OK/MNR	OK
L220	9143	8/10/97	OK	OK/MNR	OK
L230	9144	8/11/97	OK	OK/MNR	OK
L240	9144	8/11/97	OK	OK	OK
L250	9144	8/11/97	MARG	MNR	OK
L260	9144	8/11/97	OK	OK/MNR	OK
L270	9144	8/11/97	OK	MNR	OK
L280	9144	8/11/97	OK	OK	OK

L290	9149	8/11/97	GOOD	GOOD	OK
L300	9144	8/11/97	OK	OK	OK
L310	9144	8/11/97	OK	OK	OK
L320	9144	8/11/97	OK	OK	OK
L330	9144	8/11/97	OK	MNR	OK
L340	9144	8/11/97	OK	MNR	OK
L350	9144	8/11/97	OK	OK	OK
L360	9144	8/11/97	OK	OK/MNR	OK
L370	9144	8/11/97	OK	OK	OK
L380	9144	8/11/97	OK	OK/MNR	OK
L390	9144	8/11/97	OK	OK	OK
L400	9144	8/11/97	OK	OK/MNR	OK
L410	9144	8/11/97	OK	MNR	OK
L420	9145	8/11/97	OK	OK	OK
L430	9145	8/11/97	OK	OK	OK
L440	9145	8/11/97	OK	OK	OK
L450	9145	8/11/97	GOOD	GOOD	OK
L460	9145	8/11/97	GOOD	OK	OK
L470	9145	8/11/97	GOOD	OK	OK
L480	9145	8/11/97	OK	OK/MNR	OK
L490	9145	8/11/97	GOOD	OK	OK
L500	9146	8/12/97	GOOD	OK	OK
L510	9146	8/12/97	OK	MNR	OK
L520	9146	8/12/97	GOOD	OK	OK
L530	9146	8/12/97	GOOD	MNR	OK
L540	9146	8/12/97	GOOD	MNR	OK
L550	9146	8/12/97	OK	MNR	OK
L560	9146	8/12/97	OK	MNR	OK
L570	9146	8/12/97	OK	MNR	OK
L580	9146	8/12/97	OK	OK	OK
L590	9146	8/12/97	GOOD	MNR	OK
L600	9146	8/12/97	OK	OK	OK
L610	9146	8/12/97	OK	MNR	OK

L620	9146	8/12/97	OK	MNR	OK
L630	9146	8/12/97	OK	MNR	OK
L640	9146	8/12/97	OK	MNR	OK
L650	9146	8/12/97	OK	MNR	OK
L660	9146	8/12/97	OK	MNR/OK	OK
L670	9146	8/12/97	OK	MNR	OK
L680	9146	8/12/97	GOOD	OK	OK
L690	9147	8/12/97	OK	OK	OK
L700	9147	8/12/97	GOOD	GOOD	OK
L710	9147	8/12/97	OK	GOOD	OK
L720	9147	8/12/97	OK	OK	OK
L730	9147	8/12/97	OK	GOOD	OK
L740	9147	8/12/97	GOOD	GOOD	OK
L750	9147	8/12/97	OK	GOOD	OK
L760	9147	8/12/97	MARG	GOOD	OK
L770	9147	8/12/97	MARG	OK	OK
L780	9147	8/12/97	MARG	GOOD	OK
L790	9147	8/12/97	GOOD	GOOD	OK
L800	9147	8/12/97	OK	OK	OK
L810	9147	8/12/97	OK	OK	OK
L820	9147	8/12/97	OK	OK	OK
L830	9147	8/12/97	OK	OK	OK
L840	9148	8/13/97	OK	OK	OK
L850	9148	8/13/97	OK	OK	OK
L860	9148	8/13/97	OK	OK/MNR	OK
L870	9148	8/13/97	MARG/OK	OK	OK
L880	9149	8/16/97	OK	MNR	OK
L890	9149	8/16/97	OK	MNR	OK
L900	9149	8/16/97	OK	MNR	OK
L910	9149	8/16/97	OK	OK	OK
L922	9148	8/13/97	OK	OK	OK
L930	9148	8/13/97	OK	OK	OK
L940	9148	8/13/97	OK	OK	OK

FLIGHT LINES

L950	9148	8/13/97	OK/MARG	OK	OK
L960	9148	8/13/97	OK	OK	OK
L970	9149	8/16/97	OK	MNR	OK
L980	9149	8/16/97	OK	OK	OK



Line List used in the Leveling for Otter Lake Grid

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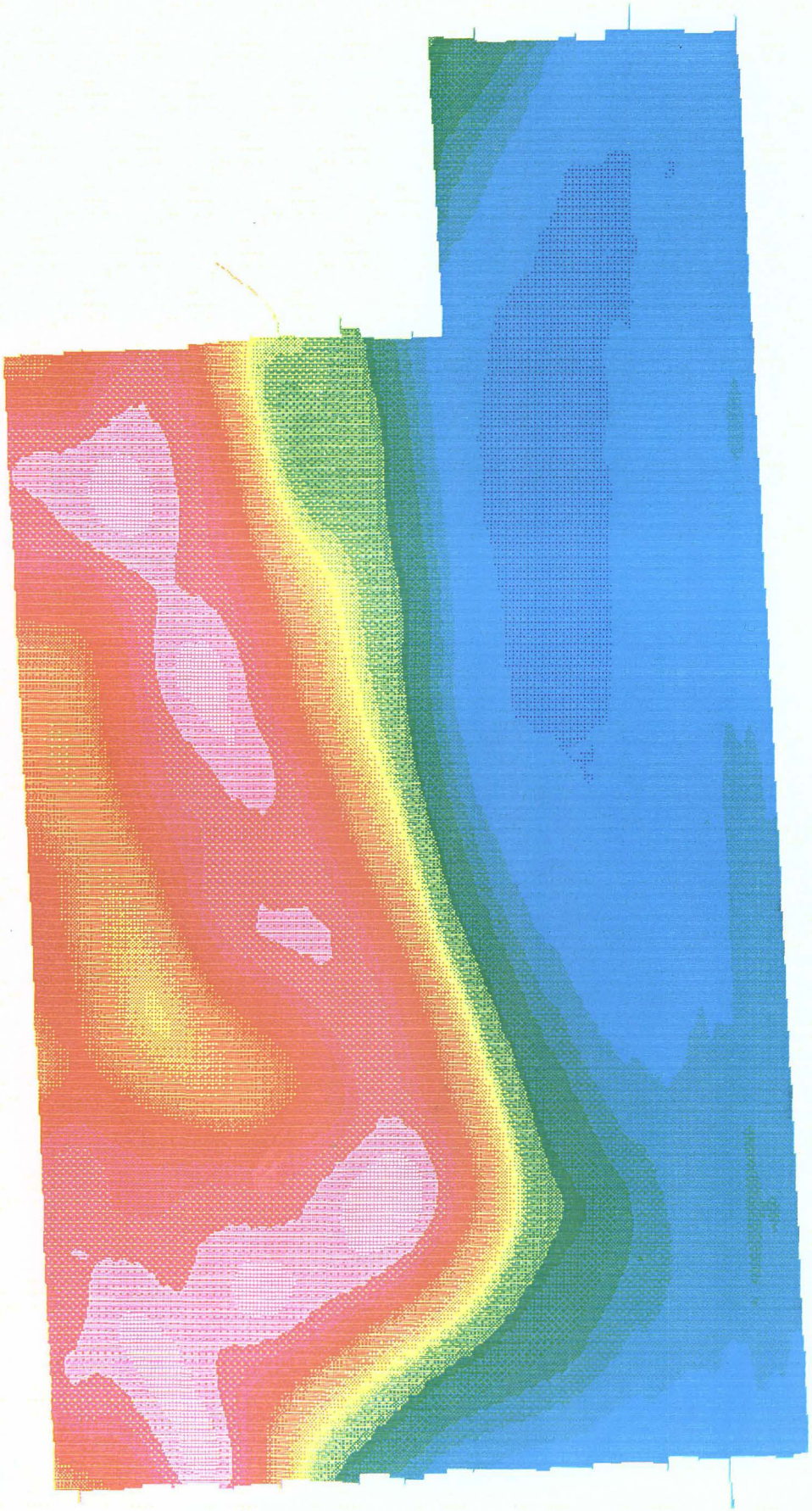
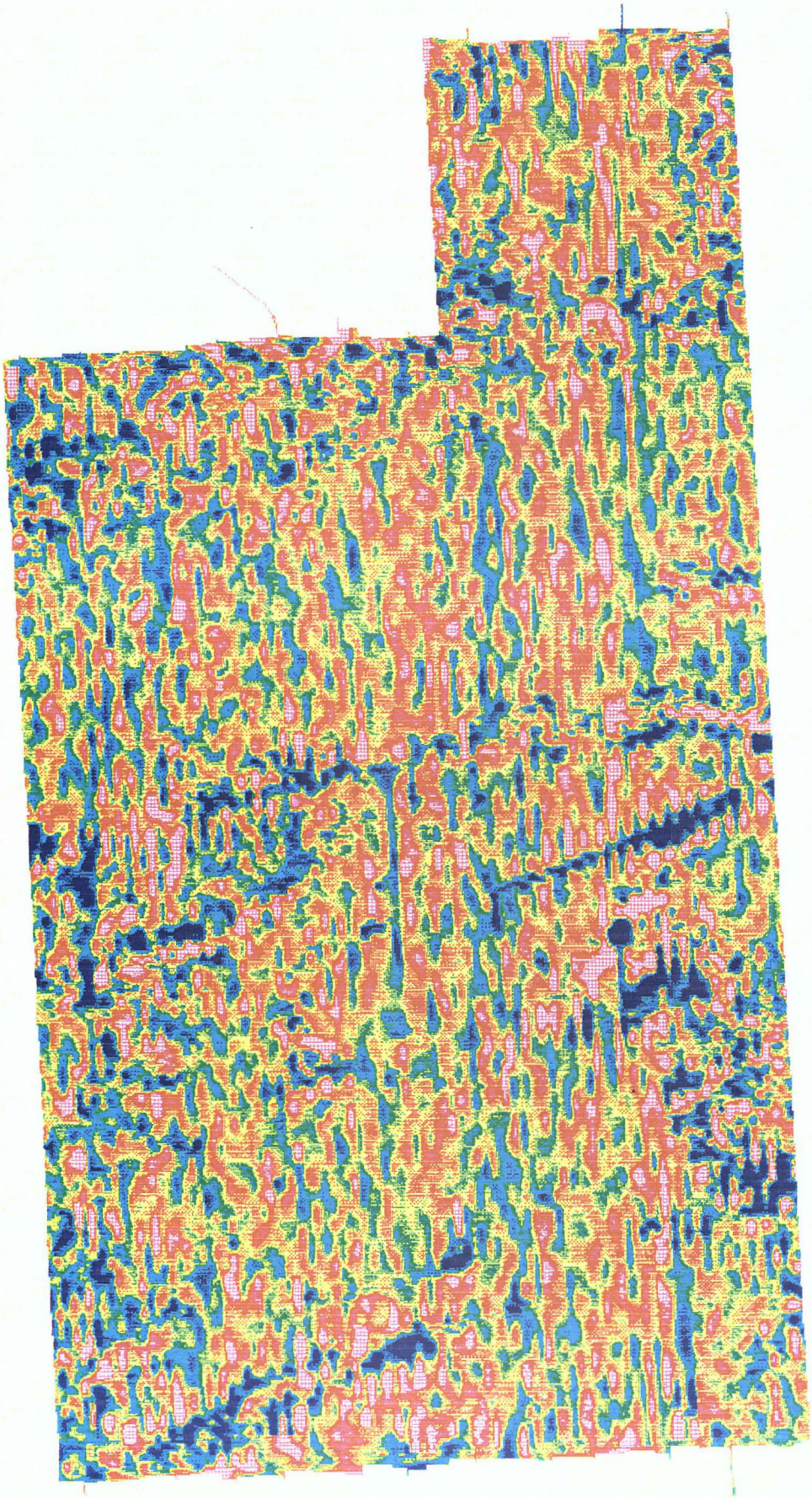
Survey lin 98
Tie lin 34

Note:
Line 880-910, 970, 980 are reflown, but line number not changed.



Otter Lake
Project: 9109
Leveled Mag
Survey Lines.
Sep. 18, 97



Otter Lake
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Radar. Attitude
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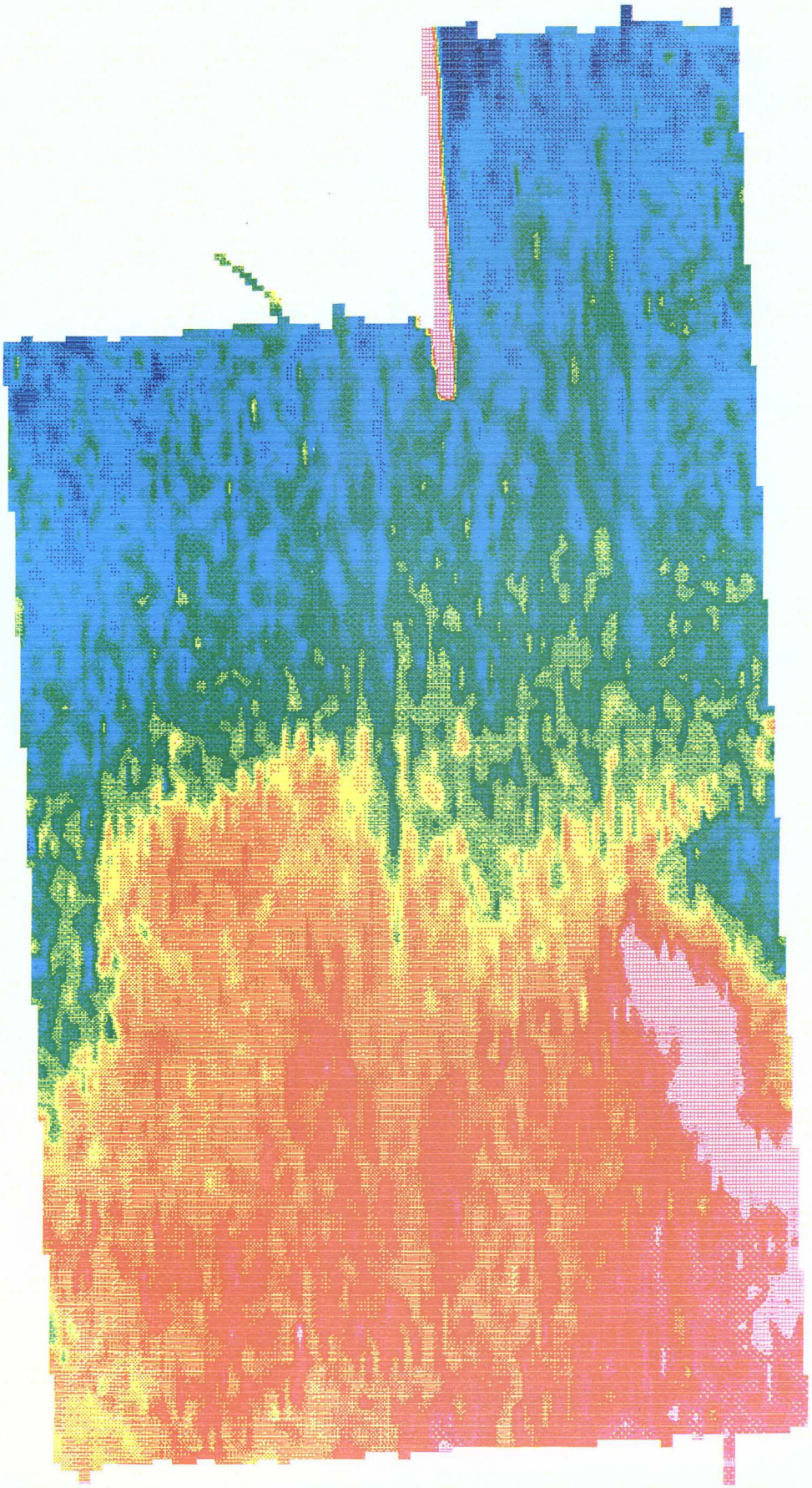


Otter Lake
Project: 9109
GPS-Z
Survey lines
Sep. 18, 97

SPECTRA

EXPLORATION GEOSCIENCE CORP.

2610, 520 5 Avenue SW, Calgary, Alberta, Canada T2P 3R7

Telephone: (403) 777-9280 Fax: (403) 777-9289

APPENDIX II

GEOPHYSICAL INTERPRETATION REPORT

GEOPHYSICAL TARGET EVALUATION using MAGNETIC MODELING

by: Jean M Legault and Paul Plazek
Quantec Consulting Inc.

HIGH RESOLUTION AIRBORNE MAGNETIC SURVEY RESULTS

surveyed by: Spectra Exploration Geoscience Corporation

OTTER LAKE PROJECT, Peace River Area, Alberta

on behalf of: SIDON INTERNATIONAL RESOURCES CORP.
Everett, Washington (USA)

GLOSSARY:

HRAM = HIGH RESOLUTION AIRBORNE MAGNETICS
BPF = BAND PASS FILTER
VDV = VERTICAL DERIVATIVE (MAGNETIC GRADIENT)
NE-SW = NORTHEAST-SOUTHWEST DIRECTION
NS = NORTH-SOUTH DIRECTION
nT = NANOTESLA (MAGNETIC FIELD STRENGTH)
TFM = TOTAL MAGNETIC FIELD
SEF = SHALLOW TARGET ENHANCEMENT FILTER
NW-SE = NORTHWEST SOUTHEAST DIRECTION
EW = EAST-WEST DIRECTION
EMU = MAGNETIC SUSCEPTIBILITY UNITS
nT/M = NANOTESLA PER METER (GRADIENT).

A. Overview

At the request of **Sidon International Resources Corp.** a geophysical target evaluation, using magnetic-inverse modeling, was performed on the high resolution airborne magnetic survey results over the **Otter Lake Project**, in the Red Earth East vicinity of Alberta. The HRAM survey was undertaken by Spectra Exploration Geosciences Corp., with quality control by Quantec Consulting Inc. (ref. QCI report P385), in August, 1997 for **Sidon**. The survey area is an oil and gas producing region (>30 wells), which is relatively unpopulated, and is underlain by thick marine sediments. The north-west Alberta region is the current focus of diamond exploration, on the basis of favourable indices, however the geologic / geophysical exploration work at **Otter Lake** is presently at an early reconnaissance stage. The purpose of this evaluation is to identify and quantify the nature of circular magnetic anomalies potentially relating to shallow bodies of kimberlitic origin, prior to ground follow-up.

The following evaluation is based on the results of a representative modeling sample, consisting of 12-13 separate targets, with the results to be extrapolated to the remaining anomalies on the property. An exhaustive simulation was unrealistic considering the size of the survey area, which covers a 28x18km region (486km^2), and, particularly, due to the detail of the high resolution data set which consists of 3,311 line-km of magnetic information, translating to nearly ½ million lines of data - an imposing amount of information. The 3D magnetic inversion/simulation algorithm determines the physical properties of the target, including its magnetic susceptibility and geometry, particularly its depth of burial and width - both of which are key elements in determining the likely bedrock source (i.e., shallow 100-300m width kimberlitic-like, versus buried 500-1000m wide intrusive-like signatures) and hence its exploration potential for follow-up.

B. Geophysical Analysis

The **Otter Lake** HRAM survey consists of roughly 100 lines of data, flown at a 200m-line spacing along nearly NS (N-3°W), with north-south control consisting of over thirty, 1km-spaced EW tie-lines. The data were collected using a Cesium-type magnetometer aboard a twin-engine aircraft, at an elevation of 100m. The sampling rate of 10Hz allowed for a 7-8metre station interval between measurements. The magnetic data were diurnally-corrected, using a fixed base-station magnetometer, and the flight recovery used on-board global satellite positioning.

Prior to discussing the results of the modeling, it is worthwhile describing the magnetic data in relation to the filter-maps provided. In addition to the raw data (diurnal+lag-corrected/unleveled) in ASCII

format on CD-ROM, three different scale preliminary map products (1:50000 scale), created by Spectra, were available for use in the geophysical evaluation:

1. Total Magnetic Field colour contours, with flight-line recovery and fiducials.
2. 1.3 - 4.7 Band Pass Filtered Magnetic Field, colour contours, with shaded relief.
3. Shallow Target Enhancement Filtered Magnetic Field colour contours, with shaded relief.

The Total Magnetic Field (TFM) map is dominated by a prominent, reverse-C shaped regional-type magnetic high occupying the west-half of the property, which has not been modeled but whose long wavelength (6-8km) indicates it is likely related to an antiform/synform or uplift structure in the magnetic basement buried deep below the sediments. Unfortunately, its large wavelength and high intensity (600-800nT above background) introduces a large regional which has resulted in lack of resolution of weaker, smaller scale signatures produced by other bedrock sources - even those which are subcropping - except for the far eastern half of the grid. For example, none of the metallic oil & gas wells are visible as anomalies - it is clear, therefore, that potential kimberlites, likely to be of a slightly larger size (100-300m) but of a weaker magnetic intensity (10-100nT) are not resolvable in the data - additional processing is therefore required.

The 1-5 Km Band Pass[1] (BPF) map is designed to enhance deeper-seated sources - likely in the order of 0.5-3km depth-range, using a rule-of-thumb ½ wavelength-equals-depth estimate. In comparison with the TFM map, the BPF has defined 2-3 separate, narrower paralleling, magnetic horizons within the folded deep basement structure previously identified - likely relating to separate magnetic bedrock stratigraphies or dyke-like intrusives, whose discontinuous nature is likely related to basement faulting. In addition to these linear zones, smaller (1-2km) more circular individual anomalies may relate to intrusives plugs - possibly at intermediate depths. On the other hand, the EW corrugated appearance of the map, particularly in the east, is related to imperfections in the tie-line/cross-line intersections (preliminary leveled maps) - which is unfortunately enhanced by the shaded relief.

The Shallow Target Enhancement (SEF) map, as its name implies, is designed to highlight moderate to shallow depth features and, of the three Spectra maps, it is not only of the greatest interest, as an exploration tool, but is also the most specialized - having been designed specifically to enhance subcropping bedrock signatures, specifically, kimberlites. While the exact nature of the filter-processing involved are unclear (some low-pass filtering has been applied to eliminate the effects of near-surface culture; R. Gordon, QCI, pers. comm., 1997) and, in all likelihood, there are particularities its interpretation which are key to the full understanding of the map, we note the following:

a) The strongest features are concentrated in the west-half of the grid and consist of weak (10-25nT), small/narrow width (<1km) magnetic highs, with both linear/dyke-like and circular/oval shaped anomalies highlighted. Most (but, significantly, not entirely all) of the NNW-SSE dyke-like features are centered on the BPF and TFM magnetic highs and suggest that the basement structures are possibly feeders to thin diabase-like intrusives - possibly emplaced along NNW-SSE dilational fault-zones, which may be significant controlling structures to coeval (?) kimberlites. Closely associated with the dykes, in the west-part of the survey area, the circular highs represent the best candidates for moderate to shallow buried magnetic intrusives - possibly ultramafic/kimberlitic plugs or, depending on their size (300-500m) could also more likely represent either gabbros or diorites, to more felsic/acid intrusives, such as syenites or, possibly carbonatite, any of which could host above-average concentrations of ferro-magnetic minerals. Notice that many (but not all) of the well-sites also coincide with these circular highs, as expected. Also noticeable are distinctive NE-SW and NW-SE lineaments, which cross-cut and displace the dyke-like magnetic zones, and appear to extend across the survey area. These signatures likely represent regional fault-structures/breaks, coinciding with those noted in the BPF results, which suggests that these faults extend from surface and possibly into the deeper magnetic basement.

[1] Despite their preliminary and relatively simple appearance, the filter-processing applied to these HRAM data by Spectra are relatively specialized and prospective in nature - the results and full significance are best left to the airborne geophysical contractor.

b) The east half of the map is characterized by weaker (<10nT), narrow (<500m) sinuous, interconnected magnetic highs which are randomly oriented. Numerous, smaller circular negative anomalies (minus 10-15nT) are highlighted in particular, as well as a well-defined NE-SW magnetic-low lineament in the south-west corner of the survey area, which coincides with a drainage/lake system and likely marks a structural fault as previously mentioned. At first glance, these lows could be interpreted as likely corresponding to shoulder/edge responses surrounding more magnetic bodies (similar to the lows in the west-half) or possibly even remanent/reverse-magnetized intrusives. However, close examination of these filter-low zones in profile confirms that these actually coincide with narrow weak magnetic highs in the total field. The reasons for these unusual filter-responses are unclear, but possibly relate to the preliminary nature of the map products (i.e. these may be rectified in later versions). For example, notice how the majority of the well-sites are centered in the Filter-negative zones - despite the fact that it is unlikely that these all correspond to negatively magnetized features. On the other hand, the EW corrugation patterns observed in the eastern BPF map are also clearly visible in the SEF map and are similarly caused by non-geologic processing/leveling errors along the tie-lines

In order to better constrain the nature of the magnetic response at **Otter Lake**, a Vertical Magnetic Gradient[2] map (VDV), has been created using the raw line-profile data (≈ 20-25m stations/no tie-lines) and, because it is designed to enhance shallow/subcropping features and geologic contacts, is an ideal complement to the Shallow Enhancement filter. As shown in Figure 1, as expected, all the previously identified magnetic dyke and circular intrusive features are similarly defined (although somewhat better in the Spectra maps). On the other hand, nearly all the negative Filter anomalies, particularly those in the east-survey area, coincide with small, small dyke-like to circular magnetic gradient highs - which suggest these may also represent mafic to ultramafic (or alkali) intrusives. Notice, in particular, the previously defined NE-SW structure, which the VDV defines as a narrow, linear high, consistent with a subcropping magnetic dyke. Notice also how the well-sites all coincide with a characteristic/diagnostic peak positive/negative rimmed VDV signatures - consistent with highly magnetized, near-surface sources, as expected.

After reviewing these data, we can conclude the following with regards to potential targets for ground follow-up and magnetic modeling:

i) The **long wavelength magnetic highs**, defined in the BPF map, correspond to deeply buried magnetite-rich zones, likely associated with intermediate depth intrusives &/or mafic-rich basement lithologies, and, as a result, do not represent targets for exploration follow-up (or modeling).

ii) The **narrow linear magnetic high zones**, defined in the SEF and VDV maps likely correspond to regional sheet-like intrusives, and as result do not represent favourable targets for exploration follow-up (or modeling), in spite of their possible intermediate to shallow depth. On the other hand, these may help guide/focus exploration as the dykes are similarly emplaced along dilational, crustal fault-structures, along which kimberlites may also be occur.

iii) The **circular magnetic high zones**, identified in the west-half of the SEF and in the VDV map likely correspond to small to moderate-size intrusives emplaced at moderate to shallow depths. Their close spatial association with the dykes suggest that these were emplaced along similar zones of crustal weakness. As a result these represent good to fair targets for exploration follow-up, and are therefore primary candidates for model-evaluation. On the other hand, should modeling or ground follow-up confirm that the broader signatures are due to more deeply emplaced intrusives, then their interest could possibly diminish significantly.

iv) The **circular weak magnetic zones**, identified in the east-half of the survey area as weak SEF-negative peaks and small, weakly magnetic features in the VDV map, likely correspond to relatively shallow, near surface intrusives, either small or hosting weak concentrations of magnetite, and/or metallic culture. Their apparent preponderance in the eastern half of the grid is likely that these have been masked by the stronger features and more magnetically active region in the west. As a result, these represent reasonable targets for exploration follow-up, and also model-

[2] Calculated using Geosoft Magmap 2D-FFT processing - includes REDP Pole-Reduction, with DCOS Decorrugation & BTWR Low-Pass (0.01) Filters Applied, and DRVZ Vertical Gradient.

evaluation. Although obvious cultural signatures are easily identifiable, and circular subcropping features prioritized, conversely small dyke-like features could either coincide with a) unmineralized diabases and/or eroded gabbros or, b) possible alkali dykes/lamprophyres, which are occasionally known to be diamondiferous (?). Furthermore, due to the high resolution and low magnetic gradients, even minor susceptibility contrasts are likely to be enhanced - despite their probable limited geologic potential. It is clear therefore that, despite their possibly favourable shape and shallow burial-depth, these weaker-type features need to be more closely evaluated prior to follow-up.

C. Magnetic Inverse-Modeling and Target Evaluation

As mentioned, four-five basic anomaly types were identified in the **Otter Lake** HRAM survey results: a) Deep-Basement, b) Regional-Dyke, c) Moderate-Intrusive, d) Weak-Intrusive, along with e) Cultural sources - the most prominent examples of these signatures are shown on the interpretation/compilation plan map, in addition to interpreted fault-lineaments. Also indicated are those anomalies which have been interpreted using magnetic inverse modeling - limited to 4-5 examples of each of the latter two bedrock-type signatures, based on their more favourable exploration potential. In addition, two examples of obvious cultural anomalies were also chosen for modeling, as a point of comparison with the bedrock models.

Magnetic anomalies to be inversely modeled were identified using the Shallow Target Enhancement and the Vertical Gradient plan maps, as described, which enhance subtle shallow buried anomalies (i.e., possible kimberlitic origin) in either a strong or weak regional magnetic field. The central position of anomalies was first transferred onto the Total Magnetic Field plan, where the optimal flight line and fiducial range (≈ 0.5-1.5km) were identified. The data were then selected from the digital archive, and the total field magnetic profile were used to produce inverse magnetic models, using the computer-aided Magmod3 interpretation algorithm.

The GEOSOFT MAGMOD3^{tm} is an interactive, magnetic 2D-3D forward and inverse modeling program which produces best-fit/least square model solutions, for total field, gradient and vertical field responses. Although the algorithm allows for a variety of model geometries, at **Otter Lake**, the TABULAR2 geometric shape (2 ¾ D Model = thick flat-topped, dipping dike, finite-fixed strike length, finite-variable depth) was usually the first choice based on its close similarity to the circular shaped anomalies defined by the target-model. A second model-type, the TABULAR1 geometric shape(2 D Model = Thick, flat-topped dipping dike of infinite strike length and infinite depth extent) was also used to compare/verify the quality of the TABULAR2 solution, based on similar convergent models. All MAGMOD3 inversion models were calculated using diurnal corrected, unfiltered magnetic data. Specific constraints in the inverse-modeling procedure are described in Appendix B.

1) **Intrusive-type:** These anomalies correspond to the SEP circular highs in the west-grid, which represent prominent, but secondary/shorter wavelength signatures superimposed upon the long wavelength responses observed in the Total Field maps - at least 12 have been defined in the Shallow Enhancement Filter plan maps and limited to the west survey area and four have been inverse-modeled. These are generally characterized by circular to slightly oval-shaped (500 - 1500m along the longer axis) anomalies, with a magnitude of 10 - 50nT. The inversion modeling results of Intrusive-Buried anomalies are summarized in Table I and the plots shown in Appendix C. The defining characteristics of these models are their generally moderate magnetic susceptibilities (0.0001-0.001emu), moderate to deeper burial depths (150-750m), and moderate to large NS-half widths (250-800m) inferring a mix of shallow/ intermediate pipe-like and deep-seated intrusives.

Name/ Flight Line	Fiducial Range	UTM North	UTM East	Model Type	Depth (Burial)	Half Width (Horizontal)	Thickness (Vertical)	Dip	Magnetic Susc. (emu)
1S2 / L280	2072-2089	6261749	720995	2 ¾ D	165m	267m	250	21.5°N	0.000272
CULTURE: PIPELINES				2D	140m	258m	--	56°N	0.000109
3S2 / L280	1820-1840	6282010	719940	2 ¾ D	401m	797m	414m	56°N	0.000138
- NOT PICKED FROM ANALOGS; TOO DEEP				2D	754m	1134m	--	43°N	0.000190
1D1 / L60	2610-2650	6265526	716372	2 ¾ D	547m	743m	561m	28°S	0.000965
- NOT PICKED FROM ANALOGS: BROAD + DEEP				2D	300m	670m	--	63°N	0.000253
2D2 / L240	600-630	6264276	720077	2 ¾ D	747m	810m	1217m	54°N	0.000876
- NOT PICKED FROM ANALOGS: BROAD + DEEP				2D	489m	812m	--	59°N	0.000411

Table I: Magnetic Model Inversion Results for Intrusive-type Anomalies

2) **Dyke/Diatreme-type**: These anomalies correspond to the weak circular to lensoid VDV high which appear to coincide with weak circular SEP negatives in the east grid - at least 20 have been defined and four have been inverse-modeled. On the STE plan map, these generally coincide with discrete negative, near circular to tear-drop shaped (<300-500m in diameter) anomalies, with a magnitude of 5 - 10nT - corresponding to similar to lenticular-shaped anomalies in the VDV, with a magnitude > 0.02-0.05 nT/m. The inversion modeling results of these dyke-diatreme like bodies are summarized in Table III and presented in profile in Appendix D. The models are characterized by generally week magnetic susceptibilities (<0.0001emu), depths of burial in the near-surface to moderate range (10-110m) and narrow half widths (50-150m), which suggest these represent partly buried to subcropping, weakly mafic to intermediate dykes and/or pipes, possibly representing lamprophyres or kimberlitic-like intrusives, having weak magnetite concentrations.

Name / Flight Line	Fiducial Range	UTM North	UTM East	Model Type	Depth (Burial)	Half Width (Horizontal)	Thickness (Vertical)	Dip	Magnetic Susc. (emu)
1N1 / L840	220-230	6276013	731492	2 ¾ D	6m	158m	144m	35°N	0.00005
PICKED FROM "ANALOGS": "OUT EAST" "TOT				2 D	6m	151m	--	61°N	0.00003
GOOD ANOM 2N2 / L610	4625-4645	6261542	727655	2 ¾ D	19m	46m	556m	36°N	0.00014
- PICKED FROM "ANALOGS": "NOT SIDON LAND				2 D	20m	33m	--	46°N	0.000159
1D4 / L590	3578-3584	6272960	726656	2 ¾ D	132m	55m	100m	10°N	0.000298
- NOT PICKED FROM ANALOGS			"	2 D	109m	74m	--	54°N	0.000031
3N2 / L760	3725-3745	6282579	729558	2 ¾ D	109m	110m	451m	36°N	0.00016
- PICKED: "WELLSIDE"		"	"	2 D	85m	129m	--	56°N	0.000062

Table II: Magnetic Model Inversion Results for Diatreme/Dyke-like Anomalies

3) **Culture**: Finally, to examine the model characteristics of a target known to be small, near surface, high susceptibility features, 2 known cultural magnetic anomalies have been inverse-modeled (Table III, Appendix C). In the SEP plan, these produce weak circular negative anomalies similar to the diatreme-dyke signatures, as noted previously. However in the VDV plan, unlike the dyke-features, the well-site culture produces characteristically sharp, gradient high features (>0.05nT/m) with distinctive negative shoulders along the profiles - this contrasts the diatreme-dyke zones which feature much weaker/diffuse VDV responses, due to more weakly magnetism and deeper burial.

The inverse-modeling of the cultural anomalies indicates that these could be mistaken for mod-high susceptibility (>0.001 emu), shallow-buried to subcropping (<10m), magnetic bodies having narrow half widths(10-100m) and limited depth extents (20-90m). It is worthwhile noting the similarities in magnetism between the cultural-sources with the Intrusive-type models (both of which are >10X than our weaker dyke/diatreme-type models), while the dyke-like and cultural sources share generally similar model-depths.

Name/ Flight Line	Fiducial Range	UTM North	UTM East	Model Type	Depth (Burial)	Half Width (Horizontal)	Thickness (Vertical)	Dip	Magnetic Susc. (emu)
340	4190-4174	6262847	722163	2 ¾ D	10m	82m	19m	170°S	0.0014
890	992-997	6273340	732622	2 ¾ D	7m	14m	92m	58°N	0.0017

Table III: Magnetic Model Inversion Results over Known Culture Anomalies

D. Conclusion and Recommendations

A geophysical evaluation of the **Otter Lake** HRAM survey has used magnetic inverse-modeling to establish the nature and geometry of targets-anomalies, prior to future ground follow-up, which have been identified through the use of specialized medium and shallow target enhancement filtering. The post-processing was necessary to remove the large regional effects created by a large, deeply-buried magnetic zone in the western half of the survey area. A Shallow Enhancement Filter (SEF) plan map has defined both NNW-SSE linear magnetic lineaments and more circular anomalies consistent with regional sheet-like dykes and possible kimberlitic-like diatremes, respectively, both concentrated in the west-half of the property. Smaller, weaker circular to lense-shaped features are also defined in the east. Of the four basic type-signatures identified, two have been isolated based on their similarity to the kimberlite-target shape and a limited inverse-model study undertaken on a small representative sample - establishing their target-geometries, notably, probable width, depth of burial and magnetic susceptibility. An interpretation compilation map features the most prominent magnetic sources identified at **Otter Lake**, including deep basement features, regional dyke swarms, circular intrusive-like sources, and weak dyke/diatreme features - as well as interpreted fault-structures and the location of cultural anomalies (see Figs. 1-2). A description of these anomalies and their relative priority is provided in Table I.

The inverse-modeling across four of the twelve or more of the most prominent circular anomalies, identified in the west half of the grid, indicates that these correspond to moderately magnetic bodies having burial depths in the shallow to intermediate range (150-750m) and widths in the moderate to wide range (500-1500m) - the shallower and narrower bodies being consistent with kimberlitic-type signatures, while the others most likely correspond to deeper mafic intrusives - possibly related to the sheet dykes. We conclude that, despite the fact that these display a wide variance in depths, these anomalies fall into a range acceptable to warrant additional follow-up on the ground - although some may prove too deep and wide to represent valid drill-targets.

The east-half of the grid contains smaller, weaker circular magnetic anomalies, which resemble those obtained over cultural-sources in the SEF map and therefore may be of interest, due to their favourable size and strength. Magnetic modeling however indicates that while these anomalies correspond to shallow (10-100m), and narrow (100-300m) diatreme-like sources, their magnetic susceptibilities are nevertheless weak - nearly 10-30X below those obtained for the west-grid intrusives, which resemble kimberlitic material. Hence, if these east-grid signatures indeed represent intrusives, they likely contain very weak amounts of ferromagnetic minerals, and as such may not be kimberlitic. Notable exceptions include at least 2 circular VDV anomalies found in the SE-corner of the survey area, away from known culture, yet featuring cultural-like signatures consistent with shallow depth and mod-high magnetism (see interp. plan). Nevertheless, we conclude that while these anomalies also merit some measure of follow-up, the anomalies found in the east should be considered as low second to third priority features behind the western intrusives - pending further geoscientific evaluation (and ground proofing for obvious culture).

The magnetic-inverse modeling has been successful in determining the probable nature and source-depth range of anomaly signatures of interest, including their depth-of-burial and magnetism - which are primary concerns to exploration prior to ground follow-up. The range in depths and widths obtained from the model-inversions were found to vary directly with the strength of anomalies and the surrounding regional background field - the variance between the 2 ¾ D model in comparison with the 2D model are

good indications of the confidence level for the interpretation. In general, however, the comparative fits were good, with the modeled depth estimate likely reliable to ±10% for the closest fits. The modeling also supports the general target depth-ranges obtained from the various band-pass filter maps supplied by the airborne ~~character~~ CONTRACTOR - despite minor flaws due to their preliminary nature.

We recommend that these results be combined with existing geoscientific data for evaluation prior to follow-up - particularly with regards to the geologic explanation of deep/moderate/shallow features and interpreted regional fault-fracture zones. Although this evaluation contains interpretative elements, it is by no means exhaustive and could be further refined using additional products, such as final filter maps (properly leveled), additional shade directions (NW), as well as a vertical gradient plan map - which has proven useful in identifying additional shallow features and fault-structures in the region, yet were not easily visualized in the map products supplied.

The initial stages of ground follow-up should take the form of soil geochemistry, using reconnaissance ground magnetics and possibly VLF-electromagnetics and spectrometry, along roughly 5km NS and EW traverse, to better locate the position of airborne anomalies and possible cultural influences. Subsequent follow-up should include establishing a survey grid, preferable 1-2km^2, with 50m-spaced lines and 10-20m stations. High resolution ground geophysical techniques such as horizontal-loop EM, VLF-resistivity, spectrometry, in addition to ground magnetics and gradiometry, should be used to focus diamond drill testing.

RESPECTFULLY SUBMITTED
QUANTEC CONSULTING INC.

[redacted]

Paul J Plazek
Project Geophysicist

[redacted]

Jean M Legault, P.Eng.
Chief Geophysicist

[redacted]

Robert Gordon, P.Eng.
General Manager

Porcupine ON
November, 1997.

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Paul J. Plazek, hereby declare that:

1. I am a geophysicist with residence in Renfrew, Ontario and am presently employed in this capacity with Quantec Consulting Inc. of Porcupine, Ontario.
2. I am a graduate of Queen's University, Kingston, Ont., in 1989, with an Honours Bachelor of Science Degree in Geological Engineering.
3. I have practiced my profession in Canada since graduation.
4. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities **of Sidon International Resources Corp.**
5. I am responsible for the geophysical interpretation and the information presented in this report are a fair and accurate representation of the data, to the best of my knowledge and professional abilities.

Porcupine, Ontario
October, 1997

Paul J. Plazek, B.Sc.
Geophysicist
Quantec Consulting

Technical Services

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Jean M Legault, hereby declare that:

1. I am a geophysicist with residence in Timmins, Ontario and am presently employed in this capacity with Quantec Consulting Inc. of Porcupine, Ontario.

2. I am a graduate of Queen's University, Kingston, Ont., in 1982, with an Honours Bachelor of Applied Science Degree in Geological Engineering.

3. I have practiced my profession, on a continuous basis, in Canada and the United States since graduation.

4. I am a registered professional engineer, since 1985, with license to practice geological engineering in the Province of Ontario.

5. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities of **Sidon International Resources Corp.**

6. I am the supervising geophysicist responsible for the geophysical review and all information presented in this report are a fair and accurate representation of the data to the best of my professional ability and knowledge.

Porcupine, Ontario
October, 1997

[redacted]

Jean M Legault, P.Eng..
Chief Geophysicist
Quantec - Canada

Technical Services Division

APPENDIX B

MAGMOD3 INVERSE-MODELING PROCEDURES

In all cases, the following starting model parameters were used:

i) Primary Field = 56900nT, Inclination = 78°N, Declination = 28°E, Sensor height = 100m

ii) ½ Width = 100m, Depth = 10m, Dip = 90°, Thickness = 500m, ½ Length = 200m (Tab2)

The following Fixed Model parameters were used:

I. Offset (set to 0) = distance of the survey line, along strike, from the anomaly center.
II. Remnant magnetism (0) = all anomalies assumed to have zero negative remnance.
III. Half Length (set to the calculated half-width) = half the strike length (Tab2 models only)

The following parameters were allowed to be Best-Fit during the model-inversion:

I. Depth to target
II. Thickness of target = Difference in depth between the top/base of the body (Tab2 only)
III. Half Width = One half the horizontal distance across the top of the body in the strike perpendicular direction (Tabular 2 Model only)
IV. Susceptibility (the body magnetization is assumed to have a remnant component if the total field anomaly is negative, i.e., susceptibility is negative)
V. Dip
VI. Main Position = point at which the survey line crosses the center of the top of the body

The following parameters were allowed to be Best-Fit during the model inversion within the limits that allowed the regional magnetic field to be removed:

I. The base slope or horizontal gradient of the regional background field along the survey line
II. Base curvature = The second horizontal derivative of the regional background of the vertical gradient along the survey line.

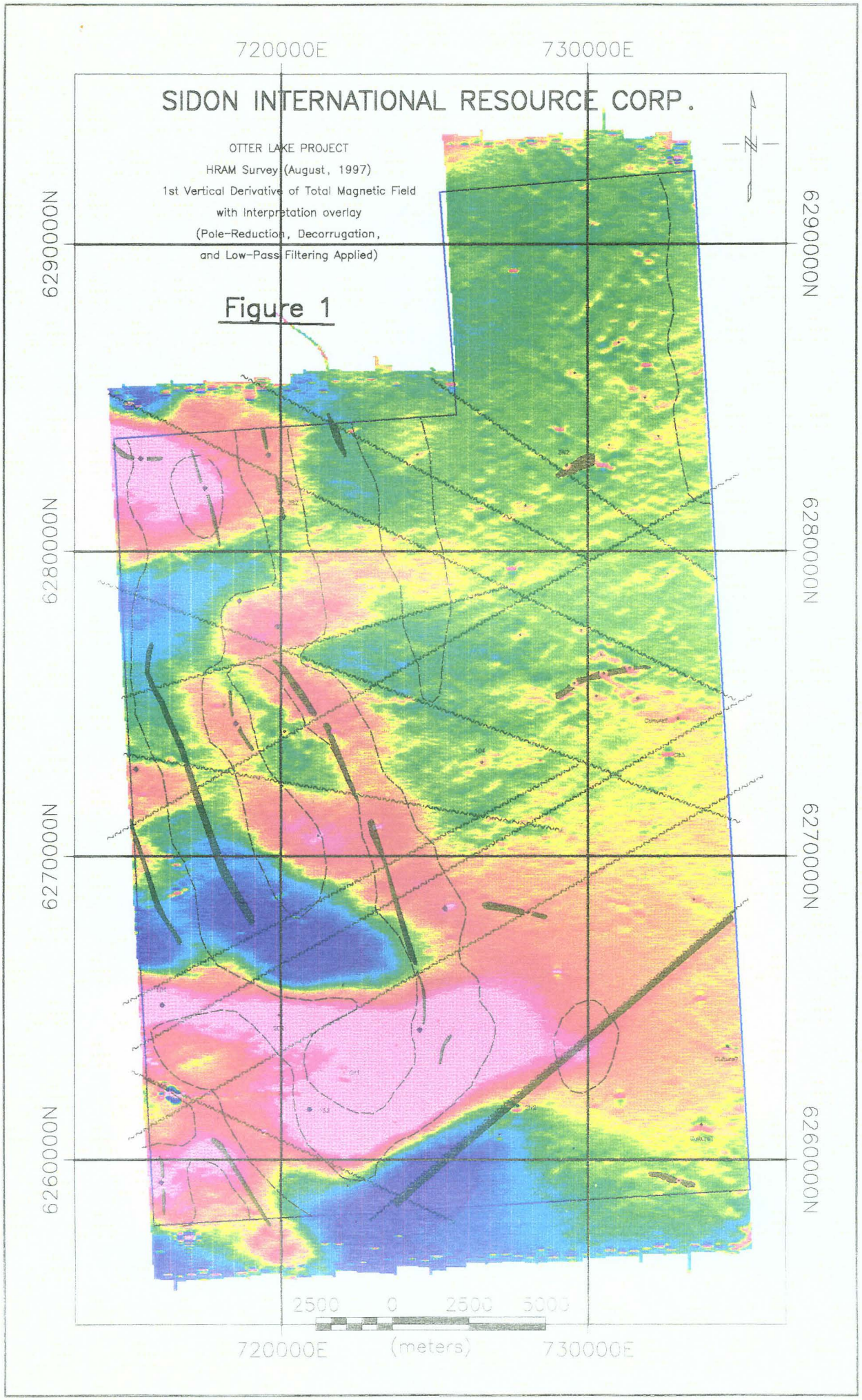
APPENDIX C

ANOMALY TABLE

Relative Priority	UTM Easting	UTM Northing	Relative Strength[3]	Anomaly Modeled	Culture in Vicinity	Comments
Intrusive-type						
1	715400	6283000	Strong	No	No	EW elliptical, on-strike with dyke
1	717500	6282100	Strong	No	No	SSE-elliptical, on strike with dyke
2	719600	6283100	Moderate	No	No	SSE-elliptical, on strike with dyke
2	720000	6281700	Moderate	3S2	No	SSE-elliptical, on strike with dyke
3	718600	6278400	Weak	No	No	ESE-elliptical, on strike with dyke
1	719900	6277500	Strong	No	No	SSE-elliptical, on strike with dyke
2	718500	6274400	Moderate	No	No	SSE-elliptical, on strike with dyke
3	715200	6272900	Weak	No	Well-sites	ESE-elliptical, near edge of survey
3	721200	6270600	Weak	No	Well-sites	Circular, centred on lake
3	725400	6268300	Weak	No	Well-sites	Circular, east of dyke
1	716100	6265000	Strong	1D1	Well sites	ESE elliptical, near edge of survey
3	719900	6264800	Weak	2D2	Well sites	Circular, poorly resolved (deep)
2	724500	6264200	Moderate	No	Well sites	NE-elliptical, on strike with dyke
1	721000	6261600	Strong	1S2	Well sites	Priority target - caution for culture CULTURE
1	716100	6259200	Strong	No	No	NNE-elliptical, near edge of survey
Dyke-Diatreme type						
2	729300	6282800	Negative	3N2	Well sites	ENE-dyke, good target "WELLS DE"
2	731400	6276200	Negative	1N1	No	ENE dyke, good target
3	730500	6276000	Negative	No	No	ENE dyke, on strike with 1N1
3	729600	6275700	Negative	No	No	ENE dyke, on strike with 1N1
3	731600	6275200	Negative	No	No	SE dyke, on strike with 1N1
2	732900	6274500	Negative	No	No	ENE body, good target (culture ?)
3	720200	6274100	Weak	No	No	NNW-body, possible dyke
2	726500	6273100	Negative	1D4	No	ENE dyke, good target
3	728100	6268200	Negative	No	No	ESE dyke, cross-cuts possible fault
2	734600	6263700	Negative	No	No	SE dyke, good target (culture ?)
2	727800	6261700	Negative	2N2	No	NE body, coincides with fault-dyke
1.5	733700	6261100	Negative	No	No	EW high, circular, negative rim - best target in east (culture?)

Table I: Summary of Possible Diatreme Targets from the Otter Lake Survey

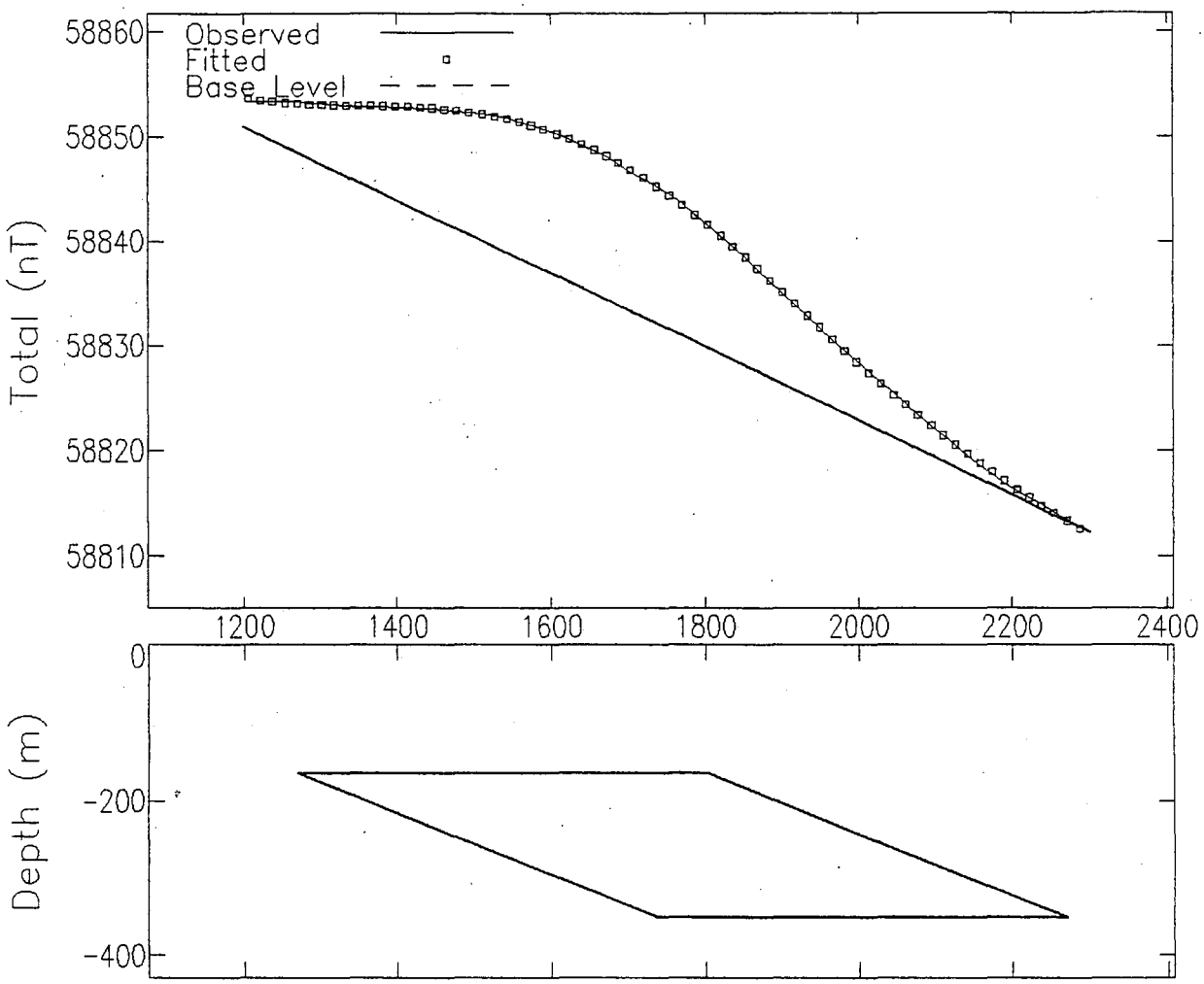
[3] Based on strength of Shallow Target Enhancement Filter map (Spectra Geoscience, Oct. 1997).


720000E
730000E
SIDON INTERNATIONAL RESOURCE CORP.
OTTER LAKE PROJECT
HRAM Survey (August, 1997)
1st Vertical Derivative of Total Magnetic Field
with Interpretation overlay
(Pole-Reduction, Decorrugation,
and Low-Pass Filtering Applied)
Figure 1
6290000N
6280000N
6270000N
6260000N
2500 0 2500 5000
(meters)

PIPELINE ALONGSIDE IT AND ANOTHER
CROSSING CROSSING CENTRAL PT. OF ANOMALY

Tabular 2 Model – Line 280

Fiducial Range = 2071-2089, Anomaly 1S2



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	165 m
Half Width	F	267 m
Half Length	X	250 m
Offset	X	0 m
Dip	F	21 deg
Thickness	F	185 m
Susceptibility	F	0.000272 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	1535.416 m
Cross Position	X	721009.1 m
Base Level	F	58839.17 nT
Base Slope	X	-.035 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

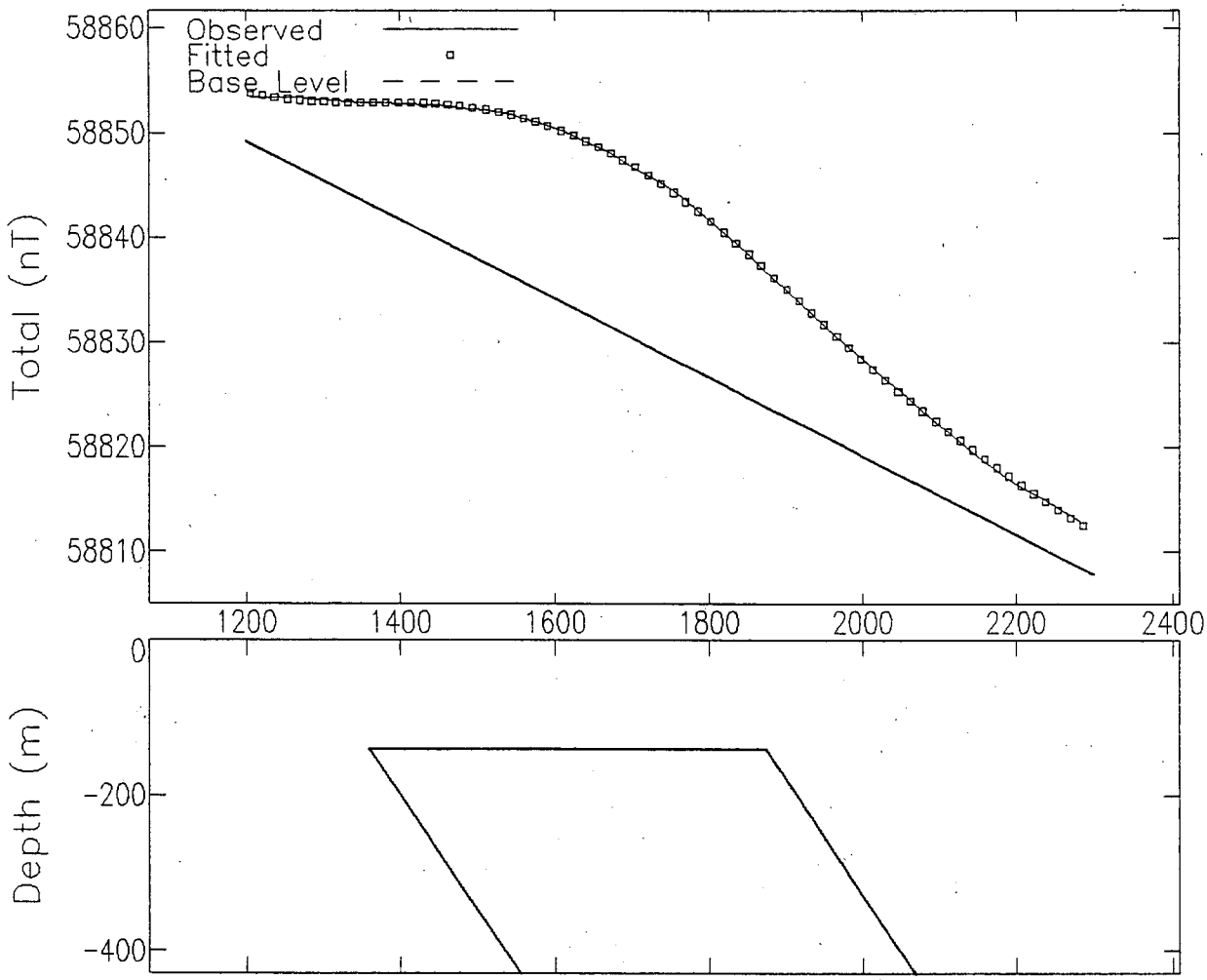
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

CULTURE, PIPELINES

Tabular 1 Model - Line 280

Fid Range = 2071-2089, Anomaly 1S2b



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	140 m
Half Width	F	258 m
Dip	F	56 deg
Susceptibility	F	0.000109 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	1616.658 m
Cross Position	X	721003.7 m
Base Level	F	58833.57 nT
Base Slope	X	-.0375498 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

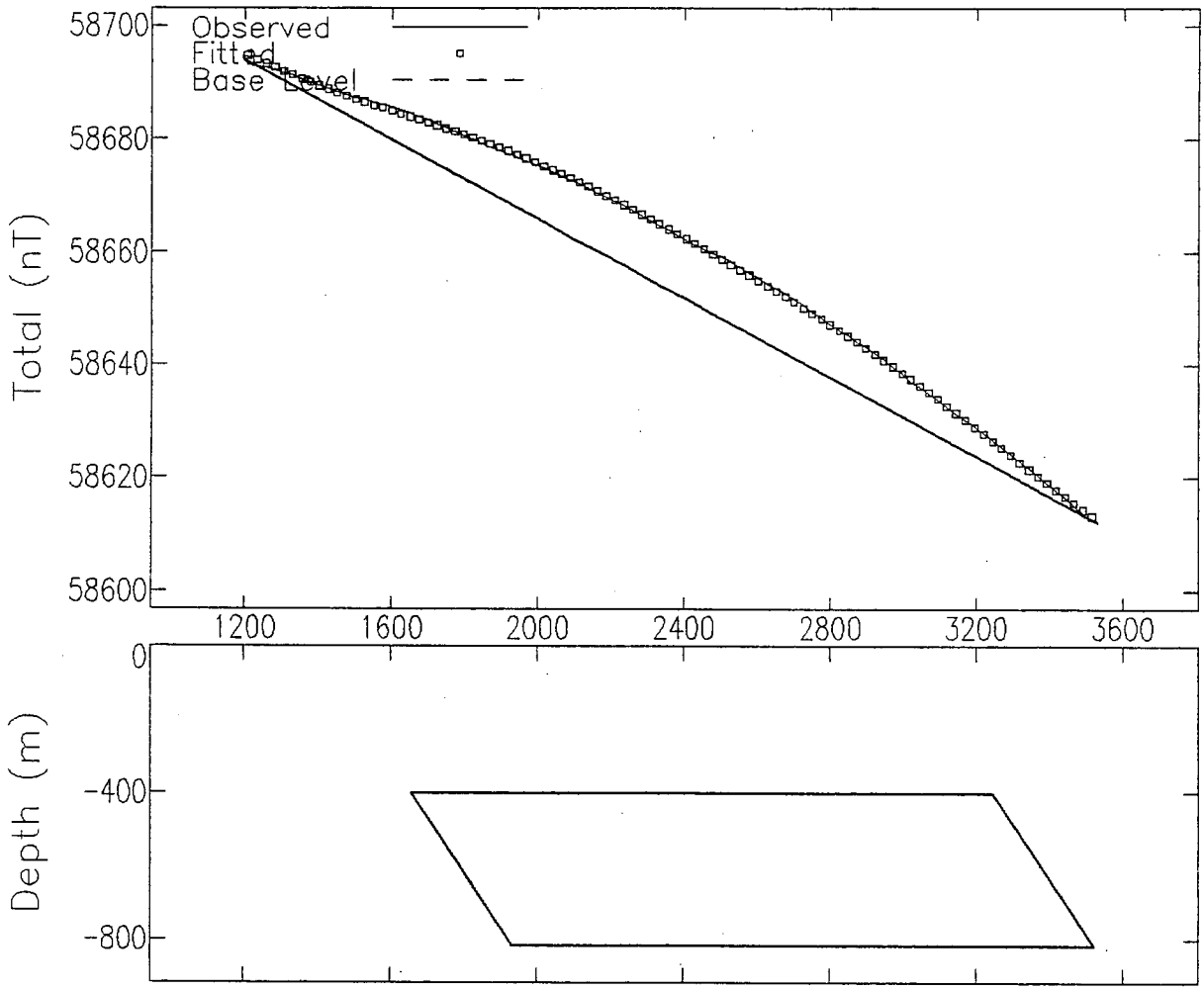
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

NOT PICKED FROM ANALOGS

Tabular 2 Model - Line 280

Fid Range = 1820-1840, Anomaly 3S2



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	401 m
Half Width	F	797 m
Half Length	X	800 m
Offset	X	0 m
Dip	F	56 deg
Thickness	F	414 m
Susceptibility	L	0.000138 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	X	2450 m
Cross Position	X	719921.9 m
Base Level	X	58650 nT
Base Slope	X	-.035 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

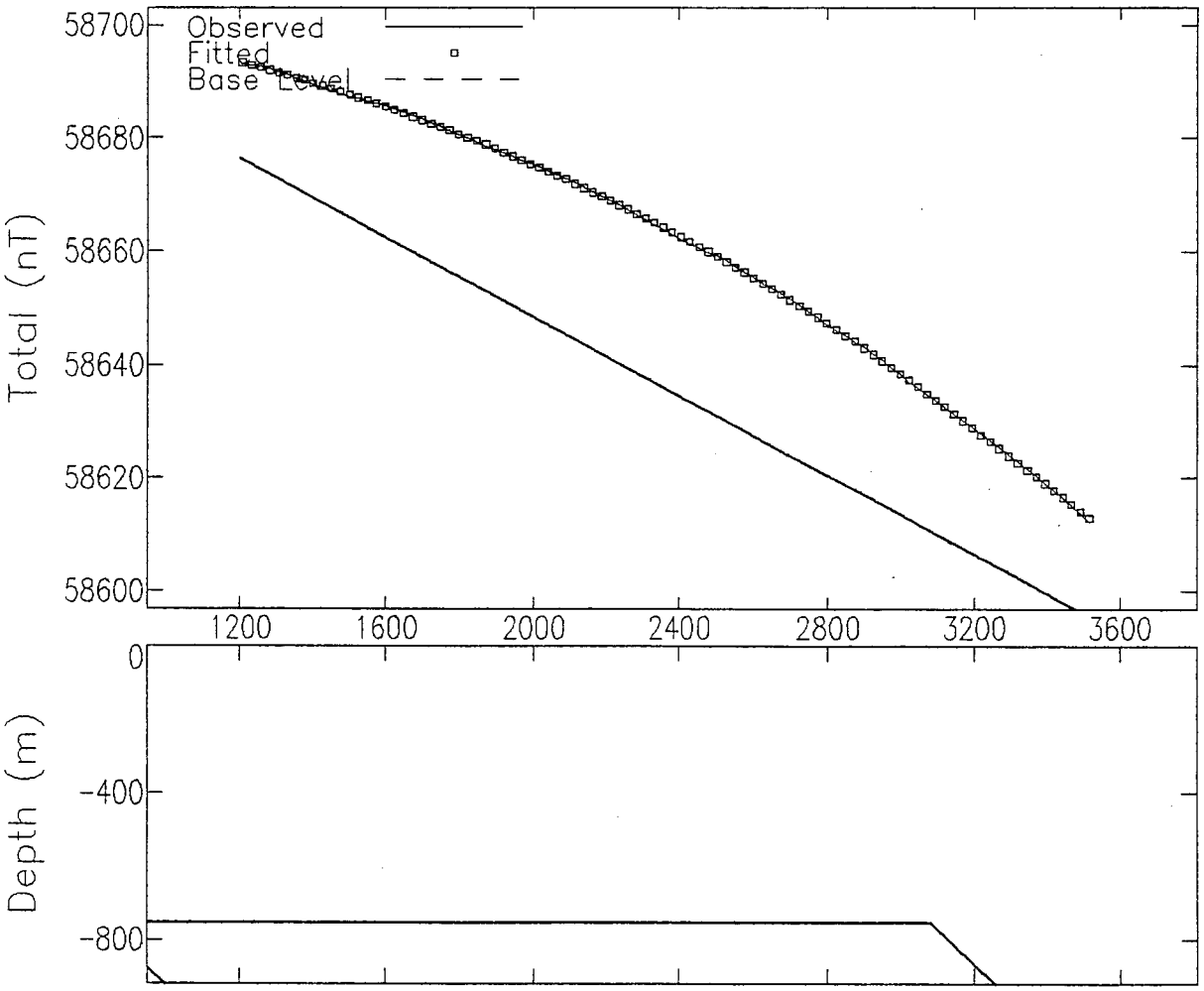
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6280000 m
Cross Direction	90 deg
Cross Offset	

SAME AS PREVIOUS PAGE

Tabular 1 Model – Line 280

Fid Range = 1820–1840, Anomaly 1s2



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	754 m
Half Width	F	1134 m
Dip	F	43 deg
Susceptibility	F	0.000190 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	1947.833 m
Cross Position	X	719947.8 m
Base Level	X	58650.24 nT
Base Slope	X	-.0349366 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

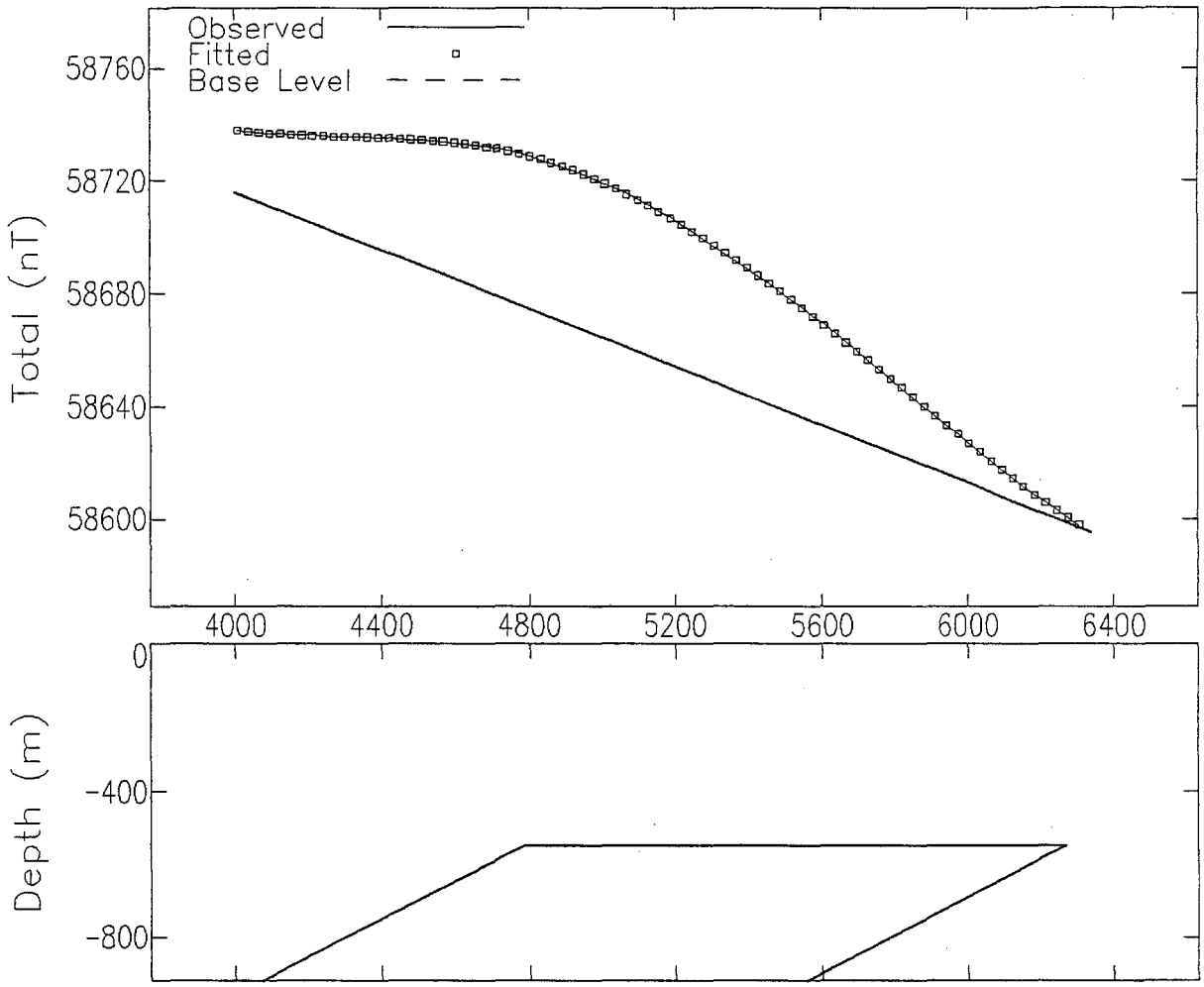
COORDINATES:

