MAR 19990020: CADOTTE RIVER

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1999002
JUN 10 1999

ASSESSMENT REPORT

CADOTTE RIVER PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020026 to 9397020029, 9397050101, 9397050102
NORTHERN ALBERTA

Geographic Co-ordinates
56° 36' 00" to 56° 46' 30" N
116° 43' 00" to 117° 11' 30" W

NTS Map Areas
84 C/10, C/11, C/14, C/15

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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SUMMARY

New Claymore Resources Ltd. Cadotte River prospect is located about 60 km northeast of the Town of Peace River in northern Alberta. The prospect is comprised of 6 Metallic and Industrial Mineral permits which encompass an area of 55,296 hectares (138,240 acres). The permits are registered in the name of New Claymore Resources Ltd.

The Precambrian basement underlying the Cadotte River prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous Shaftesbury Formation marine shale conformably overlain by feldspathic sandstone of the Dunvegan Formation itself overlain by marine shale of the Smoky Group. Glacial till and muskeg cover most of the prospect and although the drift thickness is relatively thin, bedrock exposure is sparse and generally restricted to banks of incised river valleys. Approximately 60 km east of the Cadotte River prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During the fall of 1997, Spectra Exploration Geoscience Corp. was contracted to fly a high sensitivity aeromagnetic geophysical survey over the Cadotte River prospect; in total 4,294 line kilometers of data were collected. Interpretation of the airborne data by Geophysical Exploration & Development Corporation identified 8 positive and 1 negative magnetic anomalies which may be representative of kimberlitic diatremes.

Additional exploration on the Cadotte River prospect to evaluate for the presence of kimberlitic intrusives is warranted and should include:

a) ground geophysical surveys over the 9 airborne geophysical targets;

b) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect;

c) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

d) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

e) acquisition of brokered seismic data over individual anomalies; and

f) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

Location, Prospect Description

The Cadotte River prospect consists of 6 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 55,296 hectares (138,240 acres). The prospect extends from about 56° 36' 00" to 56° 46' 30" north latitude and 116° 43' 00" to 117° 11' 30" west longitude, is located about 420 km northwest of the City of Edmonton and about 60 km northeast of the Town of Peace River (Figure 1). The permits, 9397020026 to 9397020029, 9397050101, and 9397050102 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020026	Feb 28, 1997	5-18-088: 1-36	9,216
9397020027	Feb 28, 1997	5-19-088: 1-36	9,216
9397020028	Feb 28, 1997	5-18-089: 1-36	9,216
9397020029	Feb 28, 1997	5-19-089: 1-36	9,216
9397050101	May 30, 1997	5-20-088: 1-36	9,216
9397050102	May 30, 1997	5-20-089: 1-36	9,216
		TOTAL	55,296

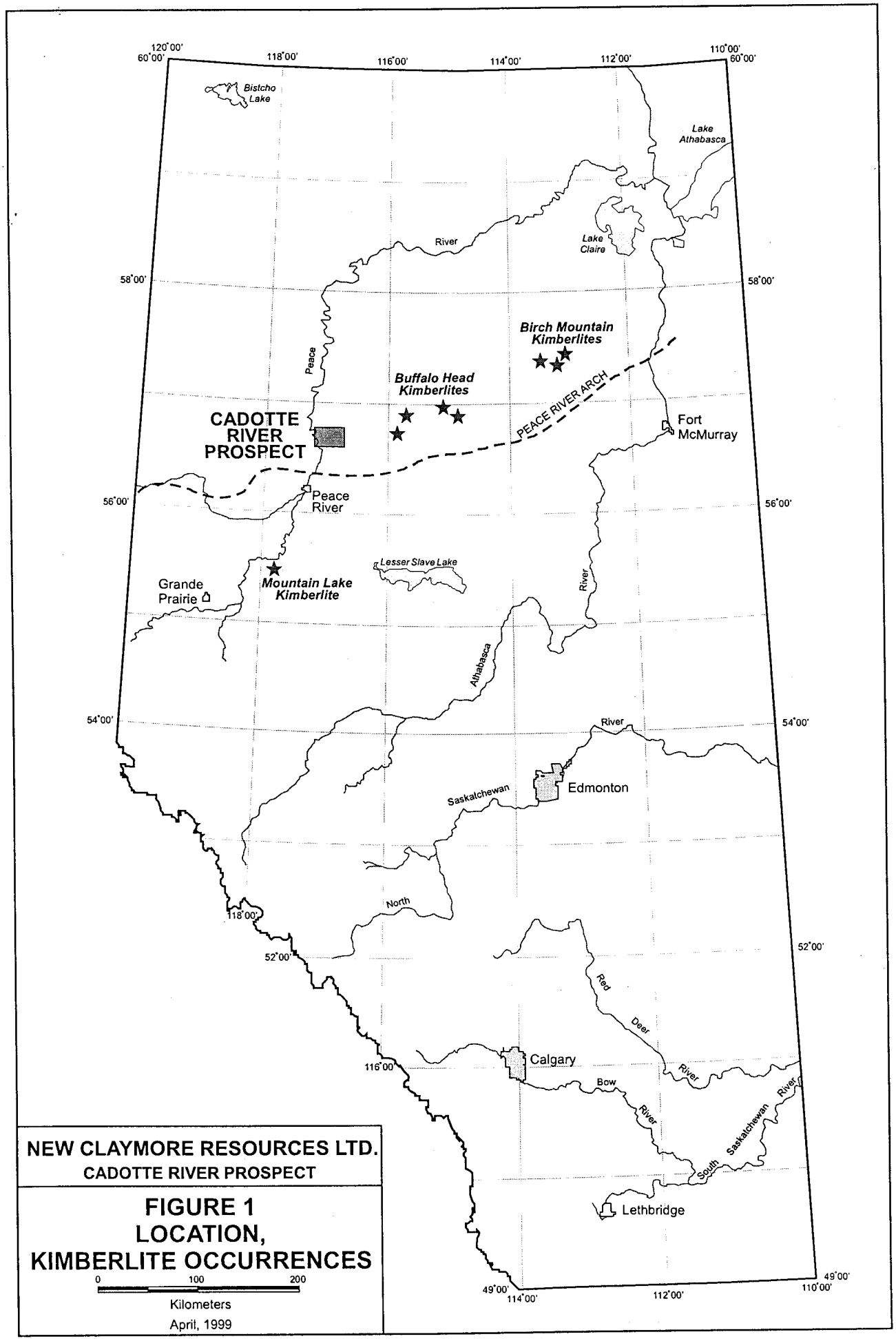
Access, Infrastructure, Physiography

Road access to the Cadotte River prospect is via secondary highway 986 then north along logging and oil and gas service roads. Access to remote parts of the prospect is via all terrain vehicle and/or snowmachine along winter logging roads and seismic lines. Helicopter access may be utilized from the Towns of Peace River or Manning. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The regional physiography of the area is characterized by flat lying topography with elevations ranging between 550 m above sea level (a.s.l.) along the Peace River valley to 620 m a.s.l. within the Buffalo Head Hills. Vegetation consists of stands of spruce and poplar trees with interspersed peat bogs and muskeg.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Cadotte River prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond

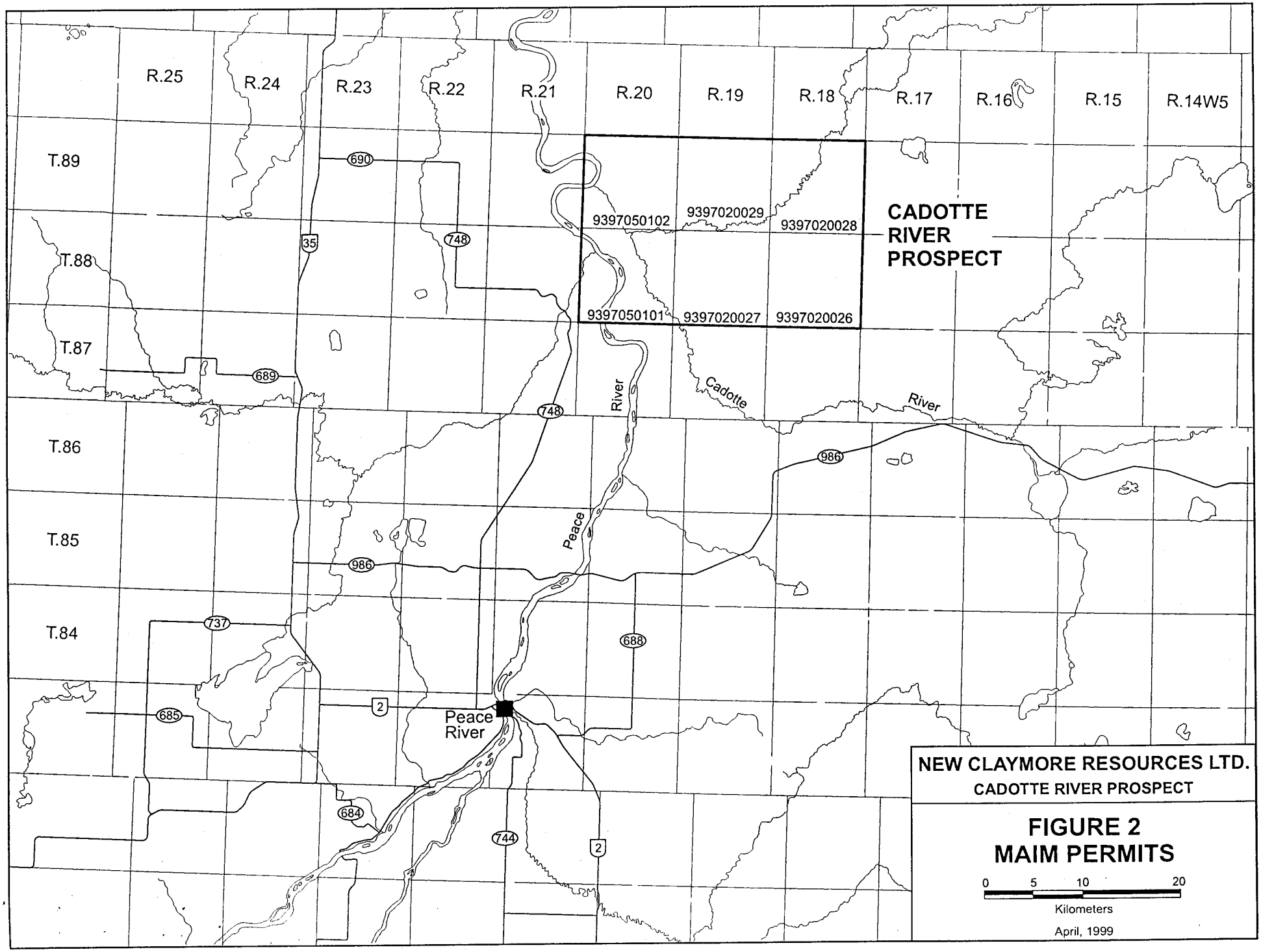


NEW CLAYMORE RESOURCES LTD.
CADOTTE RIVER PROSPECT

FIGURE 1
LOCATION,
KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


R.25
R.24
R.23
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15
R.14W5
T.89
T.88
T.87
T.86
T.85
T.84
690
35
748
689
986
737
688
685
2
684
744
9397050102
9397020029
9397020028
9397050101
9397020027
9397020026
CADOTTE
RIVER
PROSPECT
Cadotte
River
Peace
River
Peace
River
NEW CLAYMORE RESOURCES LTD.
CADOTTE RIVER PROSPECT
FIGURE 2
MAIM PERMITS
0
5
10
20
Kilometers
April, 1999

indicator mineral grains including pyropic garnets, eclogitic garnets, and chromites in glacial till samples. The till samples were collected in the vicinity and in a down-ice direction from the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Peace River Trend (Dufresne et al., 1996). The Cadotte River prospect exists along the northeastern boundary of the Peace River Trend.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 60 km east of the Cadotte River prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 220 km northeast of the Cadotte River prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced within upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

The Cadotte River prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Cadotte River prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Cadotte River prospect to consist of upper Cretaceous sediments including marine fish-scale bearing units and bentonites of the Shaftesbury Formation overlain by deltaic to marine sandstones of the Dunvegan Formation which are in turn overlain by marine shale of the Smoky Group (Figure 3).

TABLE 2
REGIONAL STRATIGRAPHY

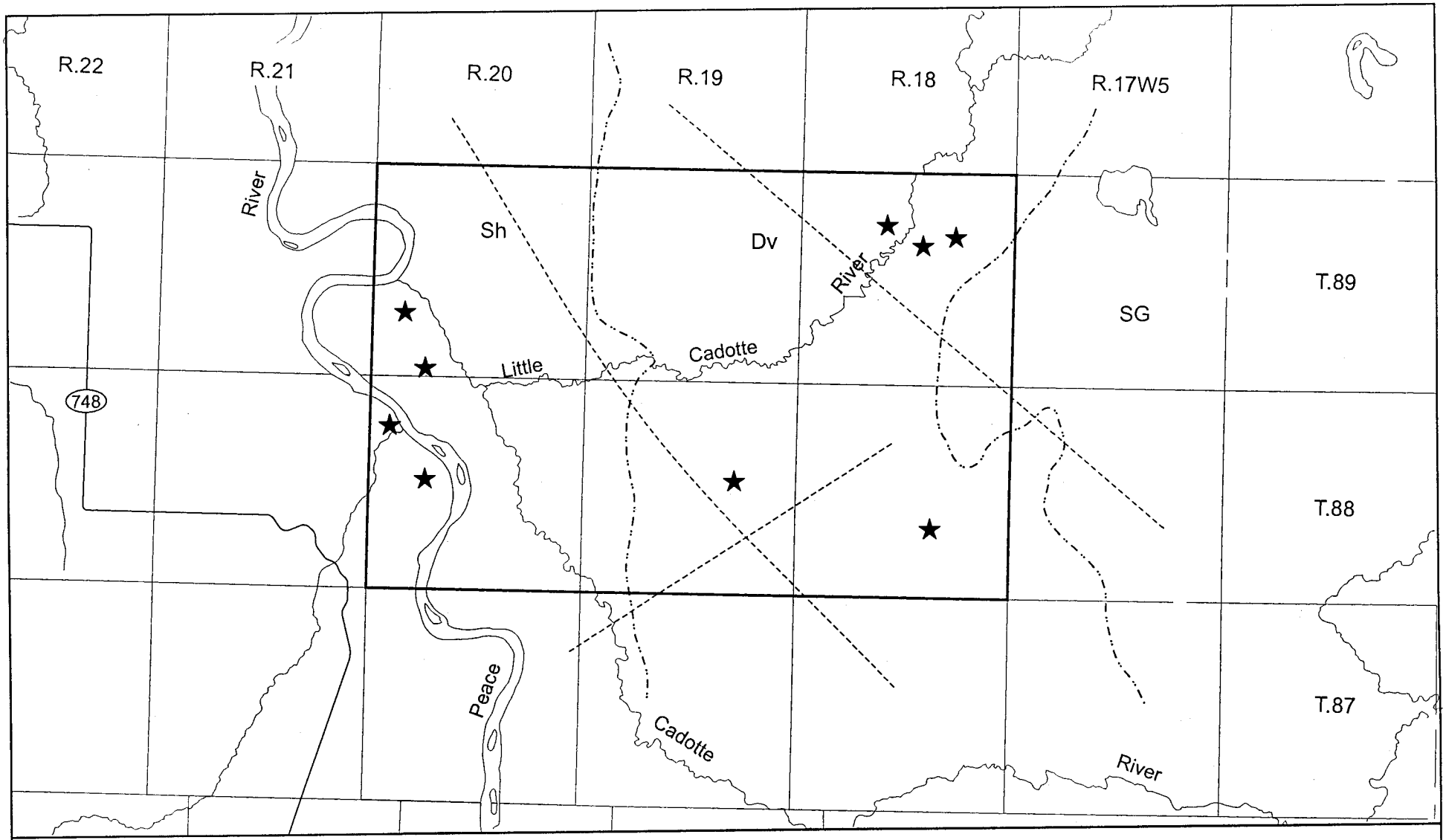
Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Cadotte River prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and sand. Glacial fluting in the vicinity of the prospect indicate ice movement was dominantly from the north to south. Drift thickness appears relatively shallow and increases from about 20 m depth along the eastern prospect boundary to a thickness in excess of 100 m within the Peace River valley.

Structural Geology

The Cadotte River prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time



SYMBOLS

★ Airborne magnetic geophysical anomaly

Interpreted geologic structure

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale

NEW CLAYMORE RESOURCES LTD.
CADOTTE RIVER PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

period. As with the Buffalo Head kimberlites, the Cadotte River prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Cadotte River prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

Spectra Exploration Geoscience Corp. was contracted by New Claymore to fly a high resolution airborne magnetic survey over the Cadotte River prospect in the fall of 1997. The fixed wing survey totaled 4,294 line-km's, was drape flown at 100 m terrain clearance along north-south trending traverse lines spaced at 200 m intervals, and covered the entire prospect. The total field magnetic data collected was leveled, processed, and edited for cultural noise by the Geophysical Exploration & Development Corporation (GEDCO). Total magnetic field contour and flight line magnetic data was examined for discrete geophysical anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 9 geophysical targets were identified which possess characteristics of possible intrusive origin (Figure 3). Eight of the 9 geophysical anomalies are weak magnetic highs (1-9 nT) while 1 is a weak magnetic negative. The anomalies appear to be isolated and independent of any features including paleochannels or eskers. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Cadotte River prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 60 km to the east of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Cadotte River prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery has identified 9 geophysical targets which may be suggestive of kimberlitic intrusives. To date, no ground magnetometer geophysical surveys have been completed over the airborne magnetic anomalies.

Additional exploration on the Cadotte River prospect to evaluate for the presence of kimberlitic intrusives is warranted and recommended. Additional exploration should include:

a) ground geophysical surveys over the 9 airborne geophysical targets;

b) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect;

c) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

d) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

e) acquisition of brokered seismic data over individual anomalies; and

f) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020026 to 9397020029, 9397050101, and 9397050102 is given in Table 3 (Appendix 1); total exploration expenditures amount to $67,459.30. The Cadotte River permits are contiguous and the dispersal of exploration expenditures is given in Table 4 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon a review of available published and unpublished reports on the Cadotte River prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.
this 30 day of April, 1999

REFERENCES

Borneuf, D. (1981) Hydrogeology of the Peace River Area, Alberta; Alberta Research Council Earth Sciences Report 81-2, 6 p., 1 map.

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G., and Edwards, W.A.D. (1996) The diamond potential of Alberta; Alberta Geological Survey Bulletin No. 63, 97 p., 33 figs., 5 appendices.

Hassan, H. (1998) Identification of possible targets for kimberlite exploration in Cadotte River prospect using HRAM data. Report prepared for New Claymore Resources Ltd. and Cambridge Minerals Ltd. by Geophysical Exploration & Development Corporation, 4 p.

Mossop, G.D. and Stetsen, I. (eds.) (1994) Geological Atlas of the Western Canada Sedimentary Basin. Published jointly by The Canadian Society of Petroleum Geologists and The Alberta Research Council, 510 p.

O'Connell, S.C., Dix, G.R., and Barclay, J.E. (1990) The origin, history, and regional structural development of the Peace River Arch, Western Canada; Bulletin of Canadian Petroleum Geology, vol. 38A, p. 4-24.

APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

TABLE 3
STATEMENT OF EXPENDITURES

MAIM PERMITS 9397020026 to 9397020029, 9397050101, 9397050102

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		9,000.00
Subcontracting Services		
Geophysical Contractors		
Gedco Geophysical Exploration	6,981.75	
RGI Resource GIS and Imaging Ltd.	1,710.21	
Spectra Exploration Geoscience Corp.	46,308.04	
Land Use and Permitting		
Licences / Recording Fees	~~2,000.00~~ 200.-	
		~~57,000.00~~ 55,200.-
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	379.33	
Reproduction / Computer Plots	278.00	
Office / Computer Consumables	15.65	
Computer Usage / Programs	210.00	
Communication - telephone, fax	34.20	
Postal, Courier, Freight	22.12	
Office Overhead	520.00	
		1,459.30
TOTAL		~~67,459.30~~ 65,659.30

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

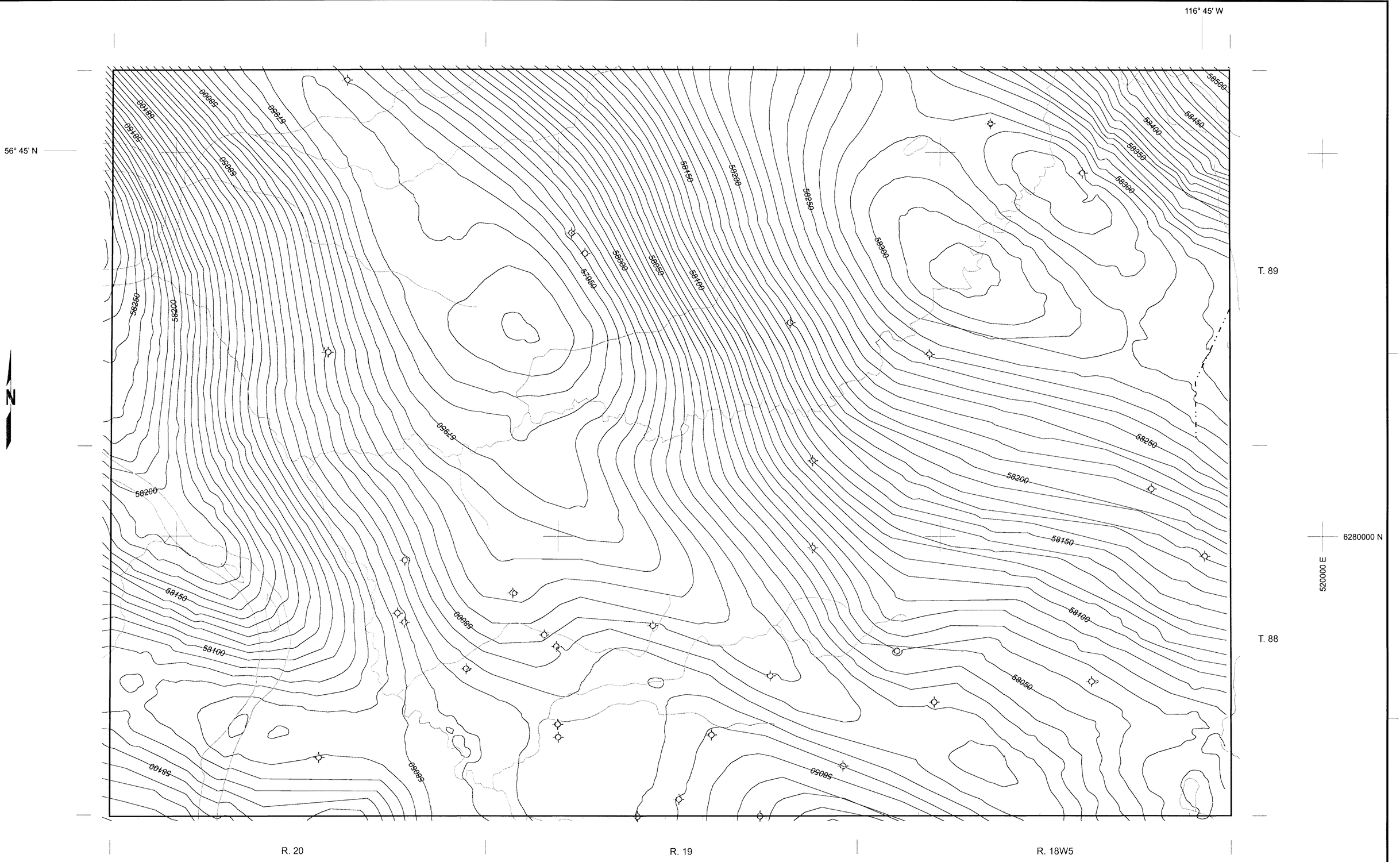
Signed: [redacted]

TABLE 4
COST ALLOCATION

MAIM PERMITS 9397020026 to 9397020029, 9397050101, 9397050102

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020026	9,216	February 28, 1997	5.00	46,080.00		46,080.00
9397020027	9,216	February 28, 1997	5.00	46,080.00		5,120.00
9397020028	9,216	February 28, 1997	5.00	46,080.00		46,080.00*
9397020029	9,216	February 28, 1997	5.00	46,080.00		10,240.00
9397050101	9,216	May 30, 1997	5.00	46,080.00		2,560.00
9397050102	9,216	May 30, 1997	5.00	46,080.00		12,800.00*
Total	55,296			276,480.00	67,459.30	122,880.00

* denotes assessment work conducted on contiguous land.



SYMBOLS

Isomagnetic contour; contour interval 10 nT

Oil or gas well

Pipeline

Property boundary

0 5

Kilometres

UTM NAD 27 Zone 11

MIN 9920

NEW CLAYMORE RESOURCES LTD.

CADOTTE RIVER PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY TOTAL MAGNETIC FIELD CONTOURS

84 C\10, C\11, C\14, C\15

April, 1999

JUN 10 1999
19990020

ASSESSMENT REPORT

CARMON CREEK PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020002 to 9397020005, 9397020011 to 9397020013,
9397020018 to 9397020022, 9397050001, 9397050002, 9397050005
NORTHERN ALBERTA

Geographic Co-ordinates
56° 04' 45" to 56° 25' 30" N
116° 20' 30" to 117° 20' 30" W

NTS Map Areas
84 C/1, C/2, C/3, C/6, C/7, C/8

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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Total Magnetic Field Contours ..... Appendix 2
Figure 8: Grid E Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 9: Grid F Ground Magnetometer Survey
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Figure 10: Grid G Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 11: Grid H Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 12: Grid I Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 13A: Grid J – West Half Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 13B: Grid J – East Half Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 14: Grid K Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 15: Grid L Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 16: Grid M Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 17: Grid N Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 18A: Grid O – West Half Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 18B: Grid O – East Half Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 19: Grid P Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 20: Grid Q Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 21: Grid R Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 22: Grid P HLEM Survey
Resistivity Colour Contour ..... Appendix 3
Figure 23: Mountain Lake Grid HLEM Survey
Resistivity Colour Contour ..... Appendix 3

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Drawing 01: Airborne Magnetic Survey
Total Magnetic Field Contours ..... in pocket

SUMMARY

New Claymore Resources Ltd. Carmon Creek prospect is centered about 30 km east of the Town of Peace River in northern Alberta. The prospect is comprised of 15 Metallic and Industrial Mineral permits which encompass an area of 118,015 hectares (291,615 acres). The permits are registered in the name of New Claymore Resources Ltd. and were under option to Meteor Minerals Inc.; all exploration on the Carmon Creek prospect was conducted by Meteor Minerals Inc.

The Precambrian basement underlying the Carmon Creek prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous Shaftesbury Formation marine shale overlain by feldspathic sandstone of the Dunvegan Formation itself overlain by marine shale of the Smoky Group. Glacial till and sand and gravel deposits cover most of the prospect with drift thickness ranging from about 60 m to greater than 130 m. Approximately 80 km northeast of the Carmon Creek prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During May, 1997, High-Sense Geophysics Limited was contracted to fly a high resolution aeromagnetic geophysical survey over the Carmon Creek prospect; in total 7,793 line kilometers of data were collected. Interpretation of the airborne data by Geophysical Exploration & Development Corporation and subsequently a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. aided in correlating magnetic anomalies with topographic features and regional structure. In total, 22 positive magnetic anomalies and 1 distinct topographic feature were identified which may be representative of kimberlitic diatremes. During October, 1997 through February, 1998, ground geophysical surveys including magnetometer and horizontal loop electromagnetics were completed over 18 of the airborne anomalies selected because of their positive magnetic signatures, proximity to interpreted geologic structures, and positive topographic expressions; in total 192.3 line-km of ground magnetometer and 25.0 line-km of electromagnetic surveying was completed. Based on an evaluation of the data, 969.0 m of diamond drilling was completed on 9 targets during January and February, 1998.

