REPORT ON GEOLOGICAL RECONNAISSANCE AND GROUND GEOPHYSICAL SURVEYS ON THE ZN 25,26,28 AND 29 CLAIMS AT DUNCAN LAKE, BRITISH COLUMBIA

Slocan Mining Division
N.T.S. Map Area 82K/7E
Latitude: 50° 21' North   Longitude: 116° 54' West

Submitted to the

Chief Gold Commisssioner
Mineral Titles Branch
Mineral Resources Division
Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

On behalf of 100% owner and operator

W. Don Sutherland
Glenbow Road
RR #2
Cochrane, Alberta
T3C 2S6

by

Richard D. Hall, Ph.D., P.Eng.
Consulting Geologist
February 29, 1992

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PROVINCE OF BRITISH COLUMBIA, MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES-ATTACHMENTS

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1.0 INTRODUCTION

1.1 Introductory Statement

W. Don Sutherland of Cochrane, Alberta is 100% owner of the ZN Claim Group consisting of 100 units contiguous with the Duncan lead-zinc deposit (approximate reserves of 9 million tonnes of 2.7 % lead and 2.9 % zinc) owned by the Consolidated Mining and Smelting Company of Canada Limited.

The ZN Claim Group was staked in 1991 to cover possible down-dip extensions to Duncan-type ore in the Badshot Formation, possible fold repetitions of the favourable Badshot Formation within the Howser Syncline east of Duncan Lake and the Badshot Formation as exposed on the east limb of the Howser Syncline.

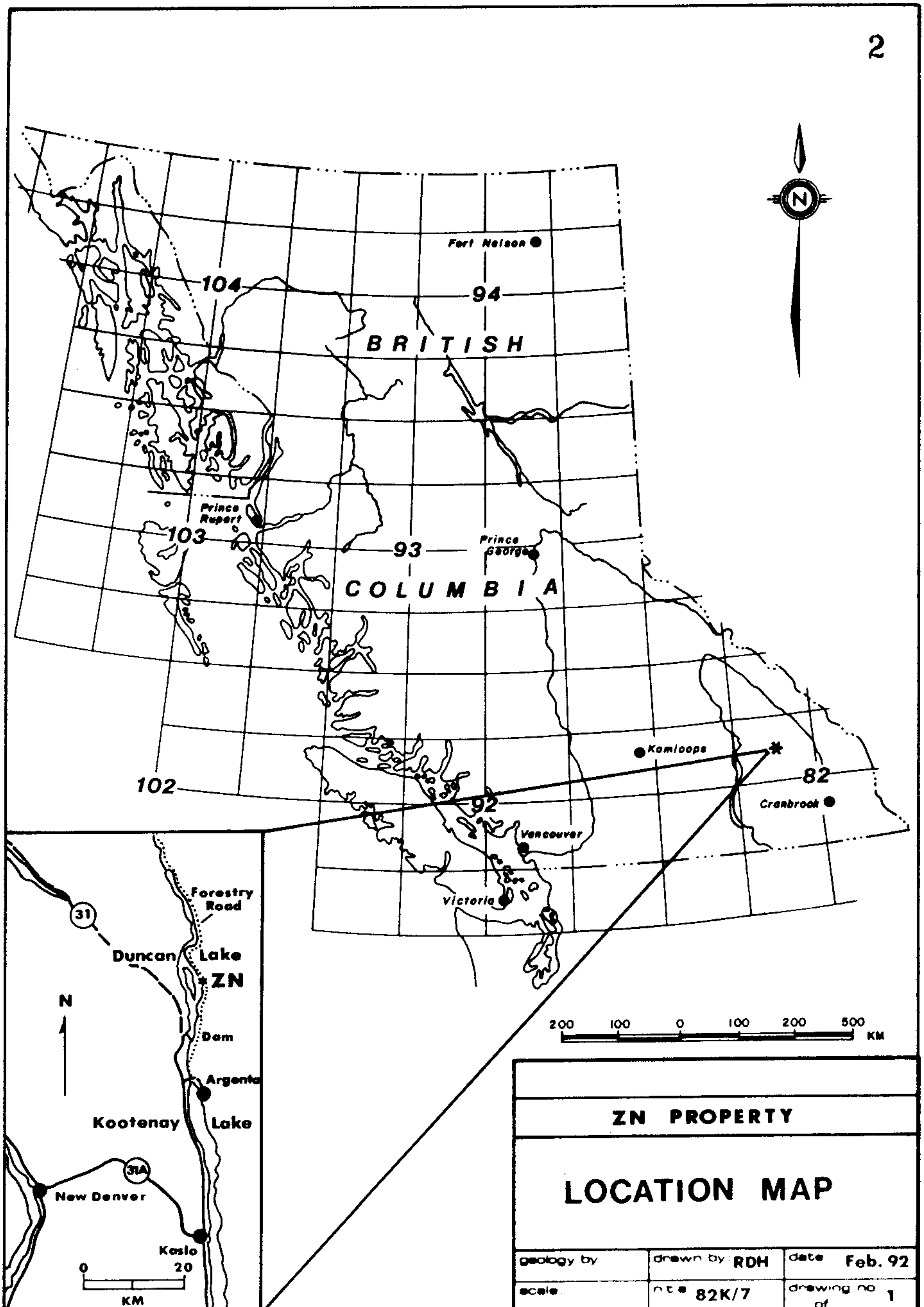
Geological reconnnaissance and a VLF/magnetometer ground geophyical survey were carried out over part of the property during the spring of 1991 and during January of 1992, respectively. The geophysical work was designed to follow-up spot zinc values in soils (samples DL-7 to 10, ranging to 152 ppm zinc) associated with a rusty weathering calcrete horizon and a grab sample of copper-rich, magnetic float (sample DL-2; 5.0% copper, 11.9 ppm silver) both of which were discovered in areas of poor bedrock exposure near Duncan Lake.

This report was commissioned by W. Don Sutherland of Glenbow Road, RR #2, Cochrane, Alberta, TOL OWO. The purpose of the report is to document completed work programs, representing exploration expenditures in the amount of $22,105.00, filed as two years of assessment credit to the ZN Claim Group on January 28, 1992.

1.2 Property Location and Access

The ZN Claim Group is located on the Duncan Peninsula and east side of Duncan Lake, in the Columbia Mountains physiographic division of National Topographic Series map area 82K/7W (Duncan Lake), at 50° 21' north latitude and 116° 54' west longitude (Figure 1).

Access to the property is 51 kilometres by road, north of the town of Kalso, along Highway 31, the turnoff to Argenta and the Duncan Lake Forestry Road. The 17 kilometre marker on the Duncan Lake Forestry Road is 100 metres south of the hub for a flagged grid established for the ground geophysical survey.


Fort Nelson
104
94
BRITISH
Prince Rupert
103
93
Prince George
COLUMBIA
Kamloops
82
102
92
Cranbrook
Vancouver
Victoria
200 100 0 100 200 500 KM
Forestry Road
31
Duncan
Lake
ZN
N
Dam
Argenta
Kootenay
Lake
31A
New Denver
Kaslo
0 20
KM
ZN PROPERTY
LOCATION MAP
geology by
drawn by RDH
date Feb. 92
scale
nts 82K/7
drawing no 1
of

1.3 Property Description and Ownership

The ZN Claim Group consists of a total of 100 units, recorded as 22 two-post claims and 3 four-post claims on February 16 to 18, 1991 and as an additional 2 four-post claims on April 9, 1991. The claims were grouped on January 17, 1992 but not common dated. Assessment work credit in the amount of $22,105.00 (Appendix I) was filed on January 28, 1992 and is sufficient to maintain the claims in good standing to February 16, 1994. A list of claims comprising the group is presented in Appendix II. W. Don Sutherland of Cochrane, Alberta is 100% owner of the ZN Claim Group.

The ZN Claim Group is tied to the east perimeter of the Duncan Lake property of Cominco Limited over a strike length of 9 kilometres between Griz Creek and Glacier Creek (Figure 2). The claim group straddles the Duncan Peninsula and extends up the west foot of Mt. Simpson to an elevation about 750 metres above Duncan Lake. Due to operation of the Duncan Dam, seasonal fluctuation in the level of Duncan Lake can be 30 metres or more.

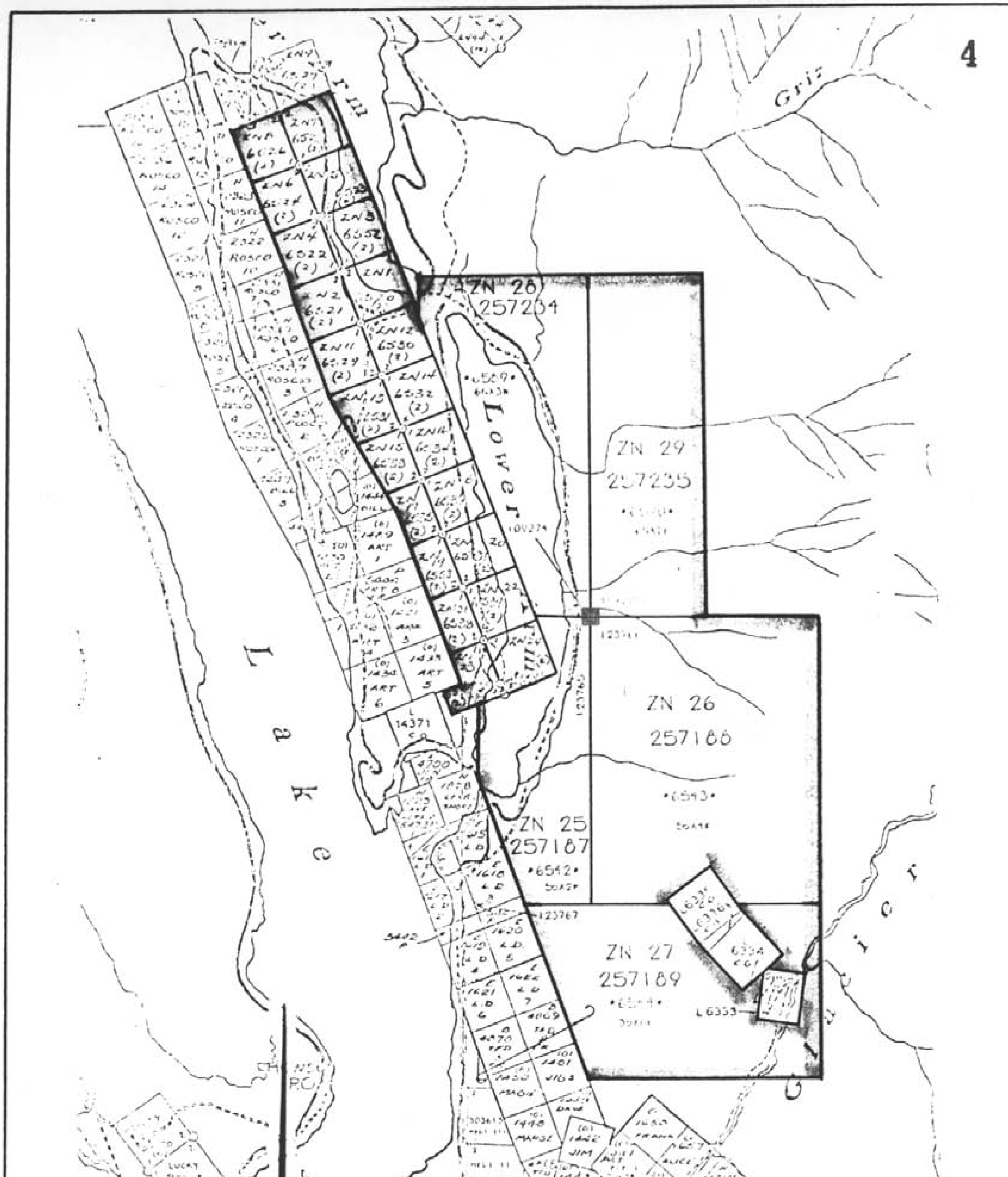
Bedrock exposure below an elevation of 750 metres and near Duncan Lake is poor. The property is covered by an immature mixed forest of cedar, pine, spruce and birch. Some clearcut logging has been carried out in the northeast part of the grid area.

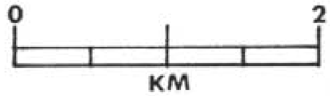
1.4 Summary of Work Done

Work completed on the property to date includes the following:

- 15 man days of geological reconnaissance and prospecting during April and May of 1991

- 34 man days of combined VLF/magnetometer ground geophysical survey, representing 2000 stations and 7200 readings during January of 1992; the program included establishment of 10 line-kilometres of flagged grid, chained without correcting for topography





ZN GROUP

CLAIM MAP

PROJECT	DRAWN **RDH**	FIGURE
NTS **82K/7E**	DATE **Feb.92**	**2**

R.D. HALL, Ph.D., P.Eng.

2.0 GEOLOGICAL SETTING

2.1 Regional

The Duncan Lake area occurs within Kootenay tectonic terrane of the Omineca Belt structural subdivision of the Columbian orogen. Kootenay Terrane is bounded by Slide Mountain and Monashee terranes west of Kootenay Lake and by Cariboo Terrane, comprising the Selkirk Anticlinorium, east of Kootenay Lake (see Struik, 1986).

Strata of Kootenay Terrane comprise four main stratigraphic divisions:

1. Precambrian grit-marble-grit succession (Horsethief Creek Group)

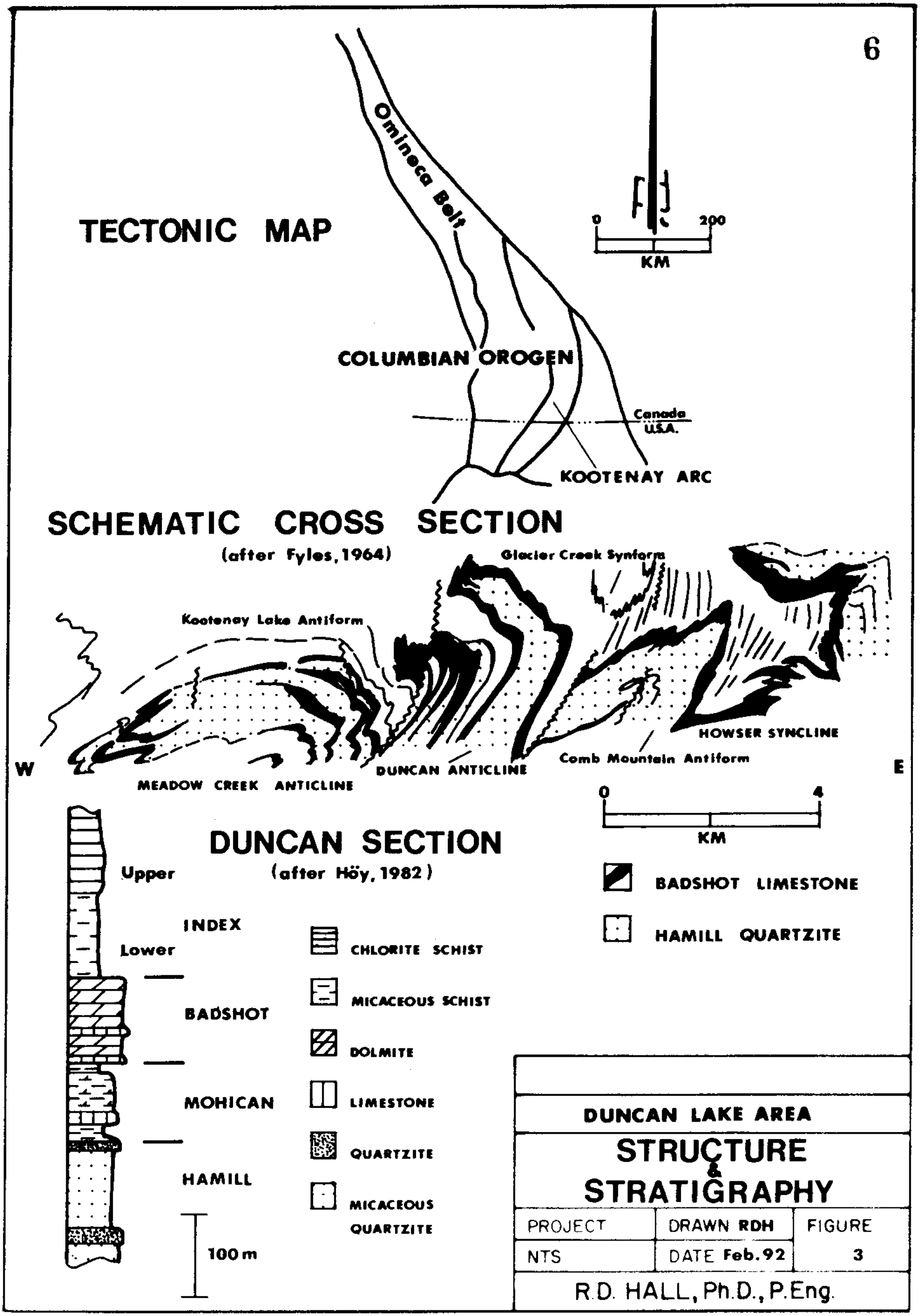
2. Lower Cambrian quartzite-limestone couplet of the Hamill Group and Mohican-Badshot formations marking the Precambrian boundary

3. Lower Paleozoic dark grey grit-siliceous pelite; volcanics and limestone; grit and pelite successions (Lardeau Group)

4. Upper Paleozoic fine grained clastics and bioclastic limestone succession (Early Mississippian to Pennsylvanian Milford Group)

Duncan Lake is centrally located within a north-trending, arcuate structural zone, about 400 kilometres in length, historically referred to as the Kootenay Arc (Figure 3). Strata of the Kootenay Arc are Middle Proterozoic to Middle Jurassic in age, polydeformed, and characterised by a north-south striking and moderately west dipping structural grain. This is due to prominent late folds with upright to west dipping axial planes superposed on early tight to isoclinal, north trending recumbent folds. The early folds are Middle Ordovician to Late Mississippian in age and are probably an expression of the Antler Orogeny. Late folds are syn- to postmetamophic in age. High angle faults, parallel and transverse to the structural grain are recognised. The regional geology of the Kootenay Arc has been described by Fyles (1964), Reesor (1973) and others.

Duncan Lake is located within the Purcell Trench, a 650 kilometre lineament extending from Idaho to the Rocky Mountain Trench. The Duncan Anticline and the Howser Syncline are the principal structural elements in the Duncan Lake area.


TECTONIC MAP
Omineca Belt
0
200
KM
COLUMBIAN OROGEN
Canada
U.S.A.
KOOTENAY ARC
SCHEMATIC CROSS SECTION
(after Fyles, 1964)
Glacier Creek Synform
Kootenay Lake Antiform
HOWSER SYNCLINE
Comb Mountain Antiform
W
E
DUNCAN ANTICLINE
MEADOW CREEK ANTICLINE
0
4
KM
BADSHOT LIMESTONE
HAMILL QUARTZITE
DUNCAN SECTION
(after Höy, 1982)
Upper
INDEX
Lower
BADSHOT
MOHICAN
HAMILL
100 m
CHLORITE SCHIST
MICACEOUS SCHIST
DOLMITE
LIMESTONE
QUARTZITE
MICACEOUS QUARTZITE
DUNCAN LAKE AREA
STRUCTURE & STRATIGRAPHY
PROJECT
DRAWN RDH
FIGURE
NTS
DATE Feb. 92
3
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2.2 Zn Property

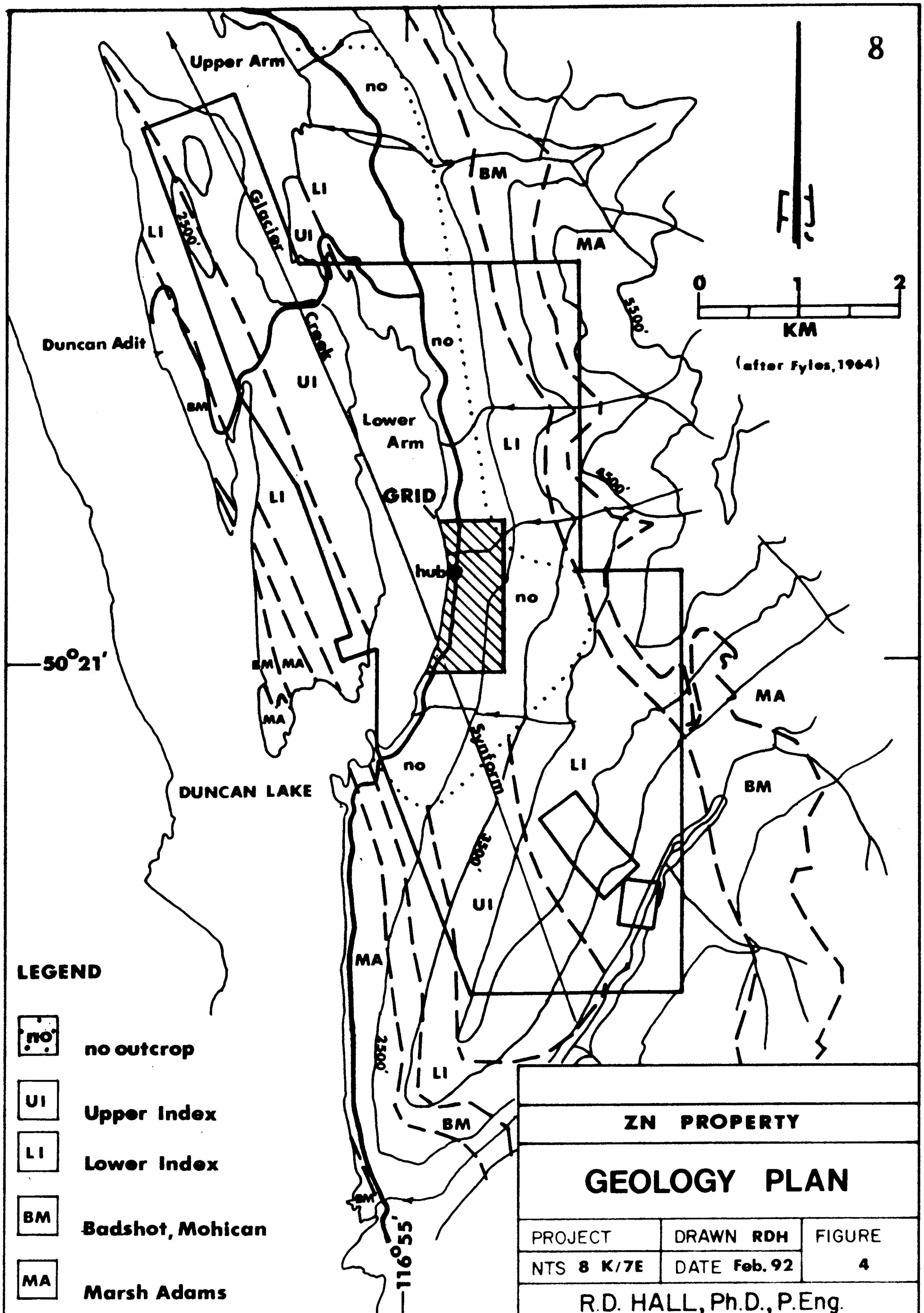
The property covers the west limb of the Duncan Anticline, and both the core and east limb of the Howser Syncline (Figure 3).

Quartzites of the Marsh Adams Formation and carbonates of the Badshot-Mohican formations, defining the east limb of the Howser Syncline are exposed along the 3500 feet elevation contour and the east perimeter of the property (Figure 4) The remainder of the property is thought to be underlain by younger strata of the Index Formation of the Lardeau Group as mapped by Fyles (1964). However, much of the property at lower elevations and in proximity to Duncan Lake has little or no outcrop and the structural relationships within the Howser Syncline are complex.

The Index Formation is subdivided into an upper division of green chloritic schists and a lower division of grey carbonaceous schists. As the property straddles the garnet isograd, chloritic rocks commonly contain small porphyroblasts of brown garnet.

The Glacier Creek synform, a phase II fold structure, is mapped east of Duncan Lake in the core of the Howser Syncline. On the ZN property, the synform is defined by a trough of green schists of the Upper Index Formation enclosed within grey schists of the Lower Index Formation. Within the synform, and north of Duncan Lake, this stratigraphic relationship can be reversed.

Both strata and cleavage strike approximately 340° and dip moderately to steeply east. The dominant lineation plunges 10° to the north by northwest.



LEGEND

no	no outcrop
UI	Upper Index
LI	Lower Index
BM	Badshot, Mohican
MA	Marsh Adams

ZN PROPERTY

GEOLOGY PLAN

PROJECT	DRAWN RDH	FIGURE
NTS 8 K/7E	DATE Feb. 92	4

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3.0 REGIONAL SETTING OF LEAD-ZINC MINERALISATION

3.1 Introduction

Carbonate-hosted lead-zinc deposits of the Duncan and Salmo mining camps occur within the Lower Cambrian Badshot/Reeves Formation. Similar deposits, mainly further south in Washington State, occur within the Middle Cambrian Metaline Formation. Both syngenetic and epigenetic models have been proposed to account for the range in styles of lead-zinc mineralisation observed. Despite significant previous production, there are no current producers of lead and zinc in the Kootenay Arc.

Stratiform lead-zinc deposits of the Duncan-type are associated with the Badshot Formation which is thought to represent carbonate deposition in a shallow, marine shelf environment. The Badshot Formation is a strike persistent, relatively pure and well banded unit of medium to dark grey limestone several tens to 100 metres thick. Mineralisation is associated with dolomitised and silicified segments of the formation.

More than a dozen occurrences of lead-zinc mineralisation in the Badshot Formation are known in the Duncan Lake area. These are associated with the complex Duncan anticline fold structure over a strike length of 30 kilometres. The Argenta and Mag prospects on the west limb and the Duncan, Amato-Ruby, Surprise, Lavina and Sal prospects on the east limb of the structure are the more notable occurrences. The potential for a large lead-zinc deposit in the Duncan Lake area was first recognised by Walker, Bancroft and Gunning (1929). The Duncan deposit contains the most significant reserves of lead and zinc developed in this area to date.

3.2 Duncan Deposit

The Duncan deposit (Muraro, 1962; Fyles, 1964) of Cominco Limited is located, at 50°21'50" north latitude and 116°56'50" west longitude, on the Duncan Peninsula and east side of Duncan Lake. The deposit contains total estimated reserves of approximately 9 million tonnes of 2.7% lead, 2.9 % zinc and negligible silver in 8 lenticular zones (Hoy, 1982). These are located in the hinge of a phase II fold on the east limb of the phase I Duncan Anticline (Figure 9). Ore bodies, consisting of the fine grained, sulphide assemblage pyrite-galena-sphalerite, are elongated parallel to the regional plunge of 10°, bearing 335° - 340°. The No. 6 zone contains some pyrrhotite.

The Duncan property includes the Lakeside, Amato-Ruby and Glacier properties located in the early 1920's. The property was optioned by Cominco in 1957. Underground exploration of the deposit was mainly carried out during the period 1959 to 1961 from an adit, collared about 12 metres above Duncan Lake at an elevation of 1840 feet (560.8 m.), driven on 070° through the No. 6, 7 and 8 ore bodies for 305 metres and southward along strike of the No. 7 zone for approximately 915 metres. Although the portal was sealed prior to completion of the Duncan Dam, which raised the level of the lake about 30 metres, a vent raise provides alternate access to the level. Recent work on the property in 1991 included 1069 metres of surface diamond drilling in 2 holes.

The eight mineralised zones found on the Duncan property include the following:

No. 1 zone on the north side of Glacier Creek, exposed in the adit of Lardeau Lead & Zinc Mines Ltd. and in nearby trenches (GLCACIER)

No. 2 zone located at an elevation of 3,500 feet (1067 m.) on the ridge between Glacier Creek and Duncan Lake (SUMMIT)

No. 3 zone on the south side of the entrance to the Lower Arm of Duncan Lake (AMATO-RUBY)

No. 4 zone on the Duncan Peninsula at the north side of the entrance to the Lower Arm (LAKESIDE)

No. 5, 6, 7 and 8 zones occur in the Duncan adit area; the No. 6 zone is the largest discovered to date: 90 metres high on the dip, 6 to 30 metres thick and 915 metres long in the plunge direction.

The Badshot Formation in the mine section consists of upper and lower units of dolomite separated by a thin band of white crystalline limestone. The uppermost part of the upper dolomite is siliceous (Badshot "chert"). Most of the mineralisation is located along the contact between "chert" and dolomite in the upper dolomite unit.

4.0 PROPERTY WORK COMPLETED

4.1 Geological Reconnaissance

Geological reconnaissance was carried out on the ZN 25, 26, 28 and 29 claims by W. Don Sutherland during the periods April 27 to May 3 and May 16 to 23, 1991. The work included 15,370 feet of reconnaissance spontaneous potential survey and 12 grab samples of rocks and soils for geochemistry. The geochemical results and a location map for the samples are presented in Appendix III.

Results of this initial work include the following:

1. Location of a rusty weathering, heterolithic calcrete horizon on L1+00S, at station 0+50W; The calcrete is exposed for 120 metres along the shore of Duncan Lake at the high water mark, is close to a seasonal drainage and appears to represent precipitation of solutes from ground waters at a break in slope. Grab sample number C3101 of the calcrete/duricrust returned 15 ppb gold, 149 ppm tin, 75 ppm zinc and 643 ppm strontium. Fragments of rusty weathering calcrete were traced upslope from this exposure for 100 metres.

   Further up slope from this, 152 ppm zinc in soils (sample DL-10) were obtained from sampling of the B horizon on L1+00S at station 1+35E.

2. Malachite-stained and magnetic float, located on L4+00S at station 1+70W., returned 5% copper and 11.9 ppm silver (sample DL-2). This float is a calcareous schist with disseminated chalcocite and magnetite. The float was located 30 metres down slope from a total field magnetic anomaly of 1600 gammas amplitude.

   The magnetic anomaly is one of several similar magnetic anomalies, striking into Duncan Lake west of the baseline (see Figure 8). These anomalies are spatially associated with map Unit 3c-green mica schist and garnet mica schist of the Index Formation (Fyles, 1964).

3. 104 ppm zinc in soils (sample DL-6) were obtained from sampling of the C horizon located over a spontaneous potential anomaly at 20+00 south and 5+00 west.

4.2 VLF/Magnetometer Ground Geophysical Survey

Purpose of Survey:

During the period January 16 to 28 of 1992, a 10 line-kilometre combined VLF and total field magnetic survey comprising 2000 stations was completed on the ZN 25, 26, 28 and 29 claims. The survey was designed to investigate anomalies found, in areas of poor bedrock exposure, during the course of earlier geological reconnaissance and prospecting of the property. In addition, a west-east line 400 metres in length and oriented 20° south of the bearing of the Duncan adit was run in an attempt to define a geophysical signature for Duncan-type, lead-zinc mineralisation.

Operating Procedure:

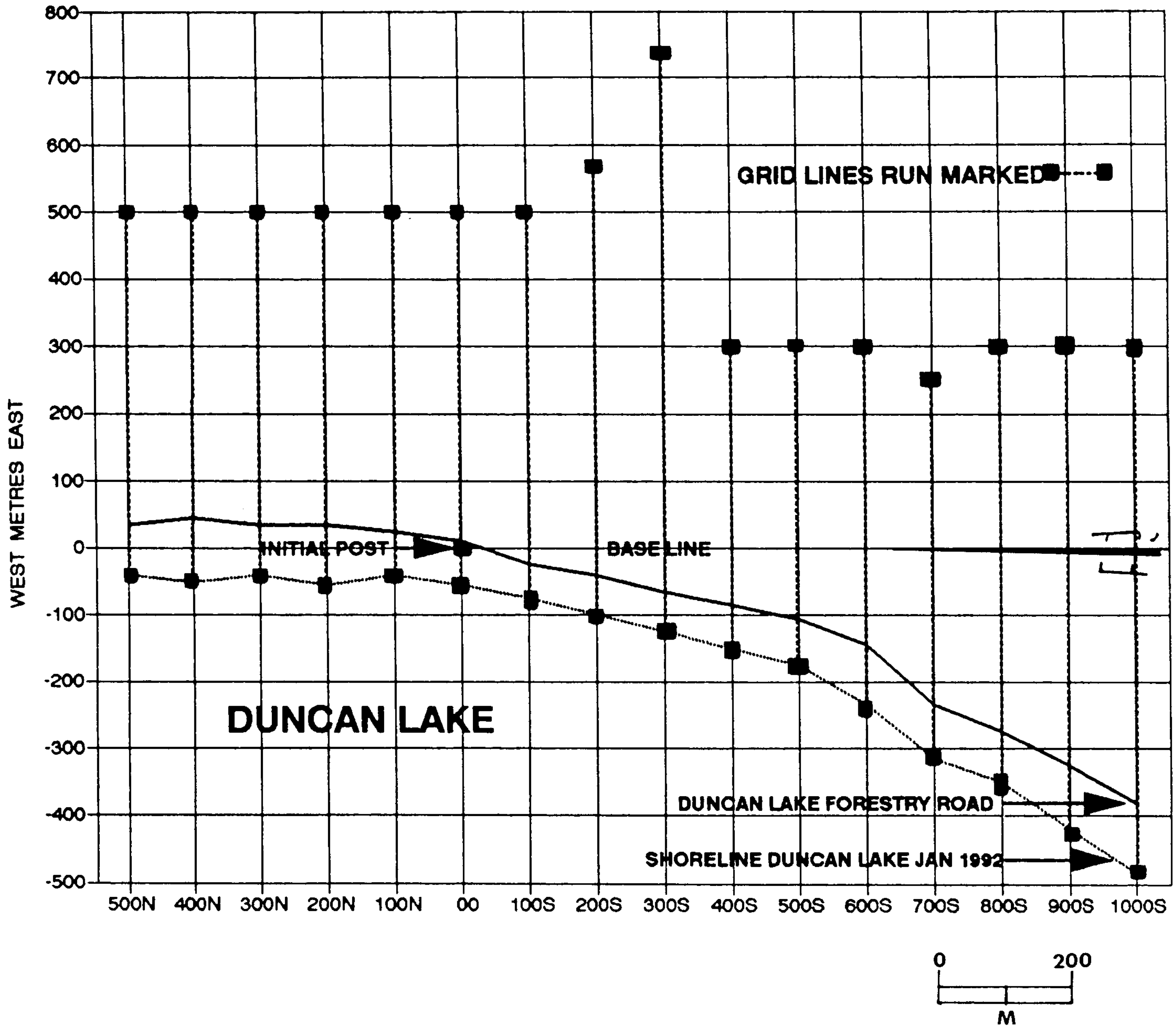
10 kilometres of flagged grid with baseline oriented 000° and cross-lines at 100 metre intervals between L5+00N and L10+00S were established for control (Figure 5). The hub for this grid is the common claim post for ZN-25, 26, 28 and 29 located 100 metres south of the 17 kilometre marker on the Duncan Lake Forestry Road. Stations were marked at 10 metre intervals and double flagged every 50 metres. The grid was chained uncorrected for slope.