Sensor Height	0 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6280000 m
Cross Direction	90 deg
Cross Offset	

NOT PICKED FROM ANOMALY

Line 60 (Tabular 2 Model)

Fid Range = 2610 - 2650, Anomaly 1D1



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	547 m
Half Width	F	743 m
Half Length	X	500 m
Offset	X	0 m
Dip	F	152 deg
Thickness	F	561 m
Susceptibility	F	0.000965 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5526.365 m
Cross Position	X	716371.6 m
Base Level	F	58637.18 nT
Base Slope	F	-.05161 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

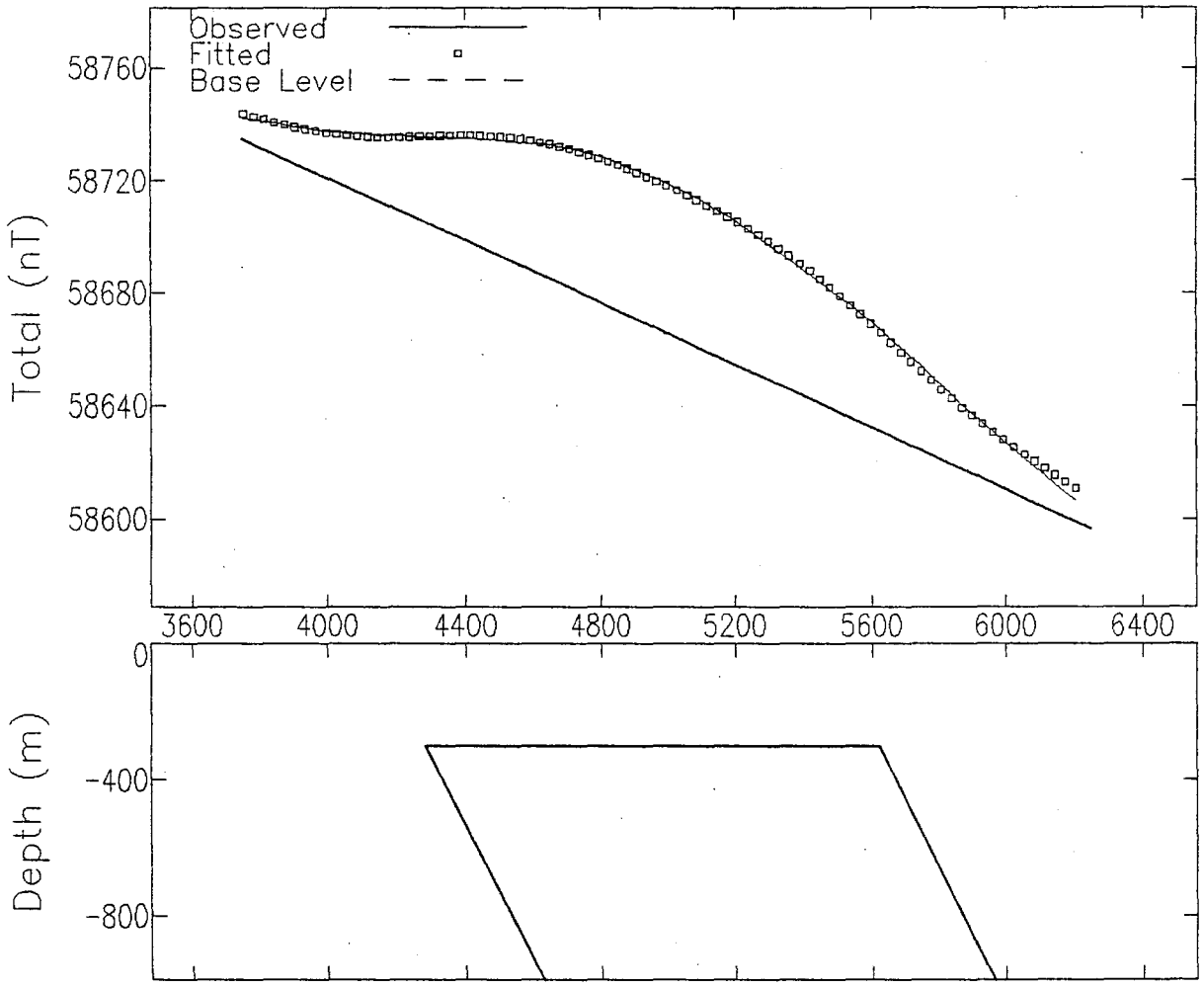
Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-2 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

NOT PICKED FROM ANALOGS

TOO DEEP

Tabular 1 Model - Line 60

Fid Range - 2610-2650, Anomaly .1d1



MODEL PARAMETERS:

Model Type		Tabular	
Depth	F	301	m
Half Width	F	670	m
Dip	F	63	deg
Susceptibility	F	0.000253	emu
Remnance Ratio	X	0	
Remnance Incl	X	0	deg
Remnance Decl	X	0	deg
Main Position	F	4951.482	m
Cross Position	X	716396.3	m
Base Level	X	58668.34	nT
Base Slope	X	-.0553043	nT/m
Base Curvature	X	0	nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000	nT
Inclination	78	deg
Declination	20	deg

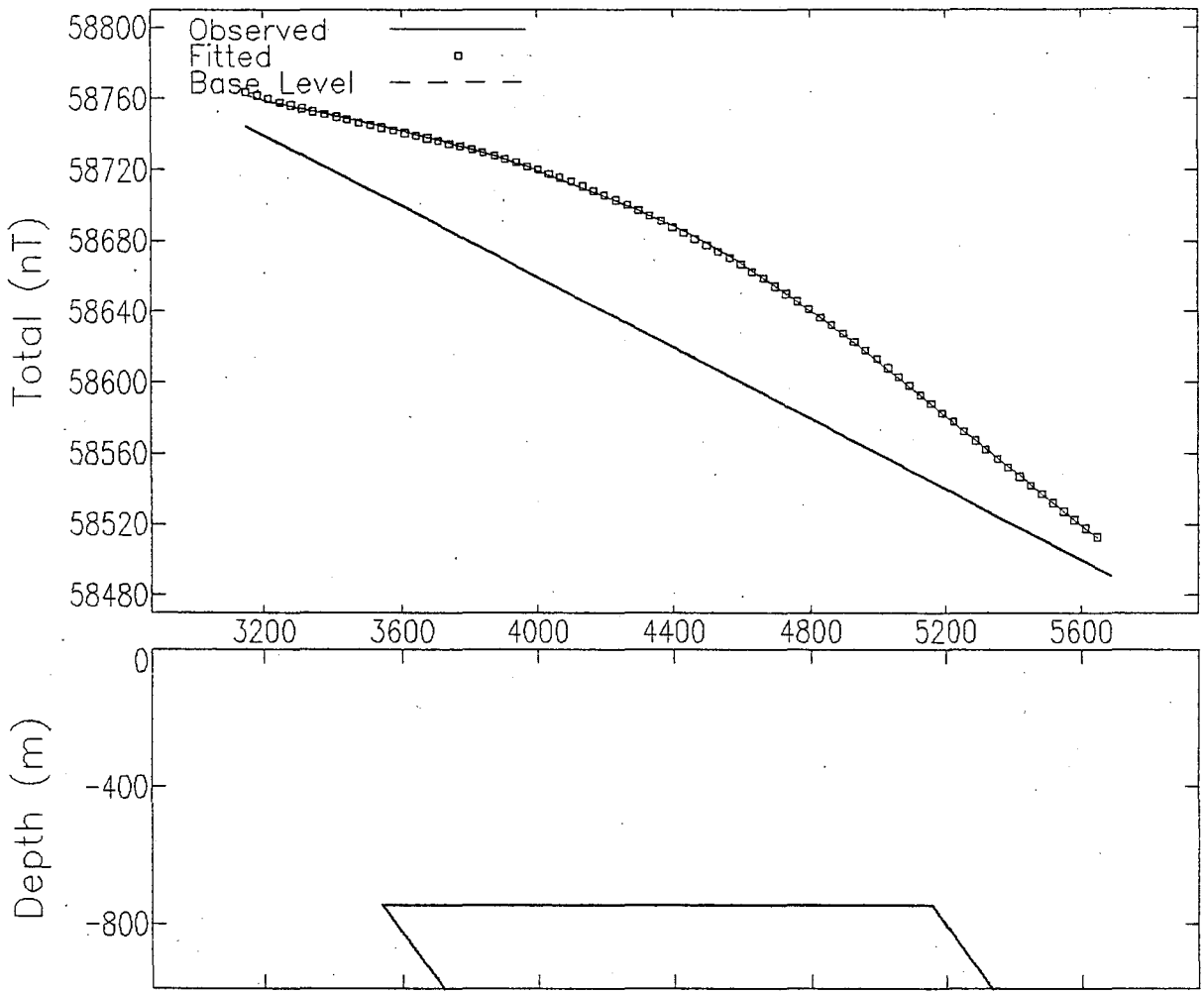
COORDINATES:

Sensor Height	100	m
Strike Perp	0	deg
Line Direction	-2	deg
Main Direction	0	deg
Main Offset	6260000	m
Cross Direction	90	deg
Cross Offset		

NOT PICKED FROM ANALOGS

Tabular 2 Model, Line 240

Fid Range 600-670, Anomaly 2d2b



MODEL PARAMETERS:

Model Type		Tabular2	
Depth	F	747	m
Half Width	F	810	m
Half Length	X	800	m
Offset	X	0	m
Dip	F	54	deg
Thickness	F	1217	m
Susceptibility	F	0.000876	emu
Remnance Ratio	X	0	
Remnance Incl	X	0	deg
Remnance Decl	X	0	deg
Main Position	X	4350	m
Cross Position	X	720073.1	m
Base Level	X	58624.63	nT
Base Slope	X	-.0998098	nT/m
Base Curvature	X	0	nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

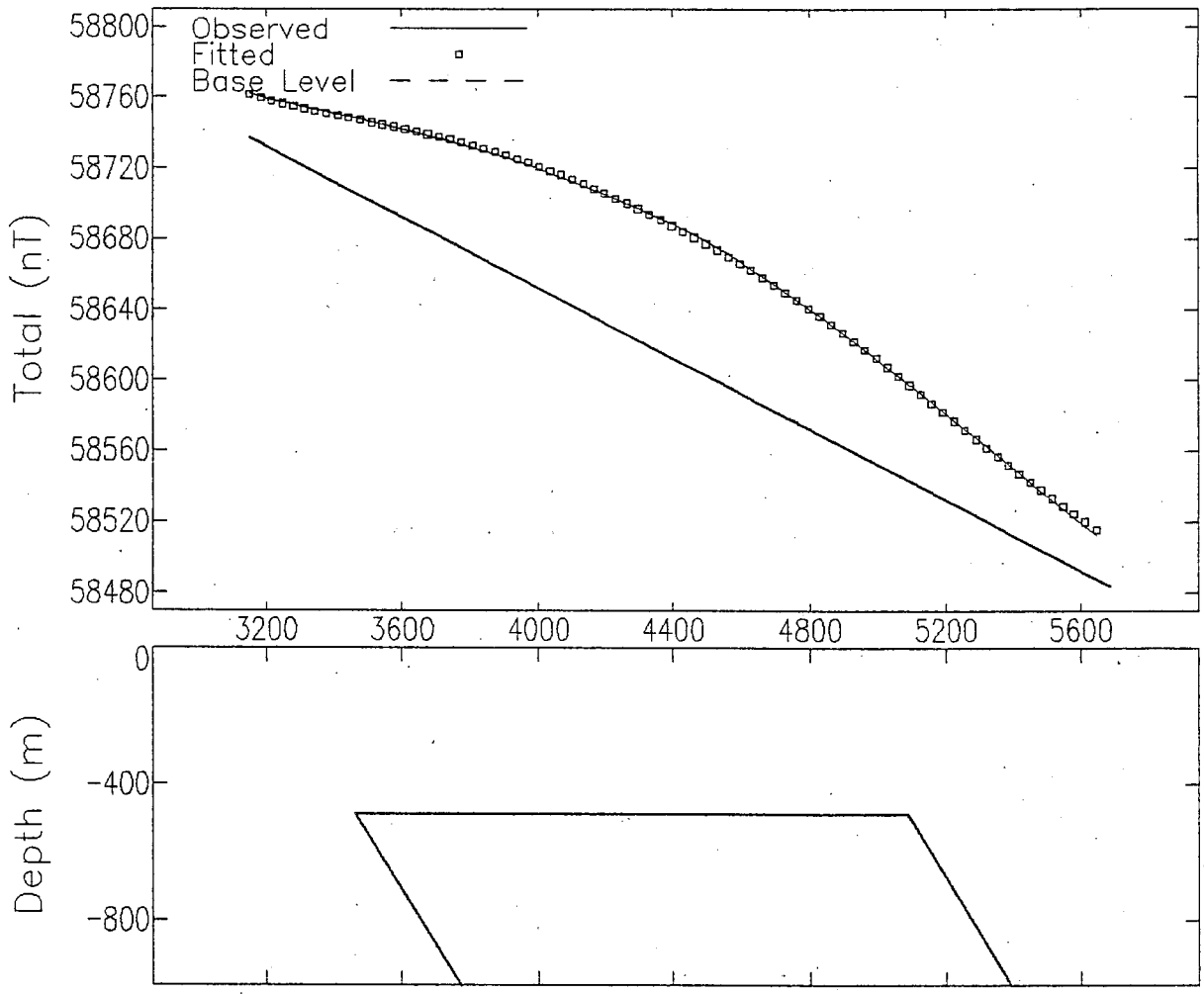
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

NOT DIGITED FROM ANALOG

Tabular 1 Model - Line 240

Fid Range = 600-670, Anomaly 2D2a



MODEL PARAMETERS:

Model Type		Tabular	
Depth	F	489	m
Half Width	F	812	m
Dip	F	59	deg
Susceptibility	L	0.000411	emu
Remnance Ratio	X	0	
Remnance Incl	X	0	deg
Remnance Decl	X	0	deg
Main Position	F	4275.886	m
Cross Position	X	720077	m
Base Level	X	58624.63	nT
Base Slope	X	-.0998098	nT/m
Base Curvature	X	0	nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000	nT
Inclination	78	deg
Declination	20	deg

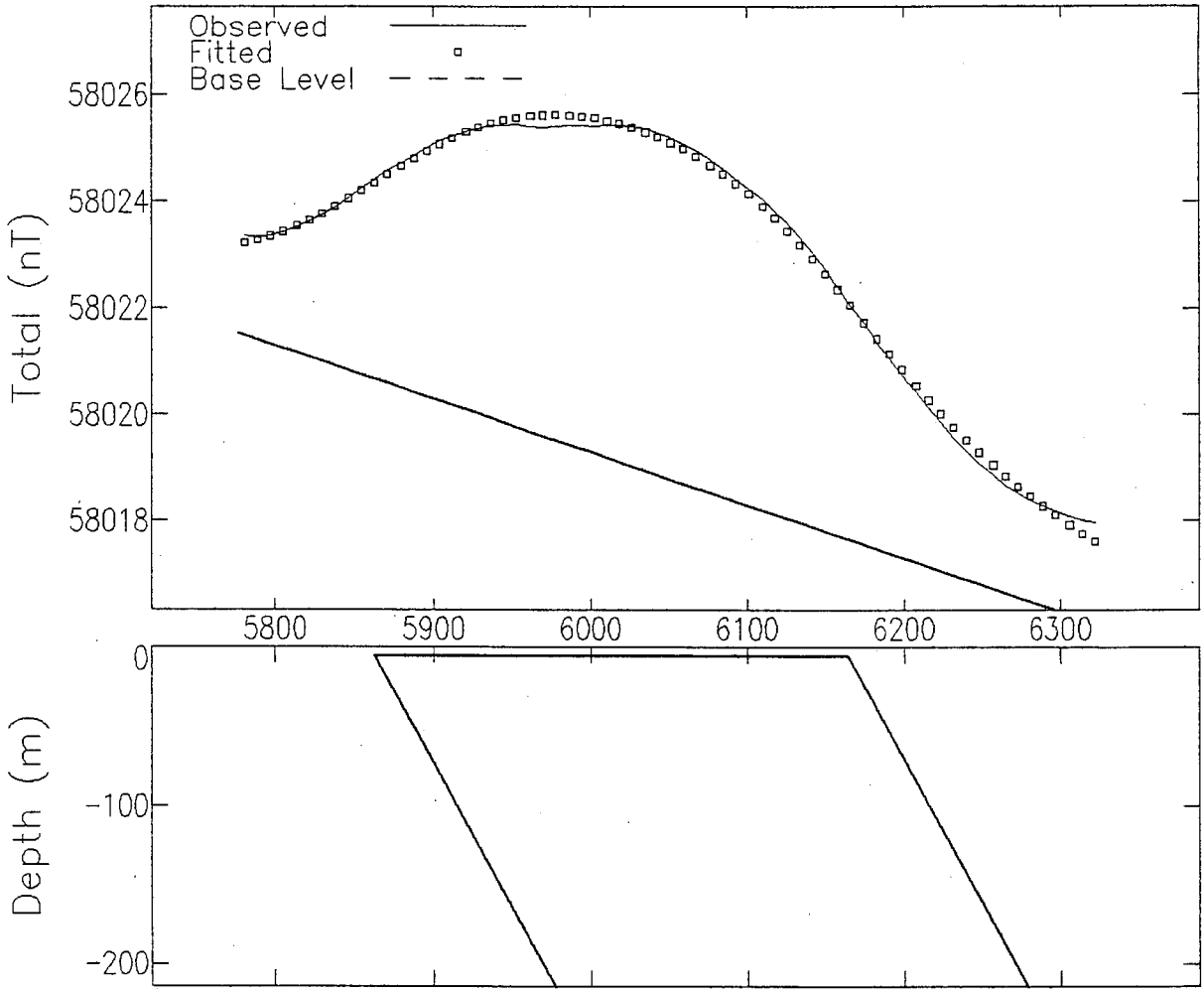
COORDINATES:

Sensor Height	100	m
Strike Perp	0	deg
Line Direction	-3	deg
Main Direction	0	deg
Main Offset	6260000	m
Cross Direction	90	deg
Cross Offset		

NB: = "OUT EAST" ANOMALY

Tabular 1 Model – Line 840

Fid Range = 220 – 230, Anomaly 1N1



MODEL PARAMETERS:

Model Type		Tabular
Depth	L	5.77 m
Half Width	F	151 m
Dip	F	61 deg
Susceptibility	F	.0000328 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	6013.693 m
Cross Position	X	731491.8 m
Base Level	F	58019.16 nT
Base Slope	X	-.01 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

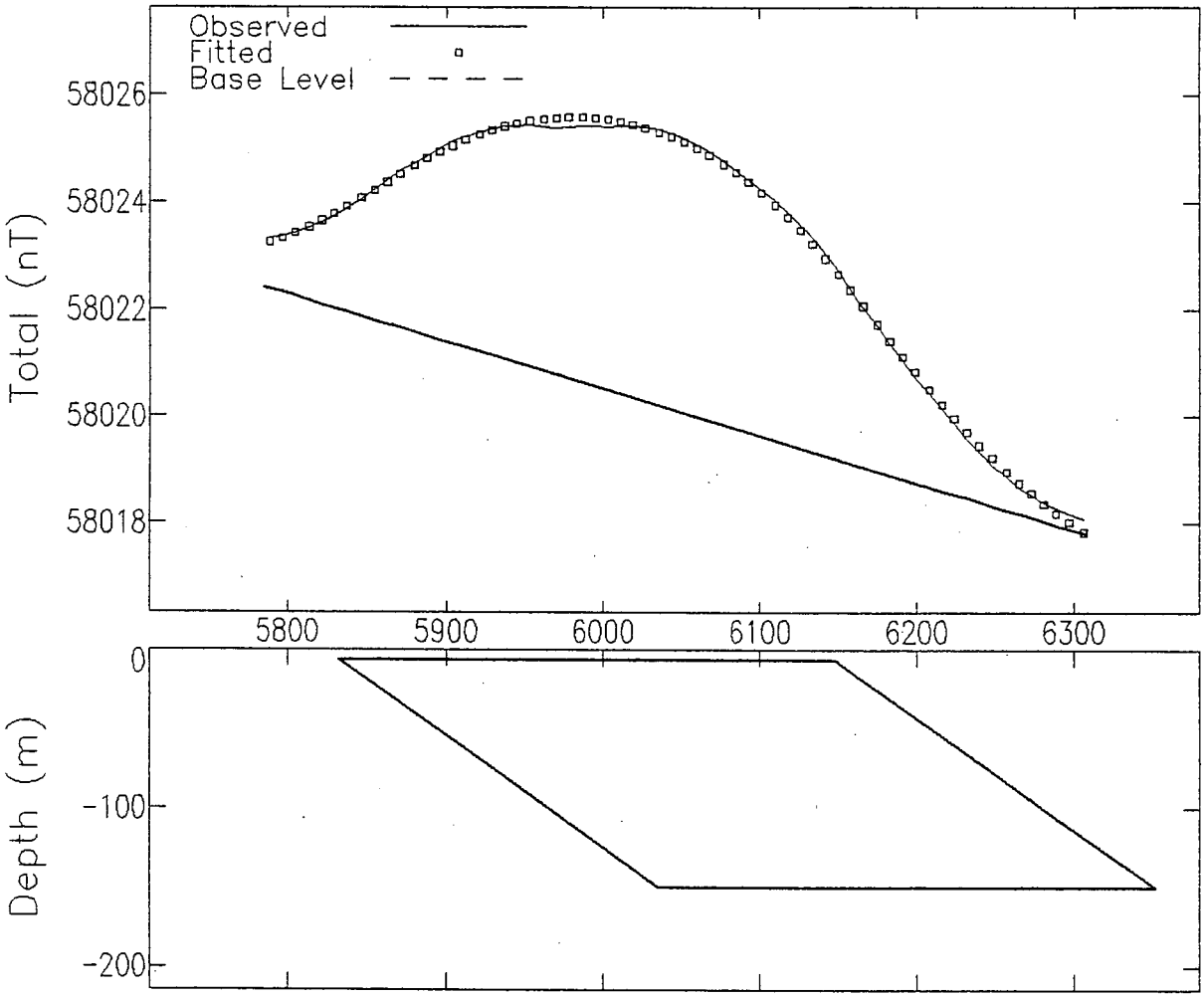
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	

"OUT EAST" Anomaly

Tabular 2 Model - Line 840

Fid Range = 220 - 230, Anomaly 1N1



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	5.95 m
Half Width	F	158 m
Half Length	X	250 m
Offset	X	0 m
Dip	F	35 deg
Thickness	F	144 m
Susceptibility	F	.0000498 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5990.392 m
Cross Position	X	731493.3 m
Base Level	F	58020.61 nT
Base Slope	F	-.0088318 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

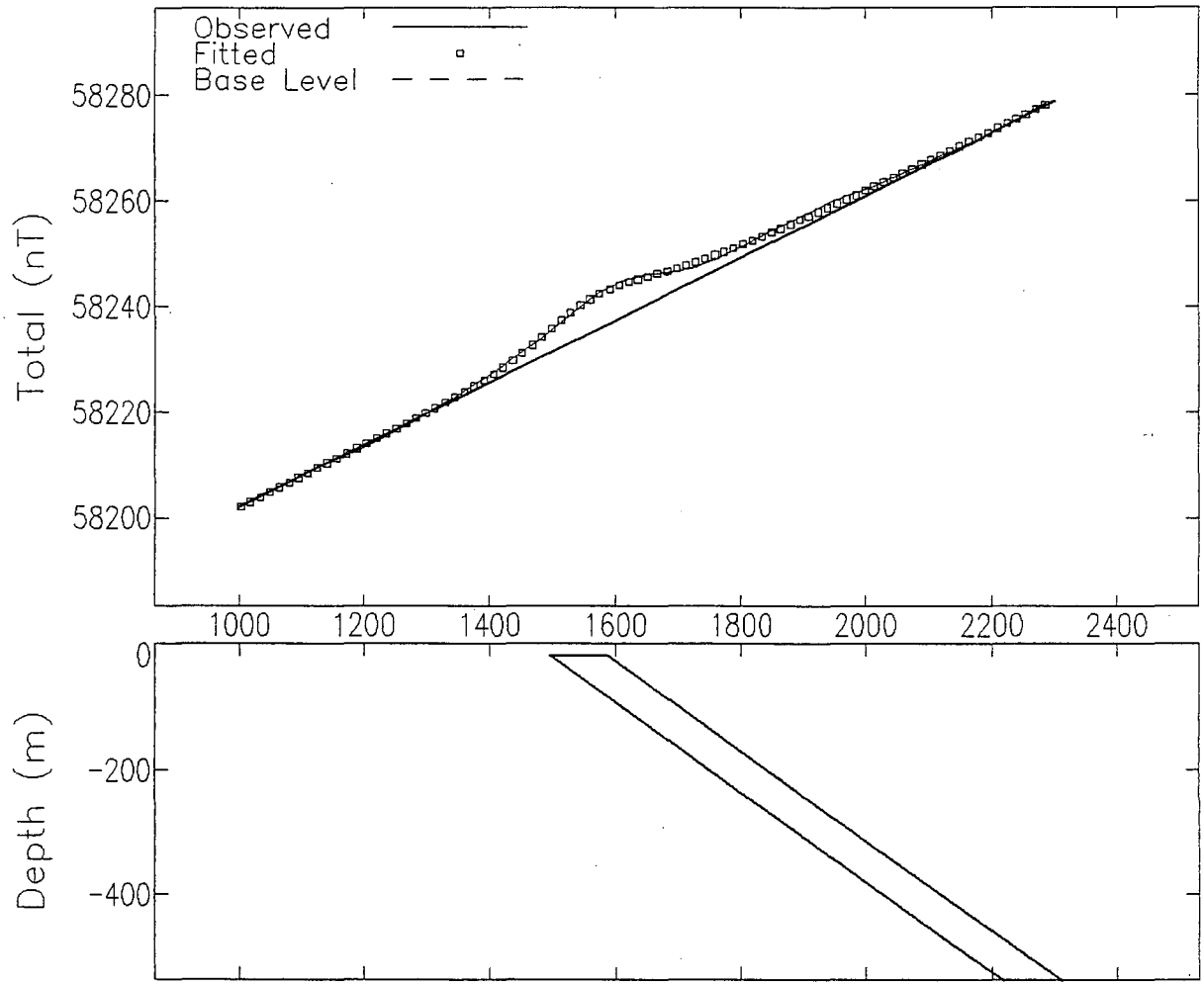
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	

PICKED FROM ANOMALIES BUT NOT NAMED

Tabular 2 Model - Line 610

Fid Range = 4625-4645 , Anomaly 2N2



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	18.9 m
Half Width	F	46.2 m
Half Length	X	200 m
Offset	X	0 m
Dip	F	36 deg
Thickness	F	556 m
Susceptibility	F	0.000136 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	1541.899 m
Cross Position	X	727655.4 m
Base Level	F	58234.04 nT
Base Slope	F	.0589611 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

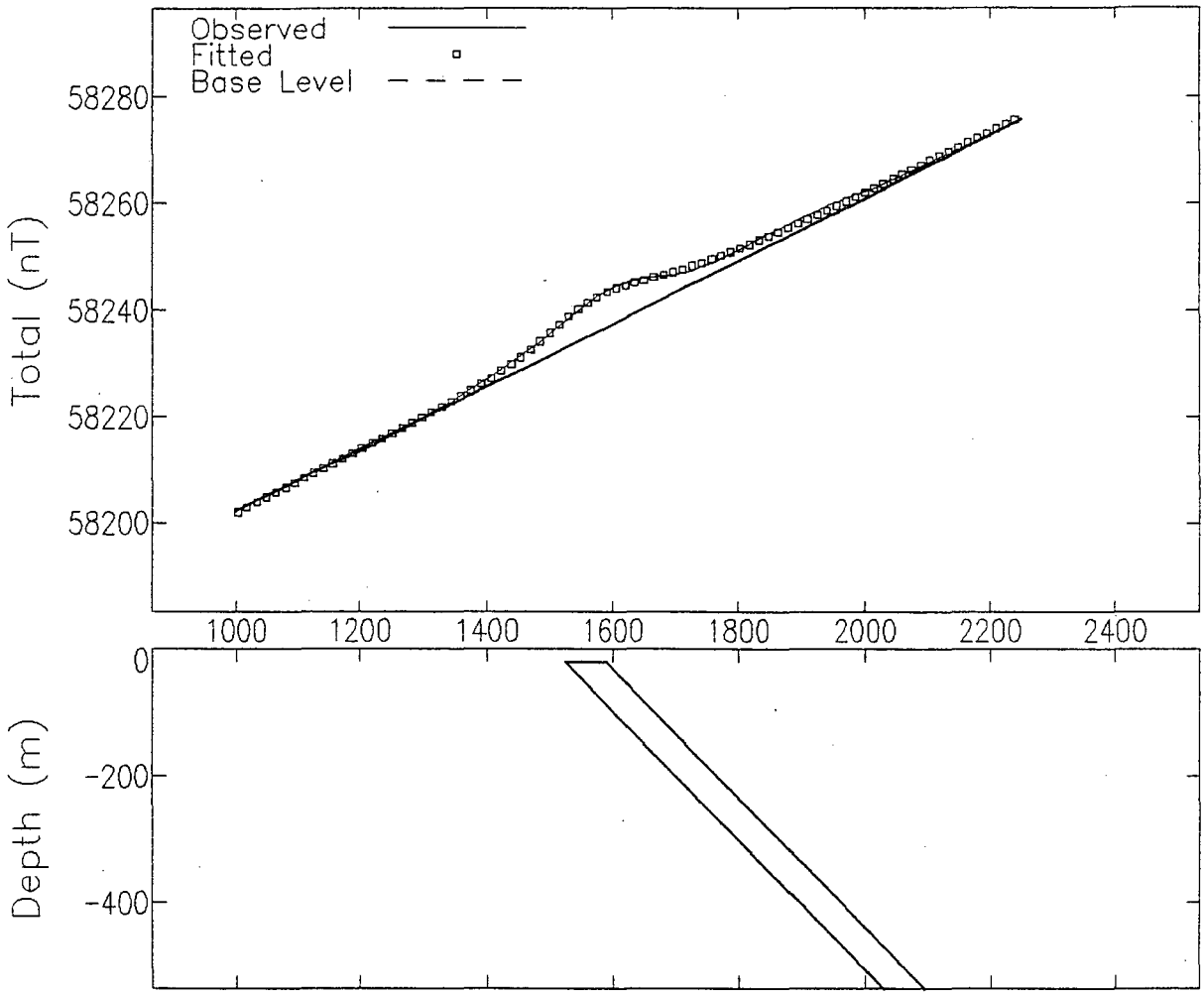
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-2 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

PICKED FROM [illegible] BUT NOT [illegible]

Tabular 1 Model – Line 610

Fid Range = 4625–4645, Anomaly 2n2b



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	20.3 m
Half Width	F	32.7 m
Dip	F	46 deg
Susceptibility	F	0.000159 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	1555.919 m
Cross Position	X	727655.3 m
Base Level	F	58234.87 nT
Base Slope	X	.0588039 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

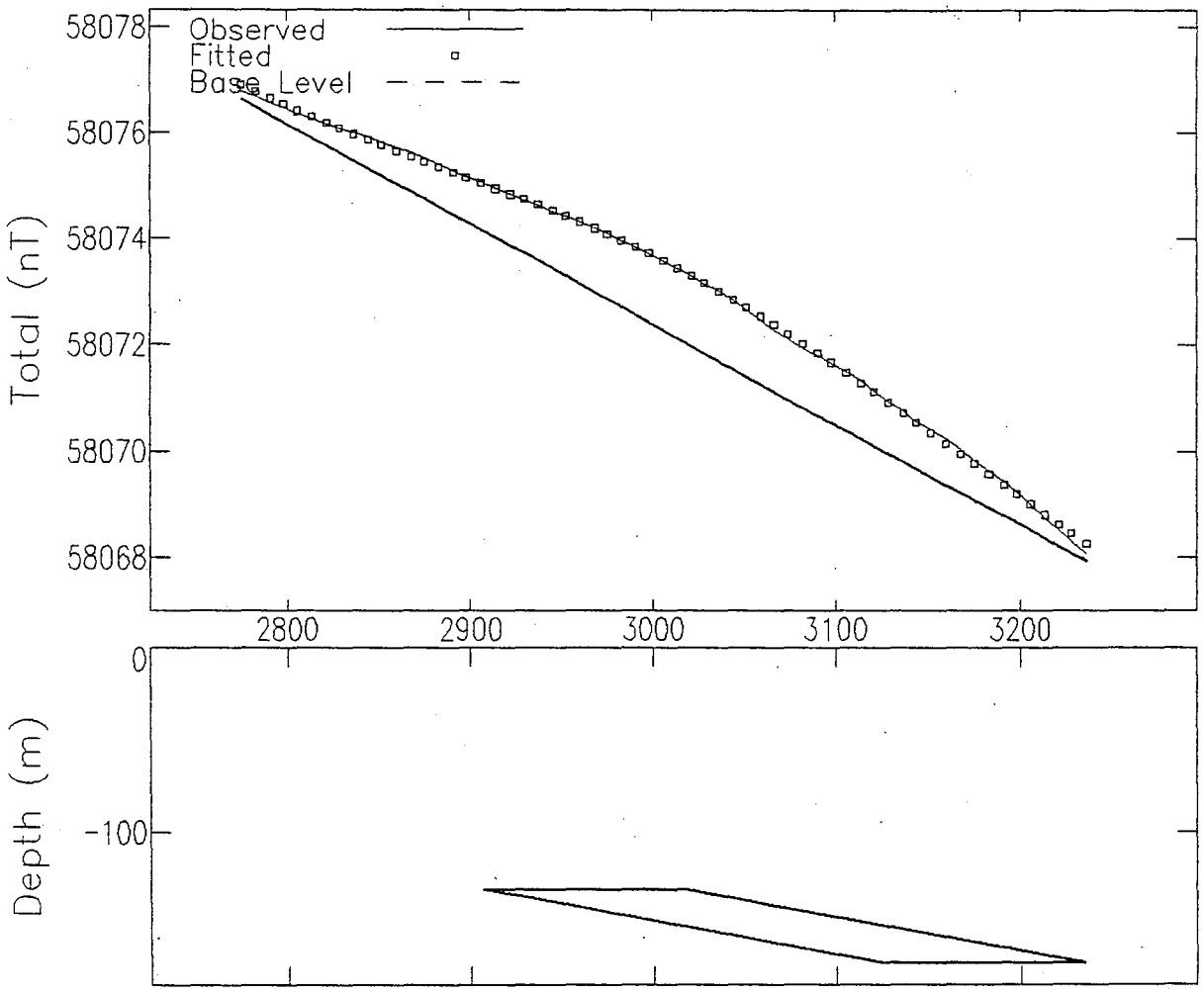
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-2 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	

NOT PICKED FROM ANALOGS

Tabular 2 Model - Line 590

Fid Range 3578-3584, Anomaly 1D4a



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	132 m
Half Width	F	55.2 m
Half Length	X	100 m
Offset	X	0 m
Dip	F	10 deg
Thickness	F	40.2 m
Susceptibility	F	0.000298 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	X	2962.47 m
Cross Position	X	726656.1 m
Base Level	X	58073.1 nT
Base Slope	F	-.0188742 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

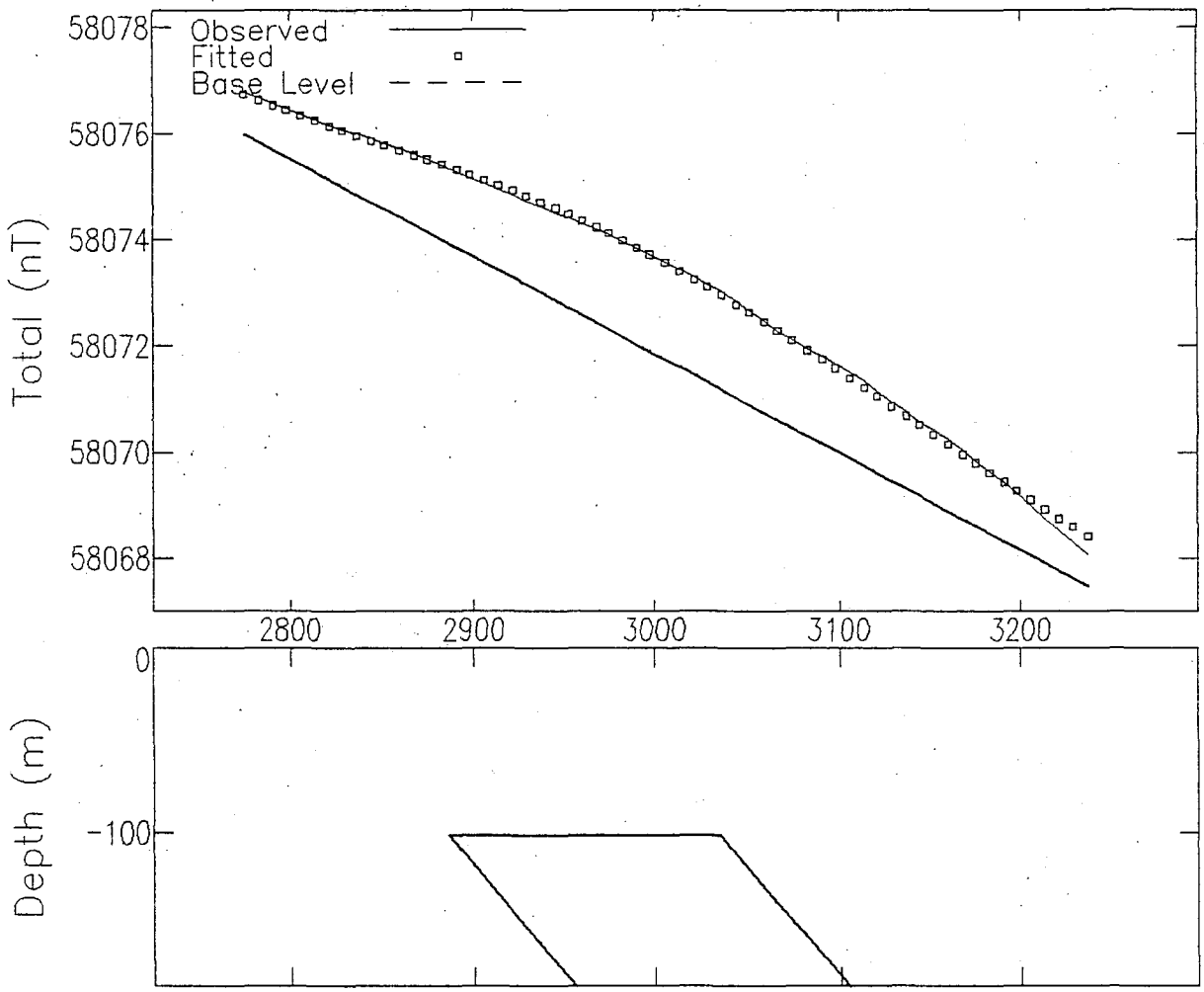
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-1 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	

NOT PICKED FROM ANALOGS

Tabular 1 Model - Line 590

Fid Range = 3578-3584, Anomaly 1D4b



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	102 m
Half Width	F	74.7 m
Dip	F	50 deg
Susceptibility	F	.0000305 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	2960.806 m
Cross Position	X	726656.2 m
Base Level	X	58072.57 nT
Base Slope	X	-.0184636 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

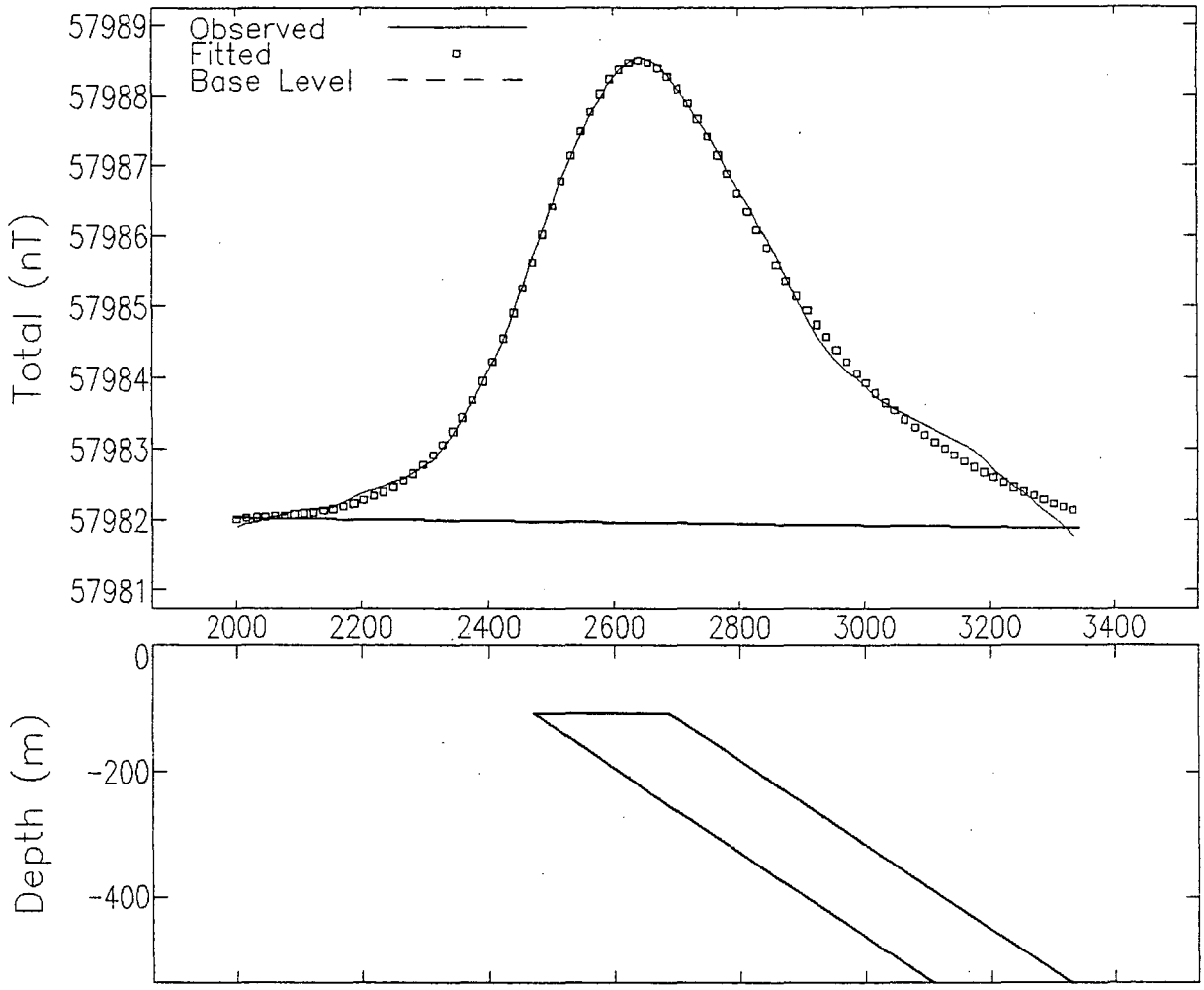
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-1 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	

"WELLSIDE" ANOMALY

Tabular 2 Model - Line 760

Fid Range = 3725-3745, Anomaly 3N2a



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	109 m
Half Width	F	110 m
Half Length	X	150 m
Offset	X	0 m
Dip	F	34 deg
Thickness	F	451 m
Susceptibility	F	0.000158 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	2578.525 m
Cross Position	X	729556.3 m
Base Level	F	57981.96 nT
Base Slope	X	-.0001111 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

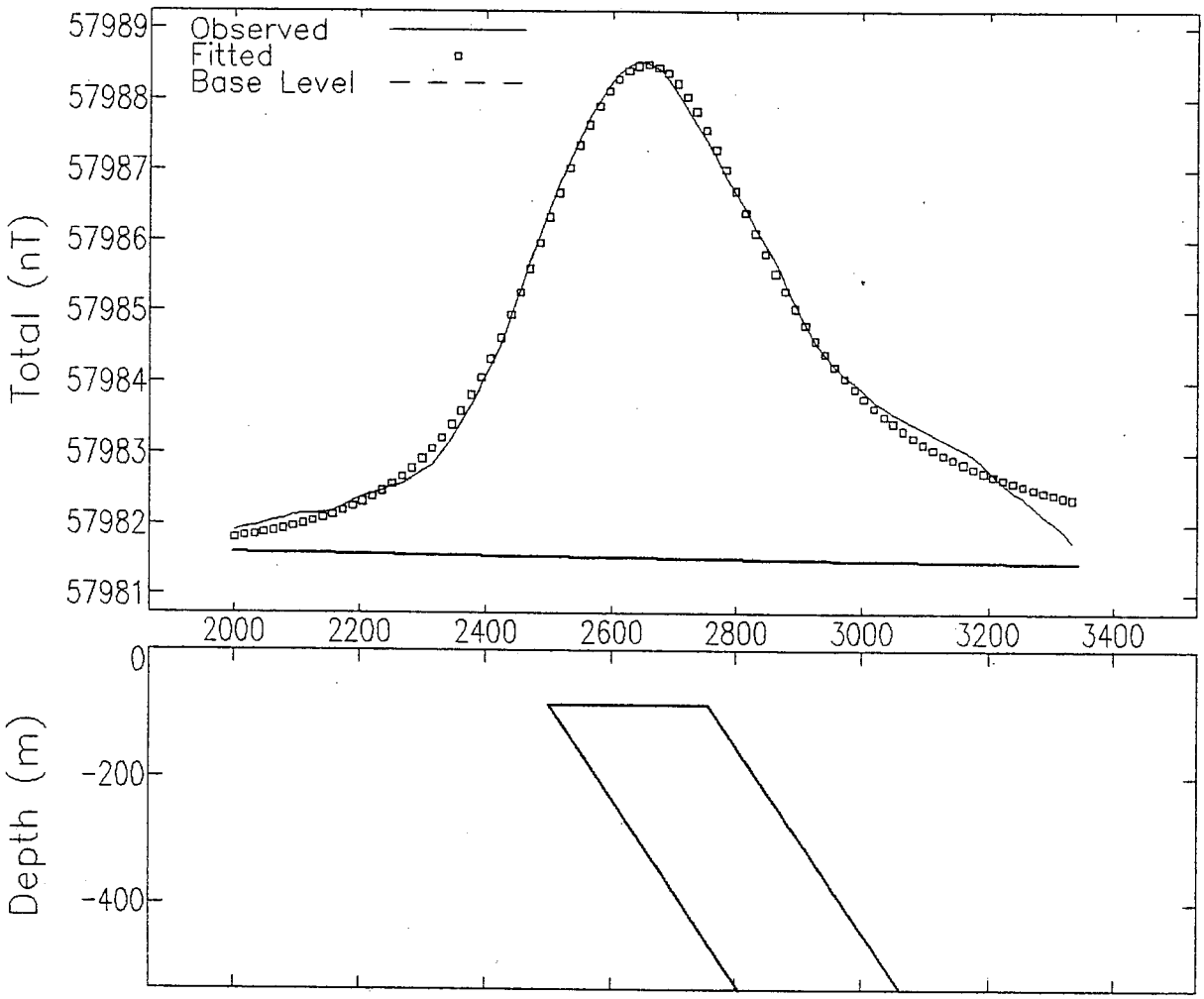
COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6280000 m
Cross Direction	90 deg
Cross Offset	

"WELLSIDE" ANOMALY

Tabular 1 Model - Line 760

Fid Range = 3725-3745, Anomaly 3n2b



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	85.3 m
Half Width	F	129 m
Dip	F	56 deg
Susceptibility	F	.0000618 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	2627.382 m
Cross Position	X	729552.8 m
Base Level	F	57981.52 nT
Base Slope	X	-.0001111 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

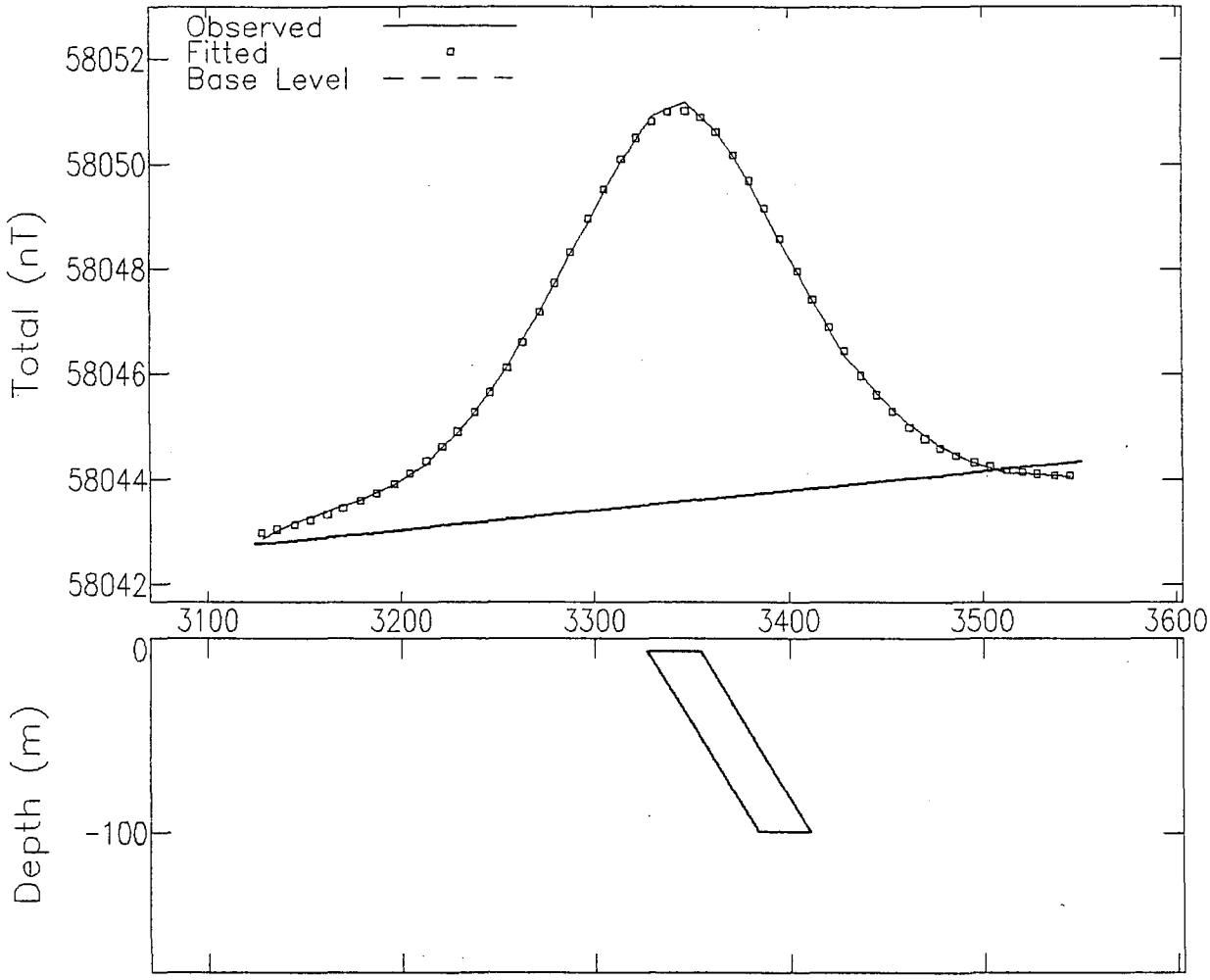
Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6280000 m
Cross Direction	90 deg
Cross Offset	

Tabular 2 Model – Line 890

Culture, Fid Range = 992 - 997 (AN OILWELL)



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	6.60 m
Half Width	F	13.6 m
Half Length	X	25.0 m
Offset	X	0 m
Dip	F	58 deg
Thickness	F	92.4 m
Susceptibility	F	0.00167 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	3340.16 m
Cross Position	X	732622.4 m
Base Level	F	58043.57 nT
Base Slope	F	.0036999 nT/m
Base Curvature	X	0 nT/m2

(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

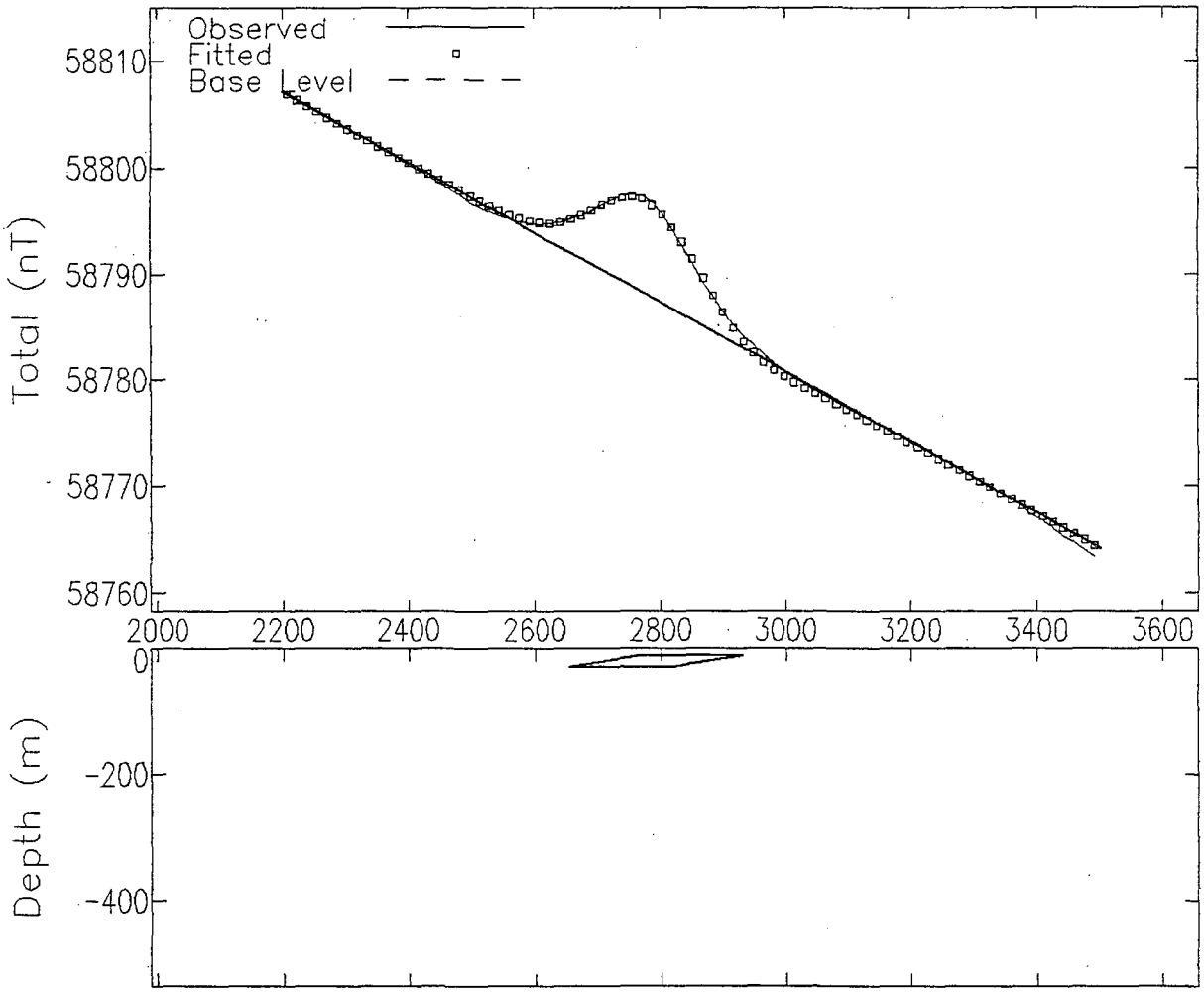
Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-2 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	

Tabular 2 Model - Line 340

Fiducial Range = 4190 - 4174



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	10.0 m
Half Width	F	82.1 m
Half Length	X	25.0 m
Offset	X	0 m
Dip	L	170 deg
Thickness	L	19.0 m
Susceptibility	F	0.00139 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	2846.904 m
Cross Position	X	12163.13 m
Base Level	F	58785.8 nT
Base Slope	F	-.0329341 nT/m
Base Curvature	X	0 nT/m2

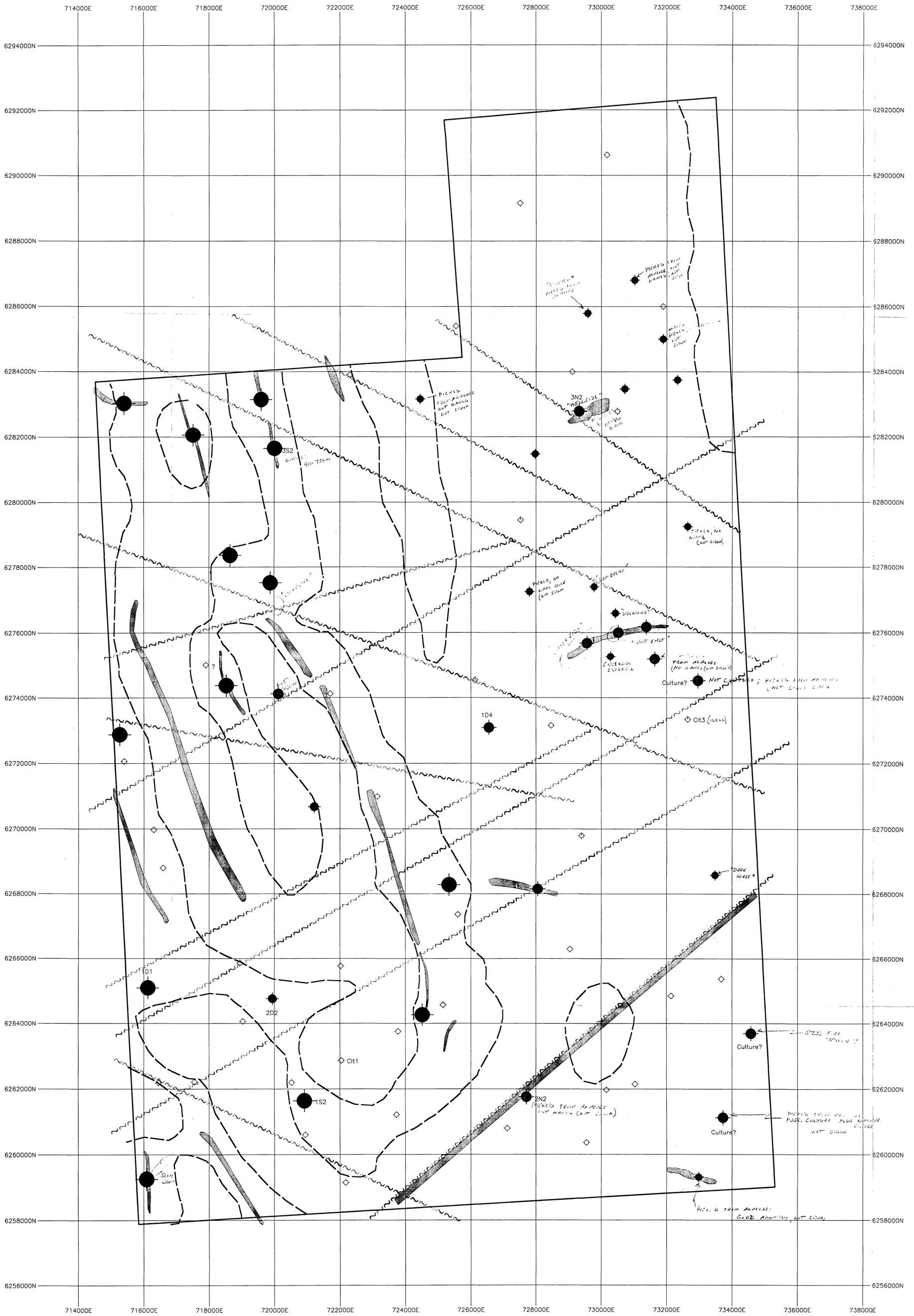
(F-fitted, X-fixed, L-limit)

GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6260000 m
Cross Direction	90 deg
Cross Offset	710000 m



LEGEND

- Shallow to Moderate Depth Body (Intrusive or Possible Diatreme)
- Shallow Weak Body (Possible, Probable Diatreme or Dyke)
- Shallow to Moderate Depth Magnetic Dyke
- Culture
- Outline of Buried Magnetic Zone (Basement or Deep Intrusive)
- Interpreted Fault
- Property Boundary

Scale 1:50000

500 0 500 1000 1500 2000 (meters)

SIDON INTERNATIONAL RESOURCE CORP

OTTER LAKE PROJECT

Peace River Area, AB

HIGH RESOLUTION AIRBORNE MAGNETIC SURVEY

INTERPRETATION PLAN MAP

(Spectra Survey Overlay)

Magnetic Datum:	56,900 nT
Magnetic Inclination	78degN
Magnetic Declination	20degW
Sample Interval:	approx. 7m
Scale Factor (UTM):	0.9996
Interpretation by:	QCI: PPlazek, JMLegault
Survey Date:	August, 1997
Survey Flown by:	Spectra Exp. Geoscience Corp.

QUANTEC CONSULTING INC.

DWG. NO. C385-MAGINT-Otter Lake

Note: Property Location digitized from Spectra Geoscience 1:50000 scale base map.

APPENDIX III

GROUND MAGNETIC FOLLOWUP OF AIRBORNE ANOMALIES, OTTER LAKE: UPDATED: 5 MAR 98

1. VERIFICATION OF PROBABLE OVERBURDEN-HOSTED, PLACER MAGNETITE-SOURCED ANOMALIES IN PALEOCHANNELS:

NAME	PEAK AIRBORNE	PEAK GROUND	BASE STA.	STATUS	RESULTS
CREEKSIDE	8γ	30γ		FULL GRID CUT	LOCATION PLOT OK; SPIKY, DIPOLAR SHEET-TYPE SIGNATURE; V.V. SHALLOW CLOSE CORRESPONDENCE WITH CREEK/LAKE. NO FURTHER WORK PLANNED
WELLSIDE	6γ	20γ	VERY QUIET	4 N-S RECON LINES	LOCATION PLOT OK; BROAD ANOM. W/ SOME SPIKINESS, DYING TO WEST QUANTEC MODELLED DEPTH 85-109 METERS, BUT IT'S PROB. MUCH LESS NO FURTHER
SIDEWINDER	5γ	10-18γ	VERY QUIET	4 N-S RECON LINES	LOCATION PLOT OK, MINOR SPIKINESS; INCONSISTENT FROM LINE TO LINE. EST. DEPTH 30 METERS NO FURTHER WORK
OUT EAST	8γ	30γ	VERY QUIET	4 N-S RECON LINES	LOC. PLOT OK; PROBABLE EASTWARD EXTENSION OF "CREEKSIDE" BROAD SOMEWHAT SPIKY SHEETLIKE SIGNATURE, INCONSISTENT LINE TO LINE. QUANTEC MODELLED AT 6 METERS DEPTH. NO FURTHER WORK PLANNED.
RANGER	2γ (NEG?)	4γ	VERY QUIET	2 N-S RECON LINES	LOCATION PLOT OK. NO DISCERNIBLE ANOMALY IN FLAT RESPONSE W/ SPIKES THROUGHOUT, NO FURTHER WORK
SPLIT	4γ	?	MAG-STORM	4 N-S RECON LINES	LOC. PLOT OK. BAD DAY FOR MAG, BUT NO FURTHER WORK PLANNED. NOTHING FOUND IN RECON

2. VERIFICATION OF ANOMALIES ON NE-SW "F-9" BASEMENT STRUCTURE/FAULT AND INTERSECTING CROSS FAULTS:

NAME	PEAK AIRBORNE	PEAK GROUND	BASE STA.	STATUS	RESULTS
PROPELLER	5γ	10γ	QUIET	2 KM GRID COMPLETED	LOCATION PLOT OK; BROAD MONOPOLAR RESPONSE W/ SOME SPIKES. DEPTH 1-200 M. PLOTS DIRECTLY ATOP AND ALIGNED WITH STRUCTURE "F-9" CONTOURS SHOW RT. ∡ BEND @ FAULT, W/ CIRCULAR ANOM JOINED BY LINEAR ANOM COMING FROM SOUTH. FULL GRID DONE
PINGO	−4γ	−10γ	QUIET	~~4 E-W RECON~~ LINES GRID DONE	LOCATION PLOT OK; 1-LINE NEGATIVE, NOT SPIKY. MAY BE RELATED TO "HILLTOP." FULL GRID WORK COMPLETED, IT'S ALL ONE W/ "HILLTOP" AND "MAYBE" IN A NW-SE SHAPED ANOMALY
HILLTOP	2γ	25γ	QUIET	~~1 E-W RECON~~ LINE GRID DONE	LOCATION PLOT OK; SLIGHTLY SPIKY MONOPOLAR ANOM. EST. DEPTH 60 M ~~PLANNED GRID IN CONJUNCTION W/ "PINGO"~~, GRID SHOWS IT'S PART OF PINGO ANOMALY
MAYBE	2γ	−10γ	QUIET	~~1 N-S RECON LINE~~ GRID DONE	LOCATION PLOT OK. SOMEWAT SPIKY NEGATIVE W/ POSITIVE TO NORTH. MAY BE EXTENSION OF "HILLSIDE" ~~PLANNED GRID IN CONJUNCTION W/ "PINGO"~~ GRID SHOWS IT TO BE PART OF "PINGO"
DARK HORSE	2γ	13γ	VERY QUIET	7 N-S RECON LINES	LOCATION PLOT OK. PLOTS ON NW STRUCTURE INTERP. FROM VERT. GRADIENT MAPS. BROAD MONOPOLE, OCC. SPIKY ON WEST, DEPTH EST. 100 METERS RECON-STYLE GRID DONE; B_L ONLY WAS CUT
OLYMPIC (NOT SIDON)	CAN'T TELL	10γ ~~SOMEWHAT~~ SPIKY	QUIET	1 V. LONG N-S RECON LINE	V. LARGE POSS. BASEMENT DIABASE ON F-9 STRUCTURE. ANOM NOT EVIDENT ON TOTAL FIELD MAP BUT STANDS OUT ON VERT. GRADIENT, ETC. V. LARGE. LOCATION PLOT OK; FLAT SHEET-TYPE RESPONSE ON + REGIONAL GRADIENT. PLACER?
WEST HILL	2γ	N.A.	OK	2 N-S RECON LINES	LOC. PLOT OK; NO DISCERNIBLE ANOMALY FOUND
CAN DO	1γ	N.A.	OK	2 N-S RECON LINES	ON SAME NW TREND AS "DARK HORSE" LOC. PLOT OK. NO REAL ANOM. FOUND
TOWER	3γ	15γ	V. QUIET	2-NS RECON LINES	LOC. PLOT OK BROAD MONOPOLE STRONG ANOM, NOT SPIKY. GRID?
AIRSTRIP	2γ	5γ	V. QUIET	2 NS RECON LINE	LOC. PLOT OK. VAGUE, BROAD ANOM, NOT SPIKY. DEEP. POSS. GRID?