Although the results of the fieldwork and drilling were not positive in locating kimberlitic intrusives, the presence of a basement terrane known to host diamondiferous kimberlite intrusives, the existence of geologic structures possibly associated with kimberlite emplacement, and the presence of untested airborne magnetic targets on the Carmon Creek prospect indicate that further exploration is warranted and should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;

b) the drill core should be processed for diamond indicator minerals;

c) ground magnetometer geophysical surveying over the remaining 5 airborne targets;

d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

e) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

g) acquisition of brokered seismic data over individual anomalies; and

h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

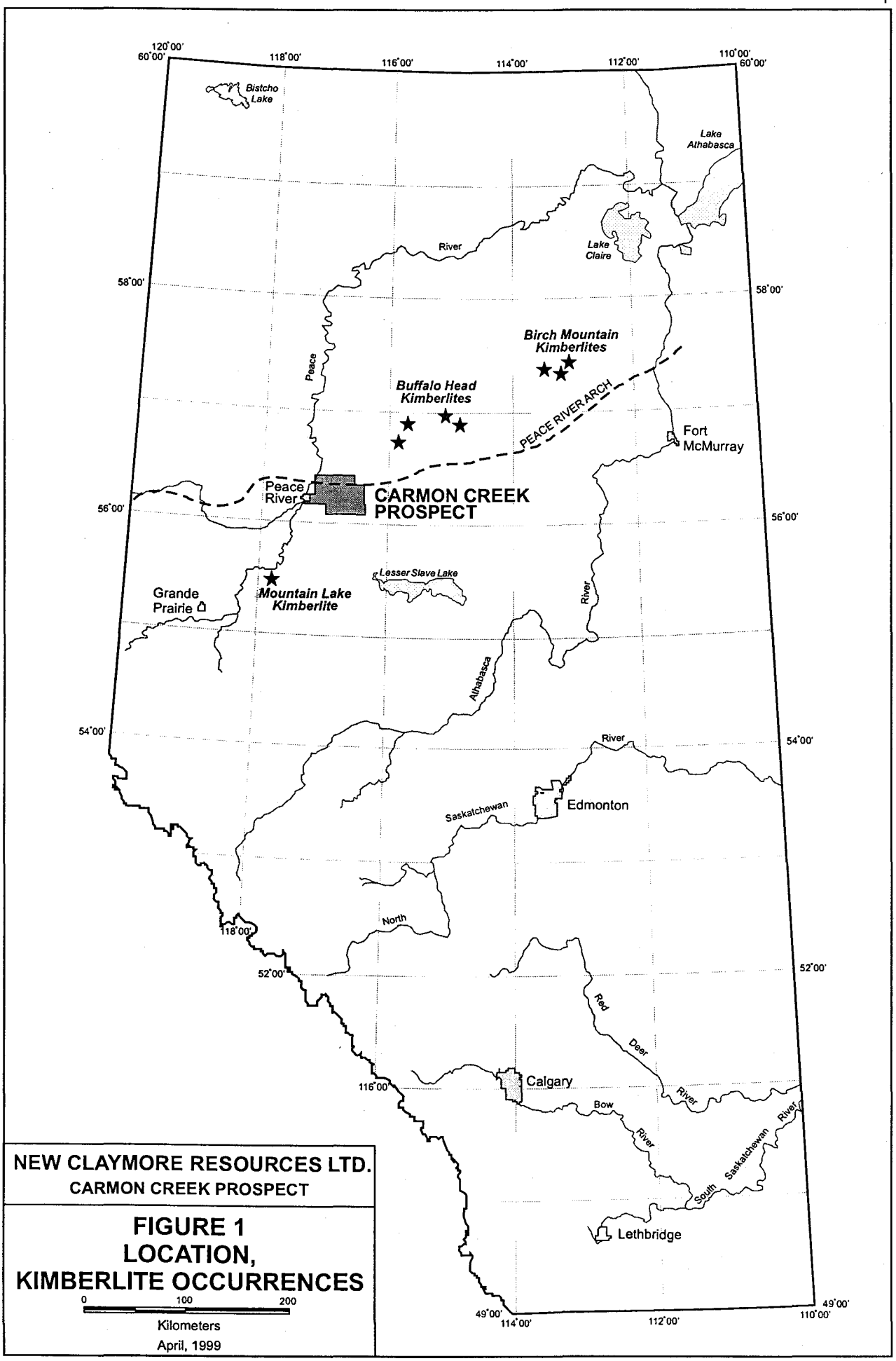
INTRODUCTION

Location, Prospect Description

The Carmon Creek prospect consists of 15 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 118,015 hectares (291,615 acres). The prospect extends from about 56° 04' 45" to 56° 25' 30" north latitude and 116° 20' 30" to 117° 20' 30" west longitude, is located about 380 km northwest of the City of Edmonton and centered about 30 km east of the Town of Peace River (Figure 1). The permits, 9397020002 to 9397020005, 9397020011 to 9397020013, 9397020018 to 9397020022, 9397050001, 9397050002, and 9397050005 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020002	Feb 18, 1997	5-16-082: 1-36	9,216
9397020003	Feb 18, 1997	5-17-082: 1-36	9,216
9397020004	Feb 18, 1997	5-18-082: 1-36	9,216
9397020005	Feb 18, 1997	5-19-082: 1-8; 9S, NE; 10-14; 15S, NE; 16-21; 22S, NW; 23S, NW; 24-26; 27N, SW; 28-36	8,896
9397020011	Feb 18, 1997	5-16-083: 1; 2; 3N; 4N; 5-34; 35N; 36	8,832
9397020012	Feb 18, 1997	5-17-083: 6; 7; 18-20; 29-32 5-18-083: 1; 2; 8-17; 20-29; 32-36	9,216
9397020013	Feb 18, 1997	5-18-083: 7; 18; 19; 30; 31 5-19-083: 4-9; 13-36	8,960
9397020018	Feb 18, 1997	5-16-084: 1-3; 10-15; 22S; 23S, NE; 24-26; 27N; 34-36	4,160
9397020019	Feb 18, 1997	5-16-084: 4-9; 16-21; 28-33 5-17-084: 5-8; 17-20; 29-32 5-18-084: 1; 12; 13; 24; 25; 36	9,216
9397020020	Feb 18, 1997	5-18-084: 2-11; 14-23; 26-33 5-19-084: 1; 14; 23-26; 35; 36	9,216
9397020021	Feb 18, 1997	5-19-084: 2-11; 15-22; 27-34 5-19-085: 1-5; 9-13	9,216
9397020022	Feb 18, 1997	5-18-085: 4-9; 16-36 5-19-085: 14-16; 23; 24	8,192
9397050001	May 21, 1997	5-20-083: 7; 8; 9E; 10-19; 20S, NW; 21S; 23; 24; 27; 28NE; 29-31; 32N, SW; 33; 36 5-20-084: 3-6; 10; 15	7,360
9397050002	May 21, 1997	5-21-083: 5-8; 9NW; 10SW; 11-14; 15E; 16W; 17; 18; 22NE; 23-27; 28N, SE, SWP; 32N, SE; 33-36	5,760
9397050005	May 21, 1997	5-20-084: 7N, SE; 8; 9; 16; 17E; 18	1,343
		TOTAL	118,015

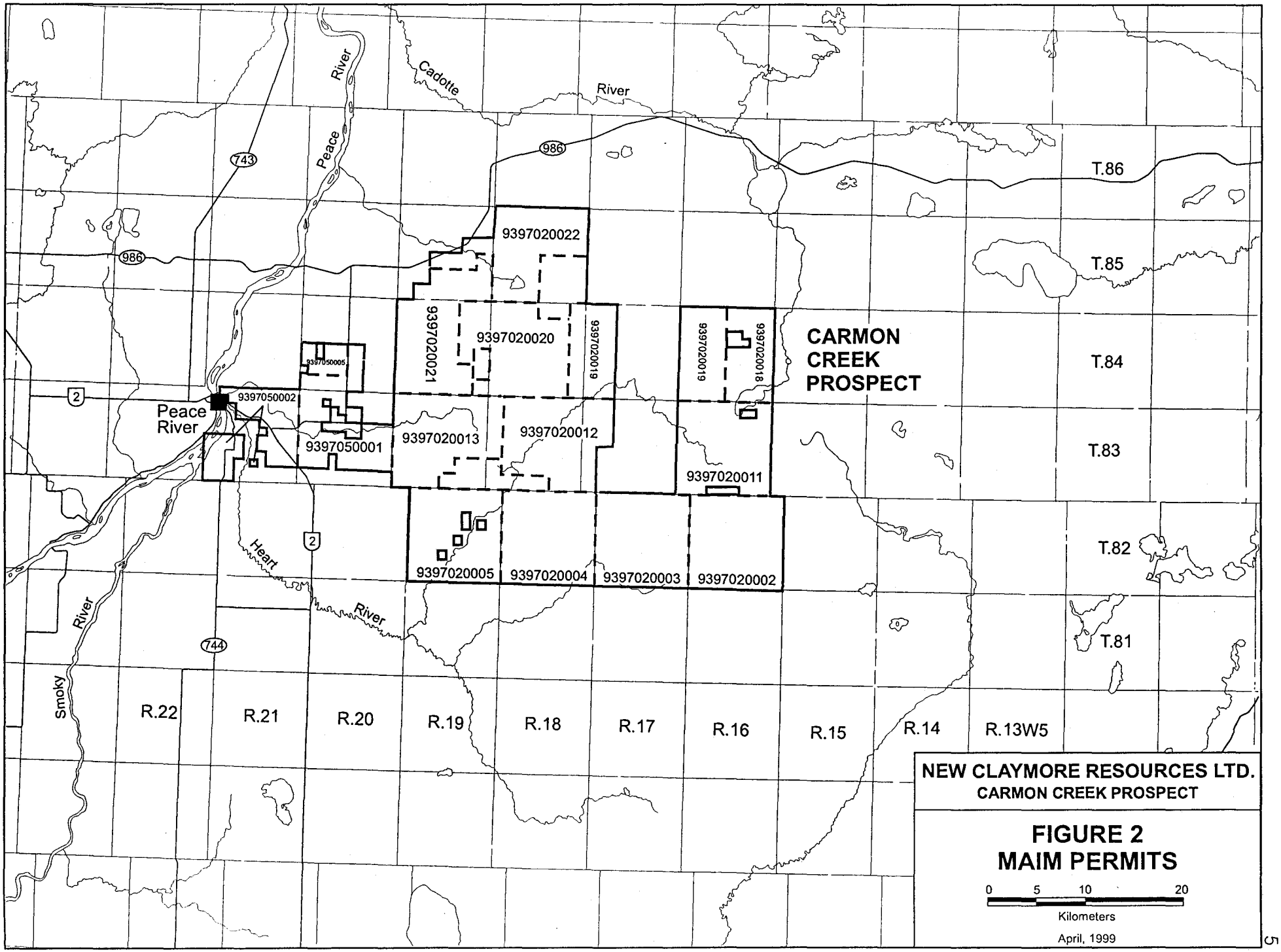


NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 1
LOCATION, KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


Peace River
Cadotte River
Heart River
Smoky River
743
986
2
744
9397020022
9397020021
9397020020
9397020019
9397020018
9397020013
9397020012
9397020011
9397020005
9397020004
9397020003
9397020002
9397050005
9397050002
9397050001
CARMON CREEK PROSPECT
T.86
T.85
T.84
T.83
T.82
T.81
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15
R.14
R.13W5
NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT
FIGURE 2
MAIM PERMITS
0 5 10 20
Kilometers
April, 1999

Meteor Minerals Inc. (Meteor) optioned the Carmon Creek prospect in May, 1997 and to earn a 50 per cent interest in the prospect Meteor agreed to issue New Claymore shares of the Company, make staged cash payments, and incur time specific exploration expenditures. Meteor elected to terminate their option on the Carmon Creek prospect in January, 1999 and until that time, all exploration on the prospect was conducted by personnel in the employ or under contract to Meteor.

Access, Infrastructure, Physiography

Vehicle access to the southern and western portions of the Carmon Creek prospect is via paved and/or all weather gravel roads. The northern and eastern portions of the prospect are accessible by vehicle from secondary highway 986 from the Town of Peace River then south along all weather oil and gas service roads. The Harmon Valley winter logging road along the southern prospect boundary and the Buchanan Haul road along the eastern prospect boundary provide winter access routes. Seismic lines and logging trails provide all terrain vehicle and/or snowmachine access to remote areas of the prospect. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The Carmon Creek prospect lies within the Interior Plains physiographic region of Canada and topographic relief is flat to gently rolling with an average elevation of about 650 metres above sea level. Vegetation is dominated by stands of poplar with white spruce and jack pine occurring on topographic highs. Lakes, peat bogs, and black spruce covered muskeg exist in low lying areas. The southern and western portions of the prospect are dominated by lands cleared for agricultural use.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Carmon Creek prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond indicator mineral grains including pyropic garnets, eclogitic garnets, and chromites in glacial till samples. The till samples were collected within and to the south of the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Peace River Trend (Dufresne et al., 1996); the Carmon Creek prospect lies within the eastern portion of the Peace River Trend. AGS till sample #319 collected along the southwestern prospect boundary returned 2 kimberlitic garnets and sample #481 collected south of the prospect boundary yielded 1 kimberlitic garnet and 1 diamond inclusion field chromite.

During the period 1993 to 1997, Ultrasonic Industrial Services Ltd. held MAIM permits situated within and surrounding the Carmon Creek prospect. Exploration included examination of regional Geological of Canada aeromagnetic maps and limited heavy mineral sampling; in total, 12 aeromagnetic targets were identified which may be representative of kimberlitic diatremes and Hawkins (1993) did not report any diamond indicator mineral results. Hawkins (1993) makes reference to heavy mineral sampling of overburden material completed by Consolidated Carina Resources Corp. in an area north of Carmon Lake (W5-18-85) which recovered 44 pyrope garnet and 14 chrome diopside grains; published details of this work appear unavailable.

Between 1994 to 1995, Ridgeway Petroleum Corp. and Horseshoe Gold Mining Inc. explored for kimberlitic diatremes on their Horseshoe project. The exploration area was located within the Carmon Creek prospect and work included an airborne magnetic survey, ground magnetometer surveys, and diamond drilling. Single line ground magnetic profile surveys were completed over 5 of 26 positive magnetic targets identified from the airborne survey and 4 of the ground surveyed targets were tested by diamond drilling. In total, 351.5 m of NQ core was drilled and drill logs and lithologic descriptions indicate that no kimberlitic material was intersected; the minimum depth to bedrock of Smoky Group marine shale was 49 m (Marchand, 1995).

During August, 1997, Ultrasonic Industrial Services Ltd. performed limited till and soil sampling on MAIM permits held within the eastern portion of the Carmon Creek prospect (portions W5-083-16, W5-084-16). During the exploration, 6 till and 6 soil samples were collected; the till samples were processed for diamond indicator mineral grains and the soil samples analyzed for gold. In total, 10 peridotitic garnets, 1 eclogitic garnet, 3 chrome diopsides, and 5 chromites were recovered from the till samples (Chin and Dufresne, 1997). The maximum gold analysis returned from the soil samples was 7 parts per billion Au; this value is not anomalous.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 80 km northeast of the Carmon Creek prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 240 km northeast of the Carmon Creek prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced with upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

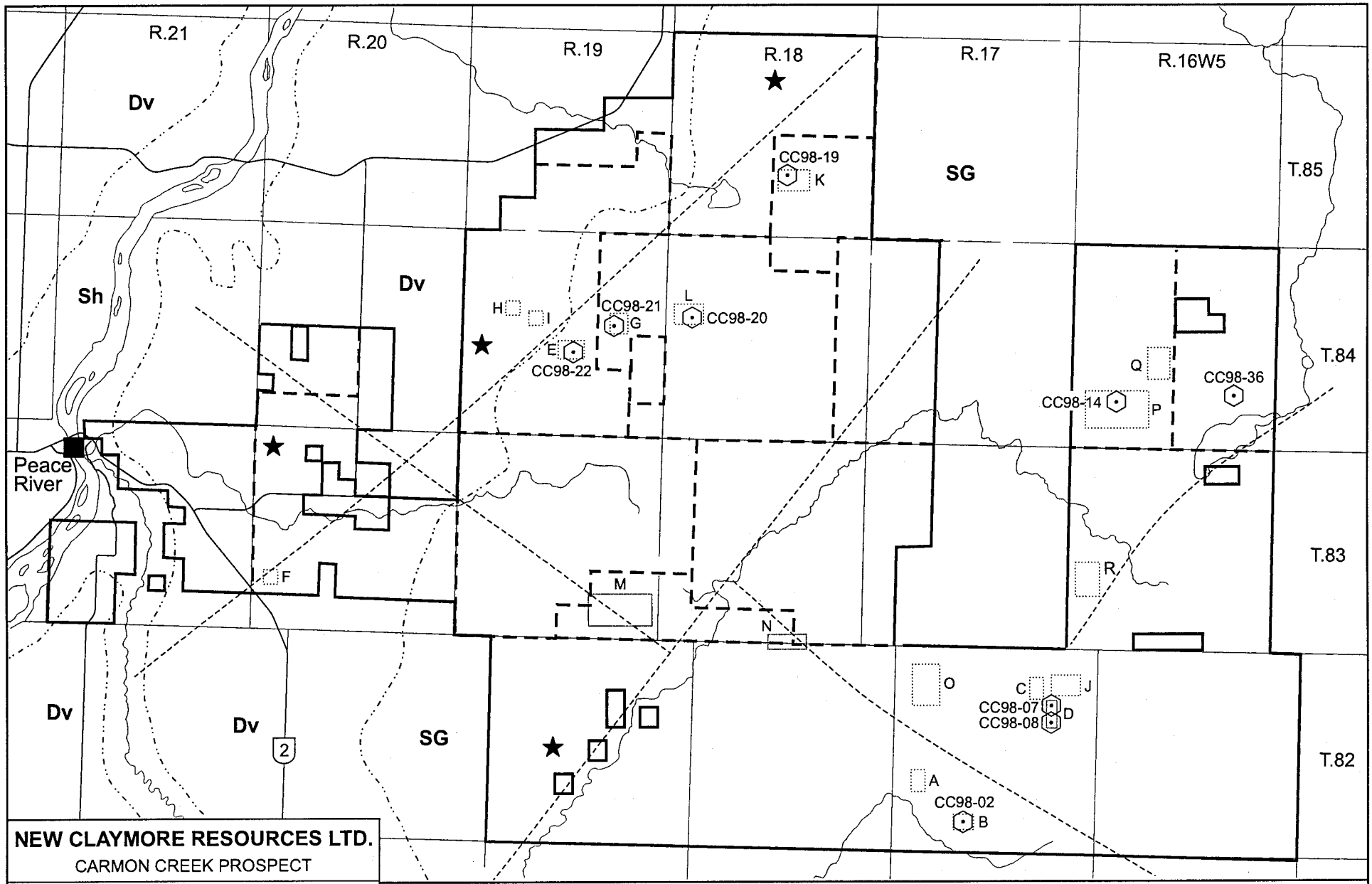
REGIONAL GEOLOGY

Basement and Prospect Geology

The Carmon Creek prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Carmon Creek prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Carmon Creek prospect to consist of upper Cretaceous sediments including marine fish-scale bearing units of the Shaftesbury Formation overlain by deltaic to marine sandstones of the Dunvegan Formation which are overlain by marine shale of the Smoky Group (Figure 3).

Glacial deposits on the Carmon Creek prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and deposits of sand and gravel. Glacial fluting in the immediate vicinity of the prospect indicate ice movement was dominantly from north to south. Drift thickness appears highly variable with depths to bedrock of 49 m to in excess of 130 m reported in drill hole data.



NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, DRILLING, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

SYMBOLS

★ Airborne magnetic geophysical anomaly; anomalies on ground grids excluded

D Ground magnetometer geophysical grid; identifier

CC98-20 Diamond drill hole; identifier

Interpreted geologic structure

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale

TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Structural Geology

The Carmon Creek prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Carmon Creek prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Carmon Creek prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

High-Sense Geophysics Ltd. (High-Sense) was contracted to fly a high resolution aeromagnetic geophysical survey over the Carmon Creek prospect in May of 1997. The 7,793 line-km fixed wing survey was drape flown at 85 m mean terrain clearance with north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was then leveled, processed, and edited for cultural noise by High-Sense and subsequently Geophysical Exploration & Development Corporation (GEDCO). The edited data was examined for small circular to elliptical shaped magnetic anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 22 geophysical targets possessing characteristics of kimberlitic diatremes were identified. Subsequently, a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. (RGI) identified 1 distinct topographic feature and aided in correlating the airborne magnetic anomalies with topographic features and regional structure. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

Ground Geophysical Surveys

Between October, 1997 and February, 1998, ground magnetometer geophysical surveys were completed over 18 airborne geophysical targets on the Carmon Creek prospect. The airborne targets identified for ground follow-up were selected based on magnetic signature, proximity to interpreted geologic structures, and positive topographic expression. In total, 192.3 line-km of ground magnetometer surveying was completed by Hendex Exploration Services Ltd. over grid areas A through R (Figure 3). After a baseline was surveyed on an individual grid, cross lines were established at 100 m intervals and on each cross line, stations were chained by topofil and marked at 10 m intervals. At 10 m stations along each cross line, a magnetometer reading was collected using an Omni proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a stationary base-station. The corrected magnetometer data was gridded, contoured, and used to generate Figure 4 to Figure 21 (Appendix 2).

During February, 1998, SJ Geophysics Ltd. was contracted to conduct a ground based horizontal loop electromagnetic (HLEM) survey over Grid P on the Carmon Creek prospect. The intention of the HLEM survey was to detect localized resistive features associated with airborne and ground geophysical magnetic highs and to aid in determining the depth to target. Prior to the Carmon Creek prospect survey, an orientation HLEM survey totaling 17.0 line-km's was

completed over the Mountain Lake kimberlite located about 100 km southwest of the Carmon Creek prospect. The orientation survey detected an isolated resistivity low within a uniformly resistive background. The Mountain Lake kimberlite is expressed as a resistivity low where the surrounding Wapiti Formation sandstone shows as a resistivity high; the data is presented as a resistivity contour plot on Figure 23 (Appendix 3). In total, 25.0 line-km of ground HLEM surveying was completed over Grid P. The survey was completed using a Max-Min I-10 system with a coil separation of 160 m and data gathered at 40 m stations along grid-lines separated by 100 m intervals. The results are presented as a resistivity contour plot on Figure 22 (Appendix 3). In general, the HLEM data over the grid area did not identify any localized resistive features and overall the ground conductivity showed little variation with increasing depth. Because there was relatively little resistivity contrast between the overburden and underlying bedrock, it was not possible to determine overburden depth.

The magnetic patterns for the 18 ground magnetic surveys correlate with the airborne signatures and provide sharpened definition and ground verification and placement of the airborne anomalies. A review of the ground geophysical anomalies is given in Table 3.

TABLE 3
SUMMARY OF GROUND MAGNETOMETER SURVEYS

GRID IDENTIFIER	LOCATION Easting	Northing	DESCRIPTION Diameter (m)	Amplitude (nT)	Comment
A	522700	6216100	50	<5	a weak, broad magnetic signature
B	524200	6215400	35	35	a small, sharp, isolated anomaly at edge of survey grid
C	528000	6222000	100	25	a double peak, single line anomaly along a linear
D	529100	6221000	140	30	a large, strong, isolated circular anomaly
E	505900	6236700	30	20	a small, weak, elliptical anomaly on edge of a basement high
F	490300	6227100	50	15	a 2 line double peak anomaly
G	507500	6237400	100	10	a weak, broad magnetic signature
H	502500	6238500	50	20	a single line 'spot' anomaly
I	503600	6238300	60	15	a single line 'spot' anomaly
J	530000	6222300	n/a	n/a	multiple 'spot' magnetic highs
K	515600	62445100	60	10	a linear anomaly extending from a basement high
L	510600	6238400	n/a	n/a	no anomaly visible on regional basement high
M	507500	6225000	80	10	linear feature on broad basement high
N	516500	6223500	60	10	weak linear feature
O	524500	6219600	n/a	n/a	multiple 'spot' and linear anomalies
P	531400	6236300	90	20	a single line 'spot' anomaly within an area of multiple linear and 'spot' anomalies
Q	533600	6237500	n/a	n/a	a number of small 'spot' anomalies
R	530500	6224500	n/a	n/a	no anomaly visible on edge of basement high

Diamond Drilling

A total of 969.0 m of diamond drilling in 9 drill holes (CC98-02, CC98-07, CC98-08, CC98-14, CC98-19, CC98-20, CC98-21, CC98-22, CC98-36) was completed on the Carmon Creek prospect during January and February, 1998. Diamond drilling was performed by J. T. Thomas Diamond Drilling and the NQ core recovered is stored at the Mineral Core Research Facility in Edmonton. Drilling intersected bedrock in 4 drill holes (CC98-02, CC98-08, CC98-20, and CC98-22) which consisted of grey silty shale and mudstone of the Smoky Group. The remaining 5 drill holes were terminated prior to intersecting bedrock either as the hole depth exceeded the interpreted geophysical anomaly depth or difficult drilling conditions caused by excessive overburden thickness and/or artesian groundwater contained within sand and gravel layers. As no kimberlitic material was intersected, no drill core was submitted for analysis. A summary of the drill hole data is provided in Table 4; drilling records and lithologic descriptions are provided in Appendix 4.