An Omni-plus, microprocessor-based, combined VLF and magnetometer system, manufactured by EDA Instruments Inc., was used for the geophysical survey. This system requires use of a single operator. The total magnitude of the earth's magnetic field and secondary field components of the primary field associated with up to three separate VLF transmitting stations were measured and stored in Auto Record mode every 5 metres. The response for Station NLK at Jim Creek, Washington, U.S.A. is presented in line profiles as this transmitter is most aligned with the regional strike of strata.

An excerpt, Section I - General Information from the Operations Manual Omni-Plus VLF/Magnetometer System is presented in Appendix IV.

The consol for the Omni-plus system has 128K of RAM and the capability of storing up to 1300 sets of readings. However, power limitations of two battery cartridges restricted production to 1.5 line-kilometres of survey per day. Data was regularly dumped uncorrected and in ASC II format to a computer using Dump and VLF Dump modes.

Fig. 5 GRID MAP: ZN CLAIMS



Conventional software were used to produce the line profiles (Appendix V), 3D format plots (Figures 6 and 7), and a composite plan (Figure 8). The profiles are plotted looking north to preserve the standard convention of positive to negative crossovers.

Data reported here are uncorrected for diurnal variations of the earth's magnetic field and variations in the amplitude of the primary electromagnetic field associated with the transmitting stations. The VLF total field response, in particular, is susceptible to variations caused by atmospheric effects and changes in the power output from the transmitter. However, monitoring of a base station, duplicate readings of stations and duplicate sections of some lines appear to indicate that the variations in measured parameters over the period of the survey were small.

4.3 Duncan Deposit Profile

A geophysical line, 400 metres in length and uncorrected for slope, was run due east over the Duncan deposit in an attempt to define a magnetic and VLF signature for the mineralisation and/or stratigraphy (Figure 9, see also Appendix V). The starting point for the profile is approximately 60 metres east of the portal to the Duncan adit at the end of the Cominco mine road on the Duncan Peninsula. The end point for the profile is the Cominco mine road east of the ridge 2400 feet (732 metres) in elevation. The profile traverses strata of the Badshot Formation, Index Formation and the Number 6, 7, and 8 ore bodies.

Principal features of the profile are:

- A flat total field magnetic response (not shown in Figure 9)

- A VLF total field peak, +50 metres in width and centred at 65 metres, reflecting the Badshot "chert" and/or the No. 6 ore zone

- A well defined inphase crossover at 280 metres probably reflecting the contact between the "chert" unit (of the Badshot Formation) and the Index Formation.

Fig. 6a **1992 VLF/MAG SURVEY: ZN CLAIMS**

MAGNETOMETER SURVEY LINES 00 TO 500N

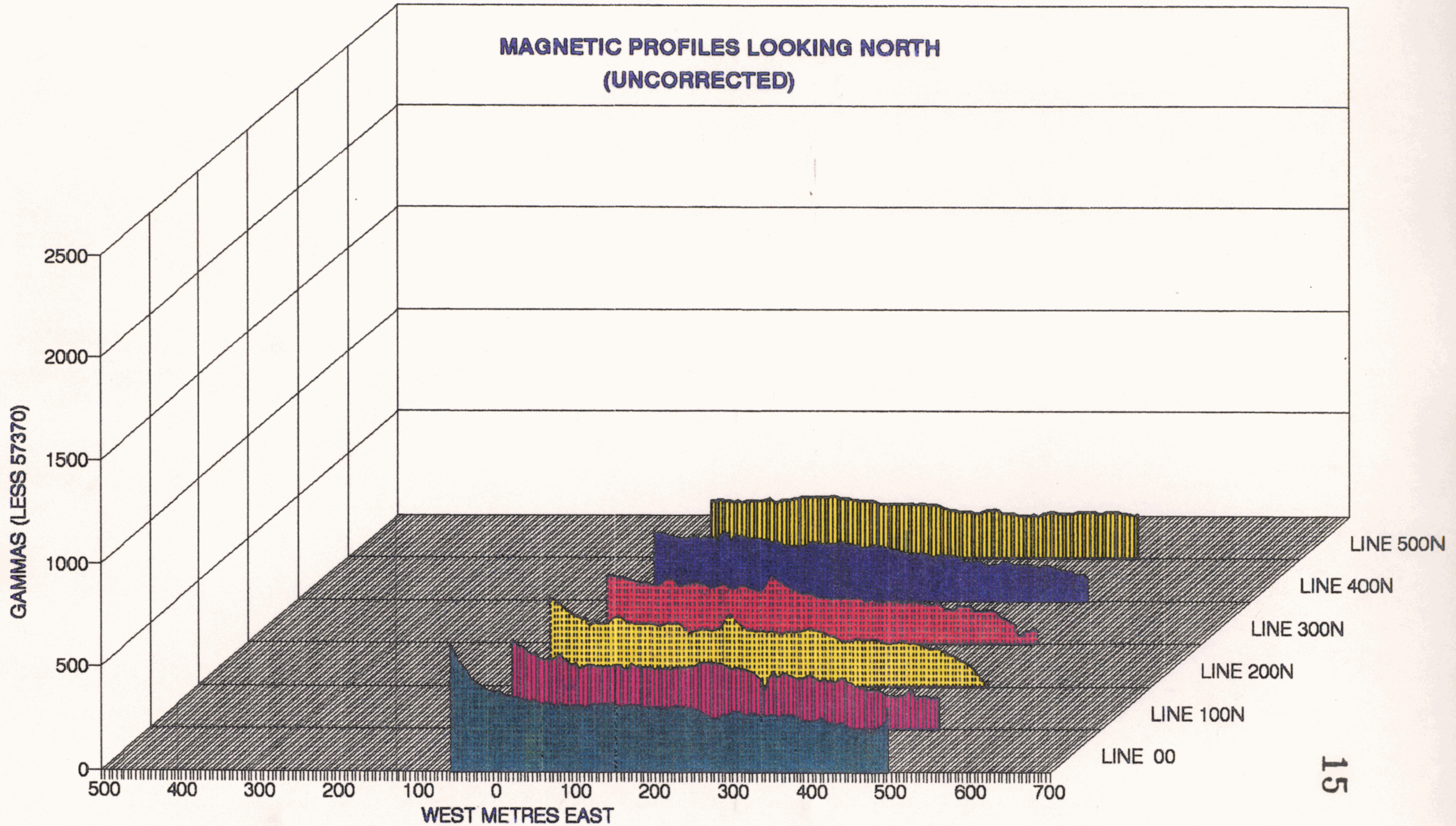


Fig. 6b **1992 VLF/MAG SURVEY: ZN CLAIMS**

MAGNETOMETER SURVEY LINES 500S TO 00

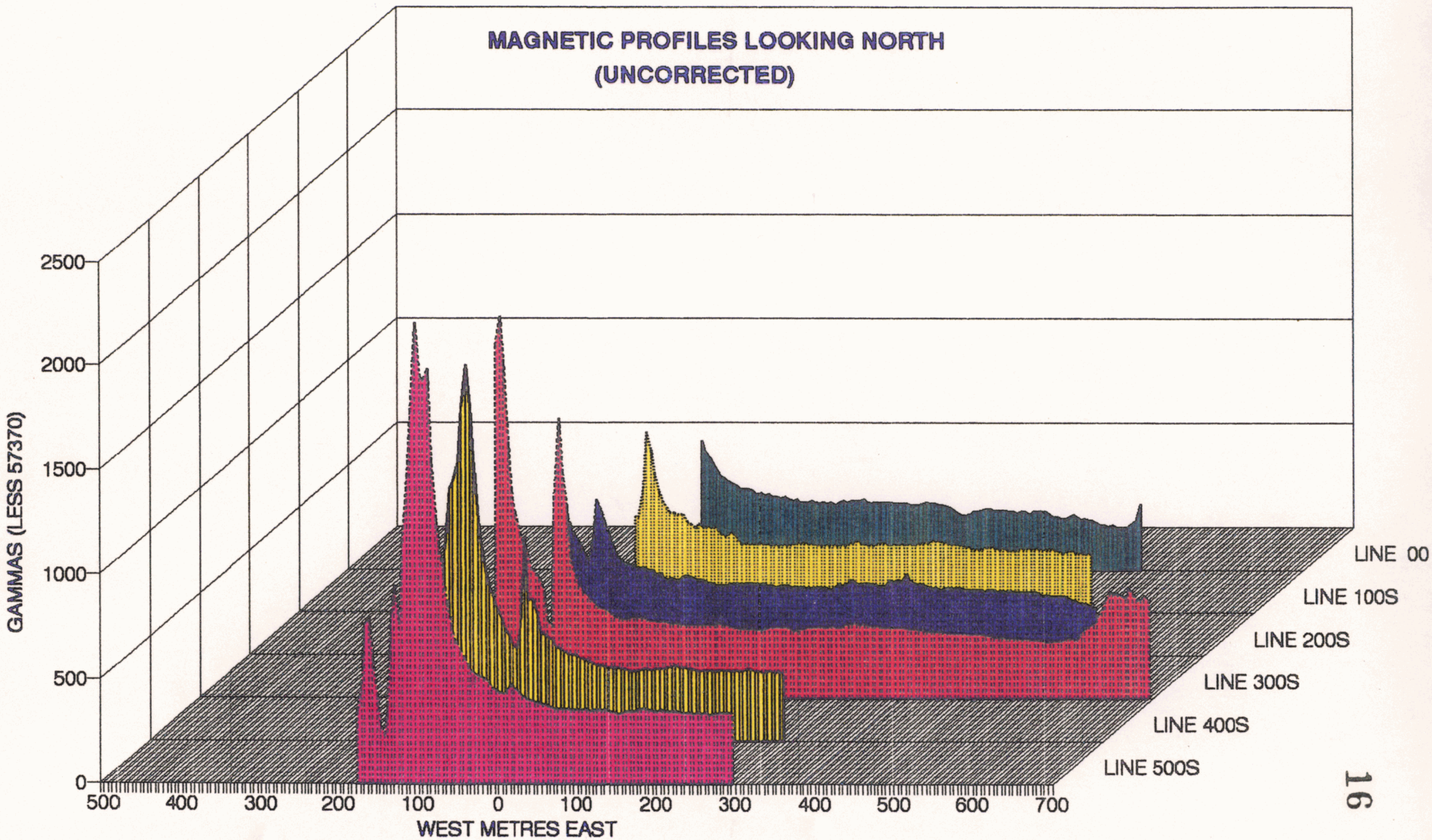


Fig. 6c **1992 VLF/MAG SURVEY: ZN CLAIMS**

MAGNETOMETER SURVEY LINES 1000S TO 500S

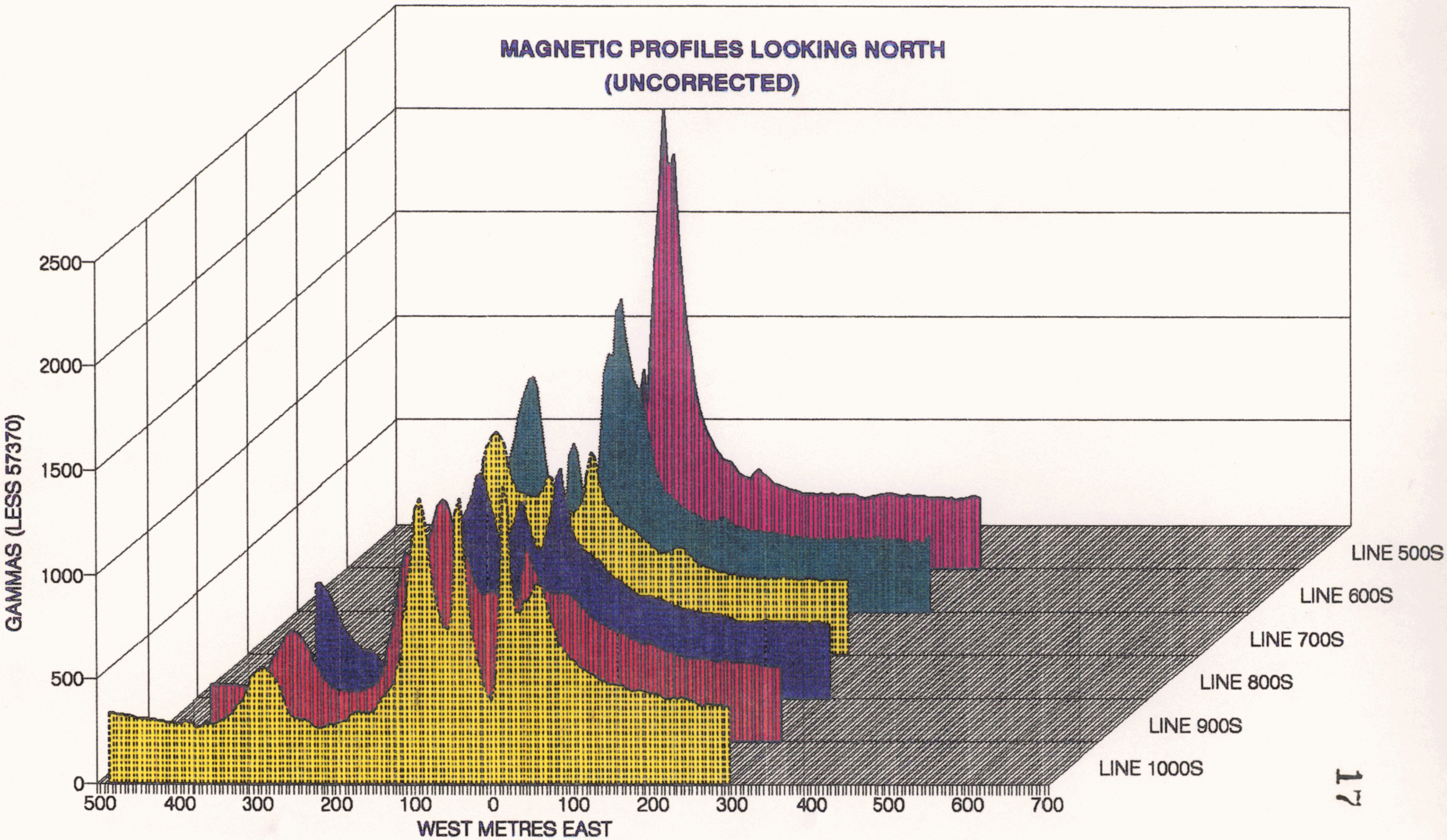


Fig. 7 **1992 VLF/MAG SURVEY: ZN CLAIMS**

VLF TOTAL FIELD

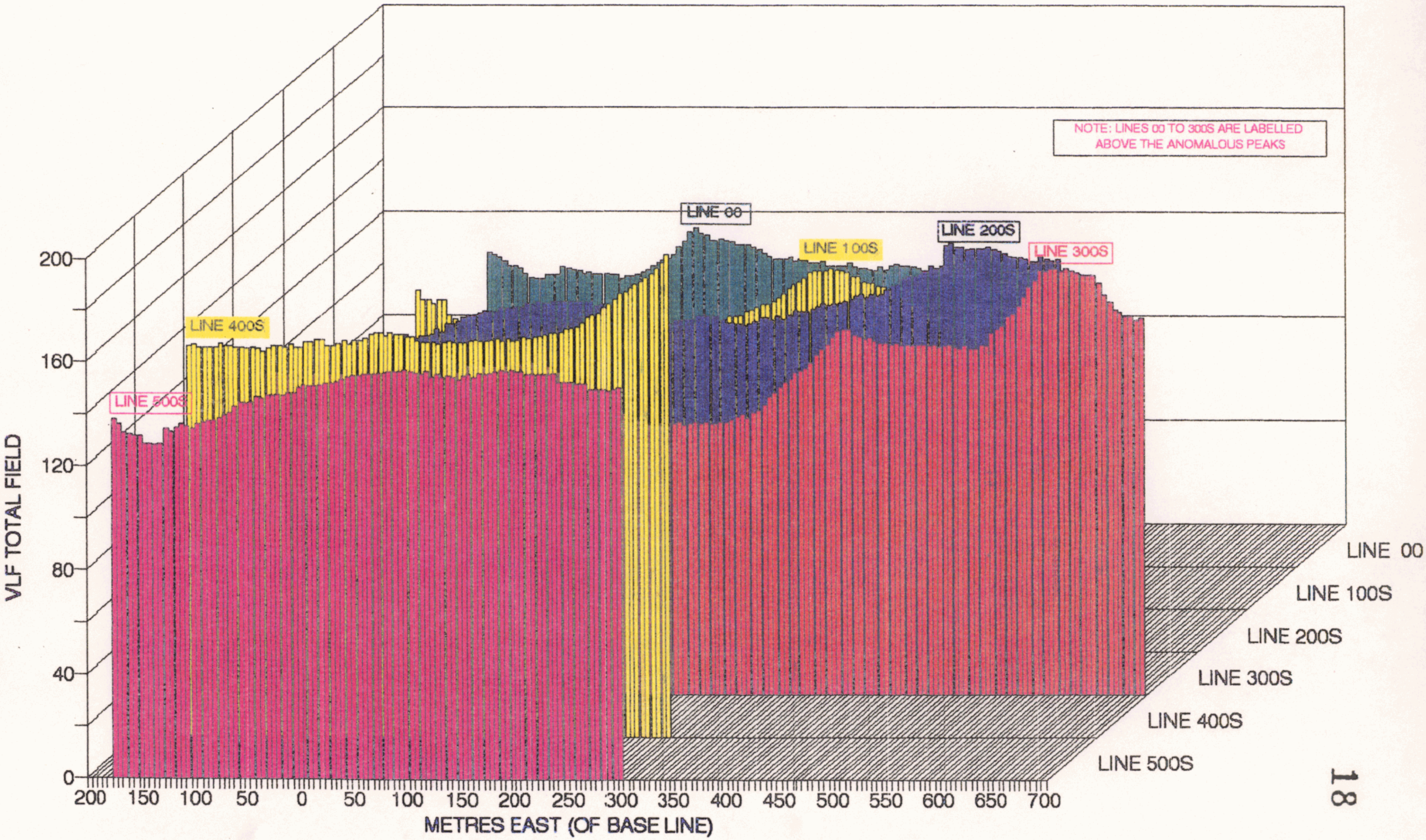
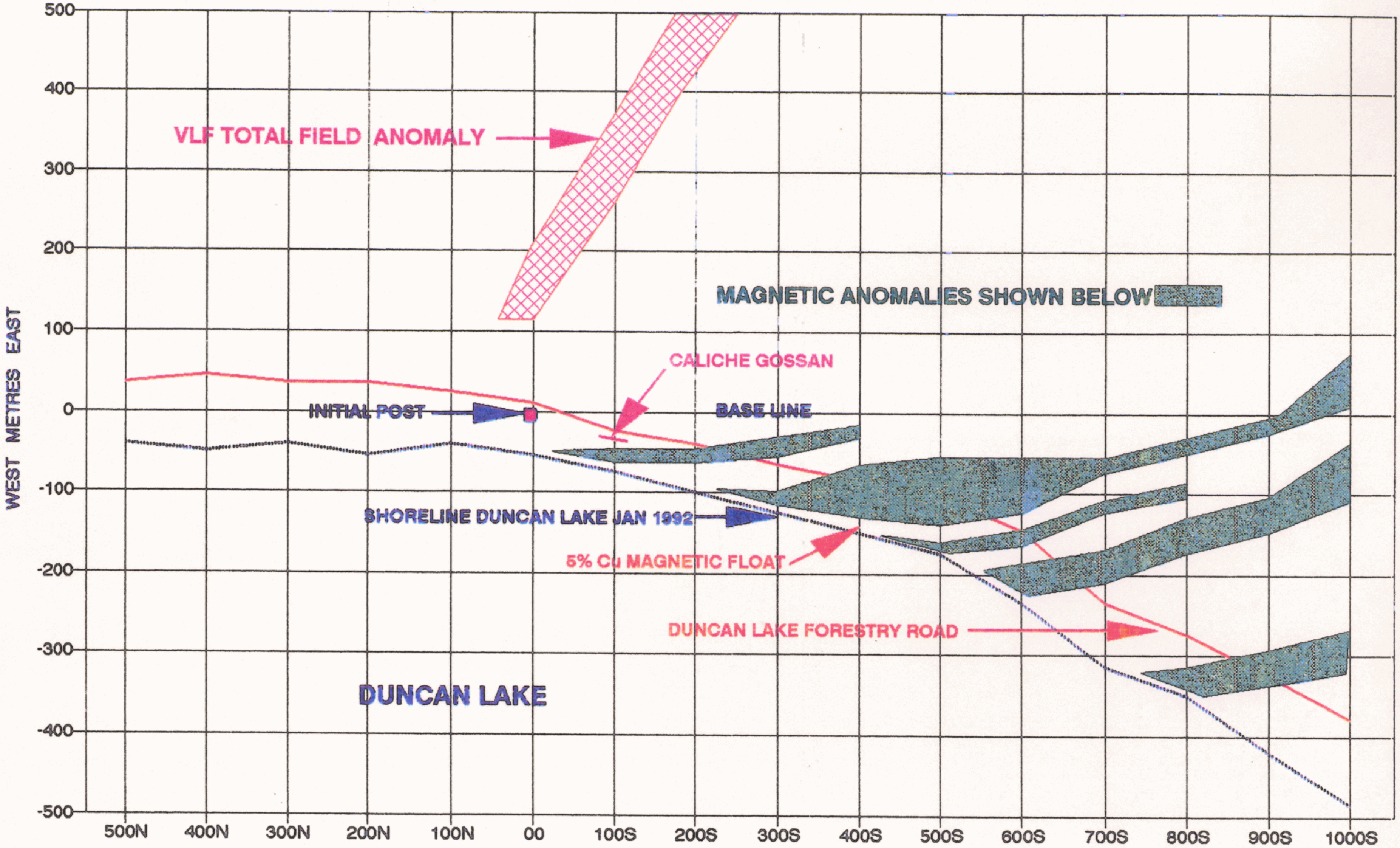
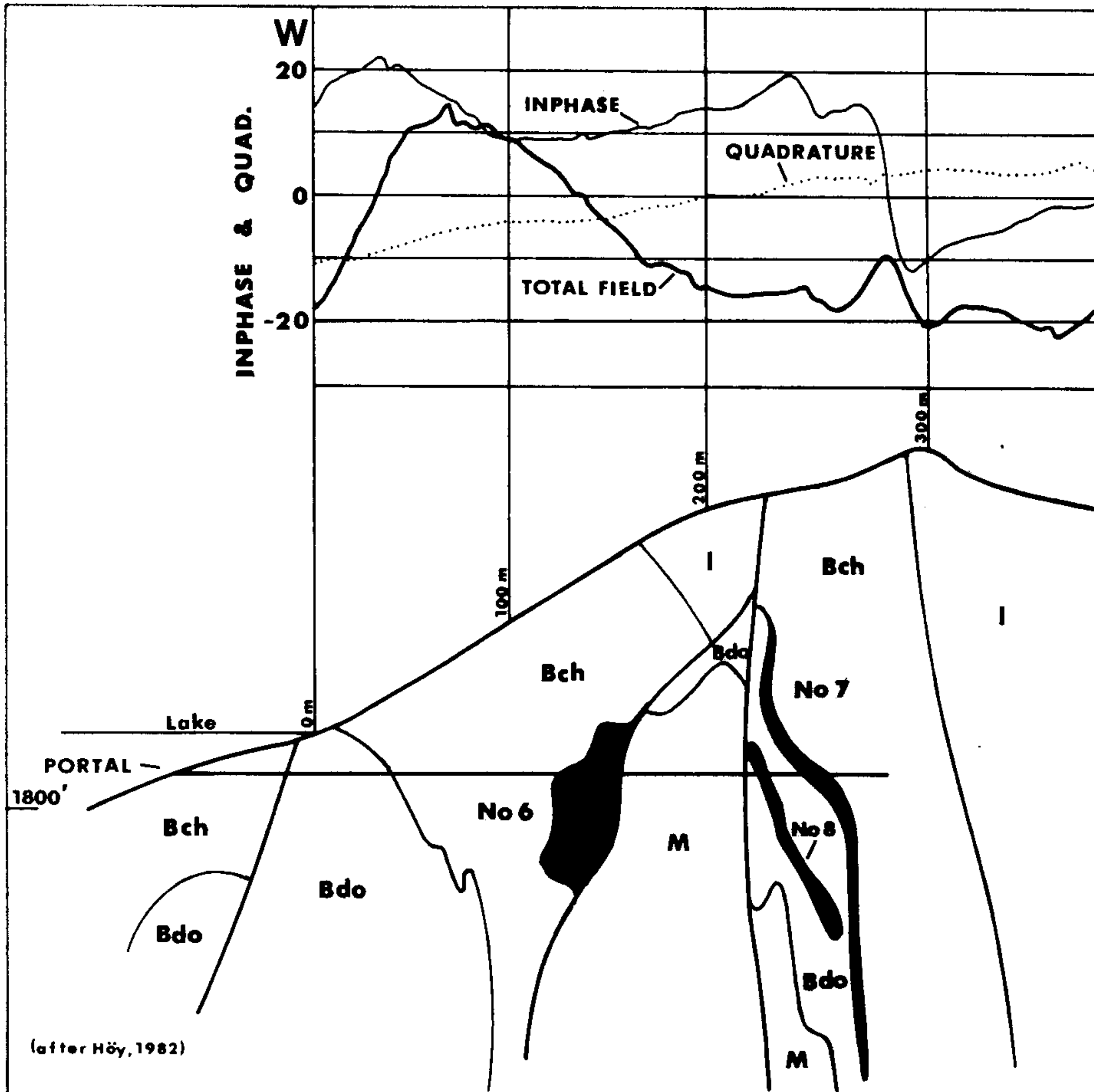


Fig. 8 COMBINED ANOMALY MAP: ZN CLAIMS





DUNCAN DEPOSIT

VLF Profile

PROJECT	DRAWN RDH	FIGURE
NTS	DATE FEB. 92	9

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4.4 Interpretation of Results

The principal results of the survey include the following:

1) A cluster of linear total field magnetic anomalies, about 500 gammas in amplitude, strike 340° to 350° into Duncan Lake west of the baseline. These correspond to strata of the Upper Index Formation and are probably associated with garnet + ilmenite and/or magnetite bearing rock units.

The magnetic anomaly striking into the lake at L3+00S is marked by segments 1000-2000 gammas in amplitude and an inphase crossover on L10+00S at station 0+55N.

2) A VLF total field anomaly, 500 metres in length, striking 300° discordant to the stratigraphy, is interpreted between L1+00N and L3+00S.

This may be part of more conformable trends:

a) Inphase crossover L5+00N, station 2+00N
   Total field peak L5+00N, station 1+95N
   Inphase crossover L4+00N, station 2+05N
   Total field peak L3+00N, station 2+70N

b) Total field peak L2+00S, station 3+30N
   Inphase crossover L1+00S, station 3+15N
   Total field peak L3+00S, station 4+25N

3) Isolated inphase crossovers occur on L3+00S, station 1+75N; L10+00S, station 0+50N. The cause of these is unknown.

5.0 SUMMARY

The ZN Claim Group was staked in 1991 adjacent to the Duncan lead-zinc deposit in order to cover possible Duncan-type lead-zinc targets in the Badshot Formation within the Howser Syncline. The detailed stratigraphy of the property is unknown as much of the claim group has little or no outcrop. Geological reconnaissance and a 10 line-kilometre VLF/magnetometer survey were carried out on the property during 1991 and 1992 ,respectively.

Up to 152 ppm zinc in grab samples of soils were located upslope from a rusty weathering calcrete horizon, containing 149 ppm tin and 75 ppm zinc, exposed on the shore of Duncan Lake.

A sample of magnetic float containing 5% copper is associated with a magnetic anomaly, 1000-2000 gammas in amplitude, striking 350° into Duncan Lake between L3+00S and L4+00S. A VLF inphase crossover is associated with this magnetic anomaly on L10+00S at station 0+55N.

A VLF total field anomaly, 500 metres in length and discordant to stratigraphy, is interpreted east of the baseline between L0+00 and L3+00S. The cause of this anomaly is unknown.

A VLF total field anomaly is associated with the Badshot "chert" unit and the No. 6 ore zone of the Duncan lead-zinc deposit.

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7.0 CERTIFICATION

I, Richard D. Hall, resident of Wells, Province of British Columbia, hereby certify as follows:

1) I am a Consulting Geologist with an office at #7 Dawson Street, Wells, British Columbia V0K 2R0.

2) I graduated with a degree of Bachelor of Science in Geological Engineering from Queen's University in 1972 and a degree of Doctor of Philosophy, Geology, from The University of Western Ontario in 1980.

3) I have practised my profession for 12 years on a continuous basis and for an additional 8 years on a seasonal basis.

4) I am registered as a Professional Engineer (No. 16077) by the Association of Professional Engineers and Geoscientists of British Columbia.

5) This report, dated February 29, 1992 is based on my examination of available reports and my supervision of the field work completed on the ZN Claim Group during the period January 20 to 28, 1992.

6) I have no direct, indirect or contingent interest in the ZN Claim Group nor do I intend to have any such interest.

Dated at Wells, Province of British Columbia, this 29th day of February, 1992.

Richard D. Hall

R.D. Hall, Ph.D., P.Eng.
Consulting Geologist

STATEMENT OF QUALIFICATIONS OF INSTRUMENT OPERATOR

Edward Allan Tipman, of 112 Westover Drive S.W. Calgary, Alberta T3C 2S6

1) Graduate of the Faculty of Applied Science of the University of British Columbia.

2) Graduated with a BaSc. in Metallurgy in 1970.

3) Has practised his profession for over 21 years.

4) Has been a member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta since April, 1973.

5) Has been involved in mineral exploration intermittently for over 17 years, and actively for the last 8 years.

APPENDIX I

COST STATEMENT

1991 GEOLOGICAL AND 1992 GEOPHYSICAL WORK PROGRAMS ON THE ZN CLAIM GROUP

Technical Personnel:

Richard D. Hall, Ph.D.,P.Eng.
Box 151, Wells, B.C. V0K 2R0
Consulting Geologist & Supervisor

W. Don Sutherland, BaSc., Geological Engineer
Glenbow Road, RR #2, Cochrane, Alberta T0L 0W0
100% Owner and Operator of Zn Claim Group

E. Allan Tipman, BaSc.,P.Eng.
112 Westover Drive S.W., Calgary, Alberta T3C 2S6
Instrument Operator

Geological Reconnaissance: W. Don Sutherland

Claims: ZN -25, -26, -28 and -29
Dates: April 27 to May 3 and May 16 to 23, 1991
Program: General reconnaissance; 4700 metres of spontaneous potential survey; 12 grab samples of rocks and soils for geochemistry

Geophysical Survey: Richard D. Hall, W. Don Sutherland and E. Allen Tipman

Claims: ZN-25, -26, -28 and -29
Dates: January 16 to 28, 1992
Program: 10 line-kilometres of flagged grid established; combined VLF and magnetometer ground survey, 2000 stations at 5 metre centres

Cost of Work Done:

Geological Reconnaissance:

- wages, 15 man days @ $200.00/man day............	$ 3,000.00
- vehicle costs, 15 days @ $30.00/day.............	$ 600.00
- field accomodation, 15 days @ $40.00/day........	$ 600.00
- geochemistry, 12 samples, prep. and freight.....	$ 200.00
- SP rental, 15 days @ $20.00/day	$ 300.00
Subtotal	$ 4,700.00

Geophysical Survey:

- wages, 34 man days @200.00/man day..............$ 6,800.00
- snow plowing, 2 trips @ 20 km per trip..........$ 790.50
- 4x4 vehicle rental, 13 days @ $45.00/day........$ 585.00
- chain saw rental, 11 days @ $10.00/day..........$ 110.00
- subsistence, 34 man days @ $70.00/man day.......$ 2,380.00
- Omni-plus VLF/magnetometer system rental, 13 days @ $200.00 per day ....$ 2,600.00
- computer rental and data processing ....$ 2,000.00
- report preparation..............................$ 2,000.00
- miscellaneous field supplies, flagging etc......$ 140.00

Subtotal	$17,405.50
TOTAL	$22,105.50

Wage Summary:

Name	Period	Days	Rate/Day	Sum
Hall	Jan. 20-27/92	8	$200.00	$1600
(Supervisor)	reporting			$2000
				$3600
Sutherland	Jan. 16-28/92	13	$200.00	$2600
	Apr.27-May3/91	7	$200.00	$1400
	May 16-23/91	8	$200.00	$1600
				$5600
Tipman	Jan. 16-28/92	13	$200.00	$2600
(Instrument Operator)				

APPENDIX II

LIST OF CLAIMS

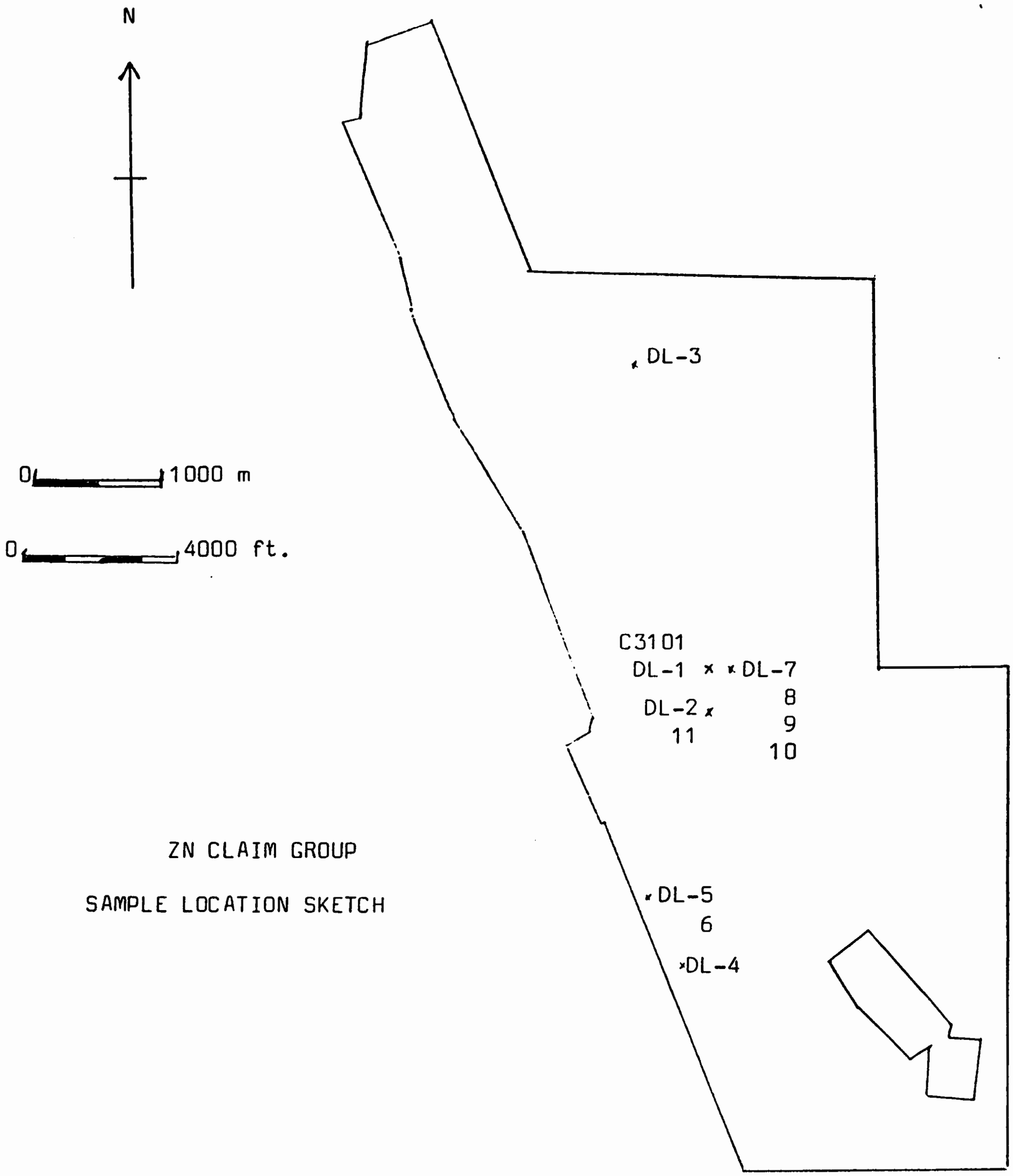
ZN GROUP

Mineral Claim Name	Units	Record No.	Recording Date	Work Due
ZN-1	(1)	257165	Feb. 16, 1991	1994
ZN-2	(1)	257166	Feb. 16, 1991	1994
ZN-3	(1)	257197	Feb. 16, 1991	1994
ZN-4	(1)	257167	Feb. 16, 1991	1994
ZN-5	(1)	257168	Feb. 16, 1991	1994
ZN-6	(1)	257169	Feb. 16, 1991	1994
ZN-7	(1)	257170	Feb. 16, 1991	1994
ZN-8	(1)	257171	Feb. 16, 1991	1994
ZN-11	(1)	257174	Feb. 17, 1991	1994
ZN-12	(1)	257175	Feb. 17, 1991	1994
ZN-13	(1)	257176	Feb. 17, 1991	1994
ZN-14	(1)	257177	Feb. 17, 1991	1994
ZN-15	(1)	257178	Feb. 17, 1991	1994
ZN-16	(1)	257179	Feb. 17, 1991	1994
ZN-17	(1)	257180	Feb. 17, 1991	1994
ZN-18	(1)	257181	Feb. 17, 1991	1994
ZN-19	(1)	257198	Feb. 17, 1991	1994
ZN-20	(1)	257182	Feb. 17, 1991	1994
ZN-21	(1)	257183	Feb. 17, 1991	1994
ZN-22	(1)	257184	Feb. 17, 1991	1994
ZN-23	(1)	257185	Feb. 17, 1991	1994
ZN-24	(1)	257186	Feb. 17, 1991	1994
ZN-25	(10)	257187	Feb. 18, 1991	1994
ZN-26	(20)	257188	Feb. 18, 1991	1994
ZN-27	(18)	257189	Feb. 18, 1991	1994
ZN-28	(18)	257234	April 9, 1991	1994
ZN-29	(12)	257235	April 9, 1991	1994

APPENDIX III

GEOCHEMICAL DATA

LOCATION MAP



ZN CLAIM GROUP

SAMPLE LOCATION SKETCH

May 27, 1991

Job#: 91-075

Project:

Sample Number	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
DL-1	2	0.01	8	1	8
DL-2	10	11.9	50000	6	33
DL-3	4				

Assay Date: May 9, 1991

Sample Information:

DL-1 Caliche Gossan

DL-2 Copper Float, 1,000 ft. south of Caliche Gossan

DL-3 Rusted Schist from south end of island 1 km south east of causway

Job#: 91-085

Project:

Sample Number	Cu ppm	Pb ppm	Zn ppm
DL- 4	29	8	86
5	13	6	62
6	23	9	104
7	6	1	12
8	8	11	77
9	14	13	90
10	15	14	152
11	10	3	116

Assay Date: May 27, 1991

Sample Information:

DL-4 Schist sub-crop 1,700 ft. south and 850 ft. east of Limestone Spring

DL-5 B Zone Soil (rusty) 15 cm deep, middle of Limeston Valley 750 ft. south and 220 ft. east of Limestone Spring

DL-6 C Zone Soil (pale green) 25 cm deep, same location as DL-5

DL-7 Caliche Float 450 ft. east and 200 ft. up hill from Caliche Gossan on shore of Duncan Lake

DL-8 Rusty Soil same location as DL-7

DL-9 Brown Soil 475 ft. east of Caliche Gossan

DL-10 Red Soil 325 ft. east of Caliche Gossan

DL-11 Red Soil 125 ft. east of Copper Float

ECO-TECH LABORATORIES LTD.