3. RECON INVESTIGATION OF ANOMALIES DISTINCTIVE FOR OTHER REASONS:

NAME	PEAK AIRBORNE	PEAK GROUND	BASE STA	STATUS	RESULTS
LOOKALIKE (NOT STAON)	−8γ	N.A.	SOMEWHAT NOISY	3 800-m E-W RECON LINES	AIRBORNE NEGATIVE ALONG E.N.E. FAULT IN GABBROIC BASEMENT. LOC. PLOT OK, ONLY BROAD NEG. REGL GRADIENT FOUND W/ A FEW SPIKES (PROBABLE BASE STATION/GEO-MAGNETIC FIELD) NO REAL ANOMALY HERE
ONE SHOT	4γ	N.A.	QUIET	2 N-S RECON LINES	4γ ENHANCEMENT IN LONG E.N.E. TREND ALONG FAULT. LIES NEAR E-W ROAD TO WELLSITE. CULT.? LOC. PLOT OK. NO ANOMALY FOUND ON THE GROUND
CIRCLE POND	2γ		QUIET	2 N-S RECON LINES	1-LINE AIRBORNE, SOMEWHAT ISOLATED NEAR-CORRESPONDENCE TO A QUANTEC "DEEP TO MODERATE DEPTH" PICK. NO ANOMALY DISCERNIBLE, MAY BE A LITTLE TOO FAR EAST W/ RECON LINES. MUST BE VERY SMALL.
SLIM JIM	−2γ	NOT DONE OUT OF TIME			NEGATIVE ANOM. IN HIGH GRADIENT AREA ALONG NW FAULT. NOT CHECKED ON GROUND
SOUTH SIDE	2γ	25γ	QUIET	2 N-S RECON LINES	ISOLATED 2-LINE AIRBORNE ANOM. LOC. PLOT OK. STRONG DIPOLE W/ SPIKY SHOULDERS; VERT. DIKE RESPONSE, d = 30-60 M. GRID? V. SHALLOW. PLACER?
OIL PATCH	1γ	10-12γ	QUIET	2 N-S RECON LINES	1-LINER PLOTS IN PRESERT CREEK; PLACER MAGNETITE? V. SHARP HIGH-SPIKE ANOMALY NEARLY COINCIDENT W/ MEANDERING CREEK. PLACER MAGNETITE CLASSIC RESPONSE. NO FURTHER INTEREST. V. V. SHALLOW

4. VERY WEAK AIRBORNE ANOMALIES WITH PALEOCHANNEL SHAPES IN WESTERN PART OF FLIGHT BLOCK. VERY LOW PRIORITY.

NAME	PEAK AIRBORNE	PK. GRND	BASE STA.	STATUS	REMARKS
ANGLE	1/2γ	NOT	CHECKED	ON GROUND	
SURPRISE	1γ	NOT	CHECKED	ON GROUND	

5. AIRBORNE ANOMALIES w/CHARACTERISTIC PALEOCHANNEL PATTERNS AND AMPLITUDES IN NORTHEASTERN PART OF FLIGHT BLOCK. NO WORK PLANNED

CORNER	3γ
TWO STEP	2γ
SHORTY	2γ
SPOT	1γ
LONG SHOT	4γ
STRETCH	6γ
LAKESIDE	1γ
BEAVER	2γ
CHINOOK	2γ
FOREST	1γ
TUNDRA	1γ
ME TOO	2γ
LOWBOY	1γ
EASTSIDE	1γ
TOPSIDER	4γ
CHARLIE	3γ
VALENTINE	3γ
OFFSIDER	3γ
CARIBOU	4γ
ASPEN	3γ
SOMBRERO	4γ
PIPELINE	2γ

APPENDIX IV

February 17, 1998

Mr. Doug J. Duskin
Sidon International Resources Corporation
700 West Pender Street, Suite 505
Vancouver, BC
V6C 1G8
Fax: 403-849-9630

98-0041-R01

Subject: Geophysical programme of the Otter Lake Diamond Exploration Project, Alberta.

Dear Doug:

The 3-day on-site visit to **Sidon**'s office in Slave Lake, Alberta, permitted an inspection of the ground geophysical survey being carried out by Eastern Geophysics on behalf of Sidon International Resources Corporation. A review of the overall geophysical programme including airborne geophysical results and anomaly selection was also performed.

In general, the designed geophysical programme is the best option with respect to finding kimberlitic bodies under the terrain and geological conditions prevailing on this project. Observations are presented in the following paragraphs and pertinent recommendations are offered in terms of immediate and future applications in similar environments.

OBSERVATIONS

Airborne geophysical survey

Airborne magnetic surveying is actually the best and possibly the only airborne geophysical method that offers discovery potential on this project. From available geological information, it is unknown if the moderately thick (50 metres) glacial overburden has sufficient clay content to preclude the use of the airborne electromagnetic method to map the possible resistivity contrast that may exist between kimberlitic bodies and Mesozoic-Paleozoic basin sediments.

The survey and data processing specifications and the instrumentation used by Spectra to carry out this airborne magnetic survey are generally good with respect to industry standards. However, the N-S orientation of the survey lines, sub-parallel to the main geological strike, introduced a higher then normal noise level in all the processed magnetic data and its derivatives. Also, small micro-levelling problems are evident in some of the derivative products supplied by Spectra and, as indicated in Quantec's report, they are related to imperfections in the tie-line/cross-line intersections which have not been corrected for by Spectra.

Noise was also introduced by bad weather flying conditions (strong winds) in some areas of the project. Finally, the profile and map products offered by Spectra are too oil-and-gas exploration oriented and are not well adapted for the exploration of kimberlitic bodies. In this sense, the derivative map products supplied by Controlled Geophysics Inc. are more adapted to the exploration of kimberlitic bodies.

Some of the observed noise and levelling errors could have been filtered out by Spectra or Controlled Geophysics before producing their final products but, in this case, the filtering would also have removed responses caused by the potential targets. This is so because the noise level introduced by the N-S line orientation is comparable in intensity and frequency to anomalies caused by potential kimberlitic bodies.

Because of these noise level difficulties, detection and resolution of weak responses from plan maps are very difficult to perform and structural features are somewhat more difficult to interpret. Thus, it remains absolutely necessary to use the unfiltered profiles in the selection of magnetic anomalies.

In general, the procedure used for the selection of airborne magnetic anomalies potentially caused by kimberlitic bodies is excellent as far as geophysical interpretation is concerned. There are three major steps in this procedure: a preliminary selection, a verification of the selected anomalies to eliminate artificial sources, and a final selection for ground follow up.

As it should be, the core of the first step of this procedure included visual-hand picking of weak to very weak magnetic anomalies from paper prints of the reprocessed profiles of the unfiltered total magnetic field line data. This is a time consuming procedure but, as indicated above, is the best tool under the circumstances. Its only limitations are the ability to define anomalies in areas characterised by steep magnetic gradients and the time consuming manual compilation of the selected anomalies at different map scales.

A great effort has been put into the verification and discrimination of the selected airborne anomalies from the preliminary selection. This has been properly done with use of video tapes, topographic maps and other map products available from the Alberta government agencies. There is nothing that can really be improved upon in this approach.

The final analysis and ranking of the anomalies to be investigated by ground magnetic surveys was solely based on the anomaly characteristics observed in the airborne magnetic data. Modelling offers some potential for specific anomaly selection. Derivative magnetic map information indicated that some of these products, such as the vertical derivative, would be useful in the analysis of structural features. The idea of evaluating available seismic data should be carried through by/with a seismic specialist.

Characteristics of selected airborne anomalies

Under the terrain and geological conditions prevailing on this project, magnetic anomalies may be caused only by deep crystalline basement sources (1250 metres), moderate to shallow kimberlitic and other mafic intrusive bodies (50 and 150 metres), placer magnetite deposits (less than 50 metres), and artificial sources such as pipelines and oil rigs (at surface). On this projet, there are three parameters that are useful for the discrimination of magnetic anomalies associated with kimberlitic bodies: anomaly shape, depth and pattern.

Anomaly shape:

If dyke-like kimberlites are excluded, kimberlitic bodies are generally circular in plan and should give more or less circular magnetic anomalies. The circular shape of the anomalies may be distorted by the often associated structural features and by the attitude of the magnetic field (magnetic response shape changes with magnetic latitude). The -75°N inclination of the magnetic field on this project is ideal because anomalies will be almost completely positive or negative. However, this steep inclination of the magnetic field, the presence of a moderately thick glacial overburden of more or less 50 metres, and the low intensity of the magnetic anomalies are not favourable to the delineation of the very small but characteristic side of the bipolar anomalies on this project.

Also, the observed shape of most of these selected anomalies is atypical of kimberlitic bodies. Circular shape anomalies have been detected by the Spectra survey but most if not all clearly identified circular anomalies have been identified as artificial sources.

Anomaly depth:

In this area, because of the neutral magnetic nature of the Mesozoic-Paleozoic basin sediments, modelling of the anomalies could supply depth estimates which are often quite reasonable. This has been verified on some of the anomalies modelled by Quantec. This is important because all magnetic anomalies that would be interpreted at burial depth less than 50 metres should be viewed cautiously; they are probably associated with placer magnetite deposits.

However, discontinuous, high frequency anomalies that should be caused by shallow bodies such as placer magnetite deposits cannot be discriminated from the more or less uniform high frequency anomalies that could be caused by near surface (less than 50 metres deep) kimberlitic bodies. That is because of the high survey altitude above ground which resulted in smoothed responses even for shallow placer deposits. Ground magnetic surveys are thus absolutely necessary in such a case.

Anomaly patterns:

Most of the selected airborne anomalies are weak to very weak in intensity, narrow to moderate in width, often sinuous and elongated. The sinuosity and elongation of the anomalies may be used as

a discriminating factor but ground surveying may be required for verification in several cases because there may be overlapping of placer magnetite deposits and underlying kimberlitic bodies. Discontinuity of anomaly patterns from line to line is also best evaluated from a ground magnetic survey on closely space lines. The anomaly distribution with respect to topographic features has shown no correlation because paleo-channels are not reflected by the present day topographic surface.

Ground magnetic surveys

Ground magnetic surveys methodology and quality have been evaluated by reviewing all the records of the surveys carried out from January 30 to February 15, 1998.

The use of GPS instrumentation to locate the reconnaissance lines and subsequent grid lines is an excellent idea, especially wherever it can also be correlated with evident topographic features.

The presence of a base station magnetometer is also a critical advantage in carrying out the magnetic surveys on this project because of the necessity of detecting and discriminating between the low intensity magnetic anomalies associated with the kimberlitic bodies and the spurious high frequency anomalies characteristic of near surface placer magnetite deposits. It has been observed that synchronised base station and portable magnetometers with high density base station measurements (5-seconds interval) are also required. The station interval of 12.5 metres may be sufficient for reconnaissance surveys but a higher density survey approach would be preferable for detailed surveys over several grid lines in order to better define the high frequency responses caused by placer magnetite deposits.

It has been found also that very detailed analysis of the base station measurements is absolutely necessary in order to detect and eliminate irregular spiky values caused by diurnal magnetic activity and to ensure that this magnetic activity is fairly low and regular (smooth) during surveying. Indeed, in the course of this verification, it was noted that one of the spiky values recorded by the base station on February 14 had been introduced into the portable magnetometer results and resulted in a moderate intensity anomaly in the compiled data. Very careful base station corrections are thus necessary and should be verified on a daily basis to ensure that the low intensity, high frequency diurnal variations are properly corrected for and that the corrections being applied do not introduce high frequency anomalies into the data. Again, the use of a high density survey along the grid lines would help in this matter.

RECOMMENDATIONS

Immediate applications

Airborne geophysical survey

The airborne magnetic data should be processed to obtain the following additional products:

- Calculated vertical gradient and horizontal gradient profiles (Spectra's noise monitor channel) compiled with the total magnetic intensity profiles at a map scale of 1:25.000. This product will help in the selection of subtle airborne magnetic anomalies in steep gradient areas.

- Shadow illuminated vertical gradient map at a map scale of 1:50.000 (I understand that this has already been ordered). This product will help in the interpretation of near surface lithological and structural features and anomaly evaluation.

- Band pass 350-1500 metres or 500-1500 metres colour total magnetic intensity map at a map scale of 1:50.000. This will help in the structural interpretation of basement features by removing near surface magnetic responses.

Preliminary anomaly selection could be updated with the new profile products while structural interpretation could be completed with the new map products.

Ground magnetic surveys

The following recommendations are made to ensure the quality of the results:

- Portable magnetometer results should be merged with the base station magnetometer results and carefully reviewed on a daily basis for spiky values.

- Profile plots of the base station magnetometer results should be done at a smaller vertical scale to improve resolution of the diurnal magnetic activity.

- If contouring of the magnetic values is done, it should be done solely for detailed surveys over several grid lines and grid parameters should be carefully selected to remove any spurious effects from contours.

- Profiles of the detailed magnetic surveys should be produced to better analyse line to line correlation and to preserve the detailed information that is often smoothed out by contouring.

These points have already been discussed with Eastern Geophysics and have been put into effect.

Other methods

Seismic profile data could be purchased and analysed for any potential characteristic anomaly. Luckily, some of the magnetic anomalies may be covered by a seismic profile.

Future applications

Airborne geophysical survey

Kimberlite anomaly and bedrock structural features resolution could be improved if airborne magnetic survey parameters were changed as follow:

- Line direction perpendicular to the main geological strike.
- Flight elevation of 60 to 80 metres.
- Line spacing of 100 metres.
- Tie-line/cross line intersection values for data correction/levelling.
- Careful application of micro-levelling.
- A base station location set-up with the following specification: a maximum vertical gradient of 2 nT/m over an area of 100 metres around the station sensor.

Better yet, a helicopter-borne magnetic survey would greatly improve the results in the following manner:

- Flight elevation of 45 metres.
- Higher density of magnetic measurements along the survey lines (3 metres instead of 7-8 metres) due to lower survey speed.

Because helicopter-borne geophysical surveying is a more expensive proposition than fixed-wing airborne surveying, it should be considered only in the event that very detailed magnetic results are required. Such a survey could be carried out over an area where a kimberlite has been discovered and others are suspected nearby.

If you have any comments or questions regarding these observations and recommendations, you may send me a message that I will answer sometime in early March. I will be back in Canada by mid-April.

With my best regards,

Paul Lortie
Consulting geophysicist

APPENDIX VI

Review

of

Aeromagnetic and Ground Magnetic Surveys

in the

Otter Lake Project Area

for

Sidon International Resources

North - Central Alberta

H. Limion

April 1998

Summary

Sidon International Resources requested a review of aeromagnetic survey data and ground magnetic survey data collected for diamond exploration in the fall of 1997 and the winter of 1998. Surveys had been carried out with the expectation that kimberlites, possibly diamondiferous and buried up to 100 m from surface, would contain sufficient magnetic material to produce a definite anomalous reading distinct from anomalies in the magnetic basement, approximately 1200 m below surface.

It became apparent very quickly that the magnetic field was affected by near surface magnetic material possibly concentrated by alluvial action. The additional problem, then, became the discrimination of very near surface magnetite and deeper magnetite associated with kimberlites.

The profiles of individual aeromagnetic anomalies do not offer the possibility of discrimination between a widespread, erratic source of magnetite and a deeper, concentrated source. Both can result in similar aeromagnetic anomalies. The image of aeromagnetic anomalies when viewed with basement effects removed does show a dendritic pattern similar to modern drainage features, and offers a method for identifying those anomalies that are part of an ancient or modern stream system.

Ground magnetic surveys do show some targets which appear deep and concentrated and others which are caused by an apparently random scattering of near surface magnetite. They may not always, however, be able to discriminate between buried scattered magnetite and kimberlites.

In this report, magnetic anomalies from seven source areas are compared. Creekside, Wellside and Sidewinder anomalies appear to have multiple near surface sources when viewed on the ground magnetic survey. These multiple sources can add up to a single aeromagnetic anomaly when viewed at airborne survey height. The Pingo and Darkhorse anomalies appear to be deeper and could originate from single sources. The Olympic anomaly appears to overlie a very deep, possibly basement source. It may be possible to separate a near surface source from this basement anomaly. The Propeller anomaly occurs on a magnetic contact where the local magnetic field increases as a step. There are anomalies near the step that could originate from discrete sources.

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Attached maps

1. Creekside grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
2. Wellside grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
3. Sidewinder grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
4. Olympic grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
5. Propeller grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
6. Pingo grid, Aeromag and ground mag surveys 1:5000 scale	in pocket
7. Darkhorse grid, Aeromag and ground mag surveys 1:5000 scale	in pocket

Introduction

The Otter Lake area is approximately 150 km ESE of Ashton's Buffalo Hills kimberlite area in north central Alberta. The geological map of Alberta (Green, 1972) maps bedrock as the Labiche formation, which includes dark grey shale and silty shale, ironstone partings and concretions and silty fish scale bearing beds in the lower part. The bedrock is covered by glacial overburden up to 50 m thick. Magnetic basement is approximately 1200 m below surface.

Previous geophysical work includes GSC aeromagnetic surveys at 300 m terrain clearance and 800 - 1600 m spacing, and GSC airborne spectrometric coverage at >25 km line spacing. The area has probably been surveyed extensively with seismic surveys.

Sidon International Resources contracted Spectra Exploration Geoscience Corp. to carry out an airborne magnetic survey on the property in mid 1997. The purpose of the survey was to search for magnetic kimberlites. The survey was flown on N-S lines spaced 200 m apart and at 100 m terrain clearance. An outline of the survey with location information is shown in Figure 1.

A particularly important part of the survey processing was the production of a "residual" magnetic field map. One of the methods used in producing a residual included an attempt to remove any magnetic signal from deep sources. This was effected by subtracting the upward continued (up 100 m) magnetic field grid from the original grid. The dynamic range of the grid was thus reduced to about 10% of the original, and near surface effects were highlighted. This processing does have the side effect of sharpening all anomalies, including basement anomalies, and making them appear to be closer to surface. An analyst should be aware of these processing artifacts.

Anomalies identified from the airborne survey were explored on the ground by magnetic field measurements in reconnaissance profiles and, in a few cases, on a grid pattern. It became apparent during the surveying that some magnetic effects were from randomly distributed magnetite, or followed the meanderings of paleo-streams. Seven anomalies identified and surveyed (see Figure 1) are discussed in this report, with possible sources identified.

Methods and Products of the Review

The objective of this review was to propose a method of discriminating between a magnetic source composed of a scattering of near surface magnetite and a magnetic source from a deeper kimberlite body.

The available data included profiles and grids of airborne magnetics, and ground magnetic survey readings. Airborne survey results are best viewed in profile form, and these are attached. In order to contrast ground and airborne surveys, both were plotted at the same scale and map extents at 1:5,000 scale, a scale suitable for ground surveys. The anomalies investigated are shown on the index map, Figure 1.

The airborne profiles plotted here include three channels. One channel is the original leveled magnetics, another is the culture edited magnetics and the third is the microleveled magnetics. The leveled magnetics show much filtering and may not be suitable to define near surface targets. The other two magnetic channels appear similar and have a broader-band information content. Gridding and contouring was carried out on the culture edited magnetics.

An estimate of magnetic sources is made by inspecting the results. Model results from each hypothesis could be constructed, but these fell outside the financial limits of this review.

Creekside

The aeromagnetic profile (Figure 2) shows a 5 gamma anomaly that is near surface. The anomaly appears to be a good exploration target, based on this airborne response.

Contour plots of the airborne magnetics (Map 1) indicate a magnetic high trend in a NE direction. Ground magnetic surveys indicate a series of near surface individual magnetic highs, which no doubt appear as a single anomaly on the flight line. As a test of reproducibility, data on ground survey line 100 N were read twice and each is plotted. Both profiles produced the same "spiky" readings.

The gridded ground magnetics were upward continued to 100 metres to provide a comparison to the airborne results. There is a slight similarity, but certainly not definite. It is quite possible that the near surface magnetic spikes have not been sampled with sufficient density to provide a good mapping of the magnetite distribution.

The ground data do not indicate a deep, single magnetic source, and the anomaly is downgraded as a kimberlite target.

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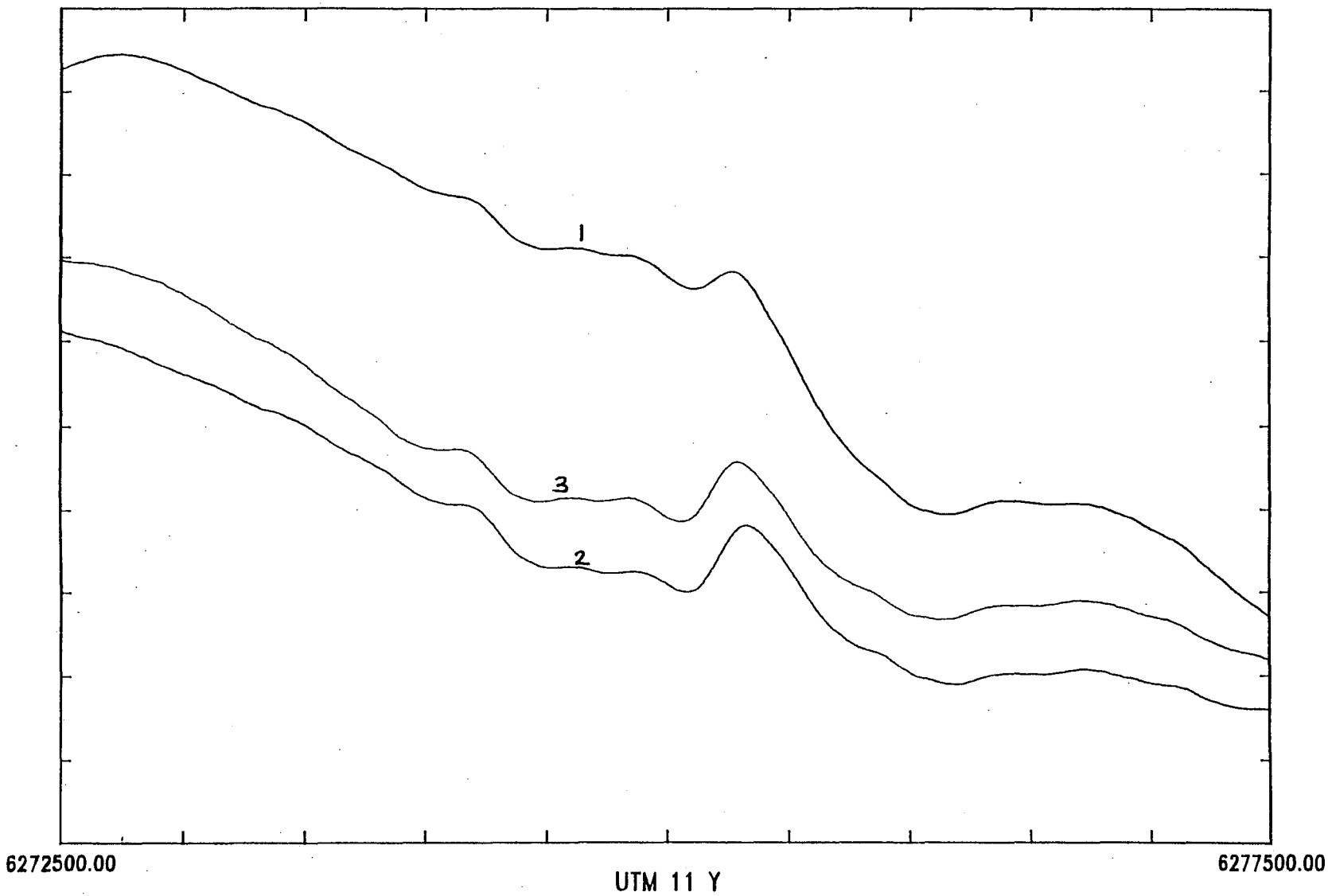

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2 ———	9	Cult ed mag	57980.00	58020.00	40.00
3 ———	16	Microlev mag	57980.00	58020.00	40.00
4 ———	–				

Creekside
Figure 2

Wellside

The aeromagnetic profile (Figure 3) shows a 12 gamma anomaly that is near surface. The airborne anomaly appears to be a good exploration target. It does extend over at least 4 lines, and follows a magnetic linear.

Contour plots of the airborne magnetics (Map 2) indicate a magnetic high trend in an ENE direction. Ground magnetic surveys are limited, but indicate a series of near surface individual magnetic highs in the same direction. The magnetic anomaly on line 700 E at about 450 N does have a possible deep source at 50 m depth or less. The ground magnetic anomaly is not a distribution of near surface magnetic lenses as on the Creekside grid.

The ground data do not indicate a deep, circular magnetic source. The anomaly is downgraded as a kimberlite target, but further work on the ground could help to define the one interesting feature. The further work is recommended on a low priority basis.

Sidewinder

The aeromagnetic profile (Figure 4) shows a 4.5 gamma anomaly at 6276500 N that appears near surface. The airborne anomaly would be graded as a fair exploration target.

Contour plots of the airborne magnetics (Map 3) indicate an elliptical magnetic high with its long axis in an EW direction. Ground magnetic surveys are limited, but show one magnetic high. The magnetic anomaly on line 900 E at about 100 N does have a possible deep source at 30 m depth or less. The anomaly appears mainly on one line, and does not indicate any strike extent.

The ground data do not indicate a deep and extensive circular magnetic source. More detailed ground surveys near line 900 E might map a near surface anomaly east of line 900 E. Further ground work could satisfy any curiosity about the source, but the target is downgraded as a kimberlite.

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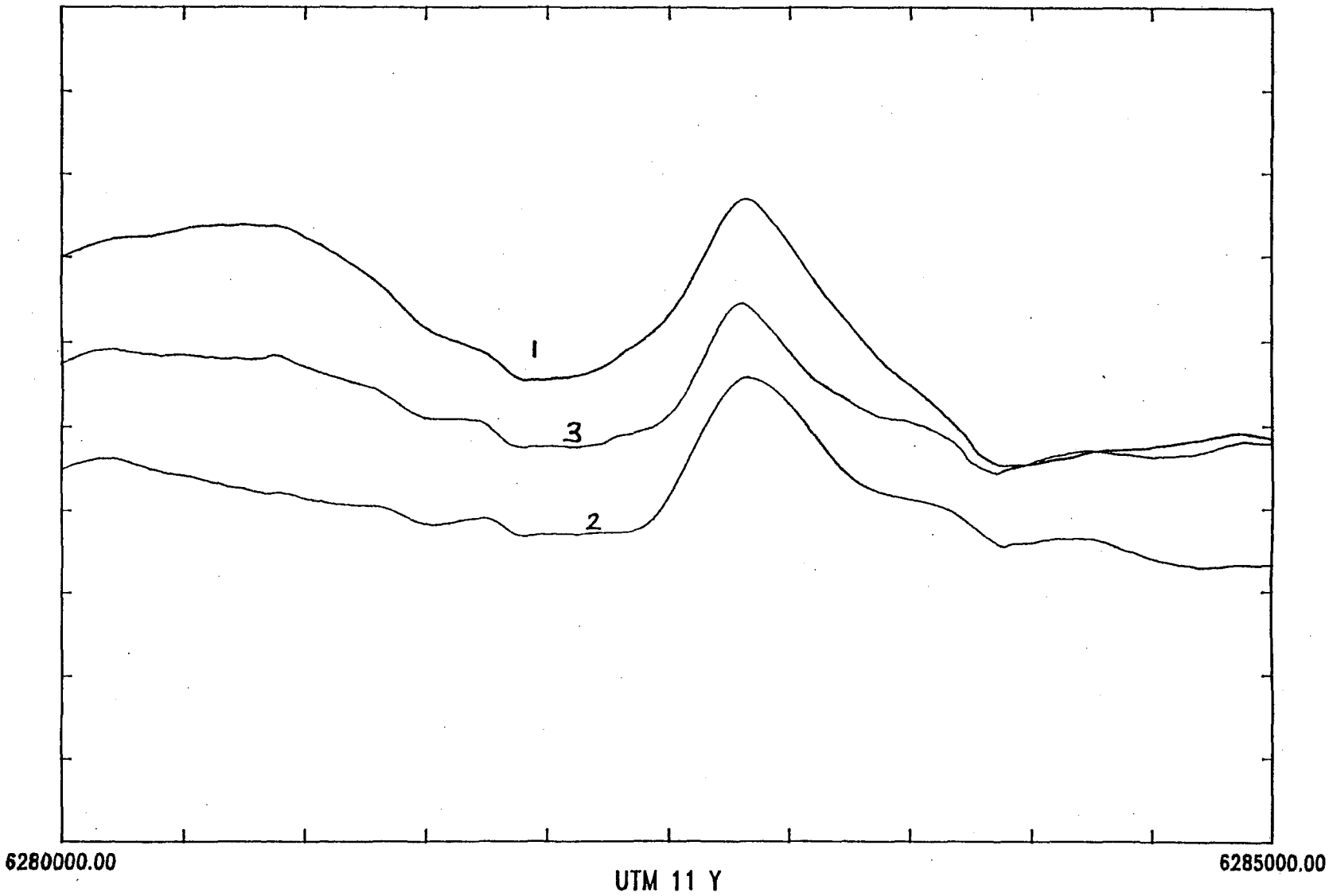

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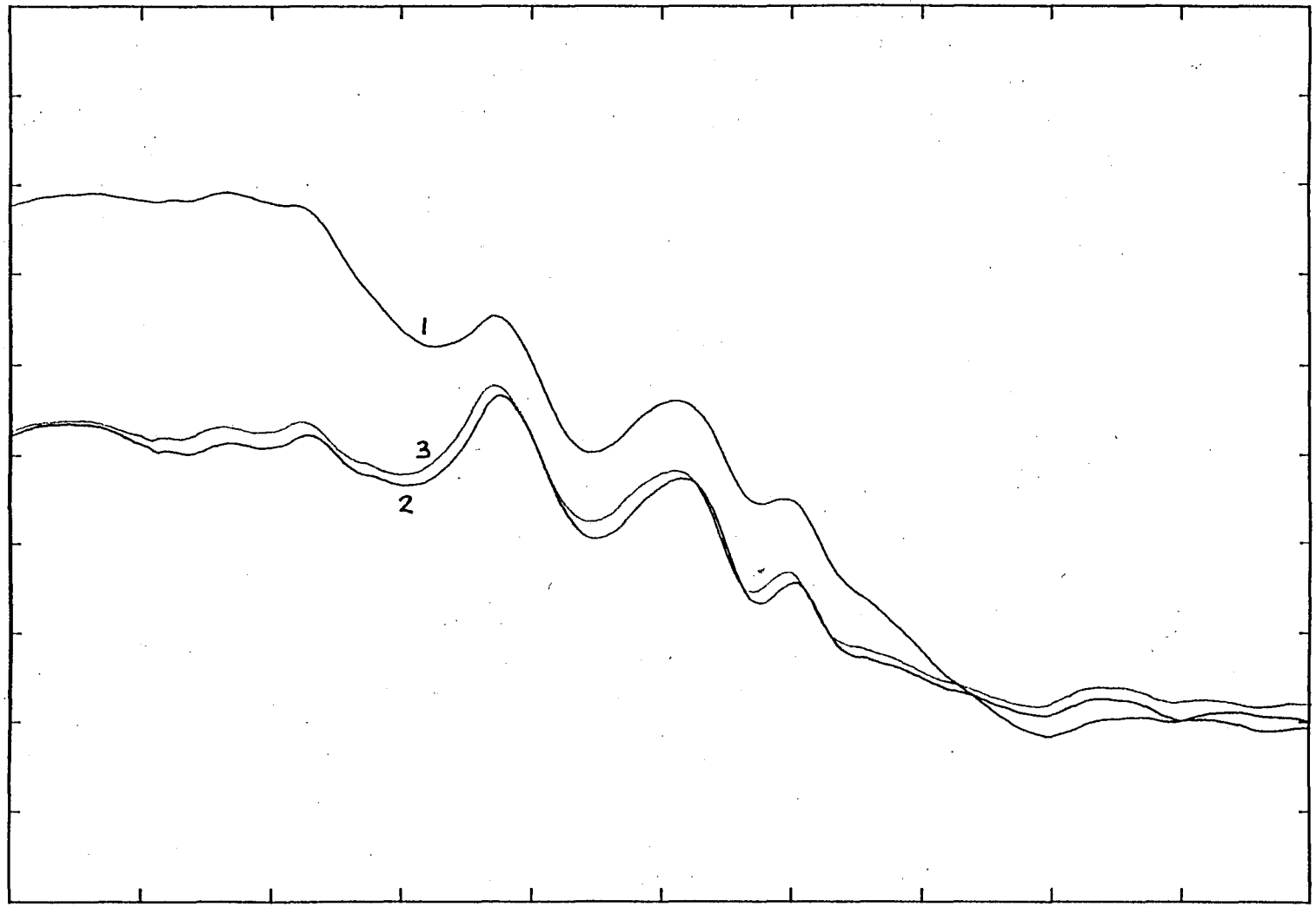
2 ———	9	Cult ed mag	57970.00	58010.00	40.00
3 ———	16	Micorlev mag	57970.00	58010.00	40.00
4 ———	–				

Wellside
Figure 3

AMAG.BDB – Line: 790.00



6274000.00 UTM 11 Y 6279000.00

Trace	Field	Label	Minimum	Maximum	Range
1 ———	8	Levelled mag	−1630.00	−1590.00	40.00
2 ———	9	Cult ed mag	57990.00	58030.00	40.00
3 ———	16	Microlev mag	57990.00	58030.00	40.00
4 ———	–				

Sidewinder
Figure 4

Olympic

This is a very interesting anomalous area, occurring on an extensive structure. The aeromagnetic profile (Figure 5) shows a 160 gamma anomaly that could have its centre as deep as 2.5 km. The area around the anomaly is an exploration target because of structural complexity and because of the possibility of a near surface feature hidden in the magnetic gradient.

A contour plot of the airborne magnetics (Map 4) indicates the anomaly occurring within a regional gradient. Previous residual plots and images had hinted at the possibility of a shallower portion of the anomaly. The interpretation of a shallow source could be an artifact of the processing and is not favoured at the moment. A one line ground magnetic profile shows a high with the base level not defined despite the line length of 2.5 km. Superimposed on the magnetic profile is magnetic "noise" from near surface sources.

The sharpness of the airborne anomaly does hint at the possibility of magnetic material closer to the surface than the basement. In this case, a 3 dimensional magnetic model could help to resolve the question if the anommaly were on Sidon controlled ground.

Both ground and airborne data indicate a deep and extensive circular magnetic source, probably from the basement. Only a very small portion of the feature impinges on Sidon's claims.

Propeller

The aeromagnetic profile (Figure 6) shows a 4 gamma anomaly that has considerable breadth, but appears to be within 300 m of surface. The airborne anomaly would be graded as a fair exploration target.

Contour plots of the airborne magnetics (Map 5) show the area to be within a magnetic gradient and to be affected by flight line leveling problems. In image, however, the area is seen to fall near a NE trending magnetic linear, the same one hosting the Olympic anomaly. This linear had been recognized in 1959 by Garland and Bower and is called the F-9 linear.

Ground magnetic surveys are extensive. There is a 2 gamma peak-to-trough noise in the readings, probably caused by near surface magnetic material. The ground base line appears to define a magnetic contact, with higher readings to grid south. Near the base line, however, are some broad magnetic highs, with one centred near 00 E, 00 N having a maximum amplitude of about 8 gammas and a half-width of 150 gammas. This could have a single source at depth.

The ground magnetic anomaly could be considered a low priority target for further investigation.

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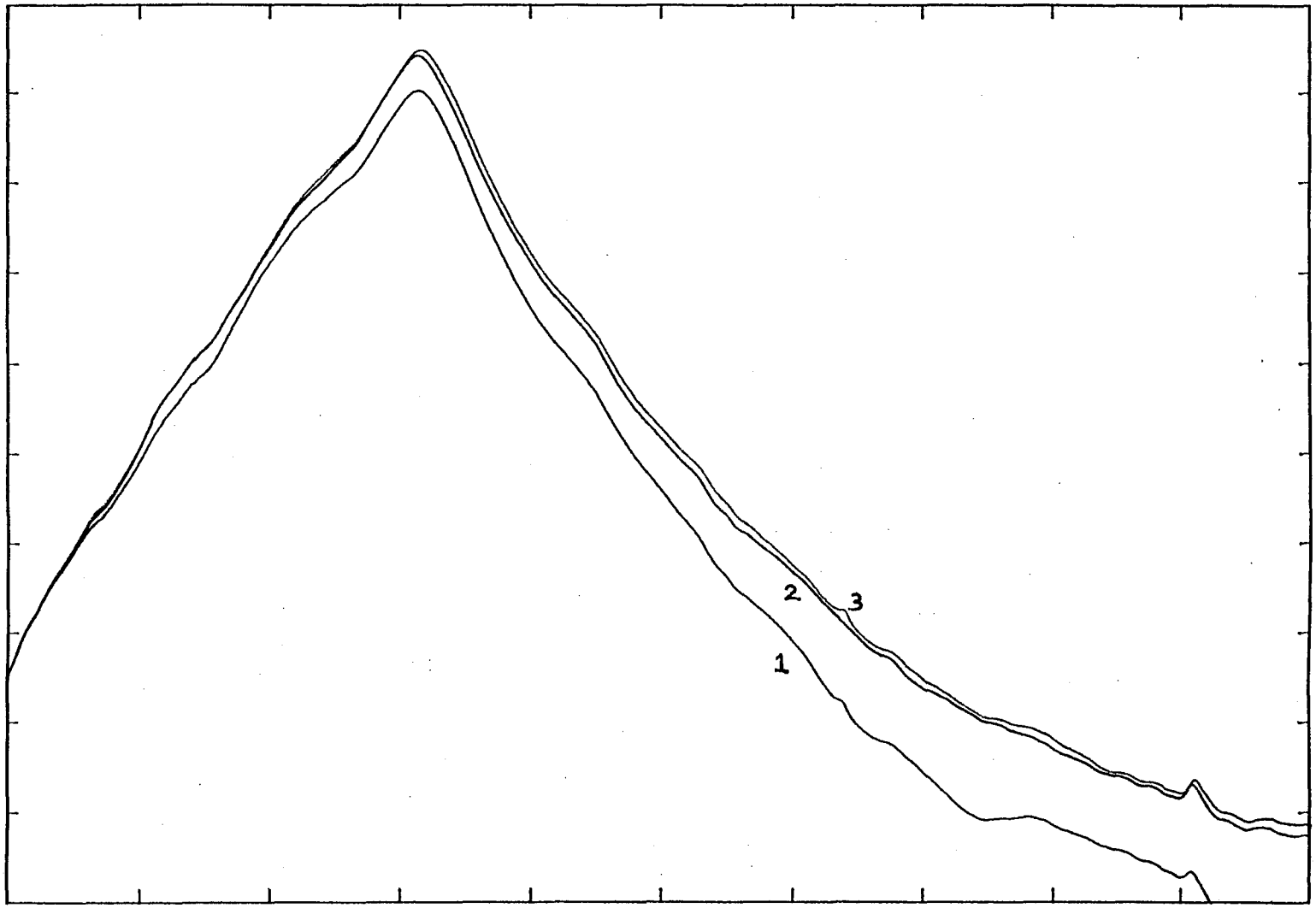

6257000.00 UTM 11 Y 6277000.00

Trace	Field	Label	Minimum	Maximum	Range
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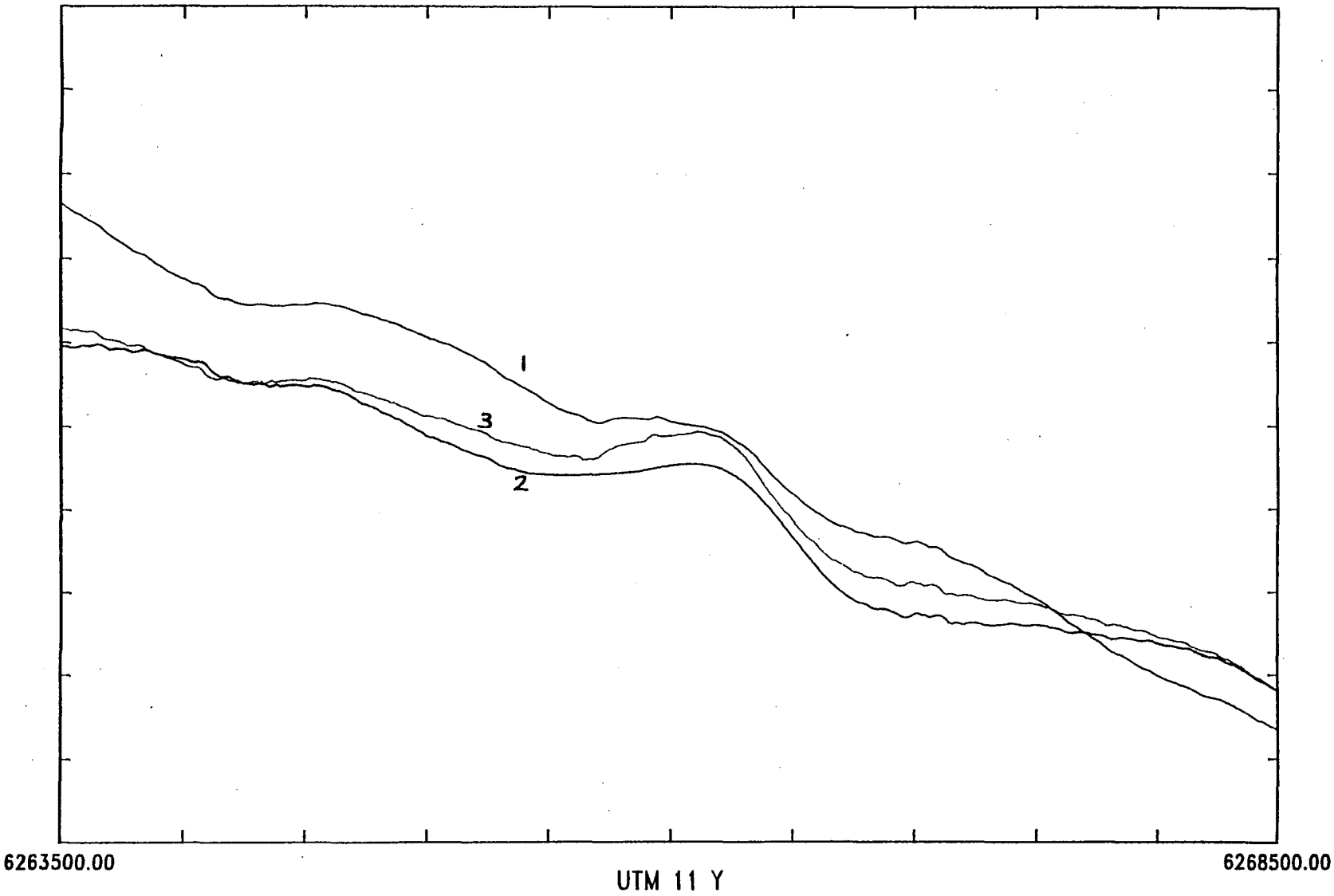
2 ———	9	Cult ed mag	57970.00	58170.00	200.00
3 ———	16	Microlev mag	57970.00	58170.00	200.00
4 ———	–				

Olympic
Figure 5

AMAG.BDB – Line: 890.00



Trace	Field	Label	Minimum	Maximum	Range
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2 ———	9	Cult ed mag	58040.00	58080.00	40.00
3 ———	16	Microlev mag	58040.00	58080.00	40.00
4 ———	–				

Propeller
Figure 6

Pingo

The aeromagnetic profile (Figure 7) shows a subtle 1 gamma anomaly that appears to originate from near surface. The airborne anomaly would be graded as a weak exploration target.

Contour plots of the airborne magnetics (Map 6) show the area to be within a magnetic gradient and to be affected by flight line leveling problems. The anomaly is seen only as subtle changes in contour direction. In image, however, the anomaly is seen as a weak, isolated magnetic high, distinct from magnetic stream patterns.

Ground magnetic surveys are over a strike length of 1100 m. They exhibit the usual near surface noise, but do show broader features north of the base line on lines 600 E and 700 E. These anomalies have a 15 gamma amplitude and an approximate half-width of 150 to 200 metres. The great increase in anomaly amplitude from airborne to ground surveys is indicative of a near surface source, much shallower than could be assumed from the half-widths of the anomaly. In an attempt to remove the near-surface magnetic noise, a "de-spiking" filter was run on the magnetic profiles. The results of that are also plotted. That filtered plot demonstrates the same anomaly identified on the original data, and does help to point out the interesting area.

The ground magnetic anomaly could be considered a low priority target for investigation. Further magnetic surveys with 5 lines of 600 m length spaced between the existing lines could help to define the ground anomaly prior to a drill decision.

Darkhorse

The aeromagnetic profile (Figure 8) shows a 2 gamma anomaly that appears to originate from near surface. The airborne anomaly would be graded as a weak exploration target.

Contour plots of the airborne magnetics (Map 7) show the area to be within a magnetic gradient and to be affected by flight line leveling problems. The anomaly, however, is seen as a set of closed contours on the residual magnetic field contours. In image, the anomaly is an elliptical magnetic high with a WNW long axis. It appears to be separate from magnetic stream patterns.

Ground magnetic surveys are limited to 6 short lines. They exhibit the usual near surface noise, but do show one broader feature N of 400 N. The broad feature does have a 7 gamma amplitude and an approximate half-width of 150 metres. A plot of "de-spiked" ground readings helps to identify the location of the possible deep features.

The ground magnetic anomaly could be considered a low priority target for investigation. Further magnetic surveys to extend the grid both EW and N would help to define the ground anomaly and provide better mapping of any magnetic feature.

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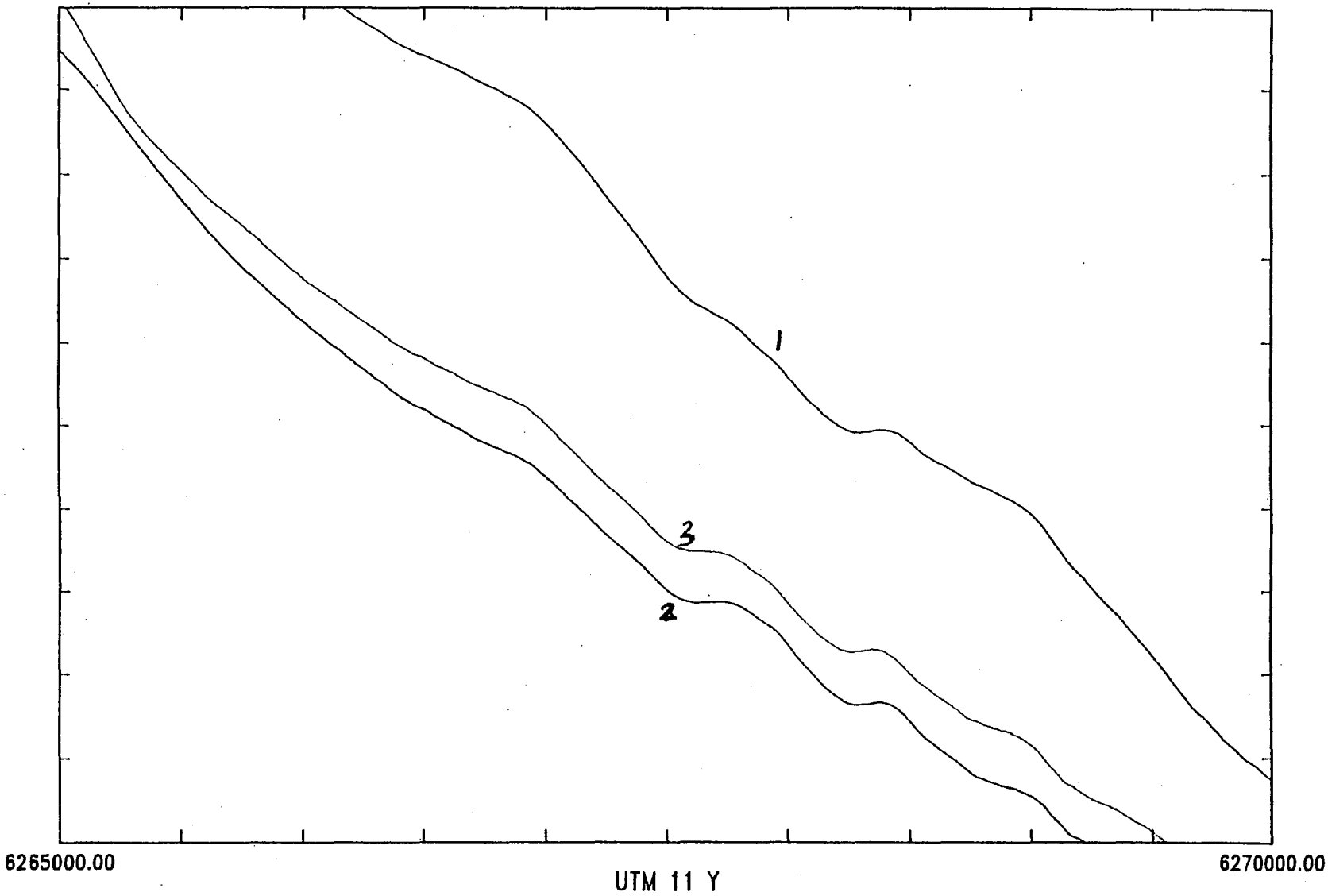

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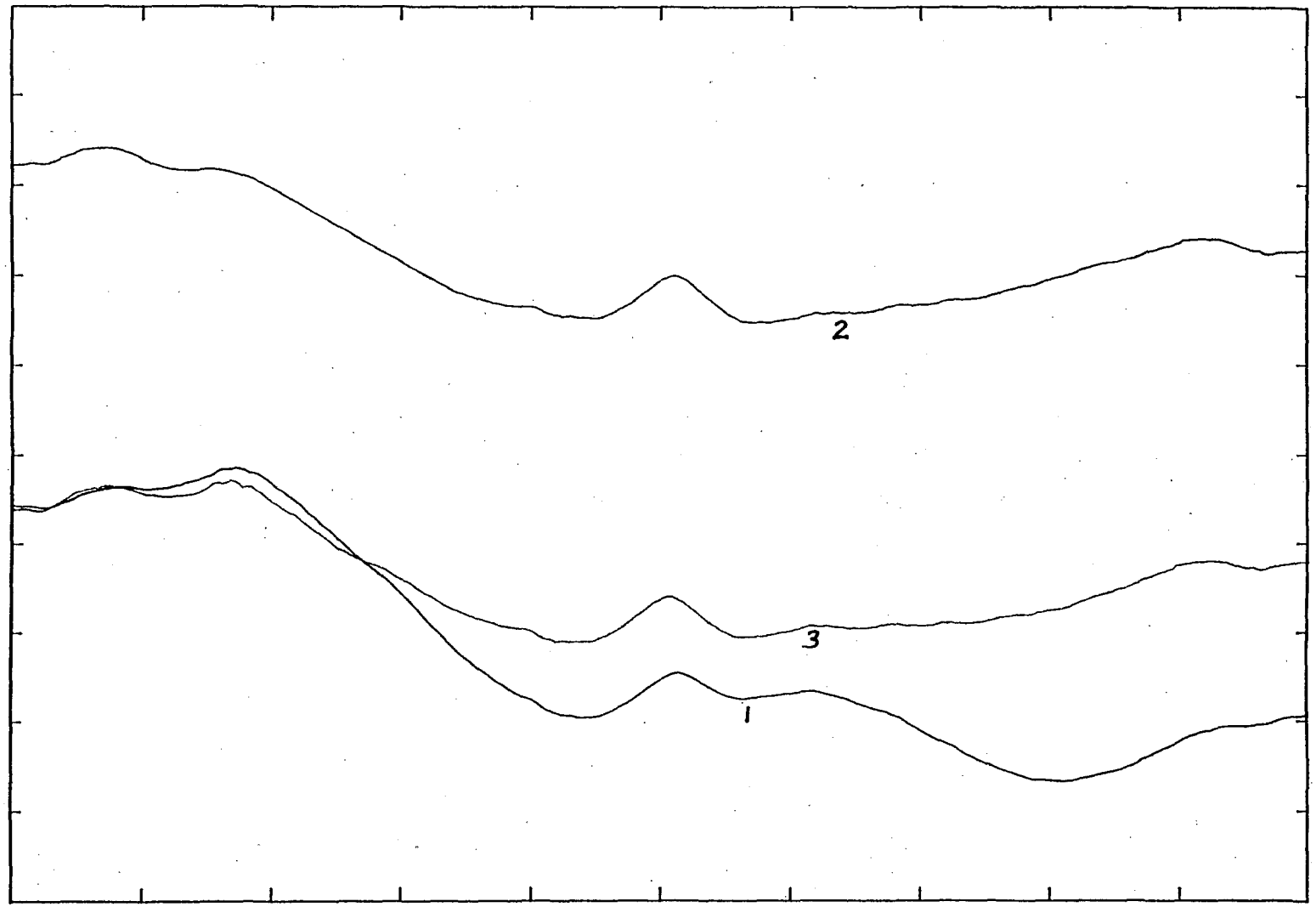
2 ———	9	Cult ed mag	58030.00	58070.00	40.00
3 ———	16	Microlev mag	58030.00	58070.00	40.00
4 ———	–				

Pingo
Figure 7

AMAG.BDB – Line: 930.00



6266000.00 UTM 11 Y 6271000.00

Trace	Field	Label	Minimum	Maximum	Range
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2 ———	9	Cult ed mag	58040.00	58080.00	40.00
3 ———	16	Microlev mag	58040.00	58080.00	40.00
4 ———	–				

Dark Horse
Figure 8

Conclusions and Recommendations

Target areas at Creekside, Wellside and Sidewinder do not indicate a single near surface magnetic body. Ground magnetic readings show high readings over a few survey stations, but no generally high or low magnetic field extending over 100 m or more. Because of this "spikiness", these areas are not considered good kimberlite targets.

Target areas at Pingo and Darkhorse do show possible magnetic highs spanning 150 m or more. These magnetic highs have the potential of originating from a source below the surface. They could be surveyed further with magnetics, not for defining the target but rather for defining and removing any near surface magnetic effects. These two anomalies are considered as having poor to fair potential for kimberlite targets.

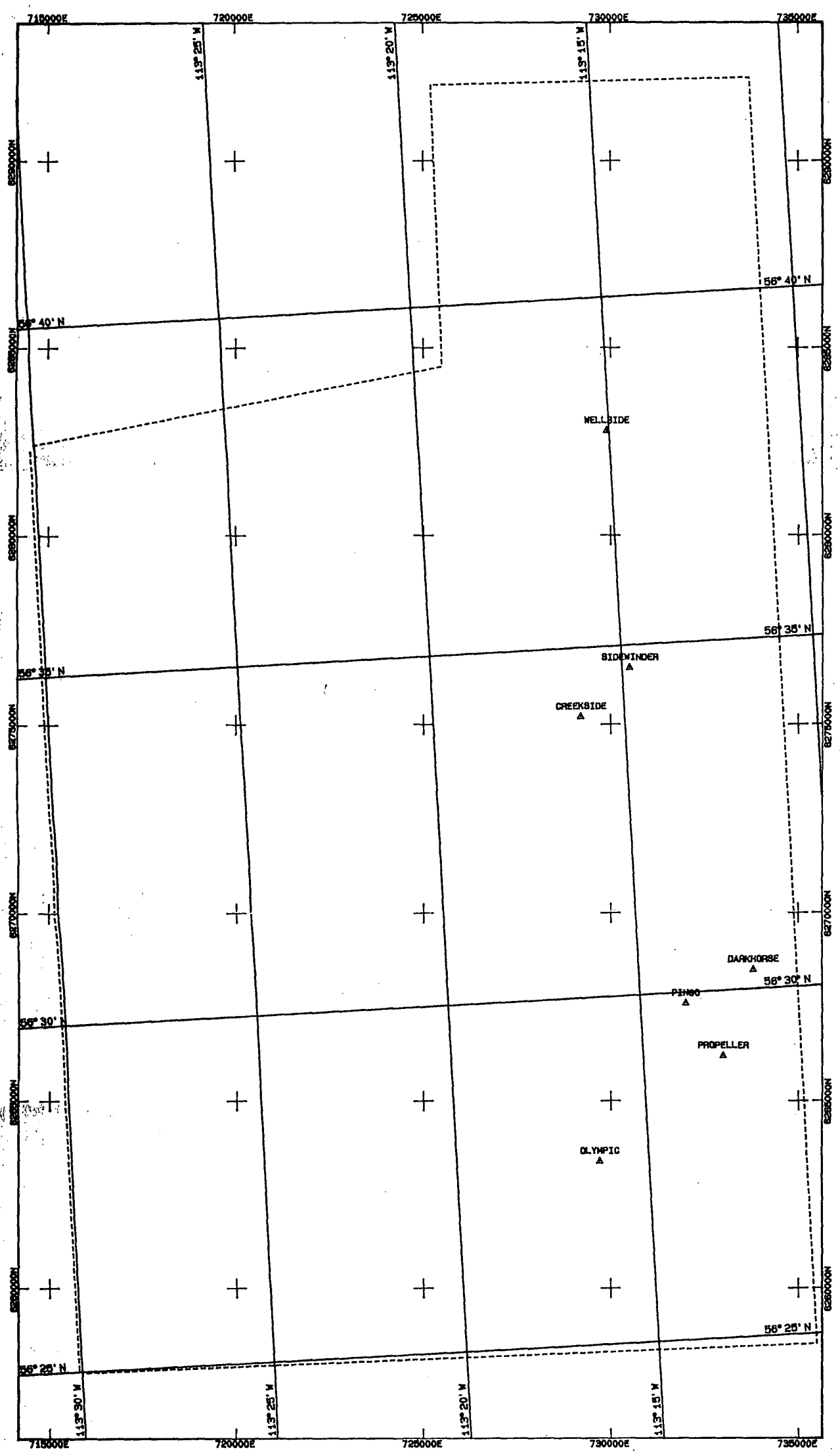
The Olympic area is the cenure of an interesting regional structure called the F-9. It may hold clues as to understanding the intrusive history of the area, and is worth further academic, if not ground, exploration.

The Propeller anomaly is found on the F-9 structure. At the site of the anomaly, the magnetic field readings indicate more than a magnetic contact, and hint at the possibility of magnetic material contained within the structure. This magnetic material is an interesting target, and the potential for kimberlites should be assessed. Again, more detailed ground surveys could help in mapping and eliminating near surface noise.

Further study to make best use of available geophysical information is recommended. Among the items to be reviewed are the seismic exploration history and results over the area, particularly relating to the F-9 structure.

[redacted]

Heikki Limion



SURVEY DATA

The airborne survey was carried out by Spectra Exploration Geoscience Corp in late 1997. Anomalies selected from the airborne survey have been examined by ground geophysics. The location of anomalous sites is plotted on this index map.

N

0 2000 4000 6000 M

SCALE 1: 100000

SIDON INTERNATIONAL RESOURC

OTTER LAKE SURVEY

LOCATION INDEX

Selected Aeromagnetic Anomalies
North Central Alberta
Lesser Slave Lake Region
NTS 84 A

Toronto April 1998 Fig

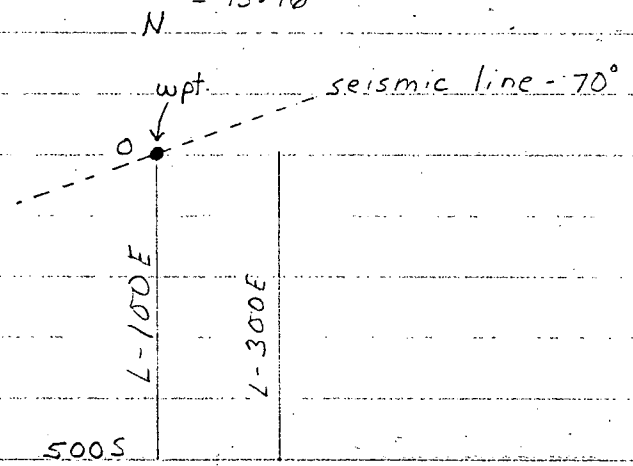
APPENDIX V

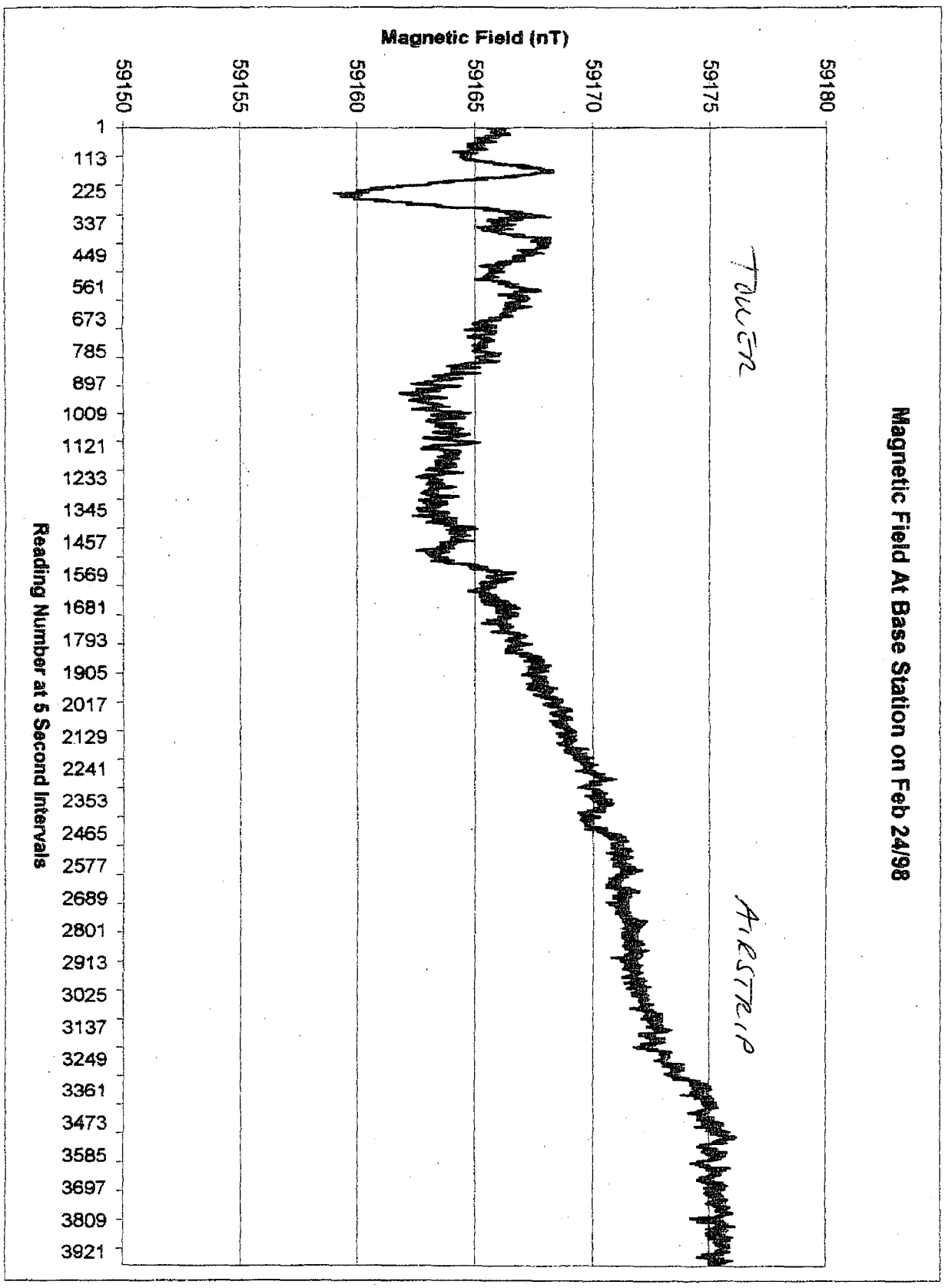
GROUND MAGNETIC RESULTS

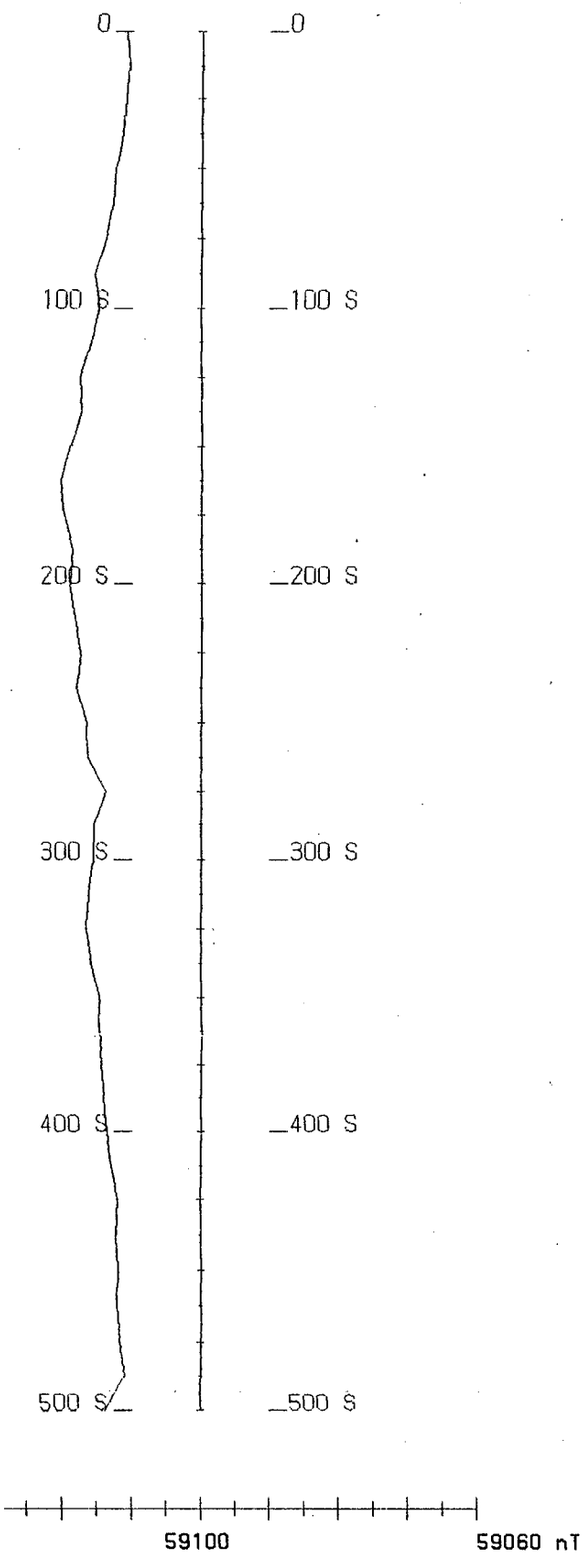
SEE APPENDIX III FOR SUMMARIES; PLATES VI AND VII FOR LOCATION OF GRIDS

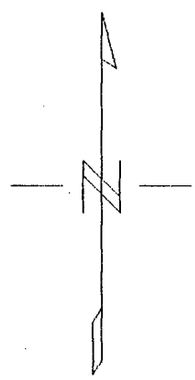
Airstrip Recon 24 FEB 98 = 27.20'

wpt: 56° 27' 11.8" N } L-100E at 0
113° 13' 27.3" W
= 13.46'




Magnetic Field At Base Station on Feb 24/98
Magnetic Field (nT)
59180
59175
59170
59165
59160
59155
59150
Reading Number at 5 Second Intervals
1
113
225
337
449
561
673
785
897
1009
1121
1233
1345
1457
1569
1681
1793
1905
2017
2129
2241
2353
2465
2577
2689
2801
2913
3025
3137
3249
3361
3473
3585
3697
3809
3921
TOWER
AIRSTRIP





Line 300 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field:

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

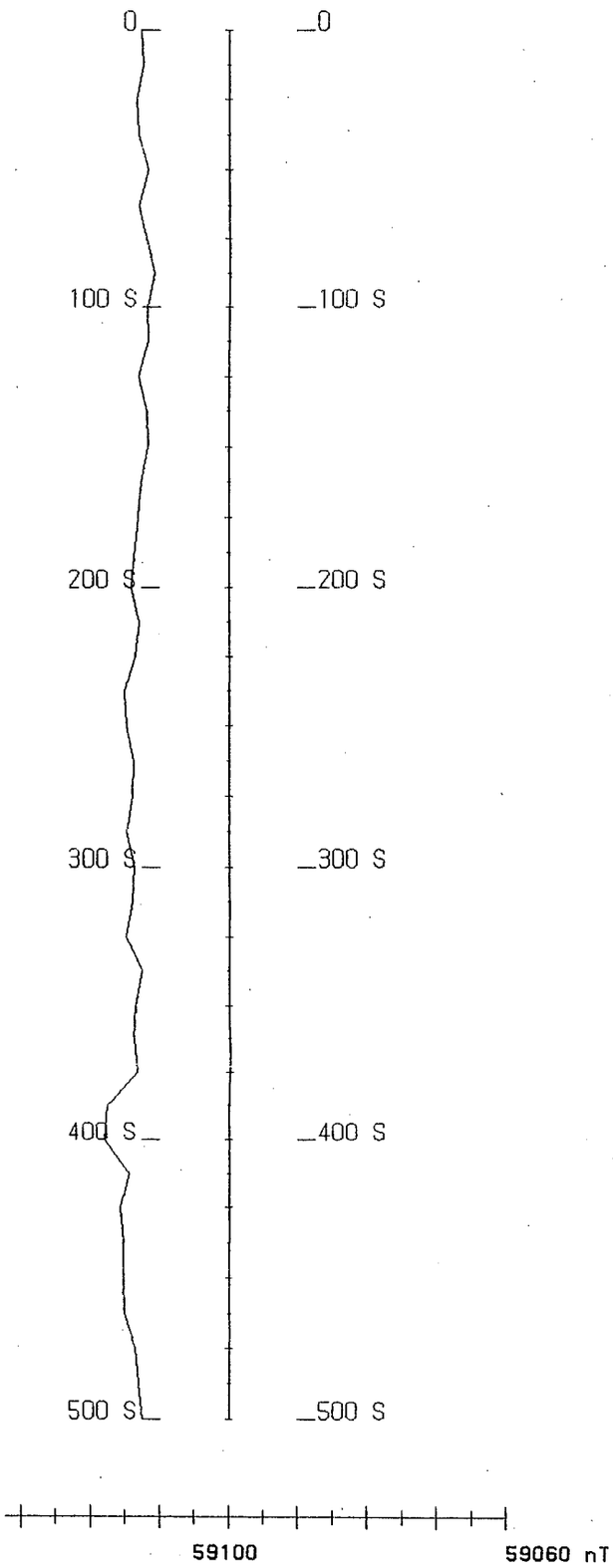
SIDON INTERNATIONAL RESOURCES CORP.