TABLE 4
DIAMOND DRILL HOLE SUMMARY

DRILL HOLE IDENTIFIER	UTM COORDINATE		GEOPHYSICAL GRID	AZIMUTH / DIP	DEPTH TO BEDROCK (m)	DRILL HOLE DEPTH (m)
	Easting	Northing				
CC98-02	524180	6215400	B	-90	86.56	117.96
CC98-07	529090	6220950	D	135 / -57	n/a	97.54
CC98-08	529296	6221525	D	-90	122.83	151.49
CC98-14	531400	6236250	P	-90	n/a	44.81
CC98-19	515560	6245100	K	-90	n/a	111.86
CC98-20	510600	6238420	L	-90	110.95	121.92
CC98-21	507500	6237320	G	-90	n/a	132.28
CC98-22	505900	6236720	E	-90	63.09	97.54
CC98-36	536800	6236100	n/a	-90	n/a	93.57

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Carmon Creek prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 80 km to the north of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Carmon Creek prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery identified 22 geophysical targets and 1 topographic expression which may be suggestive of kimberlitic intrusives. Ground magnetometer geophysical surveys conducted over 18 of the targets confirmed the presence of 9 magnetic anomalies which warranted further

investigation; the inclusion of a HLEM survey failed to upgrade the target and did not aid in determining depth to bedrock. Of 9 diamond drill holes, 4 intersected bedrock comprised of shale and mudstone which indicates the magnetic anomalies may be sourced from the concentration of magnetic minerals within surficial sediments or in preglacial to glacial channels that exist at or near the bedrock – drift interface. Five drill holes did not intersect bedrock and no direct evidence for the cause of the magnetic anomalies has been identified. Therefore, in addition to the assessment of the 4 untested airborne geophysical anomalies, continued exploration on the Carmon Creek prospect should include determining the source of the 5 magnetic anomalies. Additional exploration on the Carmon Creek prospect should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;
b) the drill core should be processed for diamond indicator minerals;
c) ground magnetometer geophysical surveying over the remaining 5 airborne targets;
d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;
e) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;
f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;
g) acquisition of brokered seismic data over individual anomalies; and
h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020002 to 9397020005, 9397020011 to 9397020013, 9397020018 to 9397020022, 9397050001, 9397050002, and 9397050005 is given in Table 5 (Appendix 1); total exploration expenditures amount to $553,725.57. The Carmon Creek permits are contiguous and the dispersal of exploration expenditures is given in Table 6 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon a review of published and unpublished reports on the Carmon Creek prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.
this 30 day of April, 1999

REFERENCES

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APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

TABLE 5
STATEMENT OF EXPENDITURES

MAIM PERMITS 9397020002 to 9397020005, 9397020011 to 9397020013, 9397020018 to 9397020022, 9397050001, 9397050002, 9397050005

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		9,000.00
Field Costs		
Accommodation / Meals	16,636.28	
Field Supplies	7,001.36	
Fuel	544.17	
Freight	160.00	
Travel Costs	6,744.29	
		31,086.10
Rental Equipment		
Field Equipment Rental	5,859.36	
Geophysical Equipment Rental	9,415.30	
Vehicle Operation and Repair	577.40	
Warehouse Rent	650.00	
		16,502.06
Subcontracting Services		
Construction Contractors		
MacMillan Construction	4,008.75	
Drilling Contractors		
J.T. Thomas Diamond Drilling Ltd.	77,608.67	
Geological Consultants / Contractors		
Dawson Geological Consultants Ltd.	26,641.18	
Discovery Consultants	11,825.30	
G. Belik & Associates	13,140.00	
[redacted]	15,500.00	
Lucero Resource Corp.	76,853.56	
Orequest Consultants Ltd.	3,529.90	
Geophysical Contractors		
Gedco Geophysical Exploration	14,574.39	
Geosoft Inc	1,200.00	
Hendex Exploration Services Ltd.	31,849.98	
High-Sense Geophysics Ltd.	163,457.66	
RGI Resource GIS and Imaging Ltd.	36,848.56	
SJ Geophysics Ltd.	9,642.30	
Helicopter Contractors		
Canadian Helicopters	3,094.66	
Land Use and Permitting		
Licences / Recording Fees	1,350.00	
Lorrnel Consultants	2,460.46	
		493,585.37
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	968.70	
Reproduction / Computer Plots	1,007.78	
Office / Computer Consumables	45.00	
Computer Usage / Programs	210.00	
Communication - telephone, fax	305.76	
Postal, Courier, Freight	494.80	
Office Overhead	520.00	
		3,552.04
TOTAL		**553,725.57**

I certify that these expenditures are valid and were incurred in conducting assessment work on the above listed permits; all accounts were provided by Meteor Minerals Inc.

Signed: [redacted]

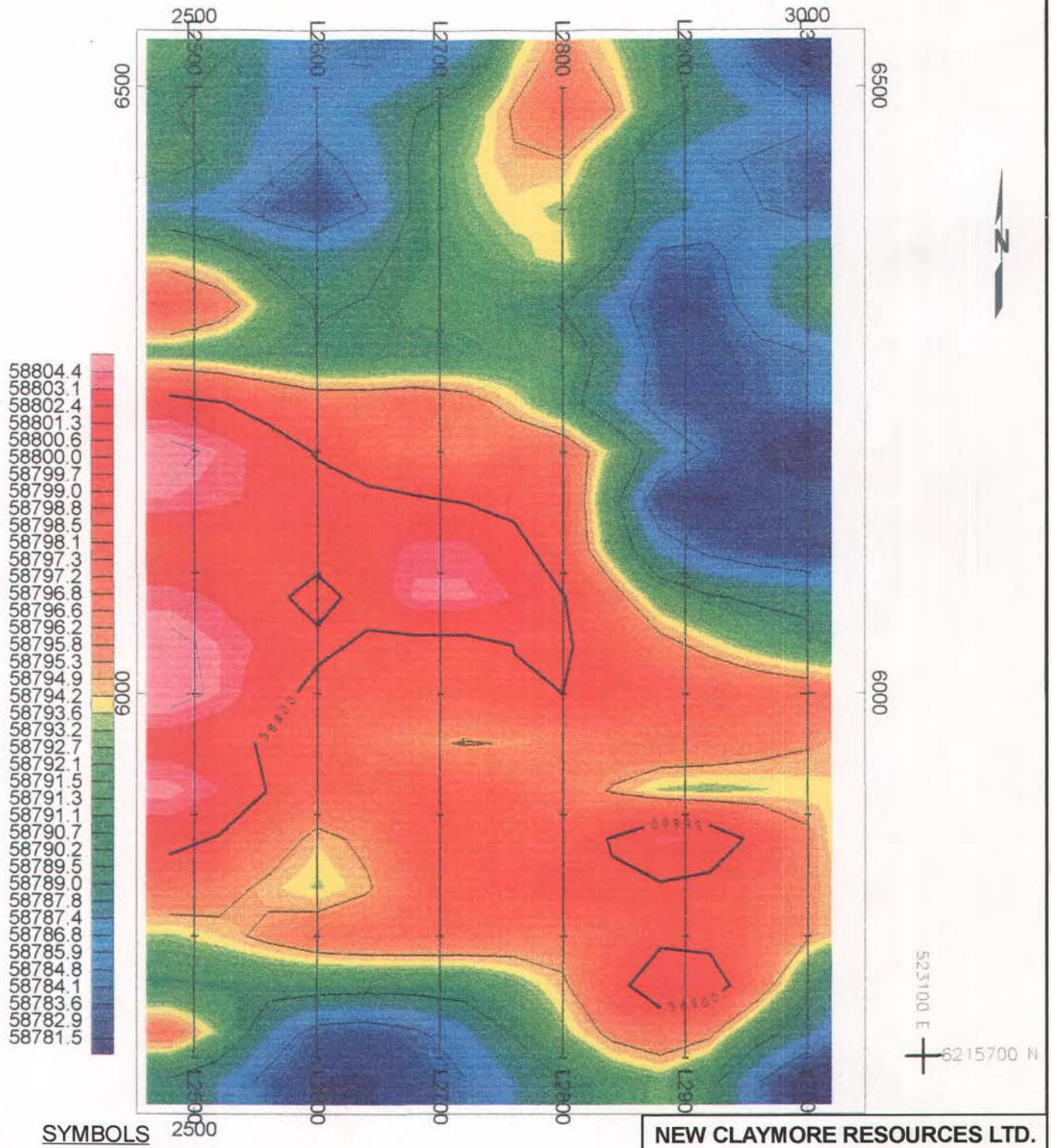
TABLE 6
COST ALLOCATION

MAIM PERMITS 9397020002 to 9397020005, 9397020011 to 9397020013, 9397020018 to 9397020022, 9397050001, 9397050002, 9397050005

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020002	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020003	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020004	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020005	8,896	February 18, 1997	5.00	44,480.00		44,480.00
9397020011	8,832	February 18, 1997	5.00	44,160.00		44,160.00
9397020012	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020013	8,960	February 18, 1997	5.00	44,800.00		44,800.00
9397020018	4,160	February 18, 1997	5.00	20,800.00		20,800.00
9397020019	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020020	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020021	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020022	8,192	February 18, 1997	5.00	40,960.00		40,960.00
9397050001	7,360	May 21, 1997	5.00	36,800.00		0.00
9397050002	5,760	May 21, 1997	5.00	28,800.00		0.00
9397050005	1,343	May 21, 1997	5.00	6,715.00		0.00
Total	118,015			590,075.00	553,725.57	517,760.00

APPENDIX 2

GROUND MAGNETOMETER SURVEY FIGURE 4 TO FIGURE 21



SYMBOLS

Isomagnetic contour
contour interval 5 nT

50 0.0 50 100 150

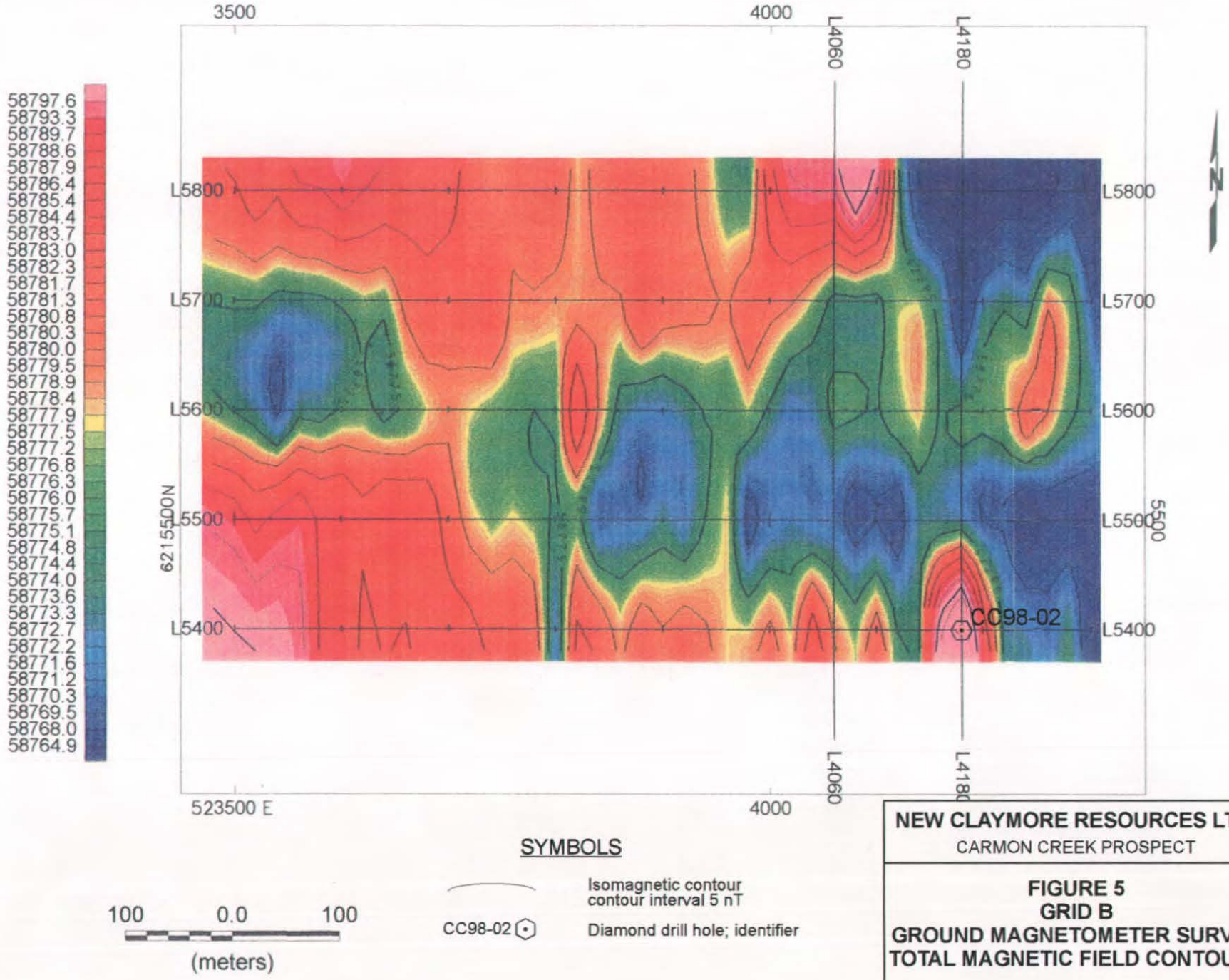
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 4
GRID A
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

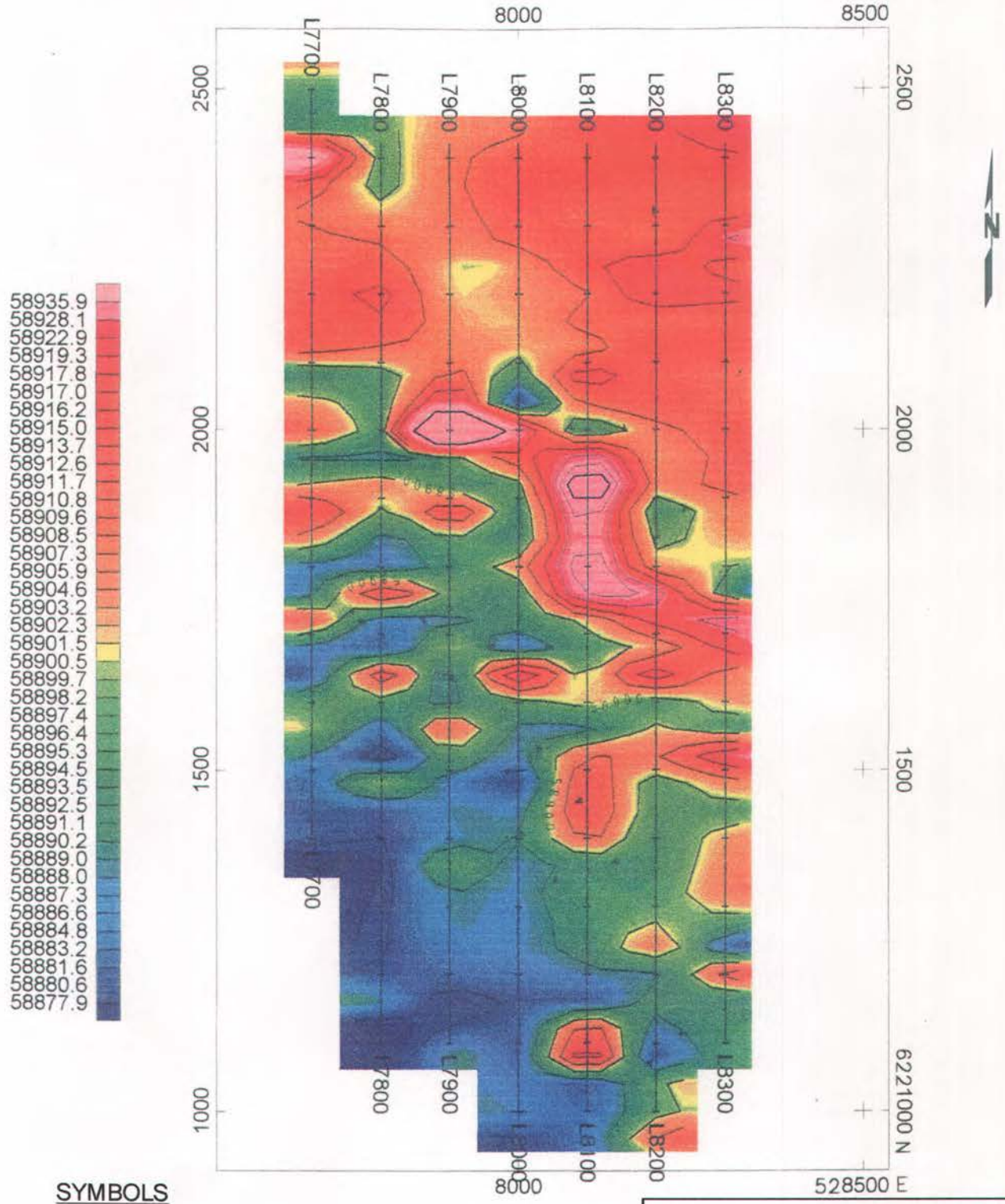
CC98-02 Diamond drill hole; identifier

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 5
GRID B
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 10 nT

100 0.0 100 200 300

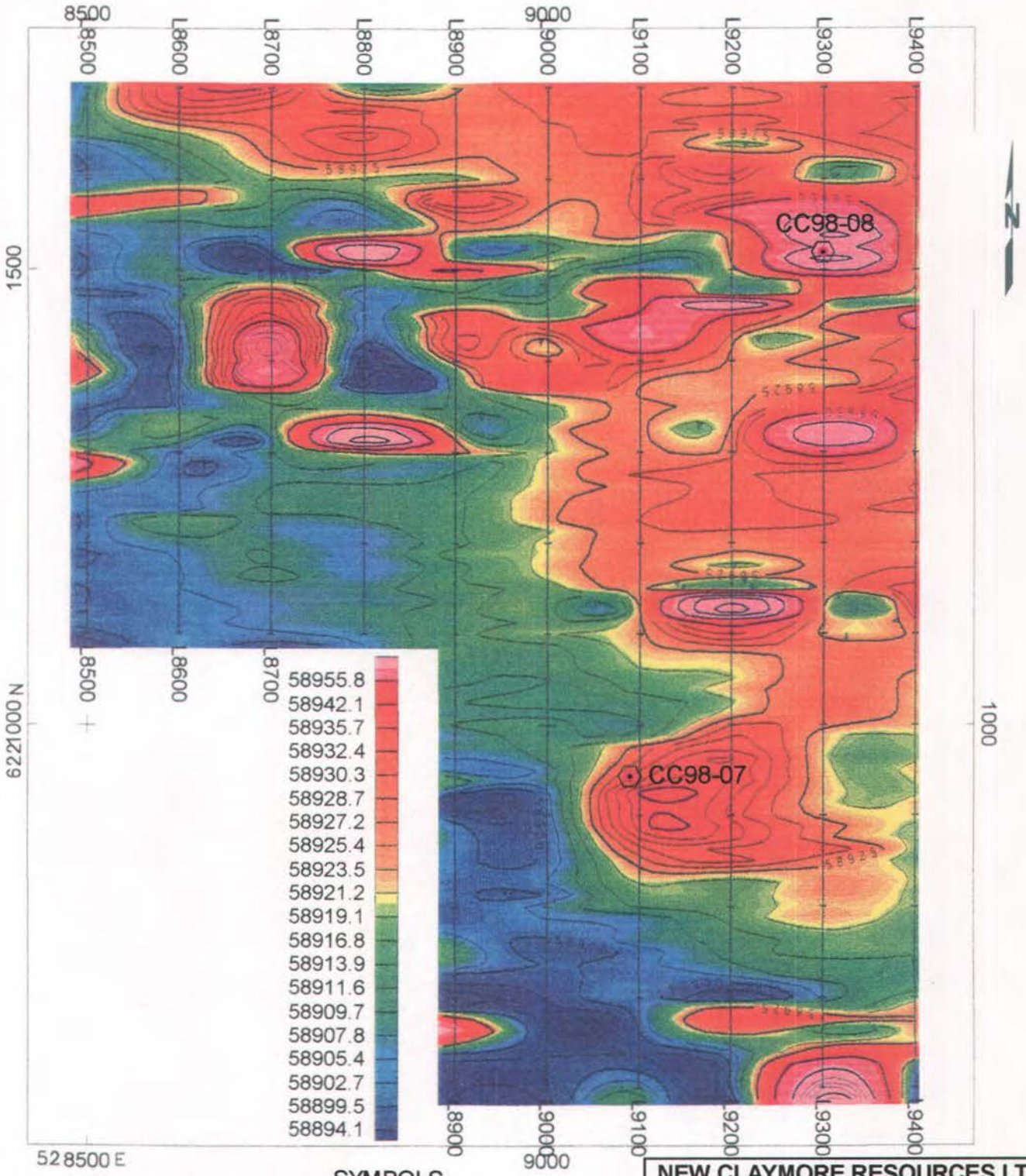
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 6
GRID C
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

CC98-07 ⊙ Diamond drill hole; identifier

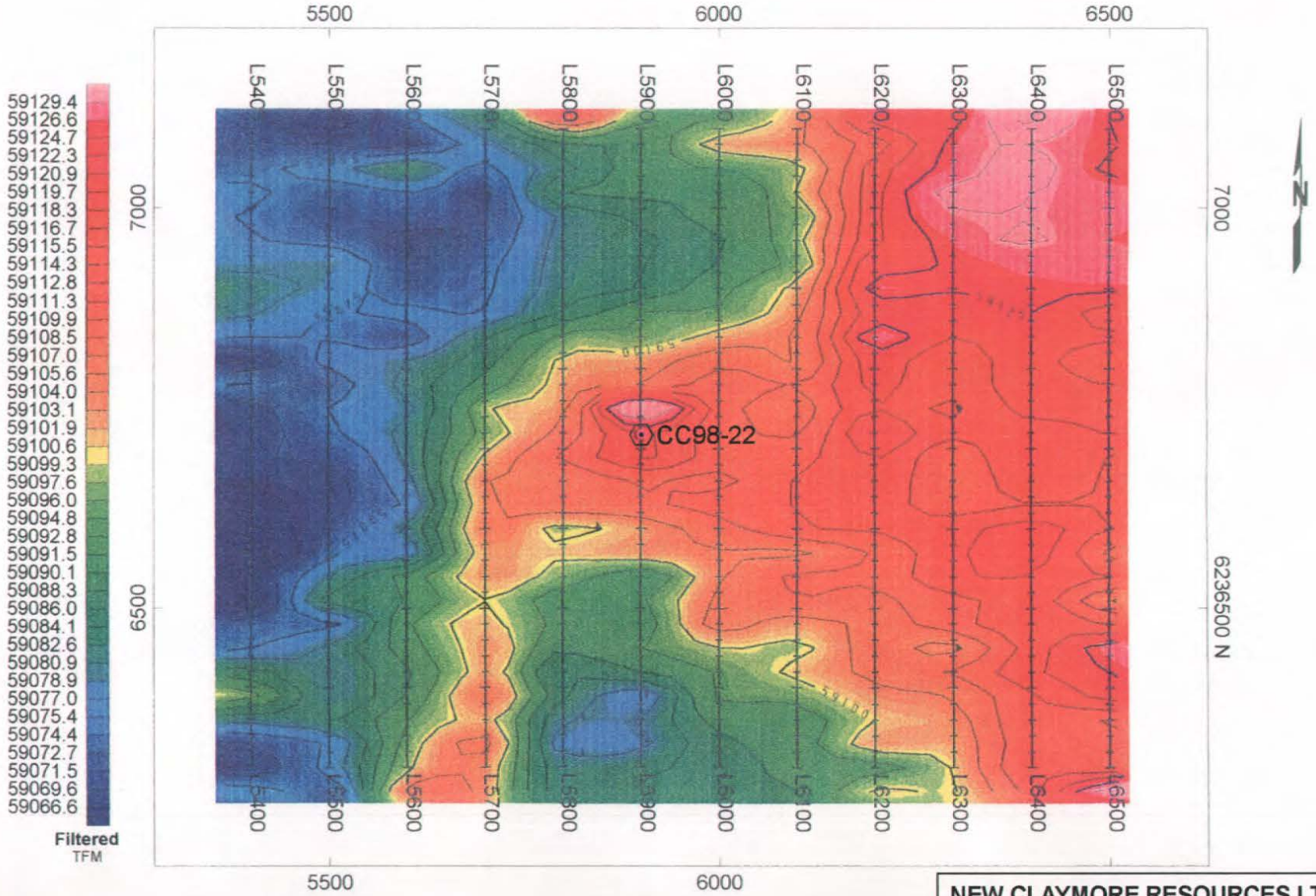
100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 7
GRID D
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

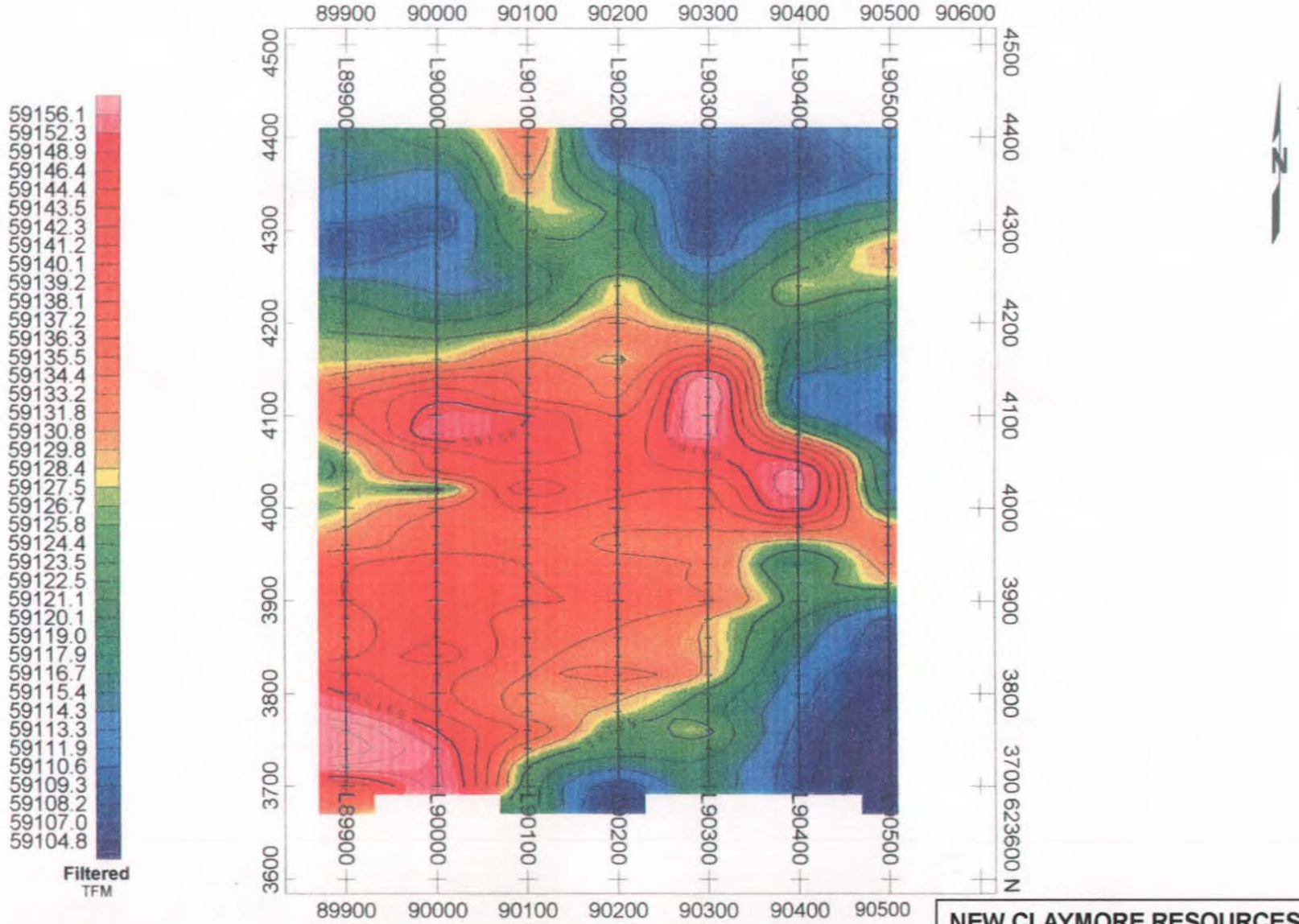
CC98-22 Diamond drill hole; identifier

100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 8
GRID E
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