PLACER DOME INC. - ETK 91-311

10041 EAST TRANS CANADA HWY.
KAMLOOPS, B.C. V2C 2J3
PHONE - 604-573-5700
FAX - 604-573-4557

401, 1540 PEARSON PLACE
KAMLOOPS, B.C.
V1S 1J9

Sample C3101 - Caliche Gossan

Anomalous Elements:

Gold	15	ppb
Tin	149	ppm
Zinc	75	ppm
Strontium	643	ppm

UNLESS OTHERWISE REPORTED

PROJECT: T K - H.K.

8 ROCK SAMPLES RECEIVED MAY 30, 1991

DESCRIPTION	AU(ppb)	AG	AL(%)	AS	B	BA	BI	CA(%)	CD	CO	CR	CU	FE(%)	K(%)	LA	MG(%)	MN	MO	NA(%)	NI	P	PB	SB	SN	SR	TI(%)	U	V	W	Y	ZN
C3101	15	<.2	.07	15	<2	<5	<5	>15.0	<1	3	8	14	1.28	.01	5	.67	96	1	<.01	4	80	8	5	149	643	<.01	<10	<1	<10	<1	75
C3102	35	14.6	.26	45	<2	25	40	1.58	<1	21	97	>10000	5.05	.13	13	.19	482	72	<.01	4	350	58	5	<20	21	<.01	<10	<1	10	<1	27
C3103	95	22.8	.17	90	<2	40	120	1.27	<1	25	49	>10000	8.49	.11	26	.16	180	160	<.01	3	510	138	10	<20	17	<.01	10	<1	20	<1	25
C3104	235	>30.0	.26	155	<2	30	<5	1.97	<1	14	87	1489	4.09	.12	17	.34	2706	30	<.01	5	330	194	40	<20	23	<.01	10	2	<10	<1	184
C3751	100	>30.0	.08	95	6	45	235	.23	<1	21	84	>10000	12.51	.04	37	.18	97	129	<.01	3	4230	246	<5	<20	4	.02	20	<1	50	<1	25
C3752	5	.6	3.07	20	<2	20	<5	1.37	<1	33	62	657	4.24	.08	21	3.37	2407	2	<.01	15	530	2	<5	<20	51	.16	<10	63	<10	2	134
C3753	5	3.8	.92	30	<2	60	15	1.14	<1	9	44	7442	3.97	.32	30	.39	1009	13	<.01	3	780	4	10	<20	21	<.01	<10	5	<10	1	38
C3754	5	.6	1.12	25	<2	74	<5	.87	<1	12	56	125	3.16	.10	22	.92	700	5	.02	2	595	4	<5	<20	29	.05	<10	22	<10	1	58

DON, C3101 - IS THE SAMPLE THAT WE TOOK ON THE EAST SHORE OF DUNCAN LAKE. RANDY

< = LESS THAN
> = GREATER THAN

ECO-TECH LABORATORIES LTD.
CLINTON AYERS
LABORATORY MANAGER

DON SUTHERLAND @
403-932-5744

APPENDIX IV

Excerpt: Section I - General Information, Operations Manual
OMNI-PLUS VLF/MAgnetometer System

SECTION 1

GENERAL INFORMATION

1.1 SCOPE OF MANUAL

This manual describes the OMNI-PLUS combined magnetometer/VLF system designed and manufactured by EDA Instruments Inc. EDA Instruments Inc.'s head office is located in Toronto, Ontario, Canada with offices located in Denver, Colorado, U.S.A. and distributor's worldwide. This manual was written to assist the user in the proper operation of the system and therefore, should be read prior to the testing and operation the unit. Also, the manual will provide references to the proper maintenance and understanding of all the features incorporated. The technical specifications are given in Table 1.1.

1.2 PURPOSE OF THE INSTRUMENT

The OMNI-PLUS is a portable, microprocessor-based magnetometer/VLF system which is capable of measuring changes or contrasts detected by two different types of geophysical methods: Magnetic and VLF Electromagnetic (magnetic and electric). A measurement from both these methods can be read and stored in as little as 4 seconds. The data is both sensitive and highly repeatable.

The OMNI-PLUS is a multi-purpose instrument designed to operate as: a magnetometer ; a combined magnetometer/VLF system or a VLF system. The configurations of the magnetometer system are as follows:

a. Tie-line magnetometer.

b. Total field magnetometer.

c. Recording base station magnetometer.

d. Gradiometer.

The primary purpose of the system is to:

* measure and store the magnitude of the earth's magnetic field independent of it's direction.

* measure and record the secondary field components of the primary field from up to three VLF transmitting stations.

Further details of the methods measured are given in Section 3 of this manual.

The configurations of the VLF system are as follows:

a. Tie-line VLF system.

b. VLF field system.

c. VLF base station system.

Measurements are obtained by the use of two sensors; a proton precession sensor carried on a pole to measure the magnetometer total field magnitude and; a three-component sensor worn on the back to measure the magnetic component of the VLF secondary field. In addition, probes attached through the VLF circuitry housing are used to measure the electric component of the VLF secondary field. An electronics console is worn on the front of the operator that allows the operator to view and store the collected data in internally protected memory. The data stored is protected by a lithium battery which also powers a real-time clock.

Along with the magnetometer and VLF data, the OMNI-PLUS stores the following information:

- line number
- position number
- date and time
- direction of travel
- statistical error of the magnetometer readings
- signal strength and rate of decay of the magnetometer sensor
- direction, in degrees, of the primary field in relation to the operator.
- signal strength and operator quality of the VLF sensor
- natural and cultural features

The data can be stored using three different types of storage modes:

Spot Record	-which assigns a record number to the readings.
Multi Record	-which assigns a line and position value to the reading using the value last stored in memory. This feature allows for multiple readings at one station.

Auto Record -which assigns a line and position value automatically incremented from the last station using the station(position) spacing entered by the operator. This allows the operator to increment or decrement the position without pressing any of the line or position keys.

The standard OMNI-PLUS has the capability of storing up to 1300 readings consisting of a total field and vertical gradient magnetometer reading , three VLF frequencies and the associated information mentioned previously.

Also, for simplicity of operation, the record keys are used to initialize the system and to retrieve the data stored in memory. Any of the three memory keys may be used for these functions.

The OMNI-PLUS, as with the OMNI IV, stores only the raw data for both the VLF and magnetometer measurements. Corrections for magnetometer diurnal variations and VLF primary field variations on each of the total field measurements are performed internally using either the tie-line (looping) method or a compatible base station unit. For correcting the magnetometer total field values, a PPM-375, PPM-400, OMNI IV or OMNI-PLUS system may be used. However, for correcting the VLF total field, only a OMNI-PLUS can be used.

Further, the raw data is retained until the instrument is re-initialized even after corrected data has been computed.

Data stored in memory is completely protected by a lithium battery. This battery also powers the real time clock.

Field Measurement Features

The OMNI-PLUS has been designed to provide the user with features that will enhance both the ease of use and data quality. These features are noted below in their magnetometer and VLF components.

The OMNI-PLUS has been designed to simultaneously measure the VLF and magnetometer components. When the READ key is pressed the previous magnetometer or VLF reading is displayed followed by the new corresponding reading for your particular station. At this point, all measurements have been completed and the data may be stored using one of the RECORD keys. If the operator tries to store the data prior to completion of the VLF measurements, the word "wait" will appear on the display indicating that the VLF measurement process is not completed. Once the VLF measurements are completed, the data may be stored.

The instrument outputs the data as it is recorded (ie. The direction the operator is walking). The station and line values are stored using +/- designations. However, the data may be later outputted using N,S,E or W signs (see Section 6).

Natural/Cultural Features. The OMNI-PLUS is equipped with a "built-in notebook" with actual words of features that the operator may wish to record along with the data. The features are accessed using the SPECIAL key and is described on page 4-21 of this manual.

<u>VLF Features</u>

Systematically Monitor Three Stations. The OMNI-PLUS monitors the VLF frequencies selected for operator quality and signal/noise during each reading. The results are both displayed as descriptor bars and stored in internal memory along with the field results.

Operator quality is a value to help the operator determine whether the measurement was properly taken. Since the in-phase and tilt measurements are dependent on the sensor being within 10 degrees of vertical and motionless, the OMNI-PLUS monitors the ability of the operator to remain motionless and vertical. As mentioned, the results are outputted on the display using the DECAY descriptor bars. The increased quality of the measurement is indicated by the increased number of bars displayed to a maximum of four. Also, for each measurement, a numeric value is given which ranges from 1 to 9, where 1 is the poorest and 9 is the best. Generally, a value of 5 to 6 should be obtained to ensure an accurate reading.

The signal/noise ratio is an actual measurement of the signal strength to the background noise. The results are outputted visually using the SENSOR descriptor bars when the VLF results are displayed. An increased signal strength is indicated by an increase in the number of bars displayed to a maximum of four. As with the operator quality, a numeric value is given which ranges from 1 to 9, where 1 is the weakest and 9 is the strongest.

Therefore, after the instrument defaults to the new measurement, the worst operator quality and the weakest signal/noise ratio is displayed for up to three VLF frequencies selected. However, if the operator wishes to see what the operator quality and signal/noise ratio is for a particular frequency, when the FREQ. SELECT key is pressed and the particular station is displayed, the operator quality and signal/noise ratio is given for that station.

Automatic Sampling Time. The OMNI-PLUS has been designed whereby, if a weak station is selected, the instrument will automatically increase the measurement period to produce higher quality results. The measurement period for one frequency may range from one to ten seconds.

Spectrum. All OMNI-PLUS systems have the spectrum feature where the operator has the ability to quickly monitor the VLF frequency range (15 to 30 kHz) to determine what stations are "on the air". When a frequency of 14.0 is selected and the instrument is programmed for base station mode, the OMNI-PLUS will automatically take a measurement every 100 Hz starting at 15.0 kHz. This data can then be outputted, where a viable signal will be indicated by a symetrical "bell-shaped" peak.

NOTE

The spectrum can be run in the VLF mode whereby each time the READ key is pressed, the instrument will automatically increment by 100 Hz.

Corrected VLF Total Field Results. The VLF total field data can be corrected for primary field variations. This can be achieved using either the tie-line method or more accurately, a base station unit. However, since the OMNI-PLUS requires no orientation for the VLF, one magnetometer total field and up to three VLF frequencies can be measured with one system. The VLF total field is corrected as a ratio, thereby, the corrected results are normalized.

Readings Adjusted for Sign Convention. In standard VLF survey methods, a single or consistant direction is used to maintain comparable signs on all in-phase, quadrature or tilt values relative to each other. Since the OMNI-PLUS is a no orientation system, a convention was selected that maintained the standard convention that North and East are positive and South and West are negative.

Therefore, the profiles plotted looking east (i.e. S to N) and north (i.e. W to E) will have the crossover in the correct sense (positive to negative).

Error Messages. To assist the operator in determining whether there are any external or internal problems affecting the performance of the system, error codes have been implemented to indicate to the operator where the problem exists.

Automatic Calculation of Fraser Filter. The OMNI-PLUS automatically calculates the Fraser Filter, from the tilt data, regardless of the interval between the stations along the grid lines. The Fraser Filter algorithm follows established conventions.

Change Frequencies During The Survey. If during the survey day the operator notices that one of the frequencies has "gone off the air", he can change one or all of the frequencies without losing the previously stored data.

To change the frequencies, the operator places the instrument in TEST mode and presses one of the RECORD keys. At this point, the first frequency will be displayed and the operator may change this or any of the others as per our instructions (Section 5).

NOTE

For users of the GEOSOFT Mapping System, the OMNI conversion program will not recognize any frequency changes from those used at the start of the data set.

FOR A SUMMARY OF THE VLF FEATURES, SEE SECTION 9 OF THIS MANUAL FOR FURTHER DETAILS.

Magnetometer Features

Polarizing Cycle. During this period the sensor or sensors are energized. The OMNI-PLUS as with the OMNI IV magnetometers utilize the principle of constant energy polarization. Most instruments utilize a fixed polarization time regardless of the battery voltage. It can be demonstrated that with such a method, a 40% deterioration occurs in sensor signal strength rendering the instrument to be more and more inaccurate (scatter phenomena).

The microprocessor within the instrument computes the battery voltage during polarization and at a specific point determines whether or not the polarization time should be increased. This method ensures that the sensor always receives the same amount of energy per unit of time. Although the performance is not linear, a significant improvement results even when the battery is approaching the depletion state.

Signal Analysis Cycle. At the end of the sensor energizing period, the signal decay cycle occurs. The precession signal is monitored and the decay rate analyzed. This precession signal is compared statistically to an optimized decay curve at 400 points along the curve. Computations are made and result of the computations displayed as error.

Tuning Sequency. After the signal analysis period, this new value becomes the basis for the next reading. The measurement portion of the reading sequence occupies typically 2 seconds.

Display Cycle. The selected parameter is displayed on the liquid crystal display (LCD) for approximately 29 seconds. At this time, the audio circuits provide a sequence of beeps which indicate that the instrument will be shut down after another 30 seconds unless the same command or another command is keyed.

Note

During this cycle, valid readings, location and time values are entered into scratch-pad memory as a data block.

To summarize, a typical reading sequence terminates after about 59 seconds. Then the computer turns off the power.

Audio Circuits. The instrument provides both visual and audio feedback. Every time that a key is pressed, an audio beep will be heard. Parameters are displayed for 29 seconds only. The moment that this visual period has elapsed, the audio is activated to give repeated beeps for another 30 seconds period to indicate the end of the data block display period. If the operator fails to press any key during this warning period, the instrument turns off automatically. Every time that a key is pressed, a new 29 second period is initiated. This allows the operator to have time to evaluate the program data. This display period may be extended by pressing the same key or another key. However, selection of a different key initiates a different display response.

Statistical Error Alarm. Following each reading, the instrument computes the true statistical error of total field reading. This value represents the confidence level of data. A visual alarm may be triggered based on the following criteria:

a. *When a statistical error of a particular reading* is equal to or larger than 0.2 gamma, the least significant digit of the displayed total field flashes on and off. For example, assume that this statistical error is 0.23 gamma and the displayed total field is: **57936.4.** In this case, the **4** flashes on and off. Flashing the least significant digit on and off indicates that the accuracy is impaired and the operator should be warned.

b. When the statistical error of a particular reading is equal to or larger than 2.0 gammas, the last two least significant digits of the displayed total field flash on and off. For example, assume that the statistical error is 2.3 gamma and the displayed total field is: **57936.4.** In this case, the **6** and **4** flash on and off. Flashing the two least significant digits on and off indicates that the accuracy is badly impaired and an audio warning sounds to alert the operator.

Note

If the error is larger than 2.0 gammas, take another reading.

Automatic Fine Tracking (Tuning) of Magnetometer Total Field
The OMNI-PLUS contains high technology circuits which allow for automatic fine tracking (tuning) over the entire field strength from 18,000 to 110,000 gammas, under computer control. An optimized tuning algorithm ensures that the system is tuned for optimum performance.

Under normal operating conditions a $\pm$15% capture tuning range from reading to reading is achieved. The capture tuning range is defined as the difference between the previous and current readings relative to the previous reading. However, if a larger difference is computed, the instrument will warn the operator of this and further measurements are inhibited automatically. The warning is both visual and audible. The displayed total field reading is *flashed on and off along with an audio alarm to inform* the operator that **the displayed value is invalid.** The value displayed, however, is the previous total field value, and should be changed manually to reflect the new tuning field.

1.3 FUNCTIONAL DESCRIPTION

The OMNI-PLUS Magnetometer/VLF System is a ruggedized, compact, portable instrument designed specifically for field operation. It allows for quick surveying capability without sacrificing accuracy and quality data. It contains several microprocessors and associated circuitry for monitoring, processing and storing data. As with the OMNI IV, the OMNI-PLUS has two memories: for the tie-line points and the field measurements of the survey.

Physical Dimensions	**Wt(kg):**	**w x h x d(mm)**
Instrument console only............	3.8:	122 x 246 x 210
Battery cartridge..................	1.8:	540 x 100 x 40
Battery belt.......................	1.8:	138 x 95 x 75
Sensors		
Magnetometer remote sensor.........	1.2:	56 dia x 220
Magnetometer gradient sensor.......	2.1:	56 dia x 790
VLF sensor module..................	2.6:	280 x 190 x 60

Environment

Electronics
- Operating temperature range... -40 C to +55 C
- Relative humidity............. 0 to 100% (weather-proof)

Magnetometer Sensors
- Temperature range............. -45 C to +55 C
- Relative humidity............. 0 to 100% (weather-proof)

VLF Sensor
- Temperature range............. -45 C to +55 C
- Relative humidity............. 0 to 100% (weather-proof)

Standard Memory Capacity

Field unit......................... 1300 sets of readings
Tie-line points.................... 100 sets of readings
Base staion........................ 5500 sets of readings

Electronics

RS-232C serial I/O................. 300 to 9600 baud(programmable); 8 data bits, 2 stop bits; no parity

Electronics console................ Enclosure contains electronics and battery pack (if not contained in separate belt). Front panel includes liquid crystal display (LCD), and keypad.

Power Supply....................... Internal battery pack or external battery belt; or 12V car battery (base station).

Table 1-1 Technical Summary

APPENDIX V

GEOPHYSICAL PROFILES

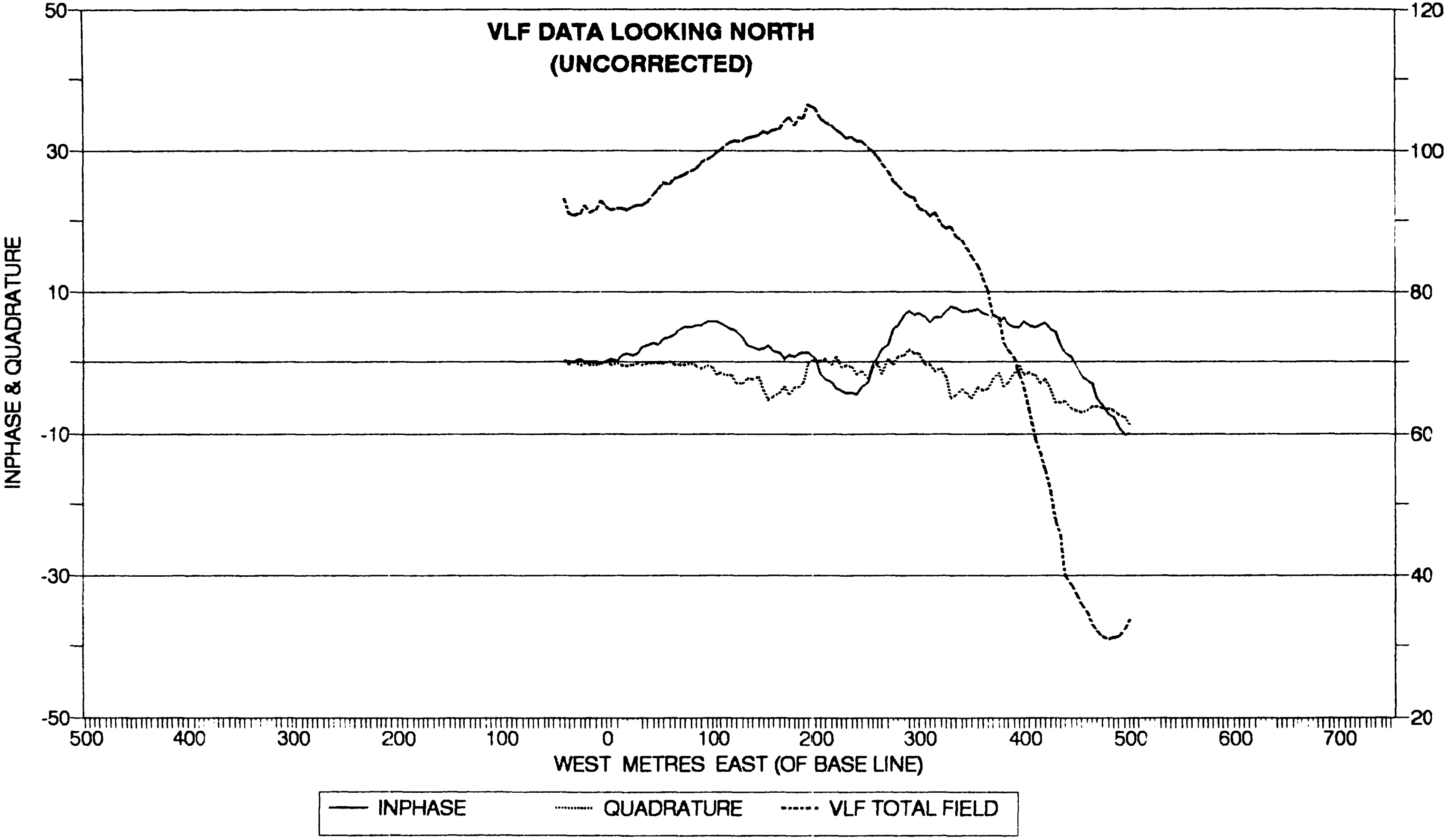
VLF Line Profiles, Jim Creek

VLF Fraser Filter Line Profiles, Jim Creek

Total Field Magnetic Line Profiles

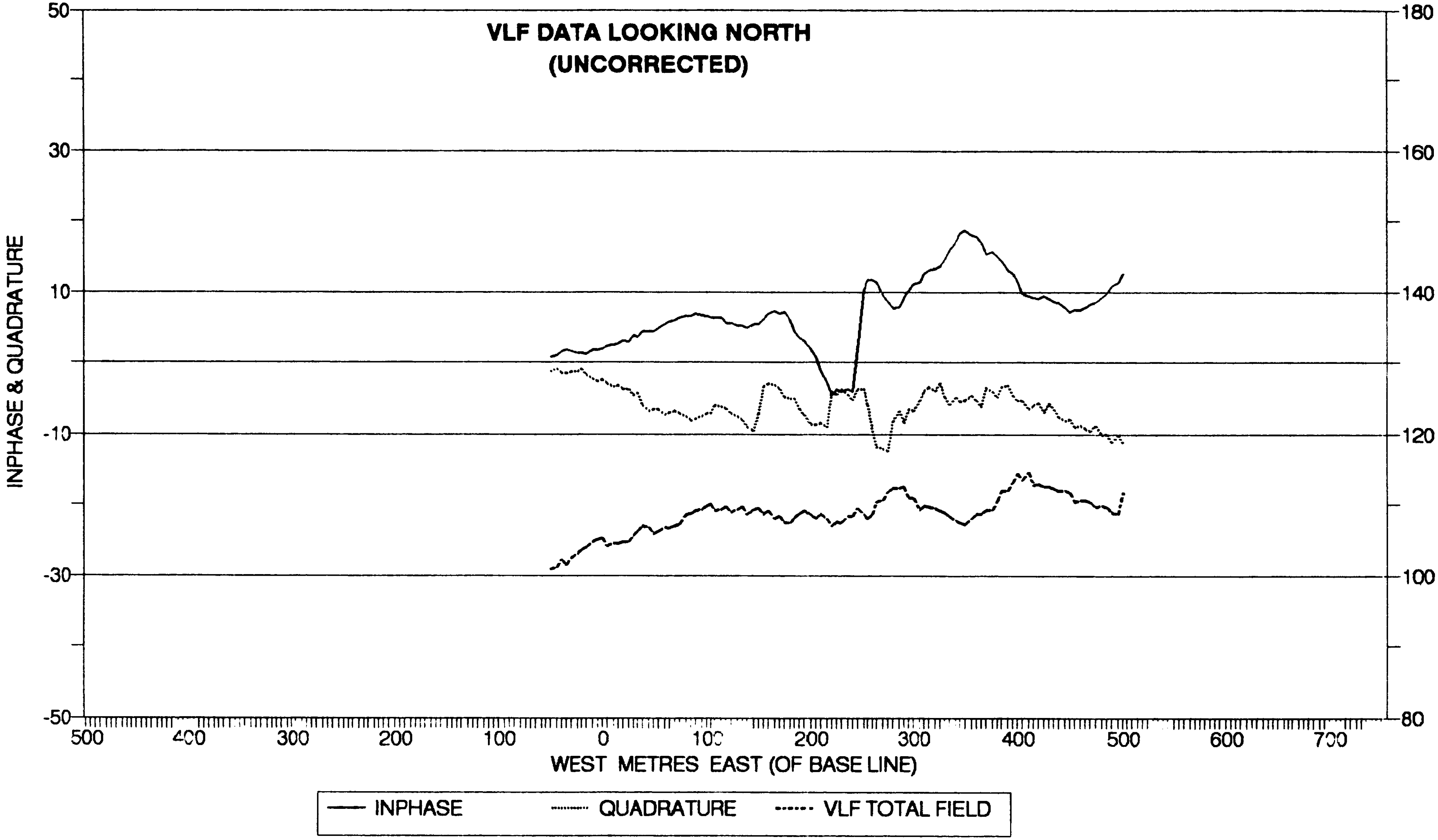
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 500N



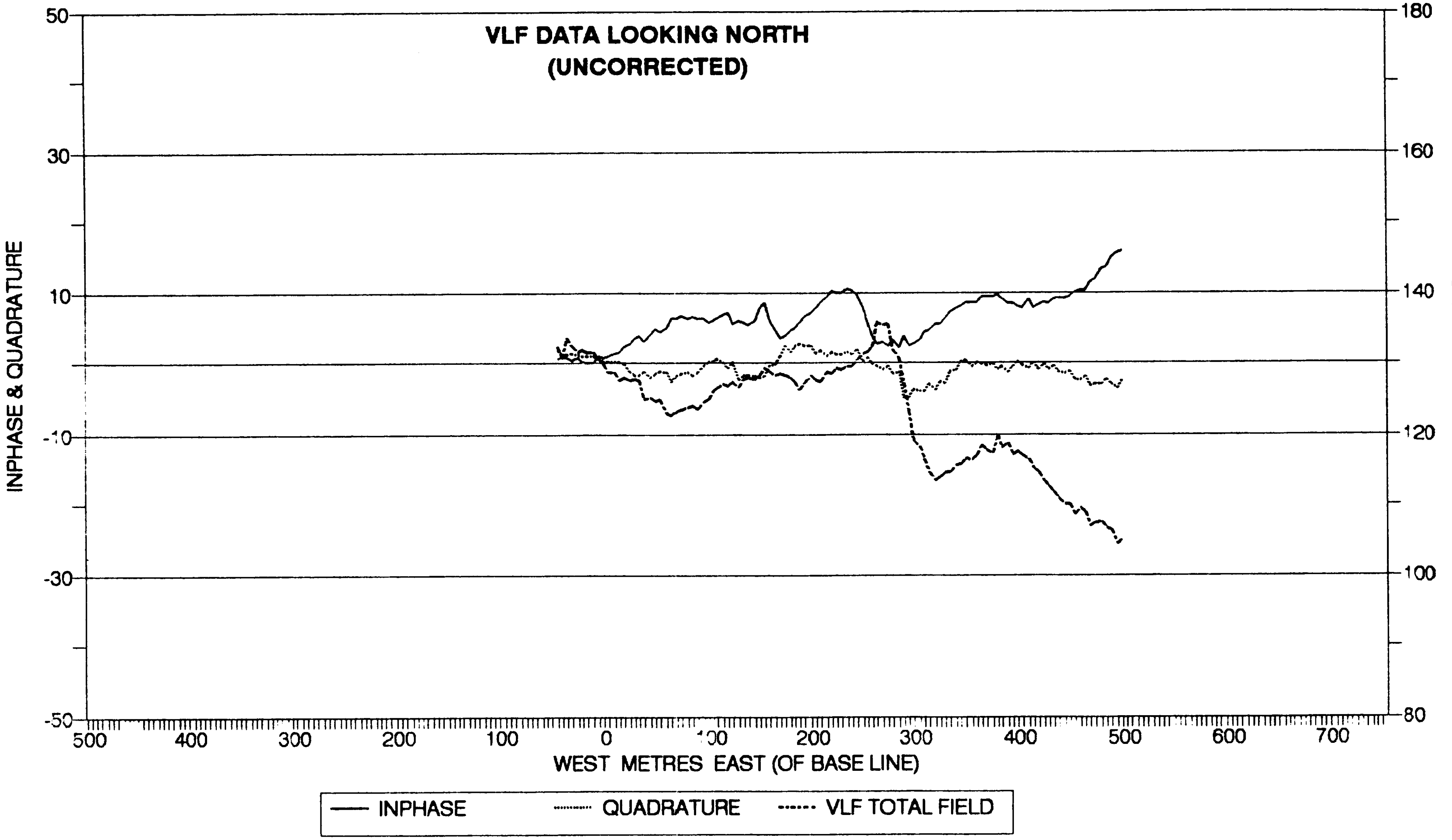
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 400N