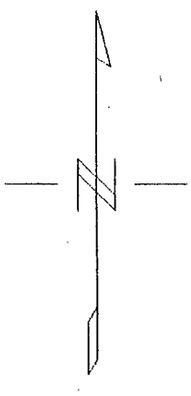
MAGNETIC SURVEY -- Strip Profile

Airstrip Target
Slave lake, Alberta

DATE: Feb 24/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Airstrip Target
Slave lake, Alberta

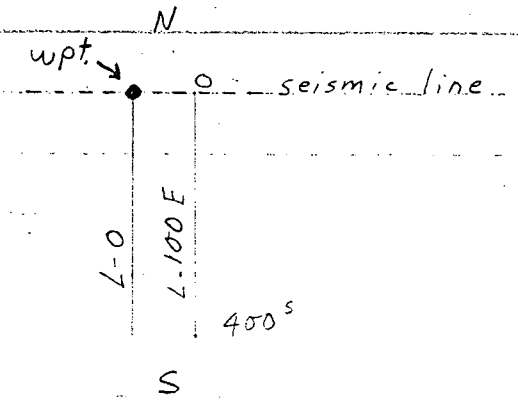
DATE: Feb 24/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

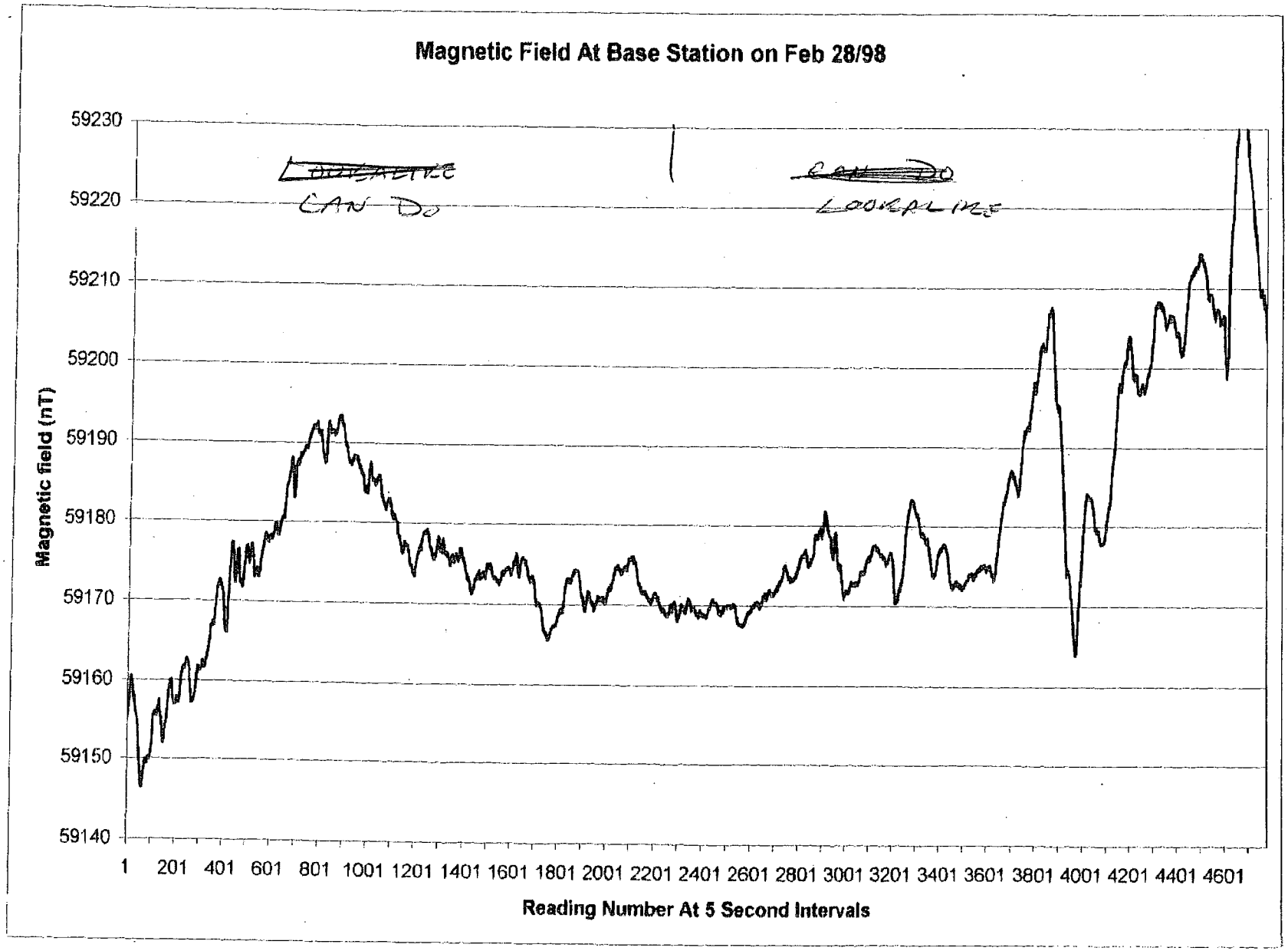
EASTERN GEOPHYSICS LIMITED

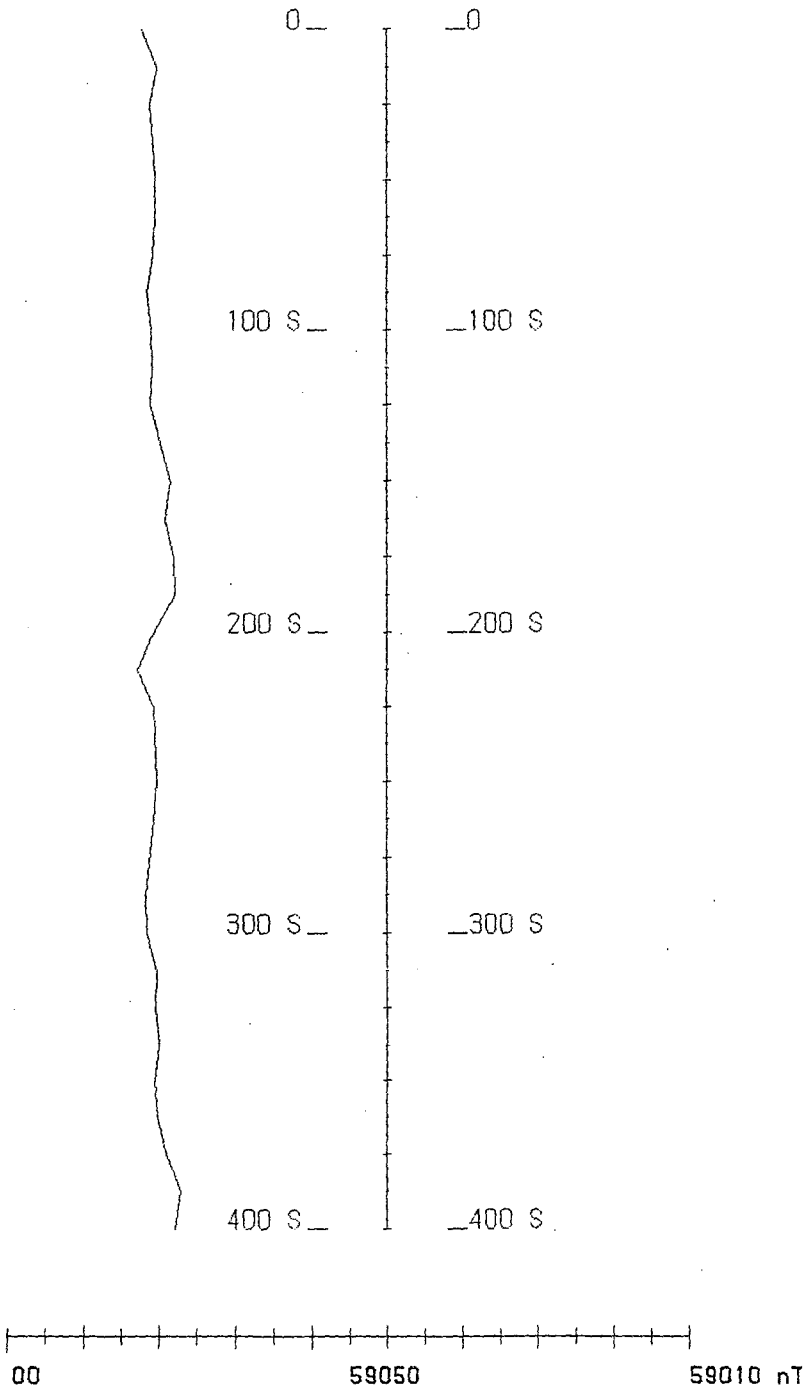
Cando: = 31.17'

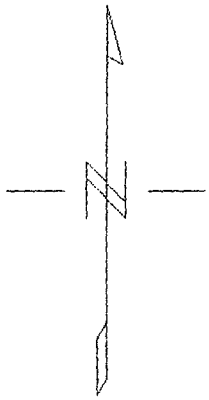
28 FEB 98 Wpt: 56° 31' 10.4" N } L-0 at 0
113° 13' 33.4" W

= 13.56'




Magnetic Field At Base Station on Feb 28/98
Magnetic field (nT)
59230
59220
59210
59200
59190
59180
59170
59160
59150
59140
1 201 401 601 801 1001 1201 1401 1601 1801 2001 2201 2401 2601 2801 3001 3201 3401 3601 3801 4001 4201 4401 4601
Reading Number At 5 Second Intervals
CAN DO
LOOKALIKE





Line 0 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTesla

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

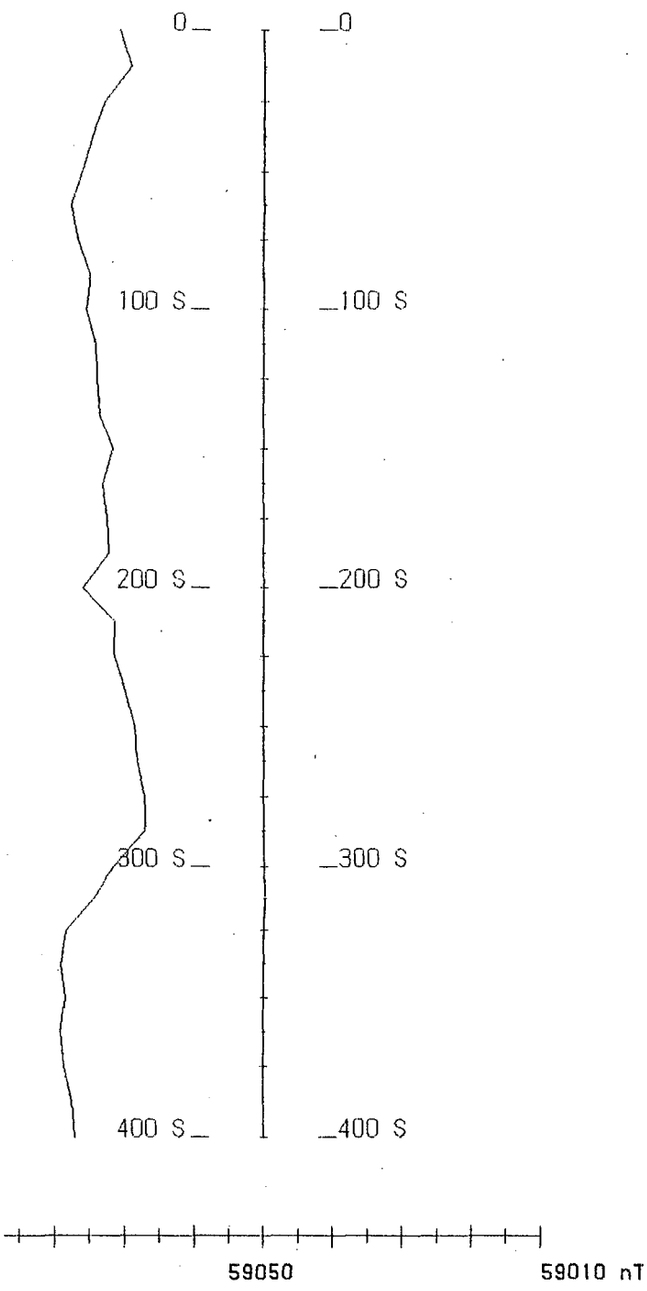
SIDON INTERNATIONAL RESOURCES

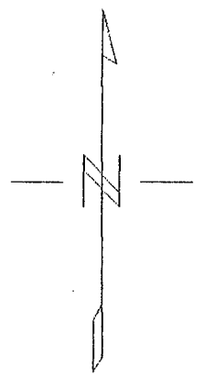
MAGNETIC SURVEY -- Strip Profile

Cando Target
Slave lake, Alberta

DATE: Feb 25/98 Instrument: Omni
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plotte

EASTERN GEOPHYSICS LIMITED





Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

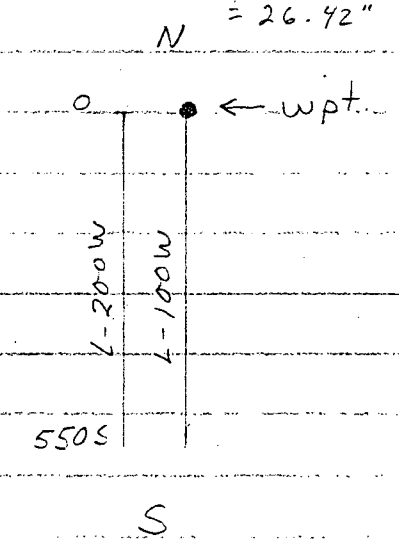
Cando Target
Slave lake, Alberta

DATE: Feb 25/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED

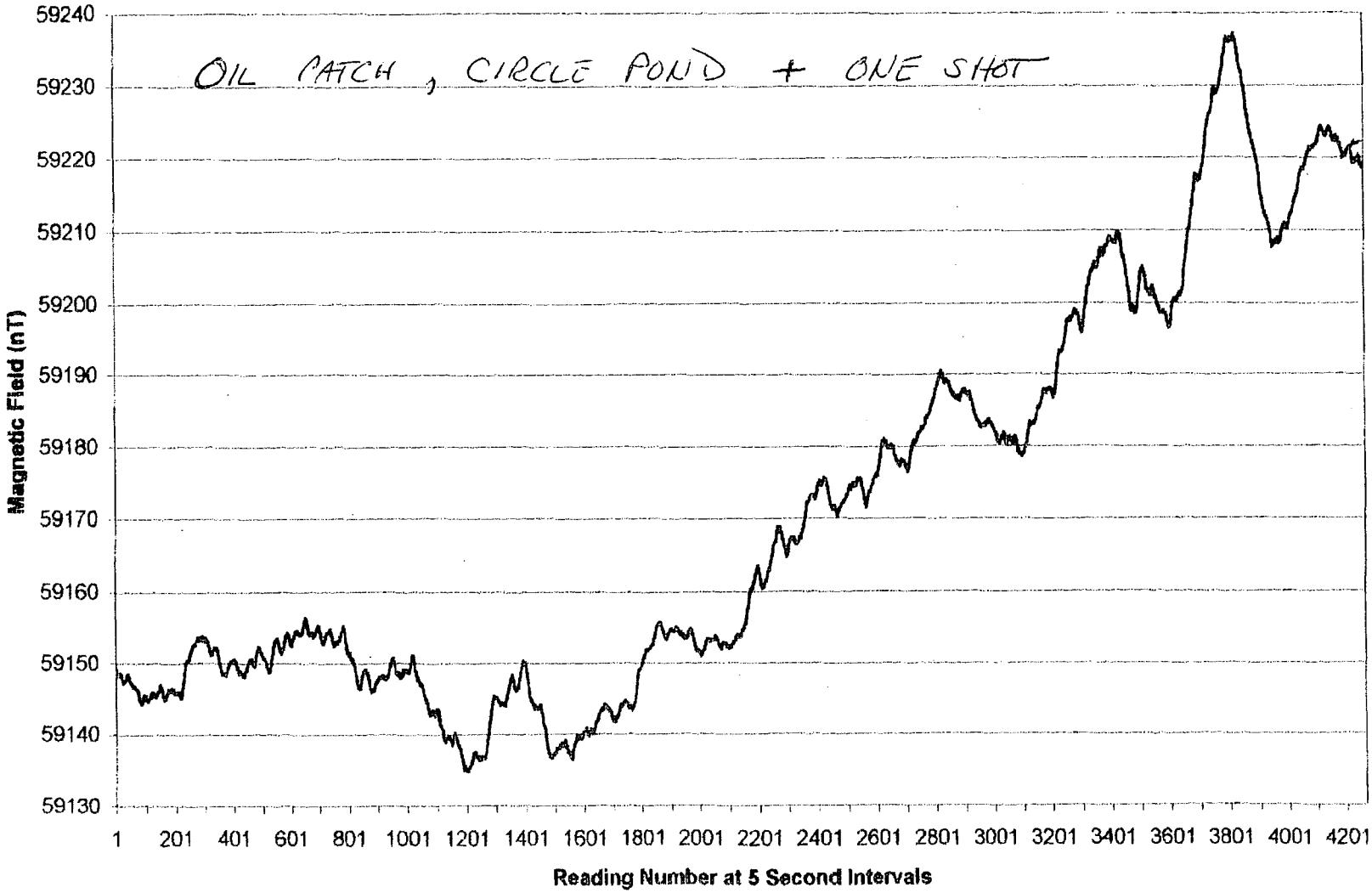
Circle Pond: = 36.39'

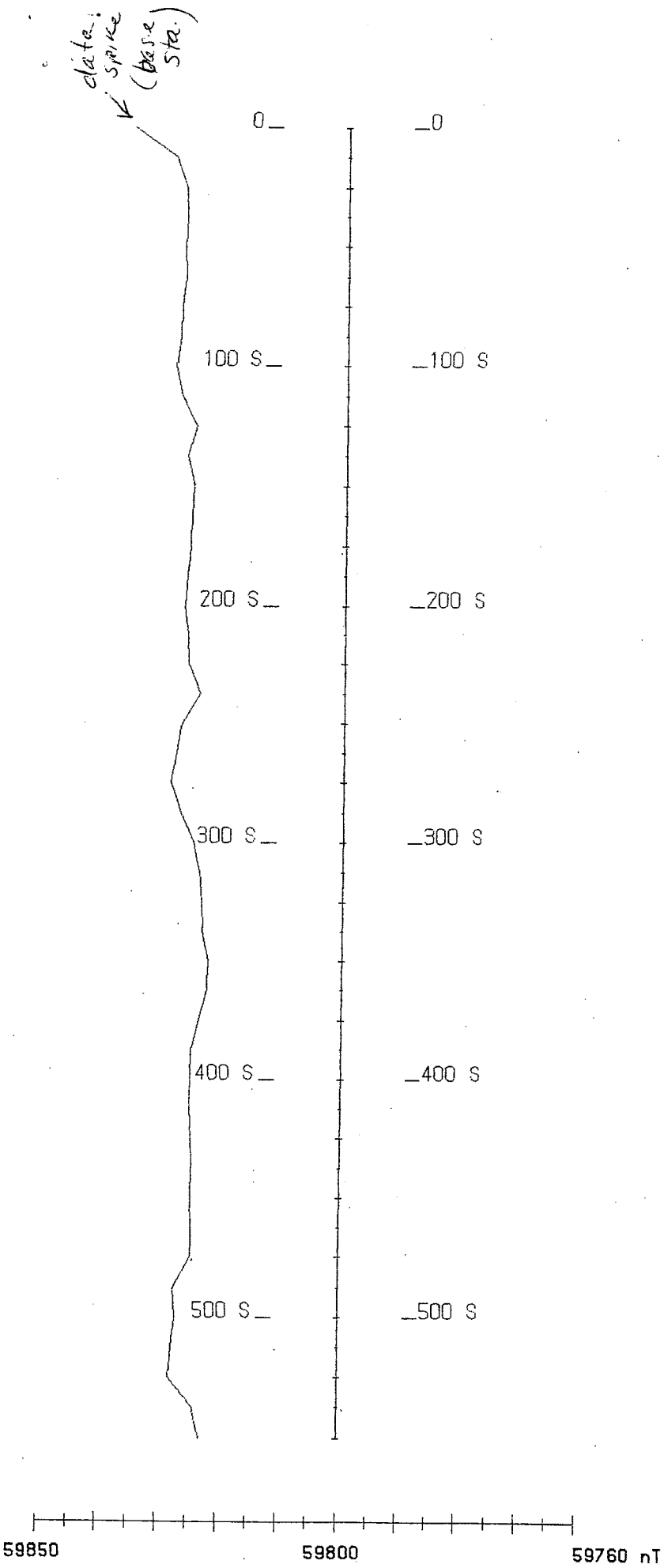
RECON 3/2/98 wpt: 56° 36' 23.6" N } L-100W at 0
113° 26' 25.3" W
= 26.42"

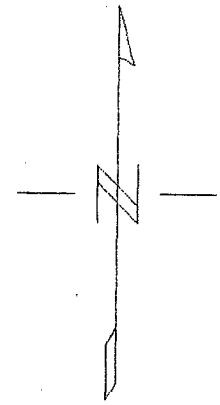


PROB. NOT QUITE FAR ENOUGH WEST W/ THESE TWO LINES

Magnetic Field at Base station on March 2/98







Line 200 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59800 nTes

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/

SIDON INTERNATIONAL RESOURCE

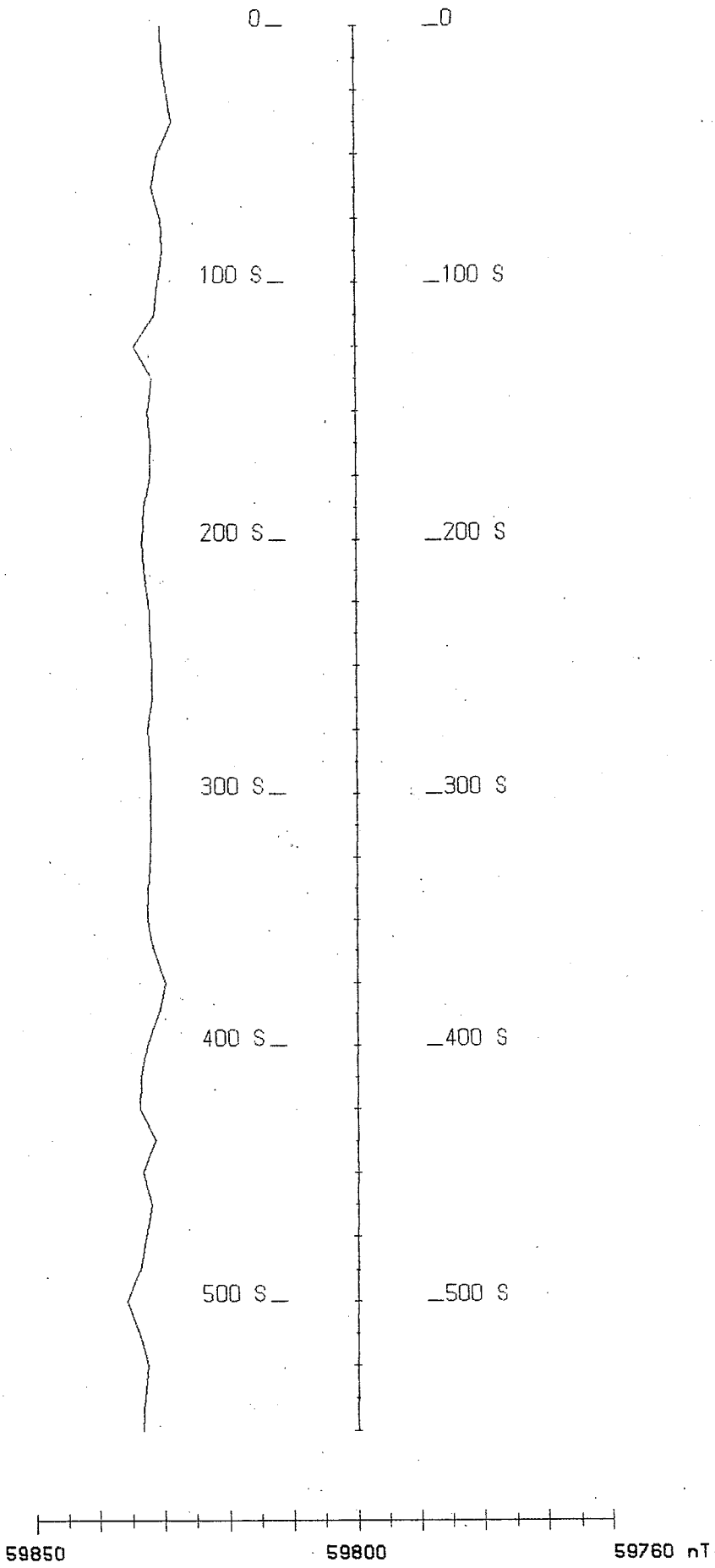
MAGNETIC SURVEY -- Strip Prof

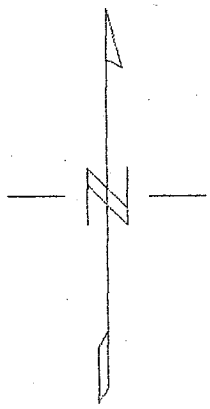
Circle Pond Target
Slave lake, Alberta

DATE: March 3/98
Base Station Setting:
line Azimuth = 0

Instrument:
Reading at 5 secon
Plot

EASTERN GEOPHYSICS LIMITI





Line 100 W

Scale 1:2500

50 0 50

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59800 nTe

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTesla

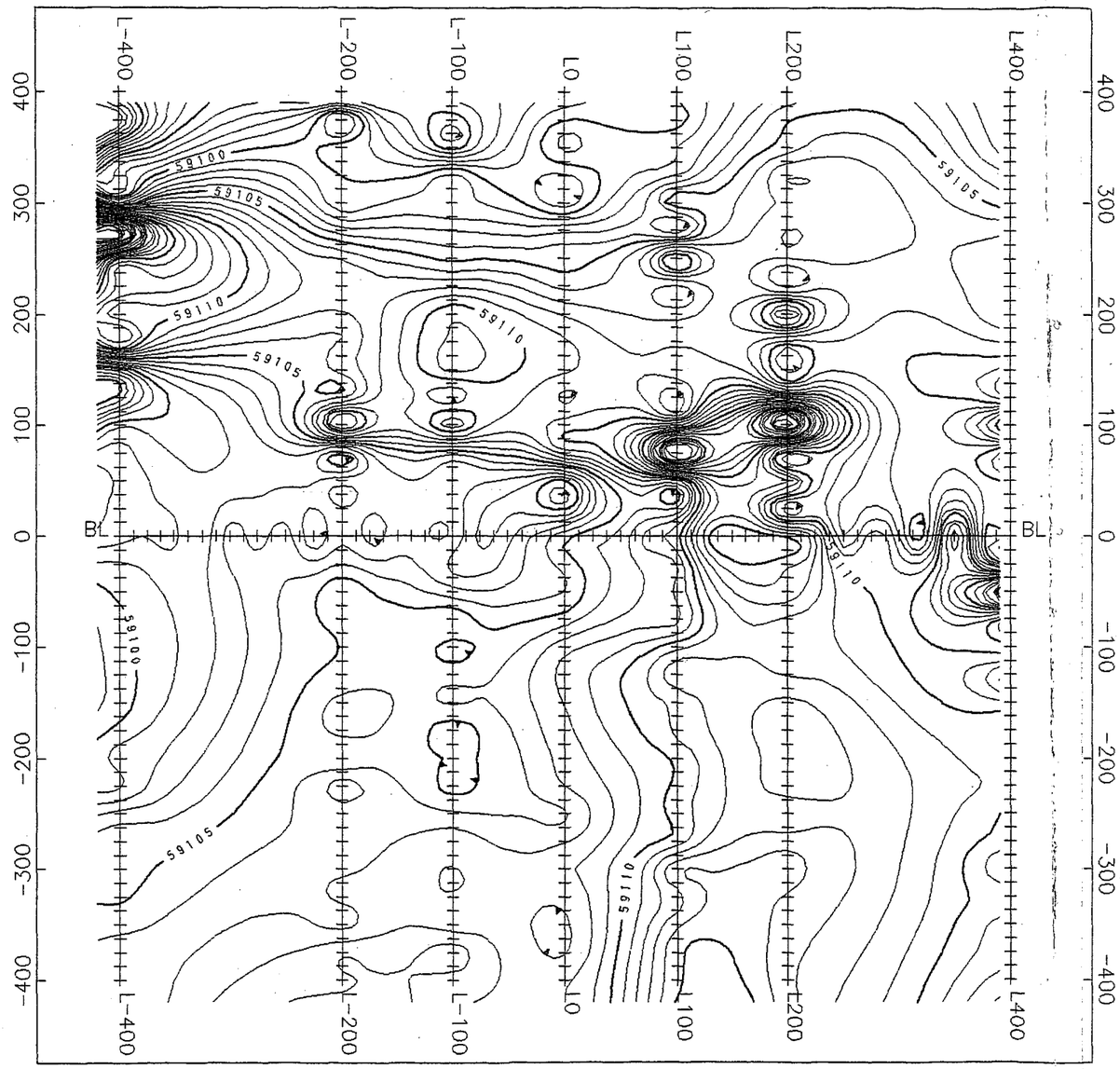
SIDON INTERNATIONAL RESOUR

MAGNETIC SURVEY -- Strip Pr

Circle Pond Target
Slave lake, Alberta

DATE: March 3/98 Instrumen
Base Station Setting: Reading at 5 sec
line Azimuth = 0 P

EASTERN GEOPHYSICS LIM



Scale 1:5000

50 0.0 50 100 150 200 250 300

(meters)

LEGEND

Contour intervals

Minor Interals: Every 1 nTeslas

Major Interals: Every 5 nTeslas

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Survey -- Contour Map

Creekside Grid

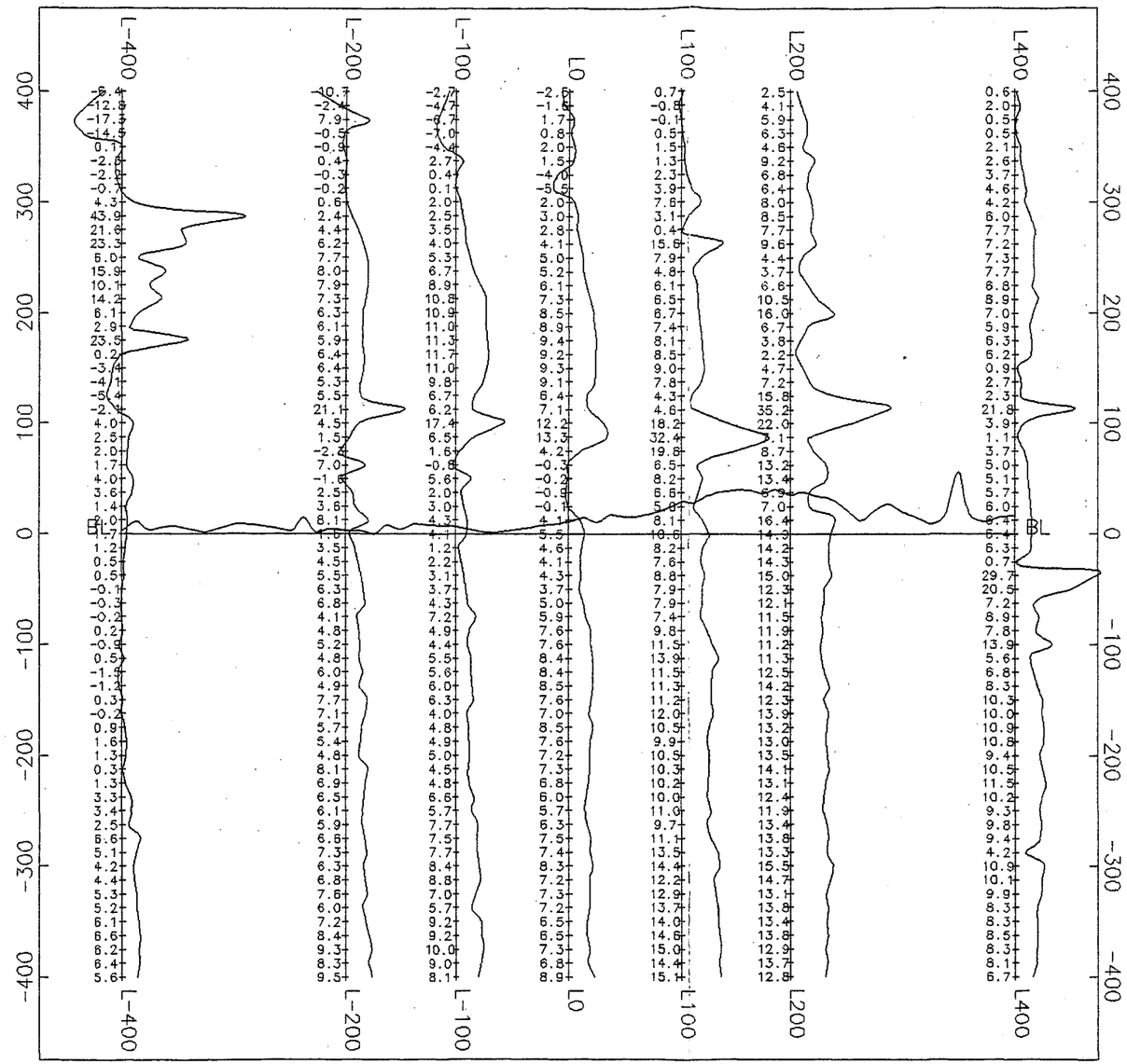
Slave Lake, Alberta

Date: Feb 22/98 Instuments: Omni IV, Omni Plus

Base Station Setting: Reading at 5 Second Intervals

Baseline Azimuth: 40° Prepared By W. H.

Eastern Geophysics Limited



Scale 1:5000

50 0.0 50 100 150 200 250 300

(meters)

Legend

Profile Settings:

Base Removed: 59100 nTeslas

Profile Scale: 20 nT/cm

SIDON INTERNATIONAL RESOURCES CORP.

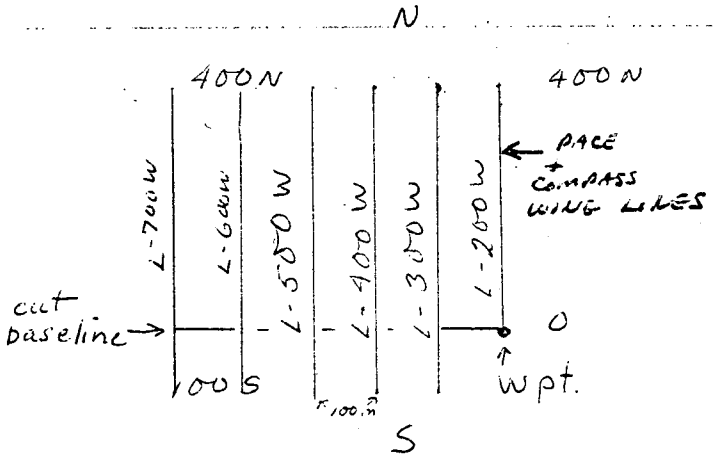
Magnetic Survey -- Profile Map
Creekside Grid
Slave Lake, Alberta

Date: Feb 22/98 Instuments: Omni IV, Omni Plus
Base Station Setting: Reading at 5 Second Intervals
Baseline Azimuth: 40° Prepared By W. H.

Eastern Geophysics Limited

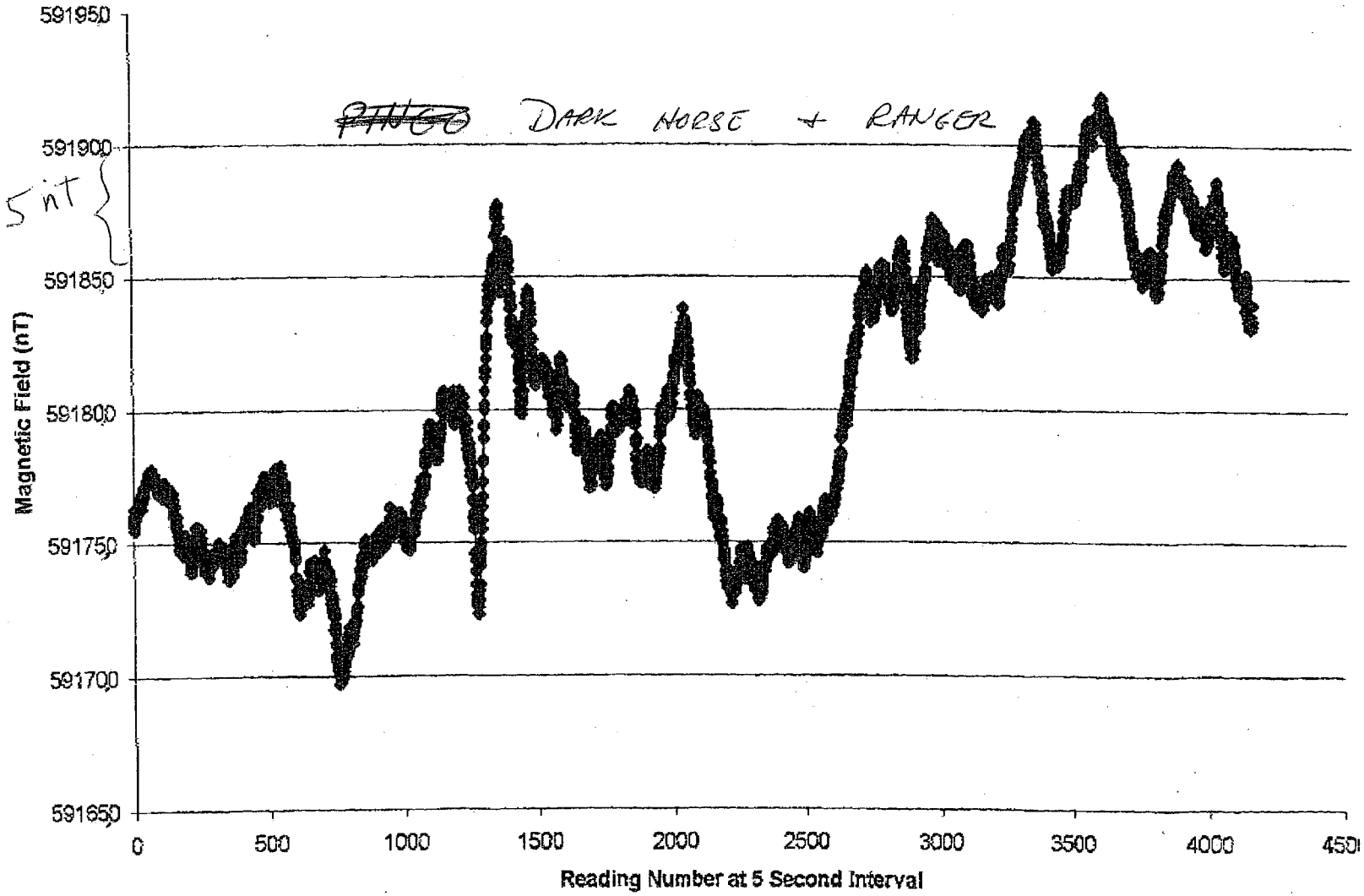
- Darkhorse:

FEB 20 '98 wpt: 56° 30' 03.0" N (= 30.05') } L-200W at 0+00
FEB 6+7 '98 (initial recon) 113° 11' 51.3" W (= 11.86')



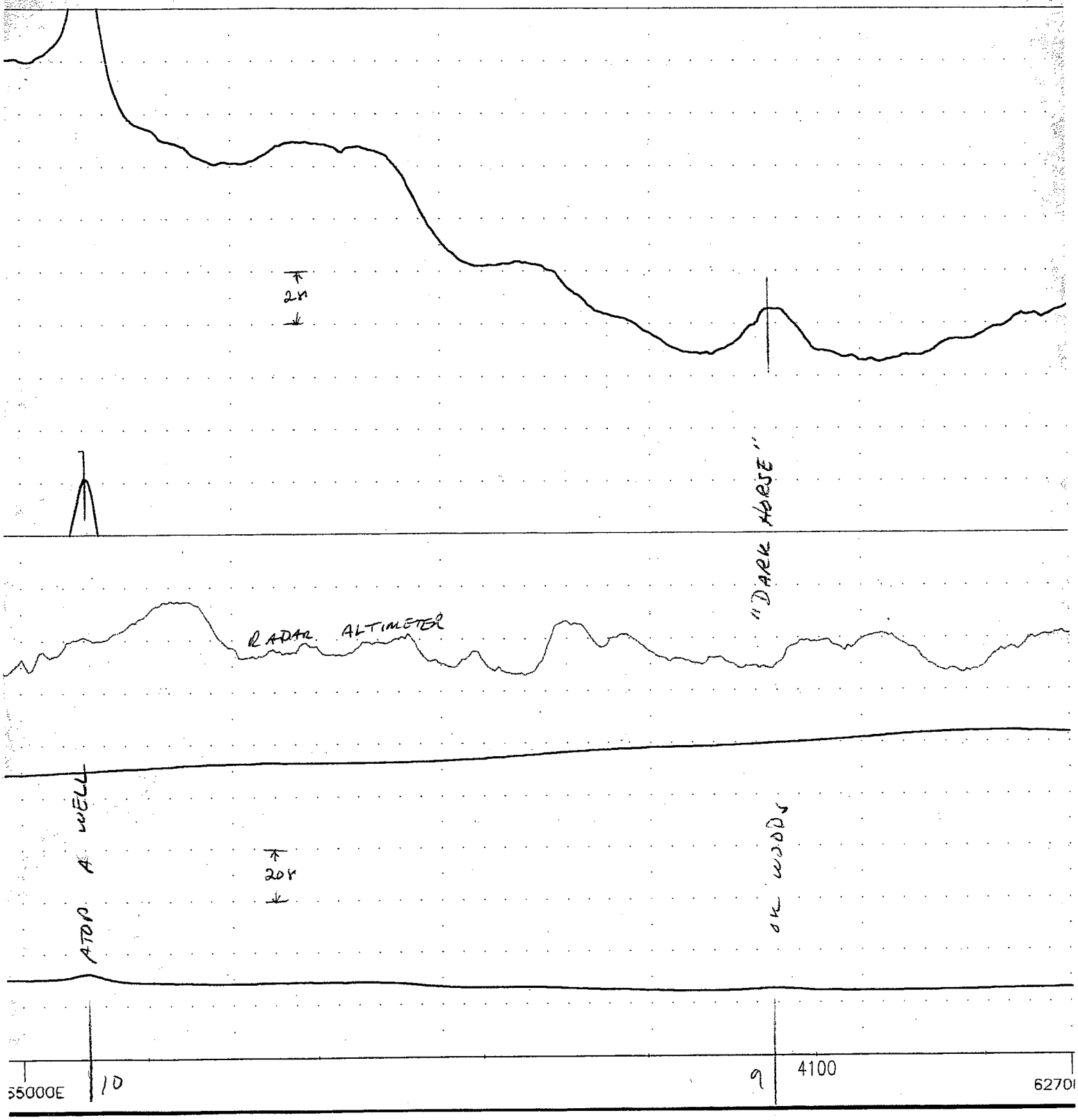
→ L-200W at 0+00 - line begins in a cut-over.

Magnetic Field at Base Station on Feb. 20/98



Otter Lake, Alberta

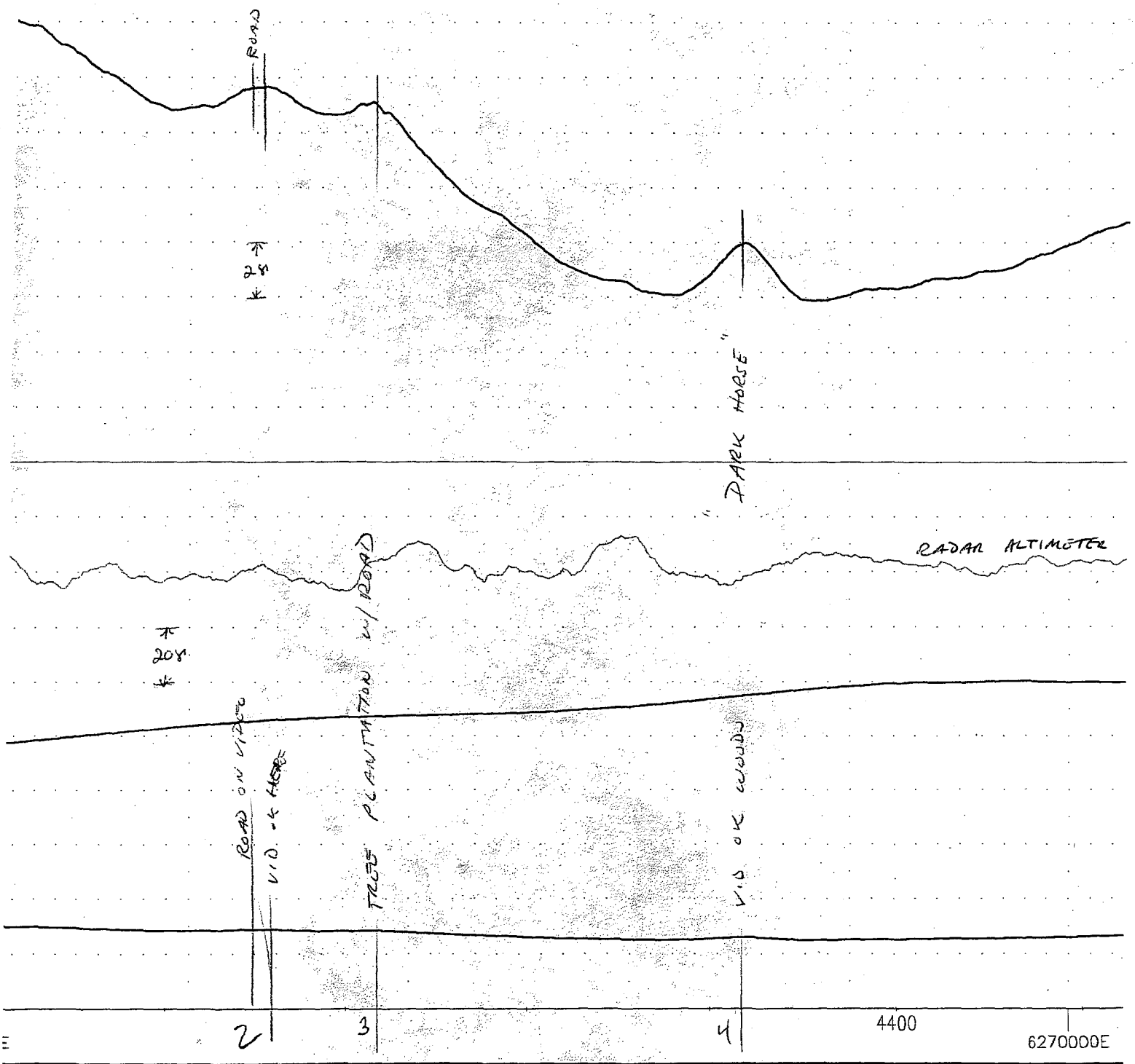
"DARK HORSE" ANOMALY



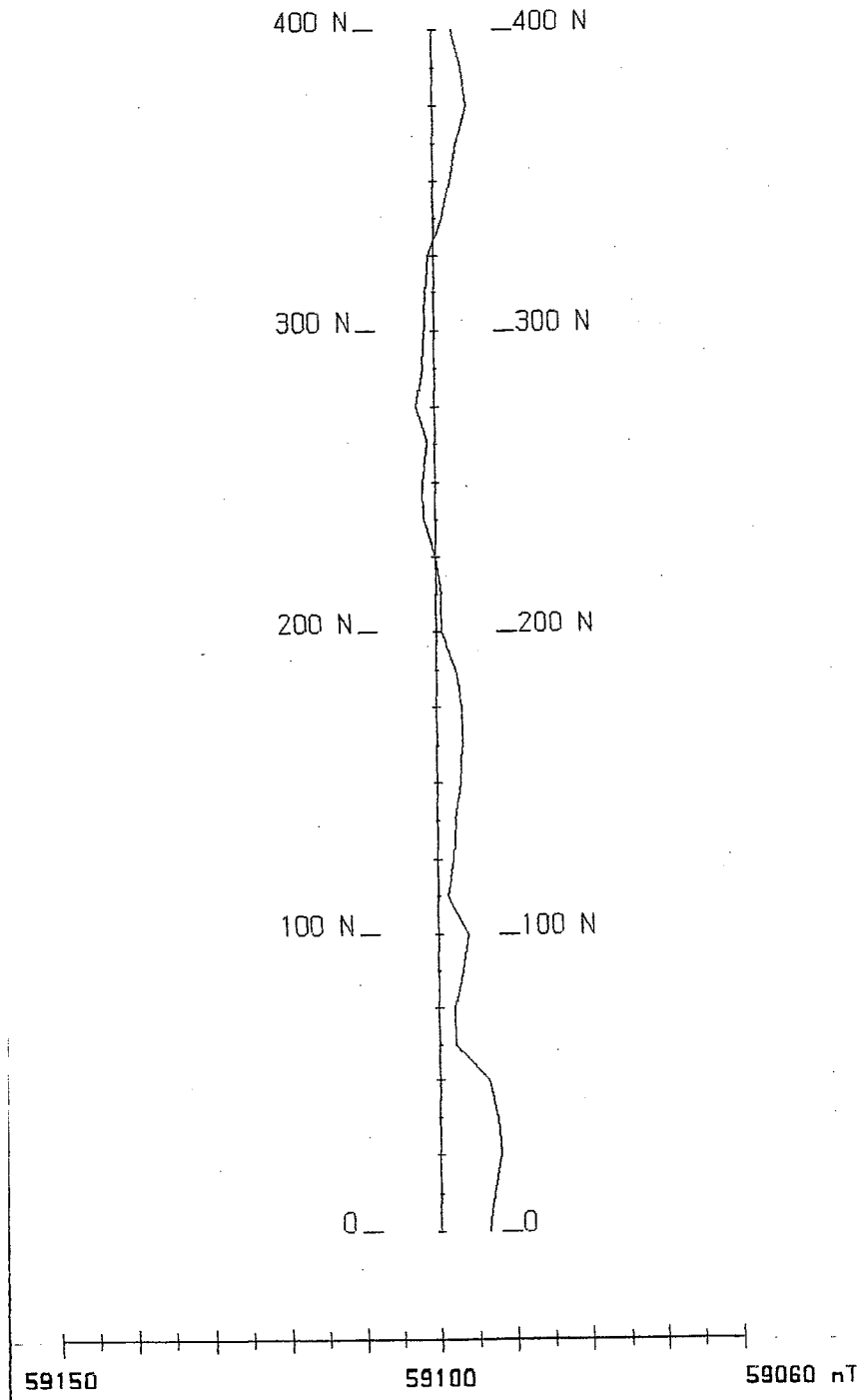
FLIGHT LINE 922

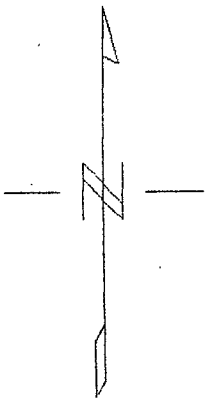
tter Lake, Alberta

"DARK HORSE" ANOMALY



FLIGHT LINE 930





Line 200 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59100 nTesl

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/c

SIDON INTERNATIONAL RESOURCE

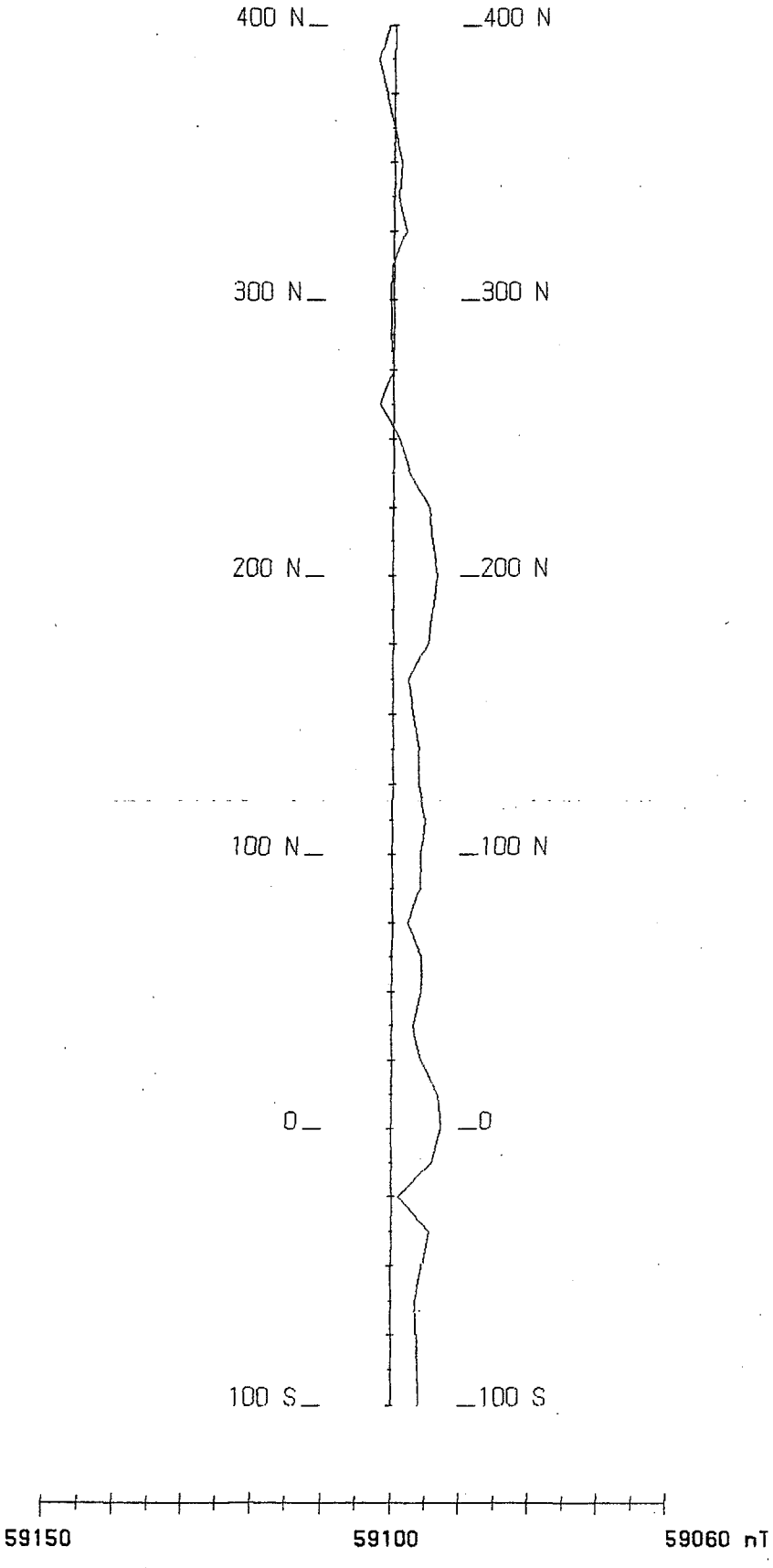
MAGNETIC SURVEY -- Strip Profi

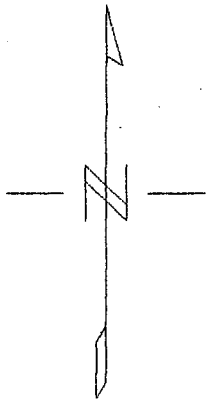
Dark Horse Target
Slave lake, Alberta

Feb. 6/98

DATE: 01/98 Instrument: Omni I
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plot

EASTERN GEOPHYSICS LIMITE





Line 300 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTes

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas

SIDON INTERNATIONAL RESOURC

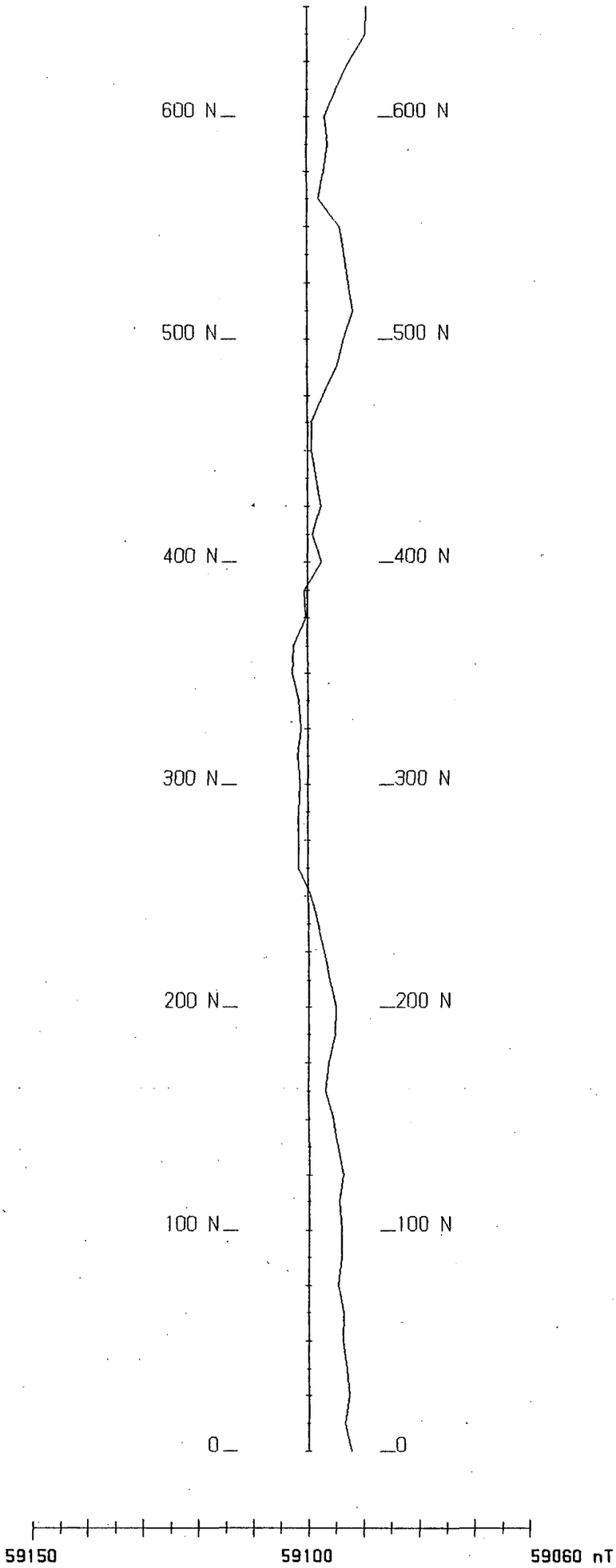
MAGNETIC SURVEY -- Strip Prof

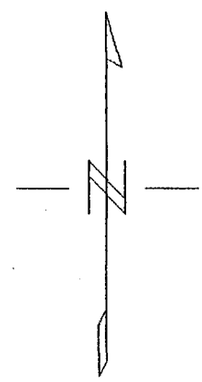
Dark Horse Target
Slave lake, Alberta

Feb. 6 / 98

DATE: 01/98 Instrument: Omni
Base Station Setting: Reading at 5 seco
line Azimuth = 0 Plc

EASTERN GEOPHYSICS LIMI





Line 400 W

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTes

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/

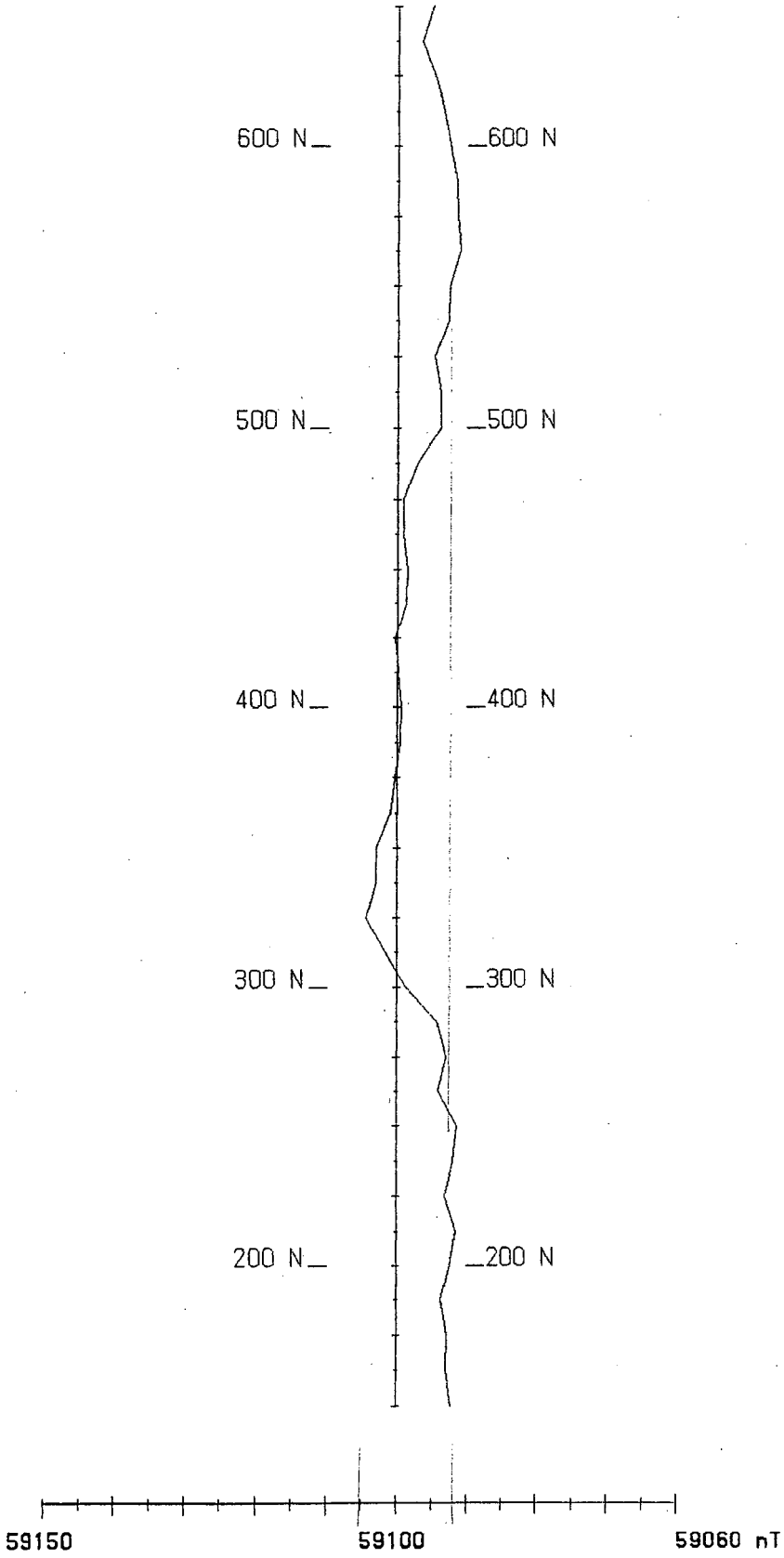
SIDON INTERNATIONAL RESOURCE

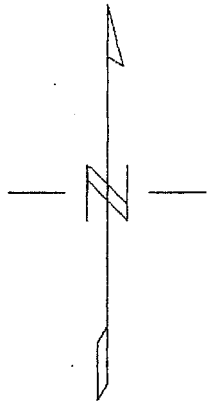
MAGNETIC SURVEY -- Strip Prof

Darkhorse Target
Slave lake, Alberta

DATE: 02/20/98 Instrument: Omni
Base Station Setting: Reading at 5 secor
line Azimuth = 0 Plc

EASTERN GEOPHYSICS LIMIT





Line 500 W

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTes

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/

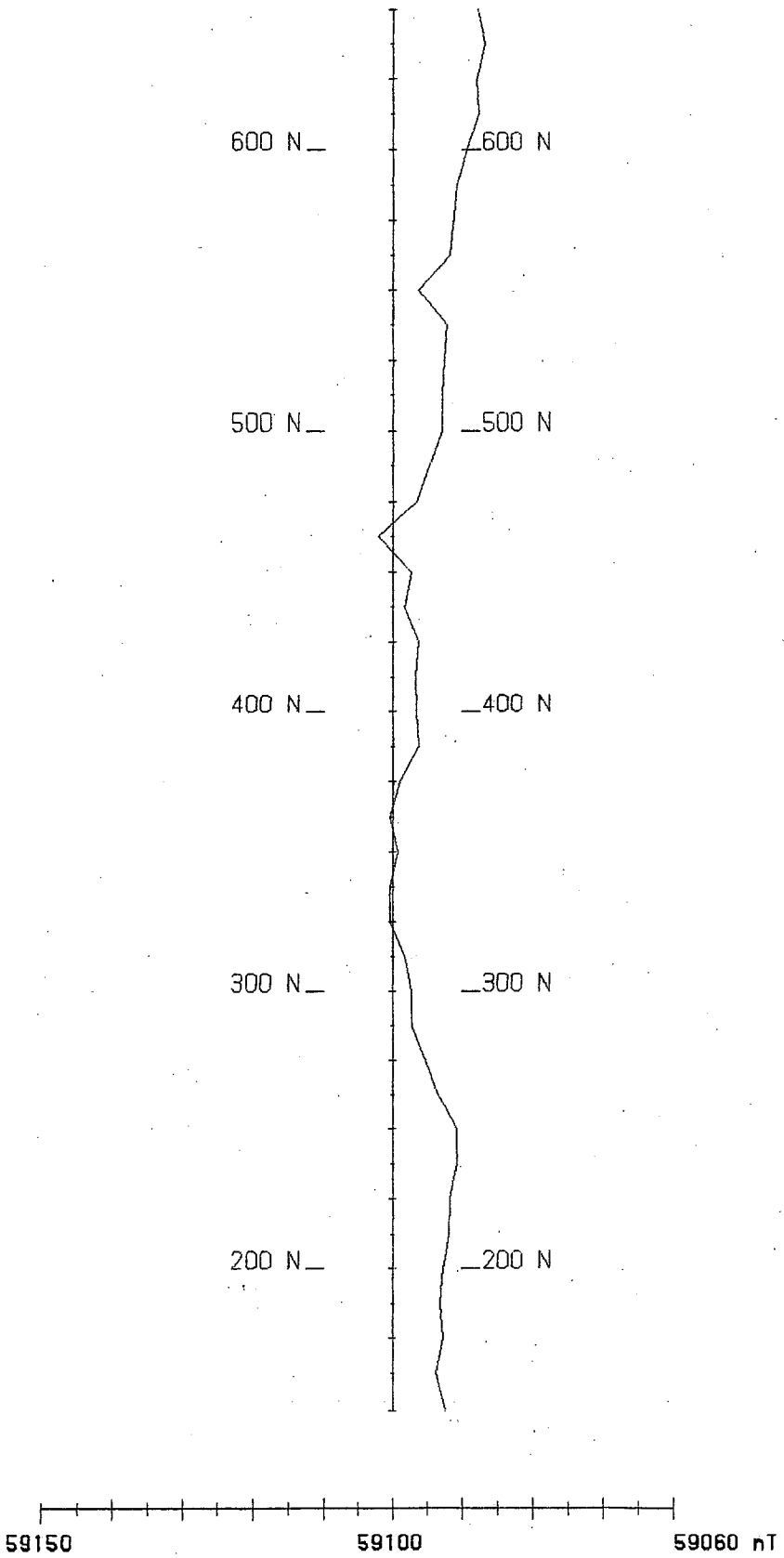
SIDON INTERNATIONAL RESOURCE

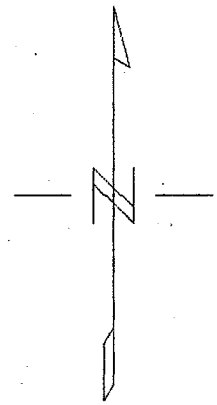
MAGNETIC SURVEY -- Strip Prof

Darkhorse Target
Slave lake, Alberta

DATE: 02/20/98 Instrument: Omni
Base Station Setting: Reading at 5 secon
line Azimuth = 0 Plo

EASTERN GEOPHYSICS LIMIT





Line 600 W

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field:

PROFILE CENTRES
Magnetic Field : 59100 nTesl

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/

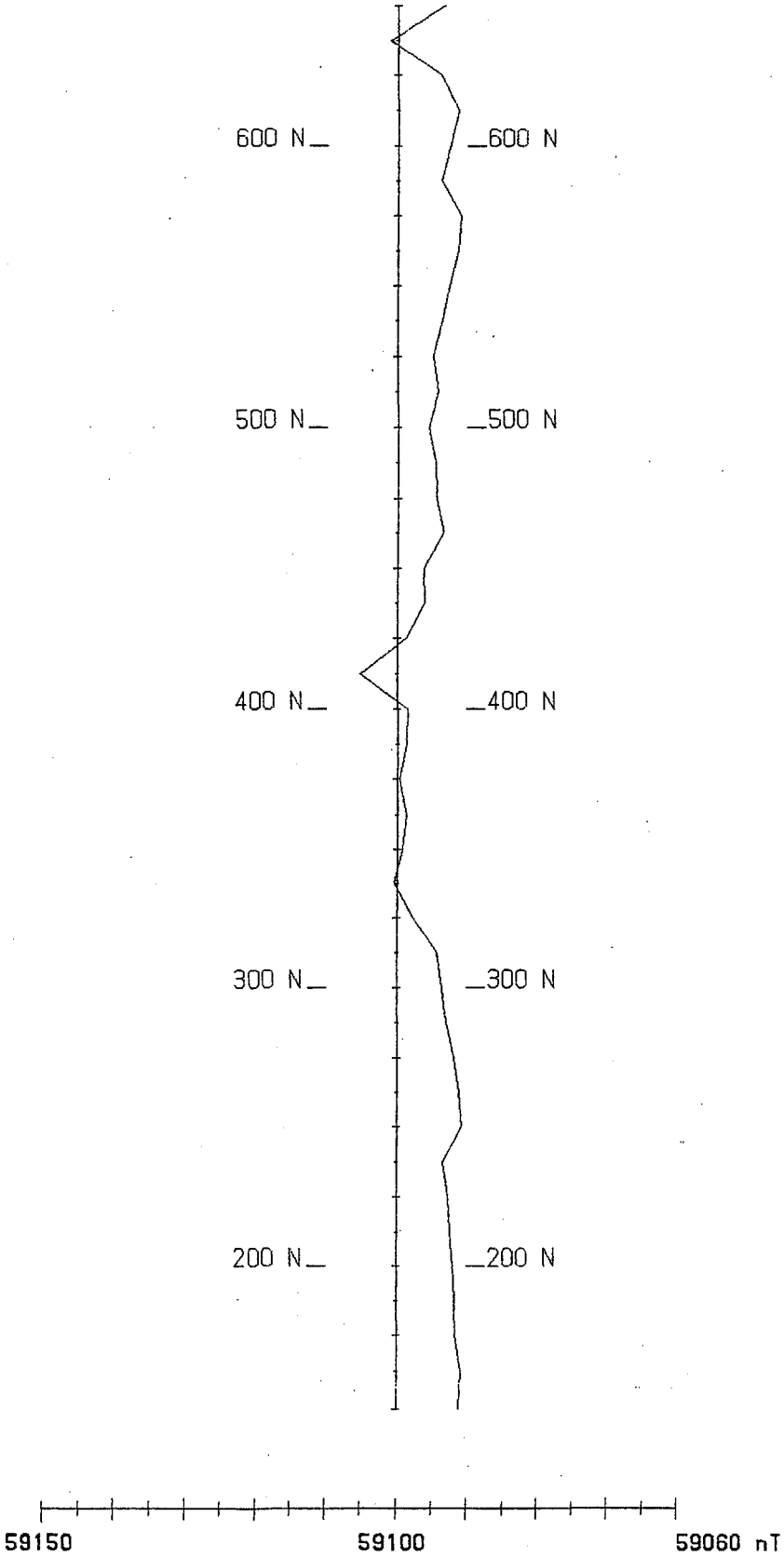
SIDON INTERNATIONAL RESOURCE

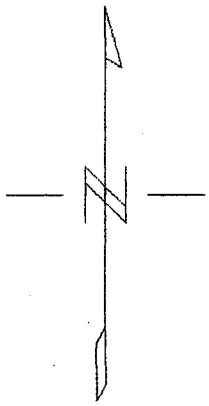
MAGNETIC SURVEY -- Strip Profi

Darkhorse Target
Slave lake, Alberta

DATE: 02/20/98 Instrument: Omni
Base Station Setting: Reading at 5 secon
line Azimuth = 0 Plo

EASTERN GEOPHYSICS LIMITE





Line 700 W

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field:———

PROFILE CENTRES
Magnetic Field : 59100 nTes

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/

SIDON INTERNATIONAL RESOURCE

MAGNETIC SURVEY -- Strip Prof

Darkhorse Target
Slave lake, Alberta

DATE: 02/20/98 Instrument: Omni
Base Station Setting: Reading at 5 secon
line Azimuth = 0 Plo

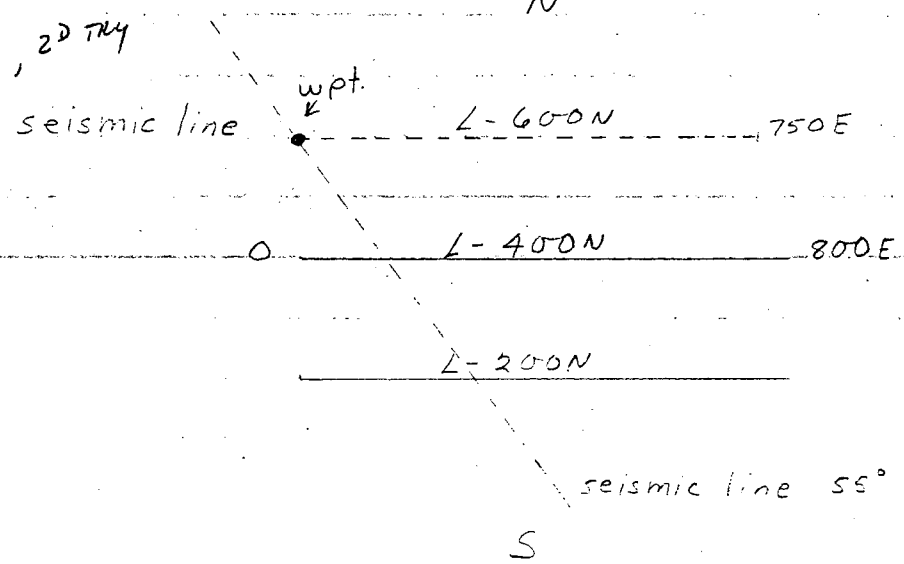
EASTERN GEOPHYSICS LIMITI

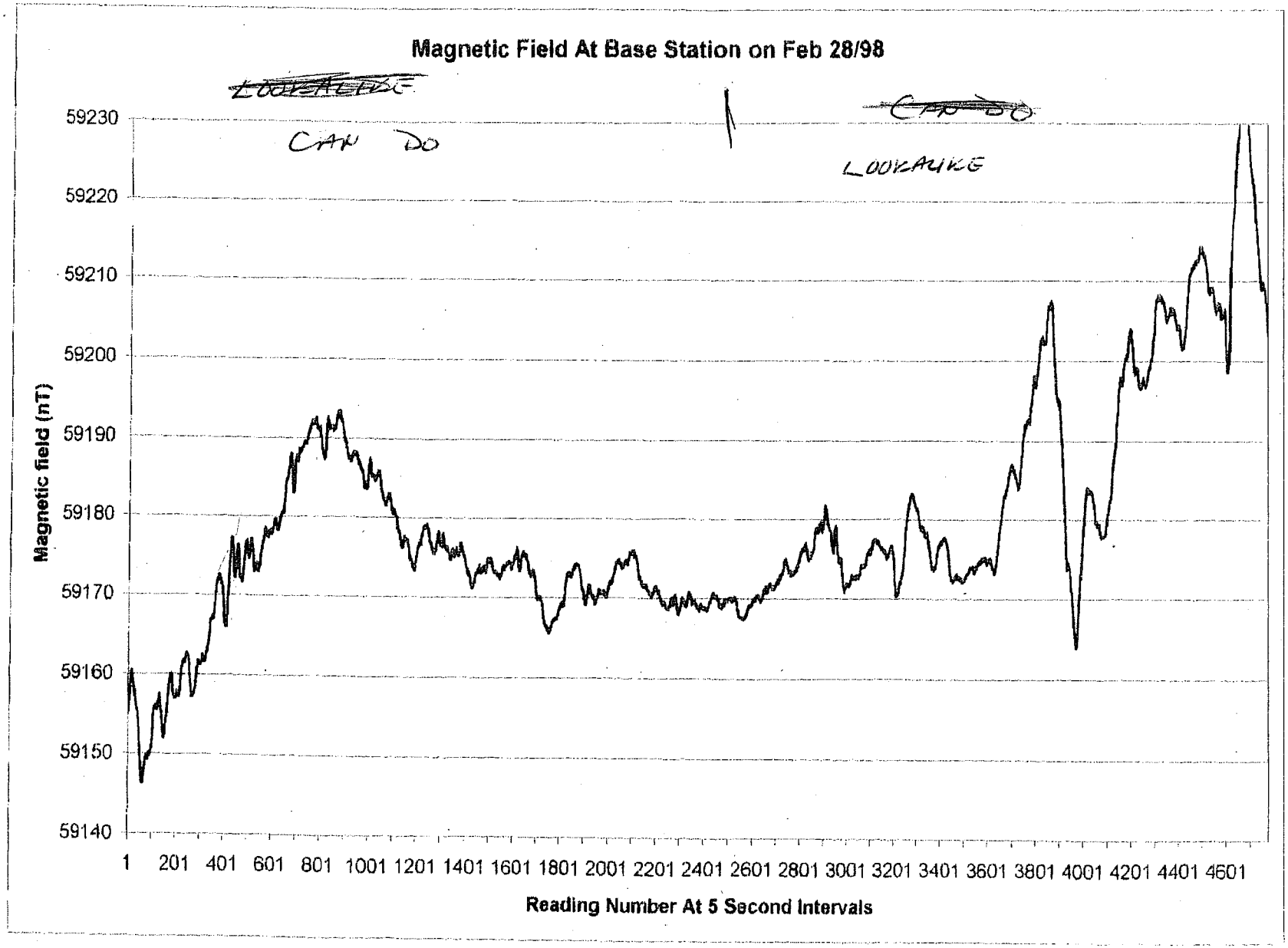
Lookalike:

28 FEB 98 wpt: 56° 35' 10.4" N (= 35.17') } L-600N at 0
113° 25' 05.9" W (= 25.1') N

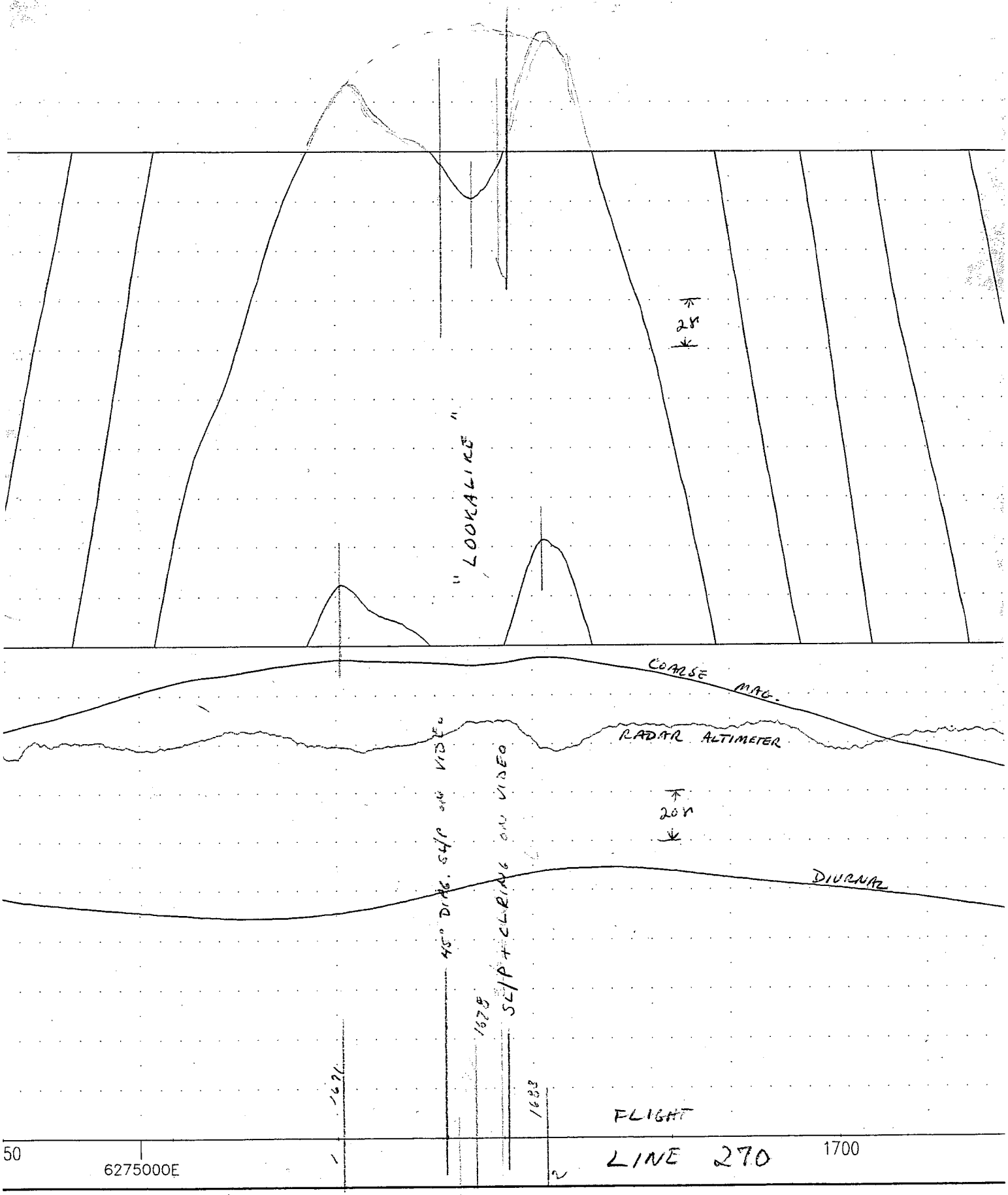
(~~RE-DONE~~)

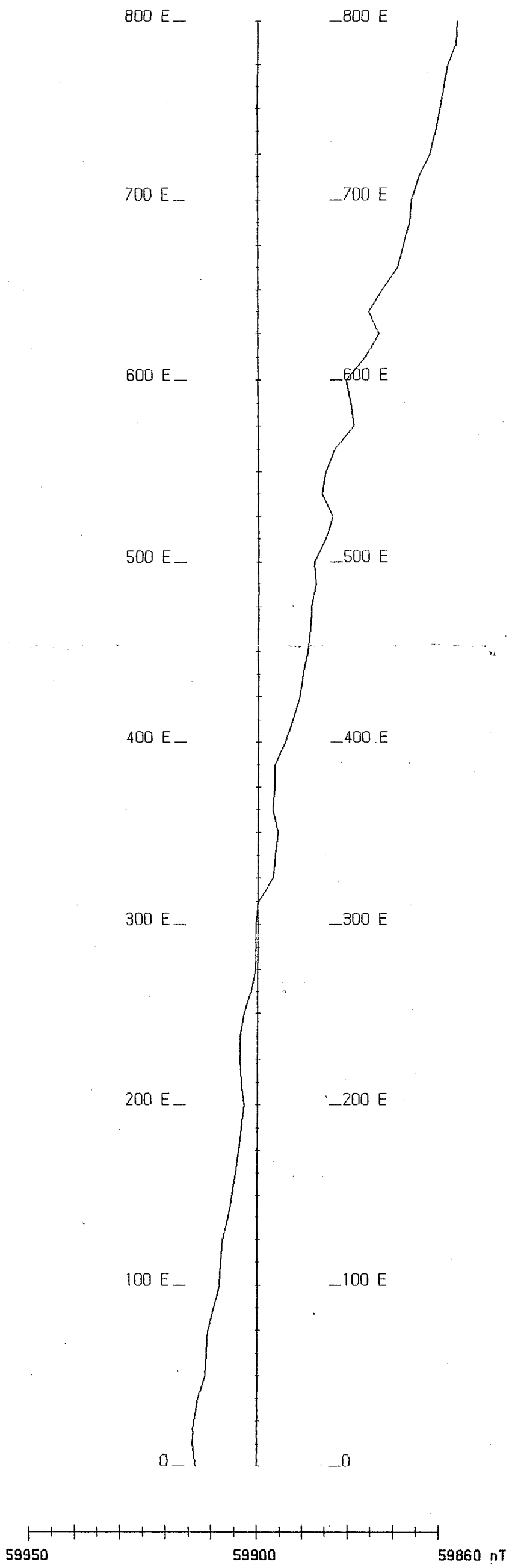
RECON
RE-DO, 2D TRY

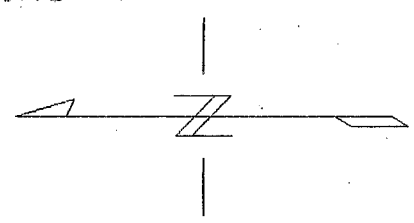



Magnetic Field At Base Station on Feb 28/98
~~LOOKALIKE~~
CAN DO
~~CAN DO~~
LOOKALIKE
Magnetic field (nT)
59230
59220
59210
59200
59190
59180
59170
59160
59150
59140
1 201 401 601 801 1001 1201 1401 1601 1801 2001 2201 2401 2601 2801 3001 3201 3401 3601 3801 4001 4201 4401 4601
Reading Number At 5 Second Intervals

OTTER LAKE
"LOOKALIKE" ANOMALY







Line 200 N

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field:———

PROFILE CENTRES
Magnetic Field : 59900 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

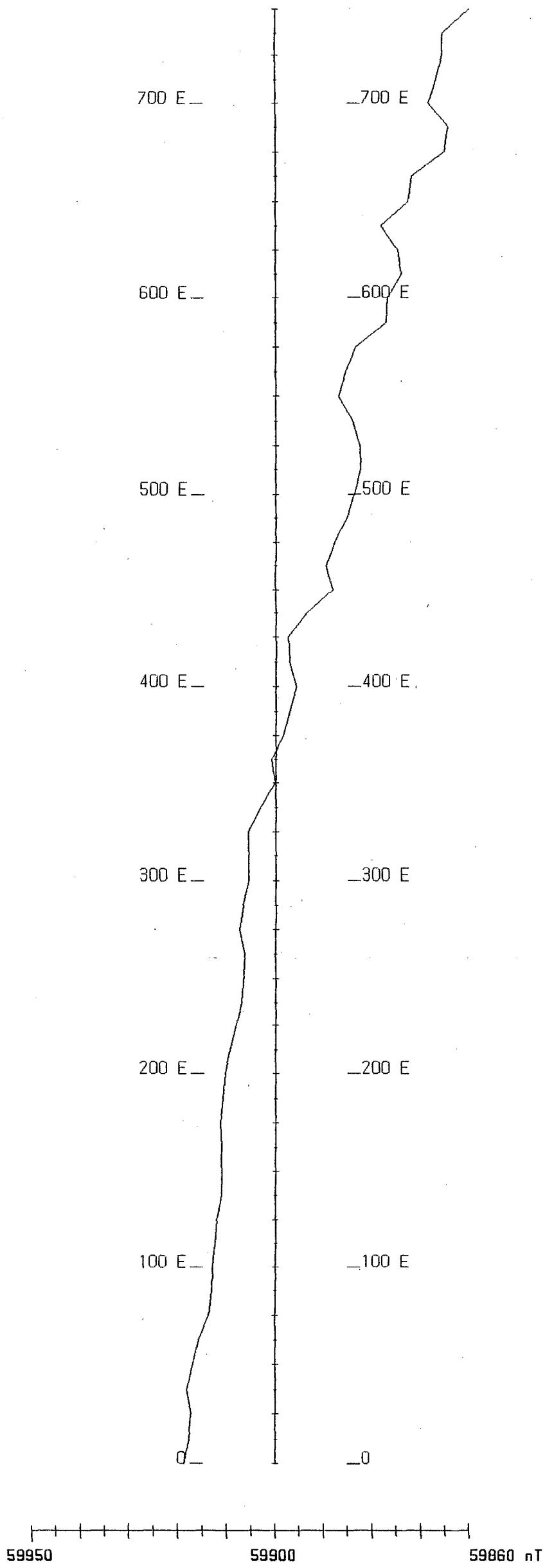
SIDON INTERNATIONAL RESOURCES CORP.

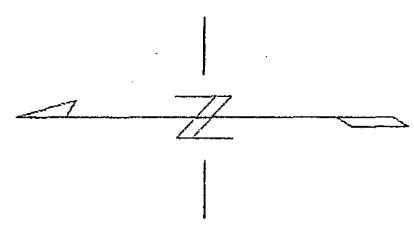
MAGNETIC SURVEY -- Strip Profile

Lookalike Target
Slave lake, Alberta

DATE: Feb ~~25~~ 26/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 90 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 600 N

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59900 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

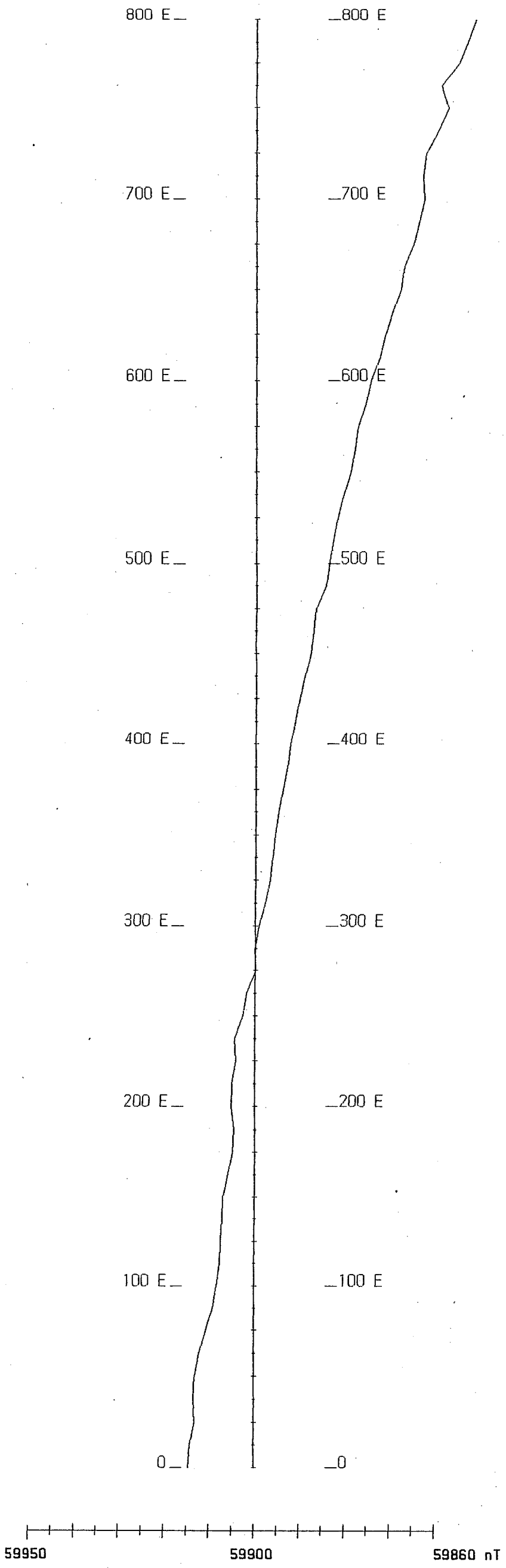
SIDON INTERNATIONAL RESOURCES CORP.

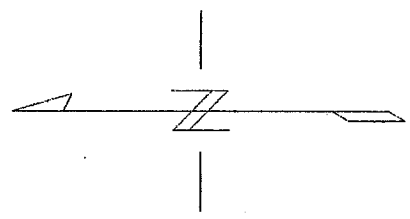
MAGNETIC SURVEY -- Strip Profile

Lookalike Target
Slave lake, Alberta

DATE: Feb ~~25~~ 28/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 90 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 400 N

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field:———

PROFILE CENTRES
Magnetic Field : 59900 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Lookalike Target
Slave lake, Alberta

DATE: Feb ~~25~~ 28/98 Instrument: Omni IV , Omni
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 90 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED

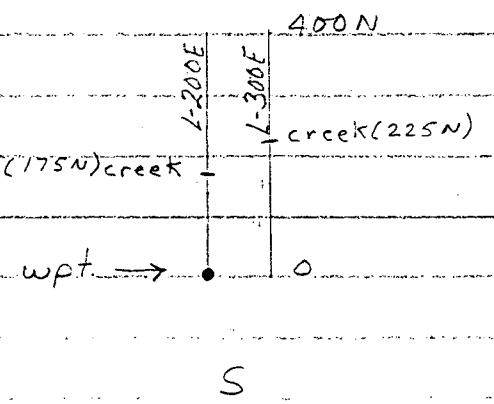
RBEN 3/2/98

Oil Patch

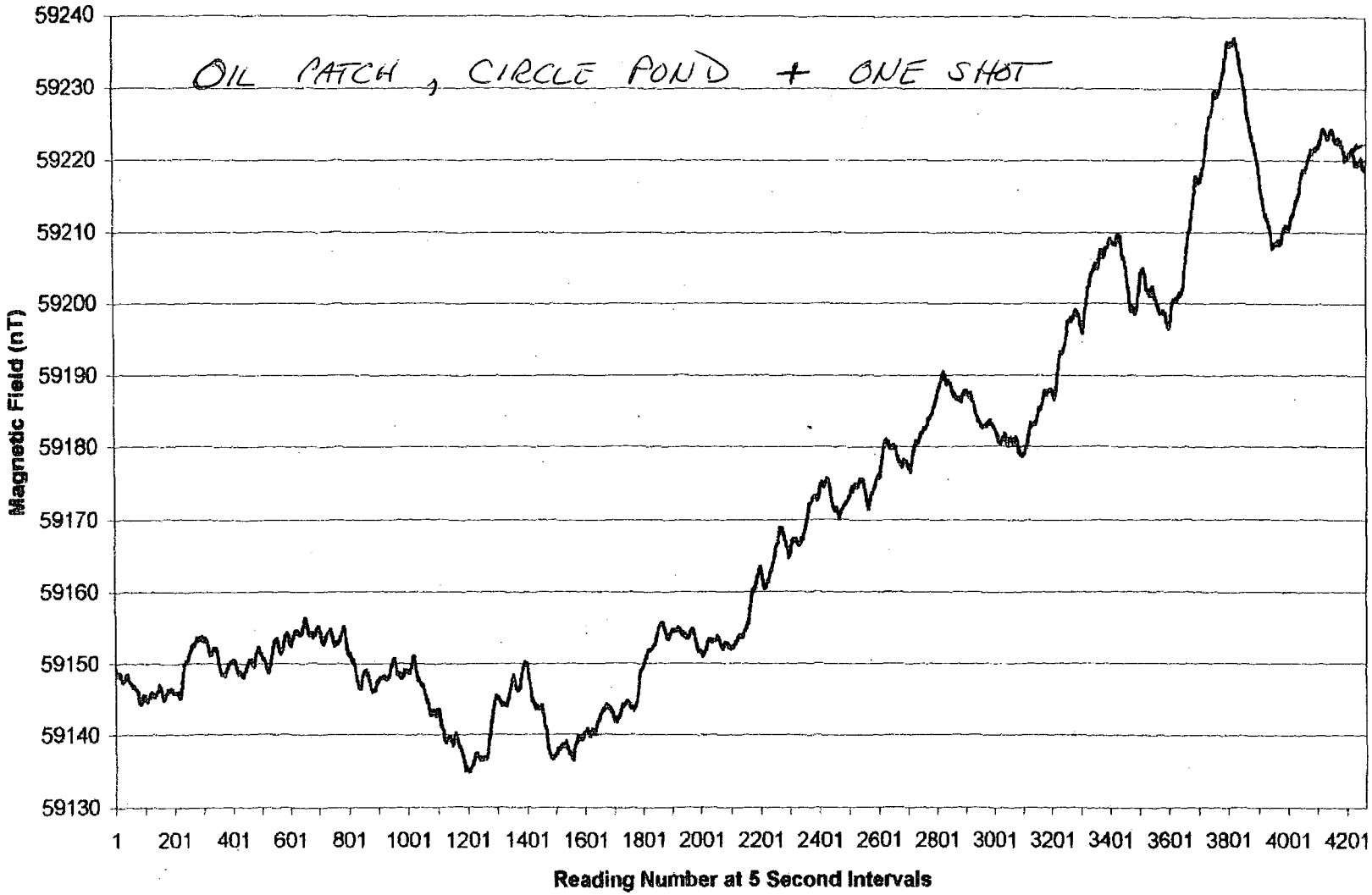
= 31.01

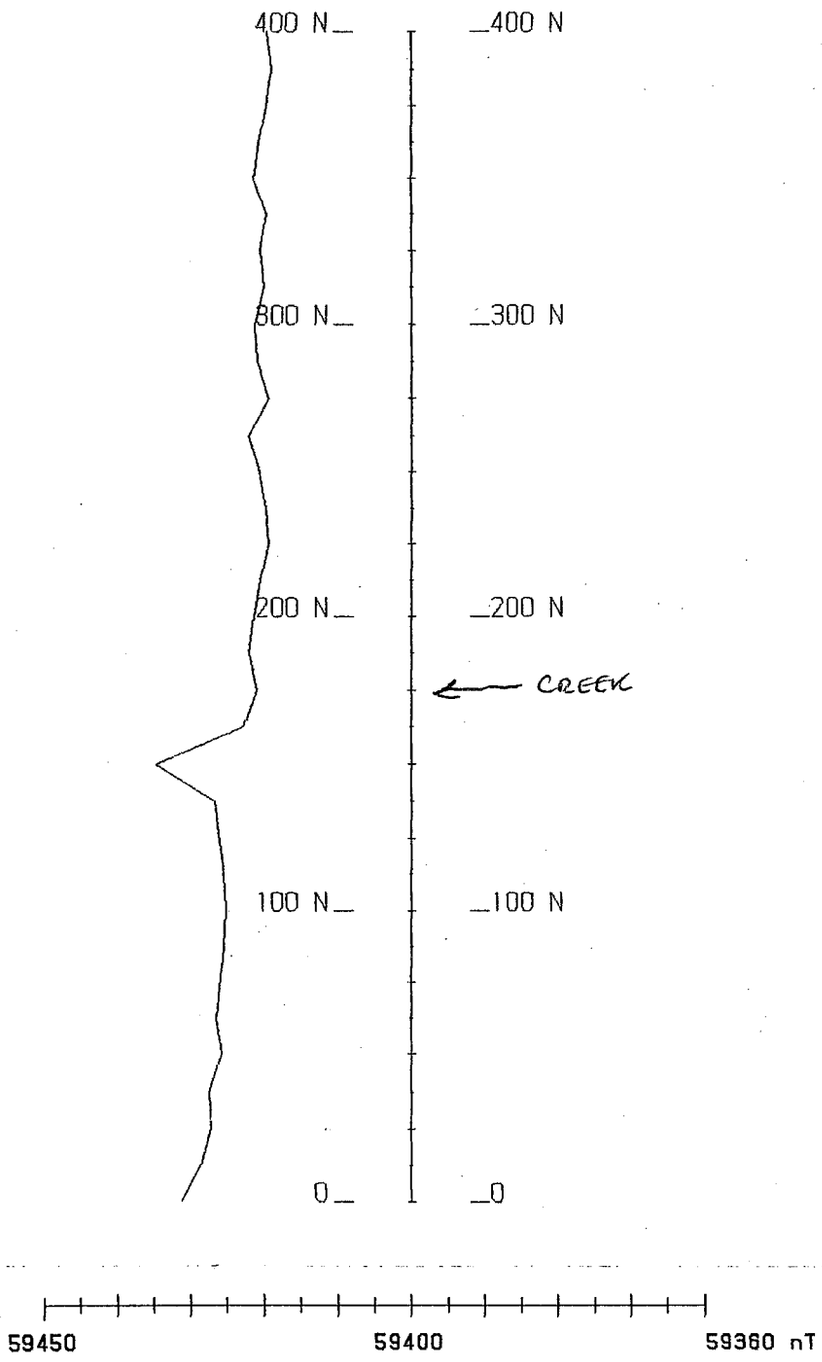
Wpt: 56° 31' 05.3" N } L-200E at 0
113° 27' 44.4" W

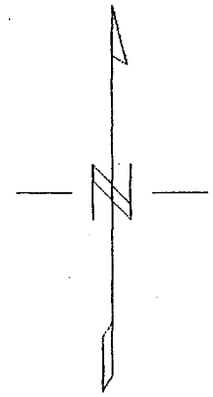
= 27.74'



Magnetic Field at Base station on March 2/98







Line 200 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59400 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

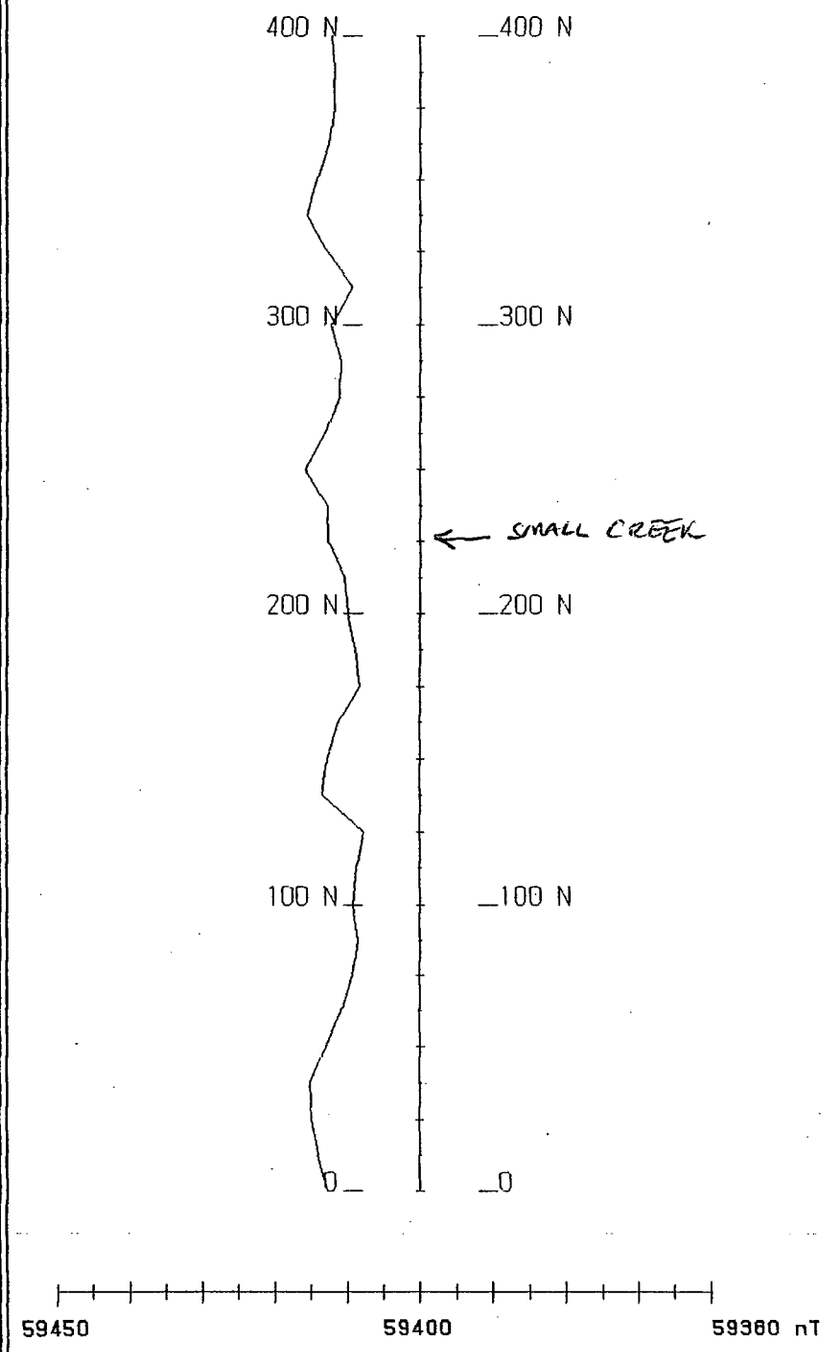
SIDON INTERNATIONAL RESOURCES CORP.

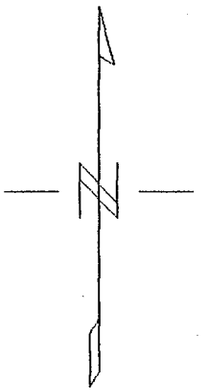
MAGNETIC SURVEY -- Strip Profile

Oil Patch Target
Slave lake, Alberta

DATE: March 3/98 Instrument: Omni IV ; Omn
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 300 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59400 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Oil Patch Target
Slave lake, Alberta

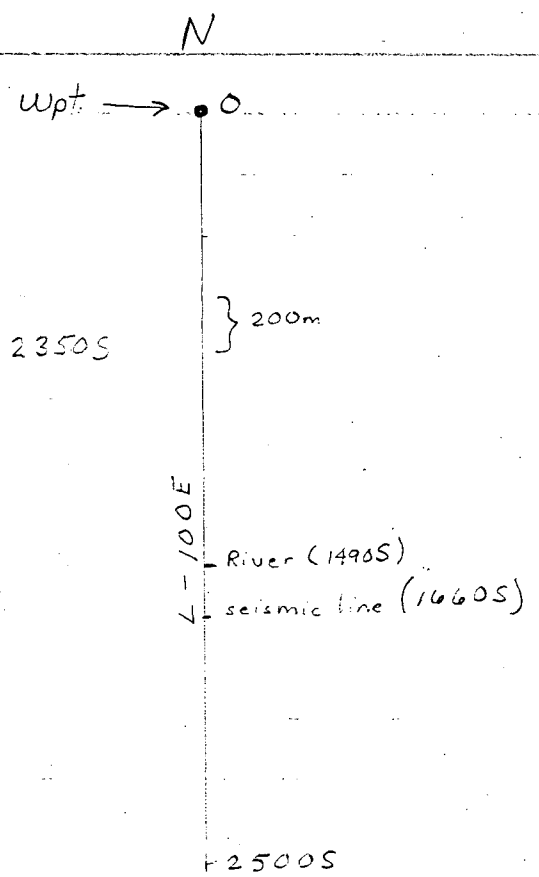
DATE: March 3/98 Instrument: Omni IV , Omn
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED

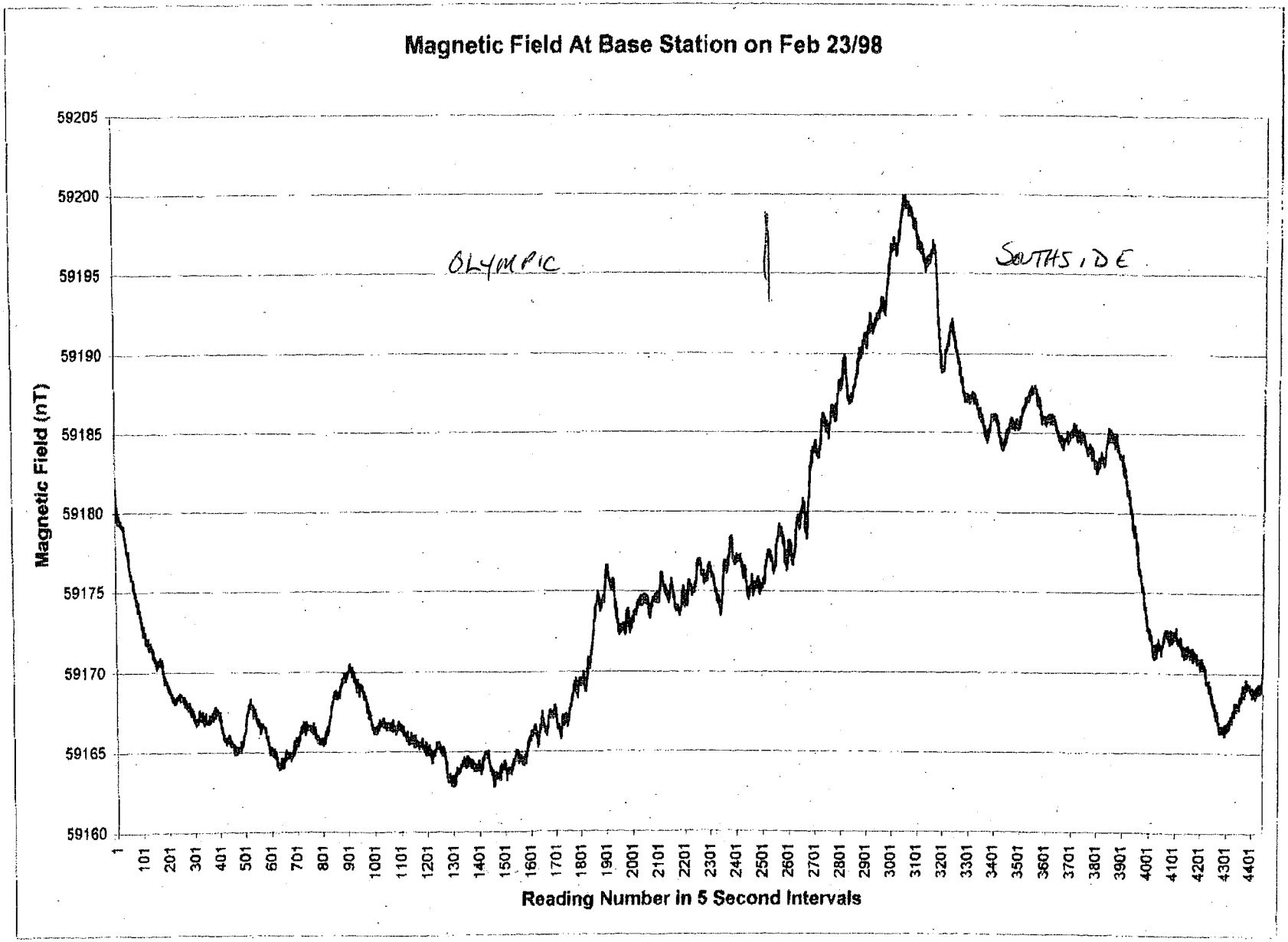
Feb. 23/98

Olympic:

wpt: 56° 28' 12.8" N = 28.21' } L 100E at 0
113° 16' 25.6" W = 16.43'

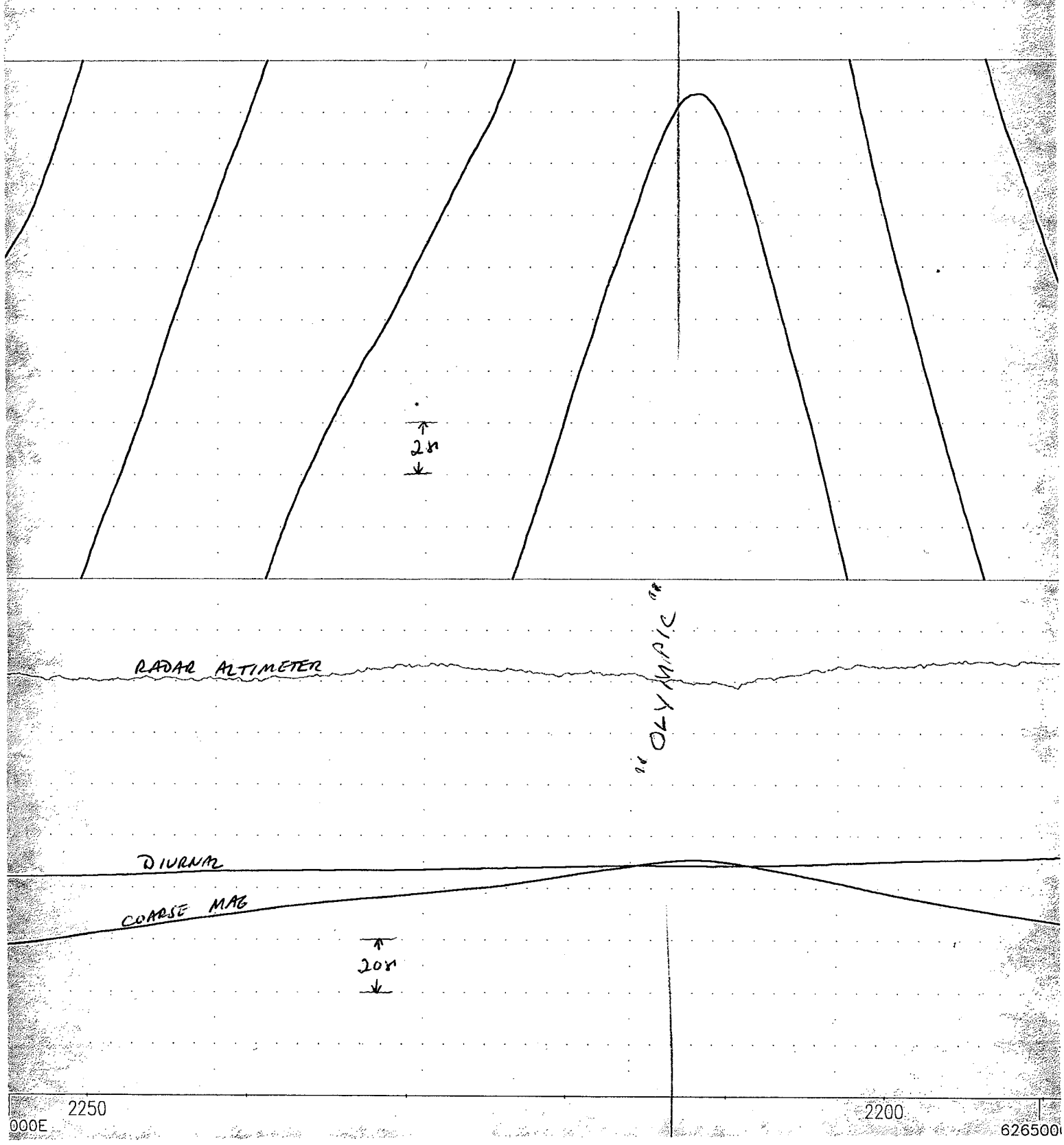


- marsh from river to 2350S


Magnetic Field At Base Station on Feb 23/98
Magnetic Field (nT)
59205
59200
59195
59190
59185
59180
59175
59170
59165
59160
OLYMPIC
SOUTHSIDE
1
101
201
301
401
501
601
701
801
901
1001
1101
1201
1301
1401
1501
1601
1701
1801
1901
2001
2101
2201
2301
2401
2501
2601
2701
2801
2901
3001
3101
3201
3301
3401
3501
3601
3701
3801
3901
4001
4101
4201
4301
4401
Reading Number in 5 Second Intervals

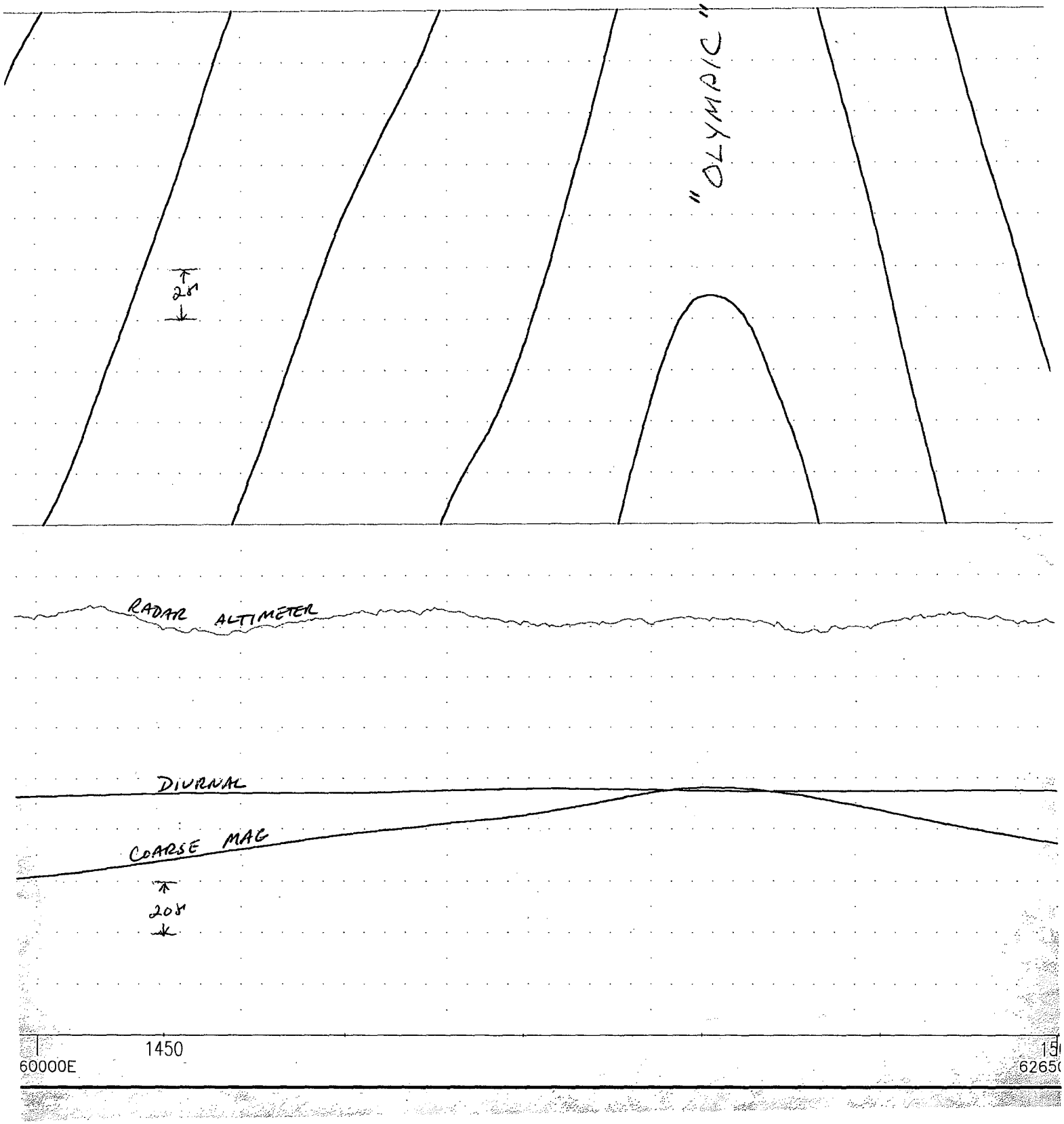
OTTER LAKE AIRMAG
"OLYMPIC" ANOMALY

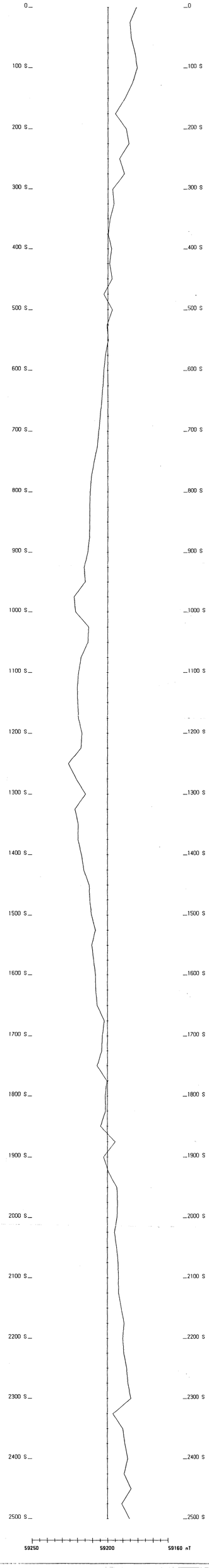
Line 720

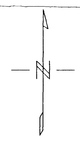


OTTER LAKE AIRMAG
"OLYMPIC" ANOMALY

Line 710







Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field:———

PROFILE CENTRES
Magnetic Field : 59200 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Olympic Target
Slave Lake, Alberta

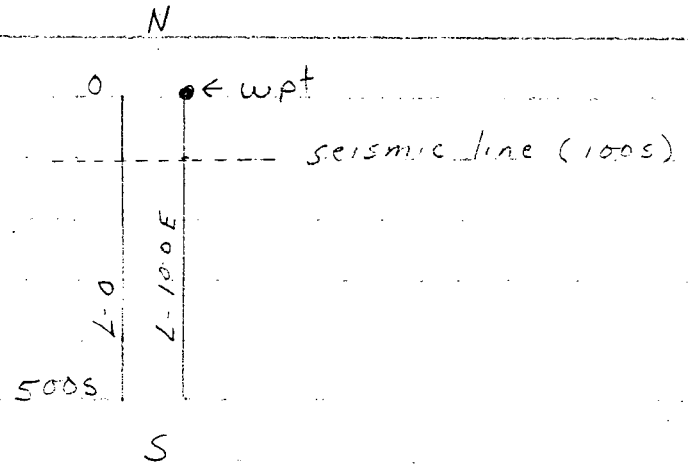
DATE: Feb 23/98 Instrument: Omni IV . Omni
Base Station Setting: Reading at 5 second intervals
line Azimuth = 0 Plotted by W.H.

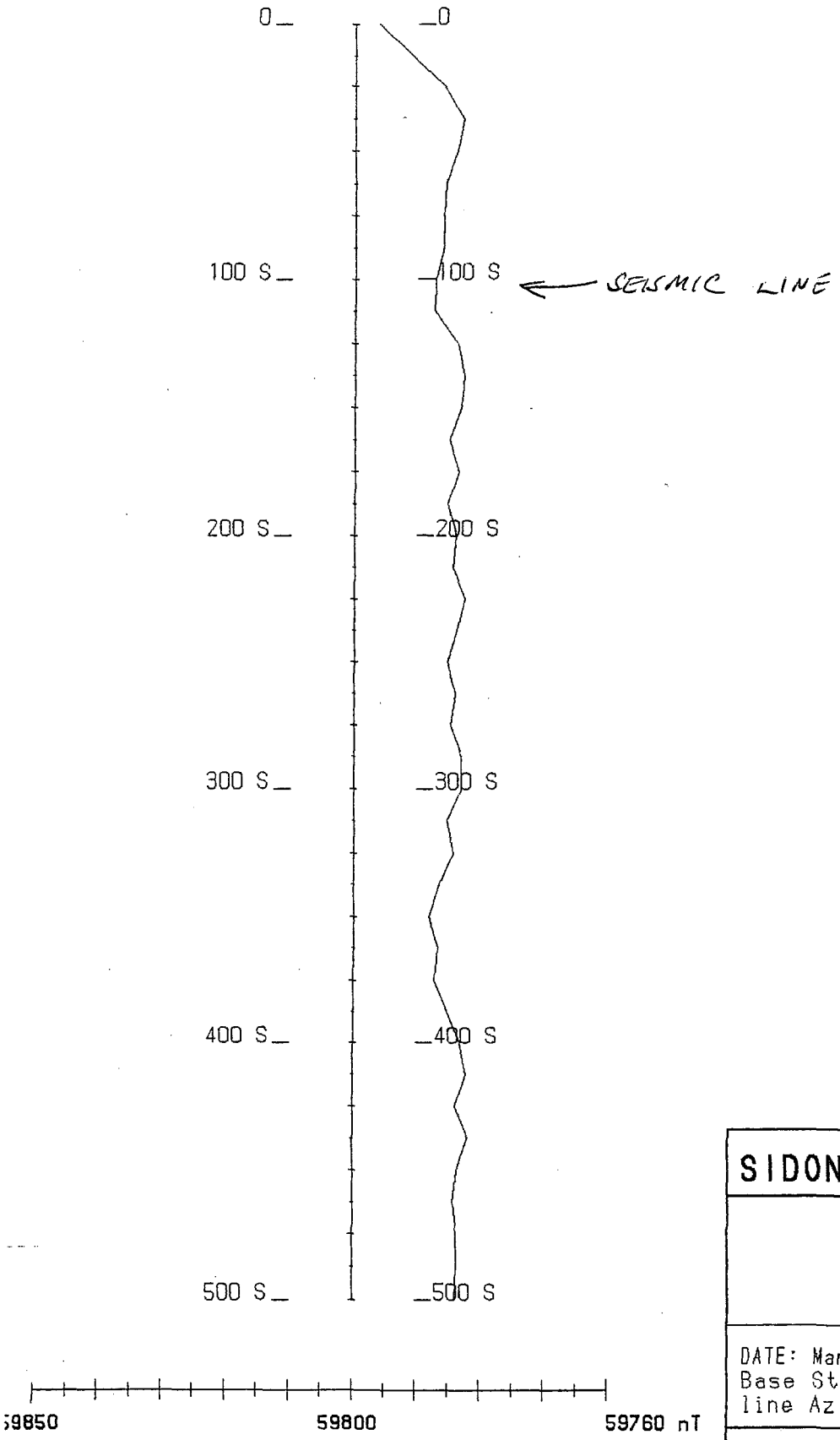
EASTERN GEOPHYSICS LIMITED

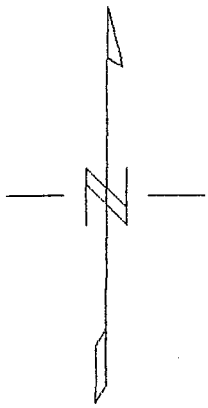
NECON 3/2/98

One Shot:

wpt: 56° 34' 18.6" N (= 34.31') } L-100 E at 0
113° 26' 20.8" W (= 26.35')







Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59800 nTesl

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/c

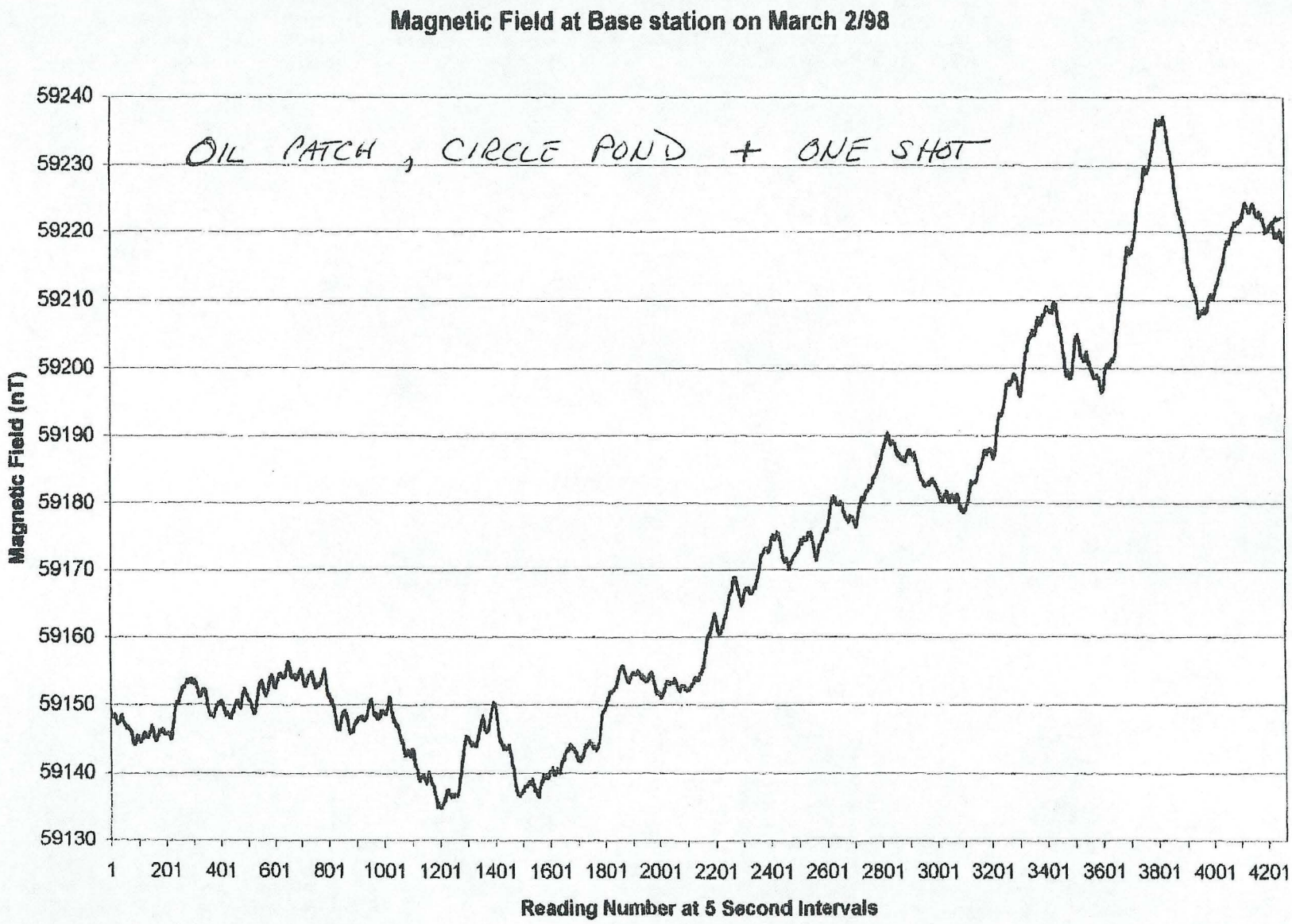
SIDON INTERNATIONAL RESOURCES

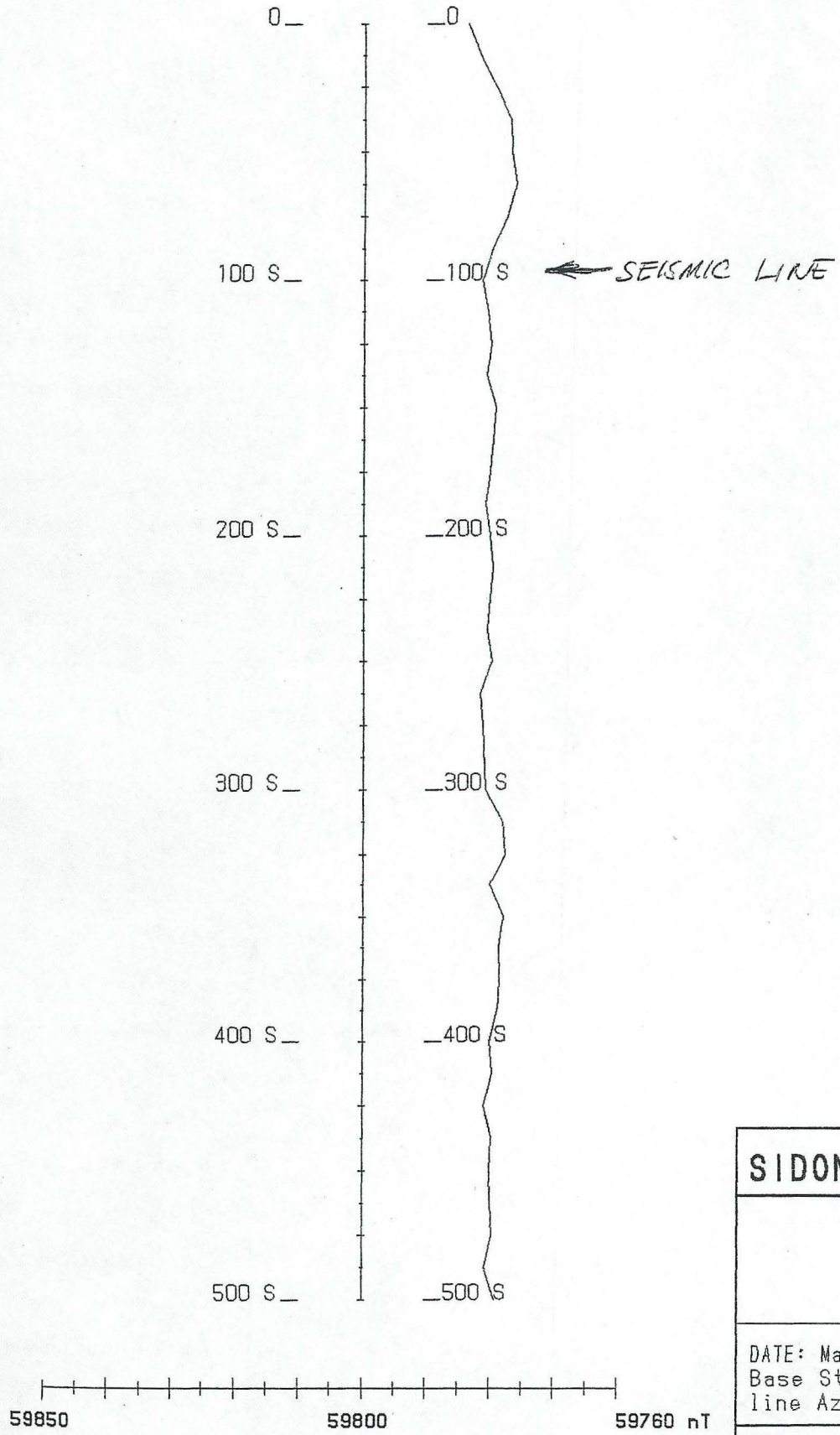
MAGNETIC SURVEY -- Strip Profi

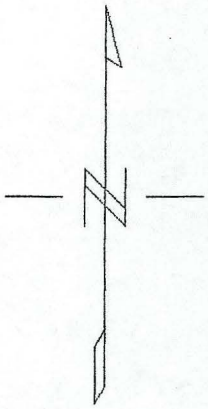
One Shot Target
Slave lake, Alberta

DATE: March 3/98 Instrument: O
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plott

EASTERN GEOPHYSICS LIMITE


Magnetic Field at Base station on March 2/98
OIL PATCH, CIRCLE POND + ONE SHOT
Magnetic Field (nT)
59240
59230
59220
59210
59200
59190
59180
59170
59160
59150
59140
59130
1
201
401
601
801
1001
1201
1401
1601
1801
2001
2201
2401
2601
2801
3001
3201
3401
3601
3801
4001
4201
Reading Number at 5 Second Intervals





Line 0 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59800 nTes

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/

SIDON INTERNATIONAL RESOURCE

MAGNETIC SURVEY -- Strip Prof

One Shot Target
Slave lake, Alberta

DATE: March 3/98 Instrument:
Base Station Setting: Reading at 5 secor
line Azimuth = 0 Plo

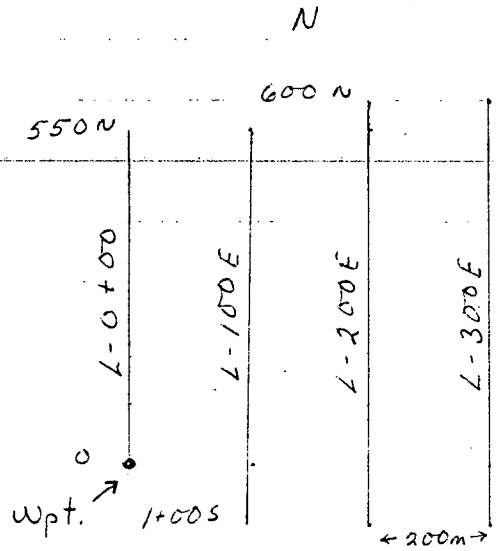
EASTERN GEOPHYSICS LIMIT

- Outeast:

= 34.15'

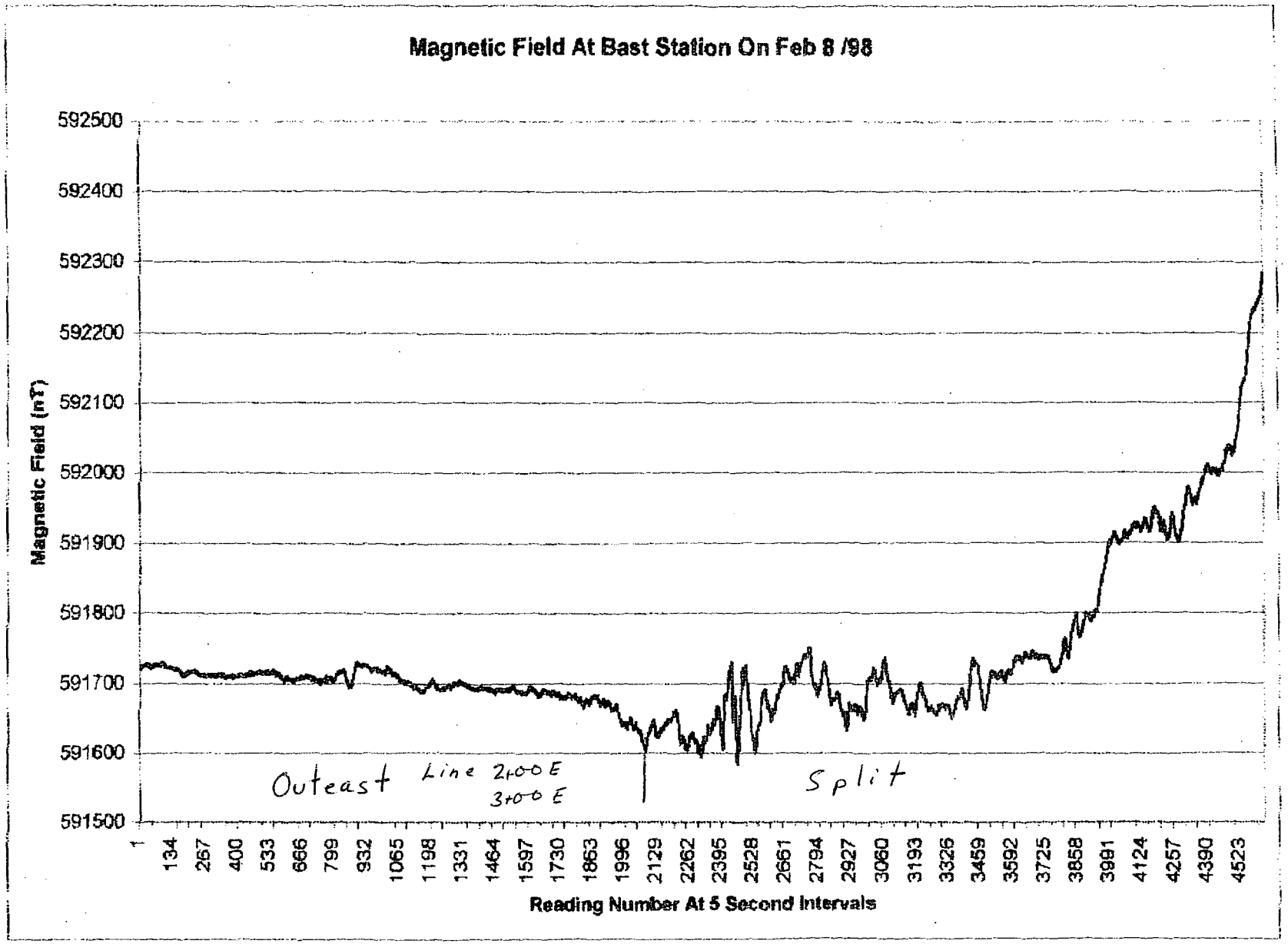
wpt: 56° 34' 09.1" N } L-0+00 at 0+00
113° 14' 49.5" W

= 14.83'

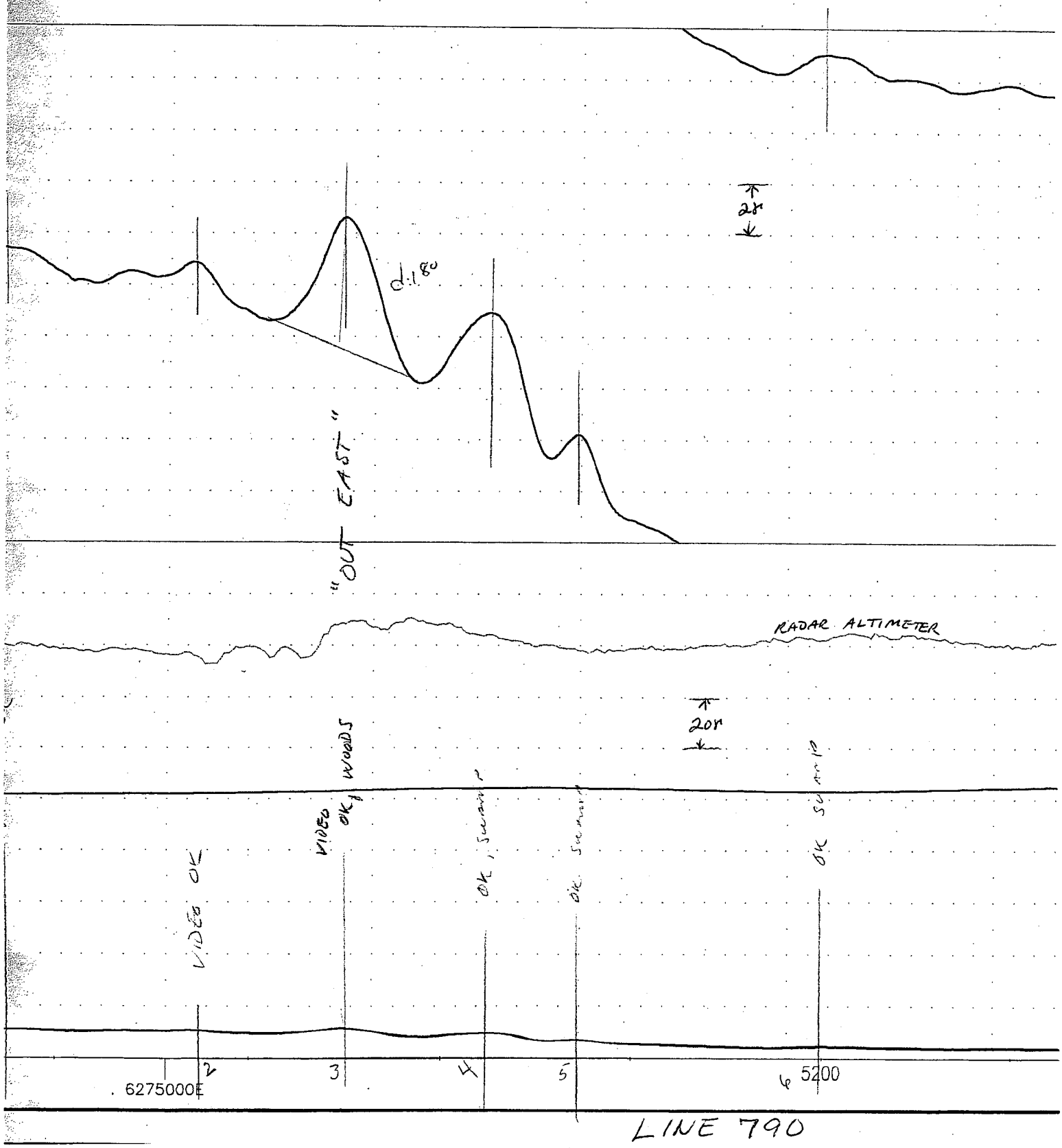


→ L-0+00 at 0+50: Line begins on a beaver pond and ends at river.