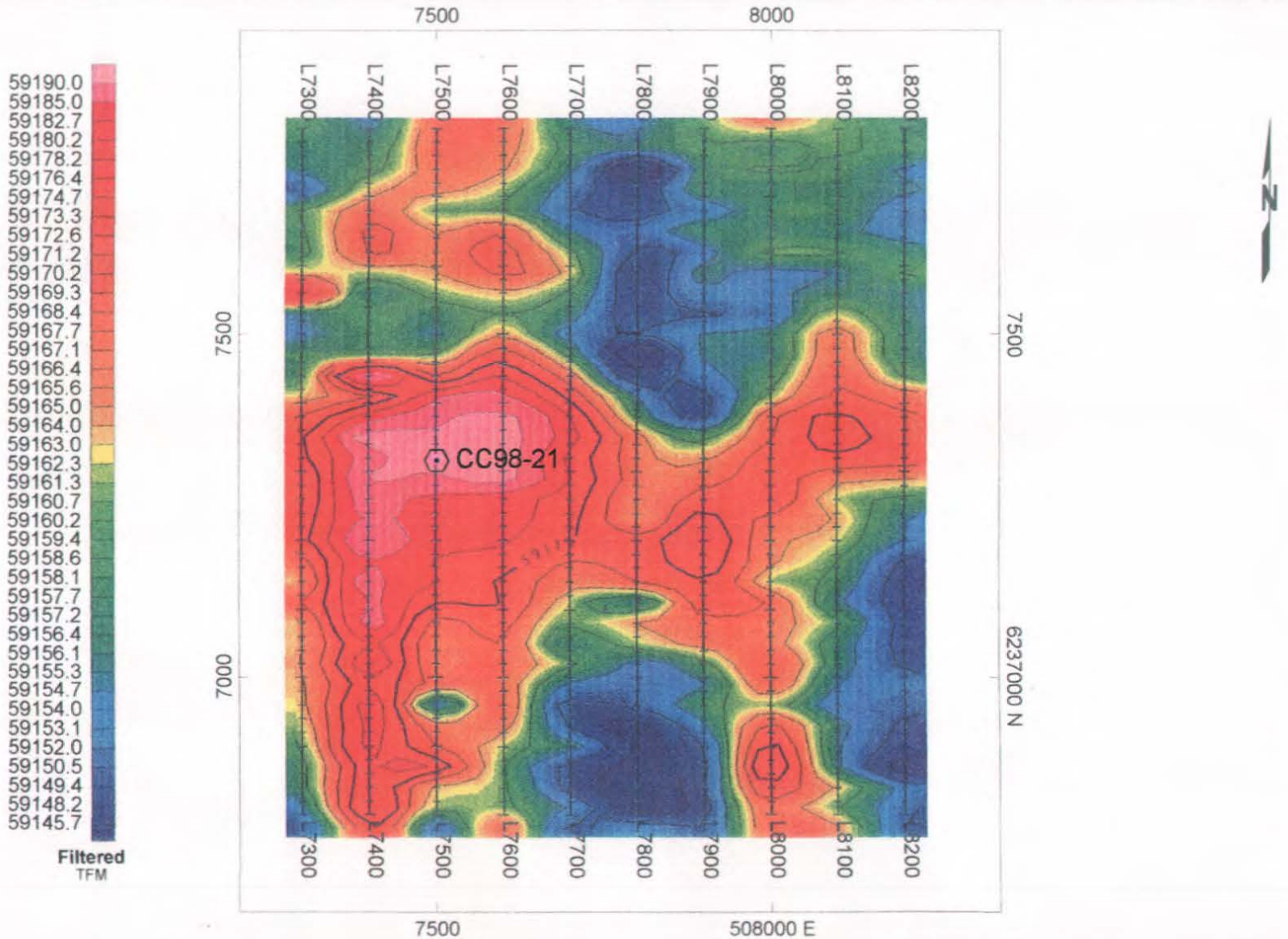
100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 9
GRID F
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

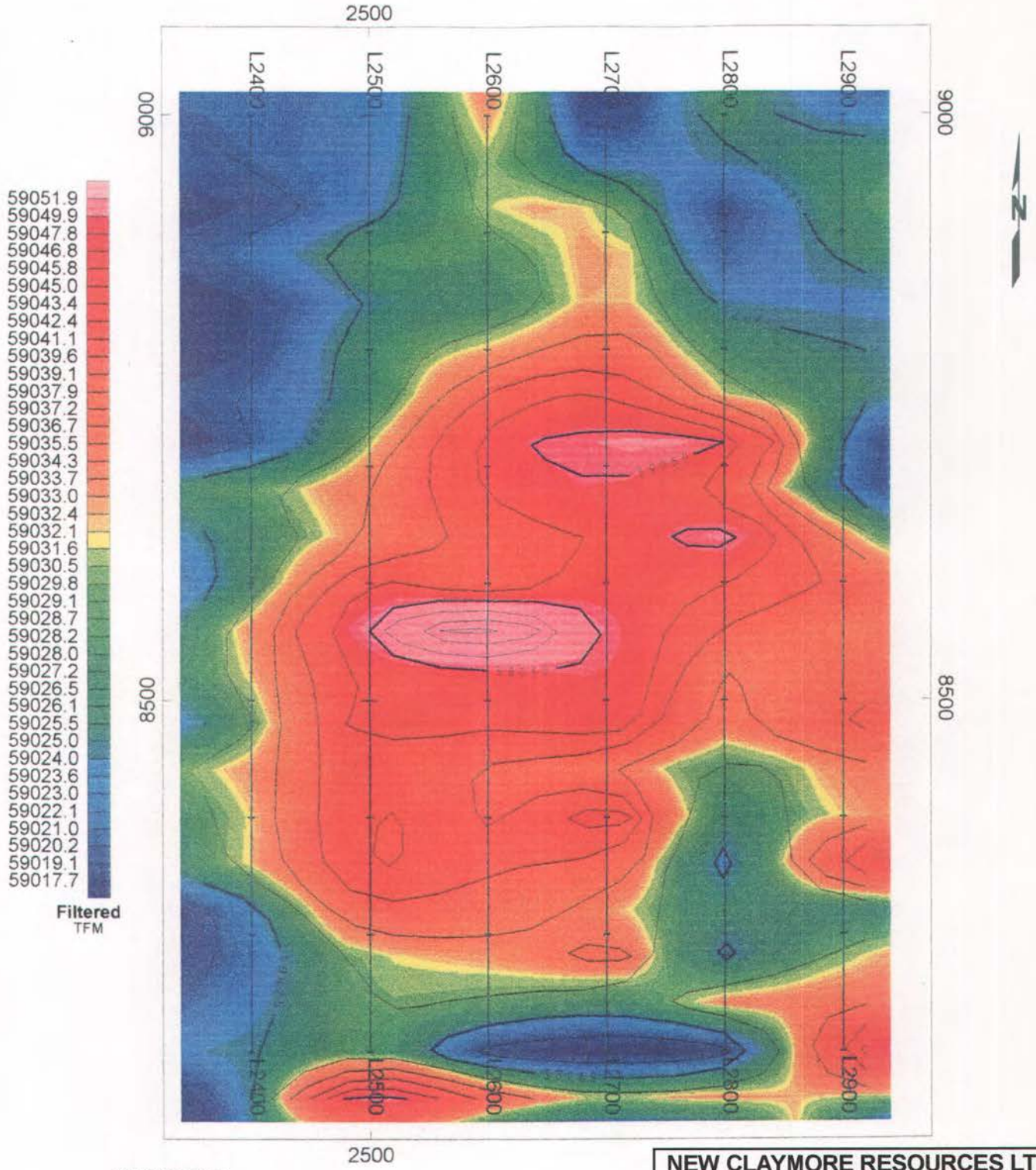
CC98-21 Diamond drill hole; identifier

100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 10
GRID G
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

50 0.0 50 100 150

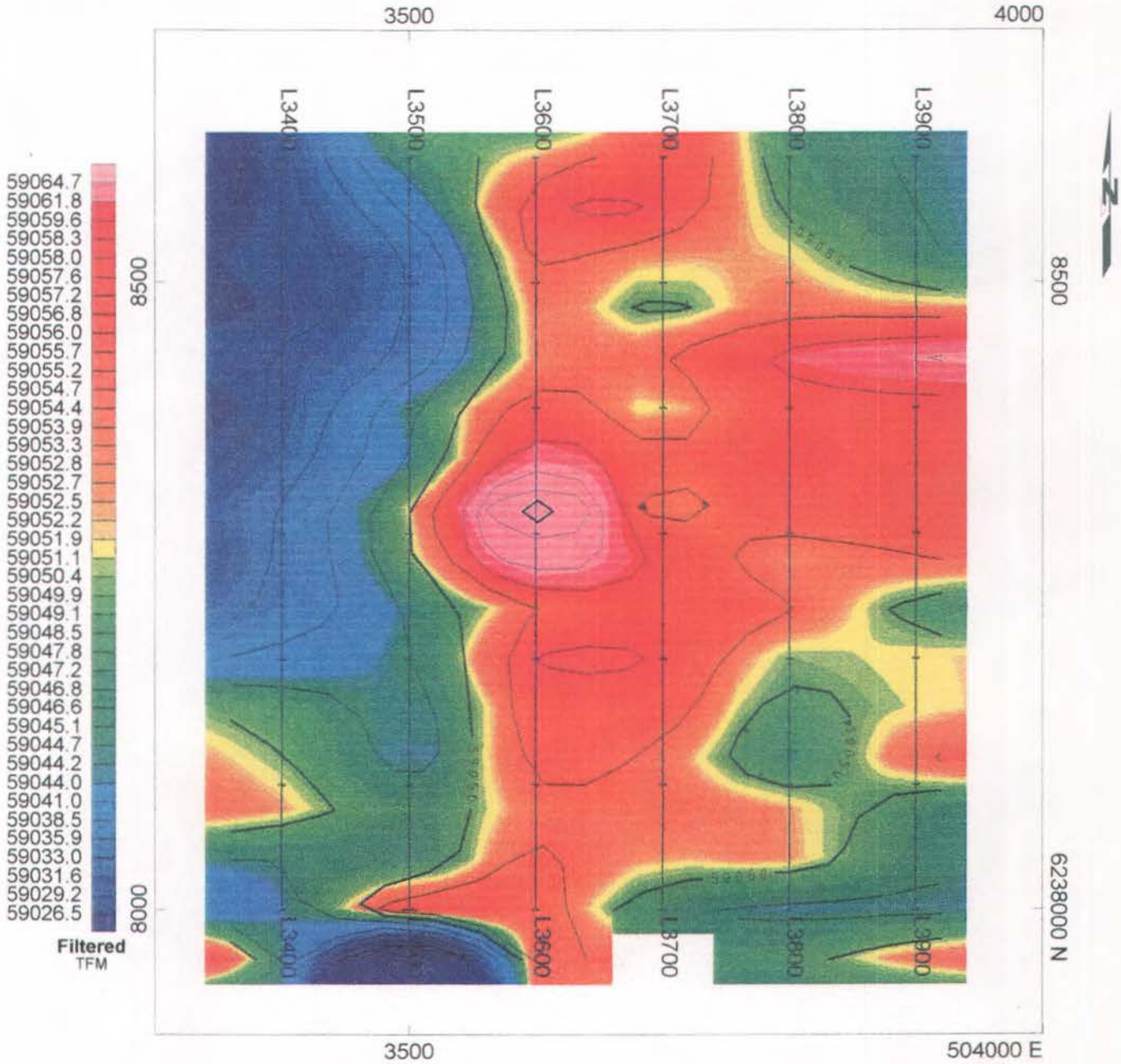
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 11
GRID H
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

50 0.0 50 100 150

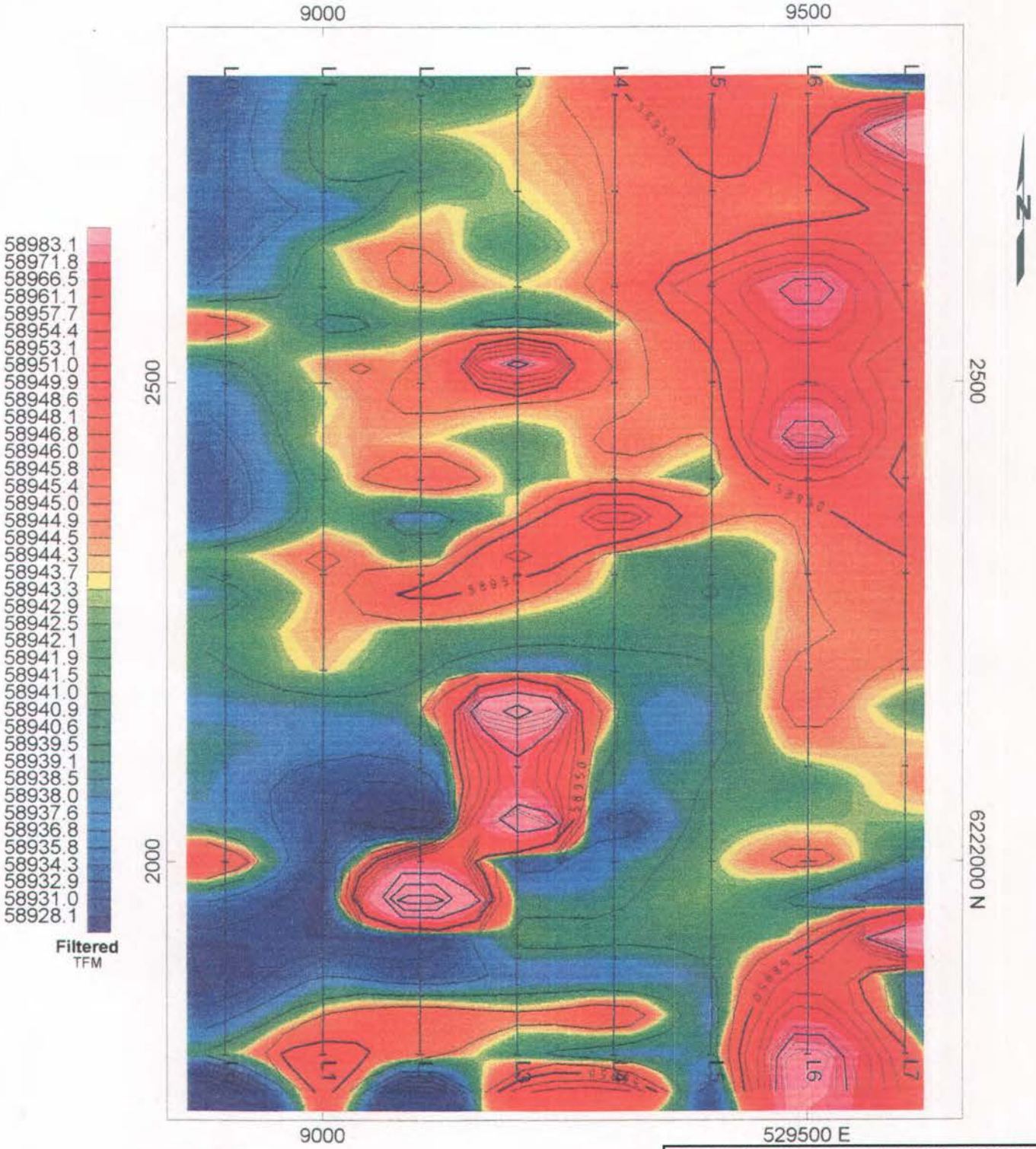
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 12
GRID I
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200

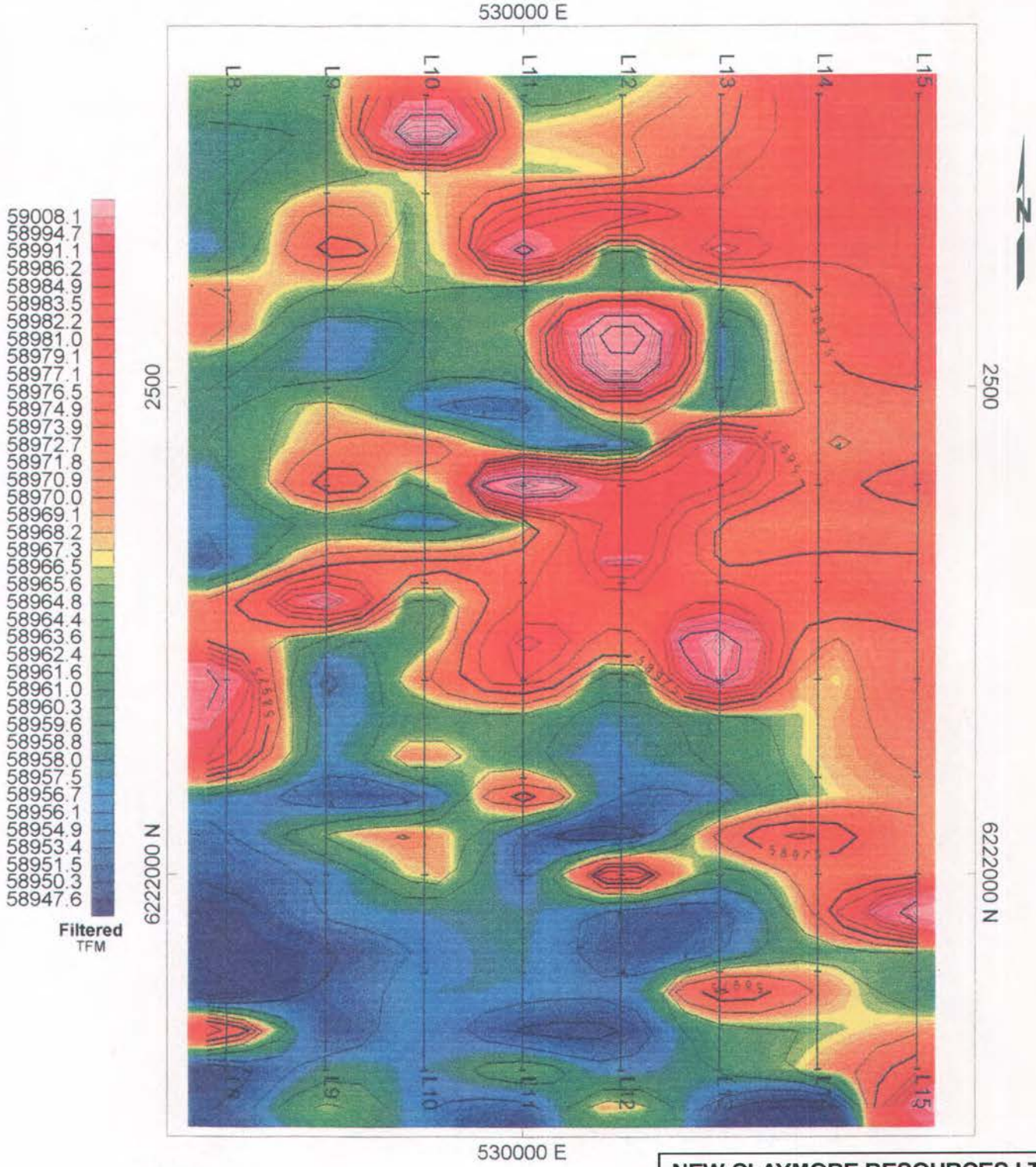
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 13A
GRID J - WEST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200

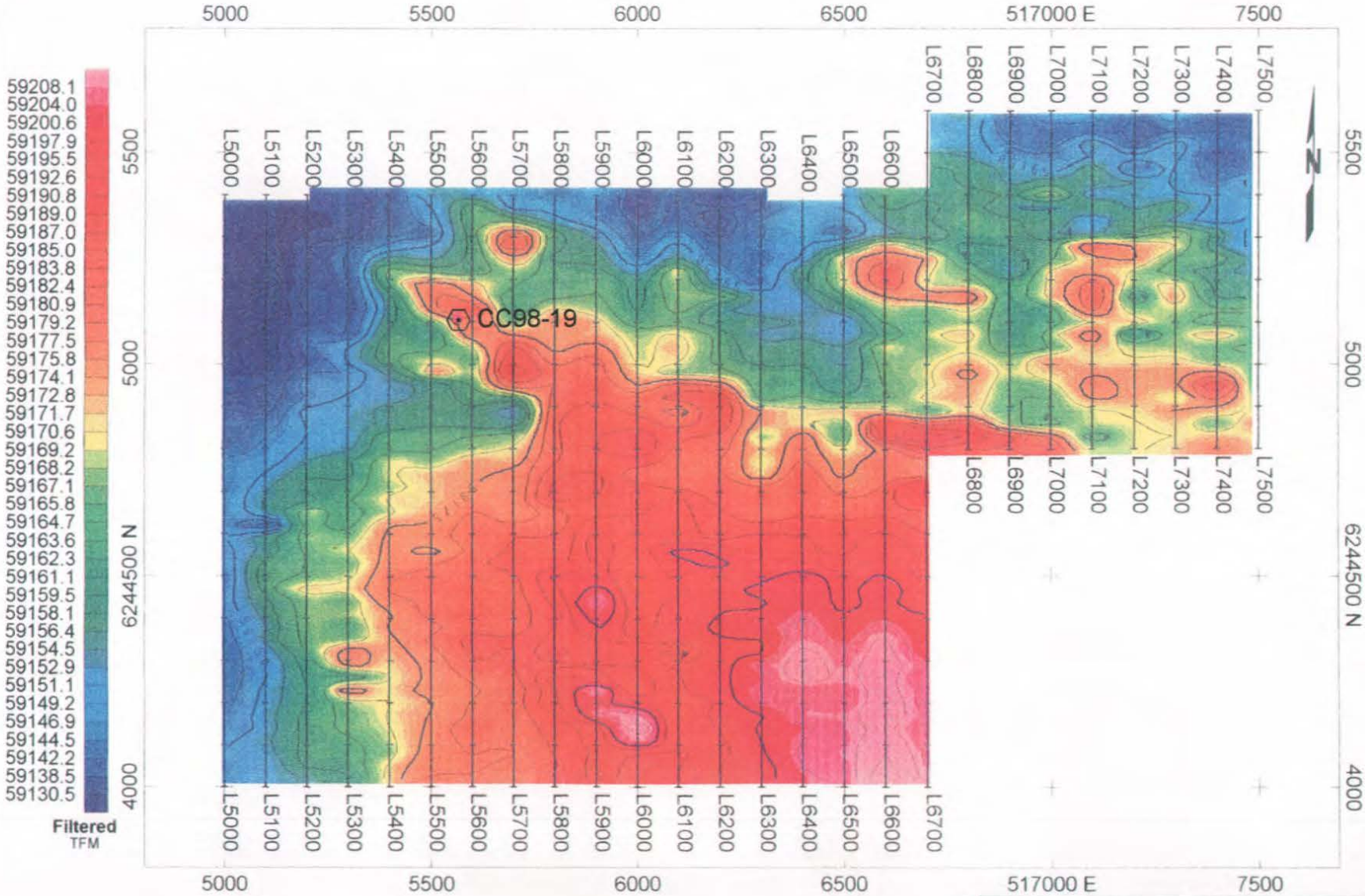
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 13B
GRID J - EAST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

CC98-19 Diamond drill hole; identifier

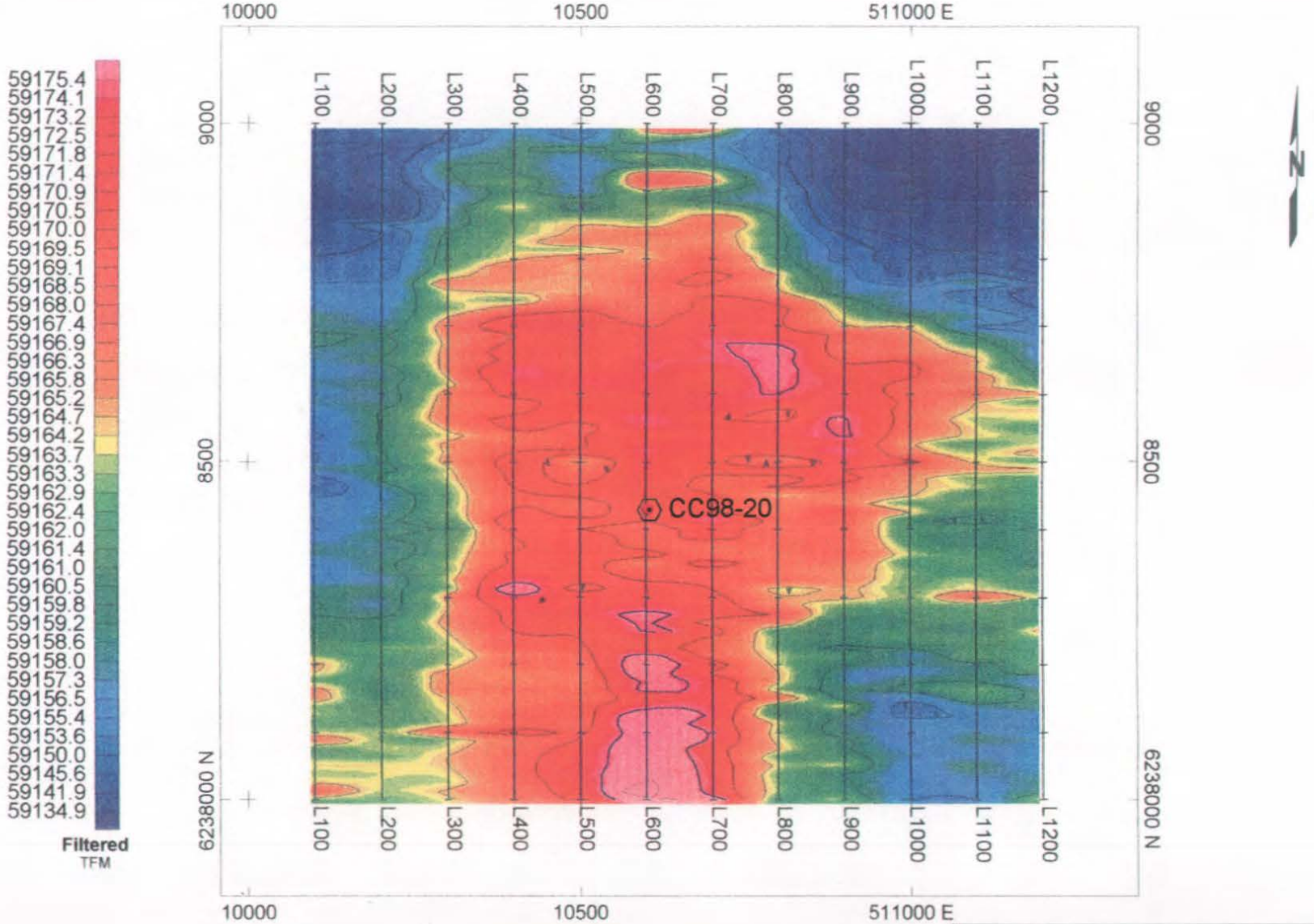
250 0.0 250
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 14
GRID K
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

CC98-20 Diamond drill hole; identifier

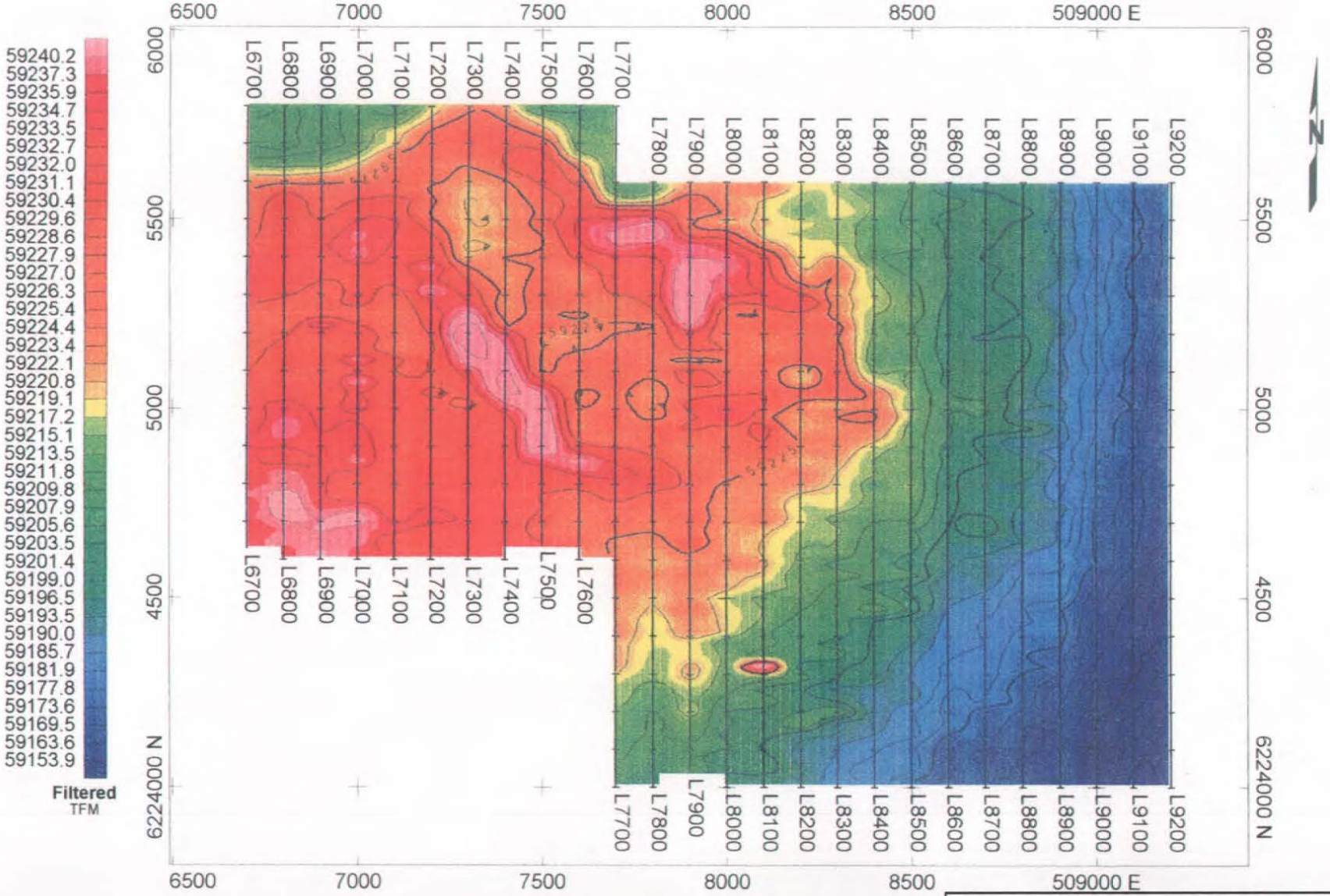
100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 15
GRID L
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