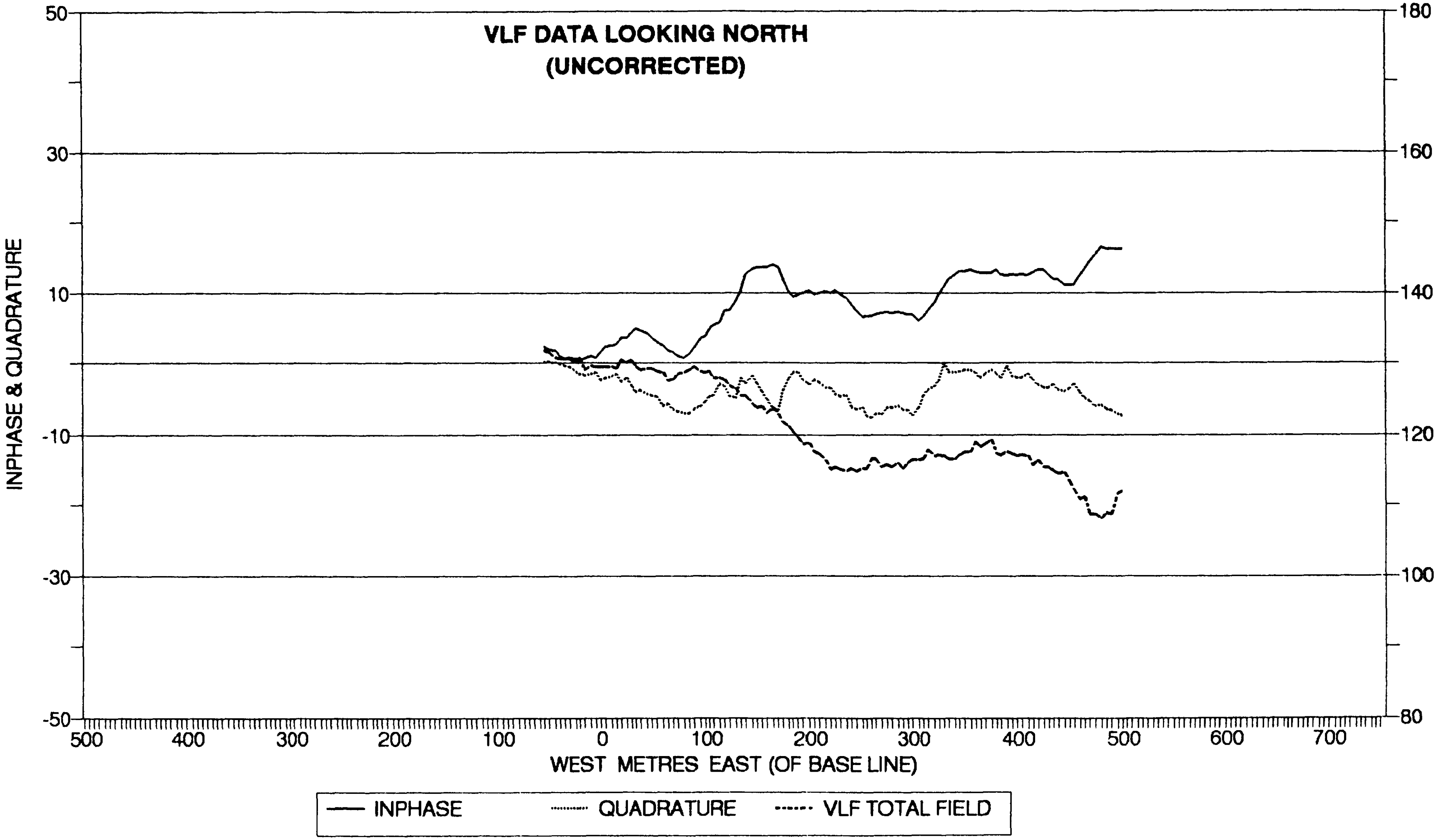
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 300N



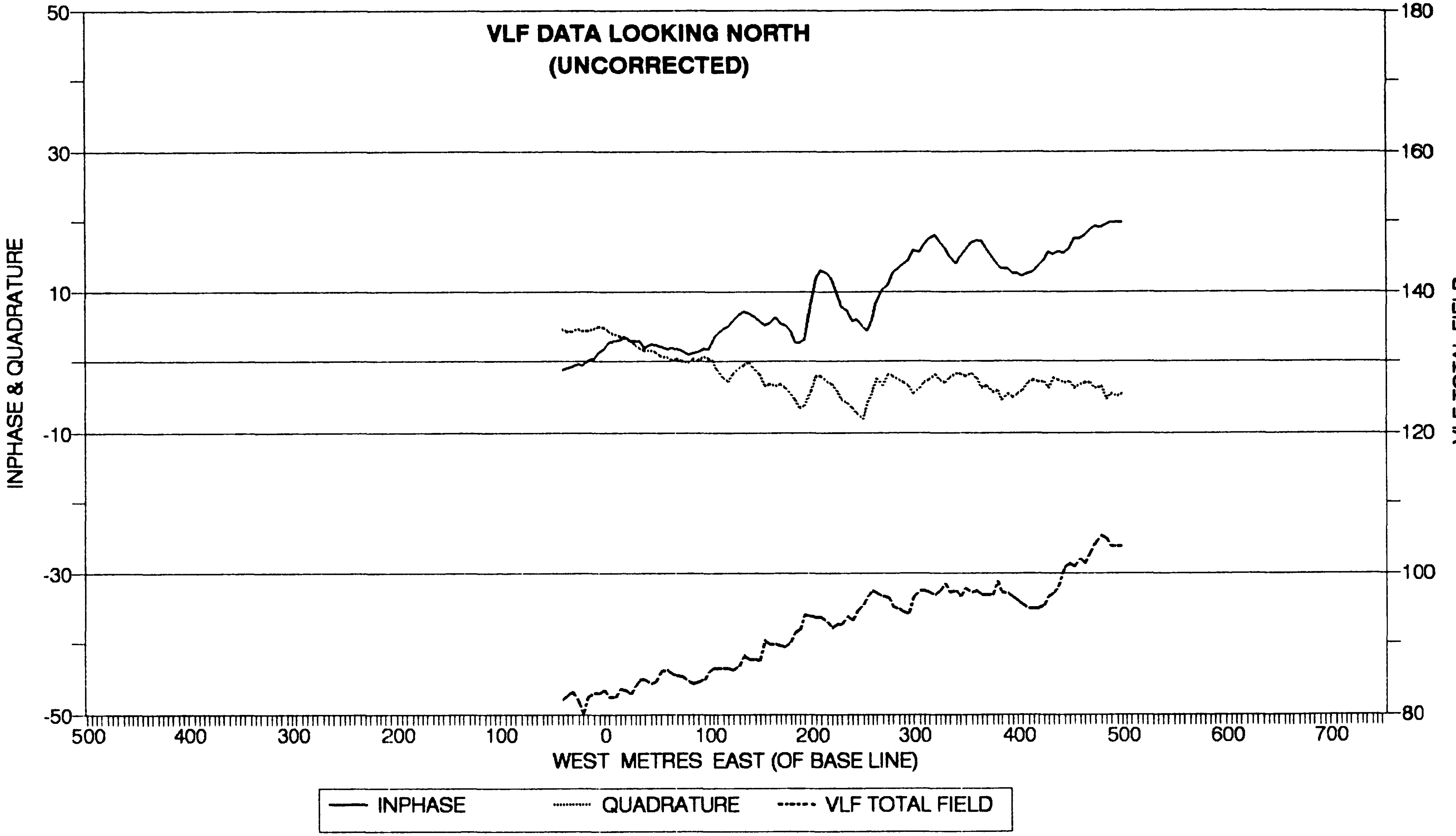
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 200N



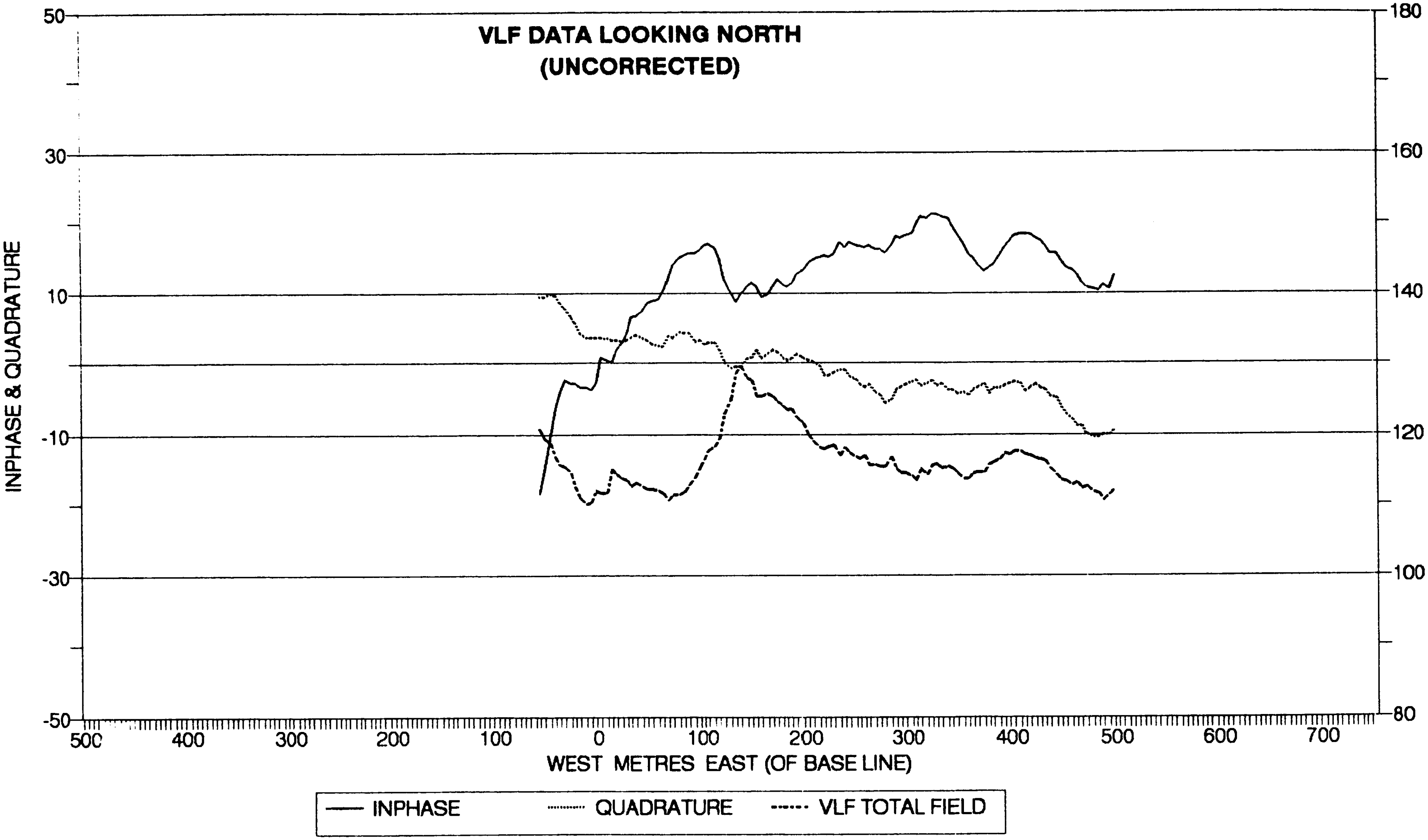
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 100N



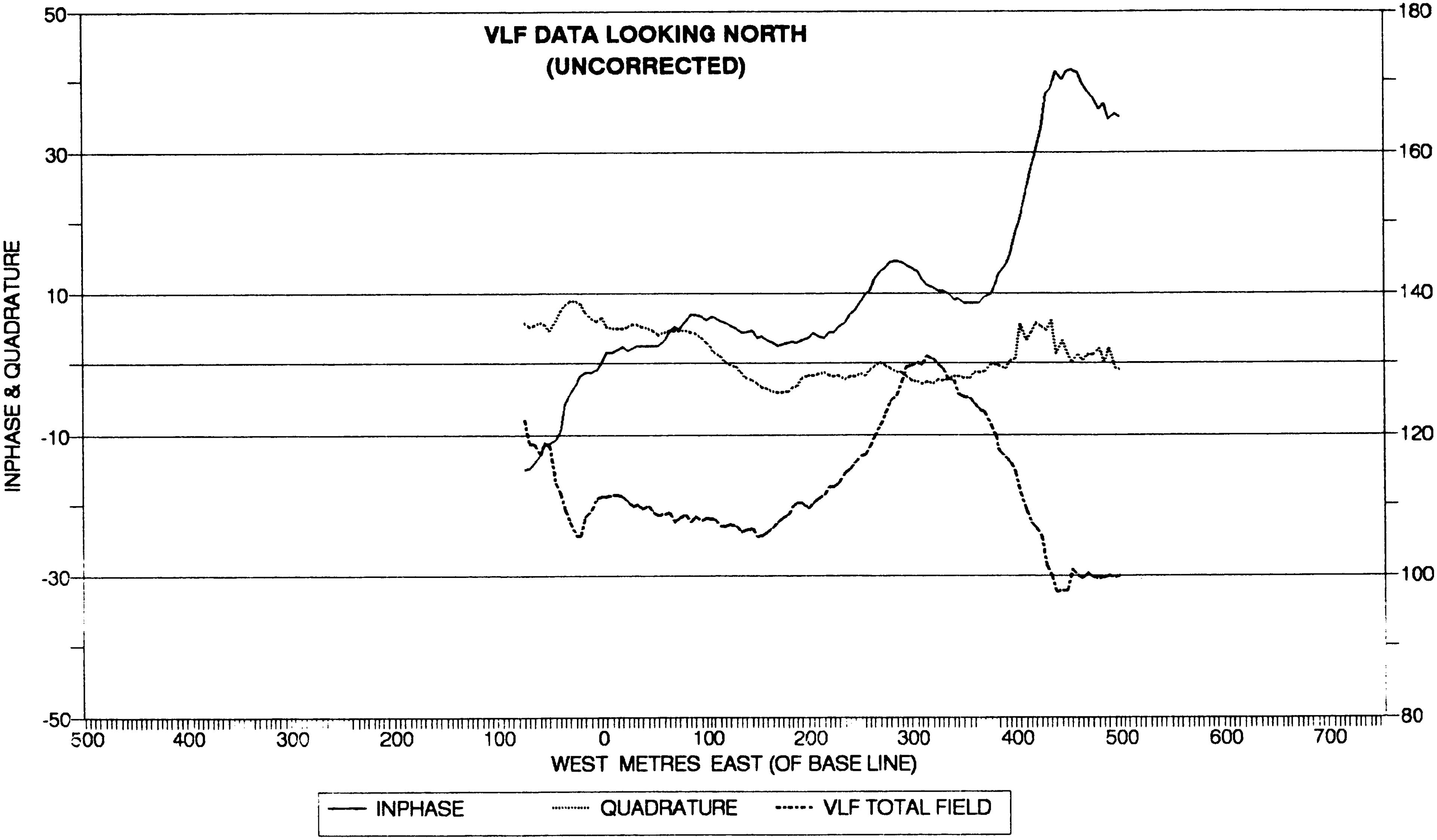
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 00



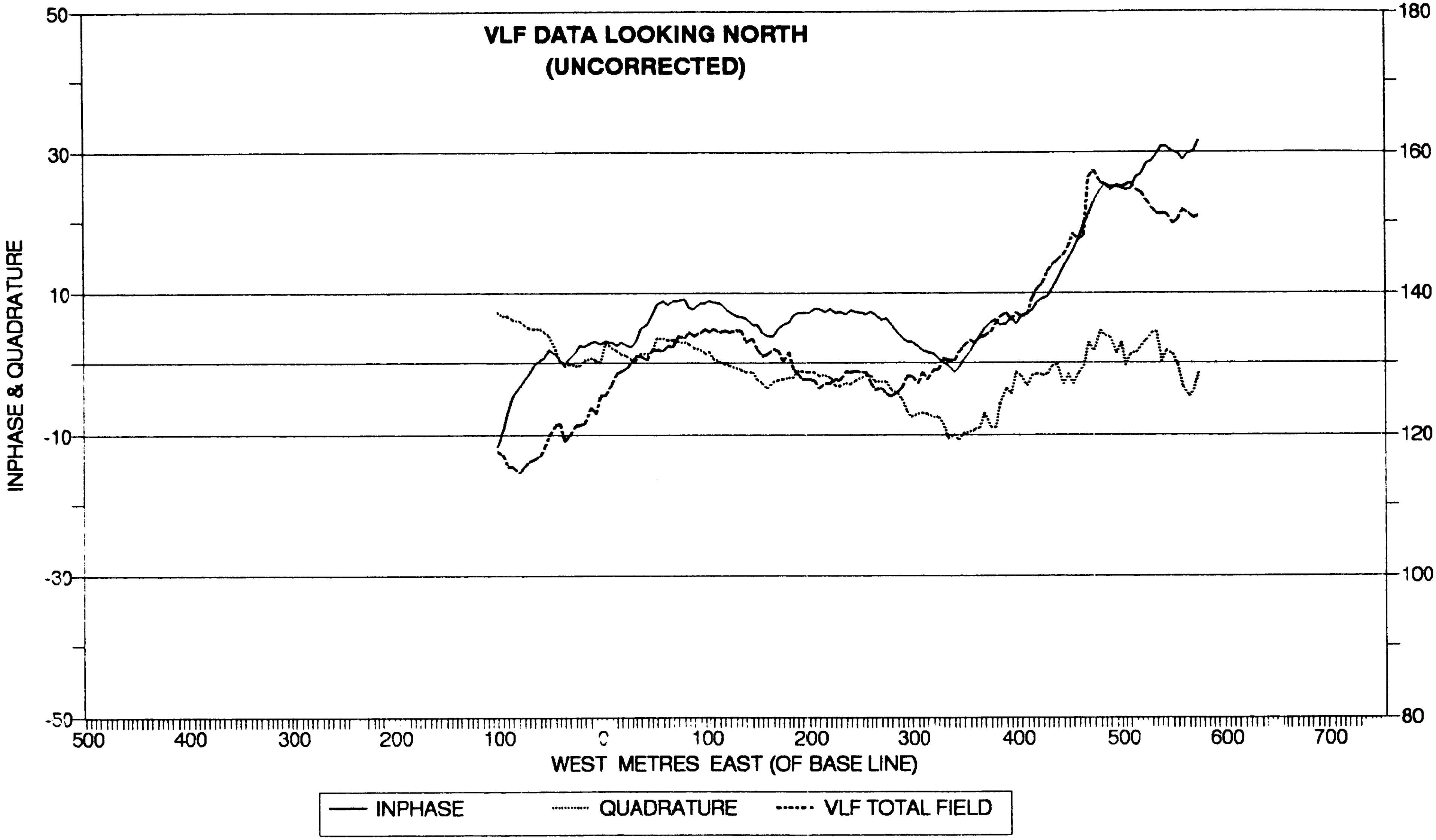
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 100S



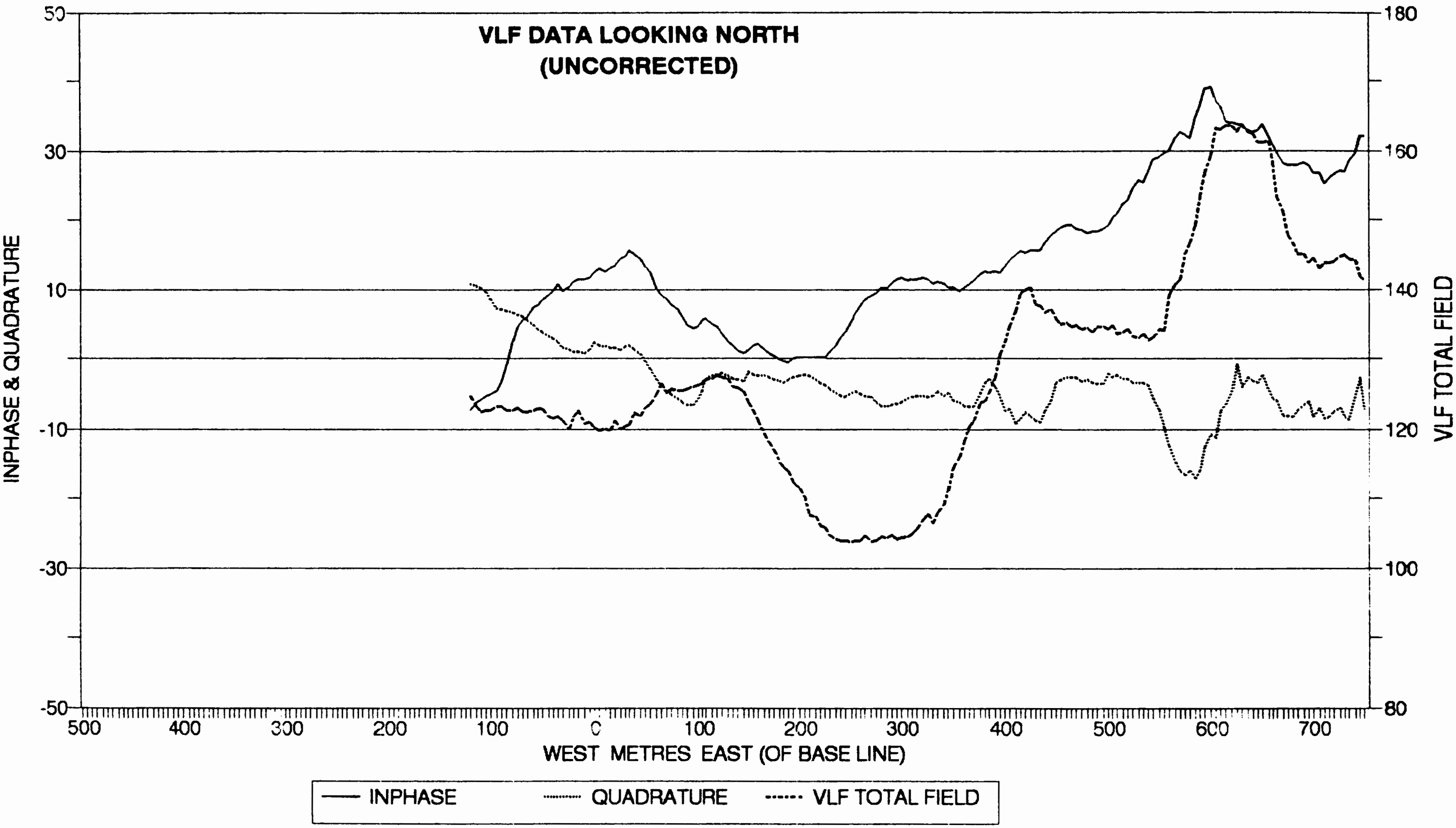
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 200S



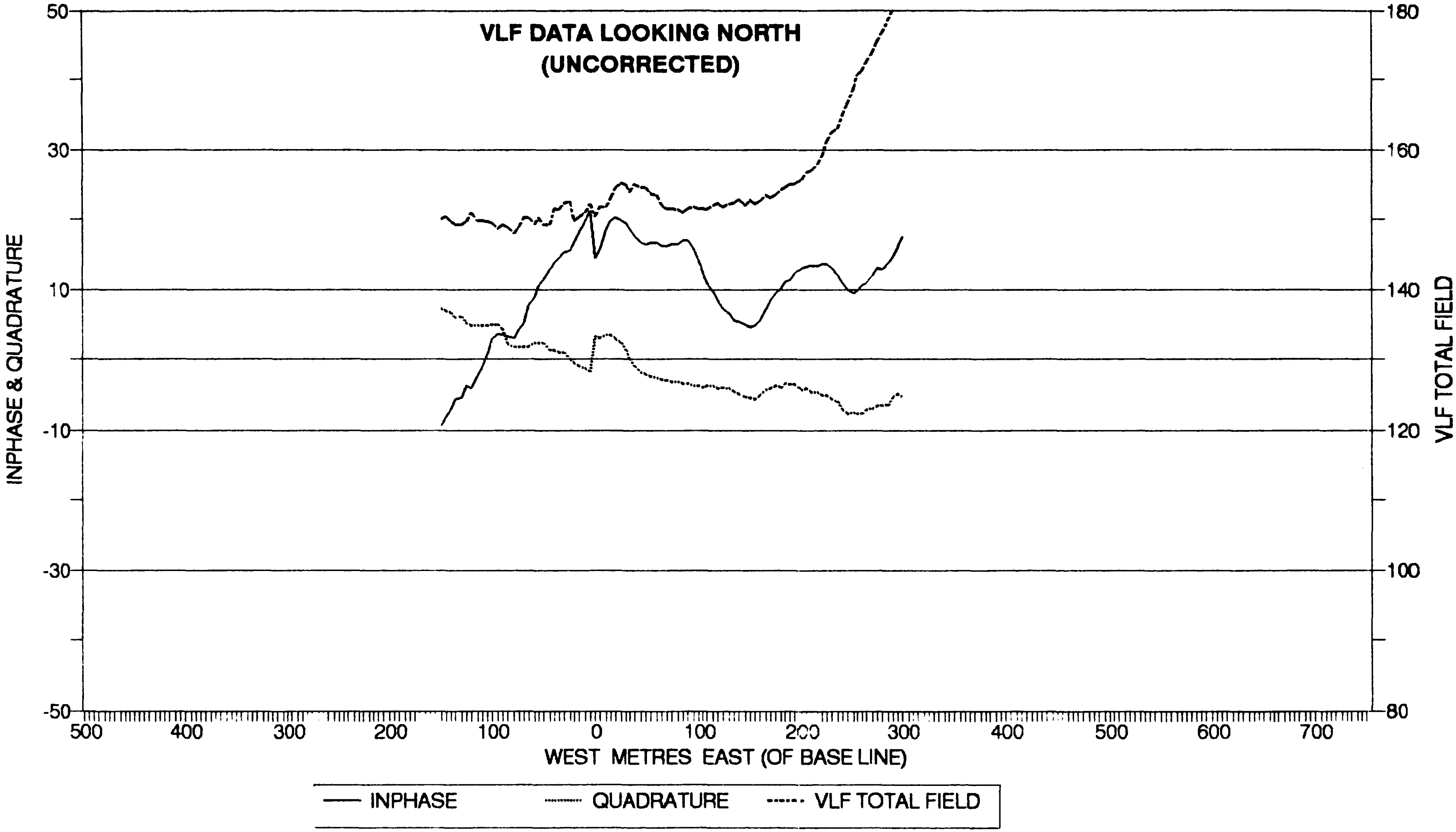
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 300S



1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 400S



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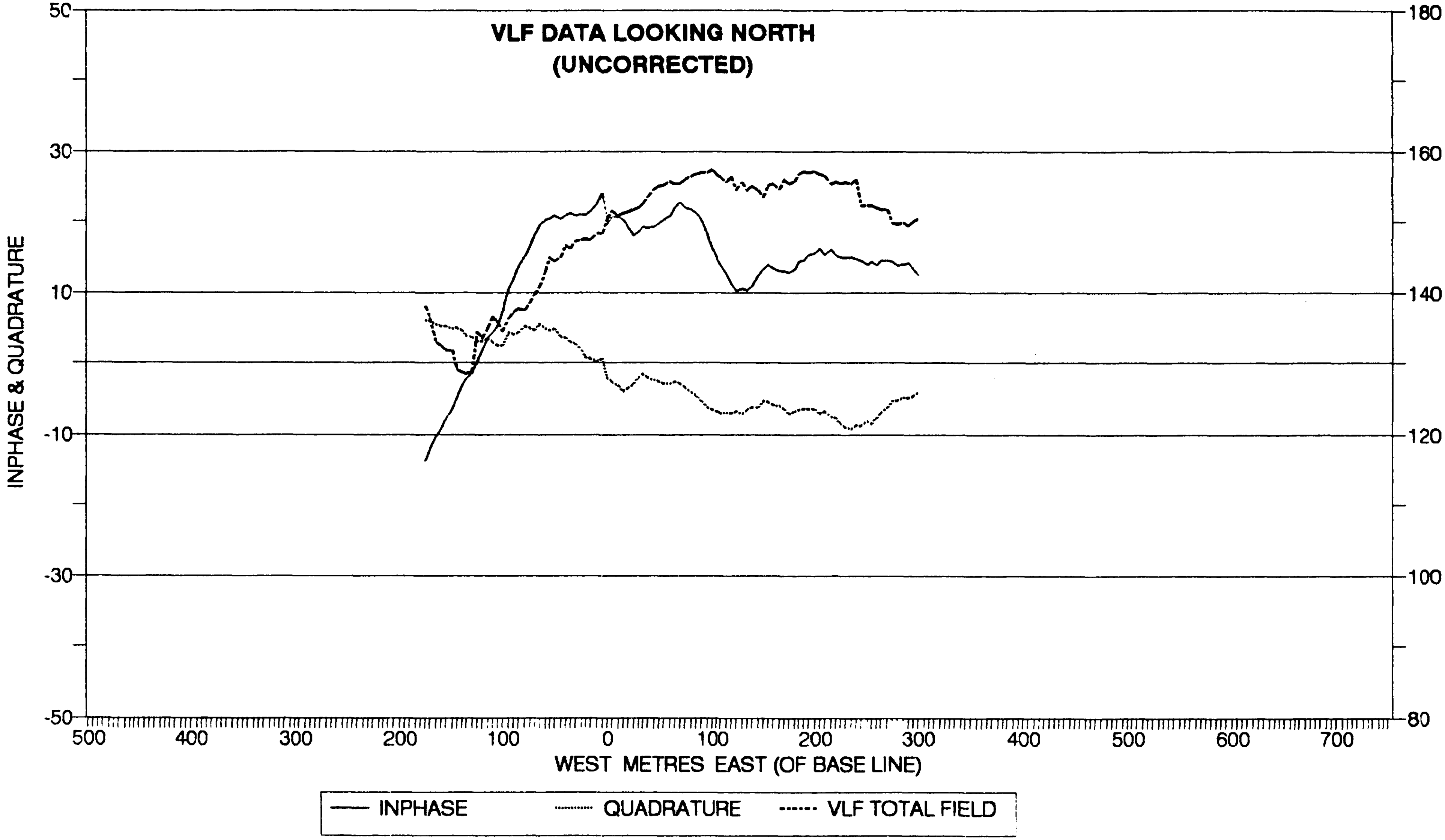
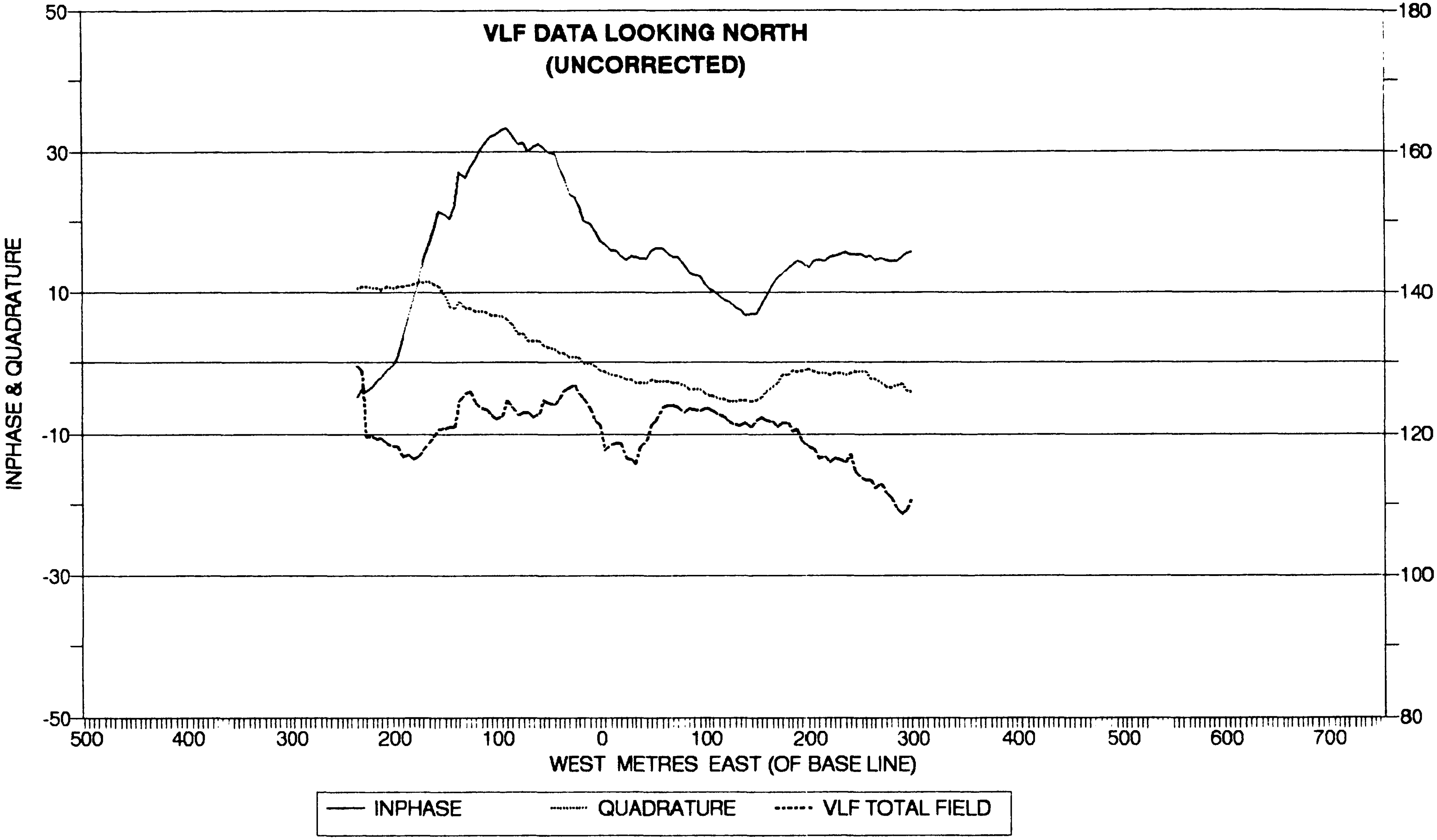
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 500S



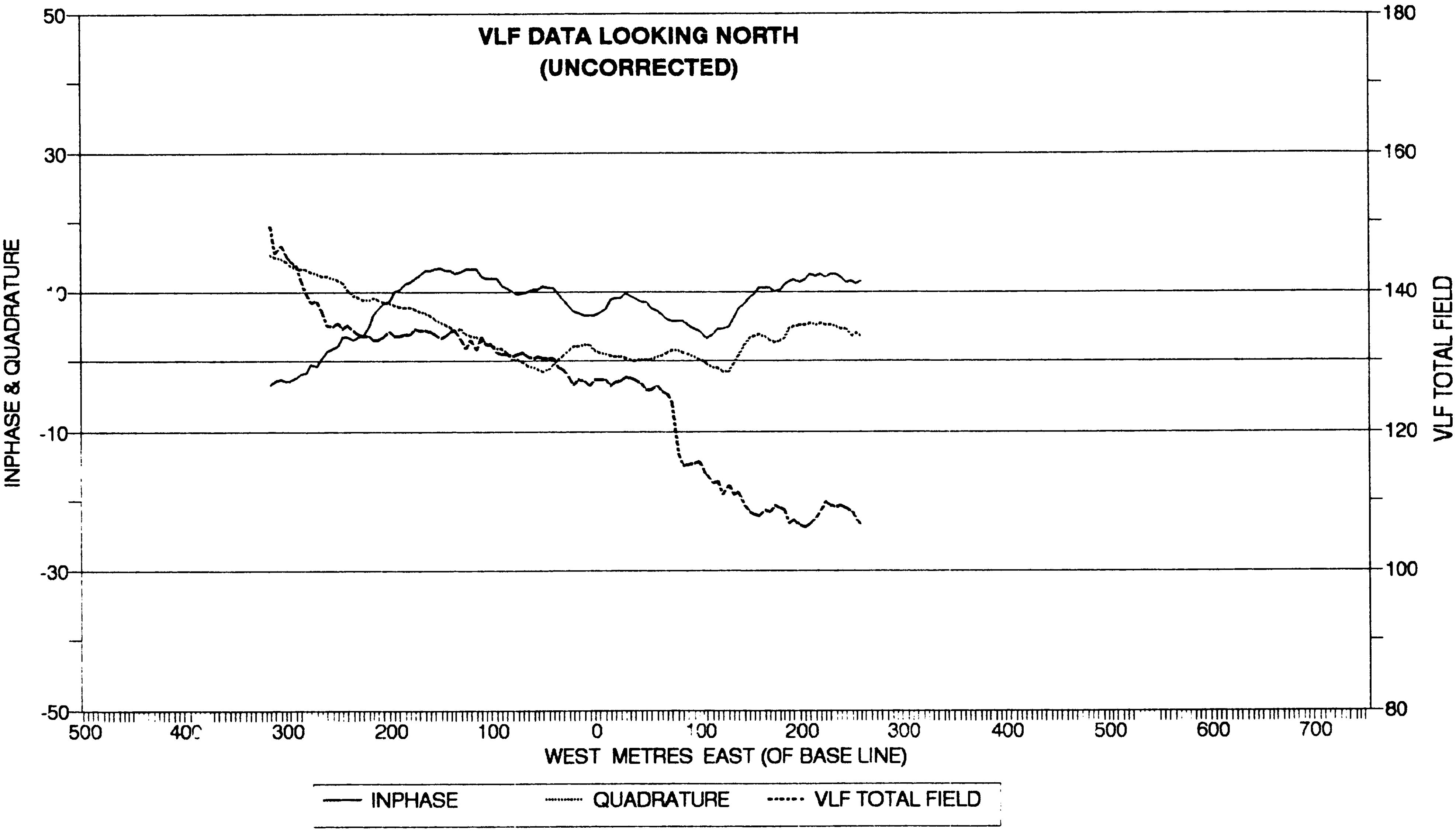
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 600S