NOTE: 200 meter spacing, despite line labelling nomenclature


Magnetic Field At Bast Station On Feb 8 /98
Magnetic Field (nT)
592500
592400
592300
592200
592100
592000
591900
591800
591700
591600
591500
1
134
267
400
533
666
799
932
1065
1198
1331
1464
1597
1730
1863
1996
2129
2262
2395
2528
2661
2794
2927
3060
3193
3326
3459
3592
3725
3858
3991
4124
4257
4390
4523
Reading Number At 5 Second Intervals
Outeast Line 2+00 E
3+00 E
Split

OTTER LAKE AIRMAG
"OUT EAST" ANOMALY

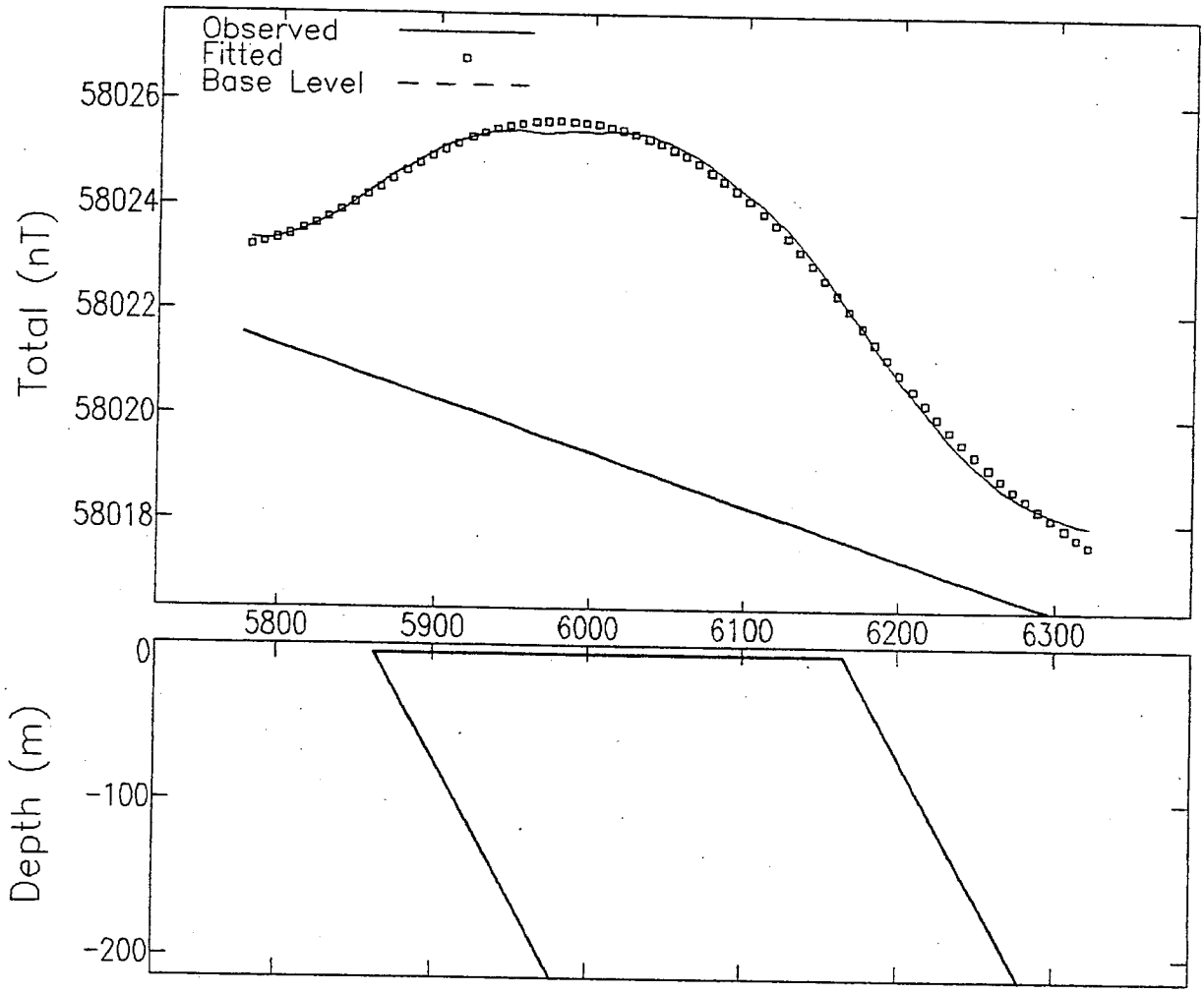


LINE 790

NB: = "OUT EAST" ANOMALY

Tabular 1 Model - Line 840

Fid Range = 220 - 230, Anomaly 1N1



MODEL PARAMETERS:

Model Type		Tabular
Depth	L	5.77 m
Half Width	F	151 m
Dip	F	61 deg
Susceptibility	F	.0000328 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	6013.693 m
Cross Position	X	731491.8 m
Base Level	F	58019.16 nT
Base Slope	X	-.01 nT/m
Base Curvature	X	0 nT/m2

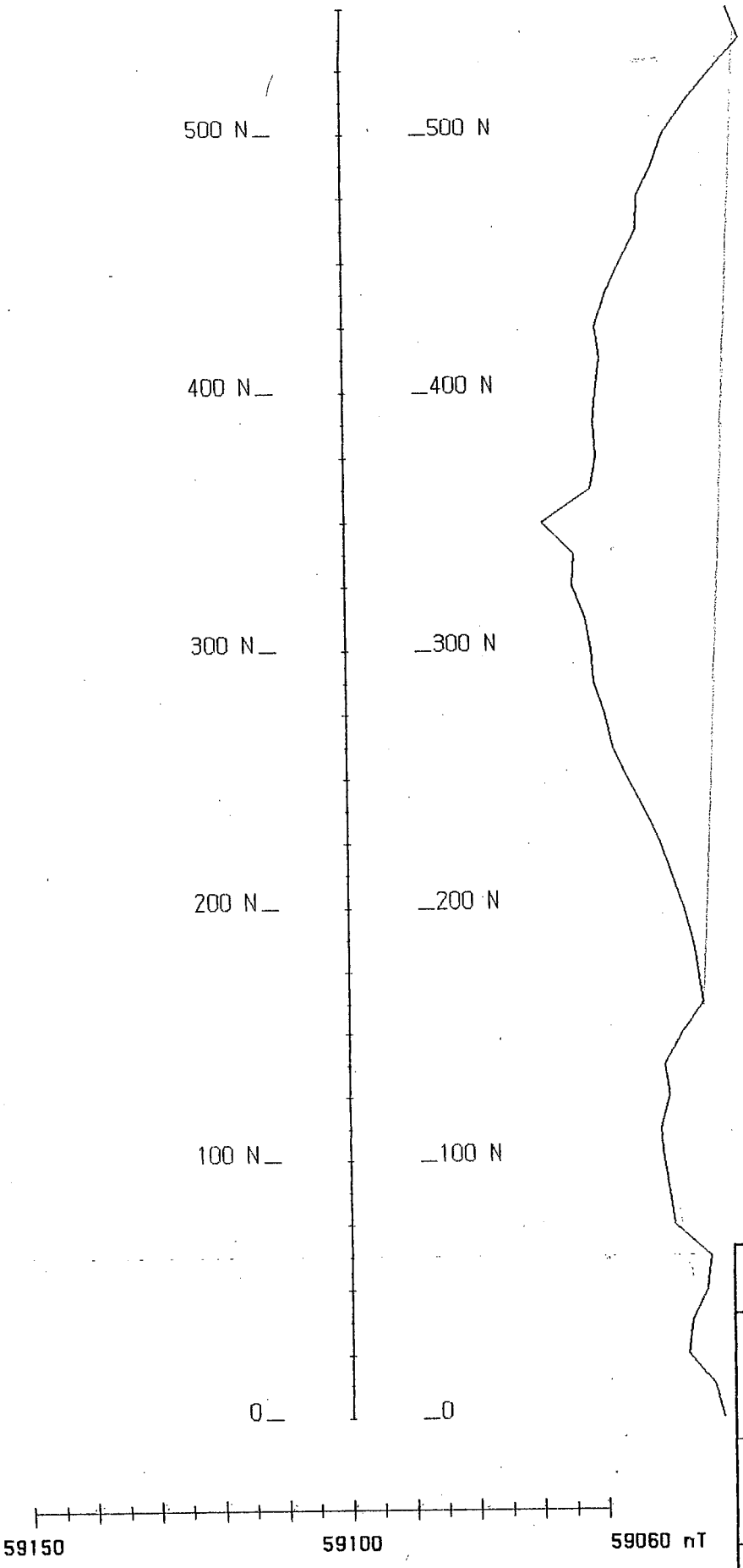
(F-fitted, X-fixed, L-limit)

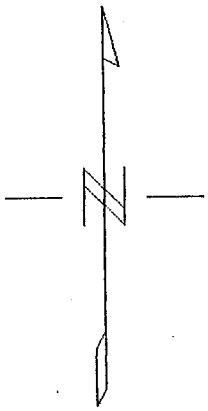
GEOMAGNETIC FIELD:

Field Strength	58000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-3 deg
Main Direction	0 deg
Main Offset	6270000 m
Cross Direction	90 deg
Cross Offset	





Line 0

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTes

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/

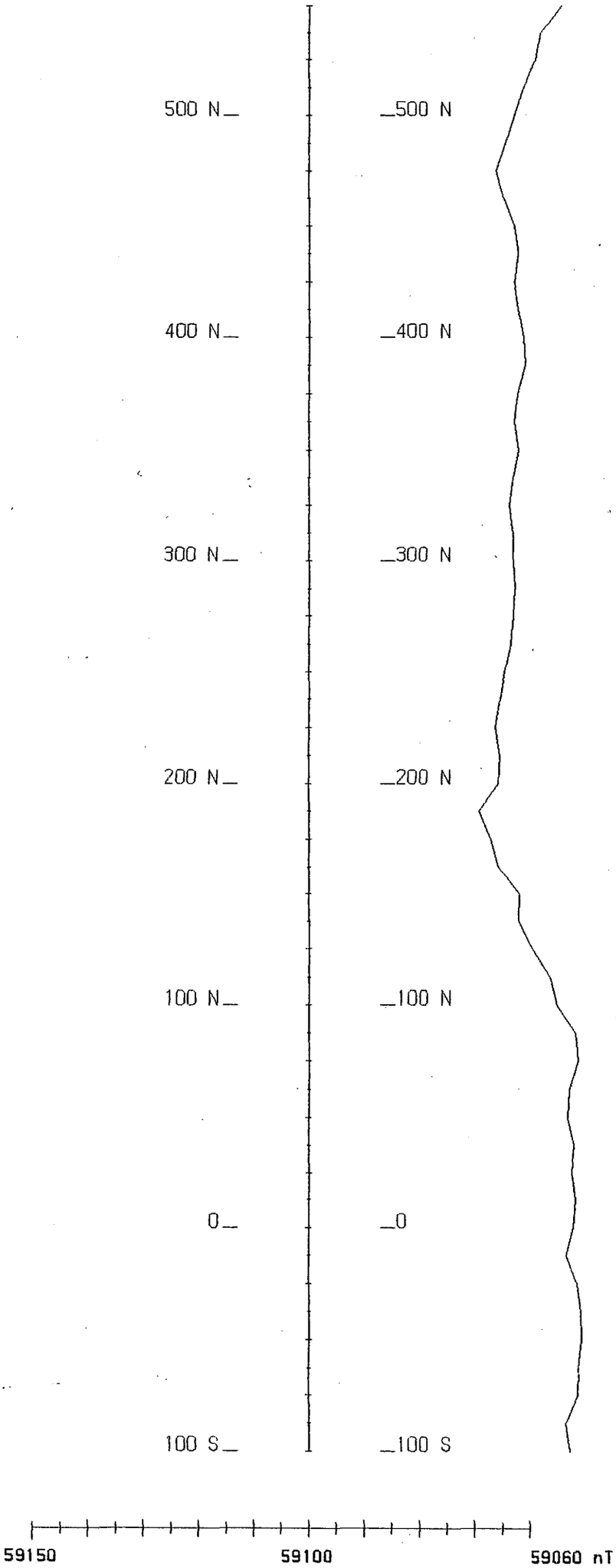
SIDON INTERNATIONAL RESOURCI

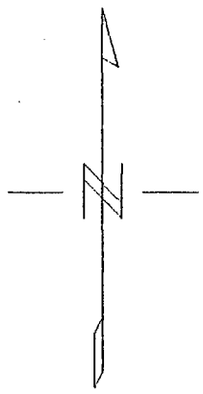
MAGNETIC SURVEY -- Strip Prof

Outeast Target
Slave lake, Alberta

DATE: 02/98 Instrument: Omni
Base Station Setting: Reading at 5 seco
line Azimuth = 0 Pl

EASTERN GEOPHYSICS LIMIT





Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTesl

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/c

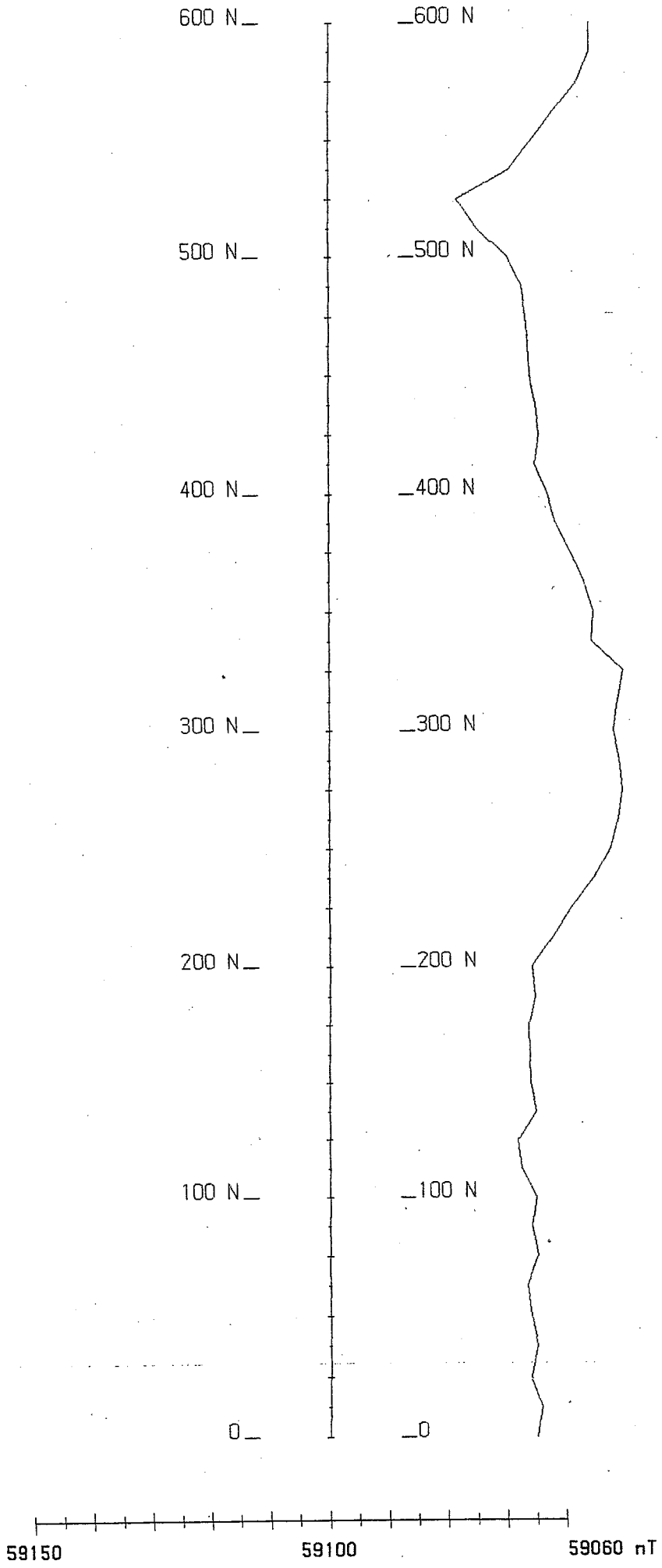
SIDON INTERNATIONAL RESOURCES

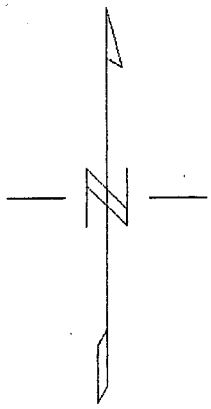
MAGNETIC SURVEY -- Strip Profi

Outeast Target
Slave lake, Alberta

DATE: 02/98 Instrument: Omni I
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plott

EASTERN GEOPHYSICS LIMITE





Line 200 E

Scale 1:2500

50 0 50

(metres)

LEGEND

Magnetic Field:

PROFILE CENTRES
Magnetic Field : 59100 nT

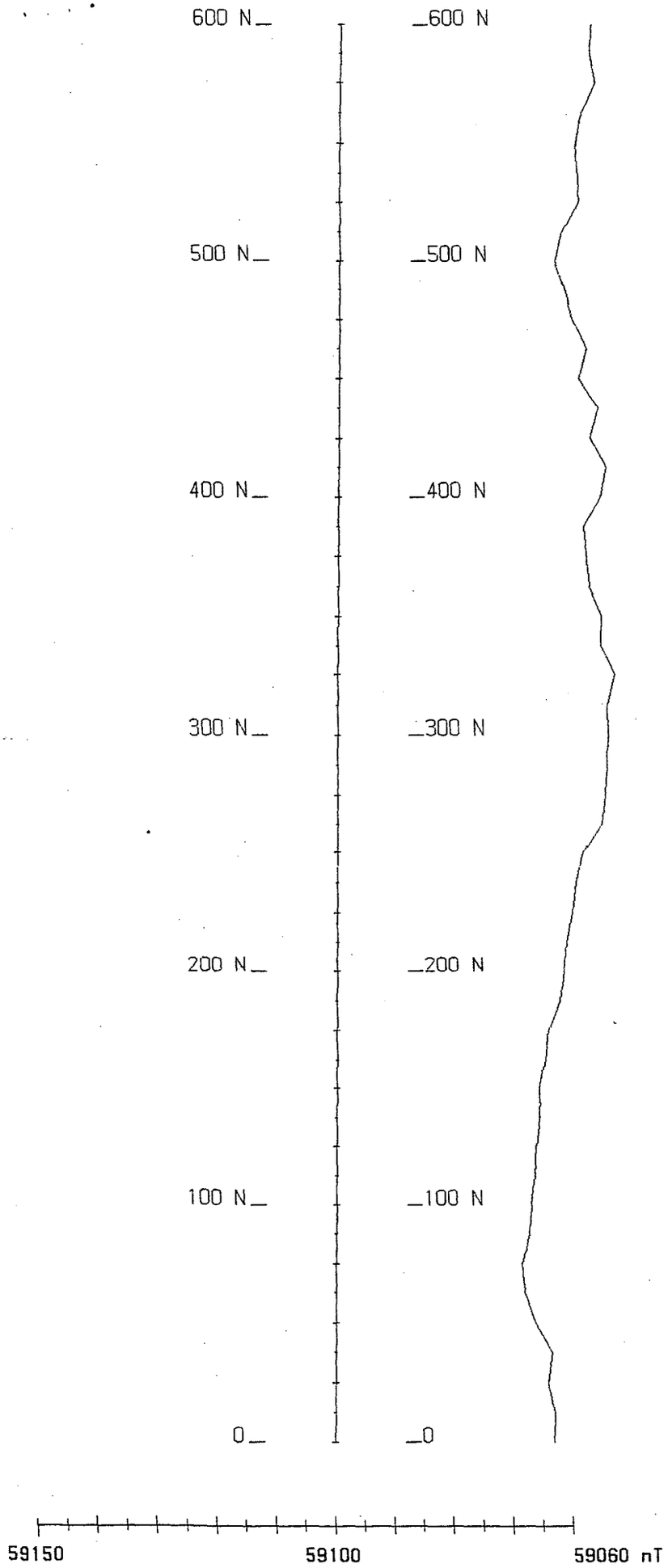
PROFILE VERTICAL SCAL
Magnetic Field: 10 nTesl

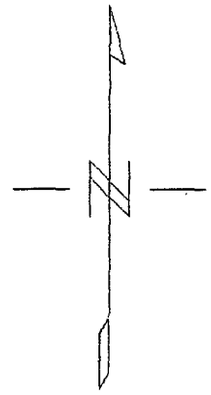
SIDON INTERNATIONAL RESOUI

MAGNETIC SURVEY -- Strip Pi

Out East Target
Feb. 8 /98 Slave lake, Alberta

DATE: 01/98 Instrument: 0
Base Station Setting: Reading at 5 se
line Azimuth = 0





Line 300 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

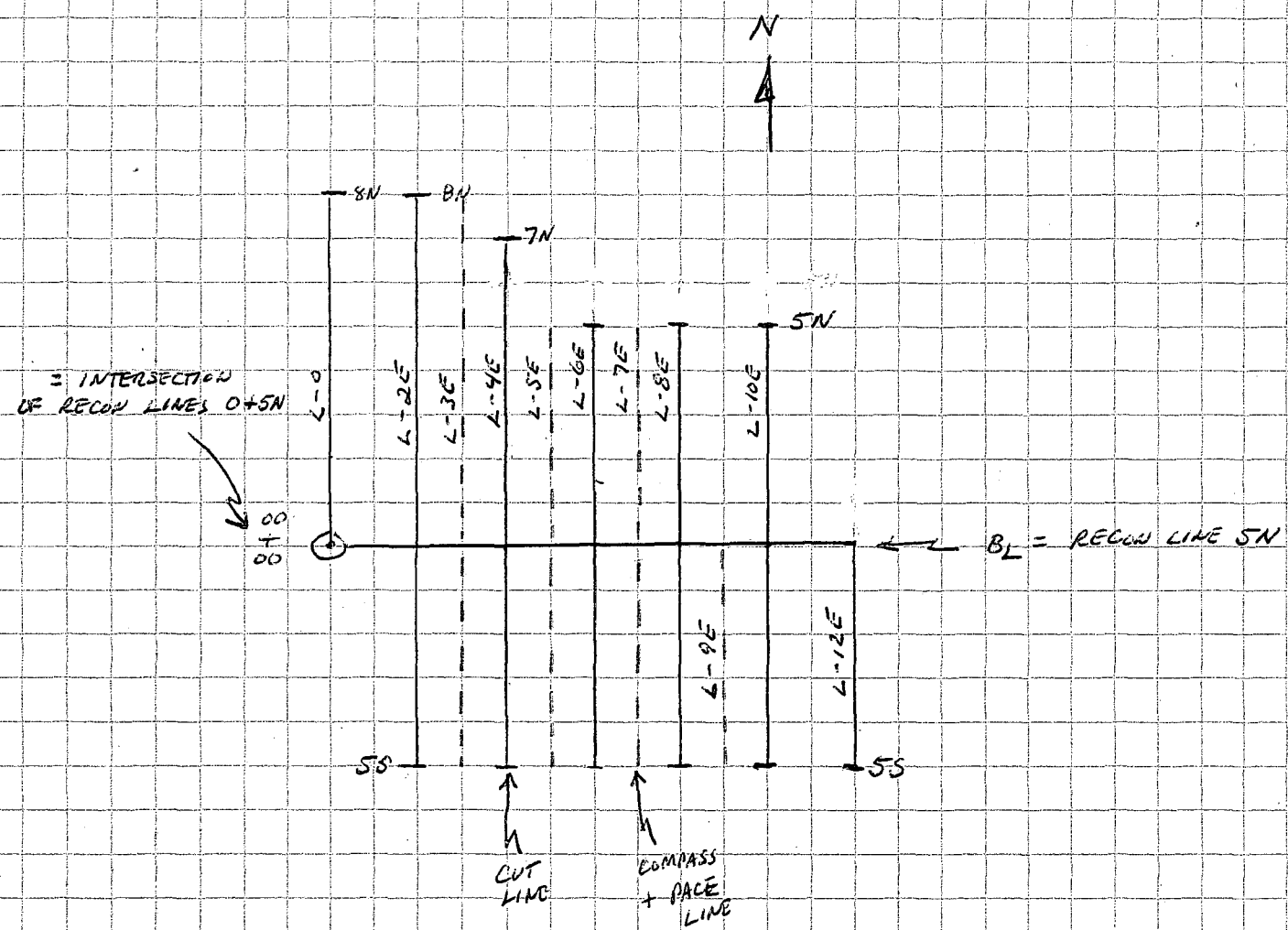
Out East Target
Feb.8/98 Slave lake, Alberta

DATE: 01/98 Instrument: Omni IV', Omni Plu
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED

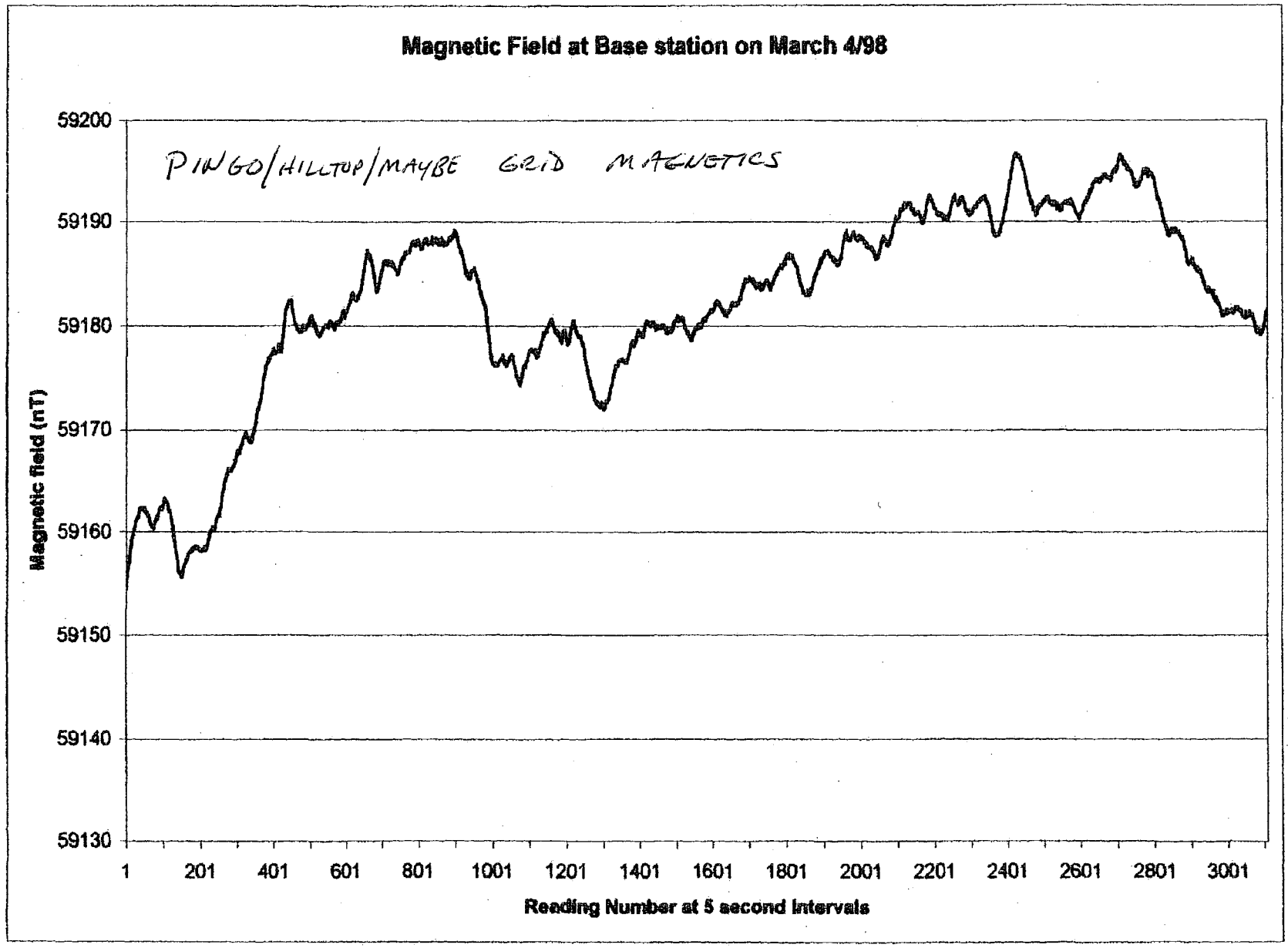
APPENDIX V: "PINGO" et al

~~PLANNED~~ PINGO/HILLTOP/MAYBE GRID AS OF 4 MAR 98

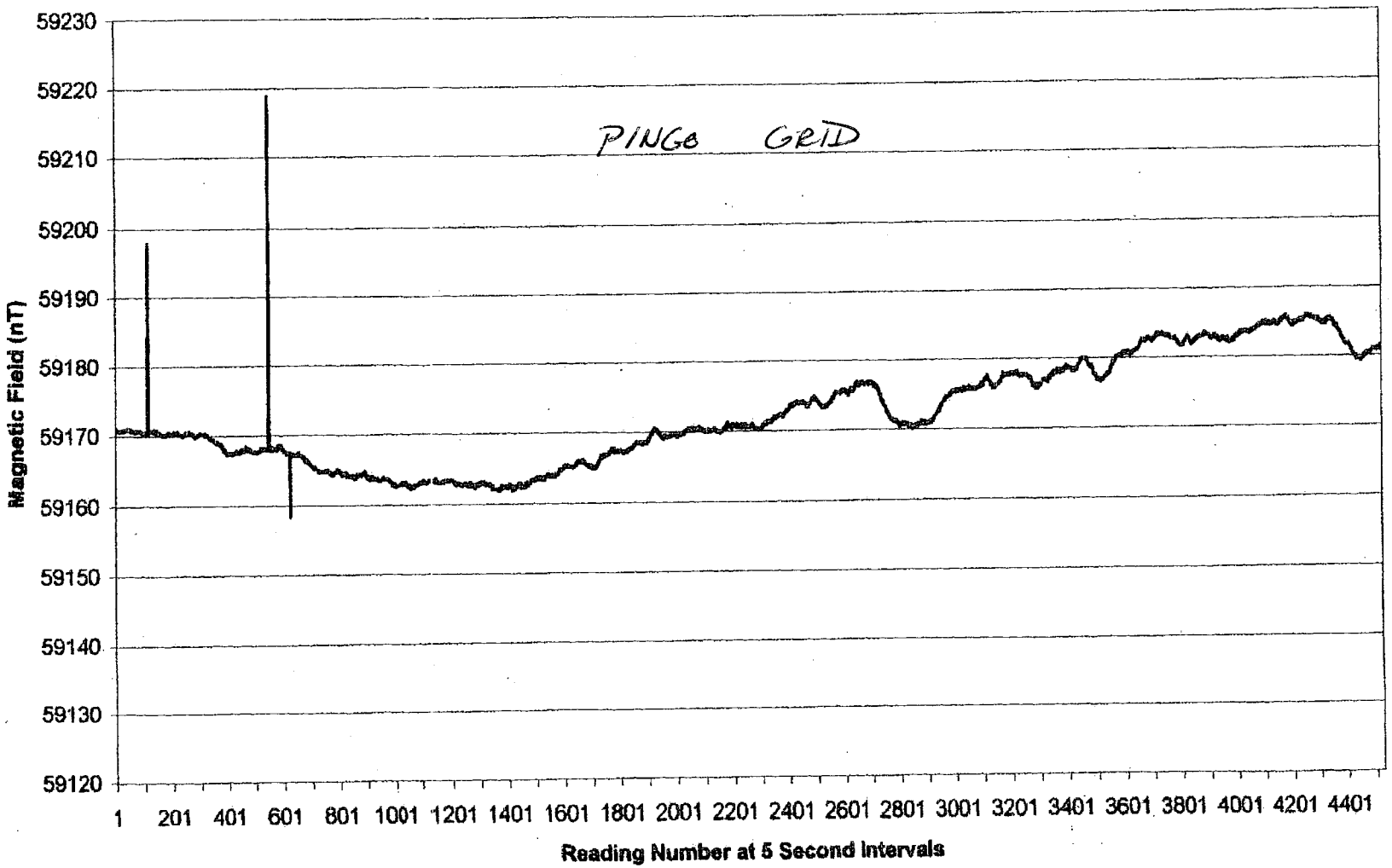


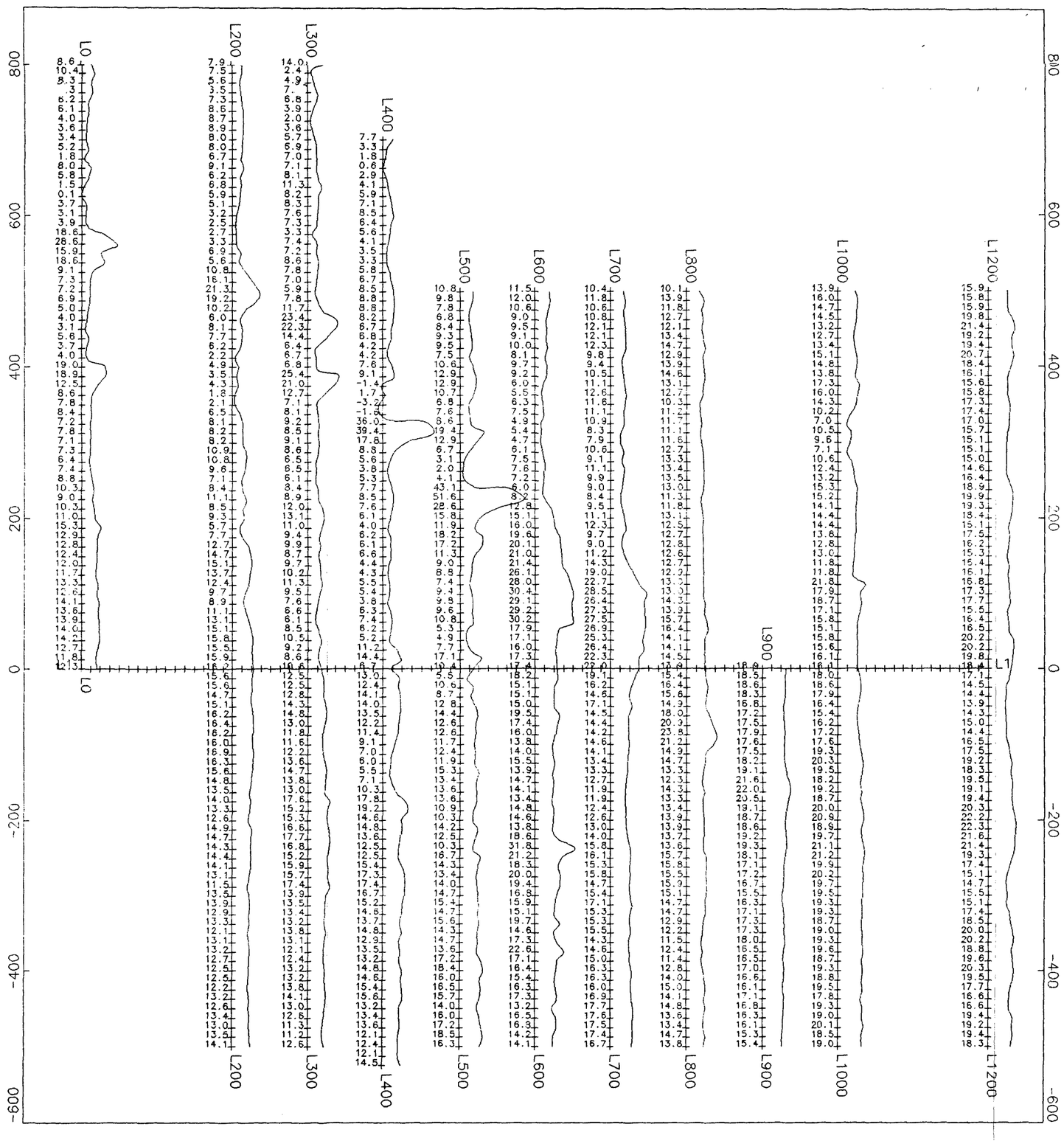
LINE CUTTING: 8.0 KM

MAG. READING: 11.8 KM


Magnetic Field at Base station on March 4/98
PINGO/HILLTOP/MAYBE GRID MAGNETICS
Magnetic field (nT)
59200
59190
59180
59170
59160
59150
59140
59130
1
201
401
601
801
1001
1201
1401
1601
1801
2001
2201
2401
2601
2801
3001
Reading Number at 5 second intervals

Magnetic Field at Base Station on March 3/98





Scale 1:5000

50 0.0 50 100 150 200 250 300 350

(meters)

Legend

Profile Settings:

Base Removed: 59070 nTeslas

Profile Scale: 30 nT/cm

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Field -- Profile Map

Pingo Grid

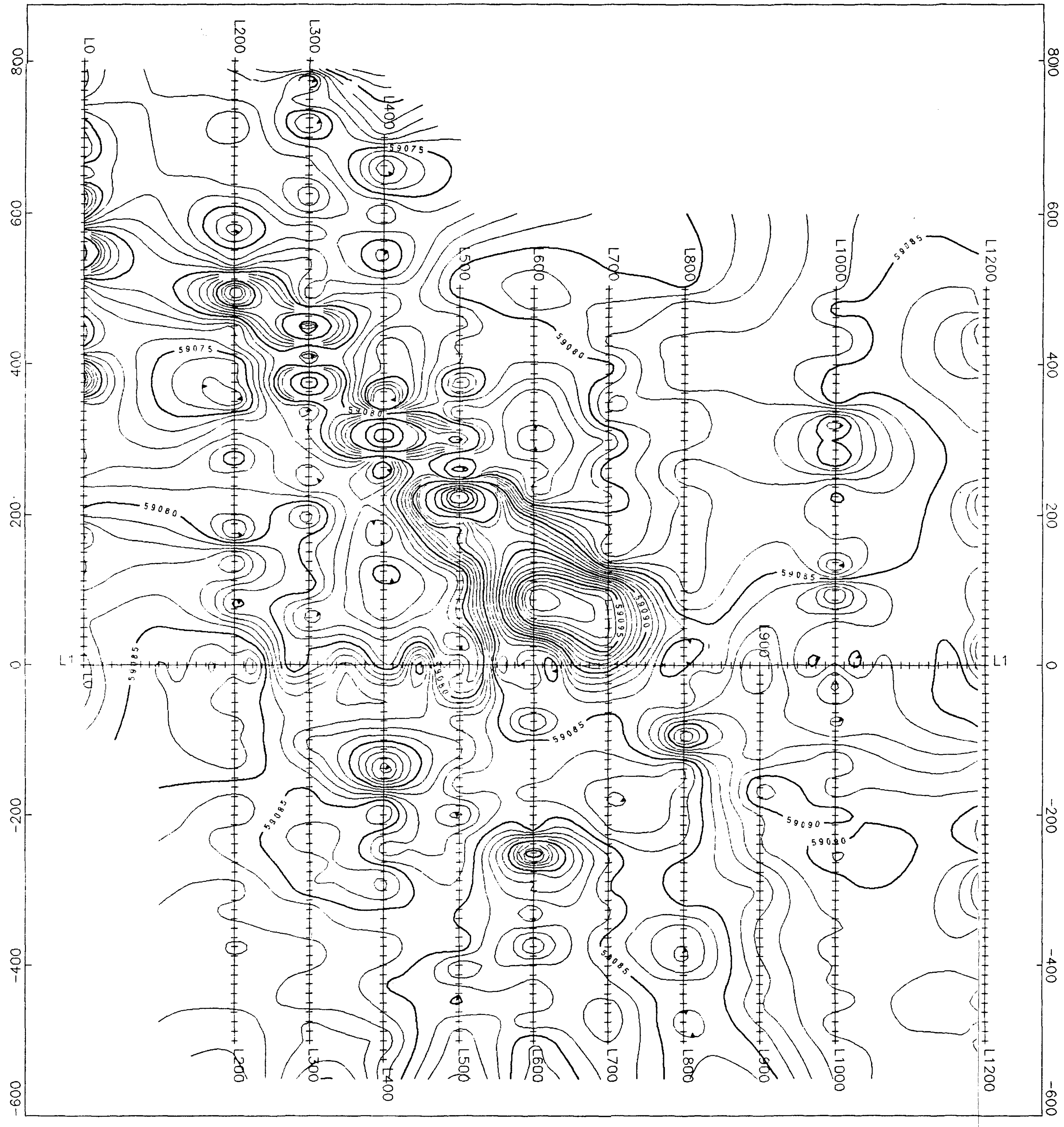
Slave Lake, Alberta

Date: March 3&4/98 Instruments: Omni IV, Omni Plus

Base Station Setting: Reading at 5 Seconds Intervals

Baseline Azimuth: 90° Prepared By W. H.

Eastern Geophysics Limited



Scale 1:5000

50 0.0 50 100 150 200 250 300 350

(meters)

LEGEND

Contour intervals

Minor Interals: Every 1 nTeslas
Major Interals: Every 5 nTeslas

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Field -- Contour Map
Pingo Grid
Slave Lake, Alberta

Date: March 3&4/98 Instruments: Omni IV, Omni Plus
Base Station Setting: Reading at 5 Seconds Intervals
Baseline Azimuth: 90° Prepared By W. H.

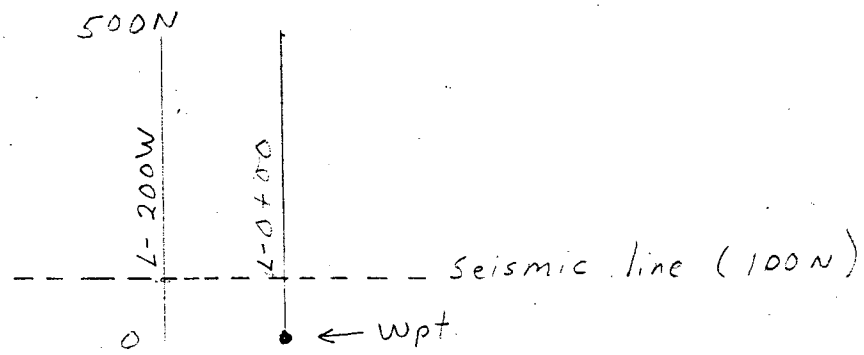
Eastern Geophysics Limited

Feb. 20 / 98

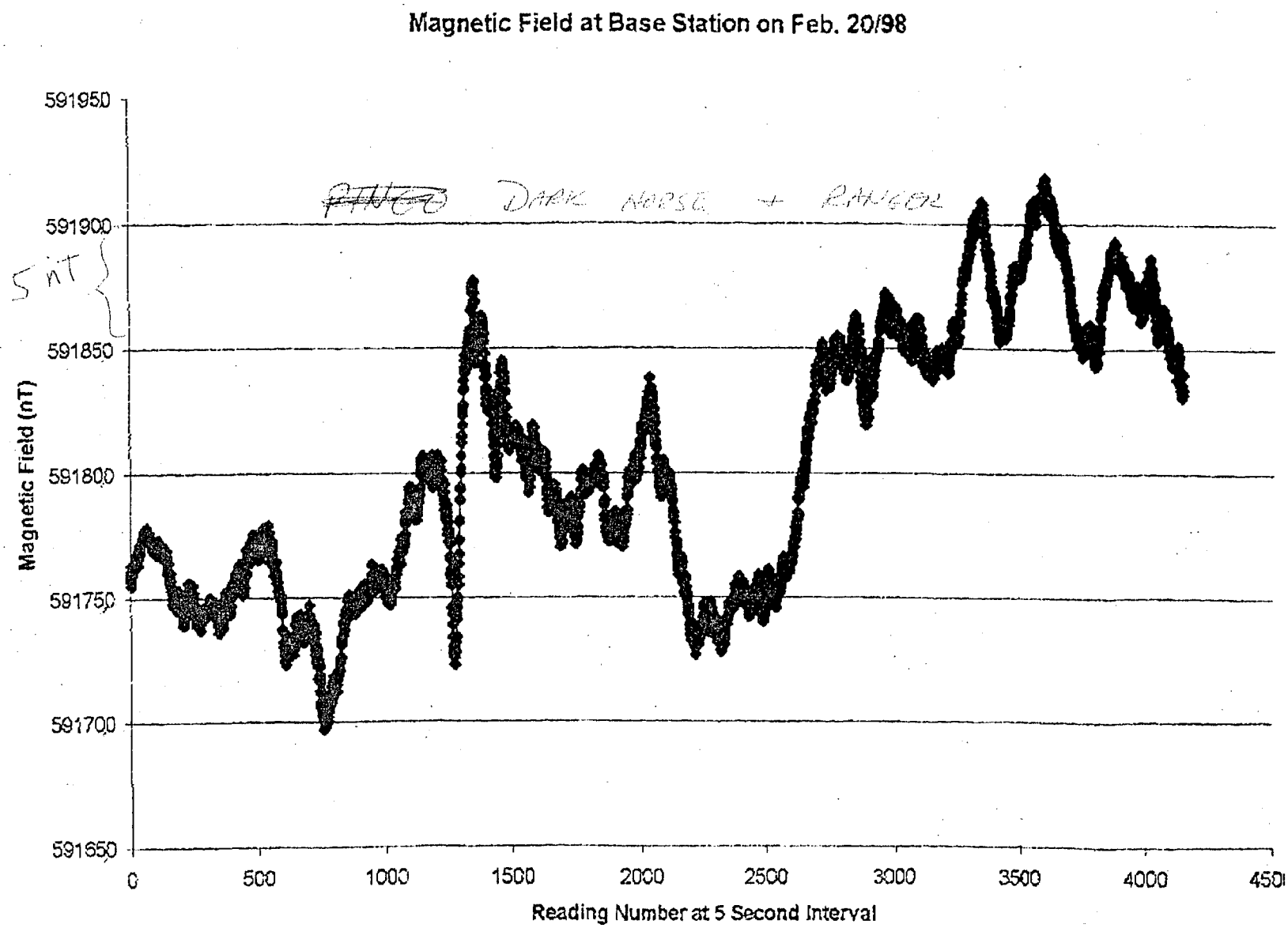
Ranger:

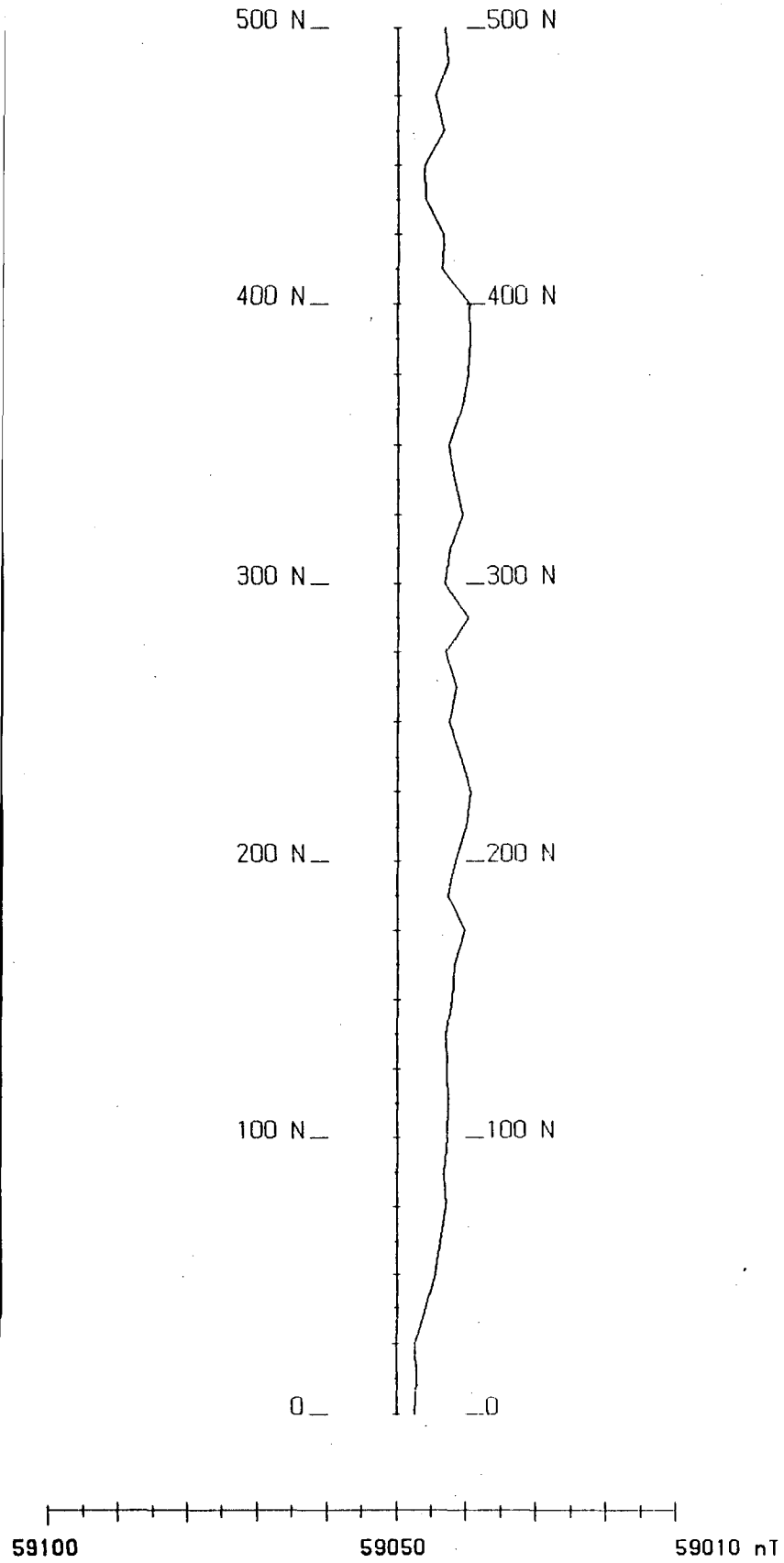
wpt: 56° 33' 40.8" N (= 33.68') } L-0+00 at 0+00
113° 17' 20.7" W (= 17.35')

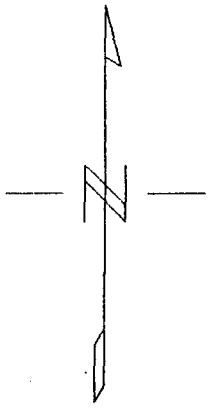
N



S


Magnetic Field at Base Station on Feb. 20/98
Magnetic Field (nT)
591950
591900
591850
591800
591750
591700
591650
0
500
1000
1500
2000
2500
3000
3500
4000
4500
Reading Number at 5 Second Interval
5 nT
DARK NOISE + RANGE





Line 0

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

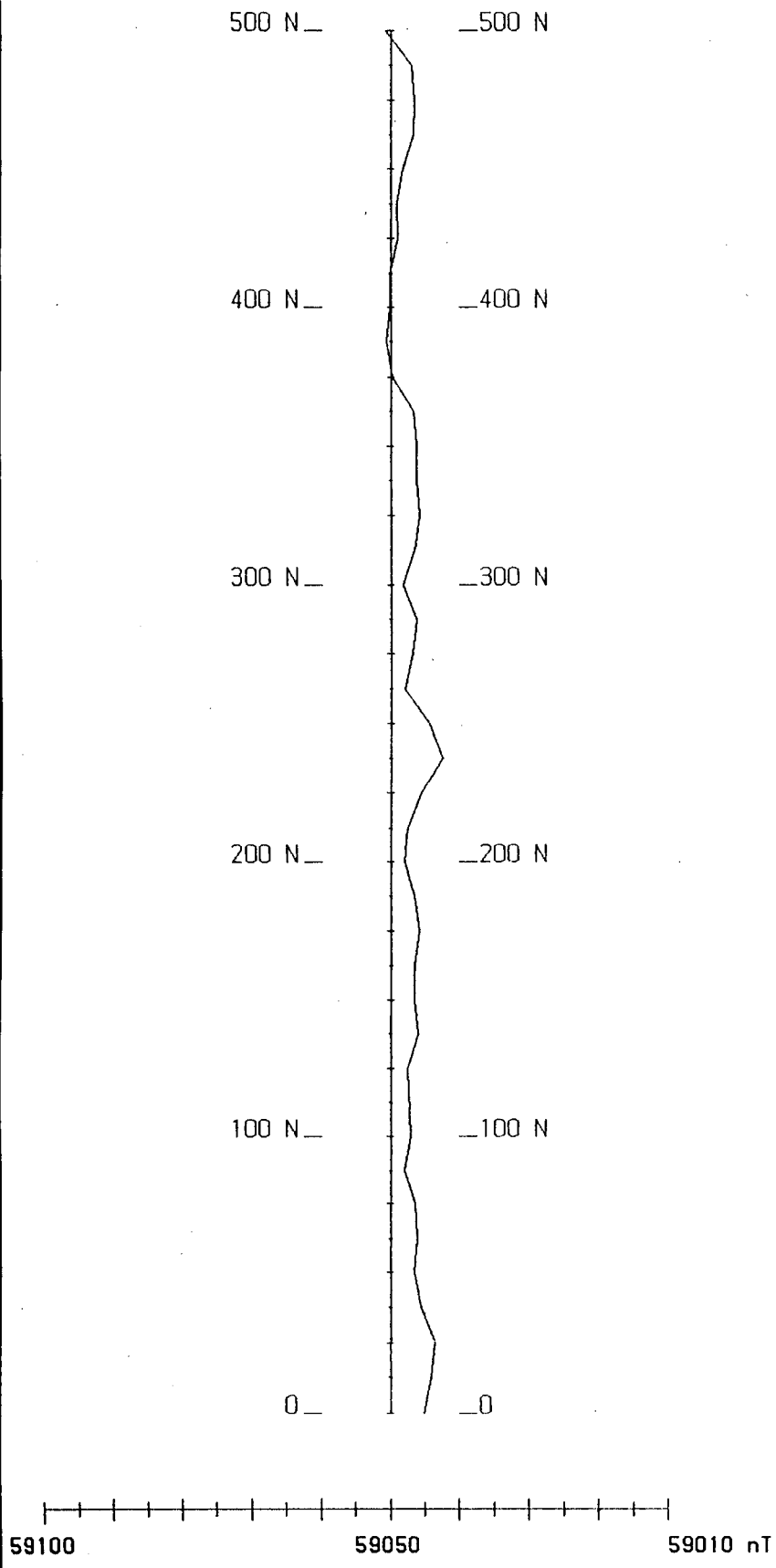
SIDON INTERNATIONAL RESOURCES

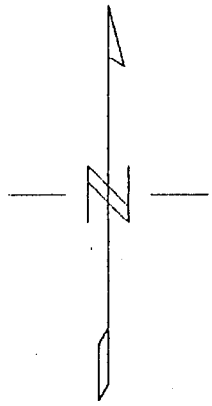
MAGNETIC SURVEY -- Strip Profile

Ranger Target
Slave Lake, Alberta

DATE: 02/20/98 Instrument: Omni IV
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plotte

EASTERN GEOPHYSICS LIMITED





Line 200 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES

MAGNETIC SURVEY -- Strip Profile

Ranger Target
Slave Lake, Alberta

DATE: 02/20/98 Instrument: Omni IV
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plotte

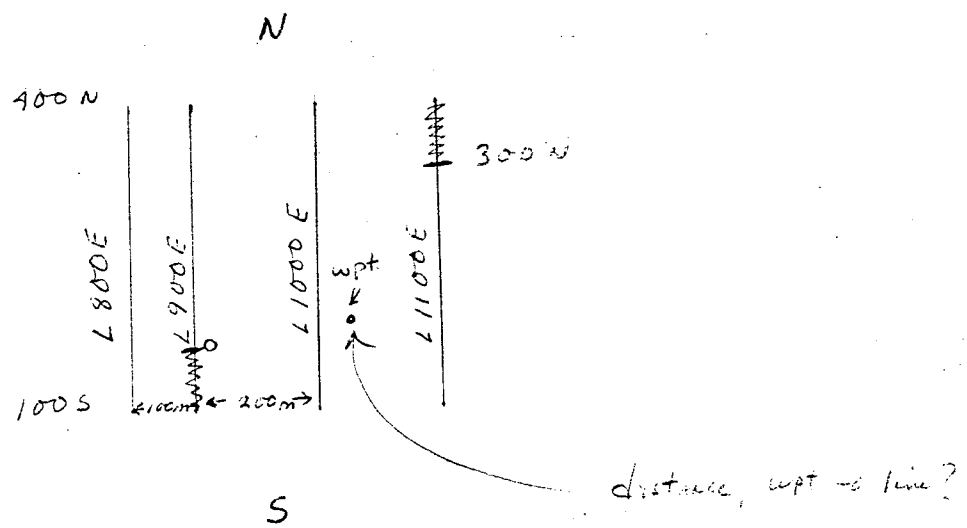
EASTERN GEOPHYSICS LIMITED

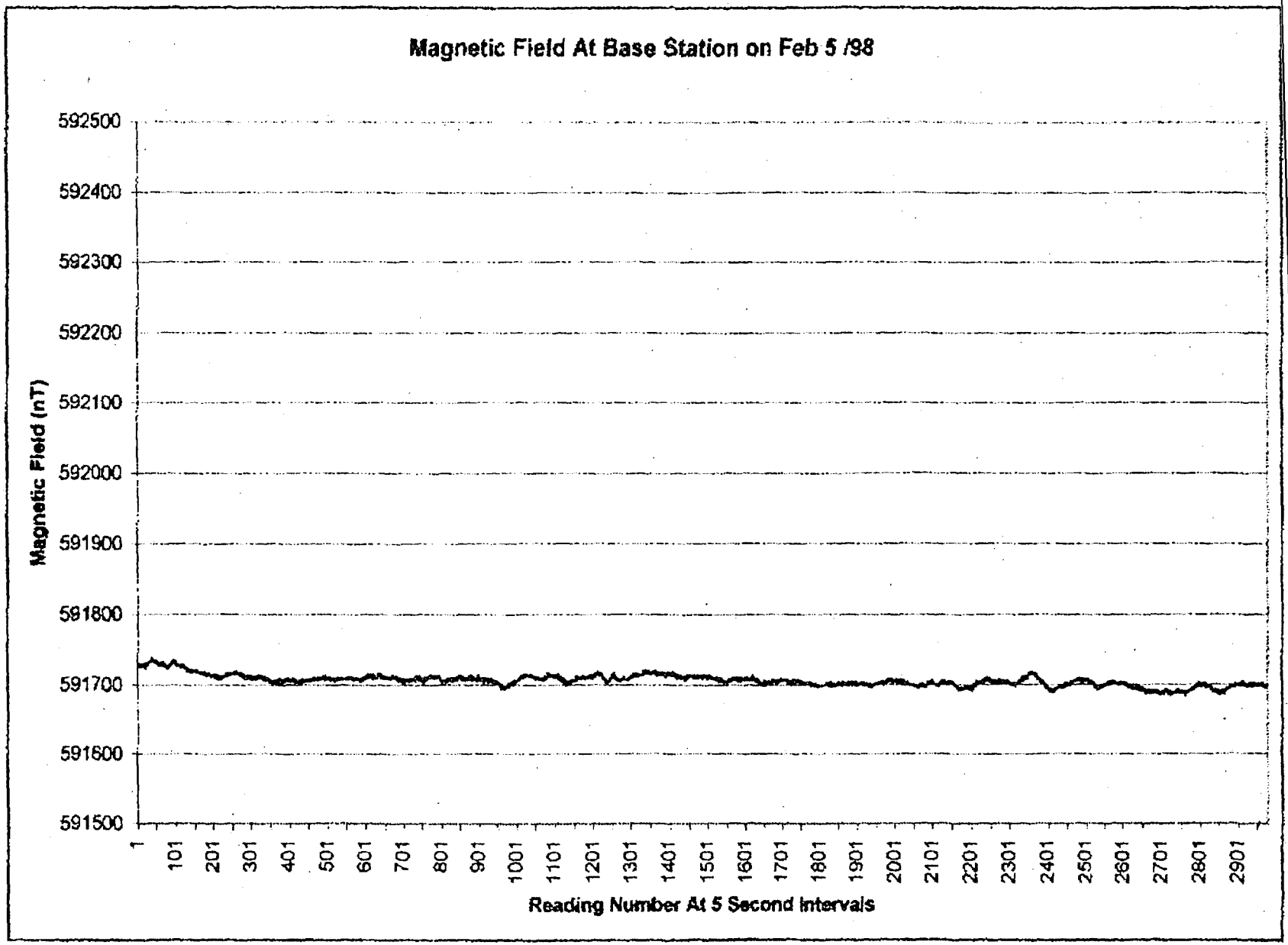
- Sidewinder:

= 34.59'

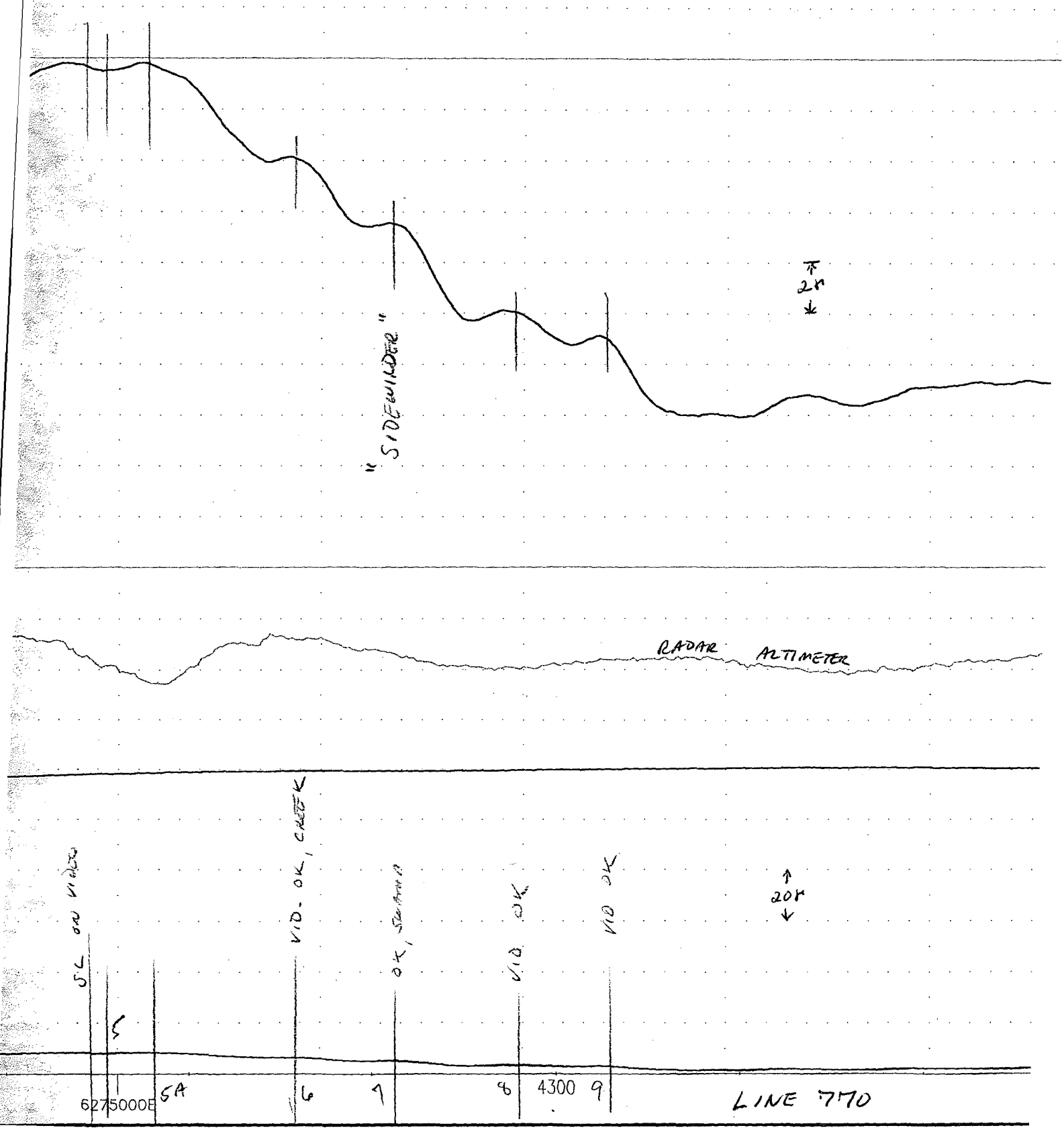
wpt: 56° 34' 35.3" N } app. locatio
113° 14' 47.2" W

= 14.79'

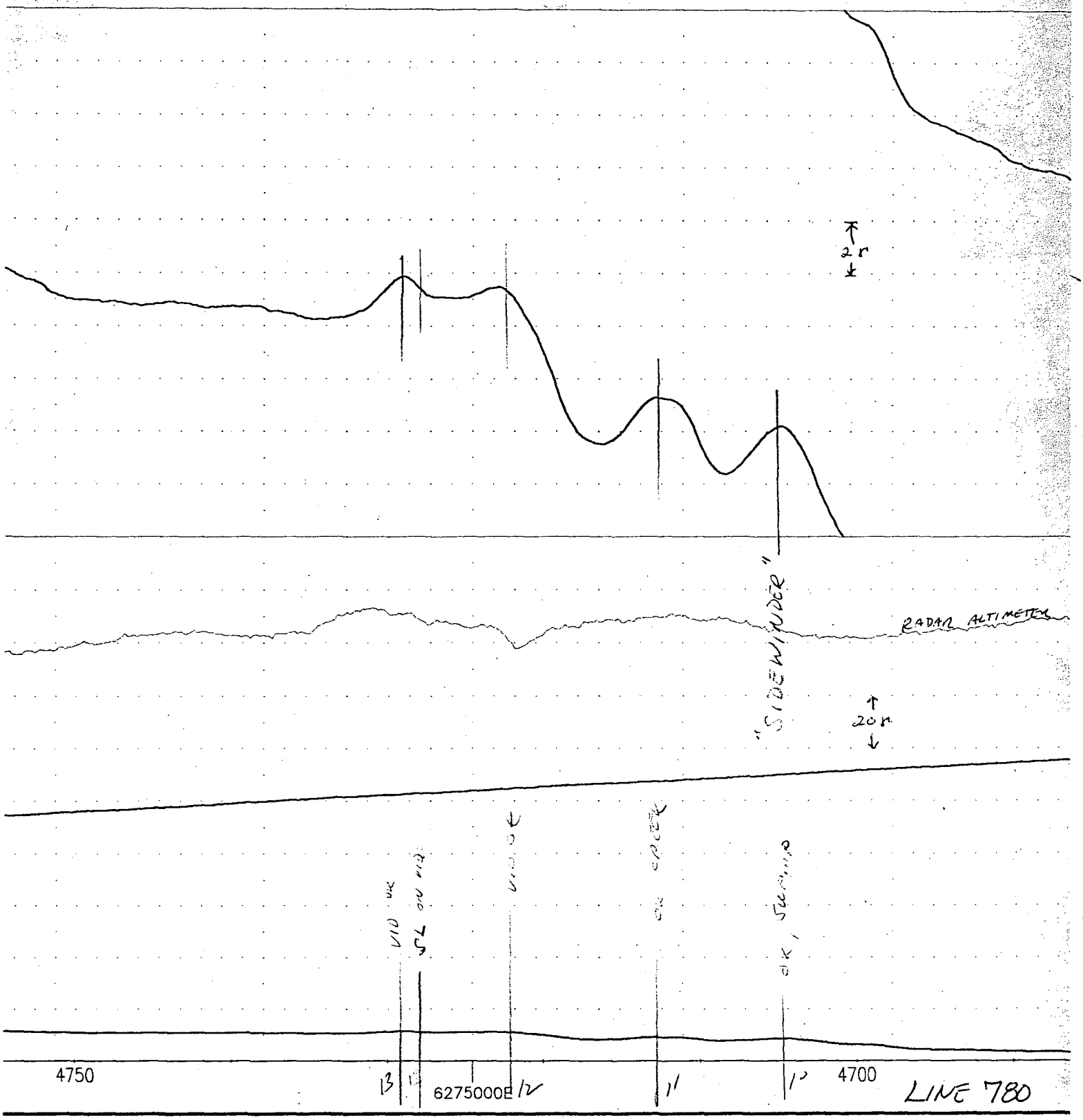


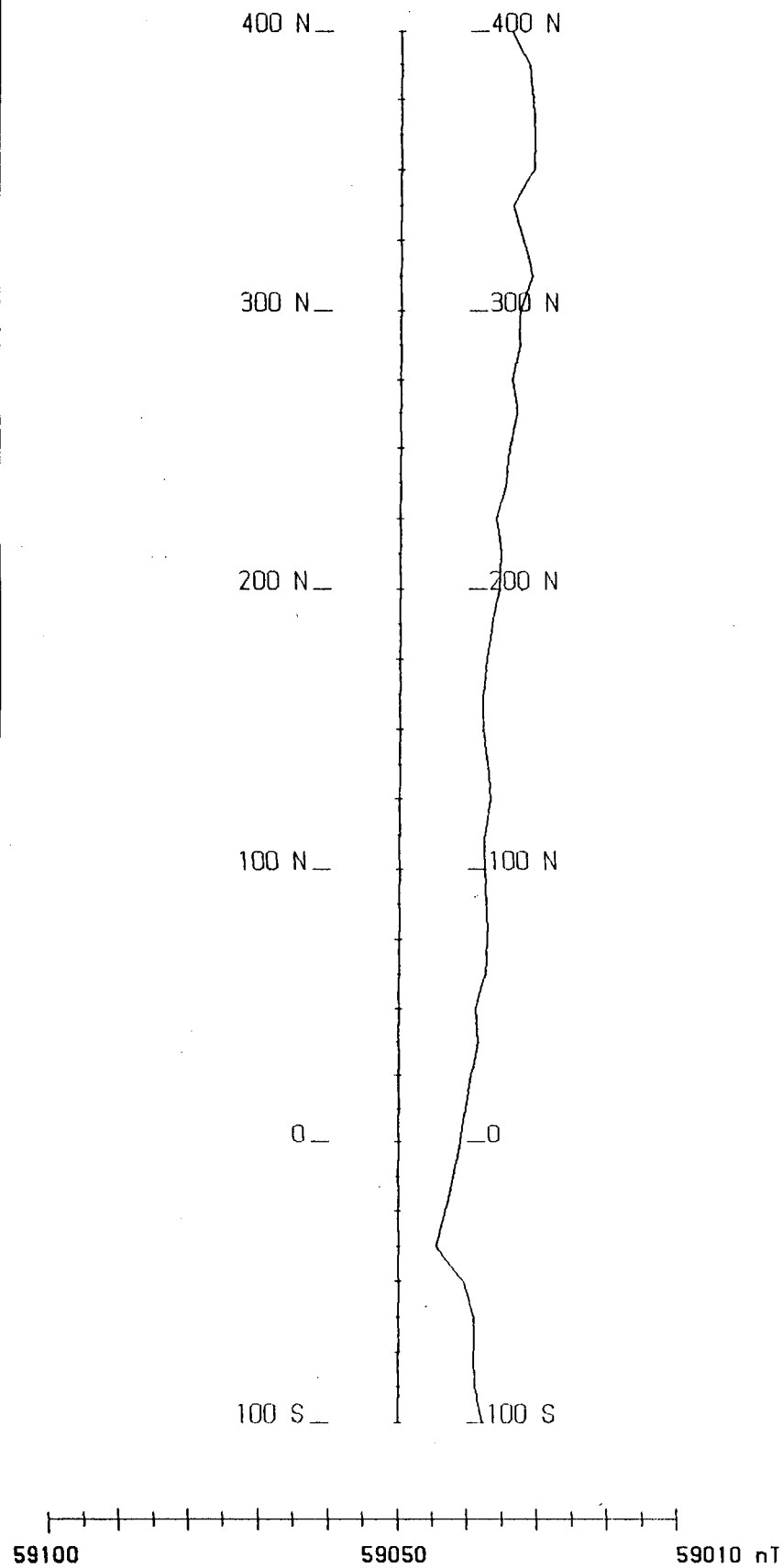

Magnetic Field At Base Station on Feb 5 /98
Magnetic Field (nT)
592500
592400
592300
592200
592100
592000
591900
591800
591700
591600
591500
1
101
201
301
401
501
601
701
801
901
1001
1101
1201
1301
1401
1501
1601
1701
1801
1901
2001
2101
2201
2301
2401
2501
2601
2701
2801
2901
Reading Number At 5 Second Intervals

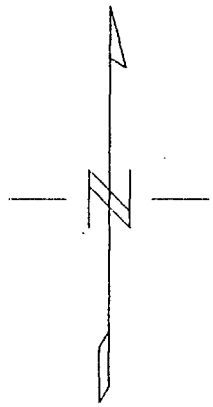
OTTER LAKE AIRMAG
"SIDEWINDER" ANOM.