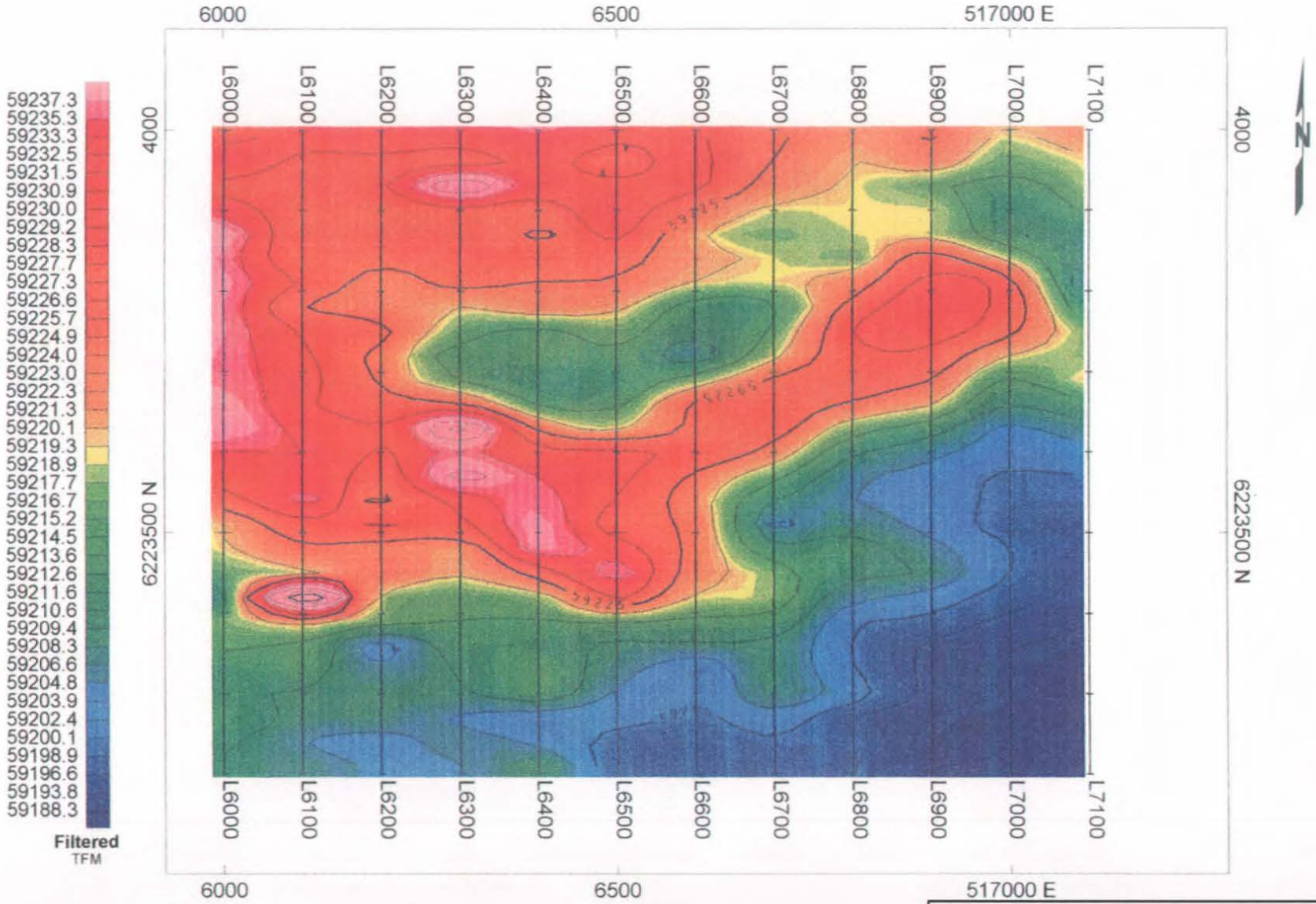
250 0.0 250 500
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 16
GRID M
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

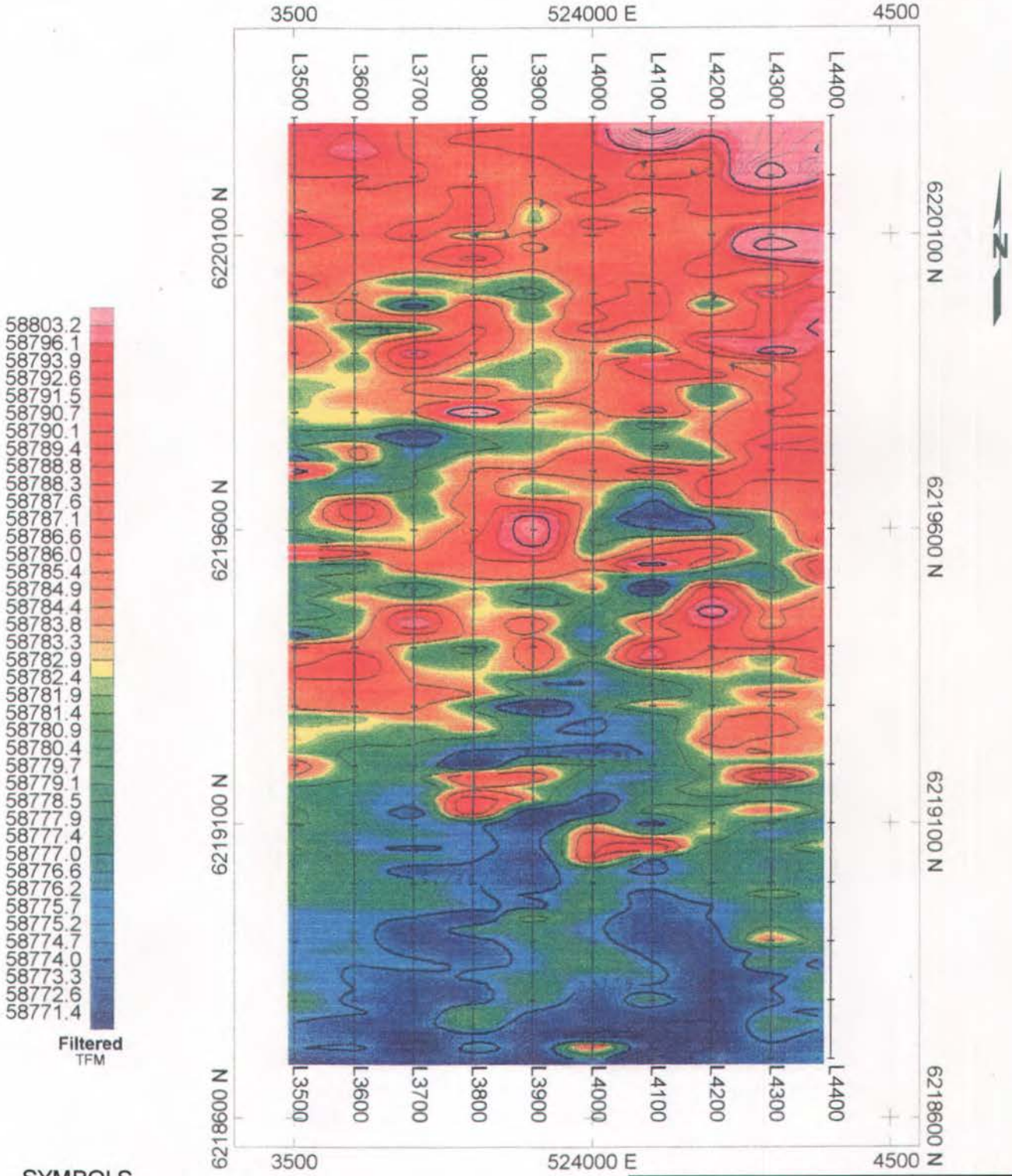
100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 17
GRID N
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200 300

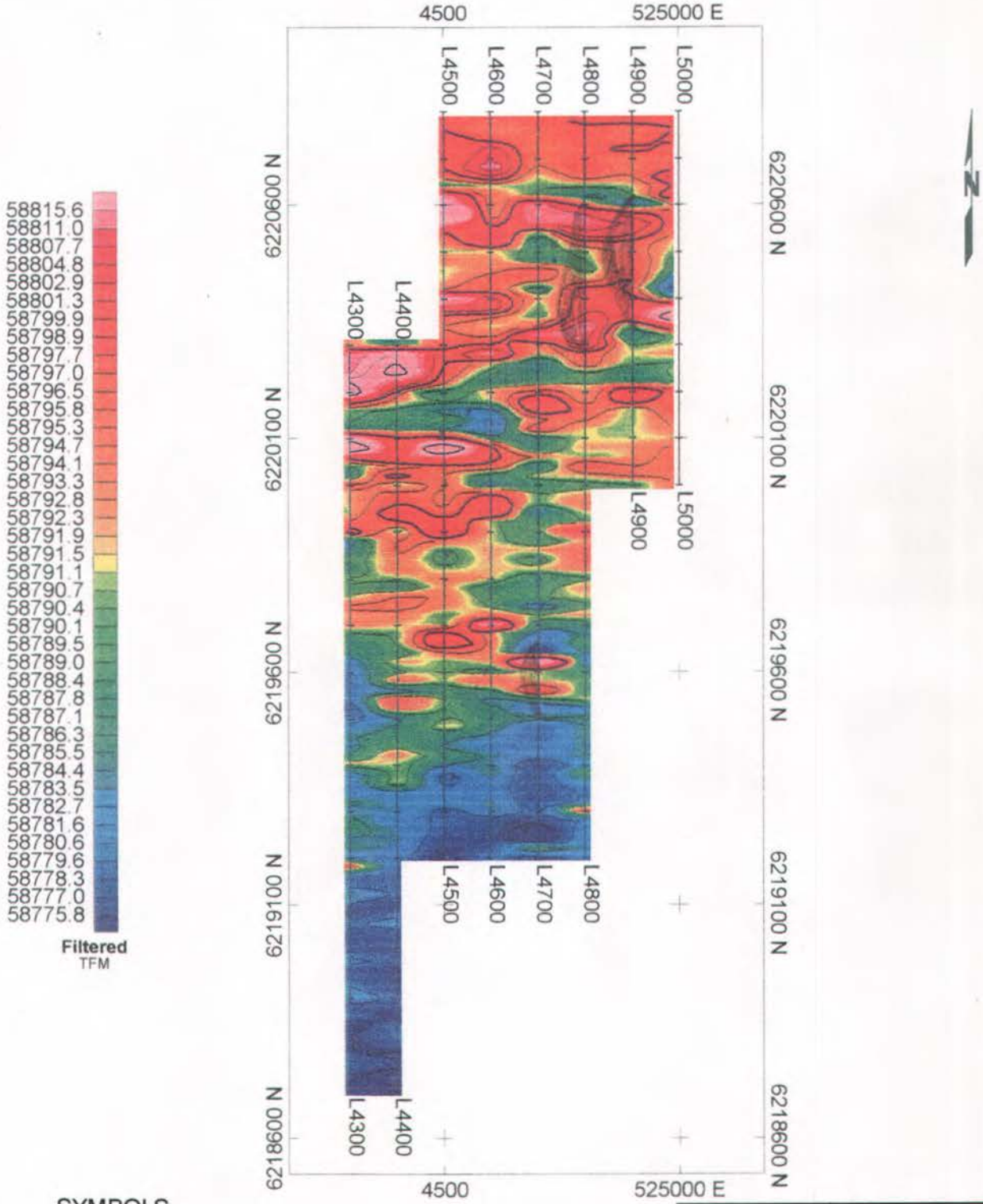
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 18A
GRID O - WEST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

250 0.0 250

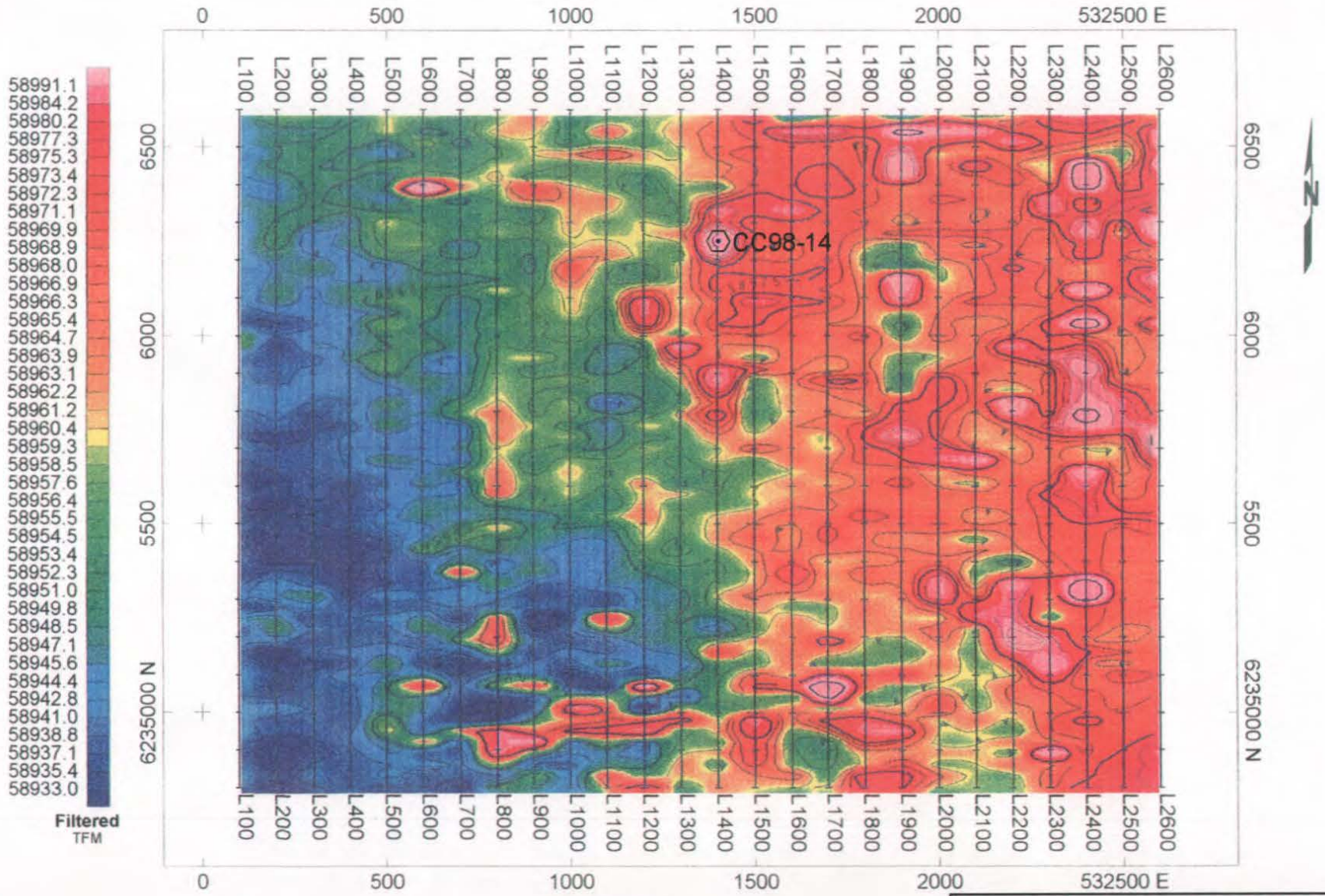
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 18B
GRID O - EAST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

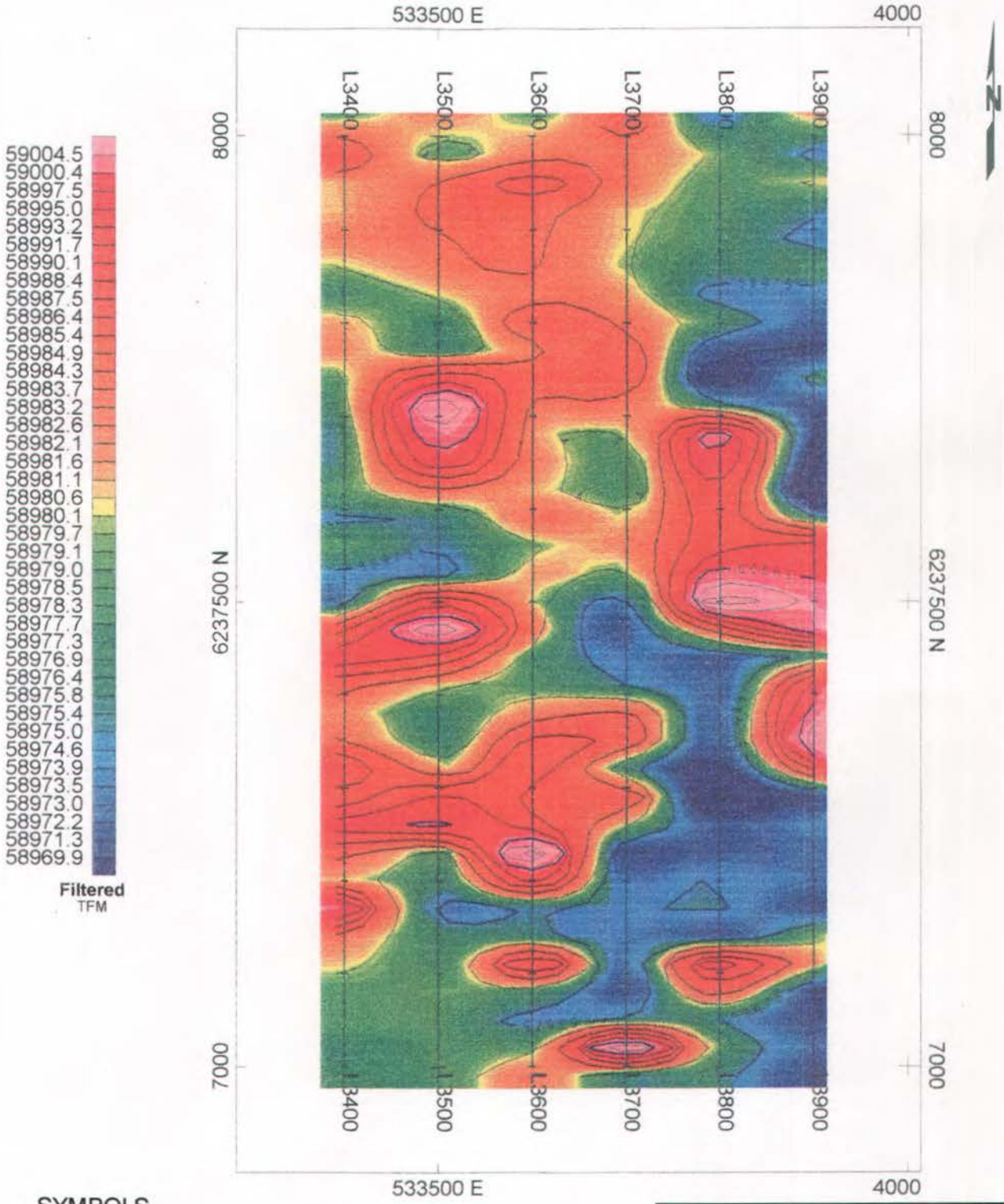
CC98-14 Diamond drill hole; identifier

250 0.0 250 500
(meters)

NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 19
GRID P
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200

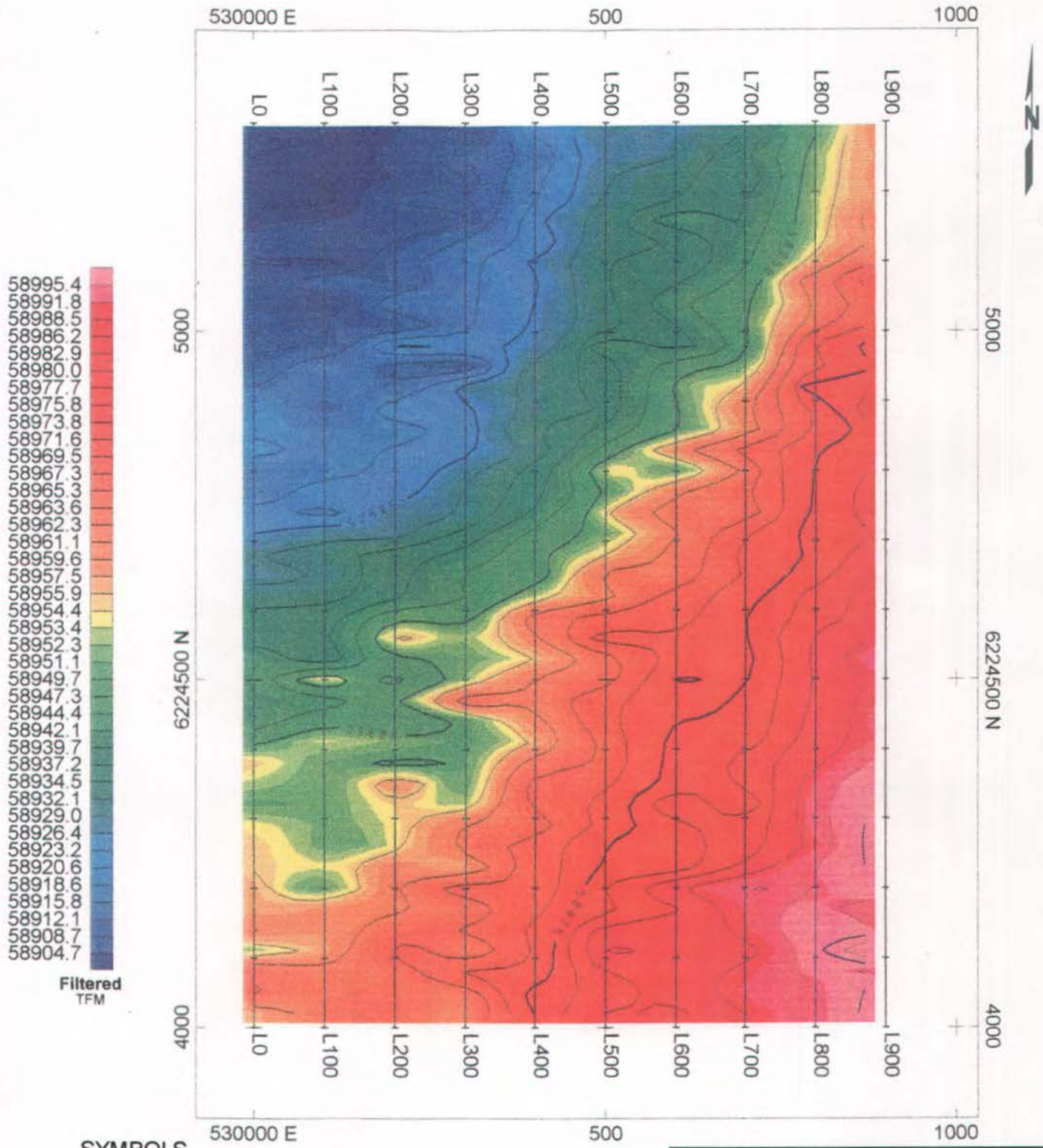
(meters)

NEW CLAYMORE RESOURCES LTD.

CARMON CREEK PROSPECT

FIGURE 20
GRID Q
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200 300

(meters)

NEW CLAYMORE RESOURCES LTD.