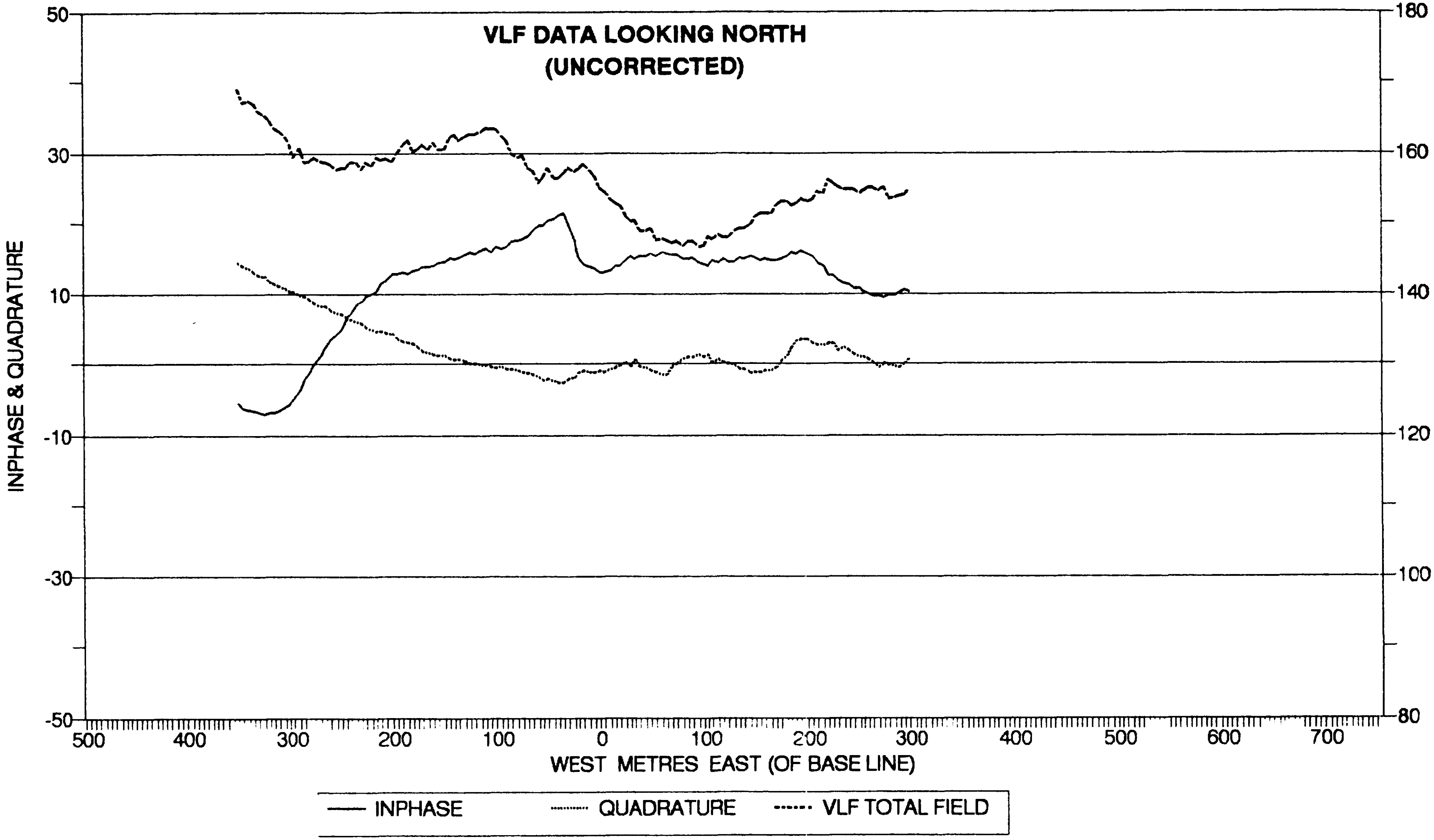
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 700S



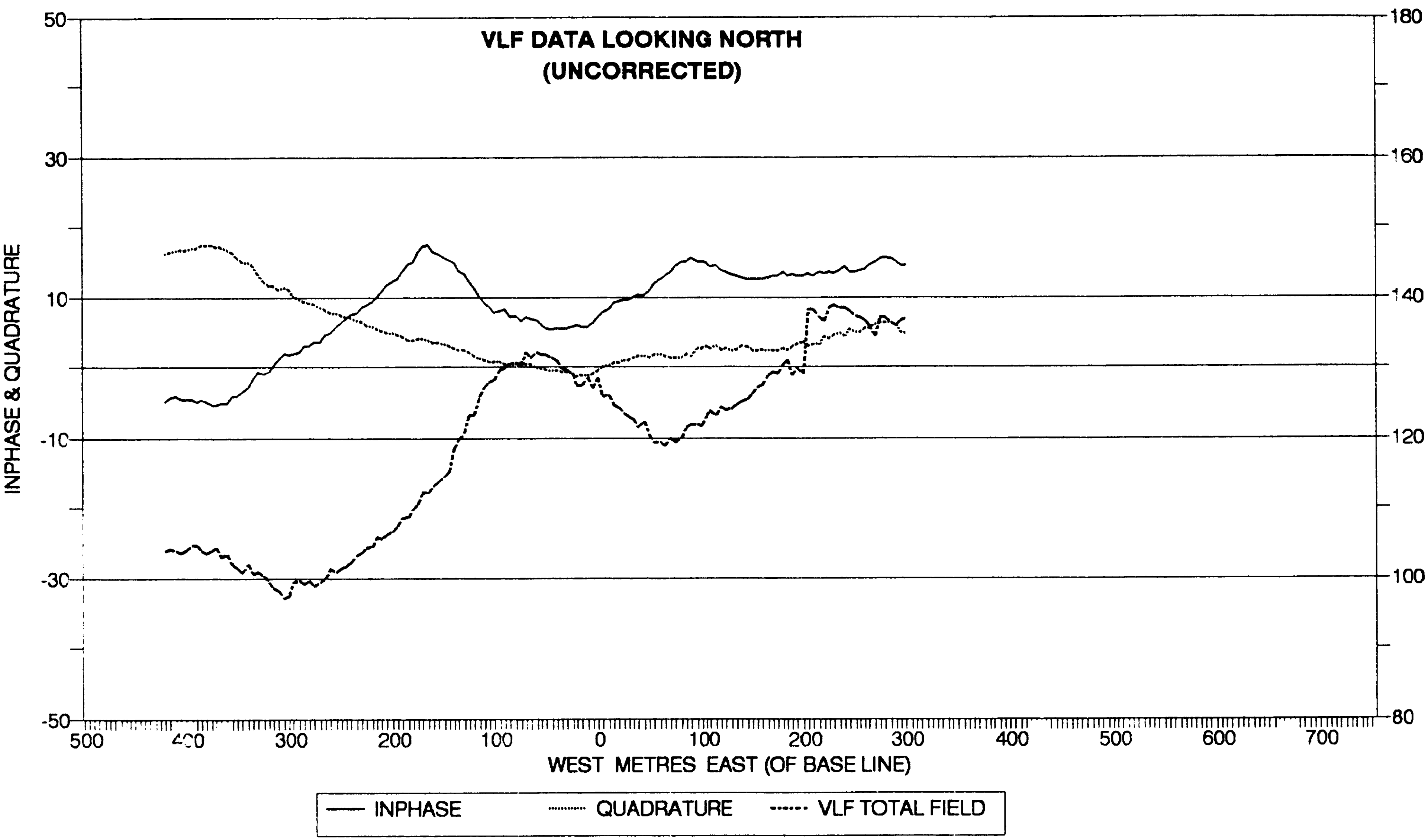
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 800S



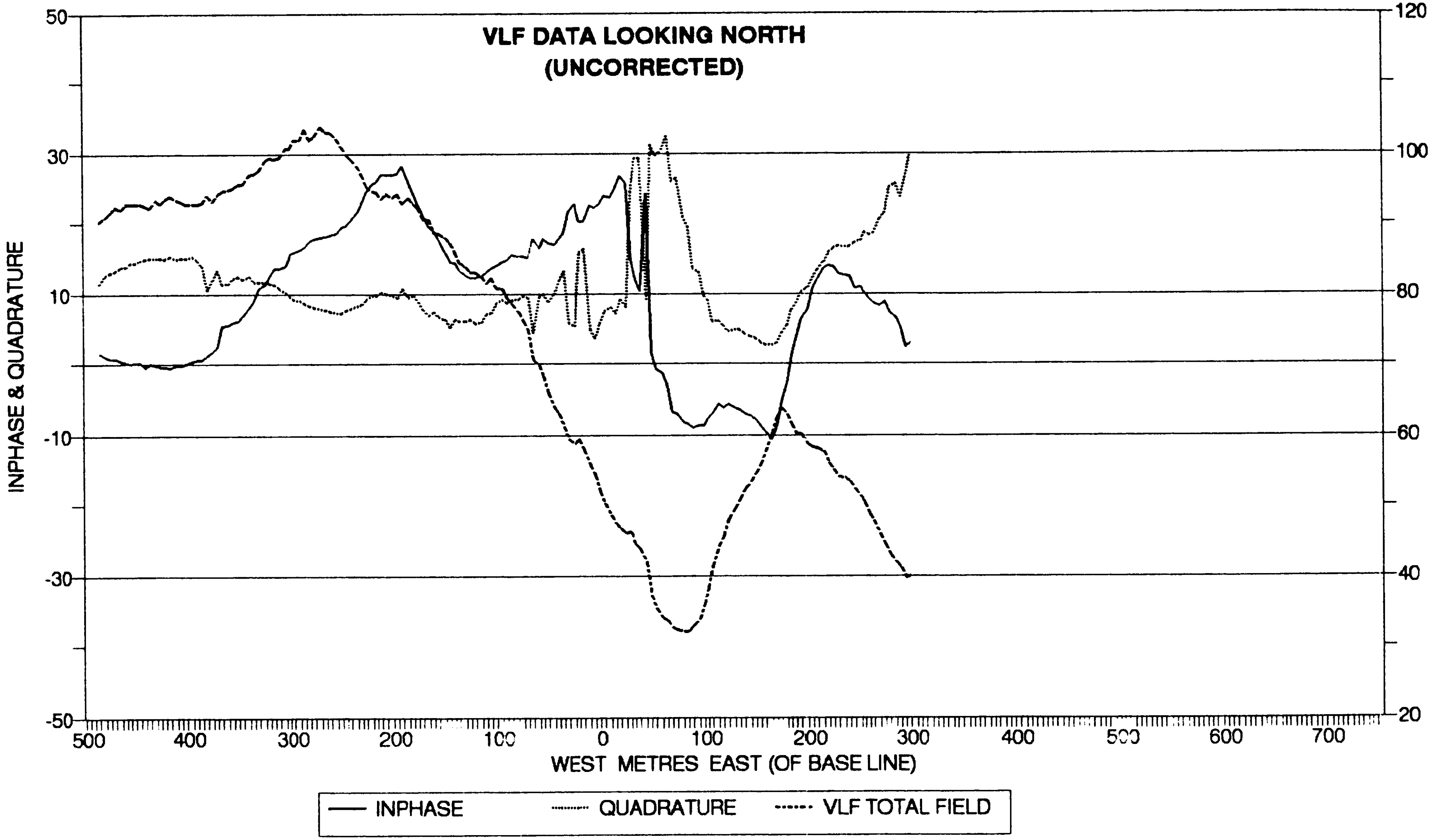
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 900S



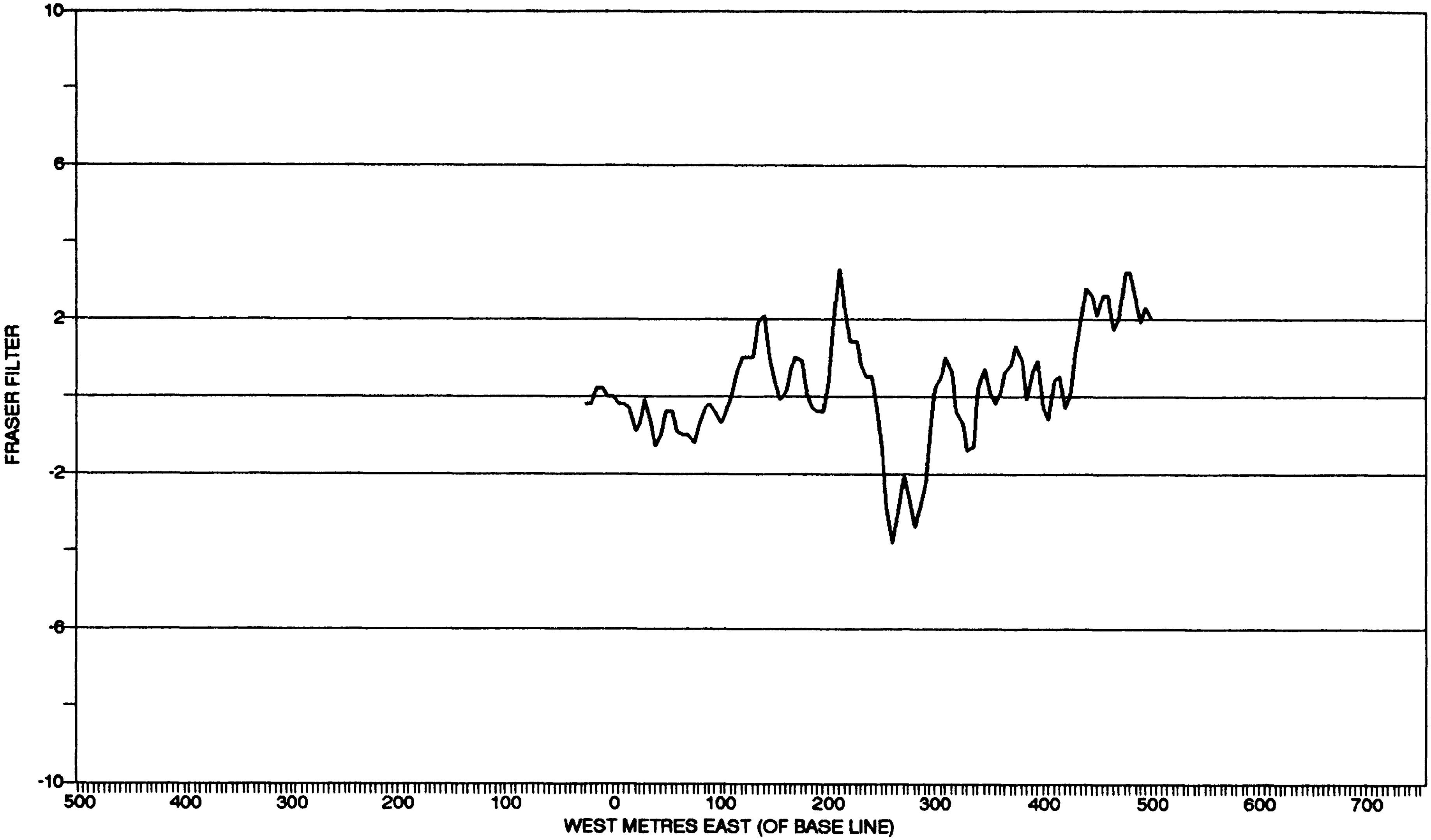
1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE 1000S



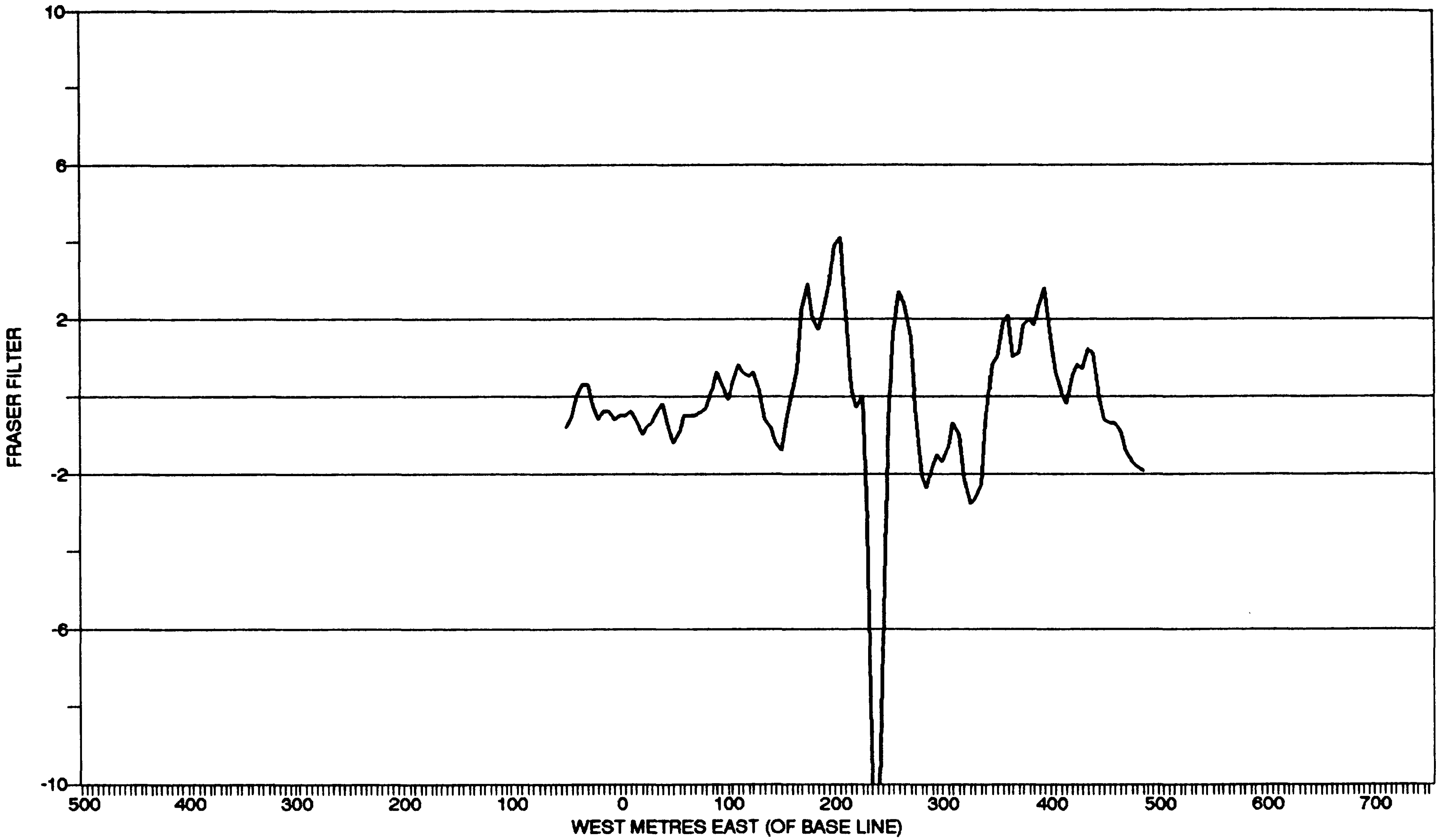
1992 VLF/MAG SURVEY: ZN CLAIMS

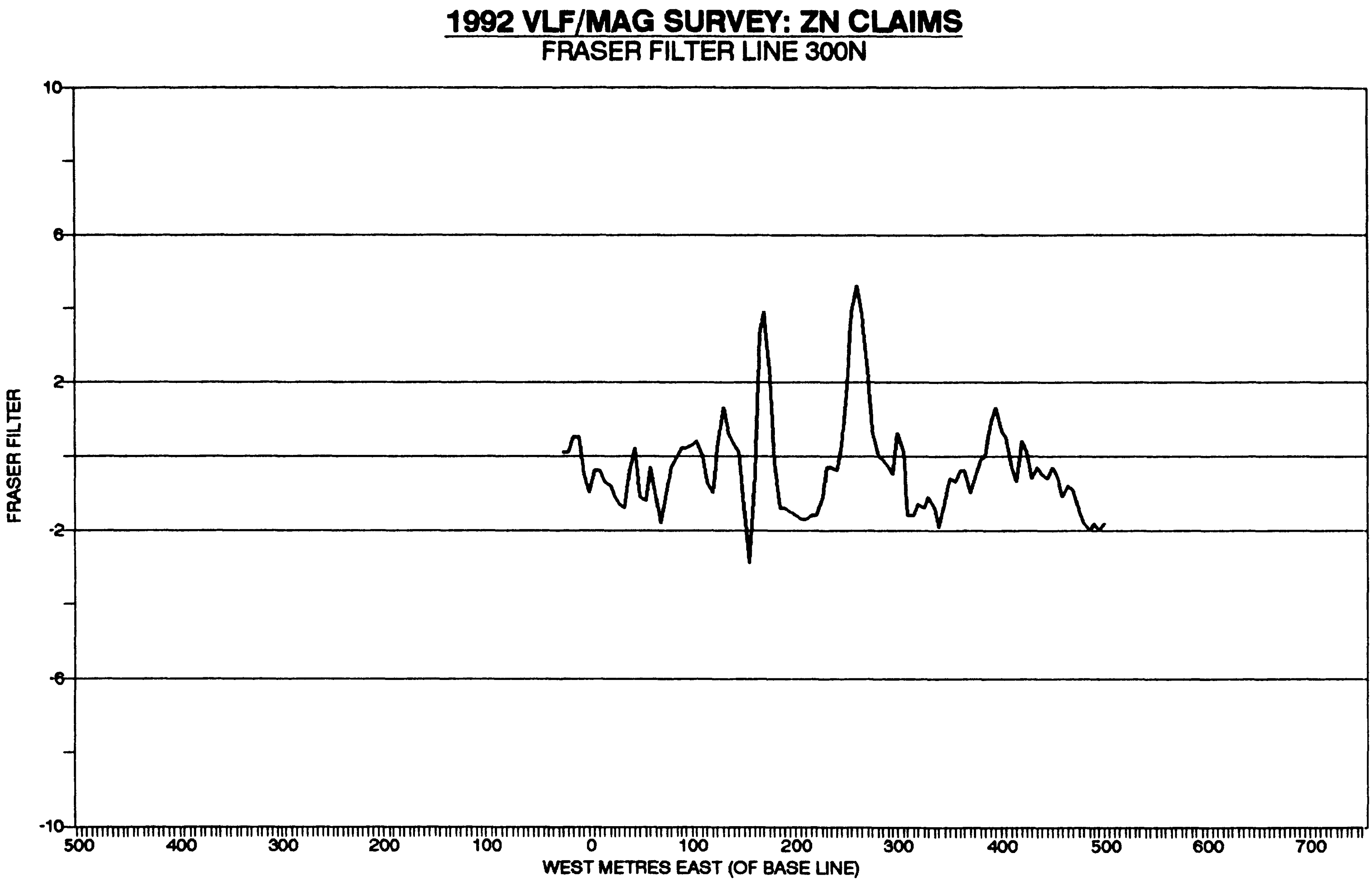
FRASER FILTER LINE 500N



1992 VLF/MAG SURVEY: ZN CLAIMS

FRASER FILTER LINE 400N

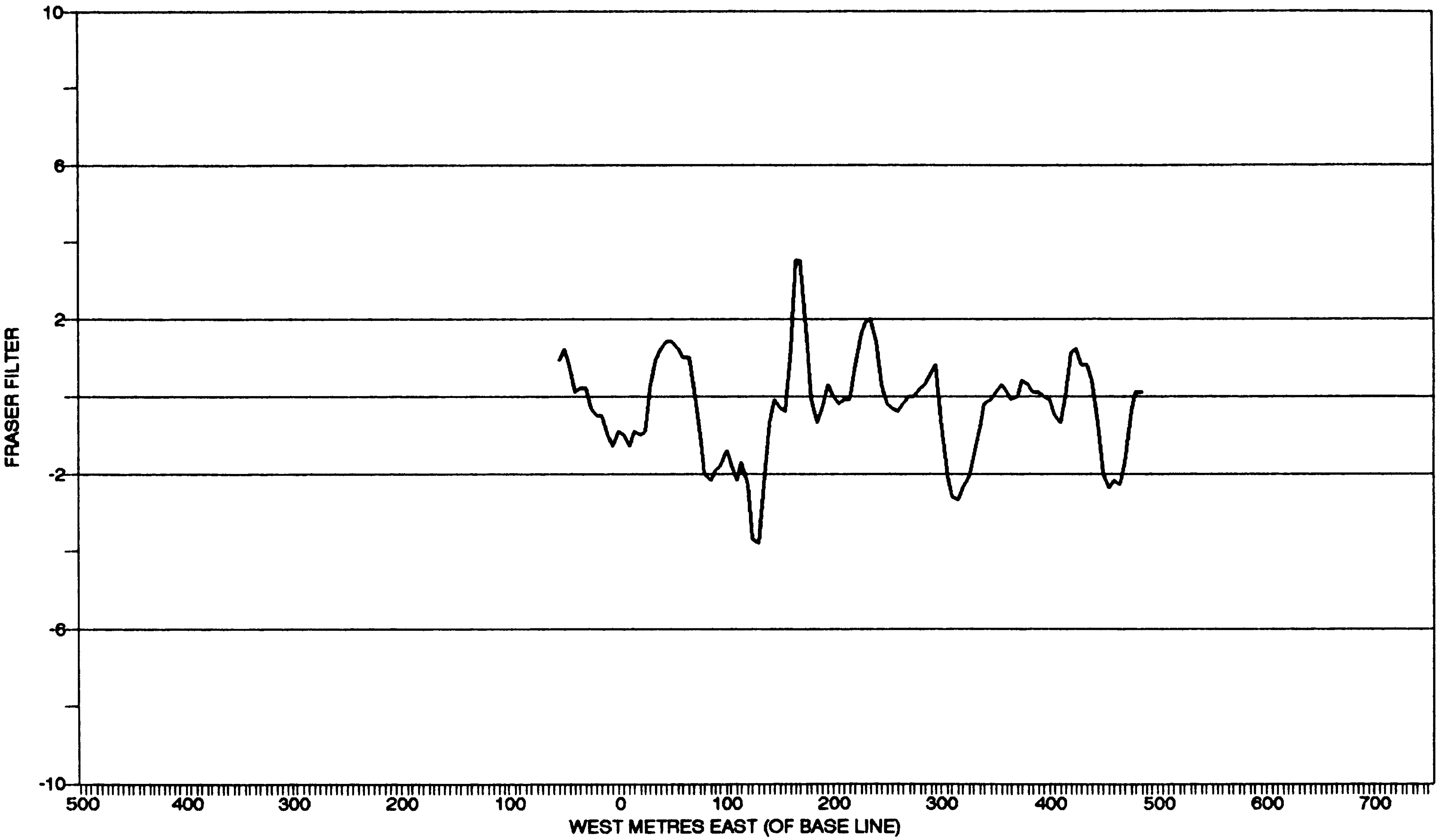




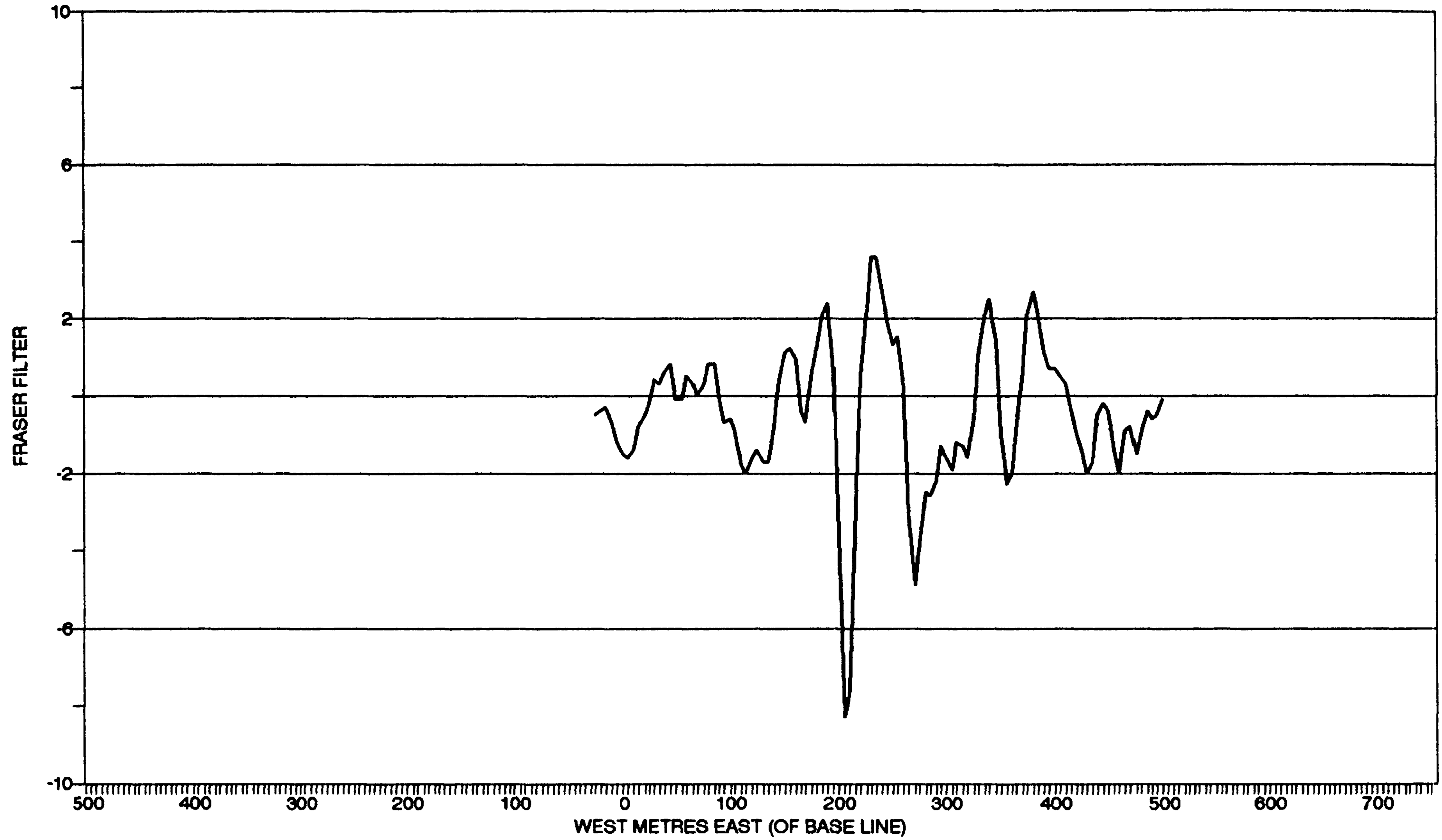
1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 300N
FRASER FILTER
10
6
2
-2
-6
-10
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