OTTER LAKE AIRBORNE
"SIDEWINDER" ANOMALY







Line 800 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTesla

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

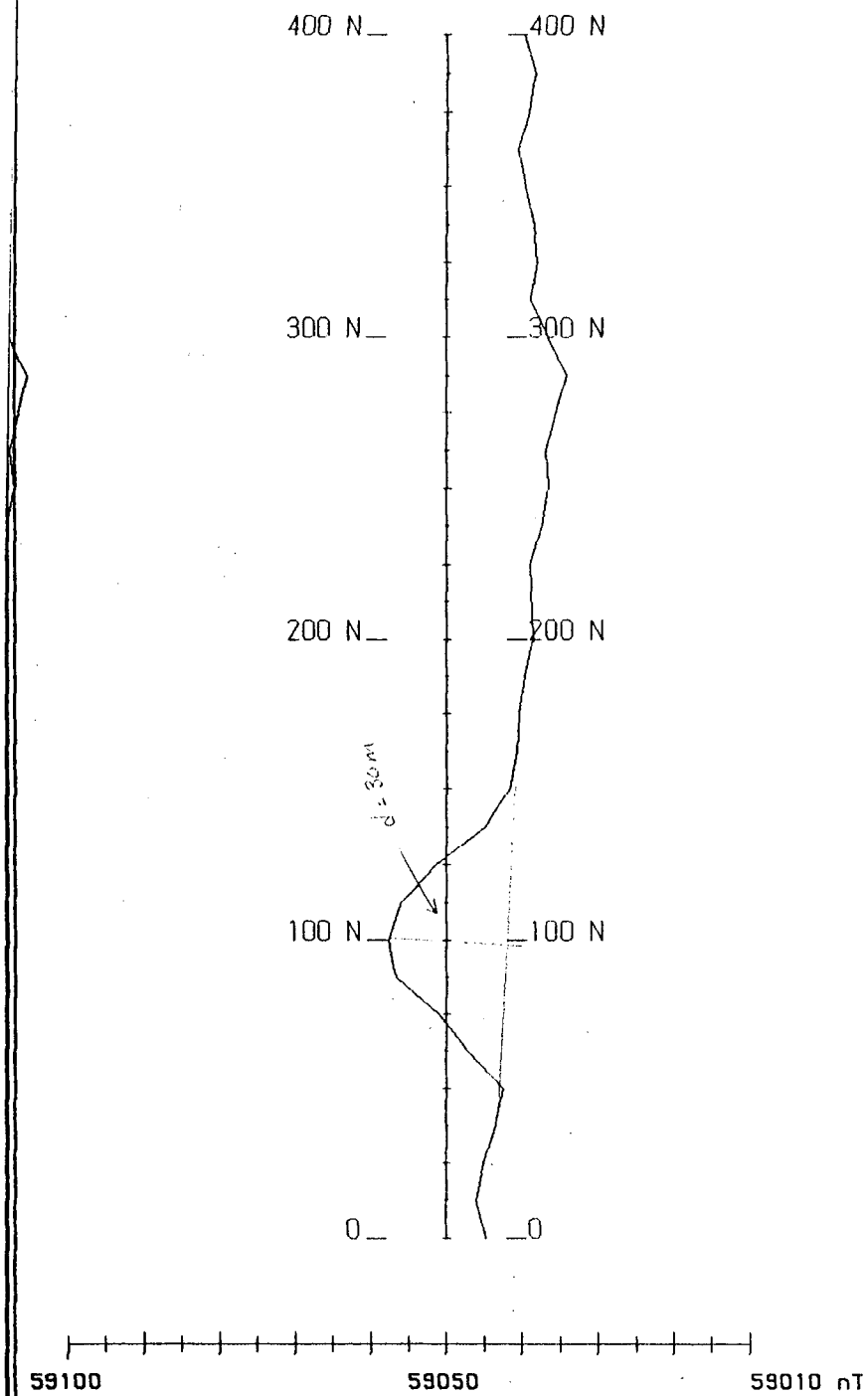
SIDON INTERNATIONAL RESOURCES

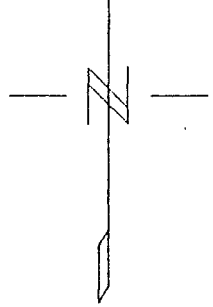
MAGNETIC SURVEY -- Strip Profile

Sidewinder Target
Slave lake, Alberta

Feb. 5 /98

DATE: 01/98 Instrument: Omni IV
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plotte





Line 900 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

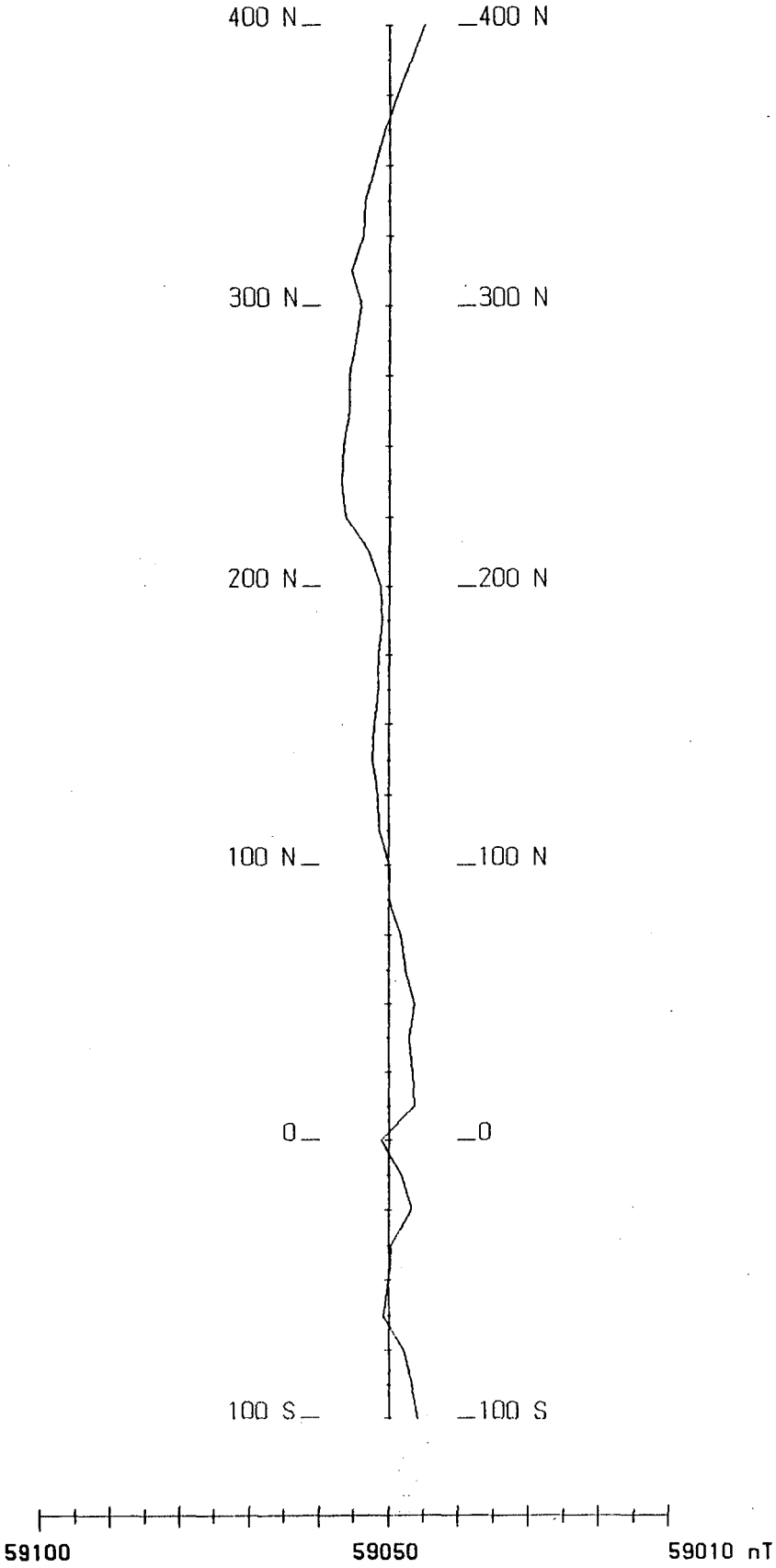
MAGNETIC SURVEY -- Strip Profile

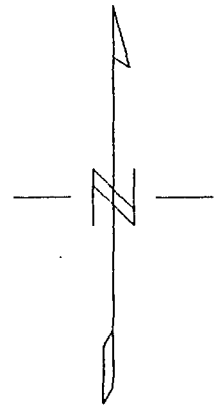
Sidewinder Target
Slave lake, Alberta

Feb. 5/98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 1000 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59050 nTesl

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/

SIDON INTERNATIONAL RESOURCE

MAGNETIC SURVEY -- Strip Profi

Sidewinder Target

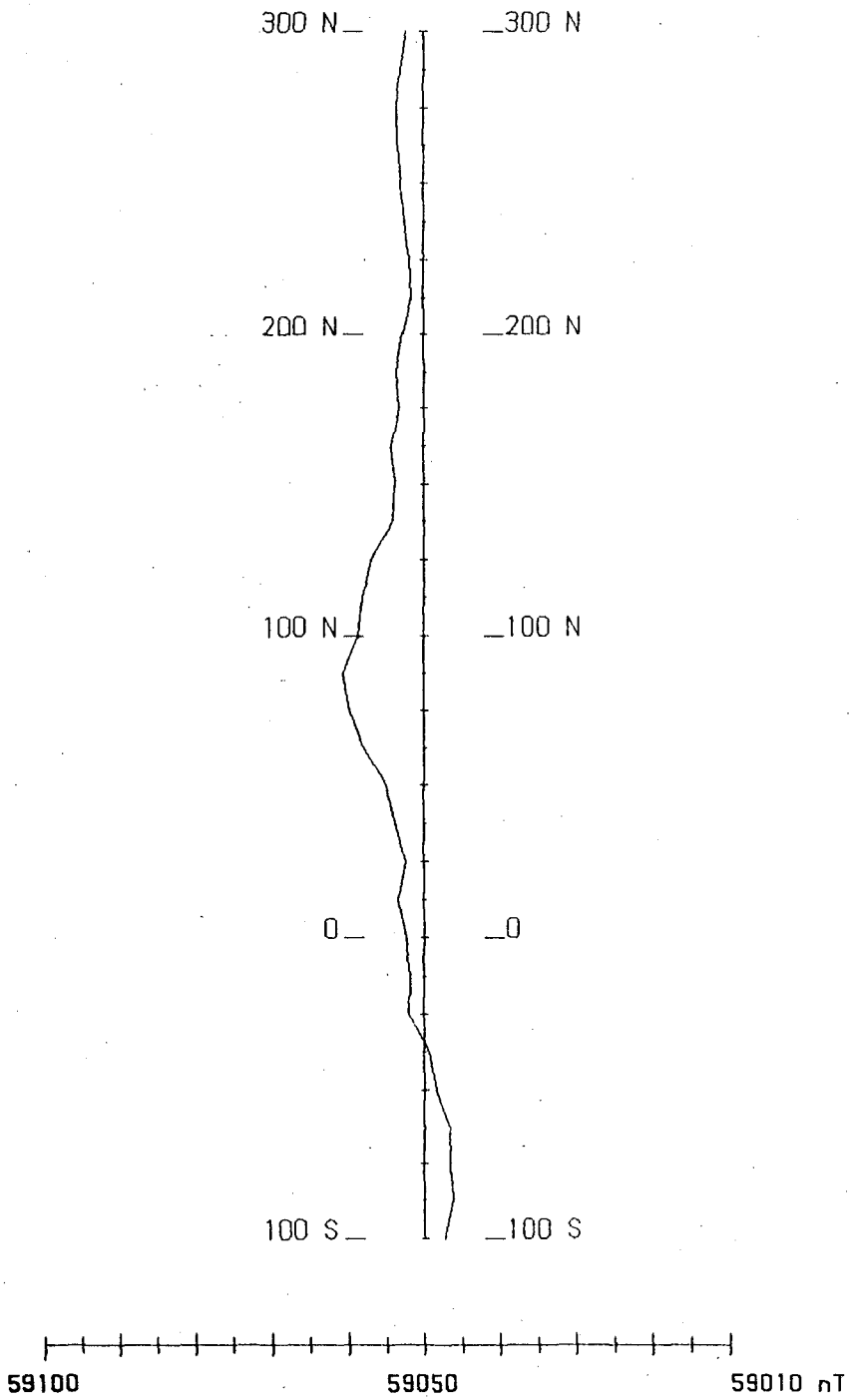
Feb. 5 /98 Slave lake, Alberta

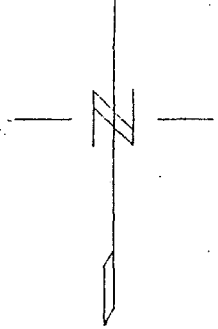
DATE: 01/98 Instrument: Omni

Base Station Setting: Reading at 5 secon

line Azimuth = 0 Plot

EASTERN GEOPHYSICS LIMIT





Line 1100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Sidewinder Target
Slave lake, Alberta

Feb. 5/98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

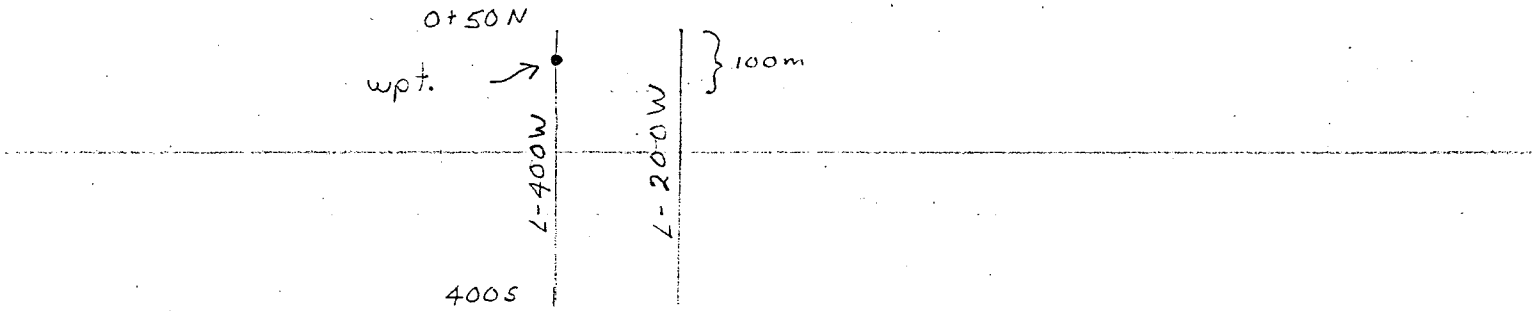
EASTERN GEOPHYSICS LIMITED

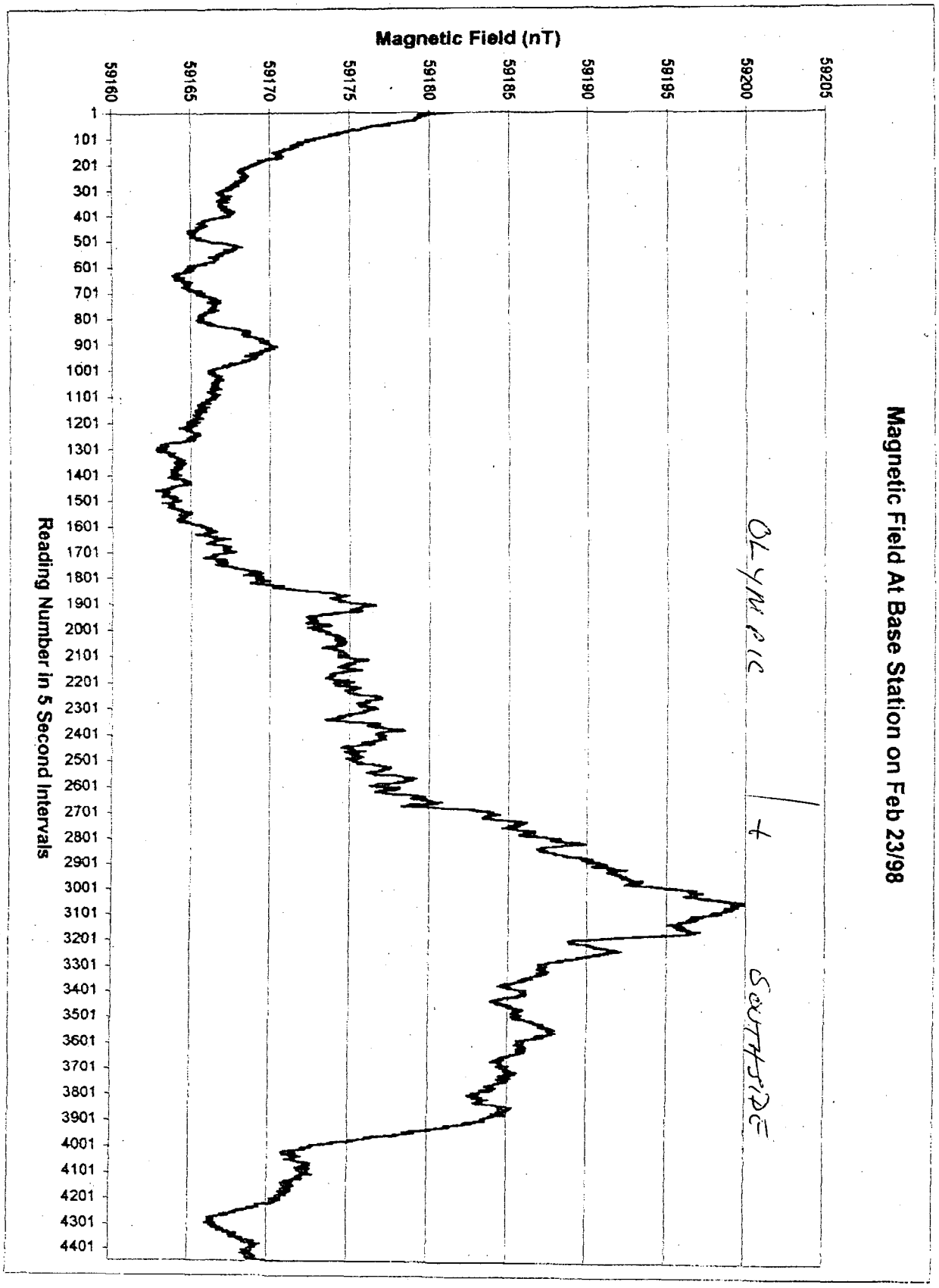
Southside: Feb. 23/98

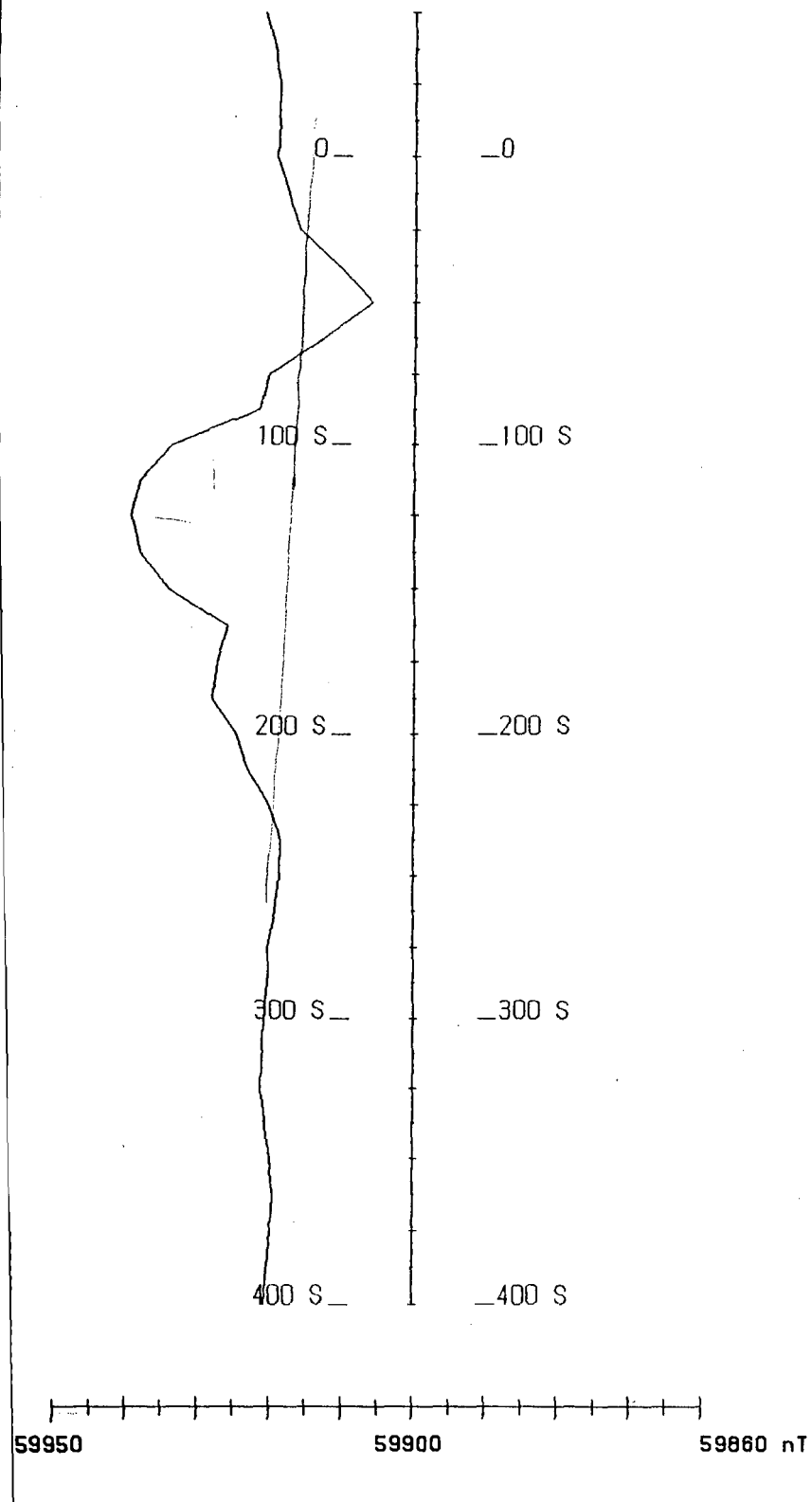
Recon. wpt: 56° 25' 18.5" N } L-400W at 0
113° 26' 57.8" W

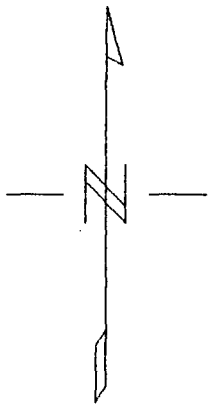
= 25.31'

N = 26.96'




Magnetic Field At Base Station on Feb 23/98
Magnetic Field (nT)
59205
59200
59195
59190
59185
59180
59175
59170
59165
59160
Reading Number in 5 Second Intervals
1
101
201
301
401
501
601
701
801
901
1001
1101
1201
1301
1401
1501
1601
1701
1801
1901
2001
2101
2201
2301
2401
2501
2601
2701
2801
2901
3001
3101
3201
3301
3401
3501
3601
3701
3801
3901
4001
4101
4201
4301
4401
OLYMPIC
SOUTHSIDE





Line 200 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59900 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

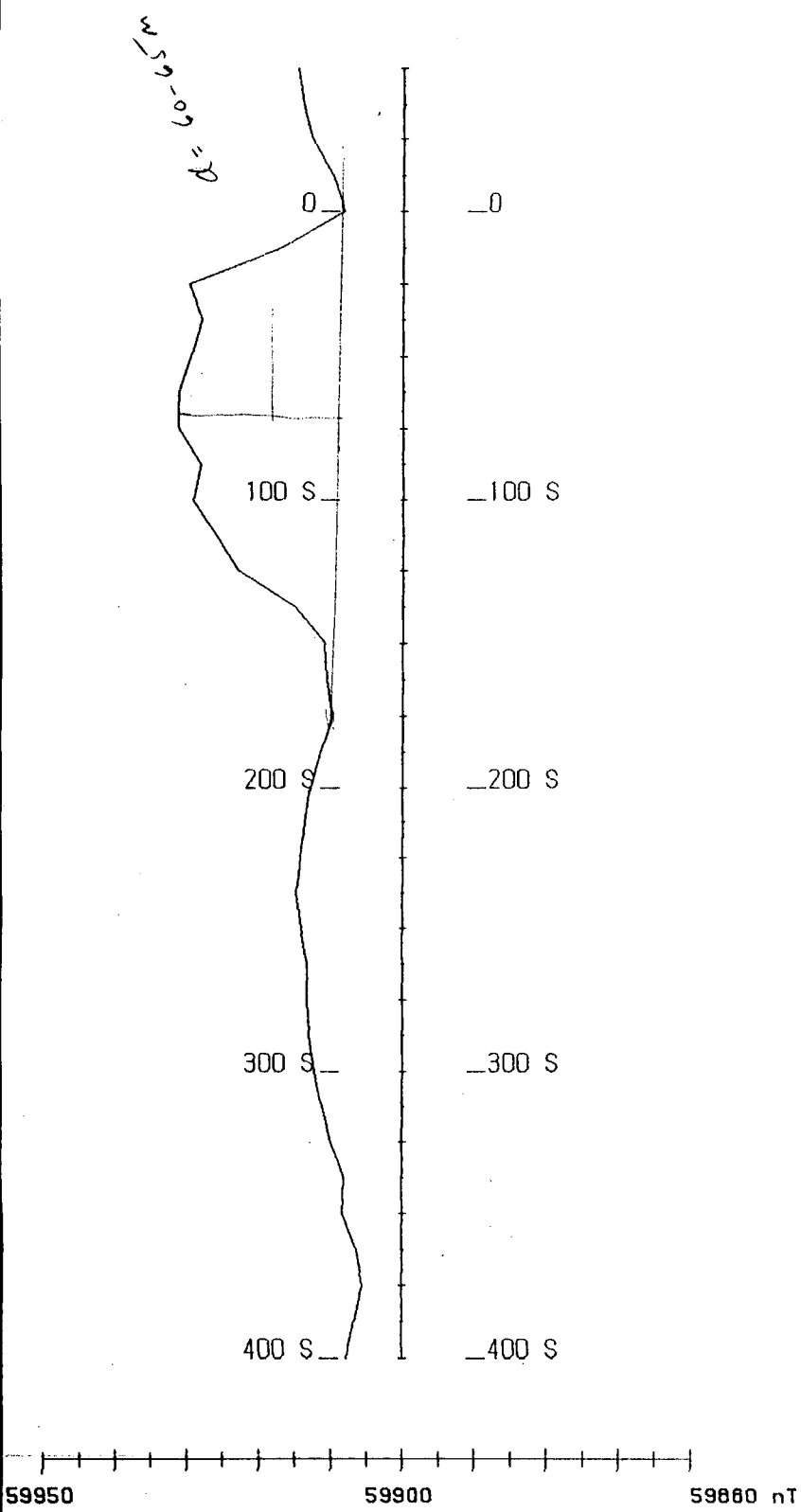
SIDON INTERNATIONAL RESOURCES

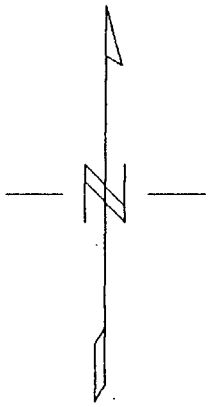
MAGNETIC SURVEY -- Strip Profile

Southside Target
Slave lake, Alberta

DATE: Feb 23/98 Instrument: Omni
Base Station Setting: Reading at 5 second I
line Azimuth = 0 Plotted

EASTERN GEOPHYSICS LIMITED





Line 400 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59900 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES

MAGNETIC SURVEY -- Strip Profile

Southside Target
Slave lake, Alberta

DATE: Feb 23/98 Instrument: Omni
Base Station Setting: Reading at 5 second..In
line Azimuth = 0 Plotted

EASTERN GEOPHYSICS LIMITED

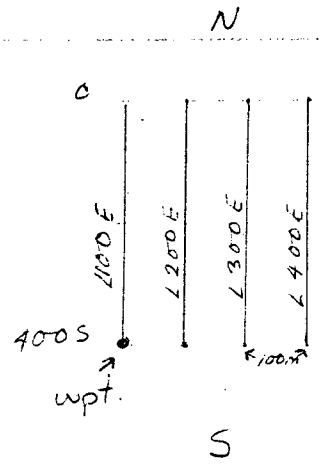
8 FEB 98

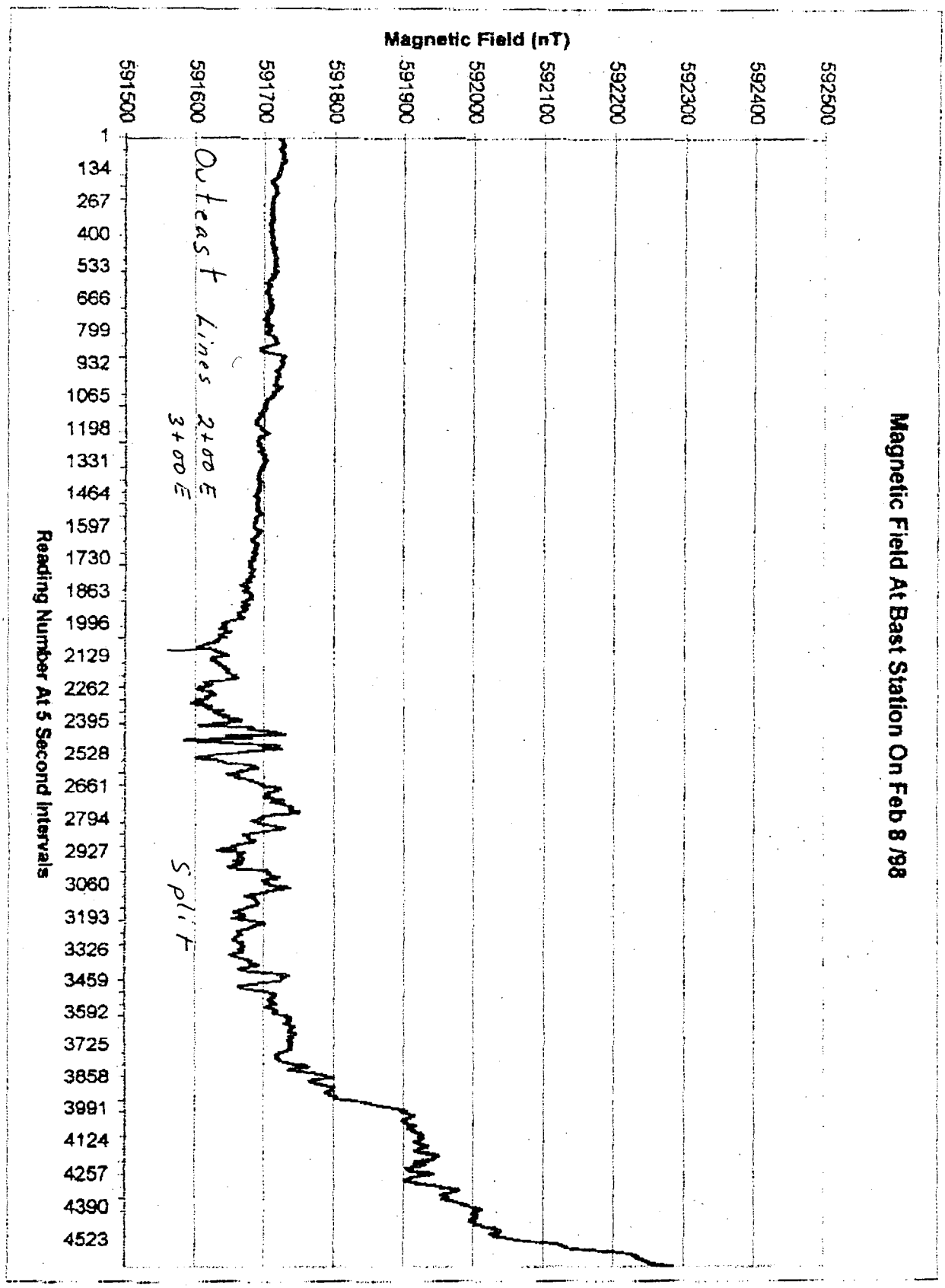
- Split:

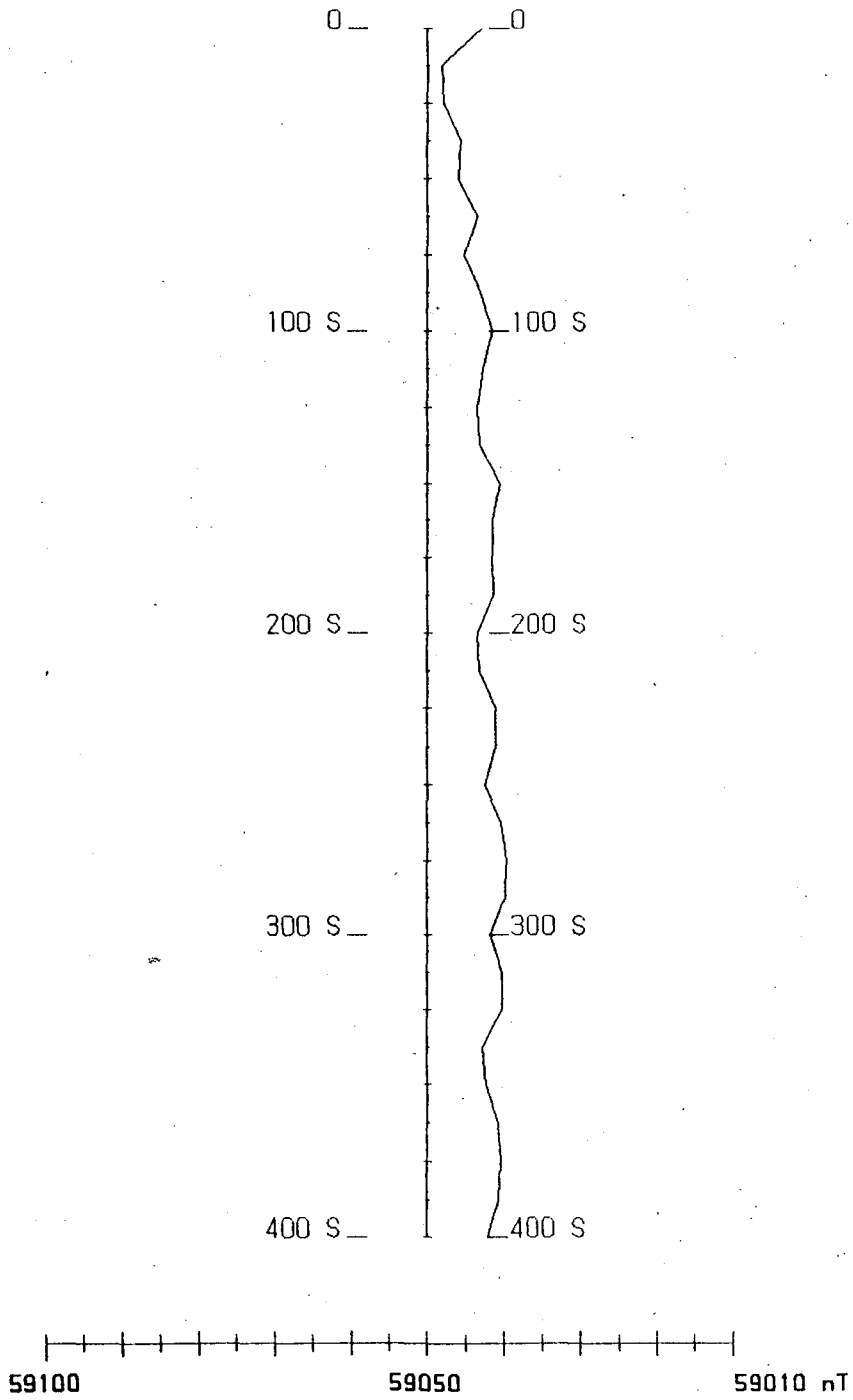
= 34.42'

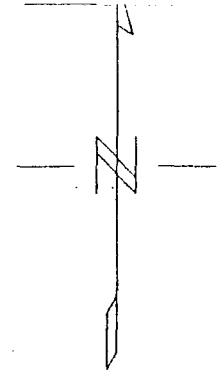
wpt: 56° 34' 25.1" N
113° 18' 06.7" W } L 100E at 400S

= 18.11'




Magnetic Field At Bast Station On Feb 8 /98
Magnetic Field (nT)
591500
591600
591700
591800
591900
592000
592100
592200
592300
592400
592500
Reading Number At 5 Second Intervals
1
134
267
400
533
666
799
932
1065
1198
1331
1464
1597
1730
1863
1996
2129
2262
2395
2528
2661
2794
2927
3060
3193
3326
3459
3592
3725
3858
3991
4124
4257
4390
4523
Outcast Lines 2+00 E
3+00 E
Split





Line 100 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

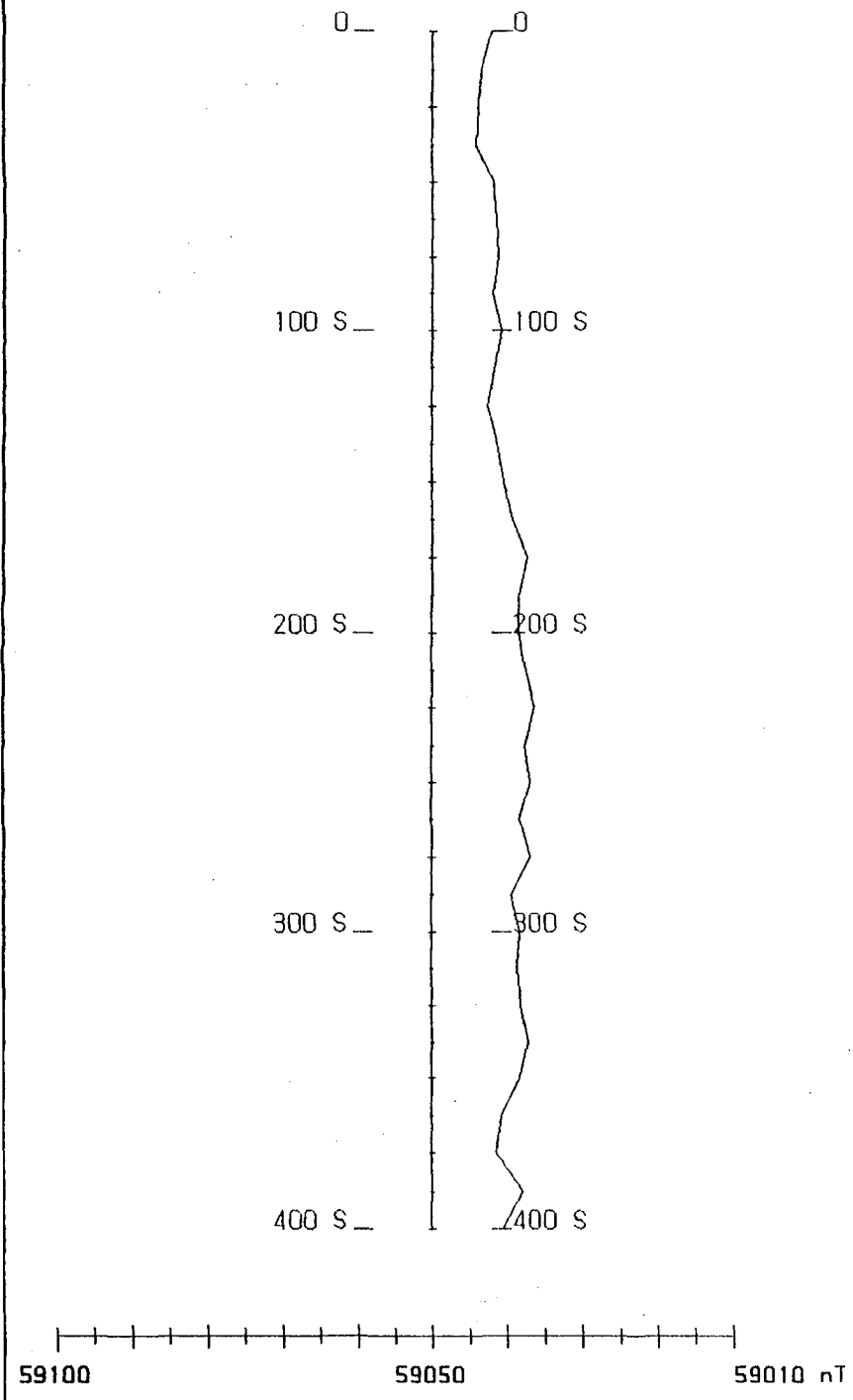
SIDON INTERNATIONAL RESOURCES CORP.

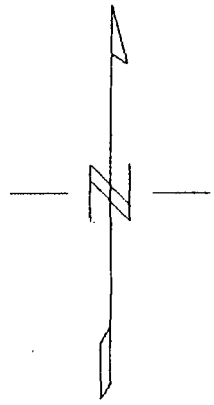
MAGNETIC SURVEY -- Strip Profile

Split Target
Feb. 8/98 Slave lake, Alberta

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 200 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES

MAGNETIC SURVEY -- Strip Profile

Split Target

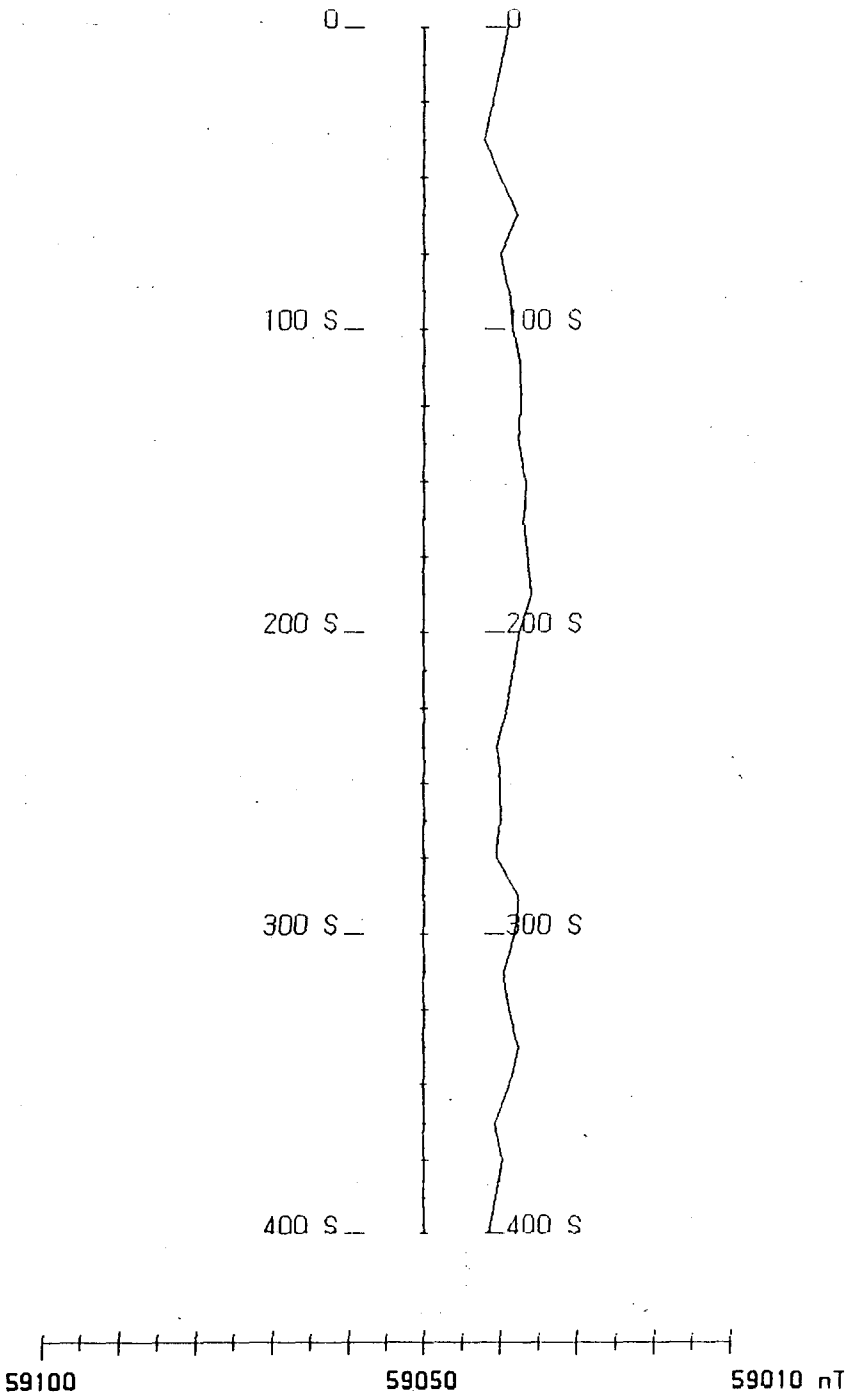
Feb. 8/98 Slave lake, Alberta

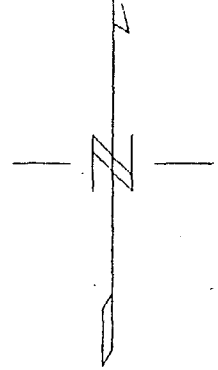
DATE: 01/98 Instrument: Omni IV

Base Station Setting: Reading at 5 second

line Azimuth = 0 Plotte

EASTERN GEOPHYSICS LIMITED





Line 300 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

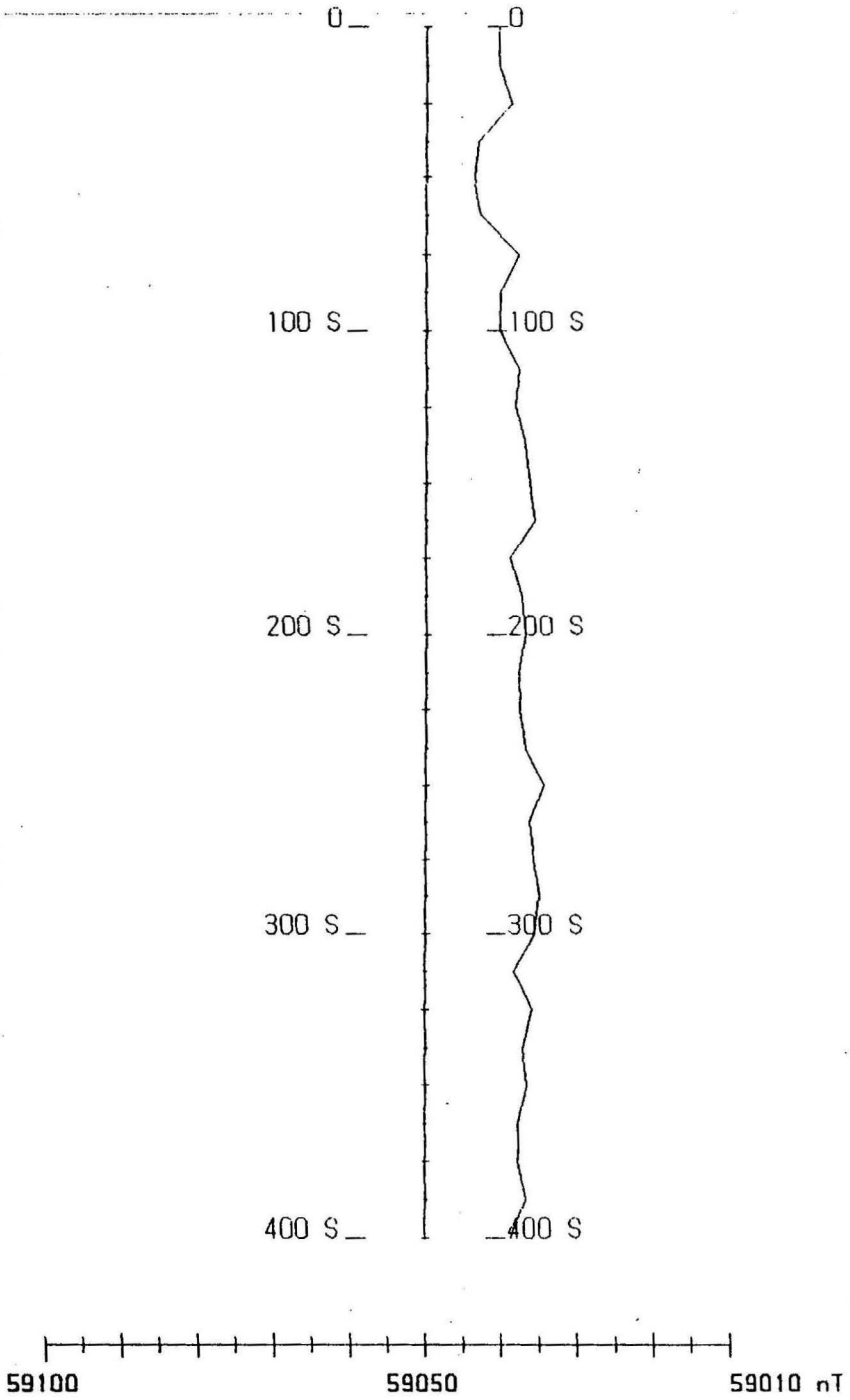
SIDON INTERNATIONAL RESOURCES CORP.

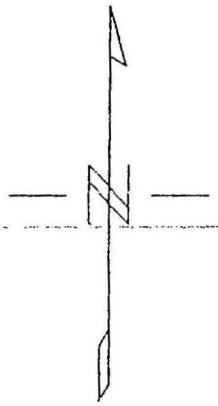
MAGNETIC SURVEY -- Strip Profile

Split Target
Slave lake, Alberta

Feb. 8/98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.





Line 400 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES

MAGNETIC SURVEY -- Strip Profile

Split Target

Feb. 8 /98 Slave lake, Alberta

DATE: 01/98 Instrument: Omni IV

Base Station Setting: Reading at 5 second I

line Azimuth = 0 Plotted

EASTERN GEOPHYSICS LIMITED

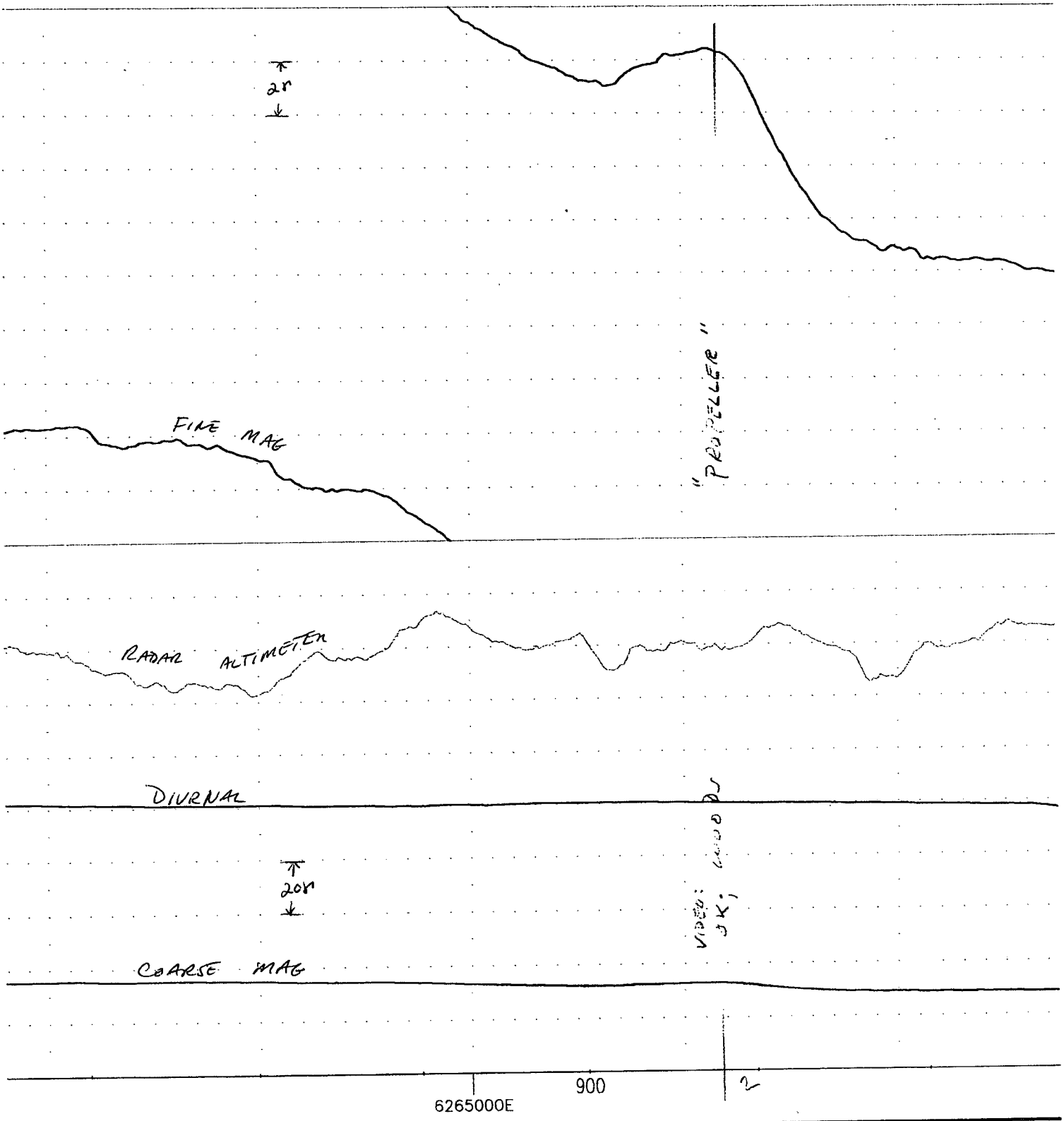
SCALE: 1:25000

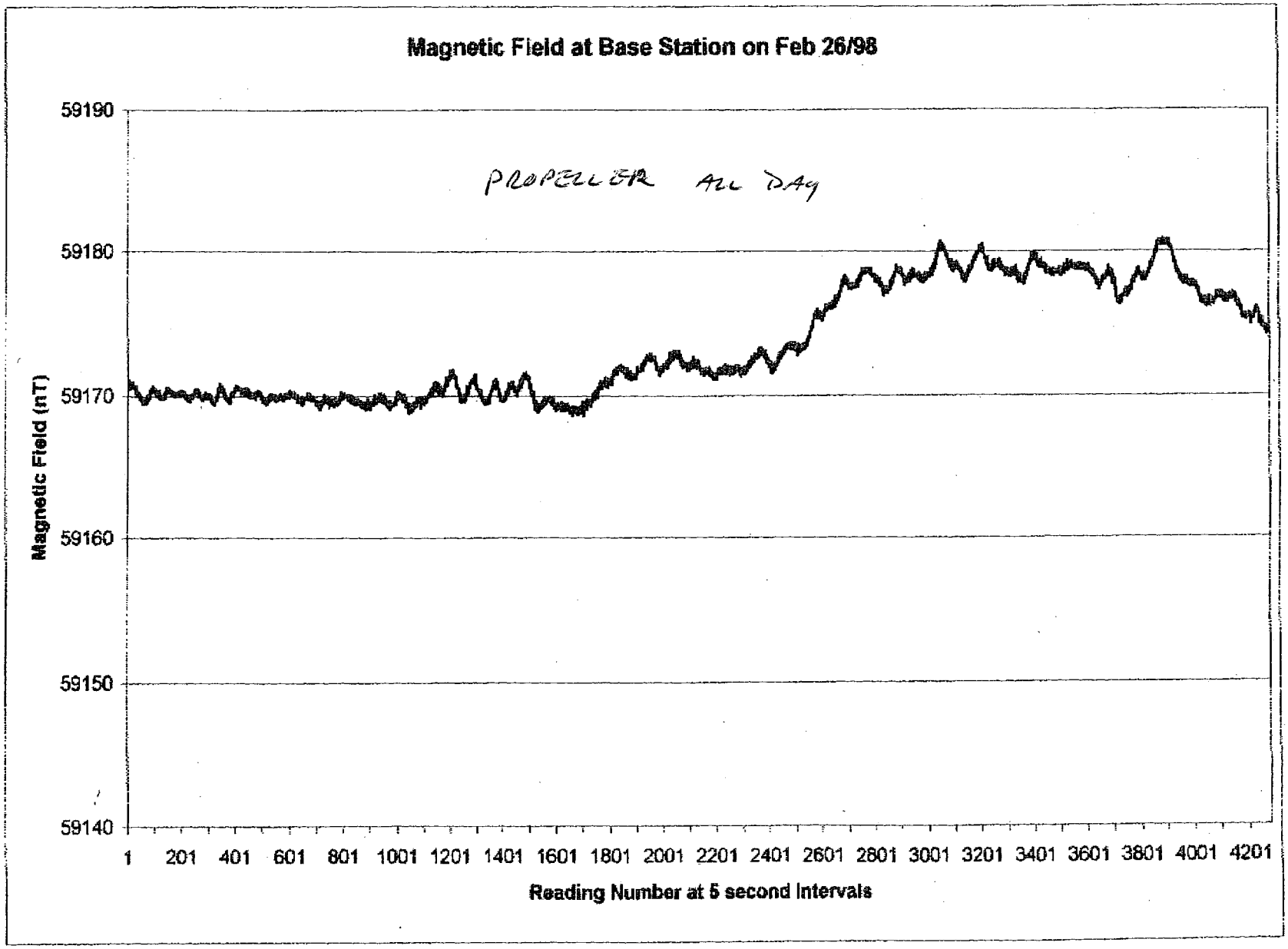
ne 890

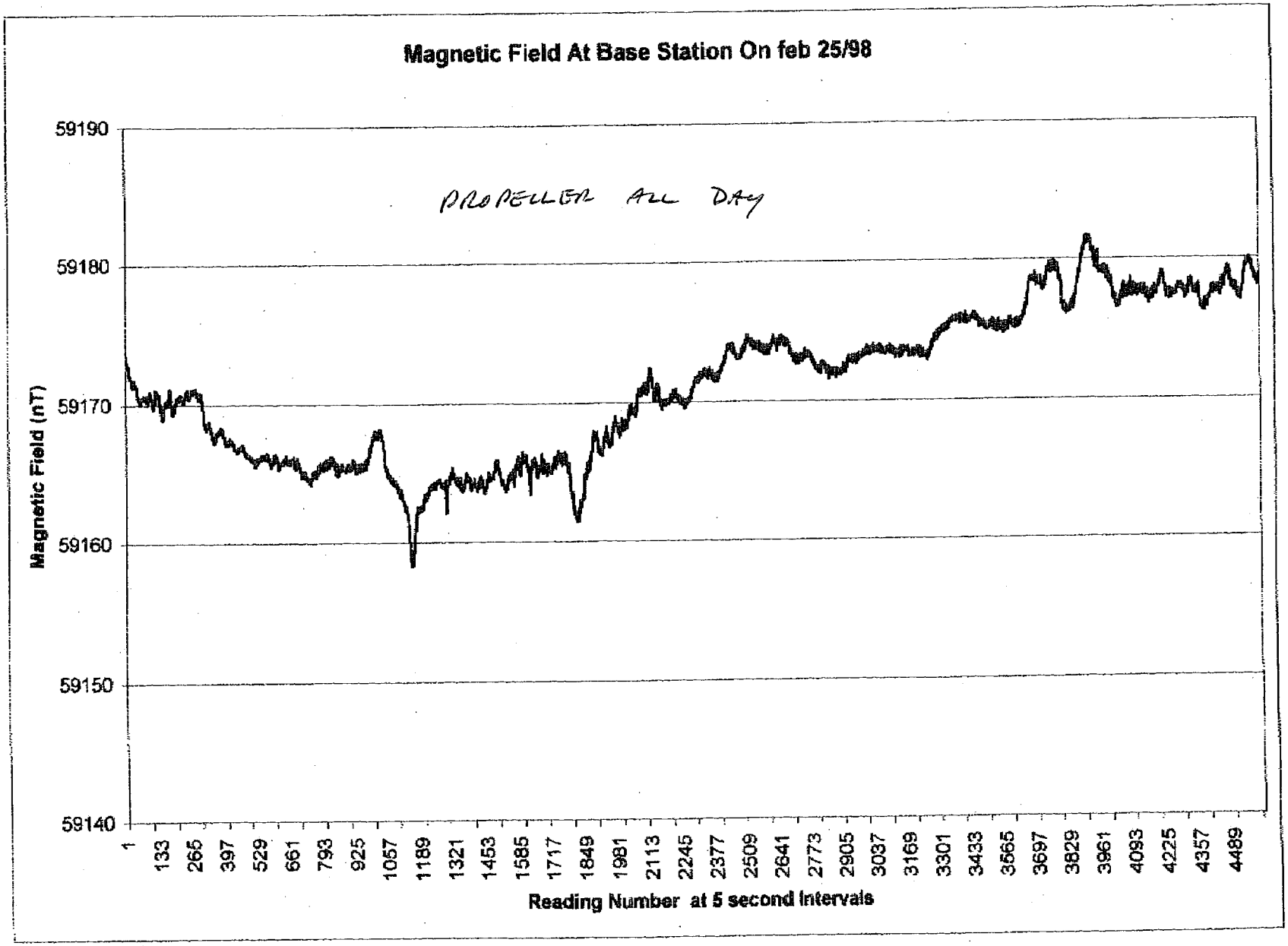
Resources Lt

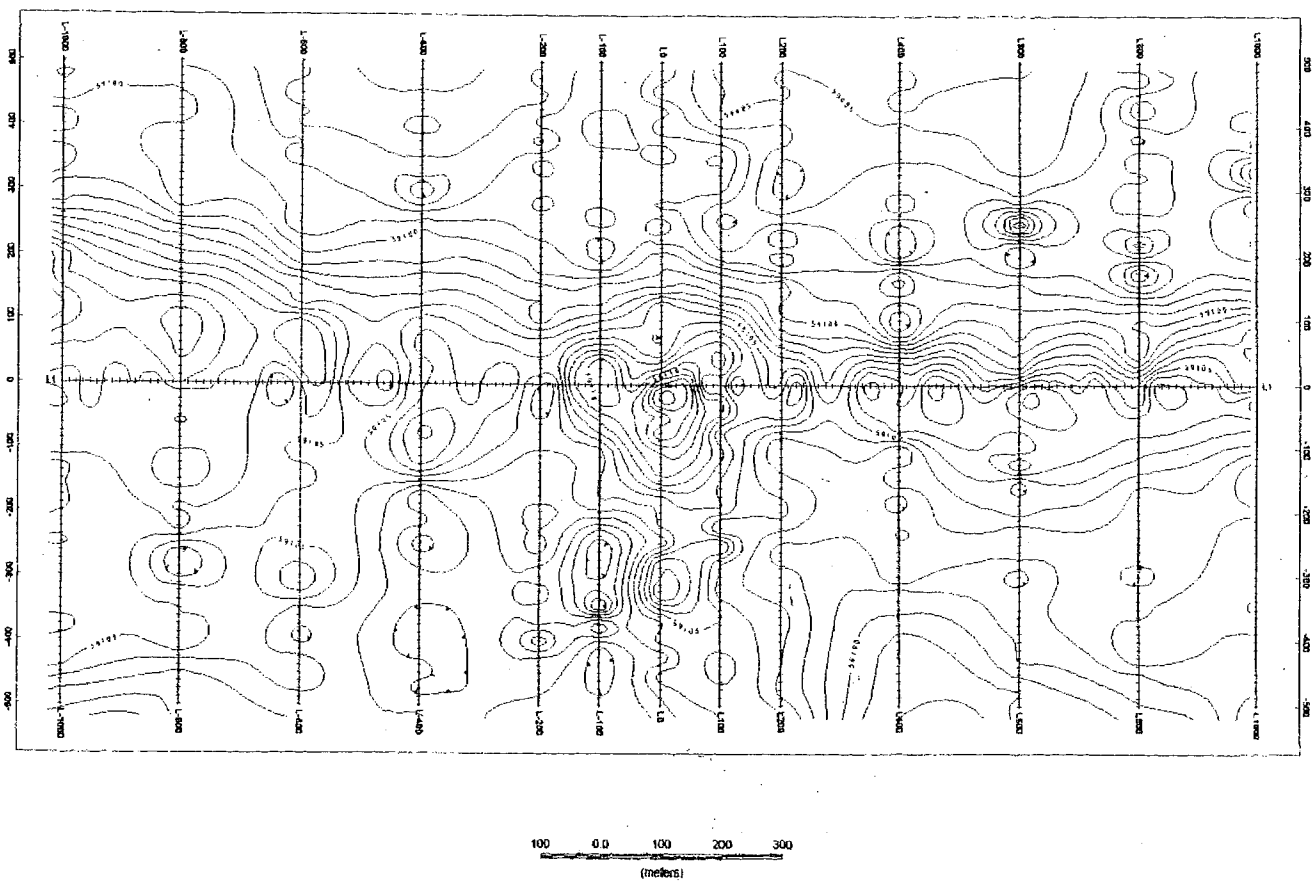
Otter Lake, Alberta

"PROPELLER" ANOMALY




Magnetic Field at Base Station on Feb 26/98
PROPELLER ALL DAY
Magnetic Field (nT)
59190
59180
59170
59160
59150
59140
1
201
401
601
801
1001
1201
1401
1601
1801
2001
2201
2401
2601
2801
3001
3201
3401
3601
3801
4001
4201
Reading Number at 5 second Intervals