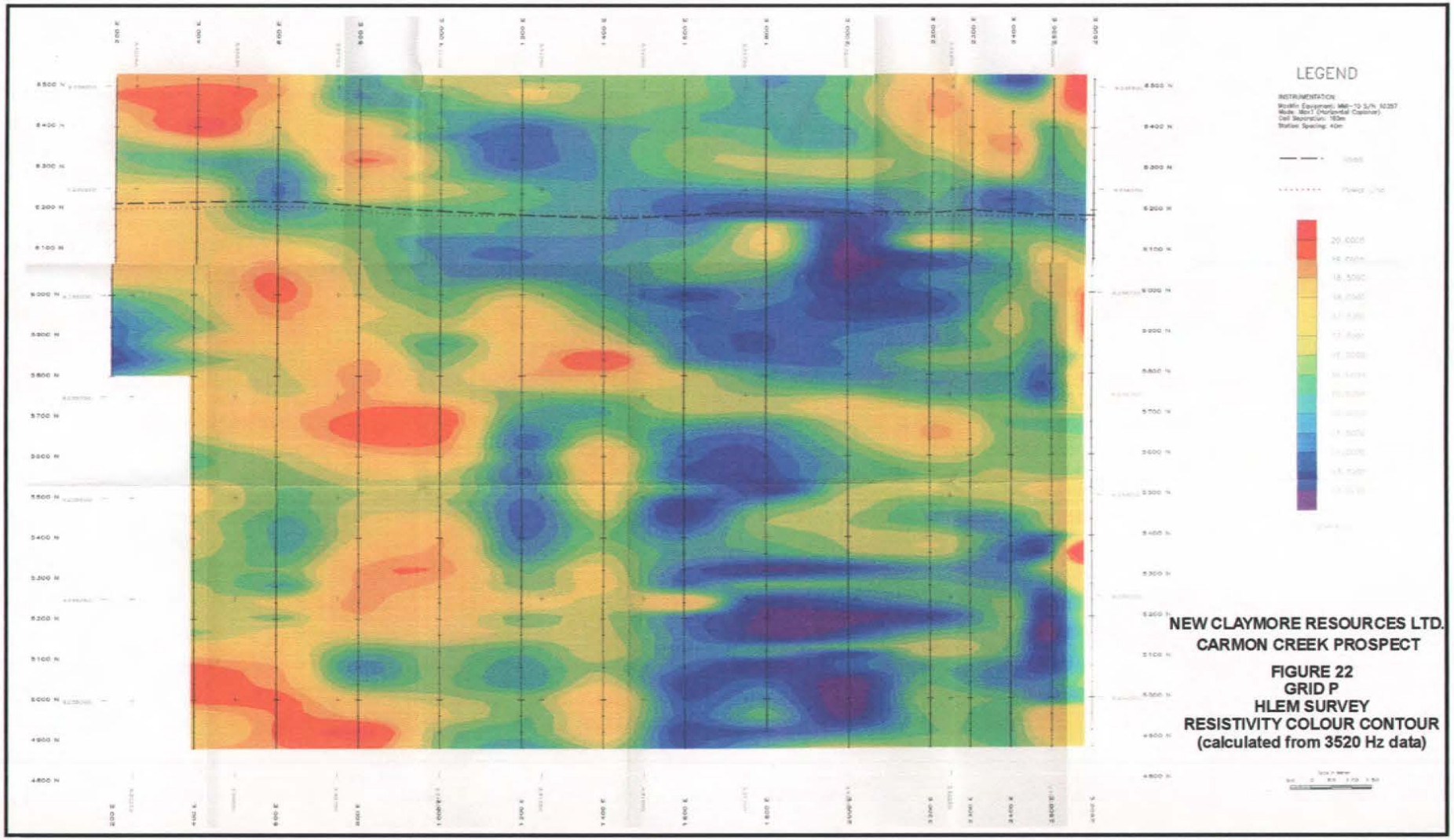
CARMON CREEK PROSPECT

FIGURE 21
GRID R
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999

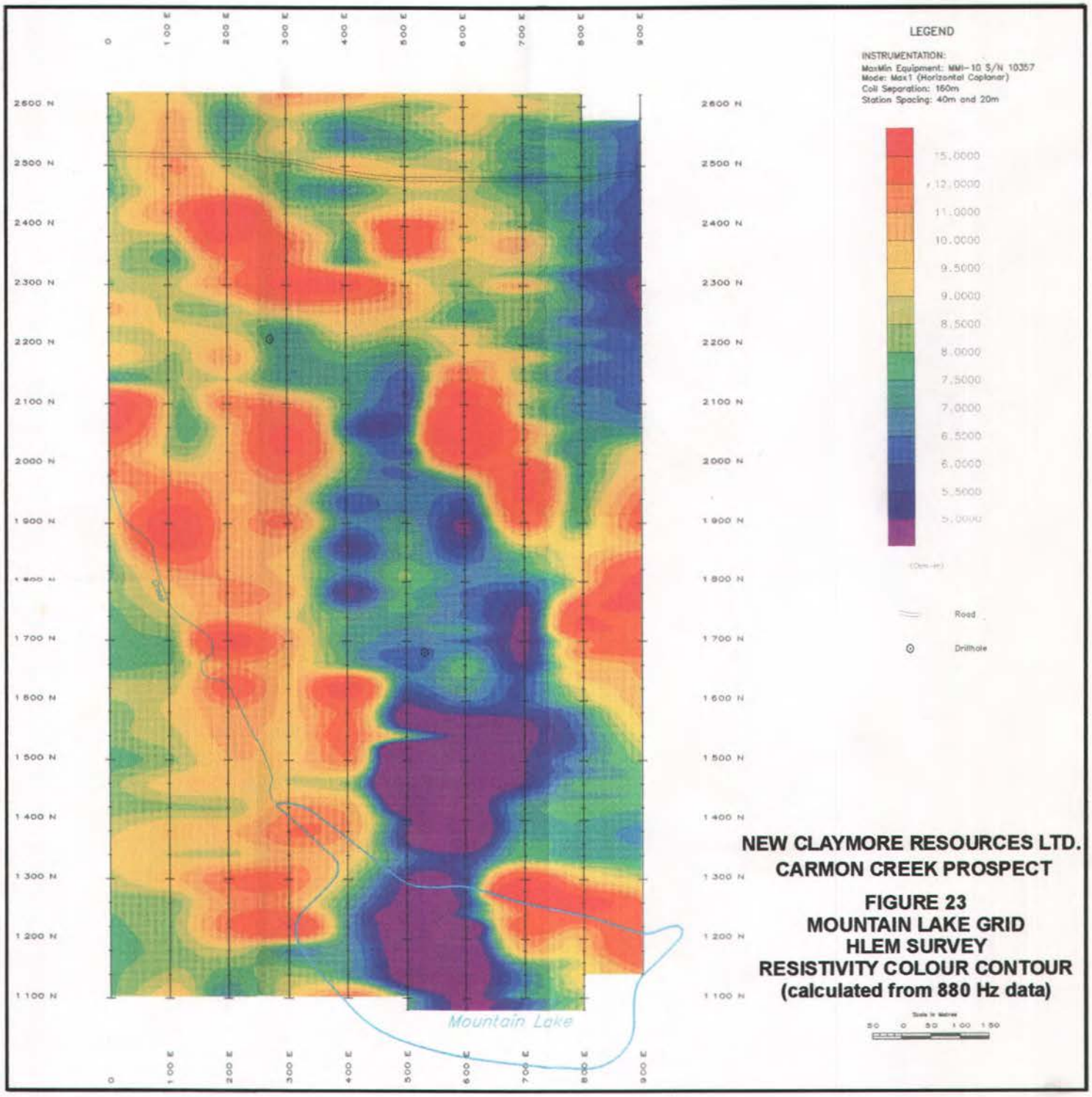
APPENDIX 3

HLEM SURVEY RESISTIVITY COLOUR CONTOUR FIGURE 22 AND FIGURE 23



NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 22
GRID P
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)



NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

FIGURE 23
MOUNTAIN LAKE GRID
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 880 Hz data)

APPENDIX 4

DRILLING RECORD AND LITHOLOGIC DESCRIPTIONS

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-14		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020018	Hole Depth:	44.81 m	Started:	Feb 17 / 98
LLD:	14-8-84-16-W5	Inclination:	-90	Completed:	Feb 18 / 98
UTM:	531400 E 6236250 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid P - L 1400 E / 6250 N	Core Size:	NQ	DIP TEST	
Elevation:	720 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	41.76	41.76	no core recovered			
41.76	44.81	3.05	very poor recovery, unconsolidated sand			
44.81			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-08		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020003	Hole Depth:	151.49 m	Started:	Jan 27 / 98
LLD:	12-25-82-17-W5	Inclination:	-90	Completed:	Jan 30 / 98
UTM:	529296 E 6221525 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid D - L 9302 E / 1528 N	Core Size:	NQ	DIP TEST	
Elevation:	720 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	38.71	38.71	no core recovered			
38.71	44.81	6.10	clay, dark grey, rounded pebbles and cobbles of quartzite			
44.81	50.29	5.48	clay, sandy, dark grey, angular to rounded grit to pebble sized quartzite fragments			
50.29	57.00	6.71	clast supported pebbles (80%) and boulders (20%) of quartzite and igneous rock with			
			clay matrix			
57.00	122.83	65.83	no core recovered			
122.83	131.06	8.23	clay / shale, dark brown to dark grey, soft, semi-consolidated, strongly banded 85-90 CA,			
			rare sand layer			
131.06	137.46	6.40	sandstone, brown, fine-grained, weakly laminated, bedding (?) 85 - 90 CA, rare thin dolomit			
			layers			
137.46	144.78	7.32	shale, dark grey to grey/brown, silty, indurated, laminations 90 CA, silty layers			
144.78	151.49	6.71	siltstone, local laminations, rare shale clasts, minor fracturing			
151.49			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-07		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020003	Hole Depth:	97.54 m	Started:	Jan 25 / 98
LLD:	1-26-82-17-W5	Inclination:	-57	Completed:	Jan 26 / 98
UTM:	529090 E 6220950 N	Azimuth:	135	Logged By:	Tom Carpenter
Grid:	Grid D - L 950 N / 9100 E	Core Size:	NQ	DIP TEST	
Elevation:	720 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 -	97.54	97.54	no core recovered, hole triconed to 97.54 m.			
97.54			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-02		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020003	Hole Depth:	117.96 m	Started:	Jan 30 / 98
LLD:	16-5-82-17-W5	Inclination:	-90	Completed:	Feb 01 / 98
UTM:	524180 E 6215400 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid B - L 5400 N / 4180 E	Core Size:	NQ	DIP TEST	
Elevation:	730 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m) To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 13.11	13.11	no core recovered			
13.11 - 17.37	4.26	sandy clay, dark brown, soft, organic rich, weak laminations 90 CA			
17.37 - 86.56	69.19	poor recovery, minor clay with quartzite pebbles			
86.56 - 101.80	15.24	clayey shale, dark grey, poorly consolidated, soft, rare thin sandy layers, laminations			
		75 - 80 CA			
101.80 - 113.08	11.28	clayey shale, dark grey/brown, indurated, strongly laminated, whispy sand/silt layers,			
		laminations 90 CA			
113.08 - 114.60	1.52	shale with limestone interbeds			
114.60 - 117.96	3.36	clayey shale, dark grey, poorly consolidated, sandy layers, rare pyrite blebs and			
		calcareous fragments			
117.96		EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-19		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9398070078	Hole Depth:	111.86 m	Started:	Feb 12 / 98
LLD:	1-10-85-18-W5	Inclination:	-90	Completed:	Feb 13 / 98
UTM:	515560 E 6245100 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid K - L 5500 E / 5000 N	Core Size:	NQ	DIP TEST	
Elevation:	640 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	21.34	21.34	no core recovered			
21.34	45.11	23.77	clay, dark grey/brown, soft, poorly consolidated, rounded quartzite and igneous pebbles			
			throughout			
45.11	56.69	11.58	clay, dark grey/brown, weakly consolidated, silty, rare pebbles			
56.69	96.62	39.93	shale, clayey, weakly laminated, poorly consolidated, thin wispy sand layers			
96.62	111.86	15.24	very poor core recovery, minor clay and quartzite pebbles			
111.86			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-20		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020020	Hole Depth:	121.92 m	Started:	Feb 10 / 98
LLD:	2-19-84-18-W5	Inclination:	-90	Completed:	Feb 11 / 98
UTM:	510600 E 6238420 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid L - L 450 E / 8300 N	Core Size:	NQ	DIP TEST	
Elevation:	640 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	14.32	14.32	no core recovered			
14.32	20.42	6.10	clay, light brown, locally limonitic, rounded pebbles and cobbles of quartzite			
20.42	23.47	3.05	no core recovered			
23.47	103.63	80.16	clay, dark grey/brown, frequent rounded siliceous clasts			
103.63	110.95	7.32	clay, dark grey/brown, rare grit sized fragments, whispy light grey sand bands 80 CA			
110.95	121.92	10.97	clayey shale, soft, organic rich bands at 90 CA, silty intervals			
121.92			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-21		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020020	Hole Depth:	132.28 m	Started:	Feb 09 / 98
LLD:	9-14-84-19-W5	Inclination:	-90	Completed:	Feb 10 / 98
UTM:	507500 E 6237320 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid G - L 7500 E / 7350 N	Core Size:	NQ	DIP TEST	
Elevation:	625 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	60.05	60.05	no core recovered			
60.05	84.43	24.38	clay, dark grey/brown, silty, soft, locally sand rich, organic bands at 90 CA			
84.43	93.27	8.84	clay, sandy to silty, coarser grained than above, poorly consolidated, organic rich			
			bands at 90 CA			
93.27	105.77	12.50	shale, clay rich, unconsolidated, organic rich bands at 90 CA			
105.77	132.28	26.51	clay, dark grey, gritty, silty to sandy, moderately consolidated, rare small rounded quartzite			
			pebbles			
132.28			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-22		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020021	Hole Depth:	97.54 m	Started:	Feb 07 / 98
LLD:	1-15-84-19-W5	Inclination:	-90	Completed:	Feb 09 / 98
UTM:	505900 E 6236720 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid C/E - L 5900 E / 6740 N	Core Size:	NQ	DIP TEST	
Elevation:	625 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	54.86	54.86	no core recovered			
54.86	61.42	6.56	clay, dark grey, frequent pebbles of quartzite, arkose, and granodiorite			
61.42	63.09	1.67	layer of quartzite and arkose pebbles			
63.09	69.19	6.10	sand, light brown, unconsolidated			
69.19	75.59	6.40	layer of quartzite and arkose pebbles			
75.59	81.38	5.79	clay, dark grey/brown, sandy, poorly consolidated, organic rich bands 80-90 CA			
81.38	91.74	10.36	clay, dark brown/grey, unconsolidated, soft, organic rich bands 90 CA			
91.74	97.54	5.80	clay/shale, sandy, weakly consolidated, organic rich bands and disseminations			
97.54			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Carmon Creek	HOLE NUMBER	CC98-36		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020019	Hole Depth:	93.57 m	Started:	Feb 19 / 98
LLD:	10-11-84-16-W5	Inclination:	-90	Completed:	Feb 20 / 98
UTM:	536800 E 6236100 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	topographic feature	Core Size:	NQ	DIP TEST	
Elevation:	722 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	60.96	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	60.96	60.96	casing			
60.96	75.29	14.33	clay, dark brown, silty, frequent grit to pebble sized rounded quartzite clasts			
75.29	84.43	9.14	quartzite pebbles			
84.43	93.57	9.14	no core recovered			
93.57			EOH			

NEW CLAYMORE RESOURCES LTD.
CARMON CREEK PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD CONTOURS

84 C/1, C/2, C/3, C/6, C/7, C/8
April, 1999

JUN 1 0 1999
1999002

ASSESSMENT REPORT

SEAL LAKE PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020008 to 9397020010, 9397020016 to 9397020018
9397020051 to 9397020053
NORTHERN ALBERTA

Geographic Co-ordinates
56° 04' 45" to 56° 20' 00" N
115° 57' 30" to 116° 20' 30" W

NTS Map Areas
84 C/1, C/8

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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Total Magnetic Field Contours ..... in pocket

SUMMARY

New Claymore Resources Ltd. Seal Lake prospect is located about 70 km east of the Town of Peace River in northern Alberta. The prospect is comprised of 9 Metallic and Industrial Mineral permits which encompass an area of 67,584 hectares (168,960 acres). The permits are registered in the name of New Claymore Resources Ltd. and were under option to Lucero Resource Corp.; all exploration on the Seal Lake prospect was conducted by Lucero Resource Corp.

The Precambrian basement underlying the Seal Lake prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous feldspathic sandstone of the Dunvegan Formation overlain by marine shale of the Smoky Group. Glacial till and sand and gravel deposits cover most of the prospect with thickness generally in excess of 100 m. Approximately 60 km north of the Seal Lake prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During May, 1997, High-Sense Geophysics Limited was contracted to fly a high resolution aeromagnetic geophysical survey over the Seal Lake prospect; in total 4,210 line kilometers of data were collected. Interpretation of the airborne data by Geophysical Exploration & Development Corporation and subsequently a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. aided in correlating magnetic anomalies with topographic features and regional structure. In total, 9 positive magnetic anomalies and 2 distinct topographic features were identified which may be representative of kimberlitic diatremes. During October, 1997 through February, 1998, ground geophysical surveys including magnetometer and horizontal loop electromagnetics were completed over 4 of the airborne anomalies selected because of their positive magnetic signatures, proximity to interpreted geologic structures, and positive topographic expressions; in total 61.9 line-km of ground magnetometer and 50.0 line-km of electromagnetic surveying was completed. Based on an evaluation of the data, 622.7 m of diamond drilling was completed on 5 targets during February and March, 1998.

Although the results of the fieldwork and drilling were not positive in locating kimberlitic intrusives, the presence of a basement terrane known to host diamondiferous kimberlite intrusives, the existence of geologic structures possibly associated with kimberlite emplacement, and the presence of untested airborne magnetic targets on the Seal Lake prospect indicate that further exploration is warranted and should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;

b) the drill core should be processed for diamond indicator minerals;

c) ground magnetometer geophysical surveying over the remaining 5 airborne targets;

d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

e) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

g) acquisition of brokered seismic data over individual anomalies; and

h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

Location, Prospect Description

The Seal Lake prospect consists of 9 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 67,584 hectares (168,960 acres). The prospect extends from about 56° 04' 45" to 56° 20' 00" north latitude and 115° 57' 00" to 116° 22' 30" west longitude, is located about 350 km northwest of the City of Edmonton and about 70 km east of the Town of Peace River (Figure 1). The permits, 9397020008 to 9397020010, 9397020016 to 9397020018 and 9397020051 to 9397020053 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

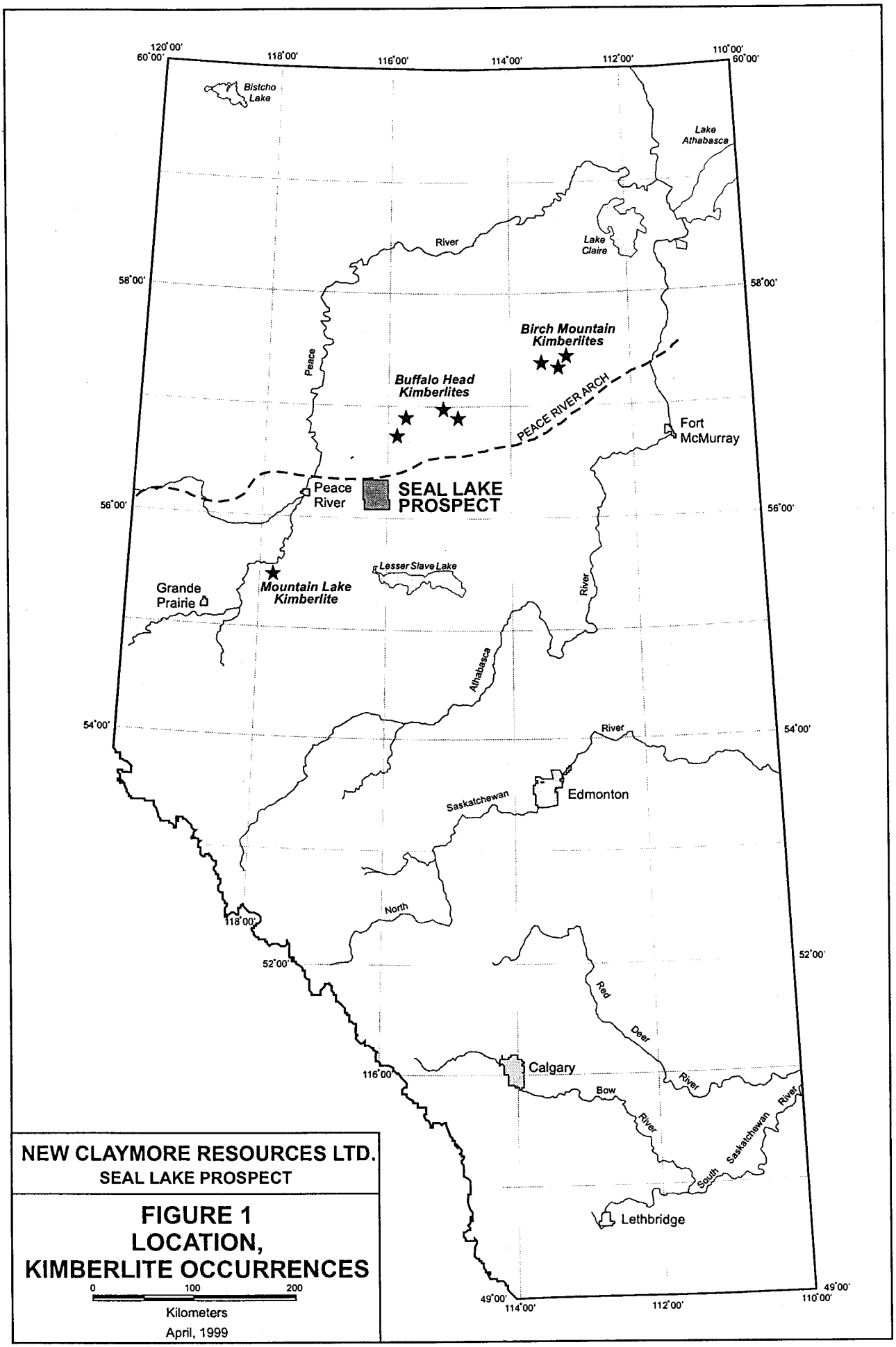
Lucero Resource Corp. (Lucero) optioned the Seal Lake prospect in May, 1997 and to earn a 50 per cent interest in the prospect Lucero agreed to issue New Claymore shares of the Company, make staged cash payments, and incur time specific exploration expenditures. Lucero elected to terminate their option on the Seal Lake prospect in January, 1999 and until that time, all exploration on the prospect was conducted by personnel in the employ or under contract to Lucero.

TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020008	Feb 18, 1997	5-13-083: 4-9; 16-21; 28-33	4,608
9397020009	Feb 18, 1997	5-14-083: 1-36	9,216
9397020010	Feb 18, 1997	5-15-083: 1-36	9,216
9397020016	Feb 18, 1997	5-13-084: 4-9; 16-21; 28-30 5-14-084: 1-3; 10-15; 22-27	7,680
9397020017	Feb 18, 1997	5-14-084: 4-9; 16-21; 28-33 5-15-084: 1-3; 10-15; 22-27; 34-36	9,216
9397020018	Feb 18, 1997	5-15-084: 4-9; 16-21; 28-33	4,608
9397020051	Feb 28, 1997	5-13-082: 4-9; 16-21- 28-33	4,608
9397020052	Feb 28, 1997	5-14-082: 1-36	9,216
9397020053	Feb 28, 1997	5-15-082: 1-36	9,216
		TOTAL	67,584

Access, Infrastructure, Physiography

The Seal Lake prospect is accessible by vehicle from secondary highway 986 from the Town of Peace River then south along all weather oil and gas service roads. Seismic lines provide all terrain vehicle and/or snowmachine access to remote areas of the prospect. Commercial access to the central portion of the prospect required a road usage permit from

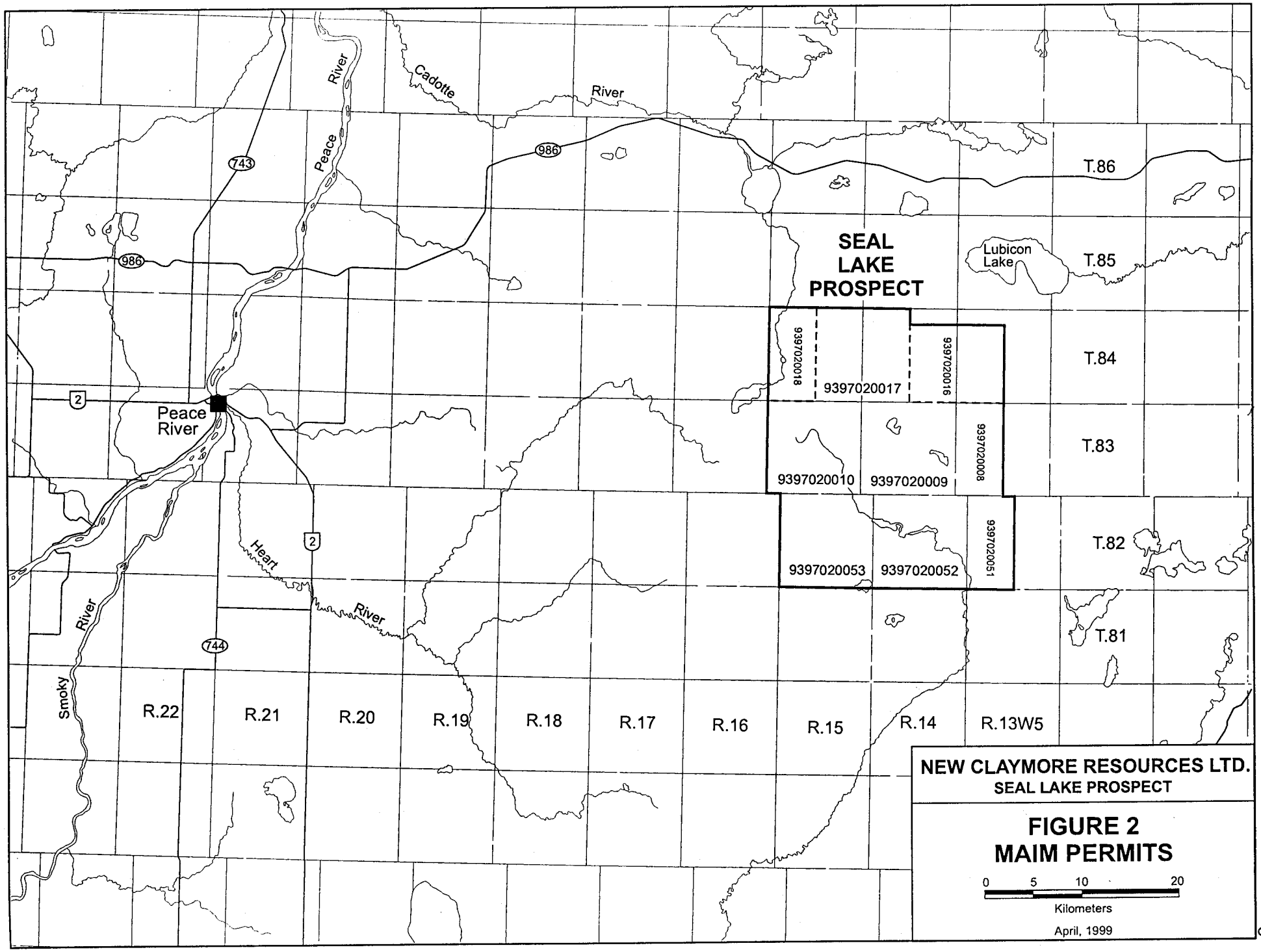


NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

FIGURE 1
LOCATION,
KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


River
Cadotte
River
Peace
143
986
986
T.86
SEAL
LAKE
PROSPECT
Lubicon
Lake
T.85
9397020018
9397020017
9397020016
T.84
2
Peace
River
9397020010
9397020009
9397020008
T.83
9397020053
9397020052
9397020051
T.82
Heart
River
2
River
144
T.81
Smoky
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15
R.14
R.13W5
NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT
FIGURE 2
MAIM PERMITS
0
5
10
20
Kilometers
April, 1999

Unocal Canada Resources. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The Seal Lake prospect lies within the Interior Plains physiographic region of Canada and topographic relief is flat lying to gently rolling with an average elevation about 700 metres above sea level. Vegetation is dominated by stands of poplar with white spruce and jack pine occurring on topographic highs. Lakes, peat bogs, and black spruce covered muskeg exist in low lying areas.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Seal Lake prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond indicator mineral grains including pyropic garnets, eclogitic garnets, and chrome diopside in glacial till samples. The till samples were collected to the east of the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Wabasca River Trend (Dufresne et al., 1996). The Seal Lake prospect exists along the southwestern boundary of the Wabasca River Trend.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 60 km north of the Seal Lake prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 220 km northeast of the Seal Lake prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced with upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

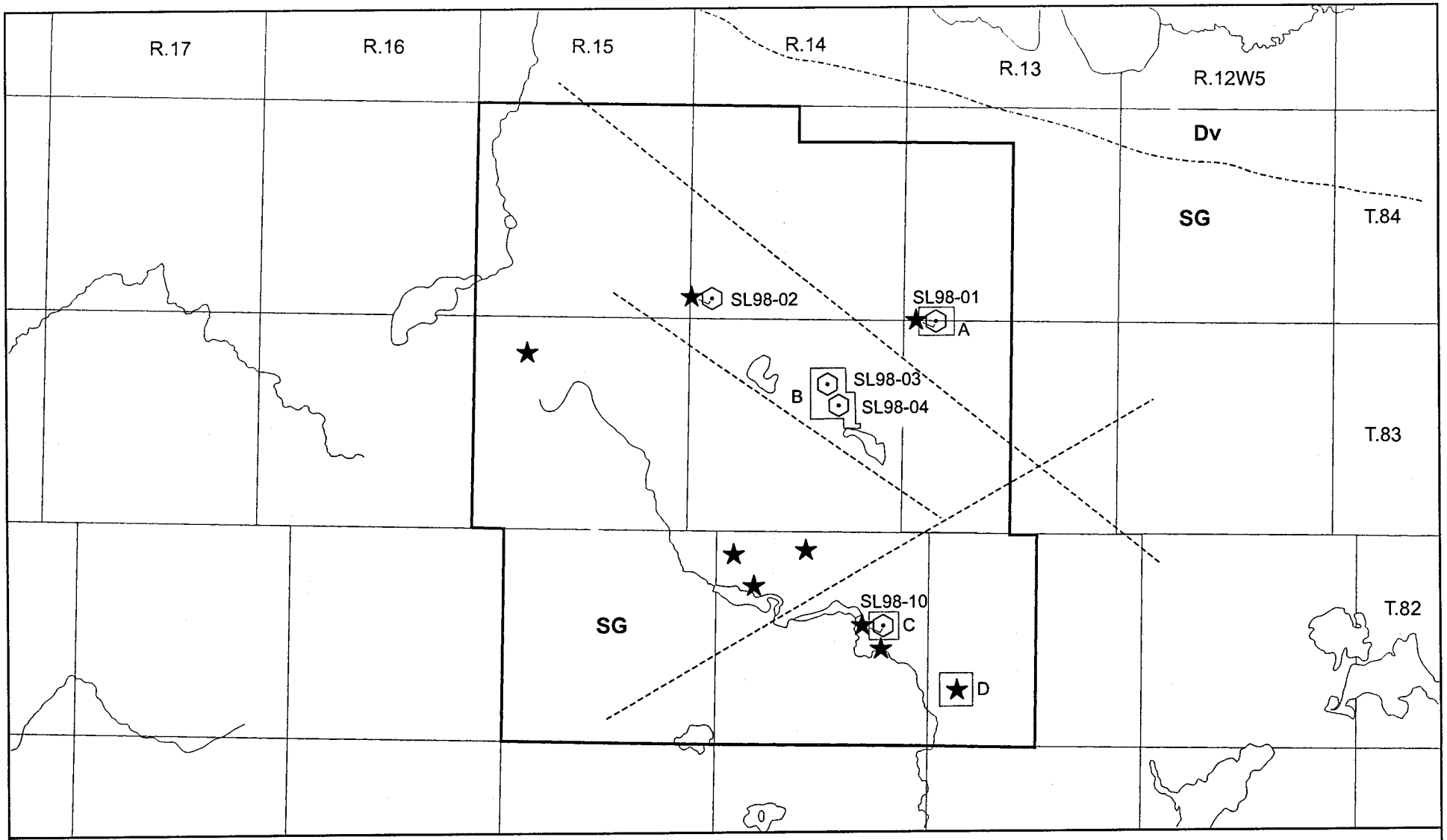
The Seal Lake prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Seal Lake prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Seal Lake prospect to consist of upper Cretaceous sediments including deltaic to marine sandstones of the Dunvegan Formation which are overlain by marine shale of the Smoky Group (Figure 3).

TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Seal Lake prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and deposits of sand and gravel. Glacial fluting in the immediate vicinity of the prospect indicate ice movement was dominantly from the northeast to southwest. Drift thickness in excess of 100 m was encountered in all 5 drill holes which imposed difficult drilling conditions.



SYMBOLS

- ★ Airborne magnetic geophysical anomaly
- D □ Ground magnetometer geophysical grid; identifier
- SL98-10 ⬡ Diamond drill hole; identifier
- Interpreted geologic structure
- Geologic contact:
  SG - Smoky Group marine shale
  Dv - Dunvegan Formation deltaic to marine sandstone

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SEAL LAKE PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, DRILLING, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

Structural Geology

The Seal Lake prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Seal Lake prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Seal Lake prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

High-Sense Geophysics Ltd. (High-Sense) was contracted to fly a high resolution aeromagnetic geophysical survey over the entire Seal Lake prospect in May of 1997. The 4,210 line-km fixed wing survey was drape flown at 85 m mean terrain clearance with north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was then leveled, processed, and edited for cultural noise by Geophysical Exploration & Development Corporation (GEDCO). The edited data was examined for small circular to elliptical shaped magnetic anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 9 geophysical targets possessing characteristics of kimberlitic diatremes were identified. Subsequently, a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. (RGI) identified 2 distinct topographic features and aided in correlating the airborne

magnetic anomalies with topographic features and regional structure. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

Ground Geophysical Surveys

Between October, 1997 and February, 1998, 4 ground magnetometer geophysical surveys were completed over 3 airborne geophysical targets and 1 topographic feature on the Seal Lake prospect. The targets identified for ground follow-up were selected based on magnetic signature, proximity to interpreted geologic structures, and positive topographic expression. In total, 61.9 line-km of ground magnetometer surveying was completed by Hendex Exploration Services Ltd. over grid areas A, B, C, and D (Figure 3). After a baseline was surveyed on an individual grid, cross lines were established at 100 m intervals and on each cross line, stations were chained by topofil and marked at 10 m intervals. At 10 m stations along each cross line, a magnetometer reading was collected using an Omni proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a stationary base-station. The corrected magnetometer data was gridded, contoured, and used to generate Figure 4 to Figure 7 (Appendix 2).

During February, 1998, SJ Geophysics Ltd. was contracted to conduct ground based horizontal loop electromagnetic (HLEM) surveys over grid areas A, B, and C on the Seal Lake prospect. The intention of the HLEM survey was to detect localized resistive features associated with airborne and ground geophysical magnetic highs and to aid in determining the depth to target. Prior to the Seal Lake prospect survey, an orientation HLEM survey totaling 17.0 line-km's was completed over the Mountain Lake kimberlite located about 120 km southwest of the Seal Lake prospect. The orientation survey detected an isolated resistivity low within a uniformly resistive background. The Mountain Lake kimberlite is expressed as a resistivity low where the surrounding Wapiti Formation sandstone shows as a resistivity high; the data is presented as a resistivity contour plot on Figure 11 (Appendix 3). In total, 50.0 line-km of ground HLEM surveying was completed over grid areas A, B, and C. The HLEM surveys were completed using a Max-Min I-10 system with a coil separation of 160 m and data gathered at 40 m stations along grid-lines separated by 100 m intervals. The results are presented as resistivity contour plots on Figure 8 to Figure 10 (Appendix 3). In general, the HLEM data over the 3 grid areas did not identify any isolated resistive features and overall the ground conductivity showed little variation with increasing depth. Because there was relatively little resistivity contrast between the overburden and underlying bedrock, it was not possible to determine overburden depth.

The magnetic patterns for the 4 surveys correlate with the airborne signatures and provide sharpened definition and ground verification and placement of the airborne anomalies. A review of the airborne and ground geophysical anomalies follows:

Anomaly A: an 11 nT airborne anomaly situated on the edge of a prominent basement magnetic high. The ground magnetic expression of this anomaly is a double peak, 500 m x 200 m elliptical anomaly with an amplitude of 35 nT (Figure 4). No significant HLEM resistive response was obtained across the grid (Figure 8).

Anomaly B: two weak airborne magnetic anomalies associated with distinct positive topographic features. The ground magnetic expressions exist as small 'spot' anomalies much smaller in size and weaker in amplitude than the airborne data (Figure 5A and Figure 5B). The HLEM survey shows several resistive features and 1 conductive feature across the grid. All responses are weak and the resistors appear to be plunging and possibly indicate thickening overburden. A power line which crosses the western portion of the grid influenced the HLEM data; the resistivity contour map is presented only for the eastern portion of the grid (Figure 9).

Anomaly C: covers 2 sharp airborne anomalies one with an amplitude of 14 nT and the second a 7 nT anomaly. On the ground survey, the anomalies are strong in amplitude, 60 nT and 55 nT respectively, although both are very small in size (Figure 6). East–west HLEM survey lines spaced at 100 m intervals display a highly resistive layer near surface (Figure10). North-south lines spaced at 200 m intervals were surveyed to test the initial response and these lines display a uniformly conductive layer. The differentiation between surveys is unexplained.

Anomaly D: a broad 10 nT airborne magnetic anomaly. The distinctness of the airborne anomaly diminishes on the ground survey and no further work was completed on grid D (Figure 7).

Diamond Drilling

A total of 622.7 m of diamond drilling in 5 drill holes (SL98-01, SL98-02, SL98-03, SL98-04, SL98-10) was completed on the Seal Lake prospect during February and March, 1998. Diamond drilling was performed by J. T. Thomas Diamond Drilling and the NQ core recovered is stored at the Mineral Core Research Facility in Edmonton. Drilling intersected bedrock in 2 drill holes (SL98-01 and SL98-10) which consisted of grey silty shale of the Smoky Group. The remaining 3 drill holes were terminated prior to intersecting bedrock either as the hole depth exceeded the interpreted geophysical anomaly depth or difficult drilling conditions caused by excessive overburden thickness and/or artesian groundwater contained within sand and gravel layers. As no kimberlitic material was intersected, no drill core was submitted for analysis. A summary of the drill hole data is provided in Table 3; drilling records and lithologic descriptions are provided in Appendix 4.

TABLE 3
DIAMOND DRILL HOLE SUMMARY

DRILL HOLE IDENTIFIER	UTM COORDINATE		GEOPHYSICAL GRID	AZIMUTH / DIP	DEPTH TO BEDROCK (m)	DRILL HOLE DEPTH (m)
	Easting	Northing				
SL98-01	561000	6234220	A	-90	94.45	145.39
SL98-02	548670	6234180	n/a	-90	n/a	117.35
SL98-03	555900	6230430	B	-90	n/a	84.43
SL98-04	555900	6230370	B	150 / -55	n/a	130.15
SL98-10	558540	6219900	C	-90	126.80	145.39

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Seal Lake prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 60 km to the north of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Seal Lake prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery identified 9 geophysical targets and 2 topographic expressions which may be suggestive of kimberlitic intrusives. Ground magnetometer geophysical surveys conducted over 4 of the targets confirmed the presence of 3 magnetic anomalies which warranted further investigation; the inclusion of HLEM surveys failed to upgrade any of the targets and did not aid in determining depth to bedrock. Of 5 diamond drill holes, 2 intersected bedrock comprised of shale which indicates the magnetic anomalies may be sourced from the concentration of magnetic minerals within surficial sediments or in preglacial to glacial channels that exist at or near the bedrock – drift interface. Three drill holes did not intersect bedrock and no direct evidence for the cause of the magnetic anomalies has been identified. Therefore, in addition to the assessment of the 5 untested airborne geophysical anomalies, continued exploration on the Seal Lake prospect should include determining the source of the 3 magnetic signatures. Additional exploration on the Seal Lake prospect should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;

b) the drill core should be processed for diamond indicator minerals;

c) ground magnetometer geophysical surveying over the remaining 5 airborne targets;

d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

e) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

g) acquisition of brokered seismic data over individual anomalies; and

h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020008 to 9397020010, 9397020016 to 9397020017, 9397020051 to 9397020053 is given in Table 4 (Appendix 1); total exploration expenditures amount to $338,721.73. The Seal Lake permits are contiguous and the dispersal of exploration expenditures is given in Table 5 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon a review of published and unpublished reports on the Seal Lake prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.

this 30 day of April, 1999

REFERENCES

Borneuf, D. (1981) Hydrogeology of the Peace River Area, Alberta; Alberta Research Council Earth Sciences Report 81-2, 6 p., 1 map.

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G., and Edwards, W.A.D. (1996) The diamond potential of Alberta; Alberta Geological Survey Bulletin No. 63, 97 p., 33 figs., 5 appendices.

Dujakovic, Z. and Pezzot, E. (1998) Geophysical summary report on HLEM surveys on the Buffalo Head projects, Alberta. Unpublished report prepared for New Claymore Resources Ltd. and Lucero Resource Corp. by SJ Geophysics Limited, 13 p.

Eby, T.W.F. (1997) Interpretation report for magnetometer survey data collected over Lubicon West (Seal Lake) prospect area, Peace River, Alberta. Unpublished report prepared for New Claymore Resources Ltd. and Lucero Resource Corp. by High-Sense Geophysics Limited, 30 p.

Hassan, H. (1998) Identification of possible targets for kimberlite exploration in Lubicon West (Seal Lake) prospect using HRAM data; unpublished report prepared for New Claymore Resources Ltd. by Geophysical Exploration & Development Corporation, 5 p.

Mossop, G.D. and Stetsen, I. (eds.) (1994) Geological Atlas of the Western Canada Sedimentary Basin. Published jointly by The Canadian Society of Petroleum Geologists and The Alberta Research Council, 510 p.

O'Connell, S.C., Dix, G.R., and Barclay, J.E. (1990) The origin, history, and regional structural development of the Peace River Arch, Western Canada; Bulletin of Canadian Petroleum Geology, vol. 38A, p. 4-24.

Thiersch, P. (1998) Project summary Seal Lake property; unpublished report prepared for New Claymore Resources Ltd. by Lucero Resource Corp., 8 p., 1 map.

APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

NEW CLAYMORE RESOURCES LTD.
11003 – 84 Avenue
Edmonton, Alberta T6G 0V6
Phone (403) 433 – 3181
Fax (403) 433 – 1721

September 28, 1999

Alberta Geological Survey
4th Floor, Twin Atria
4999 – 98 Avenue
Edmonton, Alberta
T6B 2X3

Mr. Tim Berezniuk:

Regarding the assessment reports for the Carmon Creek, Peace River, and Seal Lake prospects and our conversation regarding the statement of expenditures, find attached a list of subcontractors and a description of services they provided. If you require any further information, please contact Tony Rich at (780) 433-3181.

Subcontractor	Description of Service Provided
BJ Holdings Inc.	Peace River core warehouse and apartment rental
Dawson Geological Consultants Ltd.	project supervision, field geologist, drilling supervision, report writing
Discovery Consultants	field geologists
D.W. Coats	consultant for tendering drilling bids and logistics
G. Belik & Associates	project supervision, field geologist, drilling geologist
Gedco Geophysical Exploration	airborne data interpretation
Geosoft Inc	airborne and ground magnetic data software and interpretation
Hendex Exploration Services Ltd.	ground magnetic data collection
High-Sense Geophysics Ltd.	airborne geophysical data collection
Jonathan George	senior project supervision
Lucero Resource Corp.	joint venture partner, office staff, field geology, drilling supervision, report writing, logistics
MacMillan Construction	drilling related road construction, drill pad construction, camp construction
Orequest Consultants Ltd.	independent professional geologist for stock exchange requirements
Pacific Geophysical Ltd.	ground geophysical data interpretation
RGI Resource GIS and Imaging Ltd.	digital topography and satellite imagery data collection and interpretation
SJ Geophysics Ltd.	ground HLEM data collection
William Pelton	geophysical interpretation of airborne GEOTEM data

Sincerely,

[redacted]

Todd Faragher
New Claymore Resources Ltd.

TABLE 4
STATEMENT OF EXPENDITURES

MAIM PERMITS 9397020008 to 9397020010, 9397020016 to 9397020018, 9397020051 to 9397020053

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		9,000.00
Field Costs		
Accommodation / Meals	15,026.57	
Field Supplies	2,173.60	
Fuel	622.31	
Freight	180.00	
		18,002.48
Rental Equipment		
Field Equipment Rental	6,552.00	
Geophysical Equipment Rental	2,764.55	
Vehicle Operation and Repair	512.30	
Warehouse Rent	650.00	
		10,478.85
Subcontracting Services		
Construction Contractors		
MacMillan Construction	3,620.25	
Drilling Contractors		
J.T. Thomas Diamond Drilling Ltd.	48,248.73	
Geological Consultants / Contractors		
Dawson Geological Consultants Ltd.	29,294.34	
Discovery Consultants	7,126.35	
G. Belik & Associates	11,718.69	
[redacted]	1,500.00	
Lucero Resource Corp.	42,954.73	
Orequest Consultants Ltd.	3,049.90	
Geophysical Contractors		
Gedco Geophysical Exploration	11,995.32	
Geosoft Inc	1,200.00	
Hendex Exploration Services Ltd.	19,669.87	
High-Sense Geophysics Ltd.	71,321.27	
Pacific Geophysical Ltd.	3,304.48	
RGI Resource GIS and Imaging Ltd.	18,907.49	
SJ Geophysics Ltd.	14,752.28	
Helicopter Contractors		
Canadian Helicopters	1,993.14	
Land Use and Permitting		
Road Access Fees	250.00	
Licences / Recording Fees	~~4,500.00~~ 450.-	
Lorrnel Consultants	2,460.46	
		~~297,867.30~~ 293,817.30
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	224.50	
Reproduction / Computer Plots	2,000.17	
Office / Computer Consumables	22.12	
Computer Usage / Programs	210.00	
Communication - telephone, fax	161.73	
Postal, Courier, Freight	234.58	
Office Overhead	520.00	
		3,373.10
TOTAL		~~338,721.73~~ 334,671.73

I certify that these expenditures are valid and were incurred in conducting assessment work on the above listed permits; all accounts were provided by Lucero Resources Corp.

Signed: [redacted]

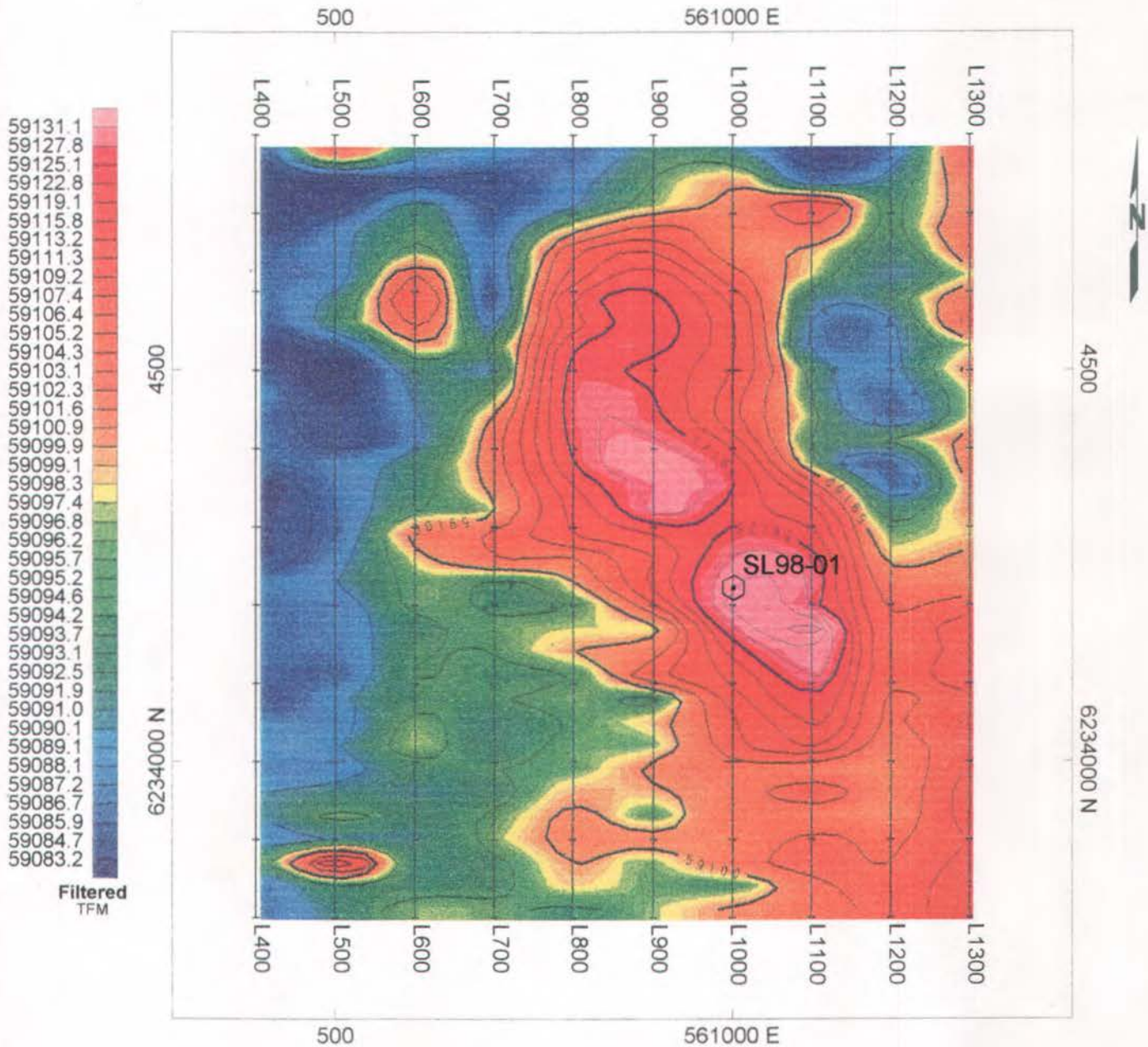
TABLE 5
COST ALLOCATION

MAIM PERMITS 9397020008 to 9397020010, 9397020016 to 9397020018, 9397020051 to 9397020053

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020008	4,608	February 18, 1997	5.00	23,040.00		23,040.00
9397020009	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020010	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020016	7,680	February 18, 1997	5.00	38,400.00		38,400.00
9397020017	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020018	4,608	February 18, 1997	5.00	23,040.00		23,040.00
9397020051	4,608	February 28, 1997	5.00	23,040.00		23,040.00
9397020052	9,216	February 28, 1997	5.00	46,080.00		46,080.00
9397020053	9,216	February 28, 1997	5.00	46,080.00		46,080.00
Total	67,584			337,920.00	338,721.73	337,920.00

APPENDIX 2

GROUND MAGNETOMETER SURVEY FIGURE 4 TO FIGURE 7



SYMBOLS

Isomagnetic contour
contour interval 5 nT

SL98-01 Diamond drill hole; identifier

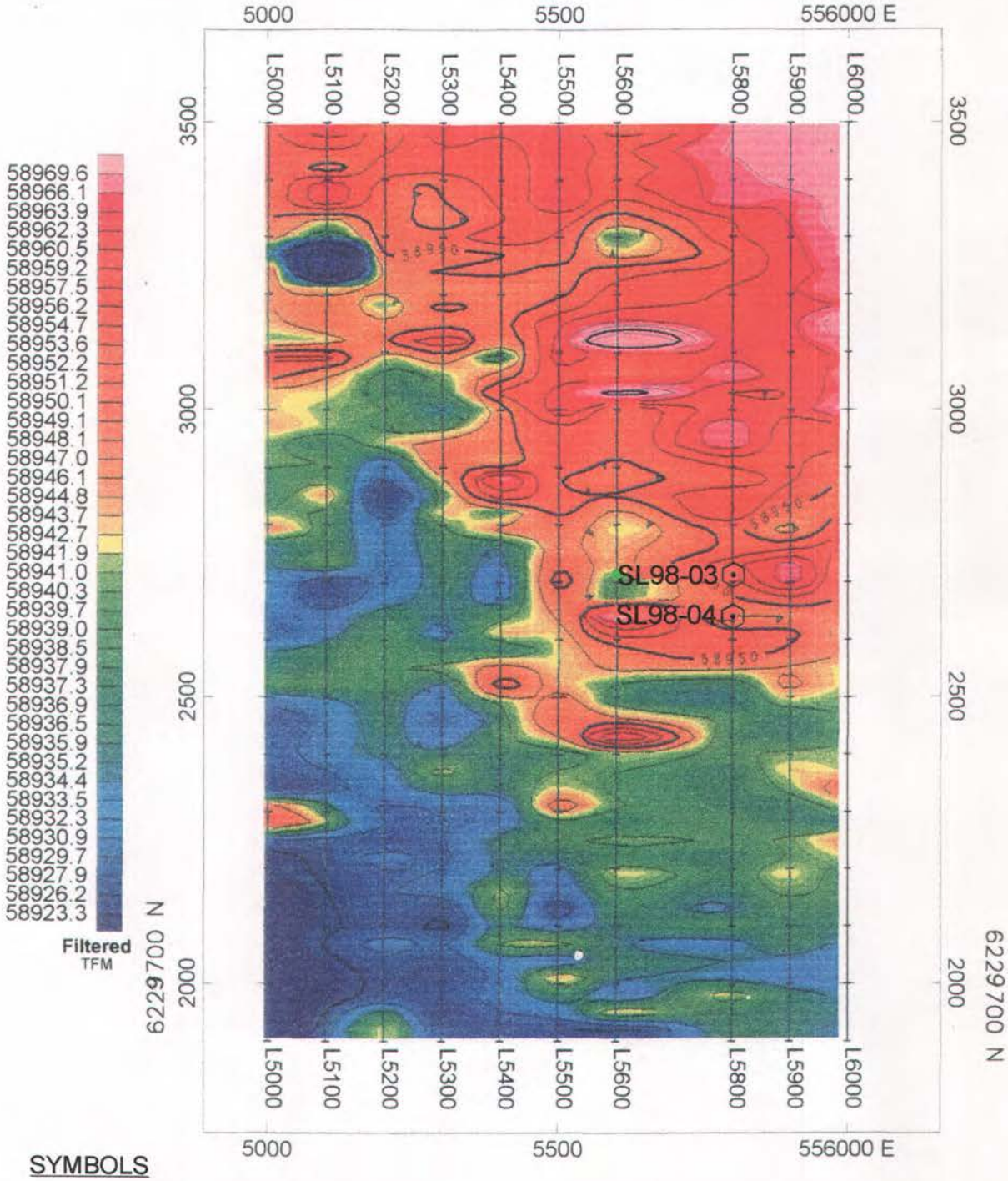
100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.