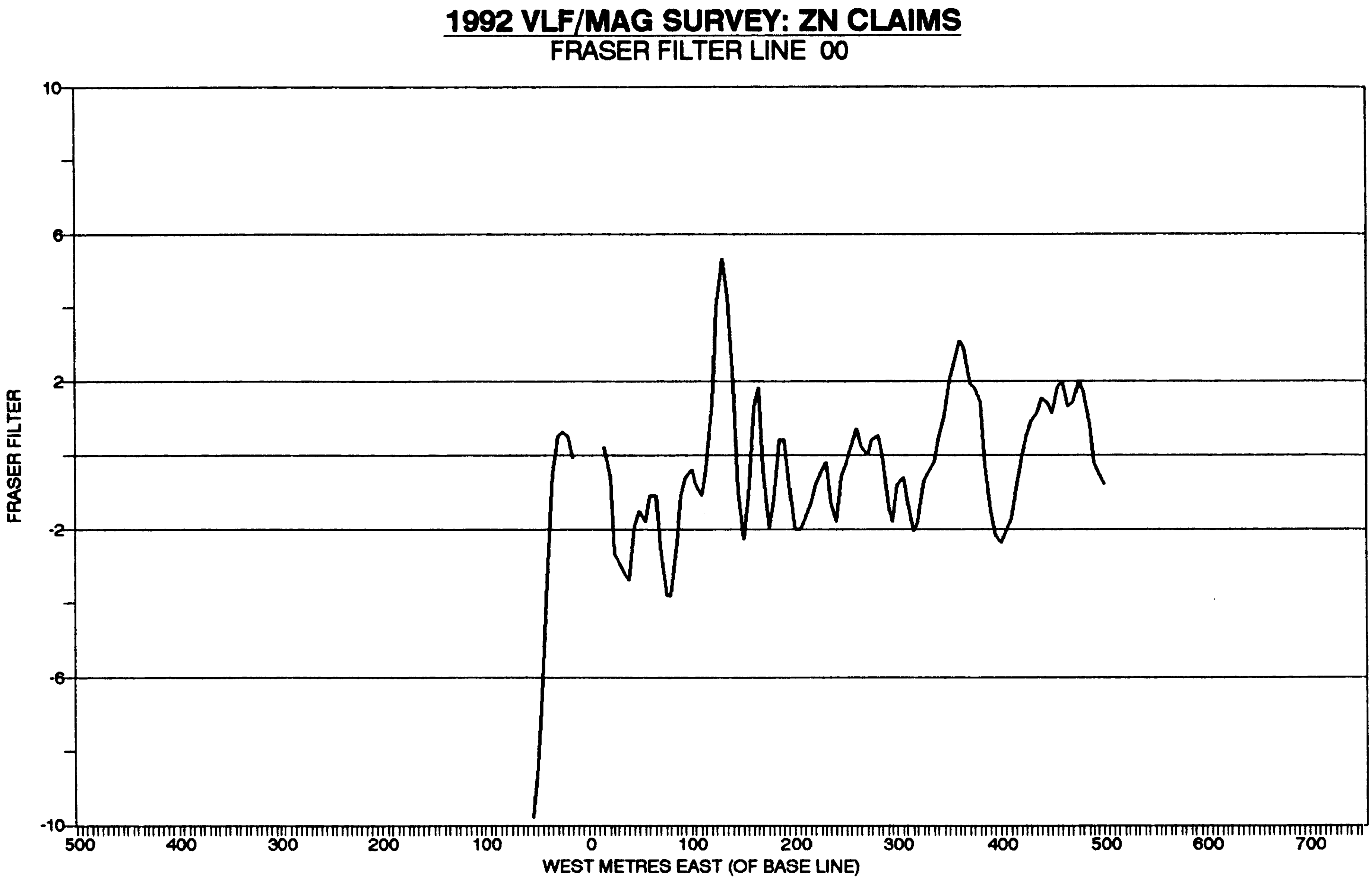
1992 VLF/MAG SURVEY: ZN CLAIMS

FRASER FILTER LINE 200N



1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 100N

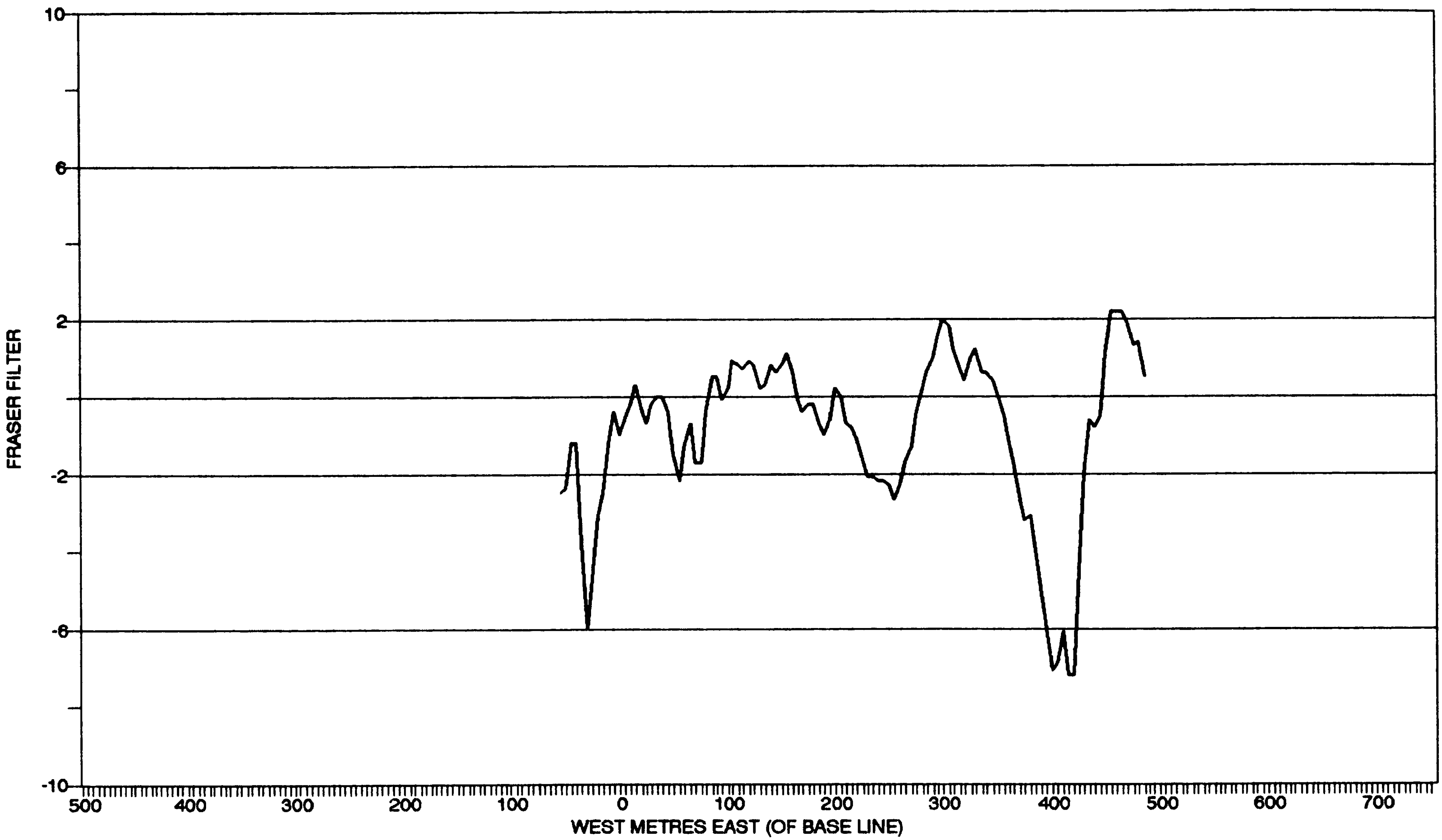




1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 00
10
6
2
-2
-6
-10
FRASER FILTER
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

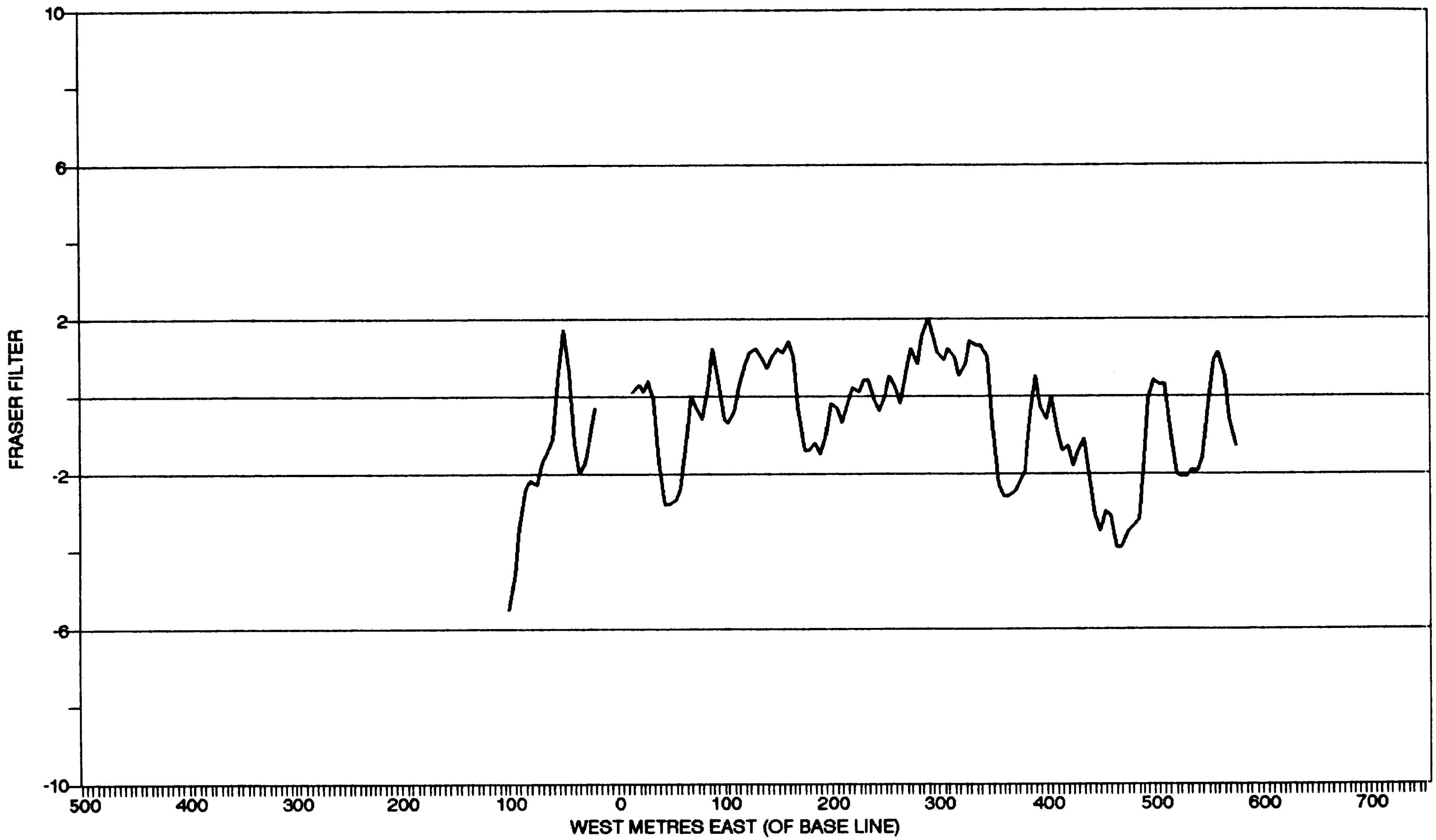
1992 VLF/MAG SURVEY: ZN CLAIMS

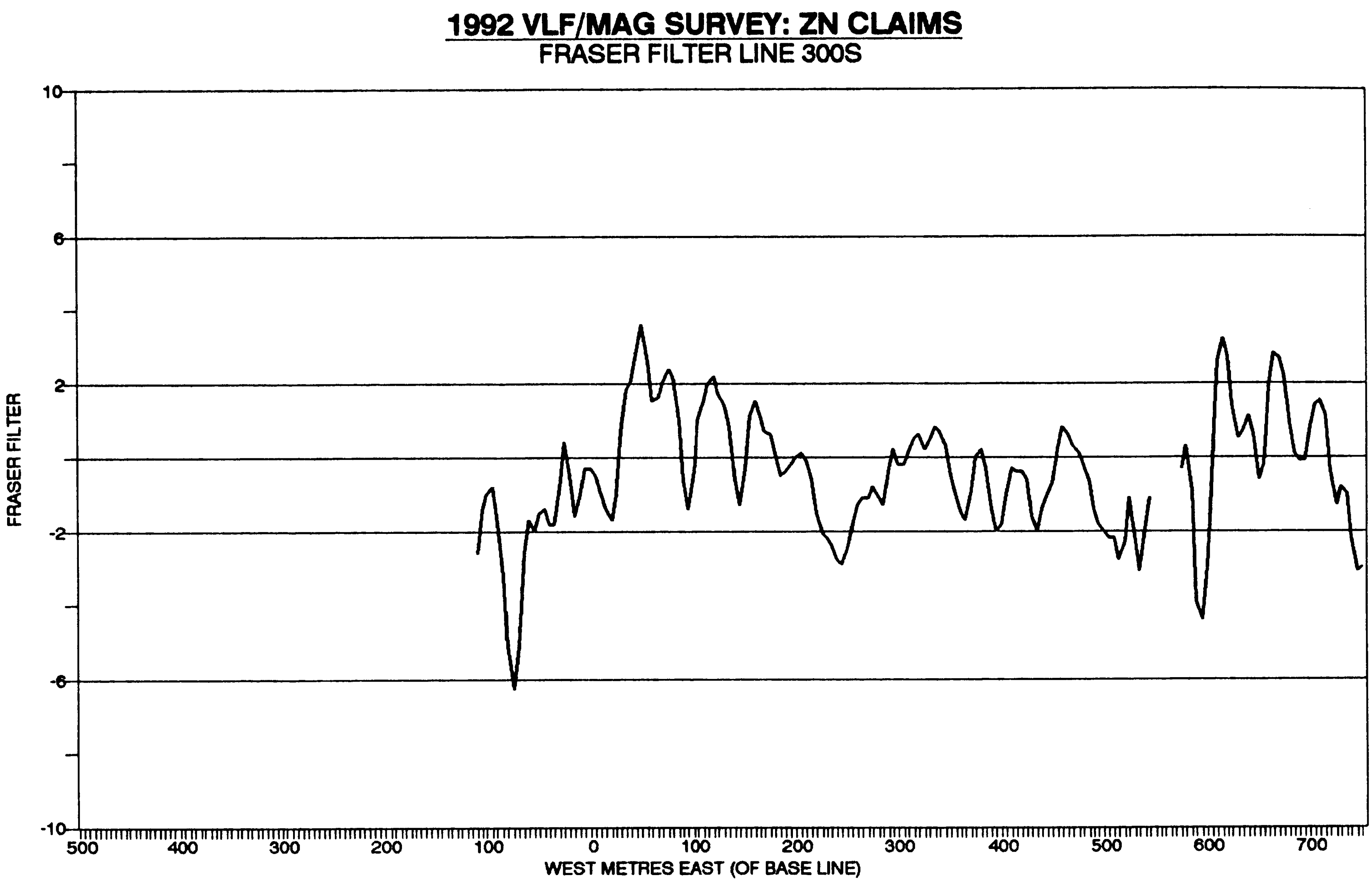
FRASER FILTER LINE 100S



1992 VLF/MAG SURVEY: ZN CLAIMS

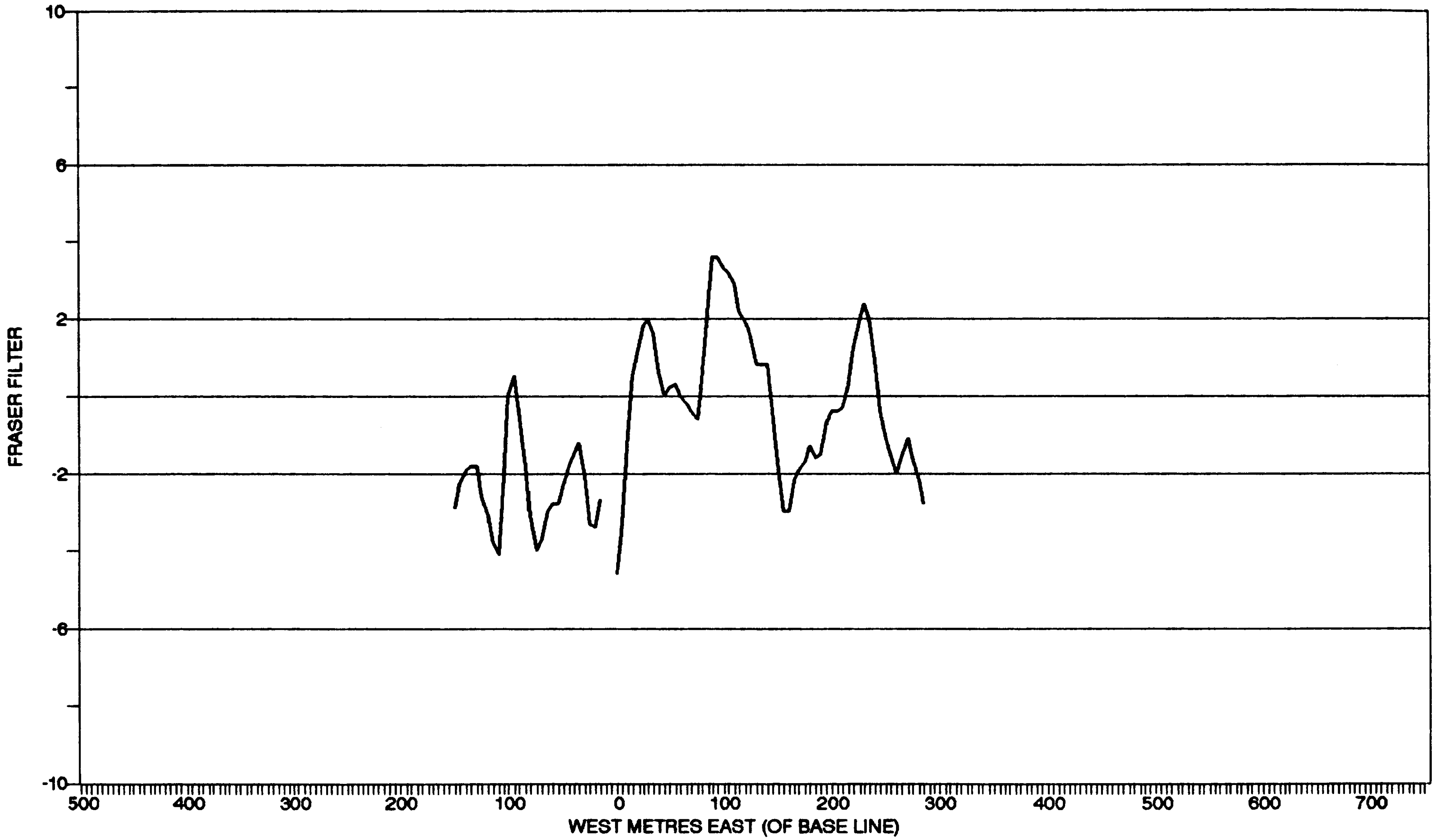
FRASER FILTER LINE 200S




1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 300S
FRASER FILTER
10
6
2
-2
-6
-10
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

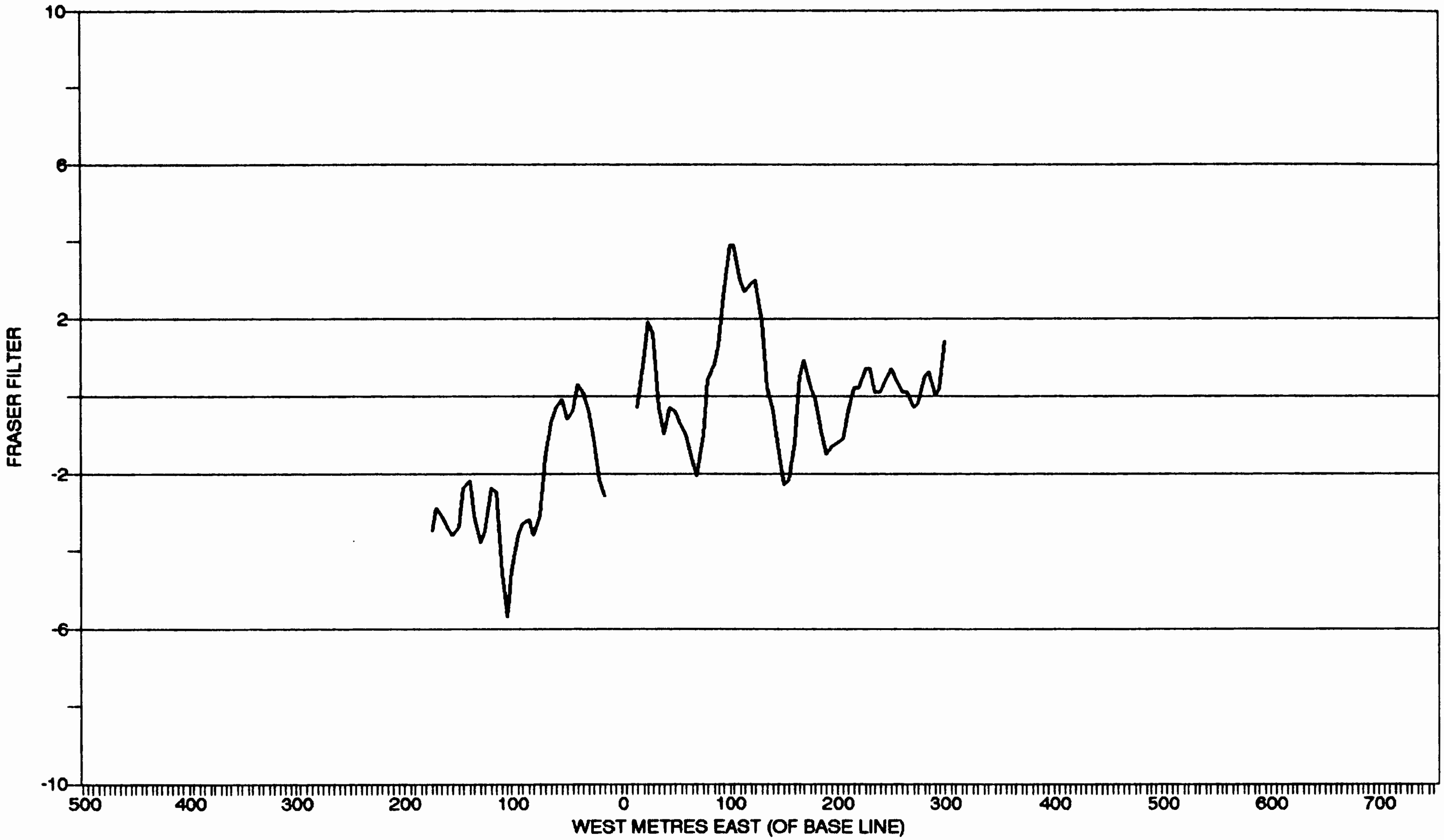
1992 VLF/MAG SURVEY: ZN CLAIMS

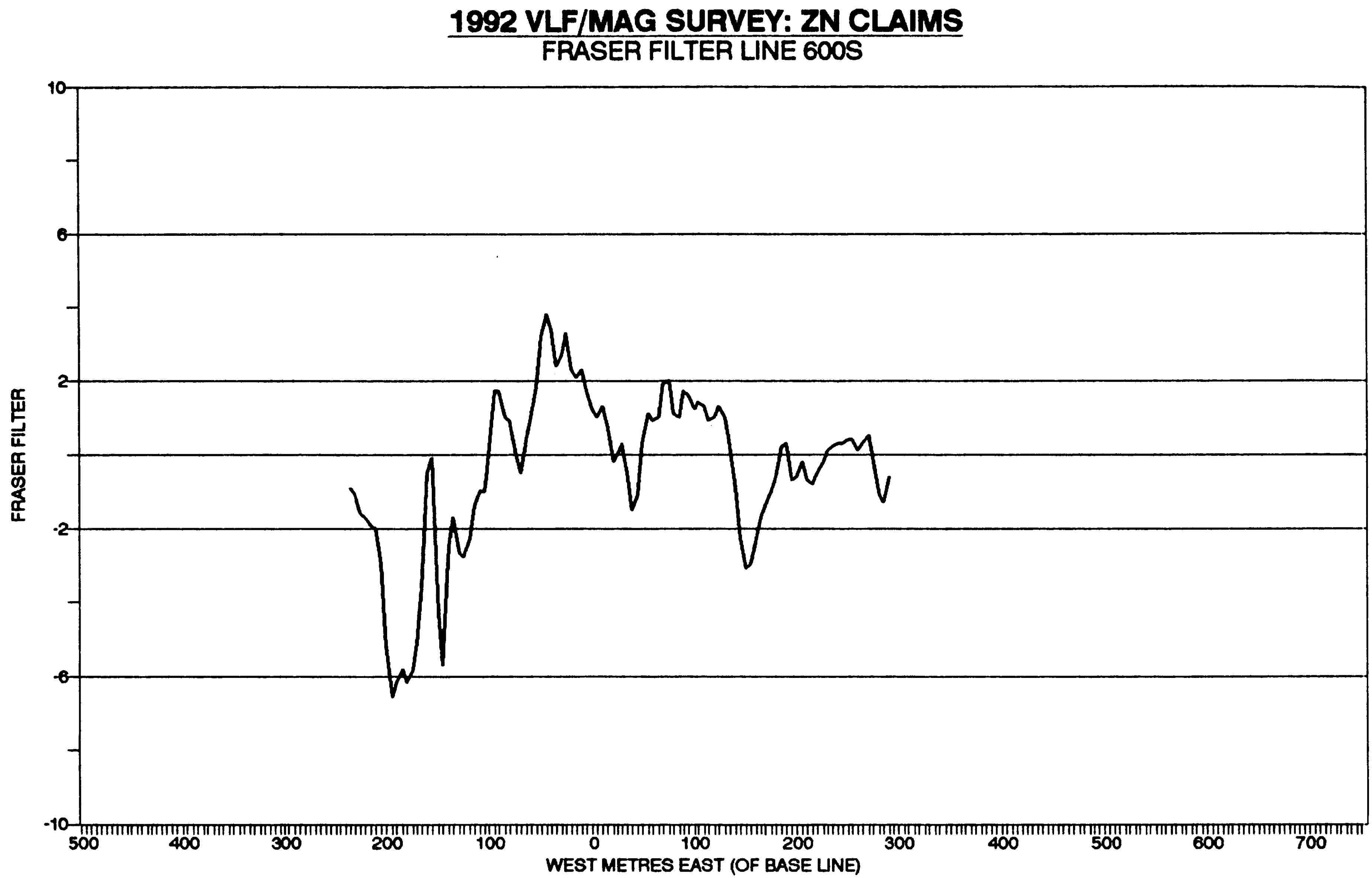
FRASER FILTER LINE 400S



1992 VLF/MAG SURVEY: ZN CLAIMS

FRASER FILTER LINE 500S

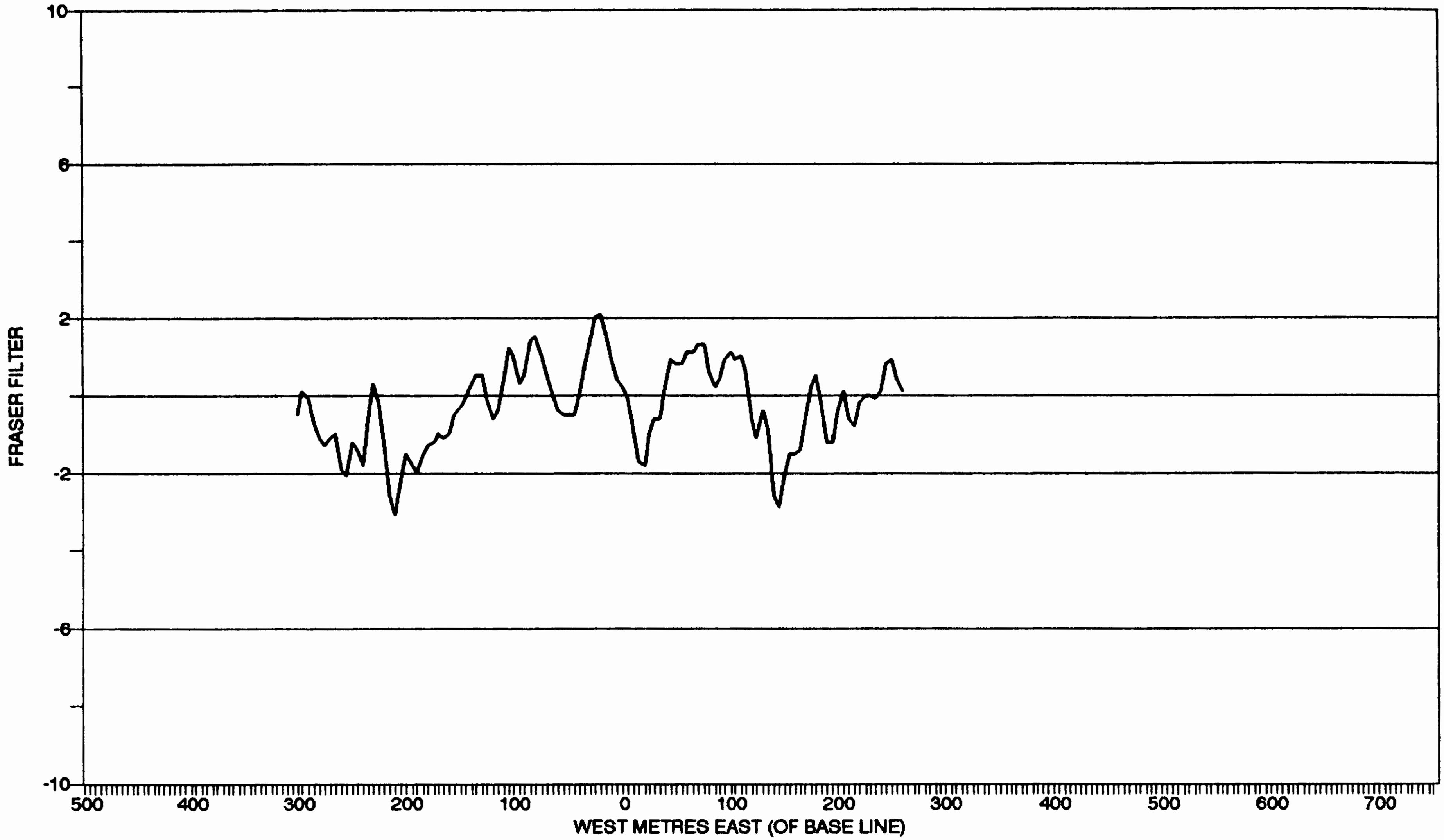


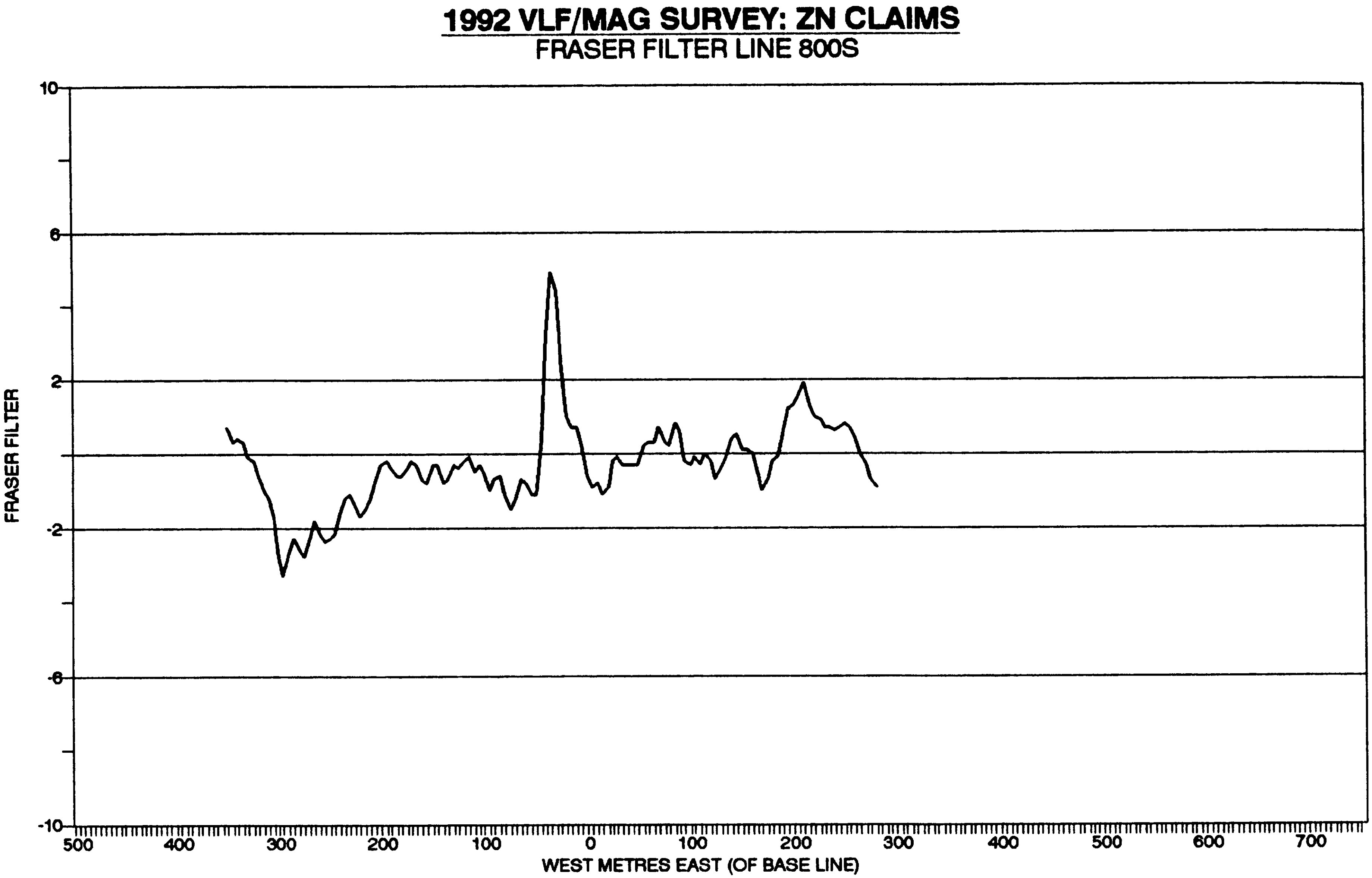


1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 600S
FRASER FILTER
10
6
2
-2
-6
-10
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