Magnetic Field At Base Station On feb 25/98
PROPELLER ALL DAY
Magnetic Field (nT)
59190
59180
59170
59160
59150
59140
1
133
265
397
529
661
793
925
1057
1189
1321
1453
1585
1717
1849
1981
2113
2245
2377
2509
2641
2773
2905
3037
3169
3301
3433
3565
3697
3829
3961
4093
4225
4357
4489
Reading Number at 5 second intervals



LEGEND

Contour Intervals

Minor Contour Intervals: 1 nTesla

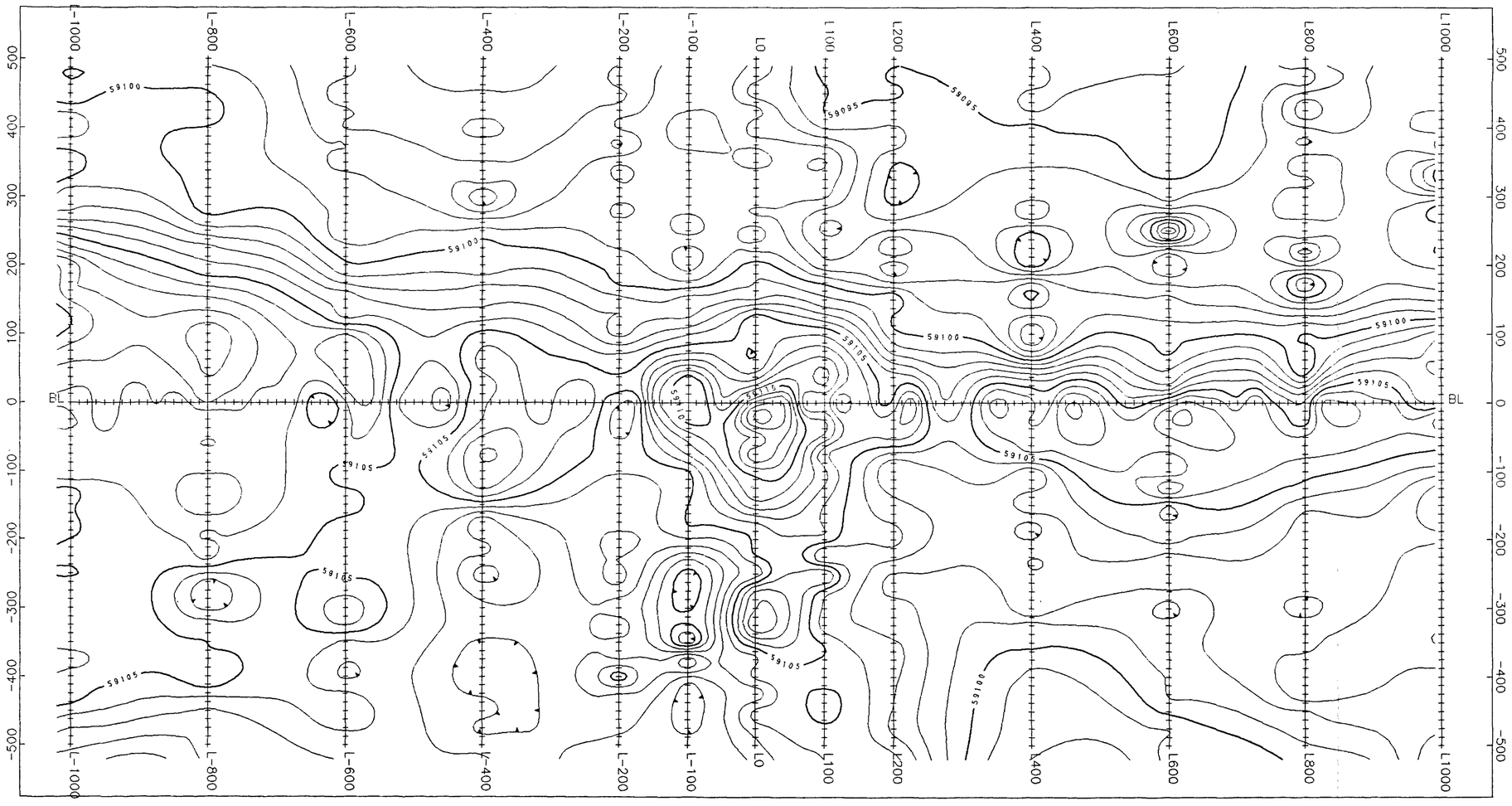
Major Contour Intervals: 5 nTesla

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Field -- Contour Map
Propeller Grid
Slave Lake, Alberta

Date: Feb 25&26 Instruments: Omni IV, Omni Plus
Base Station Setting: Reading at 5 Seconds Intervals
Baseline Azimuth: 46° Prepared By W. H

Eastern Geophysics Limited



Scale 1:5000

100 0.0 100 200 300

(meters)

LEGEND

Contour Intervals

Minor Contour Intervals: 1 nTesla

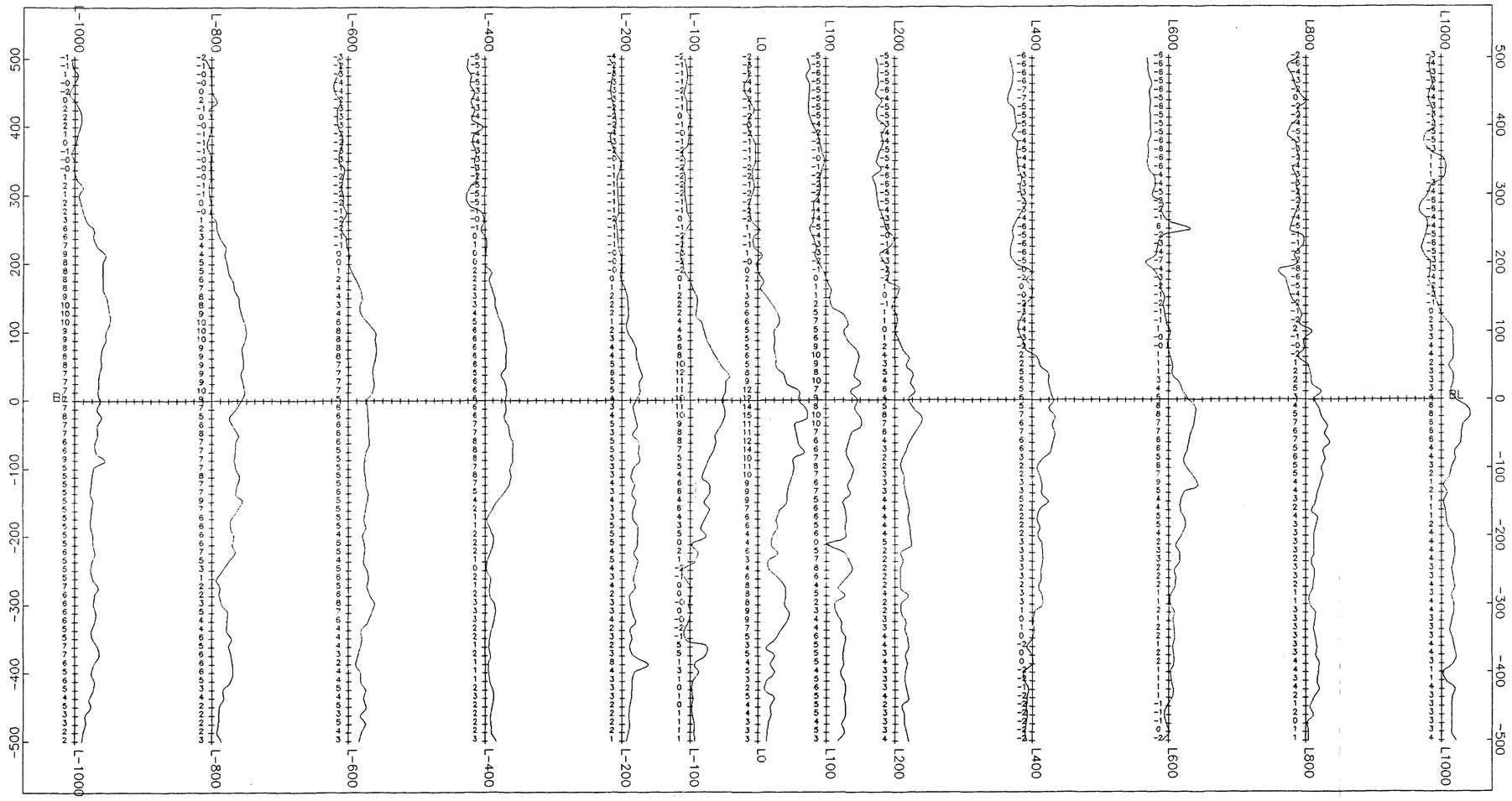
Major Contour Intervals: 5 nTesla

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Field -- Contour Map
Propeller Grid
Slave Lake, Alberta

Date: Feb 25&26 Instruments: Omni IV, Omni Plus
Base Station Setting: Reading at 5 Seconds Intervals
Baseline Azimuth: 45° Prepared By W. H.

Eastern Geophysics Limited



Scale 1:5000

100 0.0 100 200 300

(meters)

LEGEND

Profile Settings

Base Removed: 59100 nTeslas

Profile Scale: 10 nT/cm

SIDON INTERNATIONAL RESOURCES CORP.

Magnetic Field -- Profile Map
Propeller Grid
Slave Lake, Alberta

Date: Feb 25&26 Instruments: Omni IV, Omni Plus
Base Station Setting: Reading at 5 Seconds Intervals
Baseline Azimuth: 45° Prepared By W. H.

Eastern Geophysics Limited

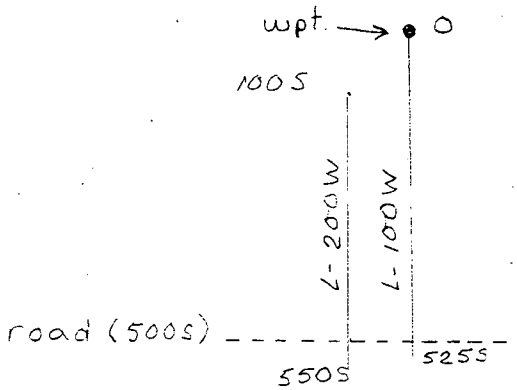
RECON

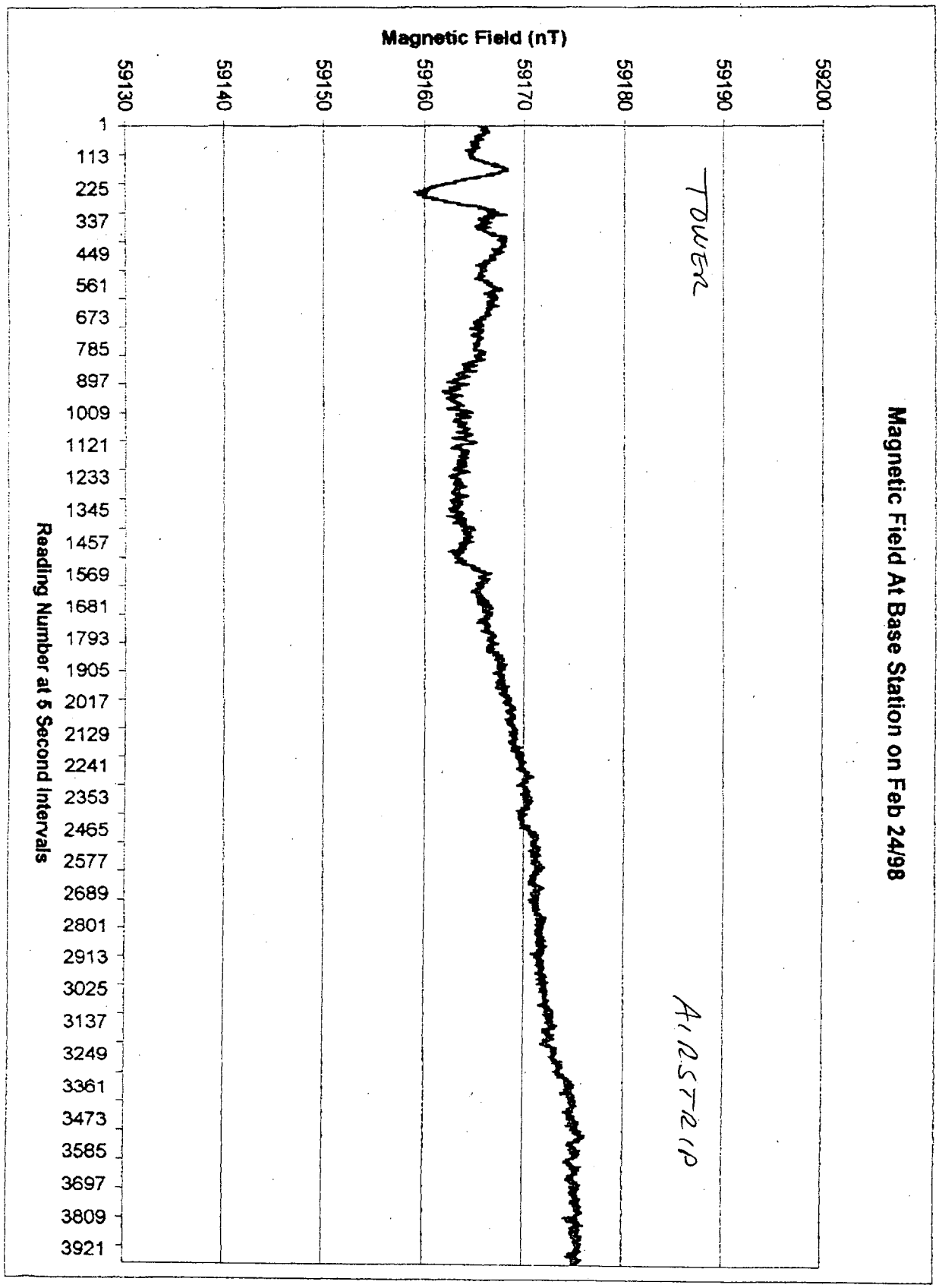
Tower: 24 FEB 98 = 27.67'

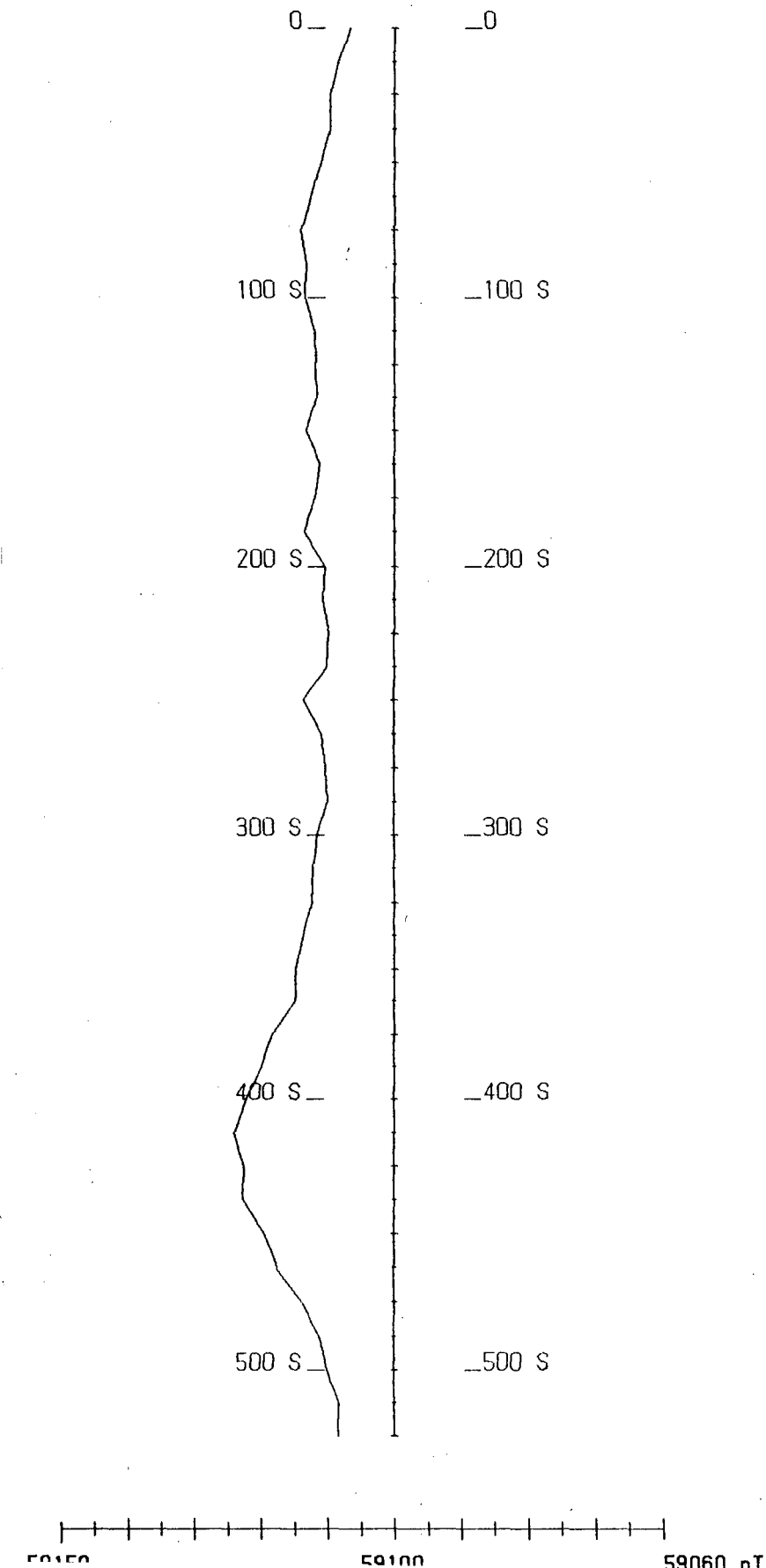
wpt: 56° 27' 40.4" N
113° 11' 21.1" W = 11.35'

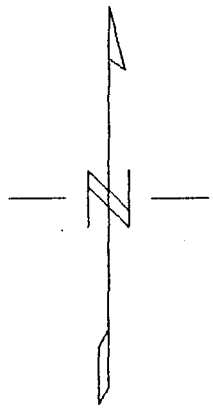
} L-100W at 0

N




Magnetic Field At Base Station on Feb 24/98
Magnetic Field (nT)
59200
59190
59180
59170
59160
59150
59140
59130
Reading Number at 5 Second Intervals
1
113
225
337
449
561
673
785
897
1009
1121
1233
1345
1457
1569
1681
1793
1905
2017
2129
2241
2353
2465
2577
2689
2801
2913
3025
3137
3249
3361
3473
3585
3697
3809
3921
TOWER
AIRSTRIP





Line 100 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59100 nTesl

PROFILE VERTICAL SCALE

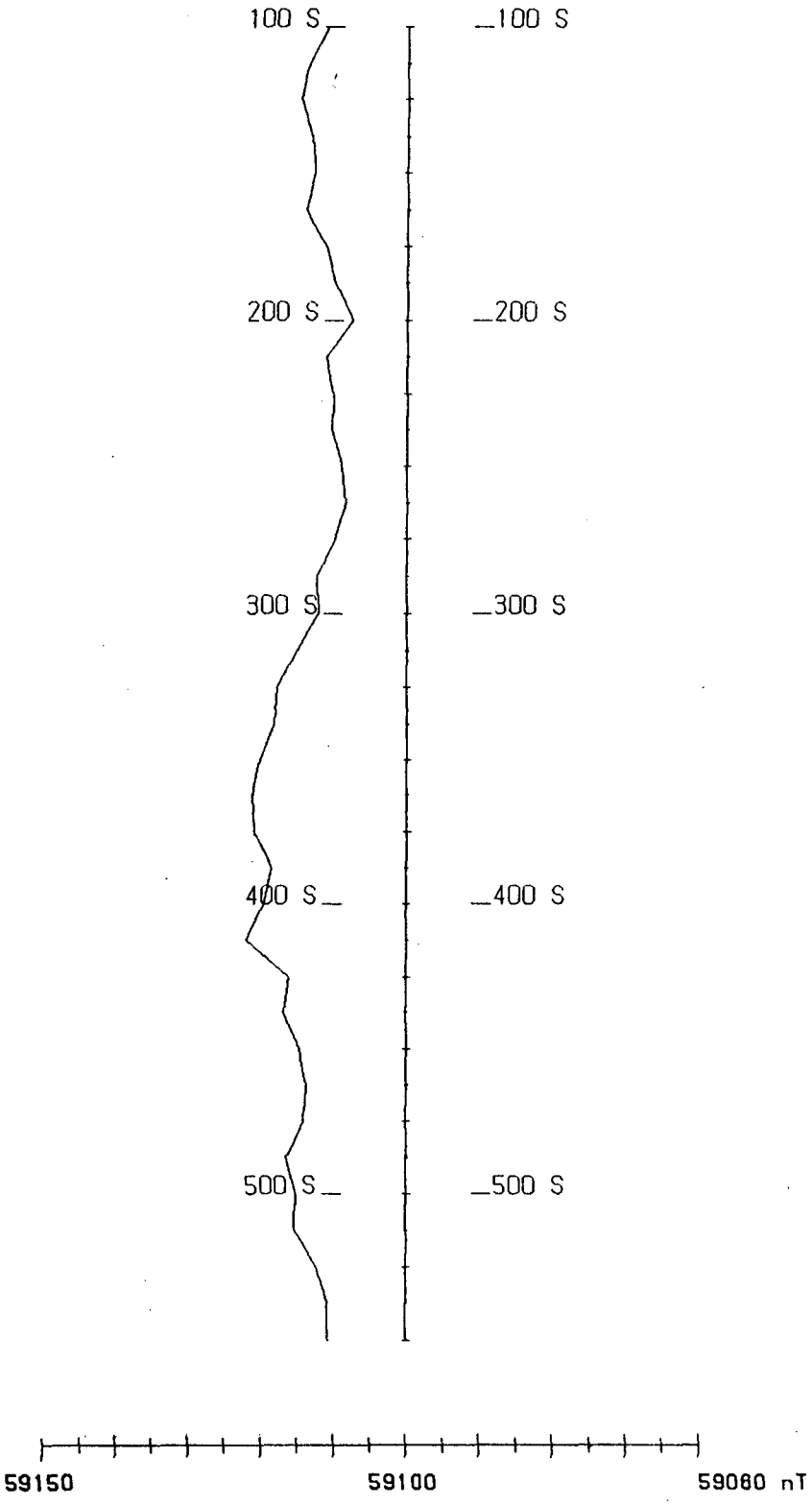
Magnetic Field: 10 nTeslas/c

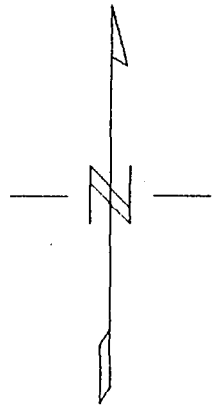
SIDON INTERNATIONAL RESOURCES

MAGNETIC SURVEY -- Strip Profi

Tower Target
Slave lake, Alberta

DATE: Feb 24/98 Instrument: Om
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plott





Line 200 W

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59100 nTesl

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/

SIDON INTERNATIONAL RESOURCE

MAGNETIC SURVEY -- Strip Profi

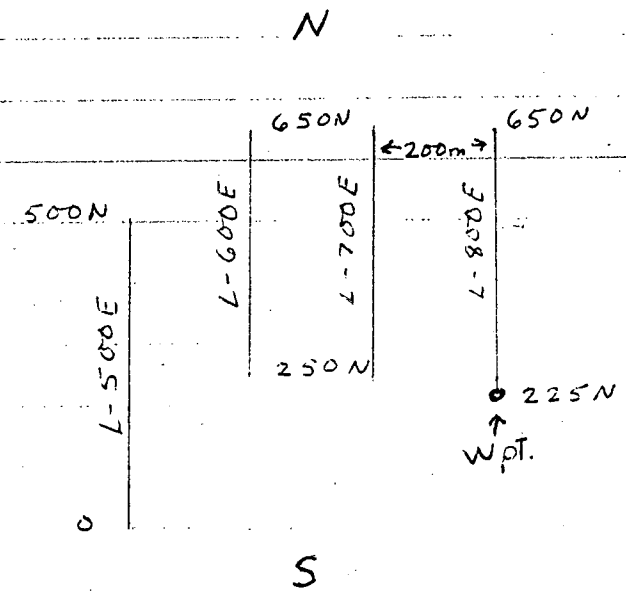
Tower Target
Slave lake, Alberta

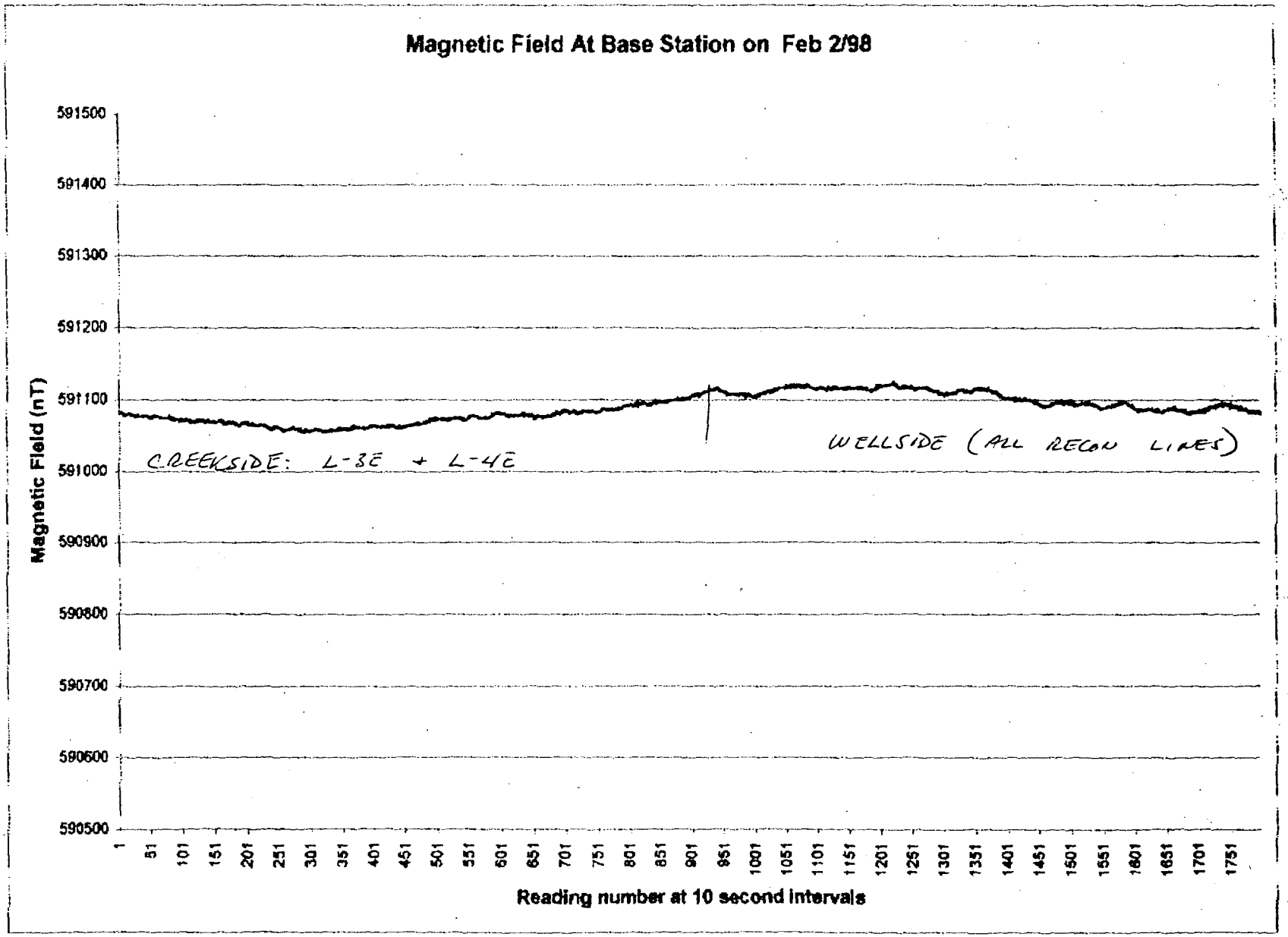
DATE: Feb 24/98 Instrument: Om
Base Station Setting: Reading at 5 second
line Azimuth = 0 Plott

EASTERN GEOPHYSICS LIMITE

- Wellside:

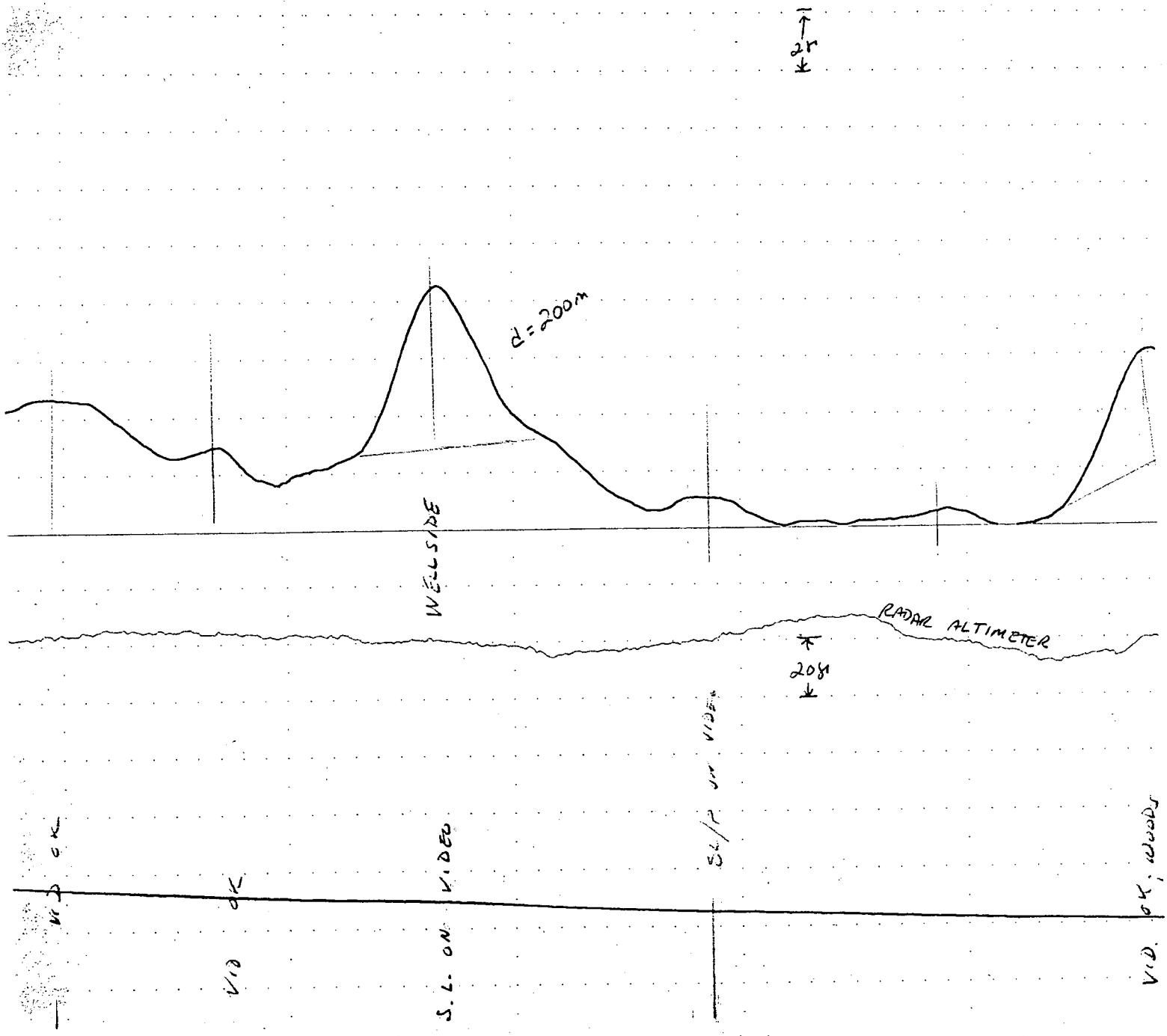
wpt: 56° 37' 57.1" N = 37.95' } L 800E at 225N
113° 14' 53.2" W = 14.89'




Magnetic Field At Base Station on Feb 2/98
Magnetic Field (nT)
591500
591400
591300
591200
591100
591000
590900
590800
590700
590600
590500
CREEKSIDE: L-3E + L-4E
WELLSIDE (ALL RECON LINES)
1
51
101
151
201
251
301
351
401
451
501
551
601
651
701
751
801
851
901
951
1001
1051
1101
1151
1201
1251
1301
1351
1401
1451
1501
1551
1601
1651
1701
1751
Reading number at 10 second intervals

OTTER LAKE AIRMAG

"WELLSIDE" ANOMALY

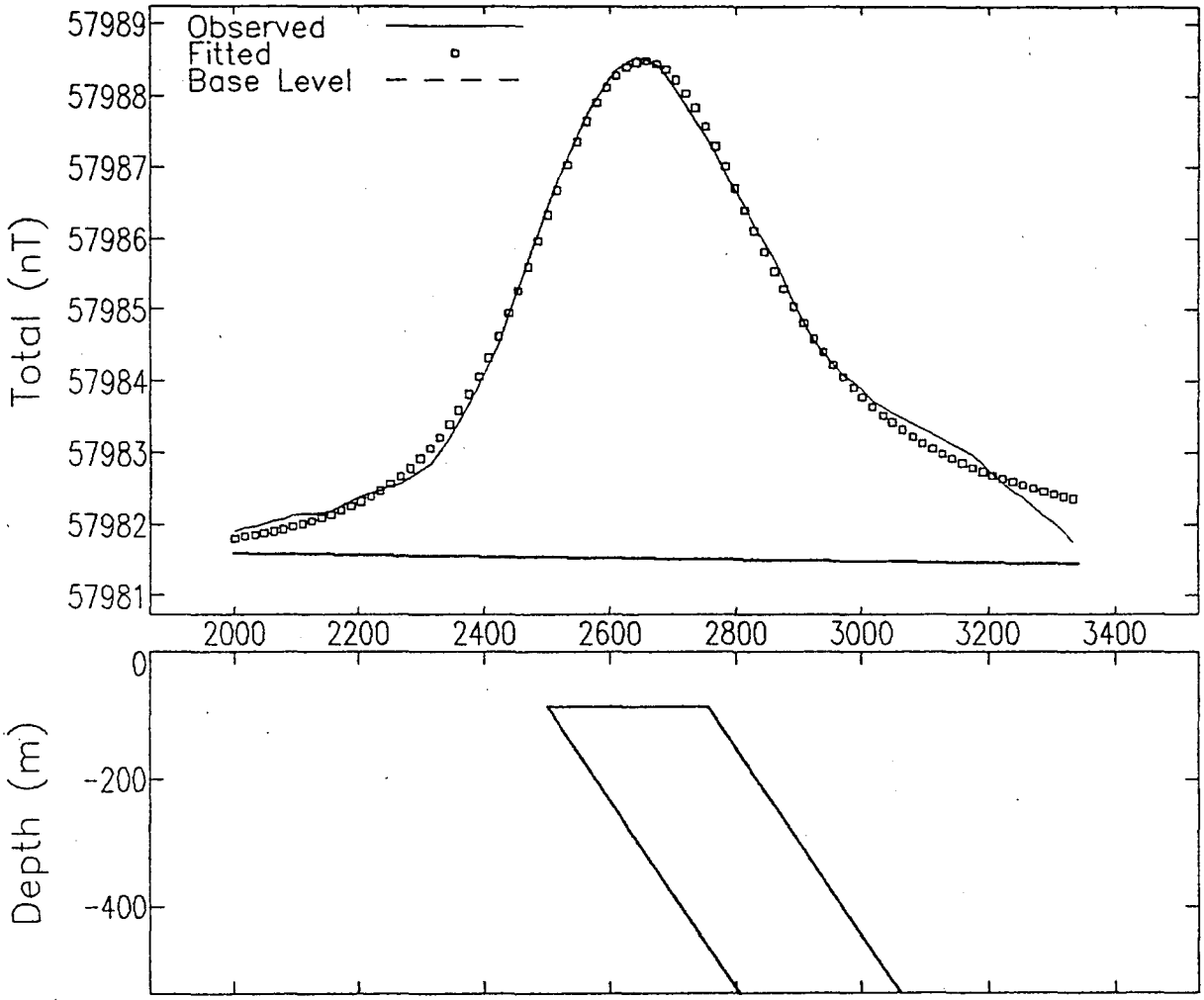


LINE 760

"WELLSIDE" ANOMALY

Tabular 1 Model – Line 760

Fid Range = 3725-3745, Anomaly 3n2b



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	85.3 m
Half Width	F	129 m
Dip	F	56 deg
Susceptibility	F	.0000618 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	2627.382 m
Cross Position	X	729552.8 m
Base Level	F	57981.52 nT
Base Slope	X	-.0001111 nT/m
Base Curvature	X	0 nT/m2

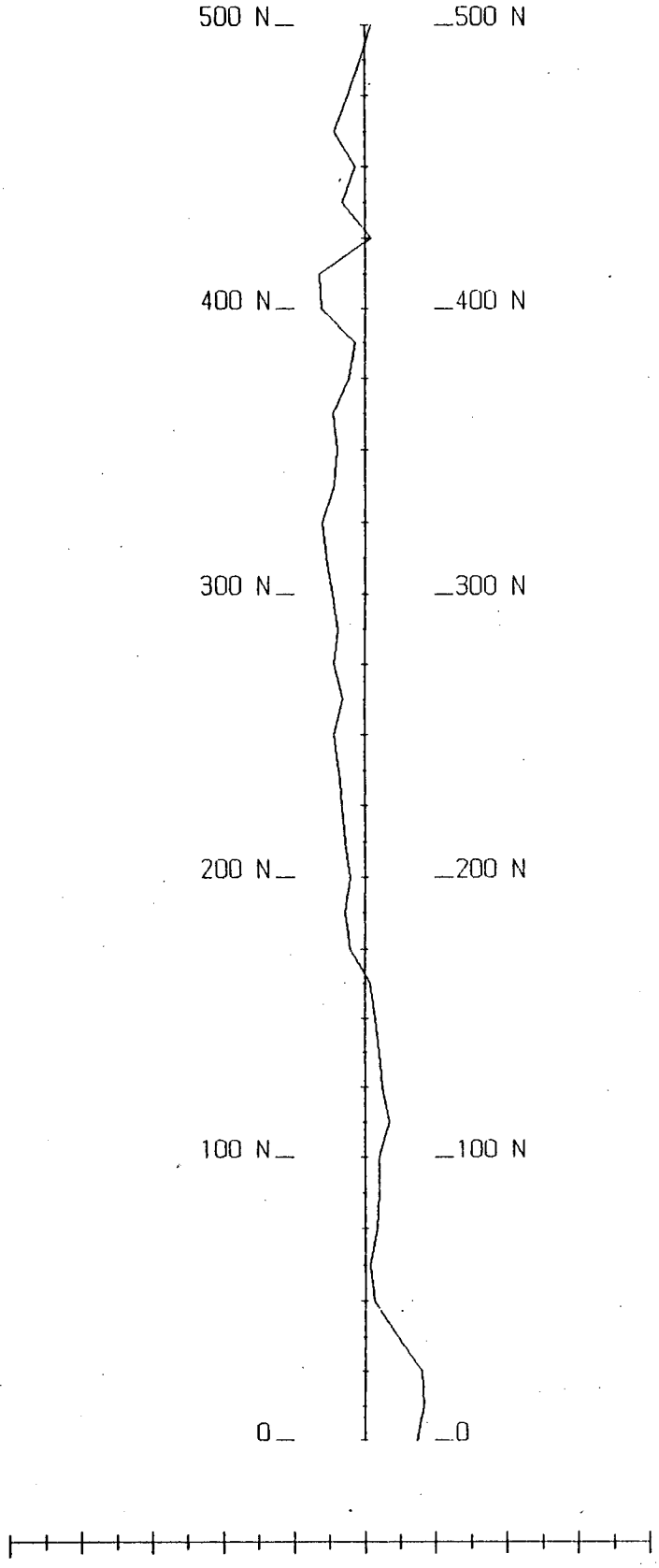
(F-fitted, X-fixed, L-limit)

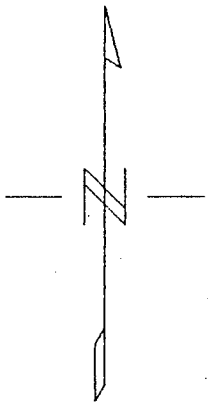
GEOMAGNETIC FIELD:

Field Strength	57000 nT
Inclination	78 deg
Declination	20 deg

COORDINATES:

Sensor Height	100 m
Strike Perp	0 deg
Line Direction	-4 deg
Main Direction	0 deg
Main Offset	6280000 m
Cross Direction	90 deg
Cross Offset	





Line 500 E

Scale 1:2500

50 0 50 100

(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES

Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE

Magnetic Field: 10 nTeslas/cm

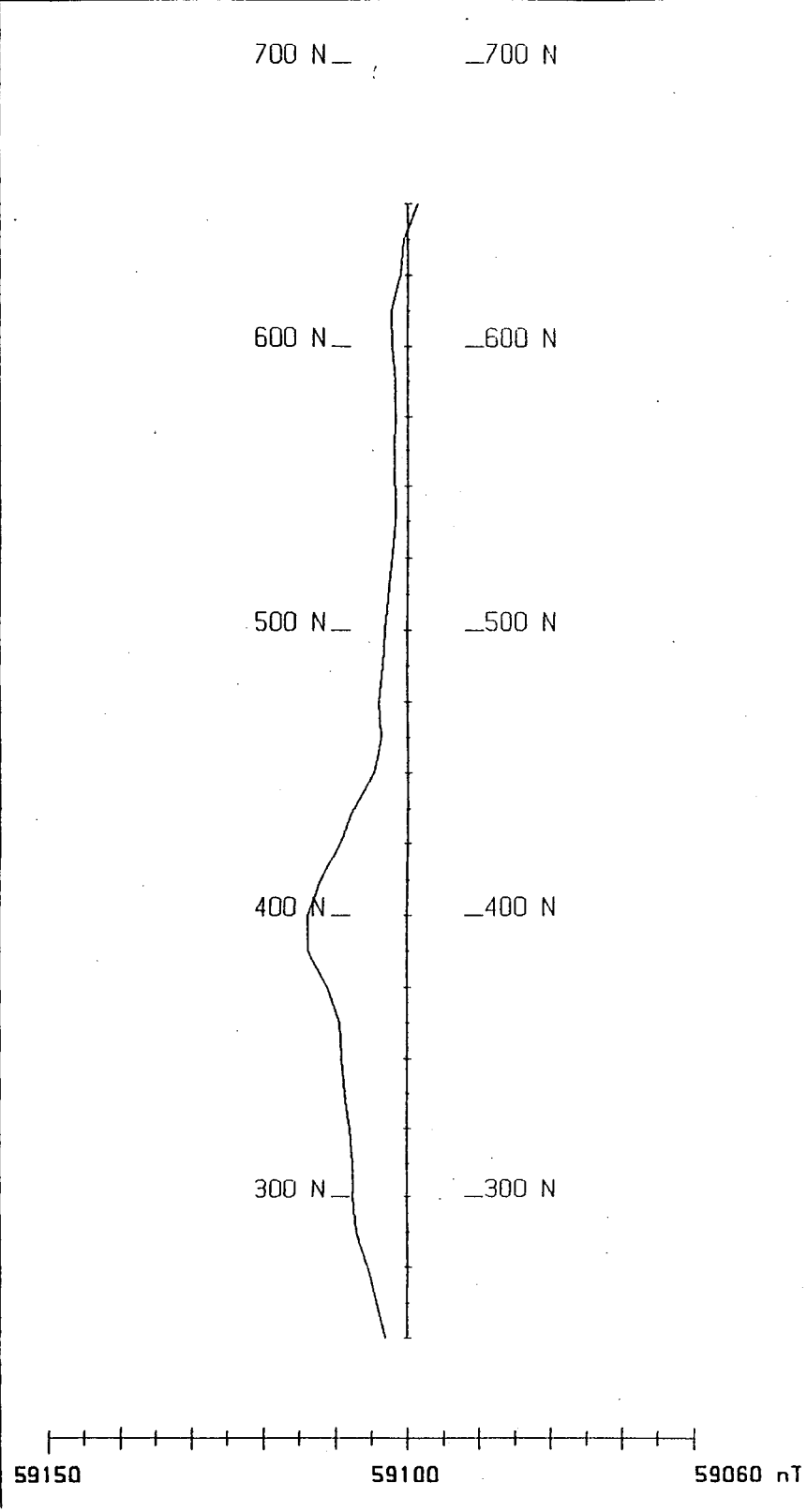
SIDON INTERNATIONAL RESOURCES

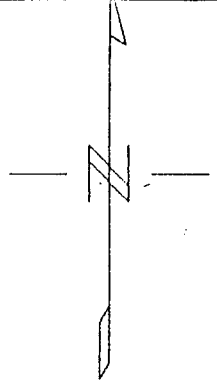
MAGNETIC SURVEY -- Strip Profile

Wellside Target
Slave lake, Alberta

Feb. 2 /98

DATE: 01/98 Instrument: Omni IV
Base Station Setting: Reading at 10 second
line Azimuth = 0 Plotted





Line 600 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

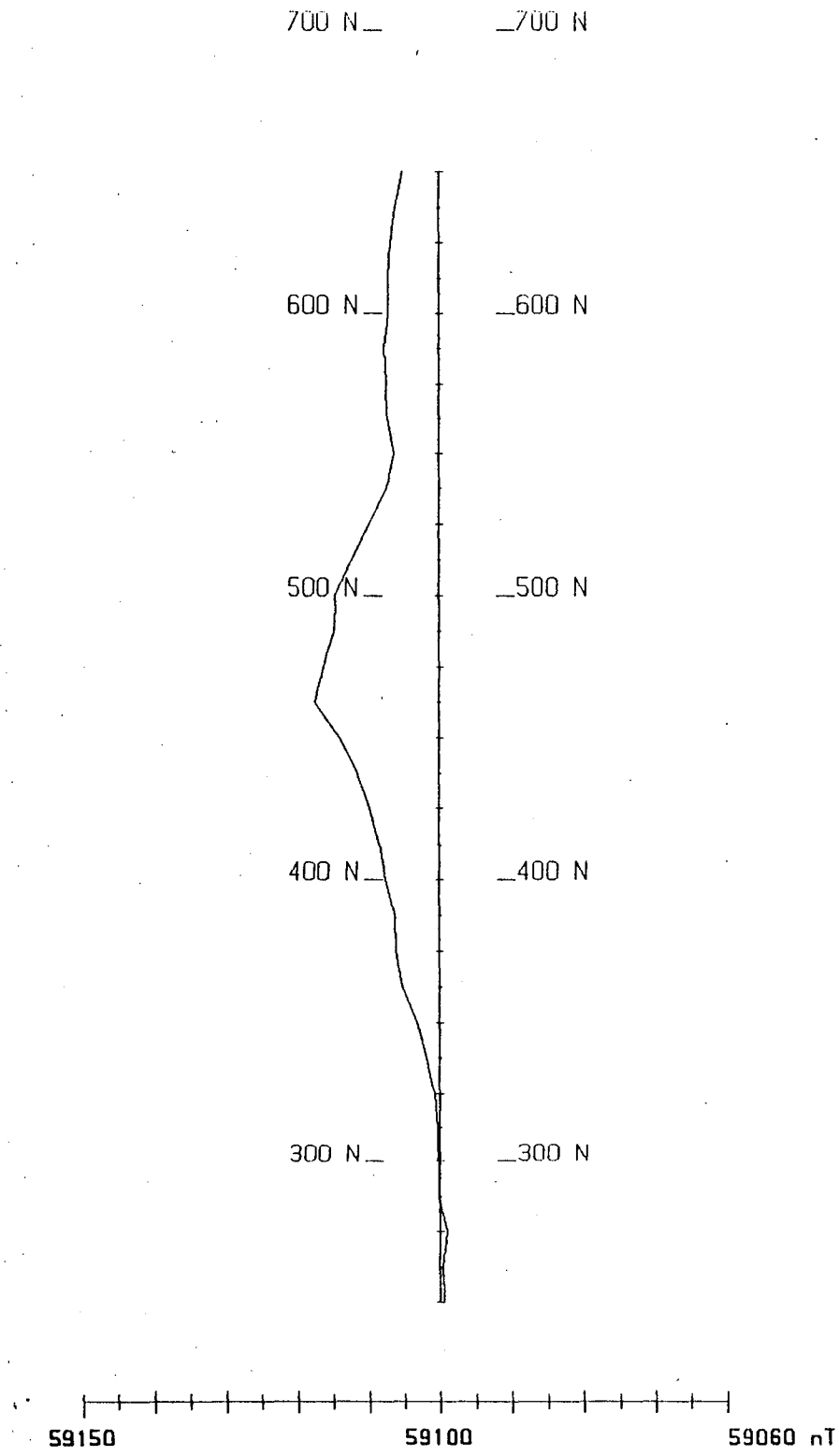
SIDON INTERNATIONAL RESOURCES CORP.

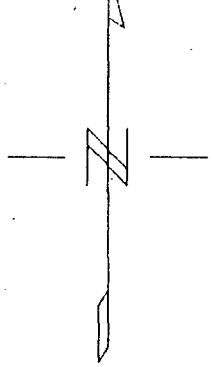
MAGNETIC SURVEY -- Strip Profile

Wellside Target
Slave lake, Alberta

Feb. 2/98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 10 second Intervals
line Azimuth = 0 Plotted by W.H.





Line 700 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

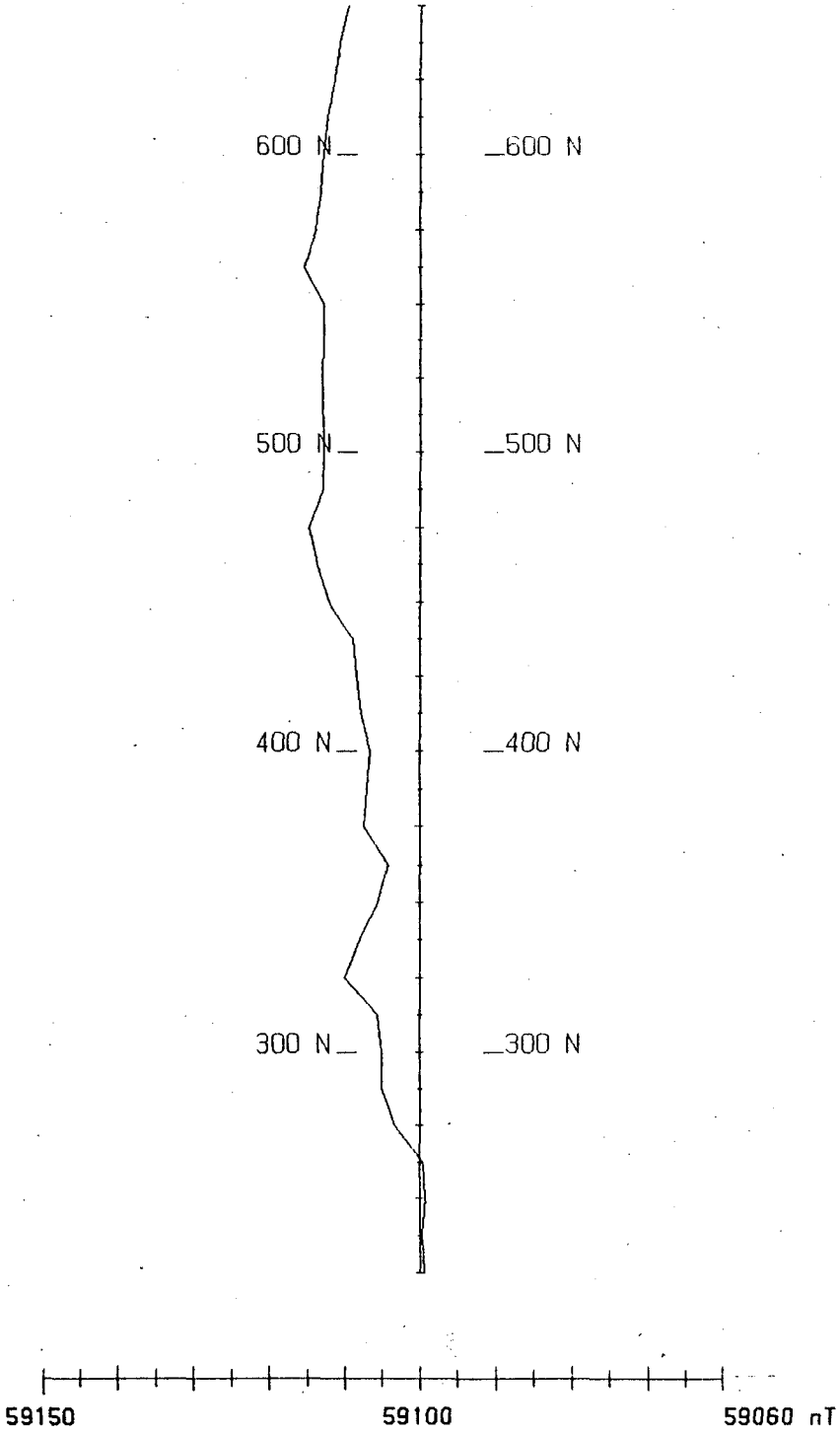
MAGNETIC SURVEY -- Strip Profile

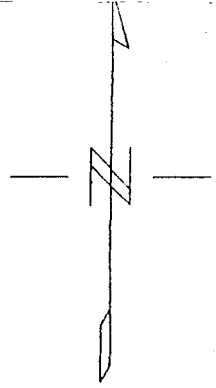
Wellside Target
Slave lake, Alberta

Feb. 2 /98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 10 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 800 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59100 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

SIDON INTERNATIONAL RESOURCES CORP.

MAGNETIC SURVEY -- Strip Profile

Wellside Target
Slave lake, Alberta

Feb. 2 /98

DATE: 01/98 Instrument: Omni IV , Omni Plu
Base Station Setting: Reading at 10 second Intervals
line Azimuth = 0 Plotted by W.H.

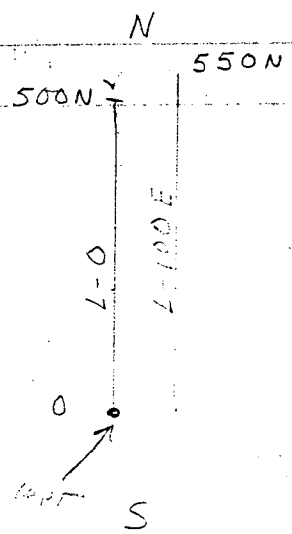
West Hill:

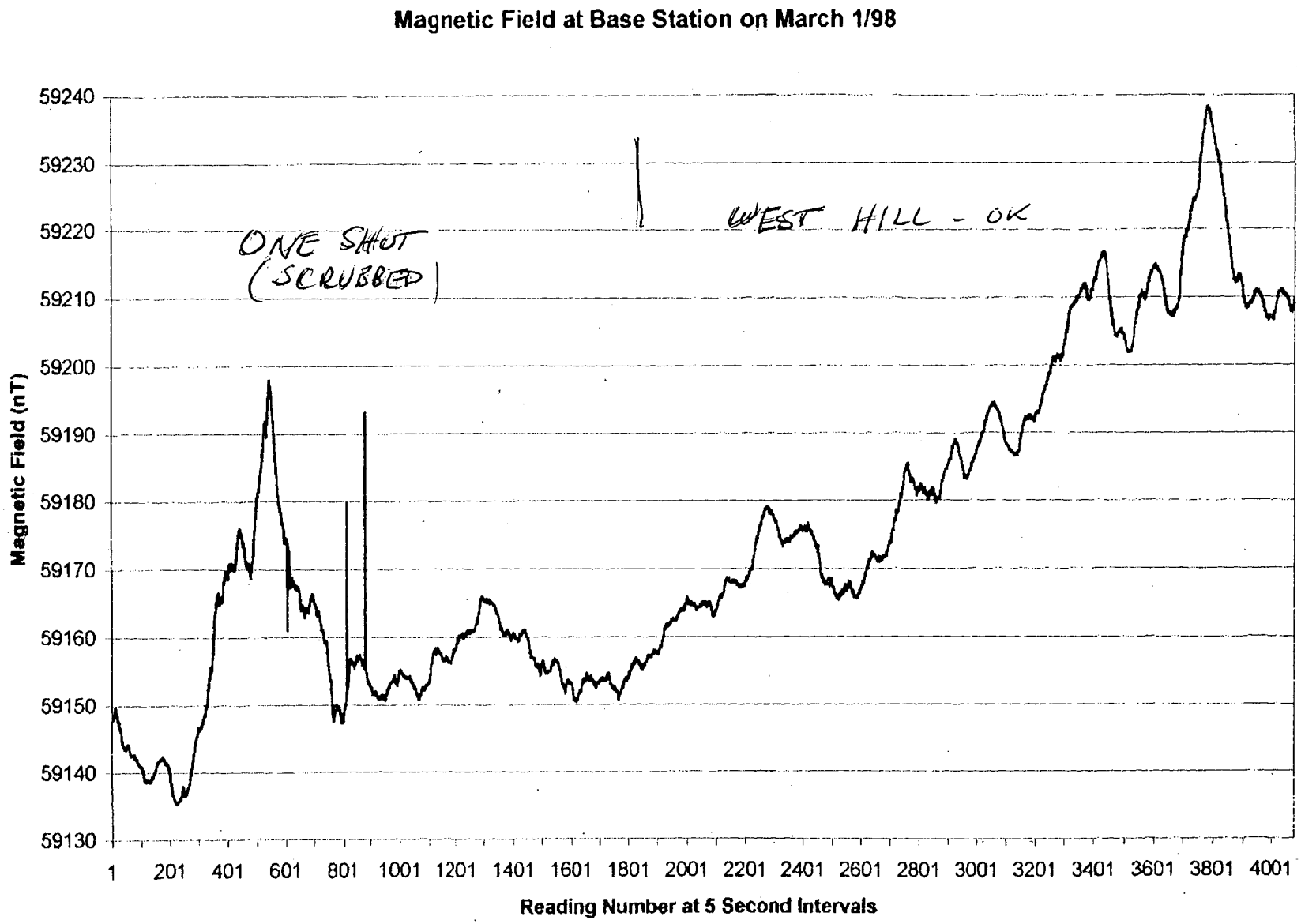
1 MARCH 98
RECON

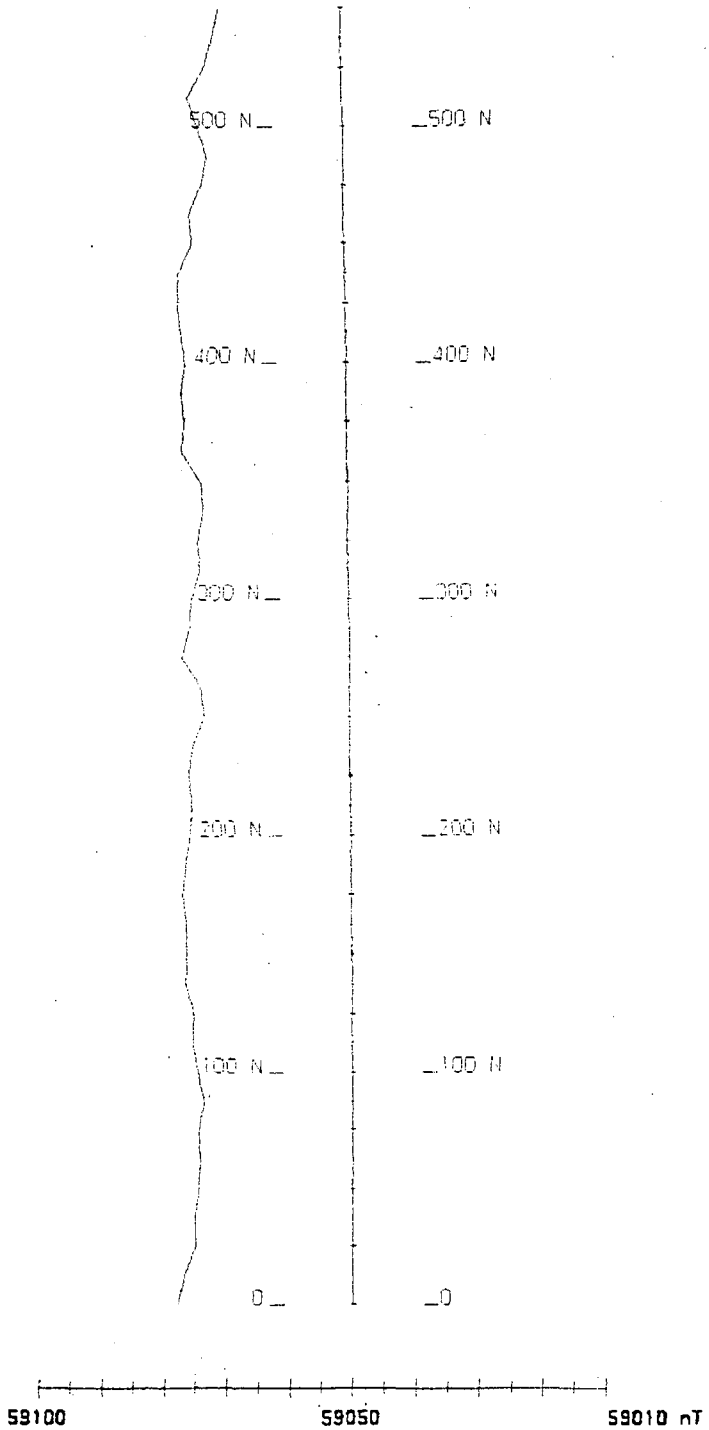
= 30.53'

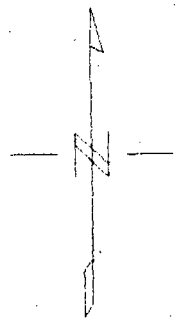
wpt: 56° 30' 31.6" N
113° 15' 39.8" W } L-0 at 0

= 15.66'




Magnetic Field at Base Station on March 1/98
Magnetic Field (nT)
59240
59230
59220
59210
59200
59190
59180
59170
59160
59150
59140
59130
1
201
401
601
801
1001
1201
1401
1601
1801
2001
2201
2401
2601
2801
3001
3201
3401
3601
3801
4001
Reading Number at 5 Second Intervals
ONE SHOT (SCRUBBED)
WEST HILL - OK





Line 100 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

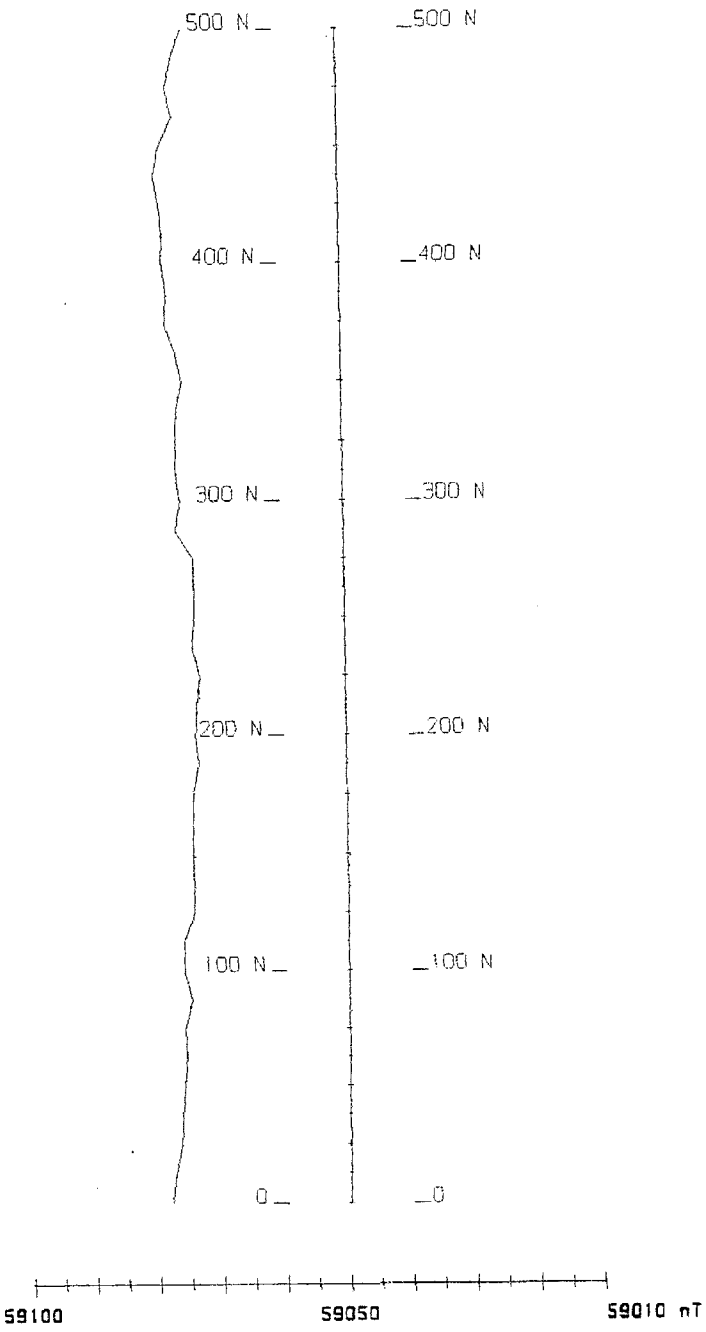
SIDON INTERNATIONAL RESOURCES CORP.

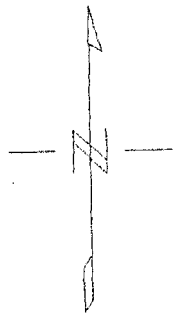
MAGNETIC SURVEY -- Strip Profile

Westhill Target
Slave lake, Alberta

DATE: March 1/98 Instrument: Omni IV , Omn
Base Station Setting: Reading at 5 second Intervals
line Azimuth = 0 Plotted by W.H.

EASTERN GEOPHYSICS LIMITED





Line 0 E

Scale 1:2500

50 0 50 100
(metres)

LEGEND

Magnetic Field: ———

PROFILE CENTRES
Magnetic Field : 59050 nTeslas

PROFILE VERTICAL SCALE
Magnetic Field: 10 nTeslas/cm

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