1992 VLF/MAG SURVEY: ZN CLAIMS

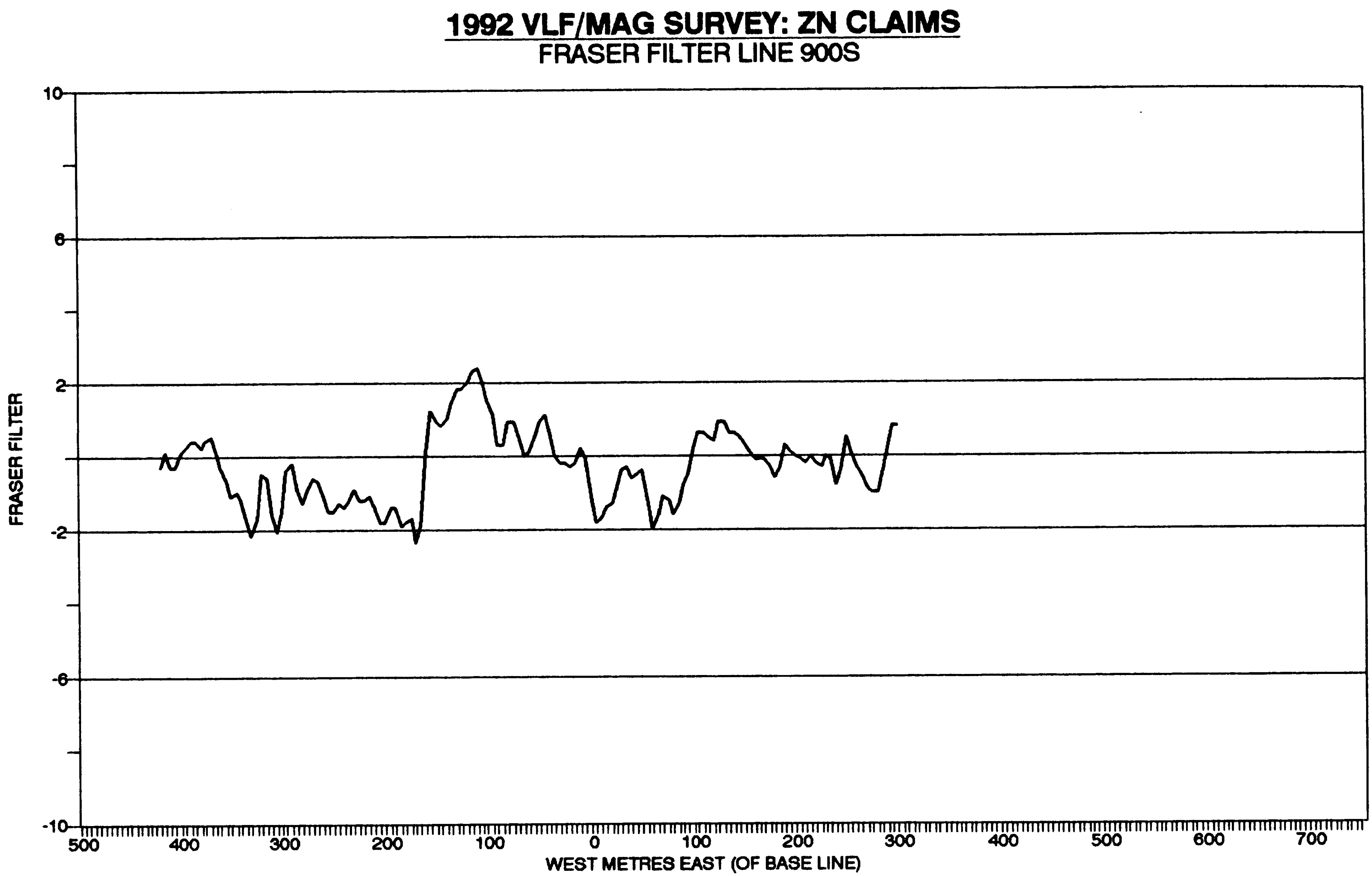
FRASER FILTER LINE 700S





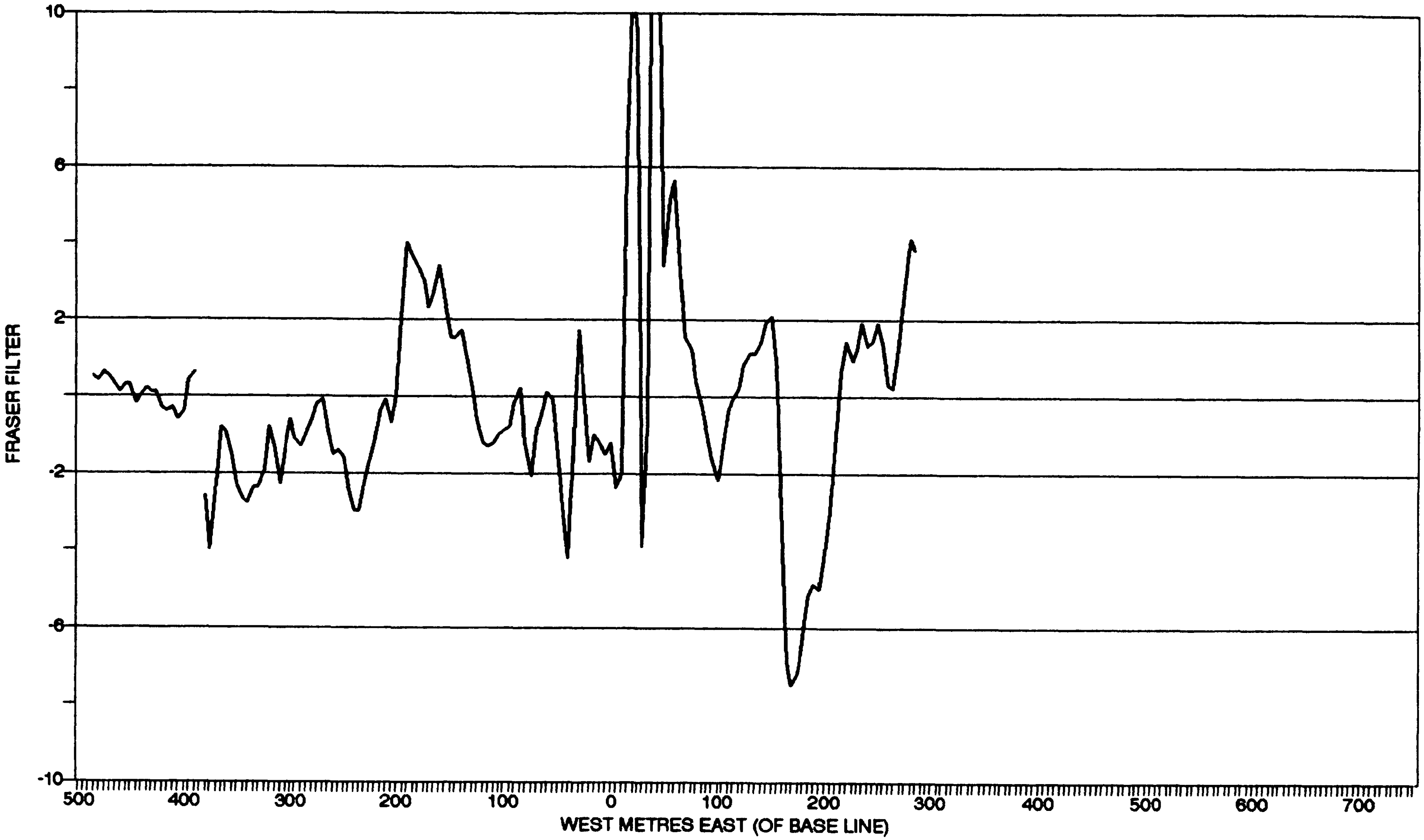
1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 800S
FRASER FILTER
10
6
2
-2
-6
-10
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

77


1992 VLF/MAG SURVEY: ZN CLAIMS
FRASER FILTER LINE 900S
FRASER FILTER
10
6
2
-2
-6
-10
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)

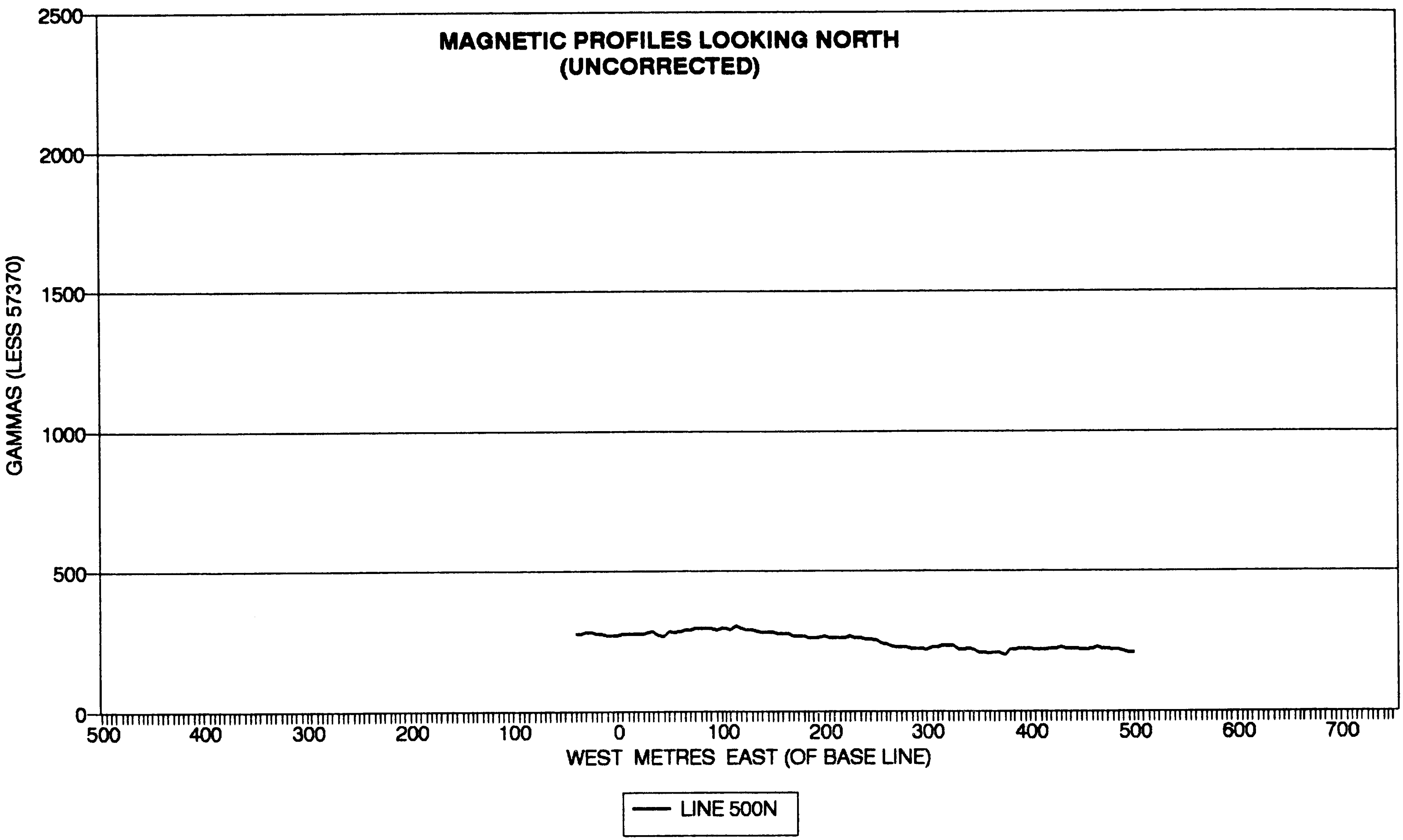
1992 VLF/MAG SURVEY: ZN CLAIMS

FRASER FILTER LINE 1000S

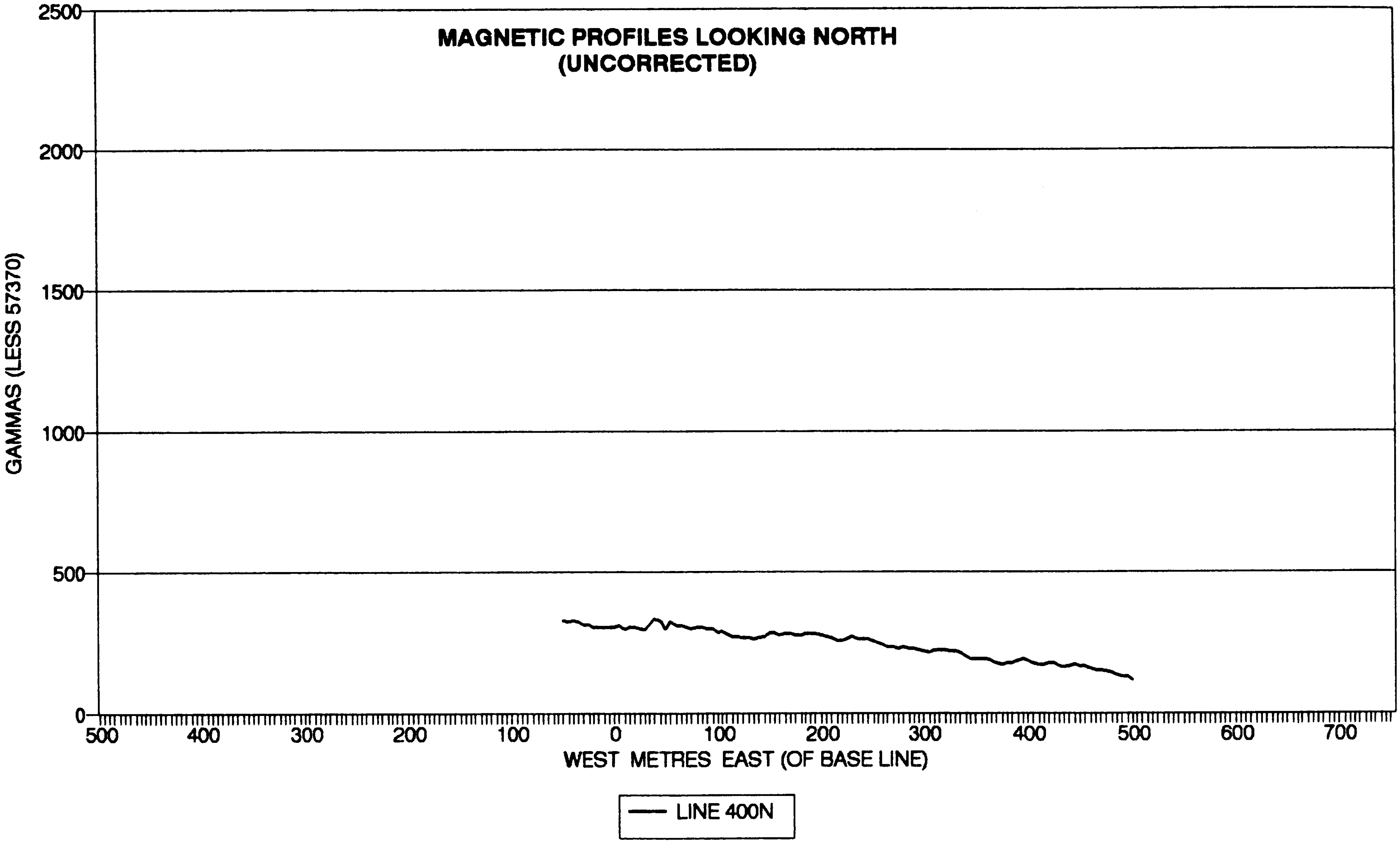


1992 VLF/MAG SURVEY: ZN CLAIMS

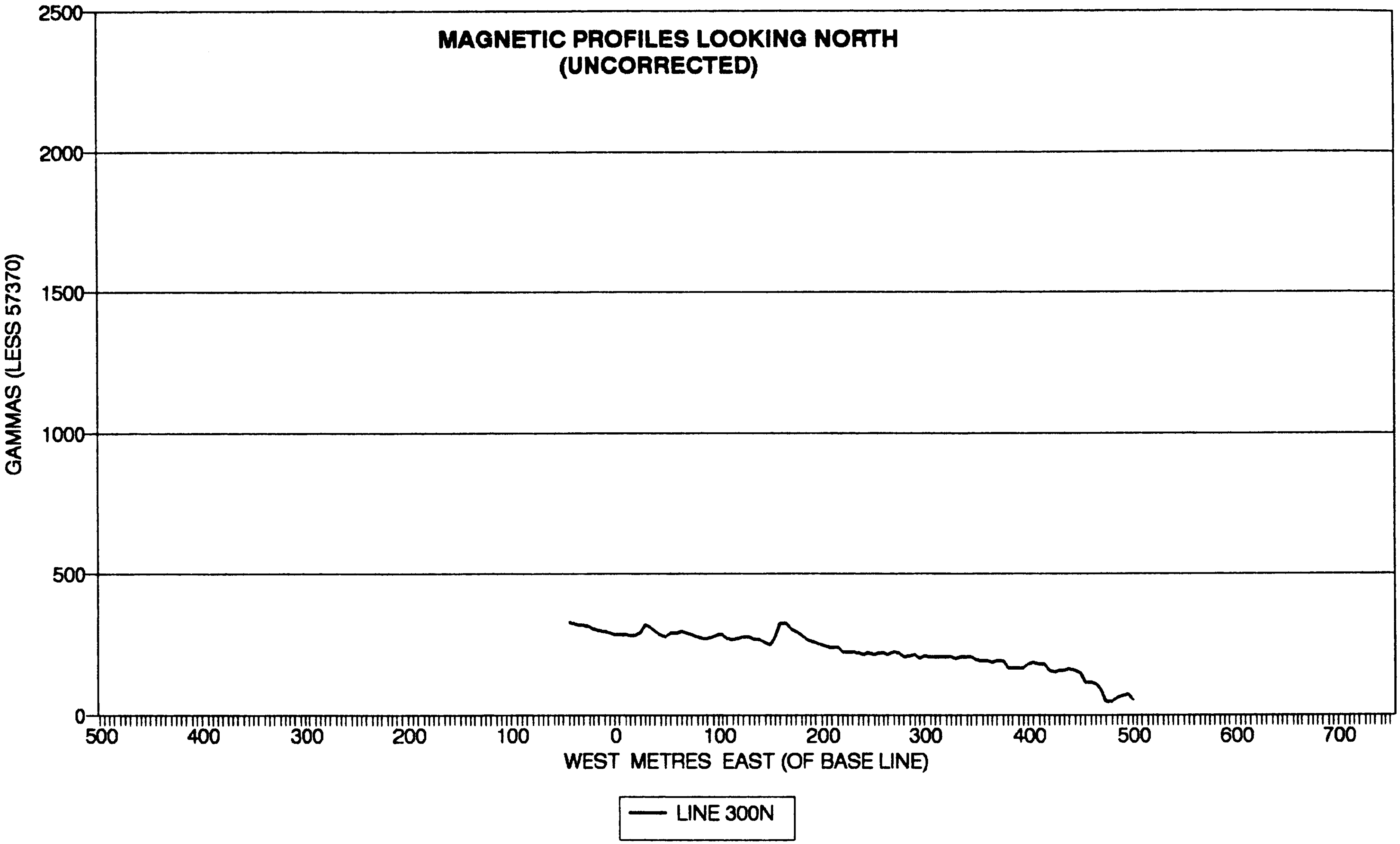
MAGNETOMETER LINE 500N



1992 VLF/MAG SURVEY: ZN CLAIMS
MAGNETOMETER LINE 400N



1992 VLF/MAG SURVEY: ZN CLAIMS
MAGNETOMETER LINE 300N



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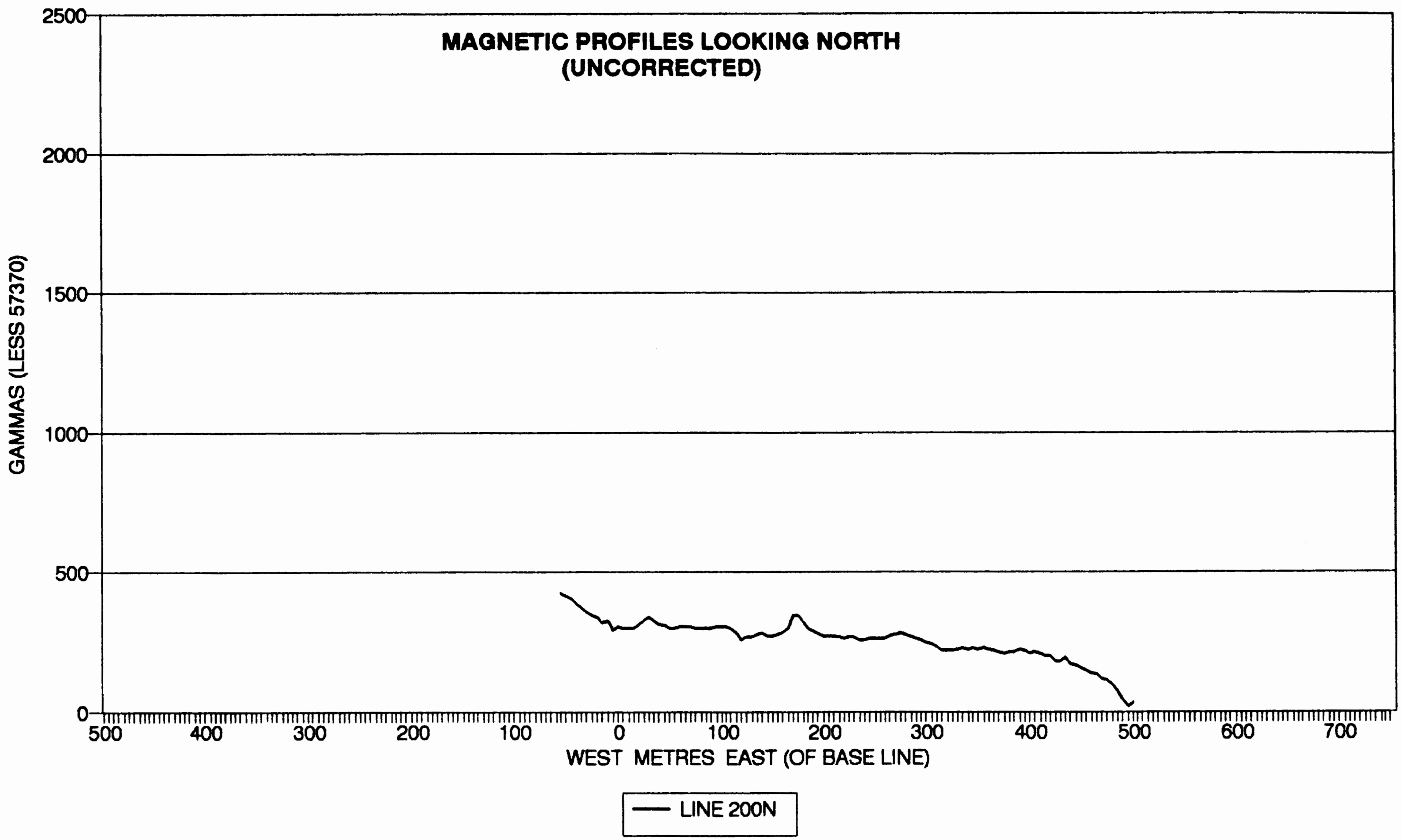
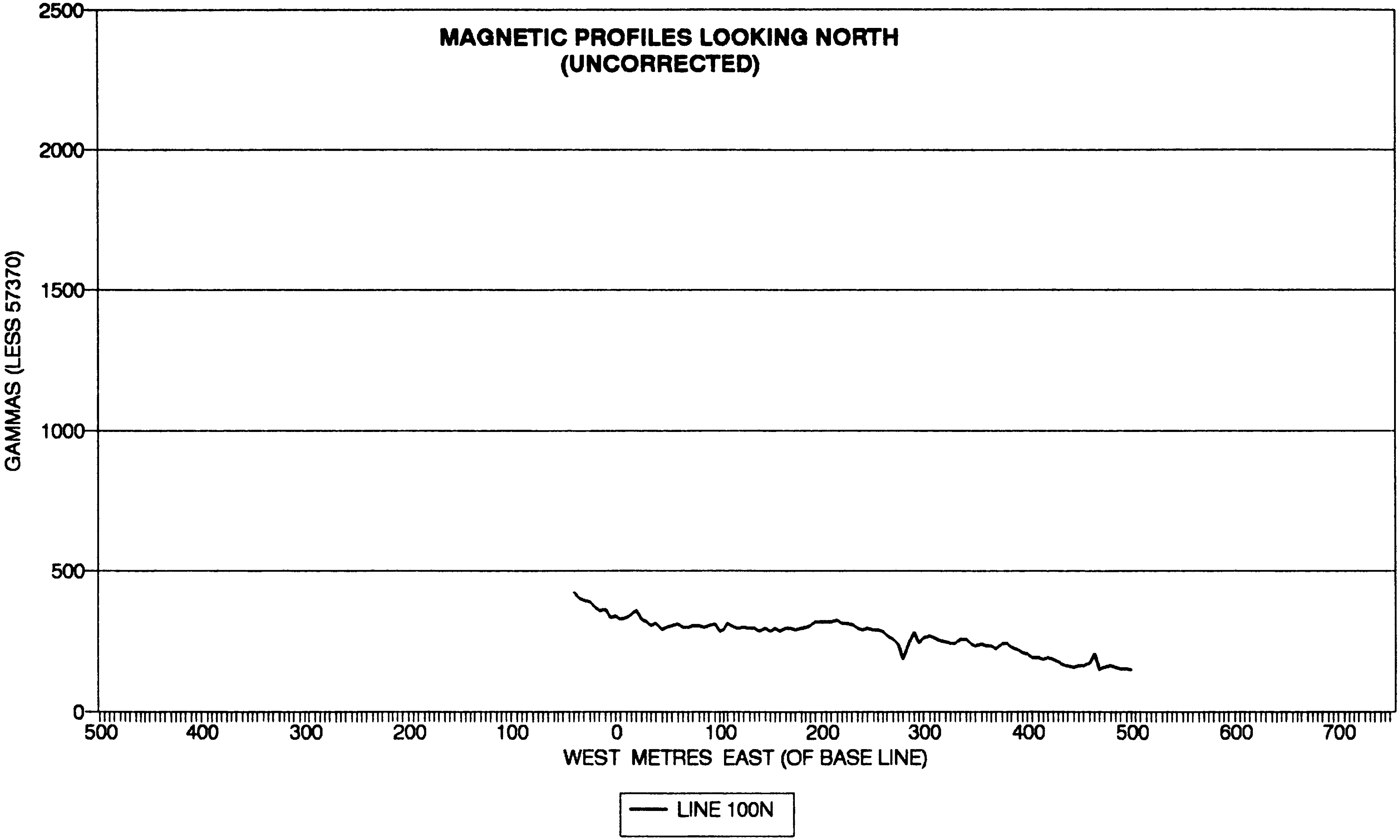
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 200N



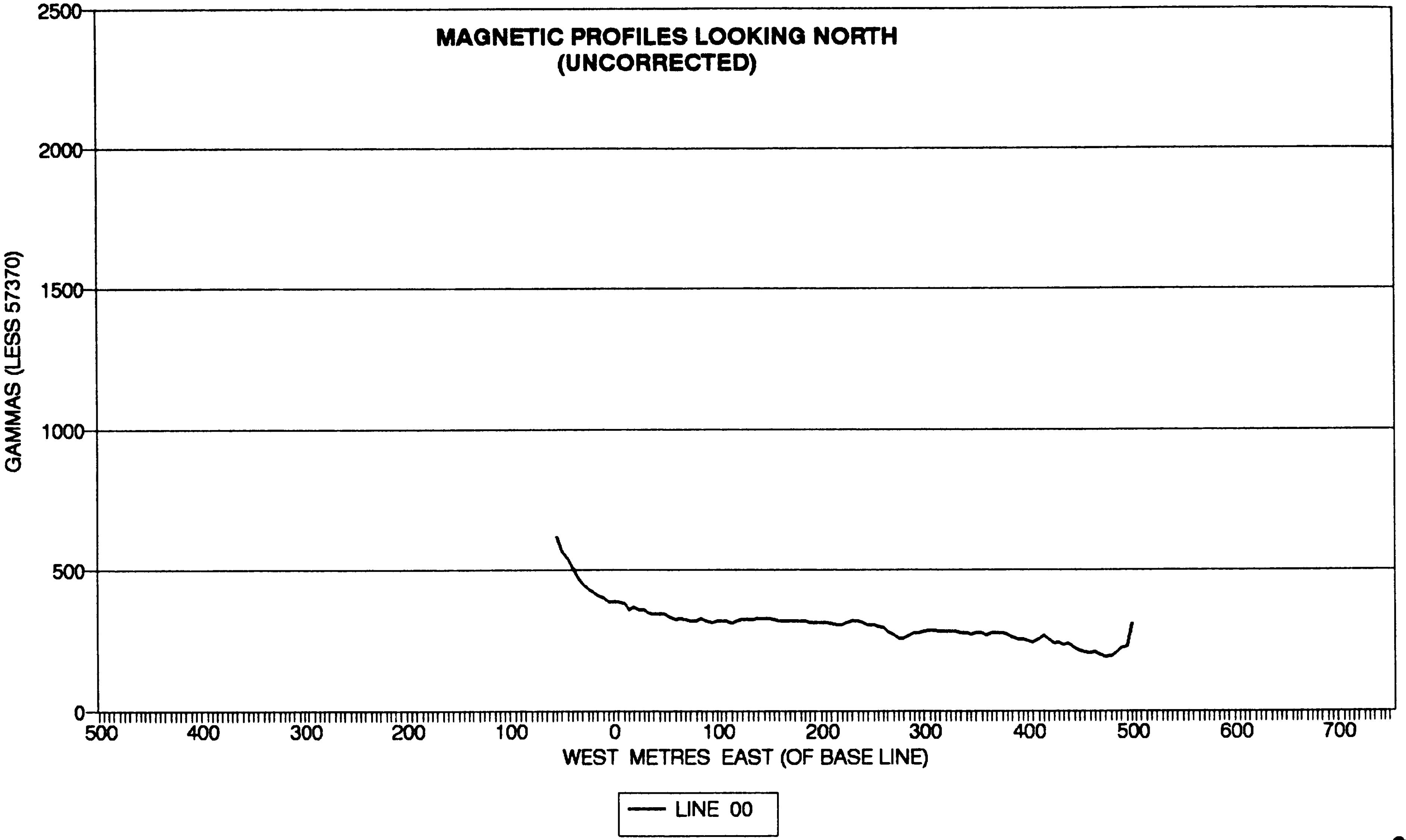
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 100N



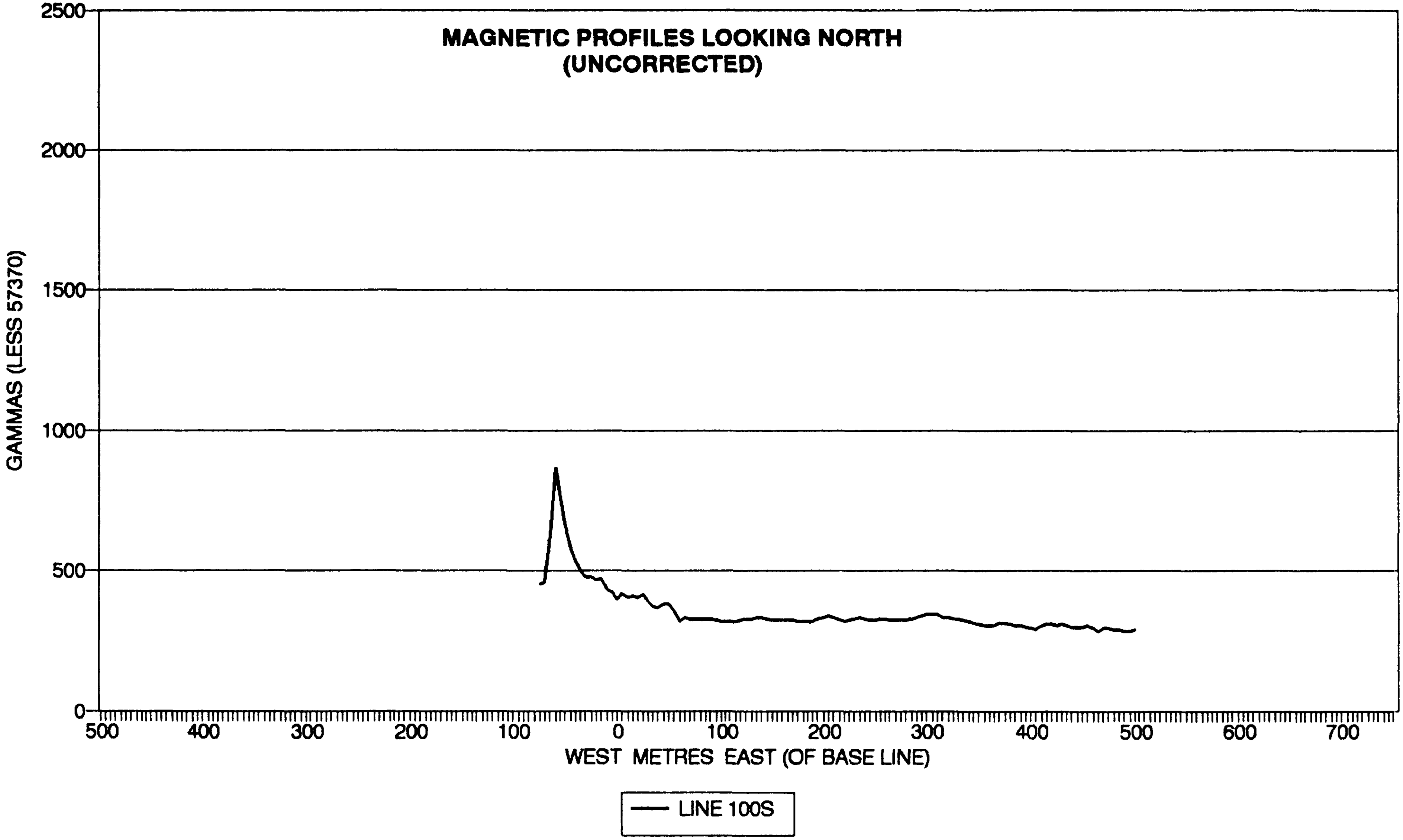
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 00



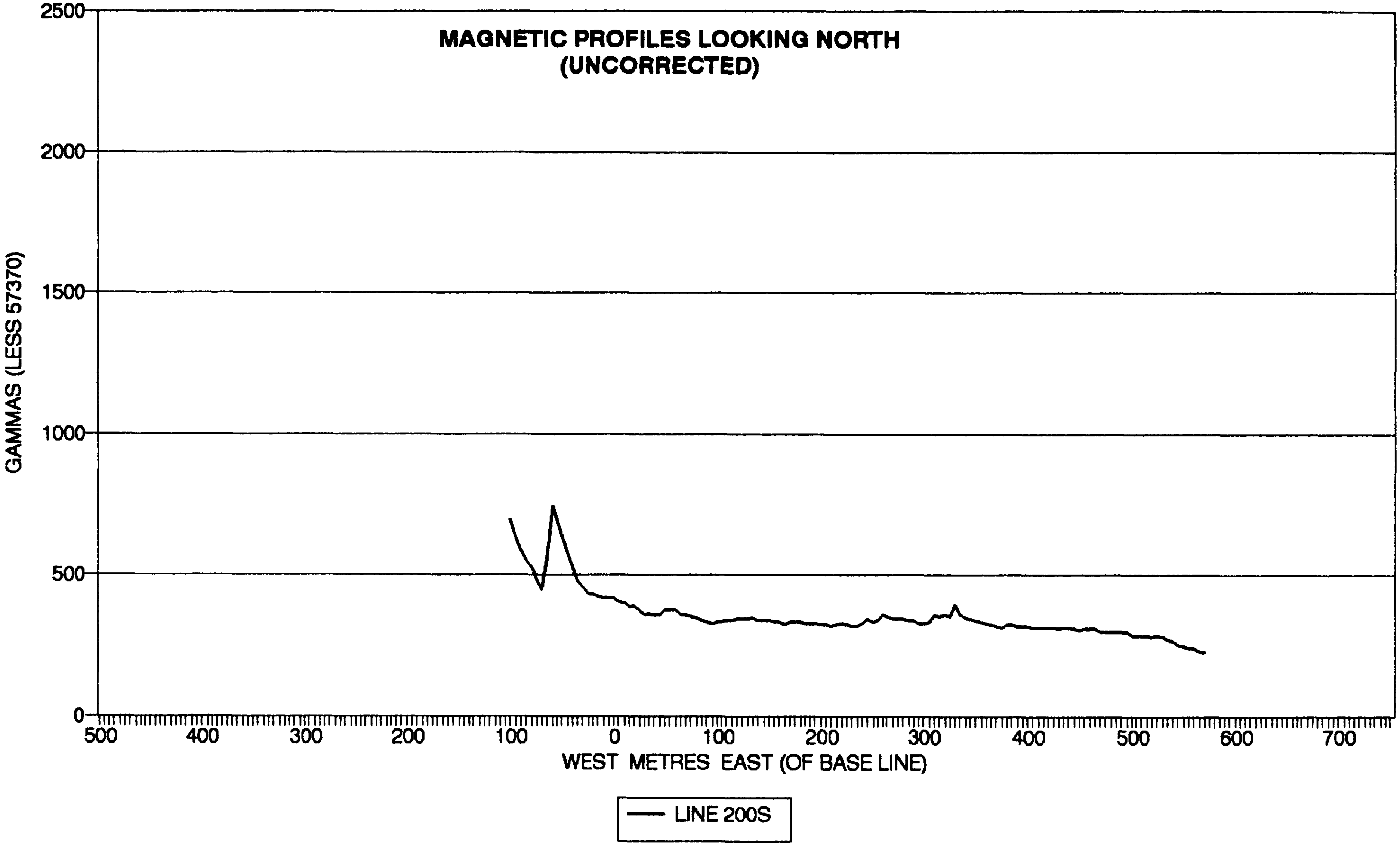
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 100S



1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 200S



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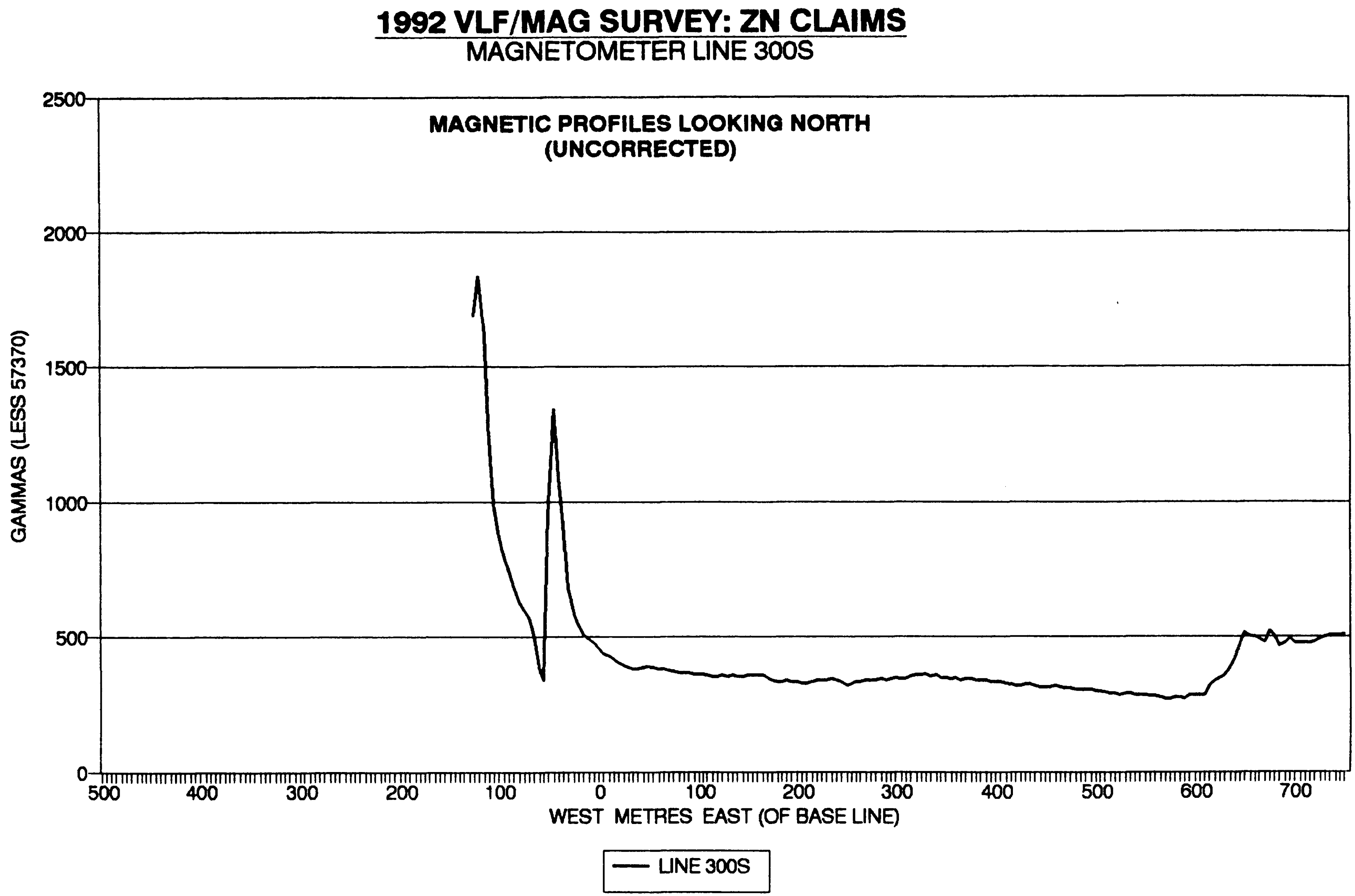
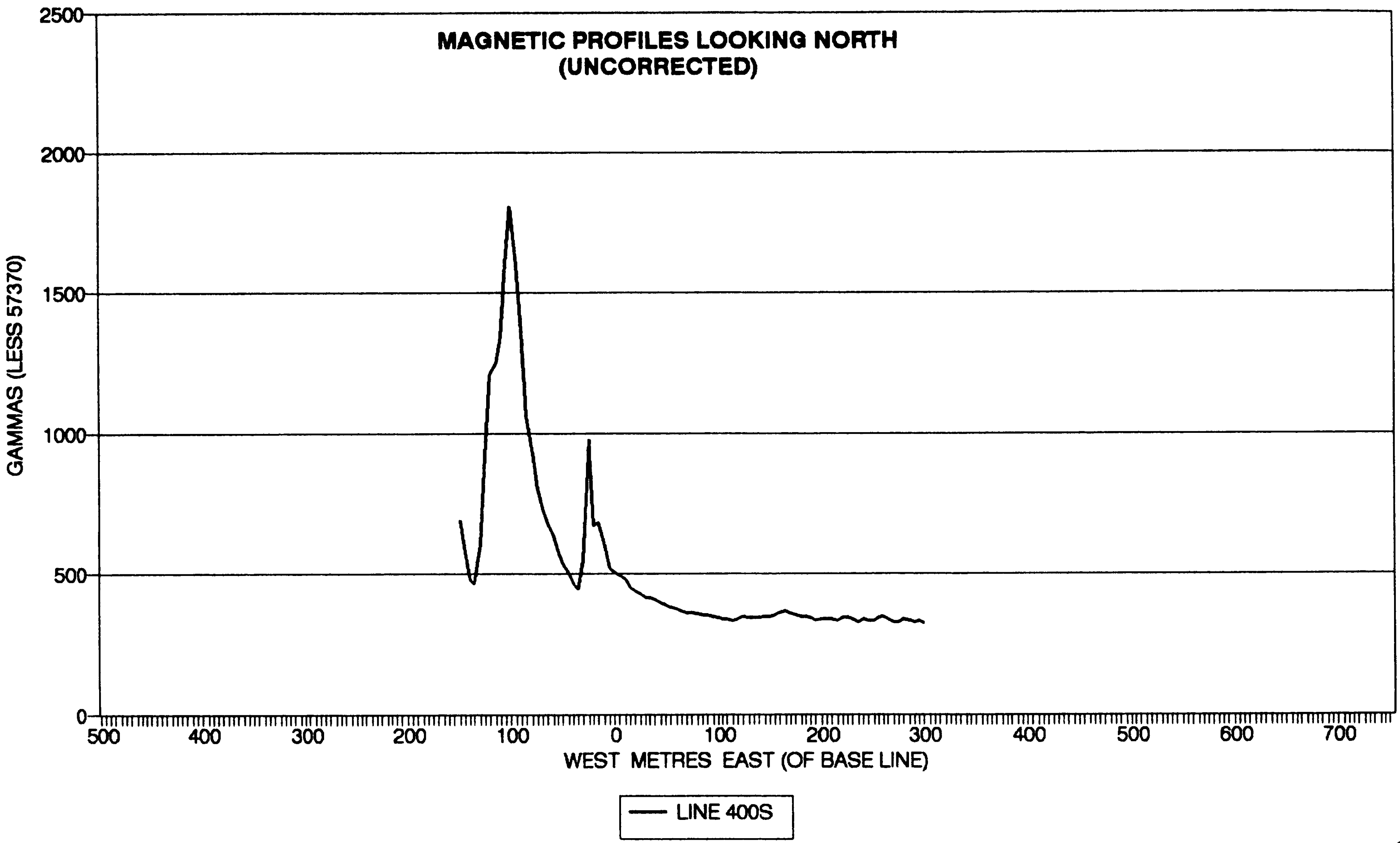


1992 VLF/MAG SURVEY: ZN CLAIMS
MAGNETOMETER LINE 300S
MAGNETIC PROFILES LOOKING NORTH
(UNCORRECTED)
2500
2000
1500
1000
500
0
GAMMAS (LESS 57370)
500
400
300
200
100
0
100
200
300
400
500
600
700
WEST METRES EAST (OF BASE LINE)
LINE 300S

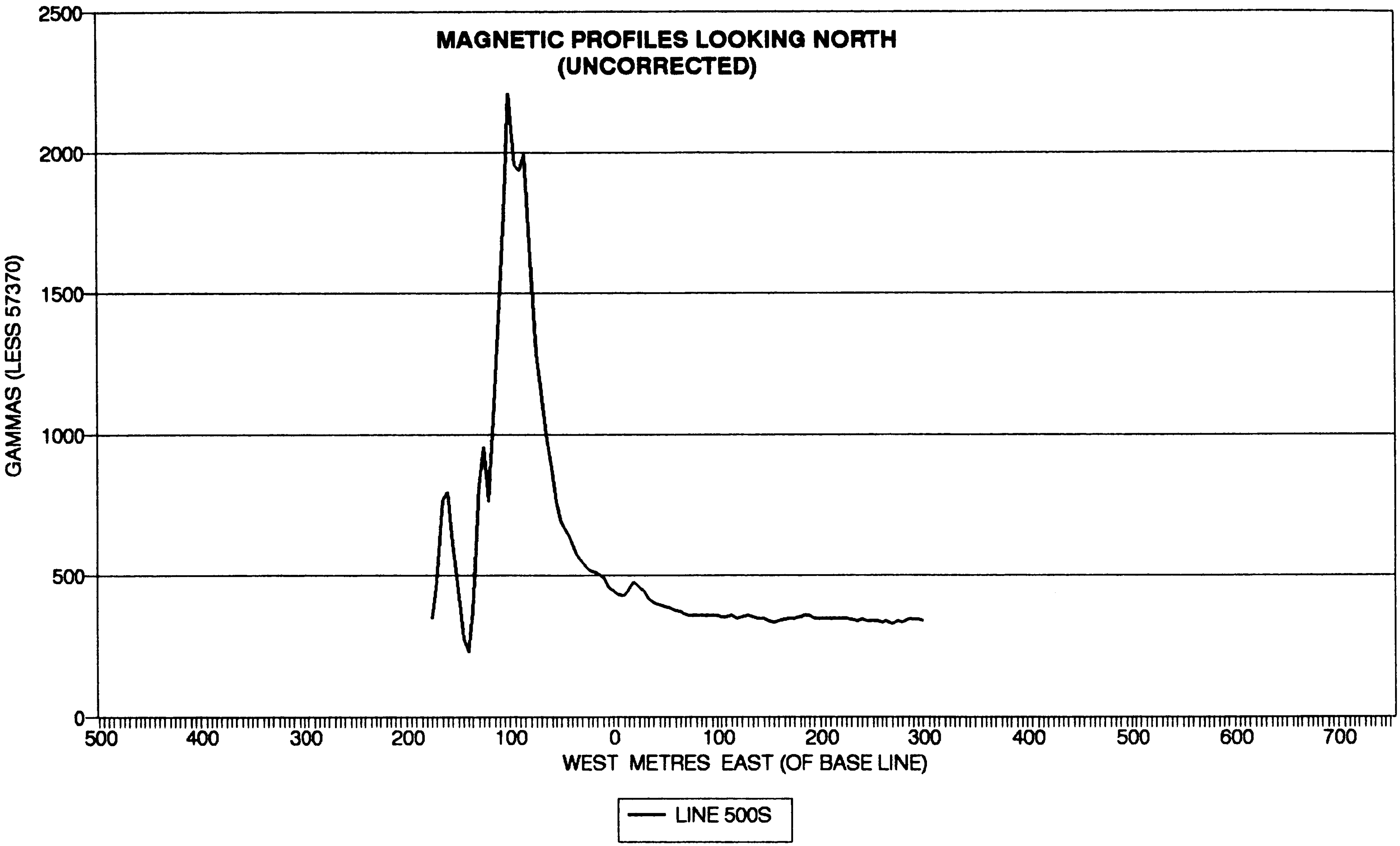
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 400S



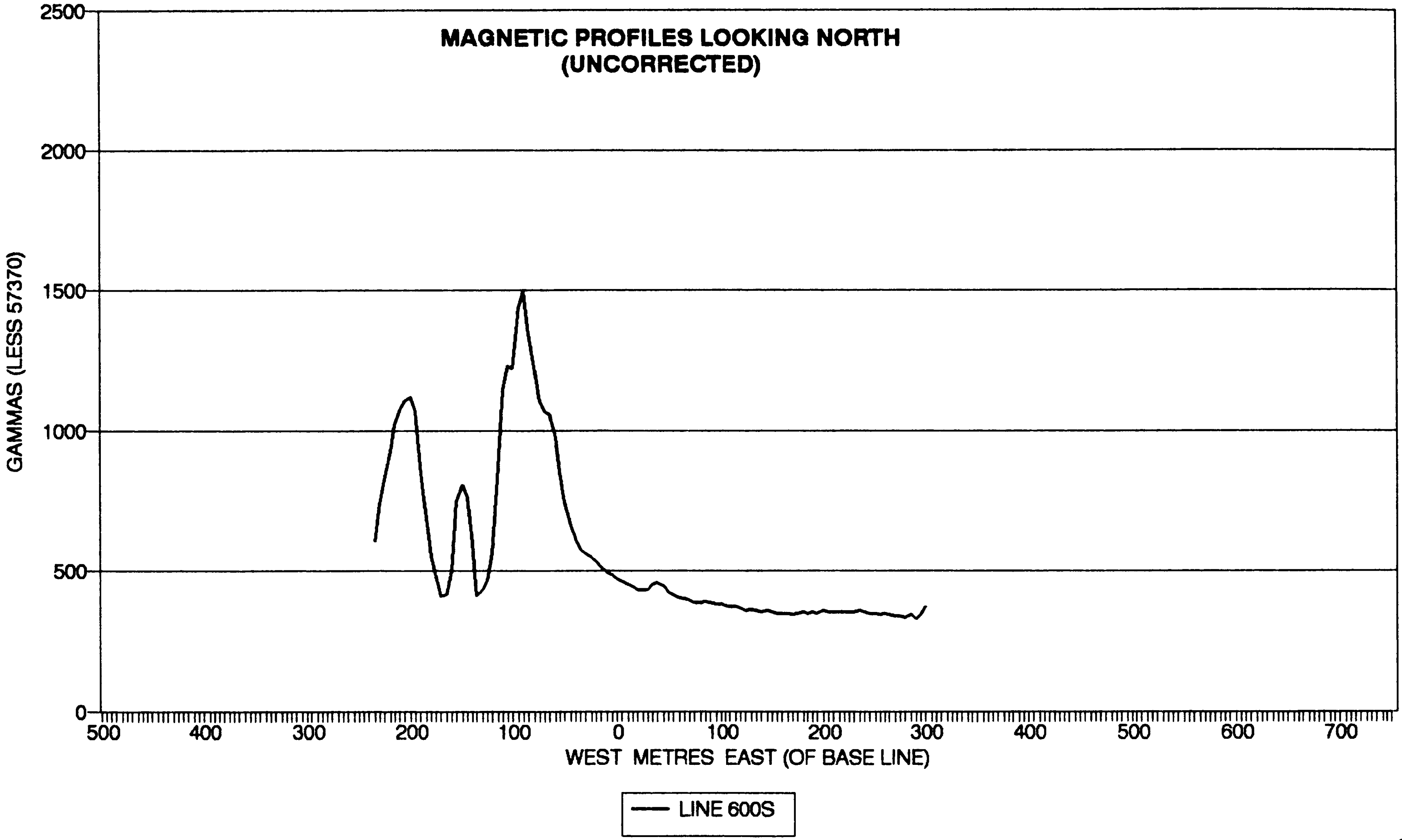
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 500S



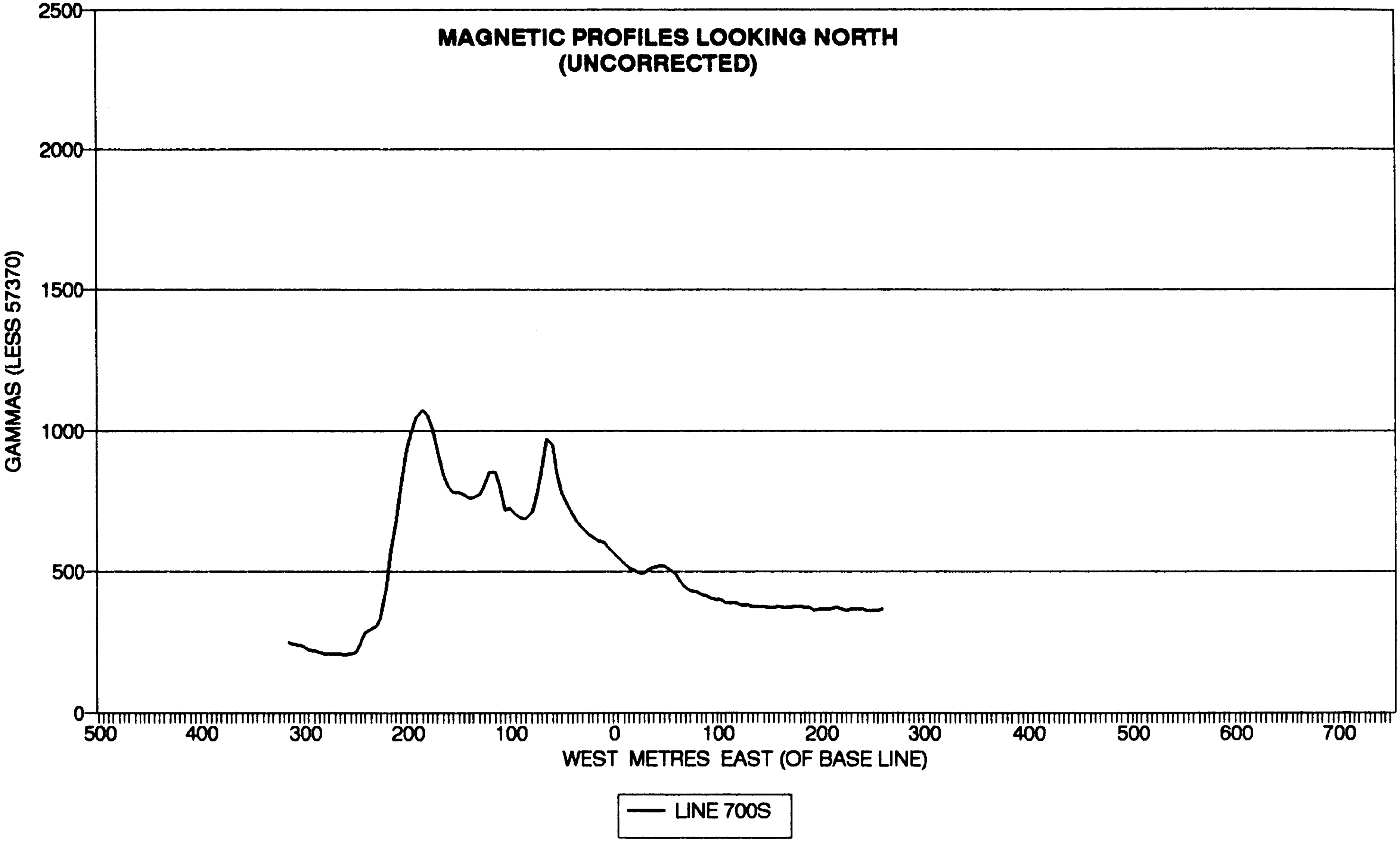
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 600S



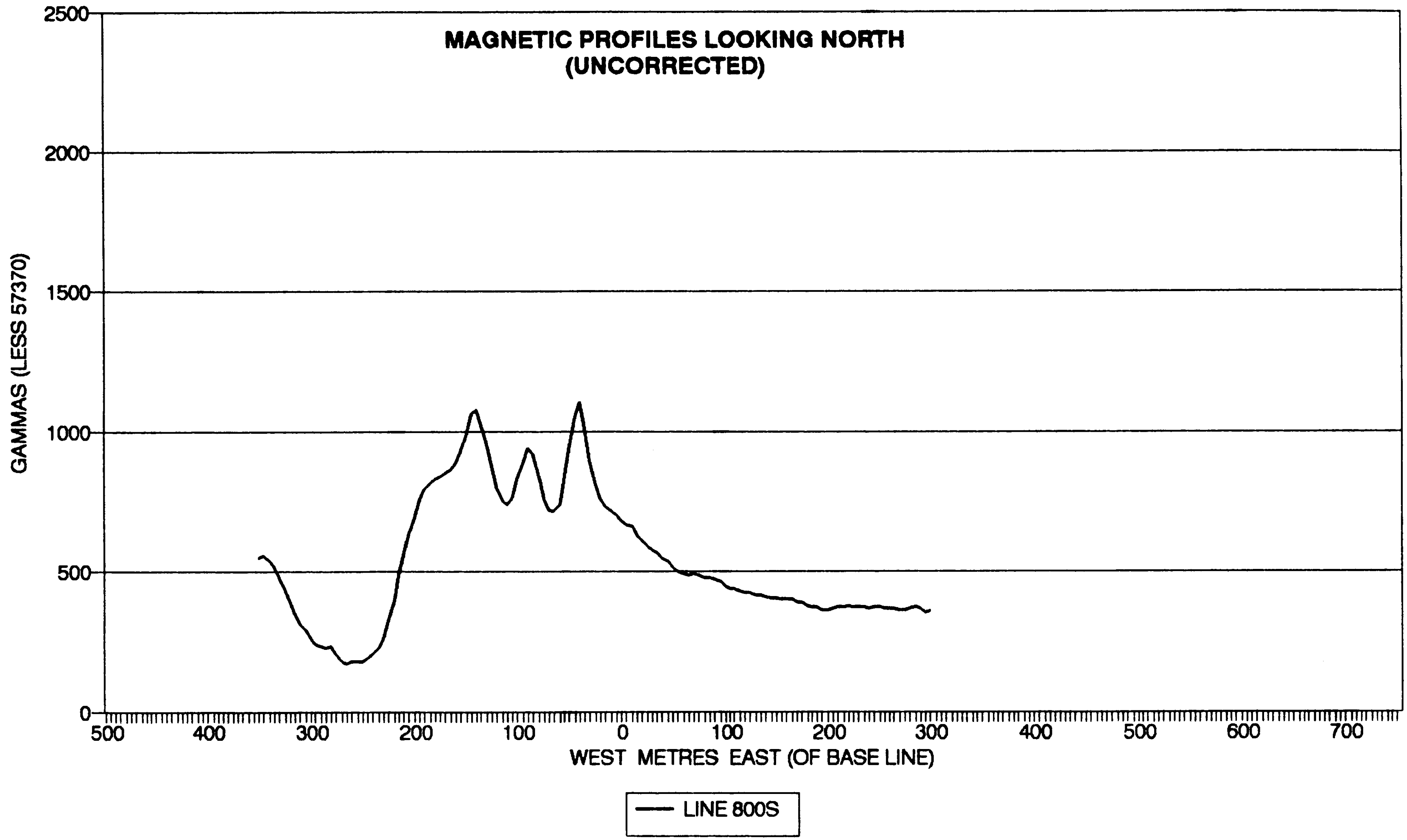
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 700S



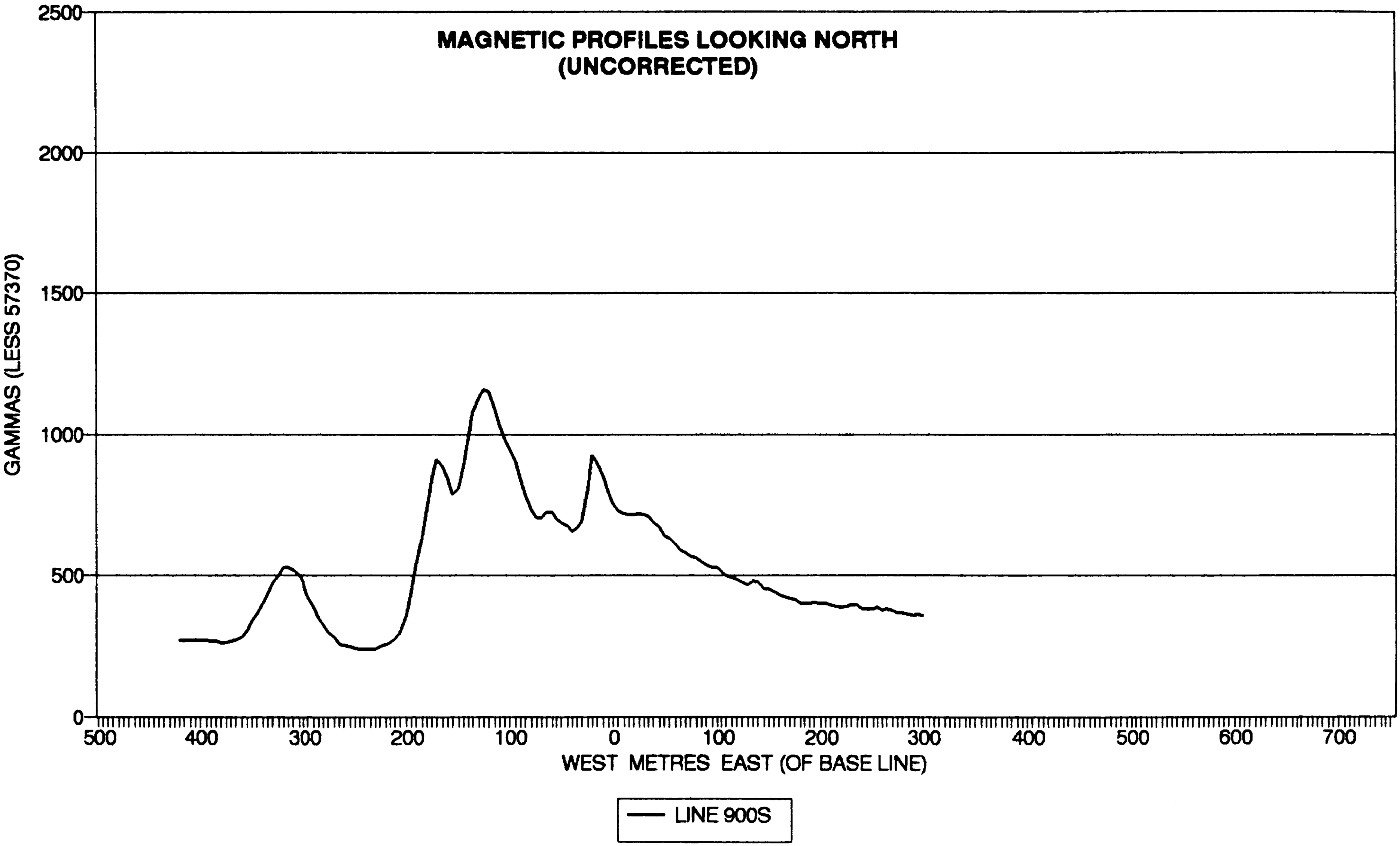
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 800S



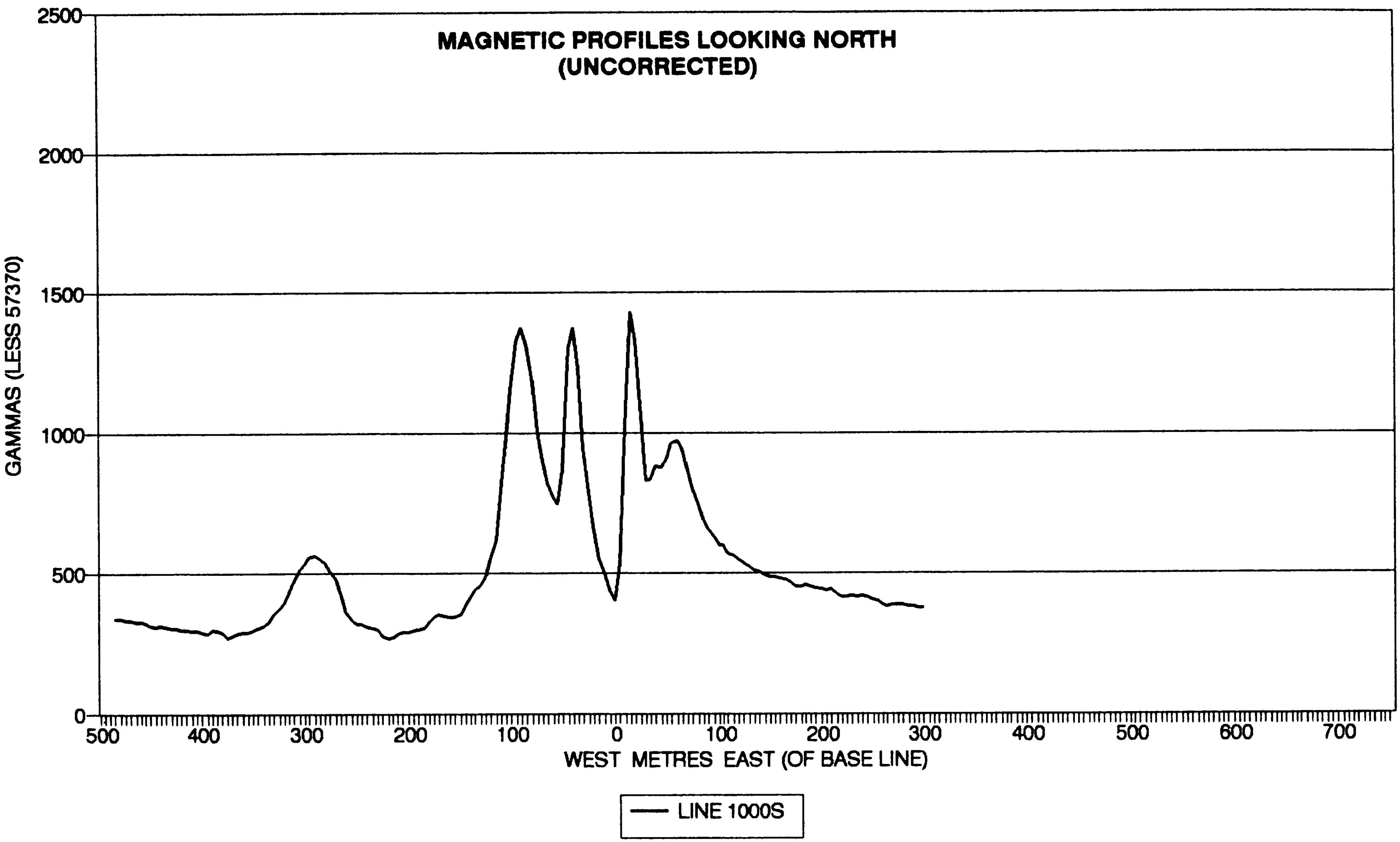
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 900S



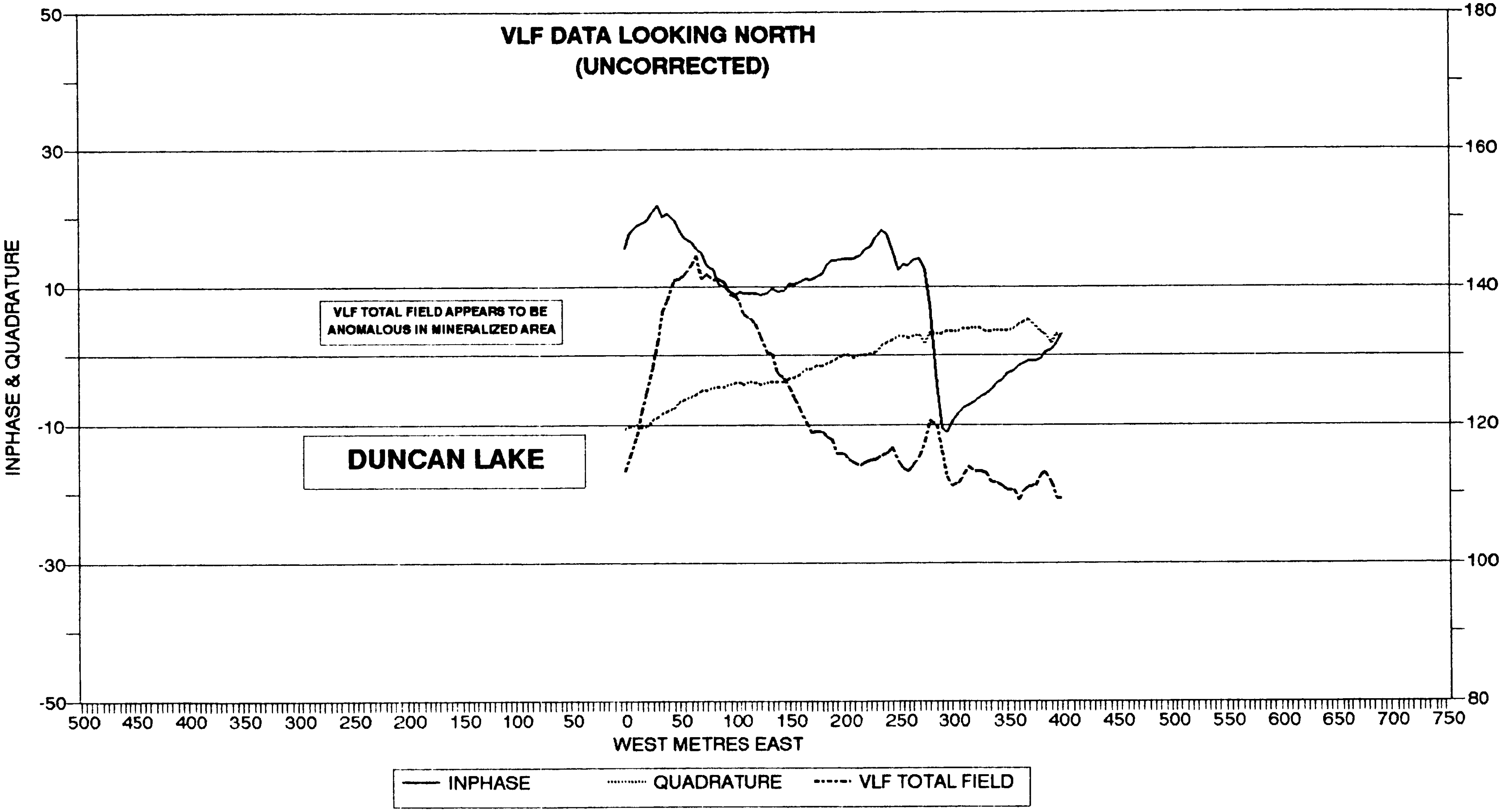
1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE 1000S



1992 VLF/MAG SURVEY: ZN CLAIMS

VLF LINE ACROSS DUNCAN MINE



1992 VLF/MAG SURVEY: ZN CLAIMS

MAGNETOMETER LINE ACROSS DUNCAN MINE