SEAL LAKE PROSPECT

FIGURE 4
GRID A
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

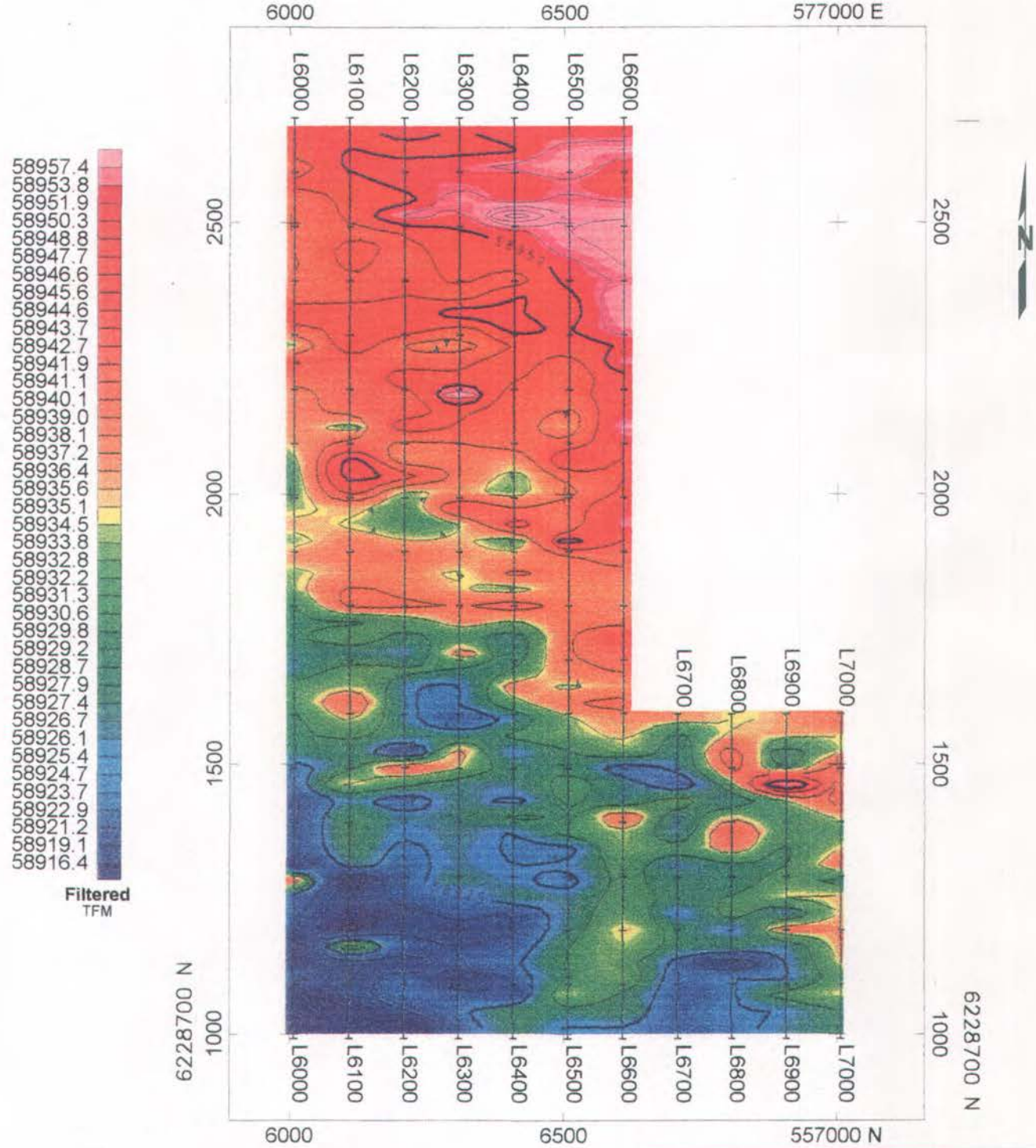
SL98-03 Diamond drill hole; identifier

250 0.0 250
(meters)

NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

FIGURE 5A
GRID B - WEST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

250 0.0 250

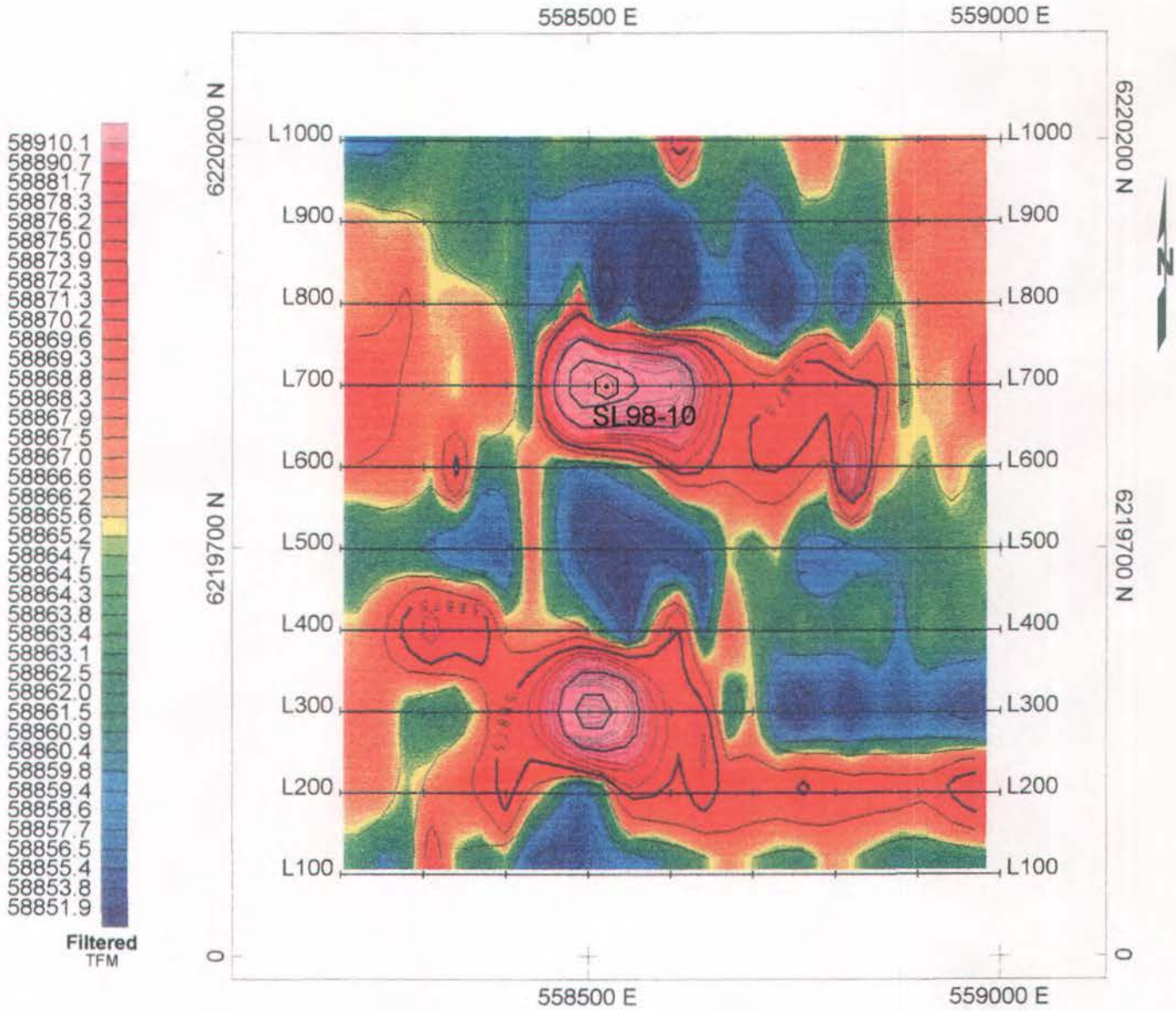
(meters)

NEW CLAYMORE RESOURCES LTD.

SEAL LAKE PROSPECT

FIGURE 5B
GRID B - EAST HALF
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

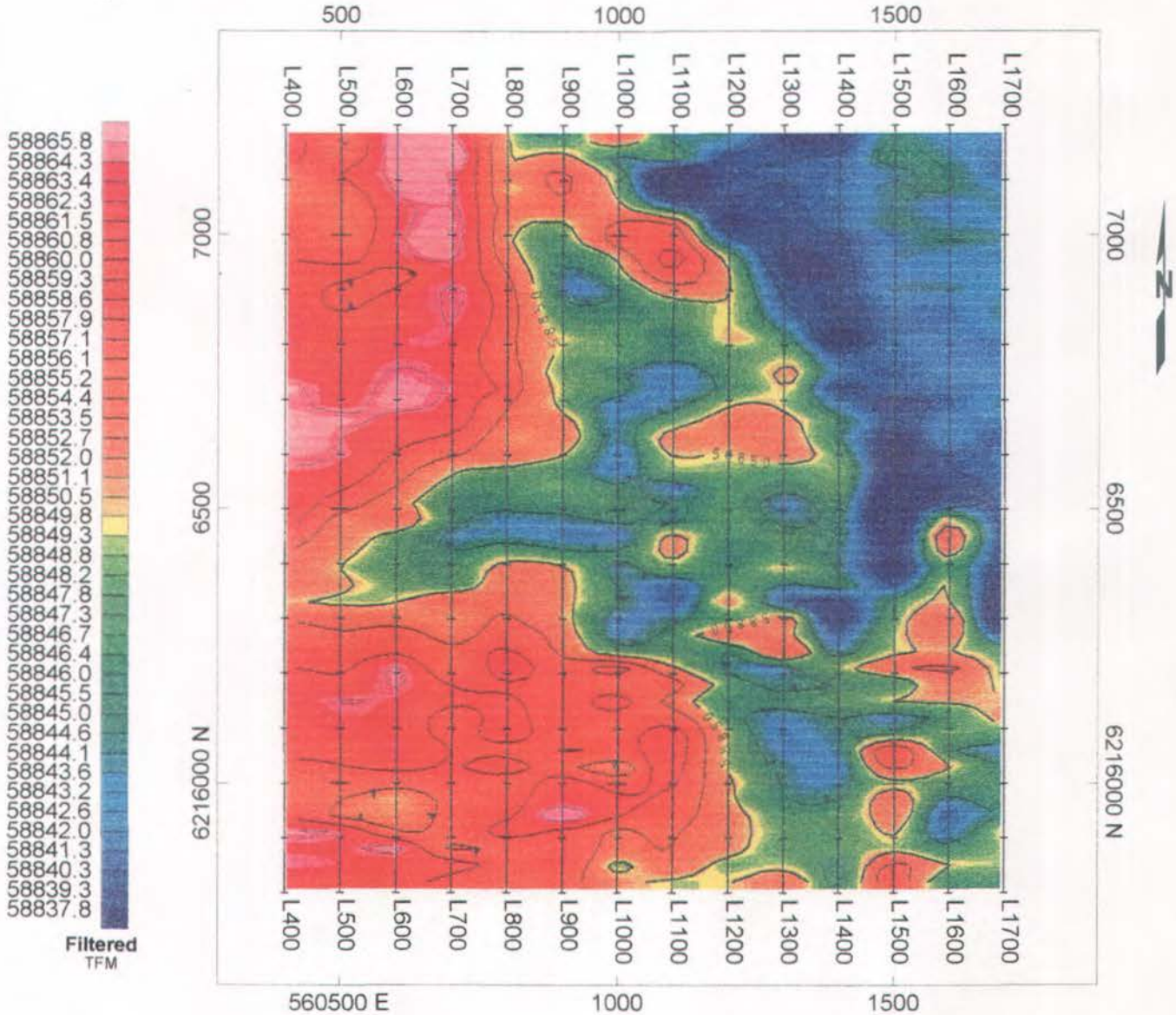
SL98-10 Diamond drill hole; identifier

100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

FIGURE 6
GRID C
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

250 0.0 250
(meters)

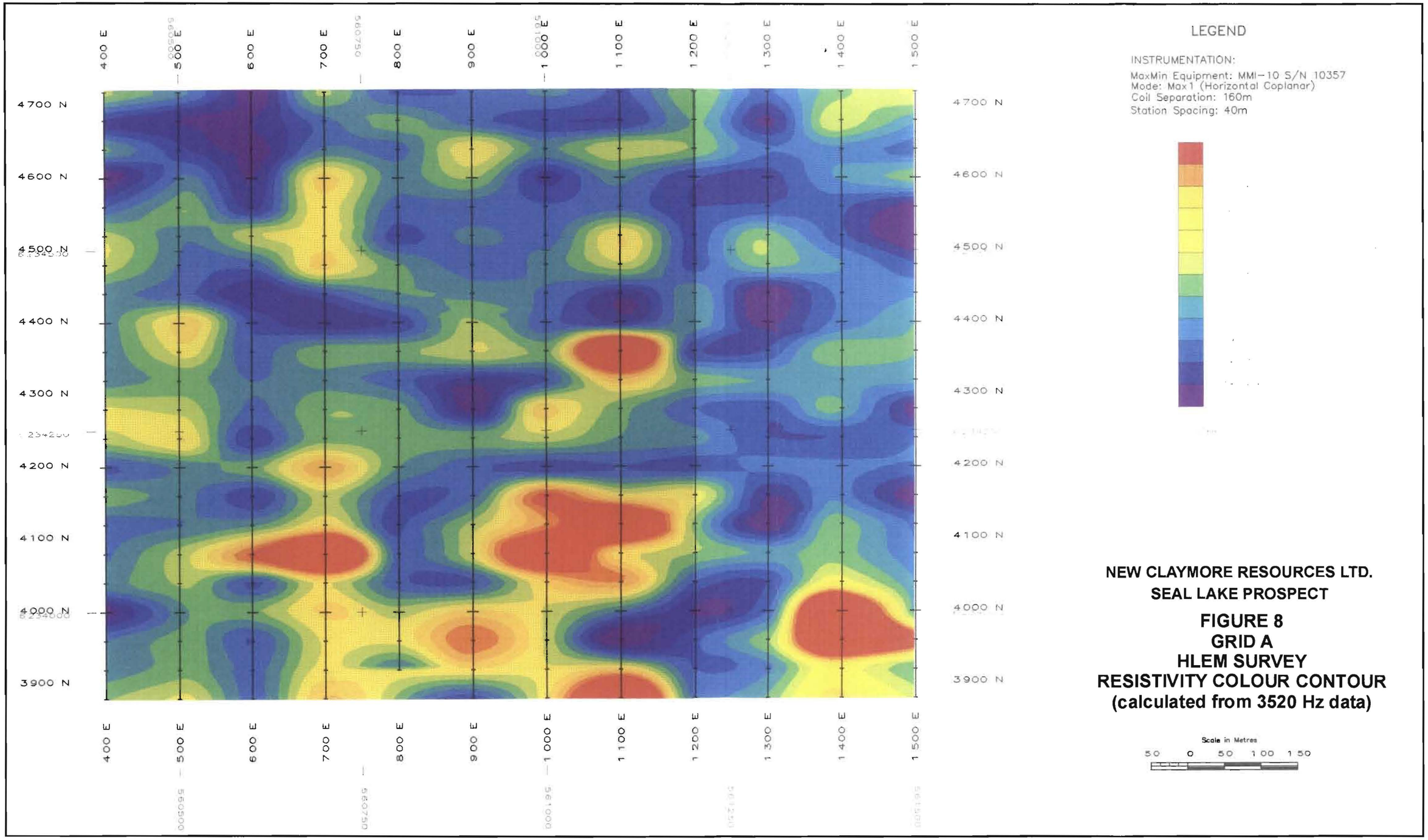
NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

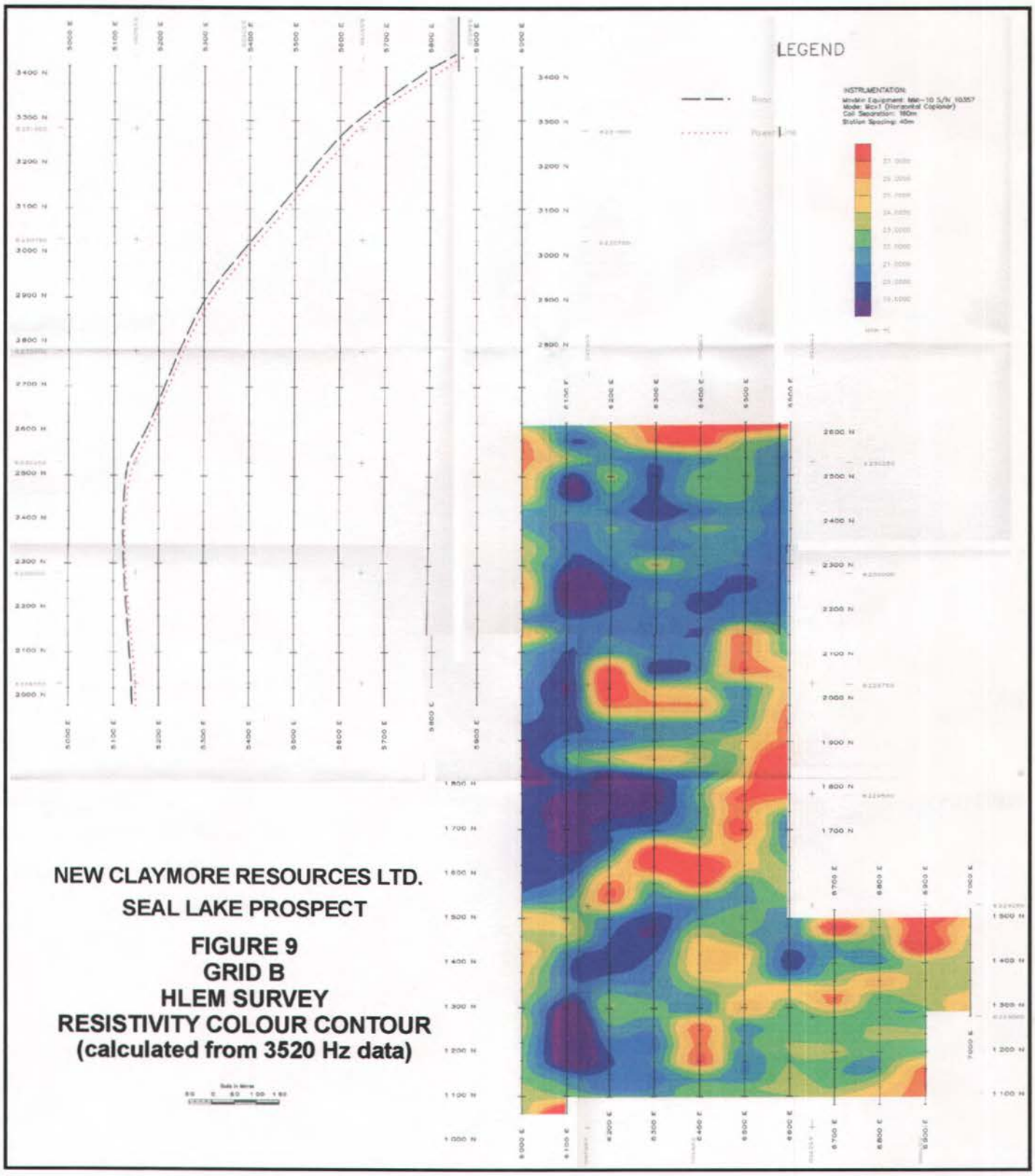
FIGURE 7
GRID D
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999

APPENDIX 3

HLEM SURVEY RESISTIVITY COLOUR CONTOUR FIGURE 8 TO FIGURE 11


400 E
500 E
600 E
700 E
800 E
900 E
1 000 E
1 100 E
1 200 E
1 300 E
1 400 E
1 500 E
4700 N
4600 N
4500 N
4400 N
4300 N
4200 N
4100 N
4000 N
3900 N
LEGEND
INSTRUMENTATION:
MaxMin Equipment: MMI-10 S/N 10357
Mode: Max1 (Horizontal Coplanar)
Coil Separation: 160m
Station Spacing: 40m
NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT
FIGURE 8
GRID A
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)
Scale in Metres
50 0 50 100 150



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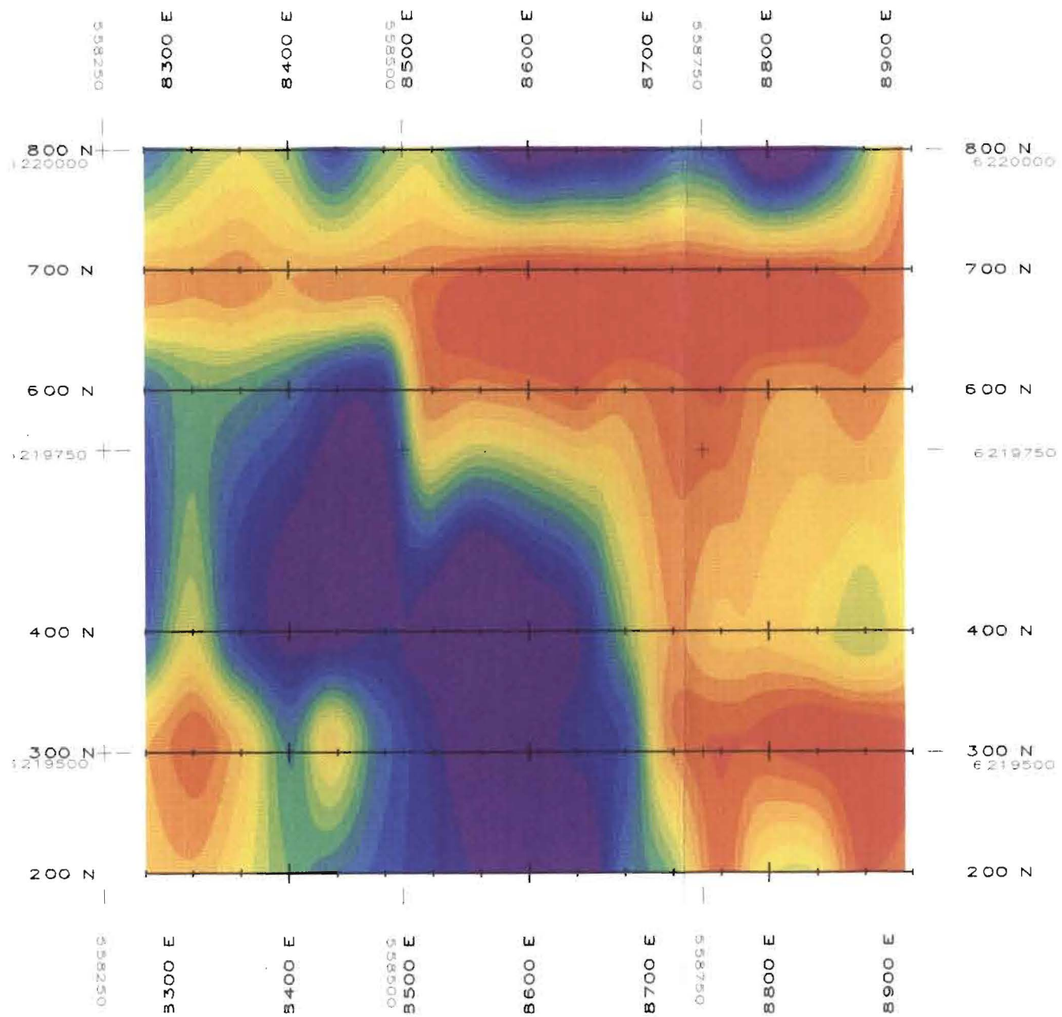
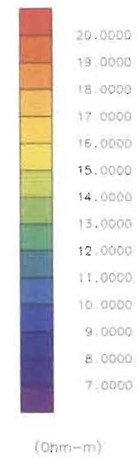
SEAL LAKE PROSPECT

FIGURE 9
GRID B
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)





LEGEND

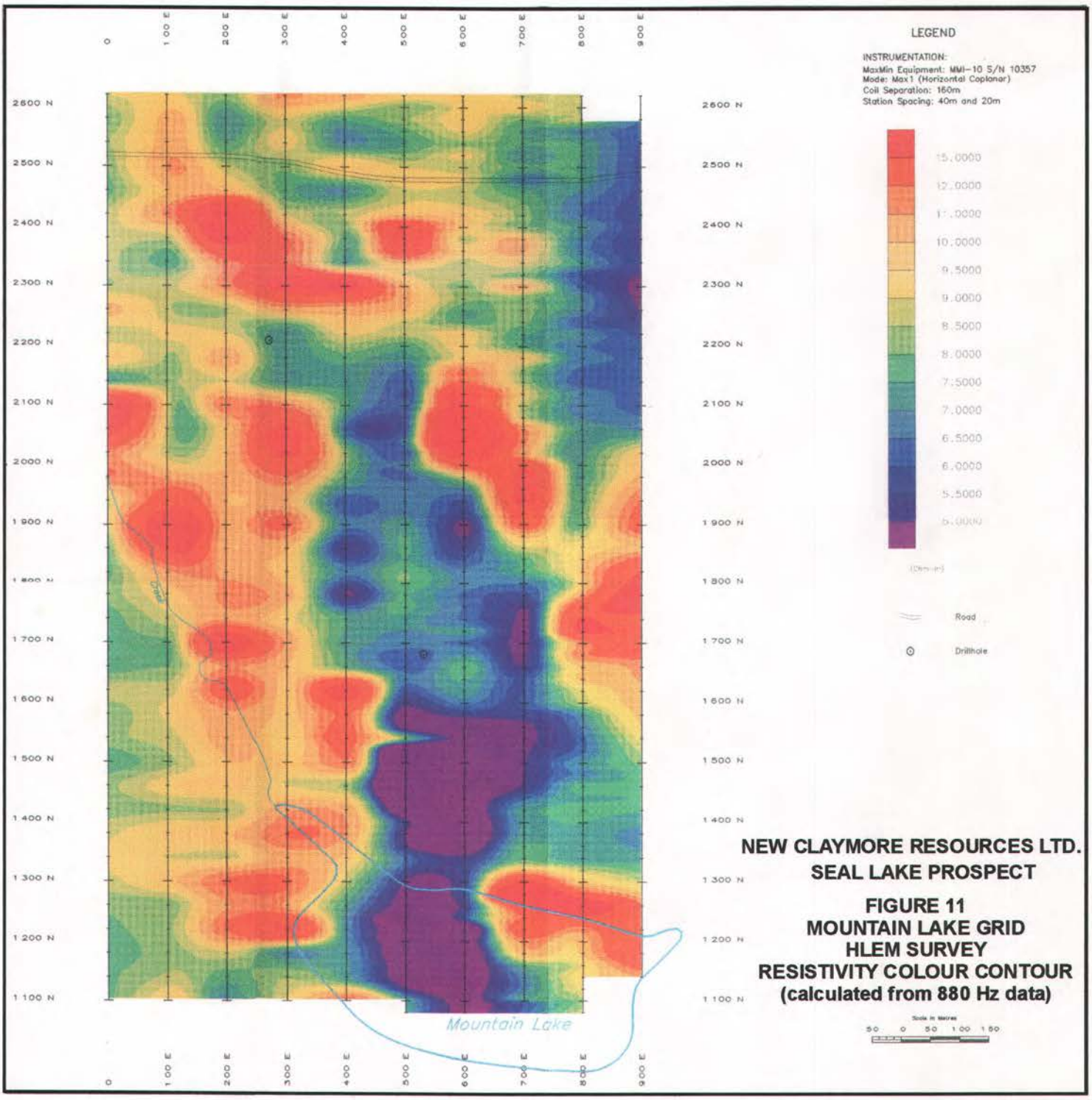
INSTRUMENTATION:

MaxMin Equipment: MMI-10 S/N 10357
Mode: Max1 (Horizontal Coplanar)
Coil Separation: 160m
Station Spacing: 40m

NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

FIGURE 10
GRID C
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)

Scale in Metres
50 0 50 100 150



NEW CLAYMORE RESOURCES LTD.
SEAL LAKE PROSPECT

FIGURE 11
MOUNTAIN LAKE GRID
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 880 Hz data)

APPENDIX 4

DRILLING RECORD AND LITHOLOGIC DESCRIPTIONS

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Seal Lake	HOLE NUMBER	SL98-01		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020008	Hole Depth:	145.39 m	Started:	Feb 23 / 98
LLD:	7-5-84-13-W5	Inclination:	-90	Completed:	Feb 25 / 98
UTM:	561000 E 6234220 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid A - L 1000 E / 4220 N	Core Size:	NQ	DIP TEST	
Elevation:	665 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T. Thomas	Casing:	48.77 m	Angle:	n/a

From - To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 48.77	48.77	casing			
48.77 - 57.00	8.23	pebbles - quartzite and granite			
57.00 - 63.09	6.09	clay with minor pebbles			
63.09 - 75.29	12.20	clay - dark brown to black, soft, weakly bedded with local organic layers			
68.58 - 70.10	1.52	organic rich - plant material			
75.29 - 92.66	17.37	sand and clay - pebbles near base of interval			
92.66 - 94.64	1.98	cobbles of dolomite and granite in brown sandy clay - dark brown/grey clay intervals			
94.64 - 145.39	50.75	clayey shale - dark grey/brown, moderately indurated, local thin laminations at 80 - 90 CA,			
		local sand and silt layers			
114.82 - 114.90	0.80	limestone bed			
145.39		EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Seal Lake	HOLE NUMBER	SL98-02		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020017	Hole Depth:	117.35 m	Started:	Feb 26 / 98
LLD:	8-1-84-15-W5	Inclination:	-90	Completed:	Feb 27 / 98
UTM:	548670 E 6234180 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Gedco Anomaly M	Core Size:	NQ	DIP TEST	
Elevation:	725 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T. Thomas	Casing:	51.82 m	Angle:	n/a

From - To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 51.82	51.82	casing			
51.82 - 57.00	5.18	cobbles and minor clay			
57.00 - 93.57	36.57	pebbly clay, till, grit to pebble sized rounded clasts in dark grey/brown clay matrix,			
		local organic rich bands at 90 CA			
93.57 - 117.35	23.78	sand and pebbles, very poor core recovery			
117.35		EOH. Hole abandoned as no casing to advance hole below this depth			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Seal Lake	HOLE NUMBER	SL98-03		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020009	Hole Depth:	84.43 m	Started:	Feb 28 / 98
LLD:	14-23-83-14-W5	Inclination:	-90	Completed:	Mar 01 / 98
UTM:	555900 E 6230430 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid B - L 5800 E / 2710 N	Core Size:	NQ	DIP TEST	
Elevation:	715 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T. Thomas	Casing:	54.86 m	Angle:	n/a

From - To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 54.86	54.86	casing			
54.86 - 82.91	28.05	slity to sandy clay, dark grey to grey/brown, frequent quartzite pebbles			
58.06 - 63.09	5.03	pebbly clay, medium brown, iron stained			
82.91 - 84.43	1.52	sandy clay, dark brown/grey, soft			
84.43		EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

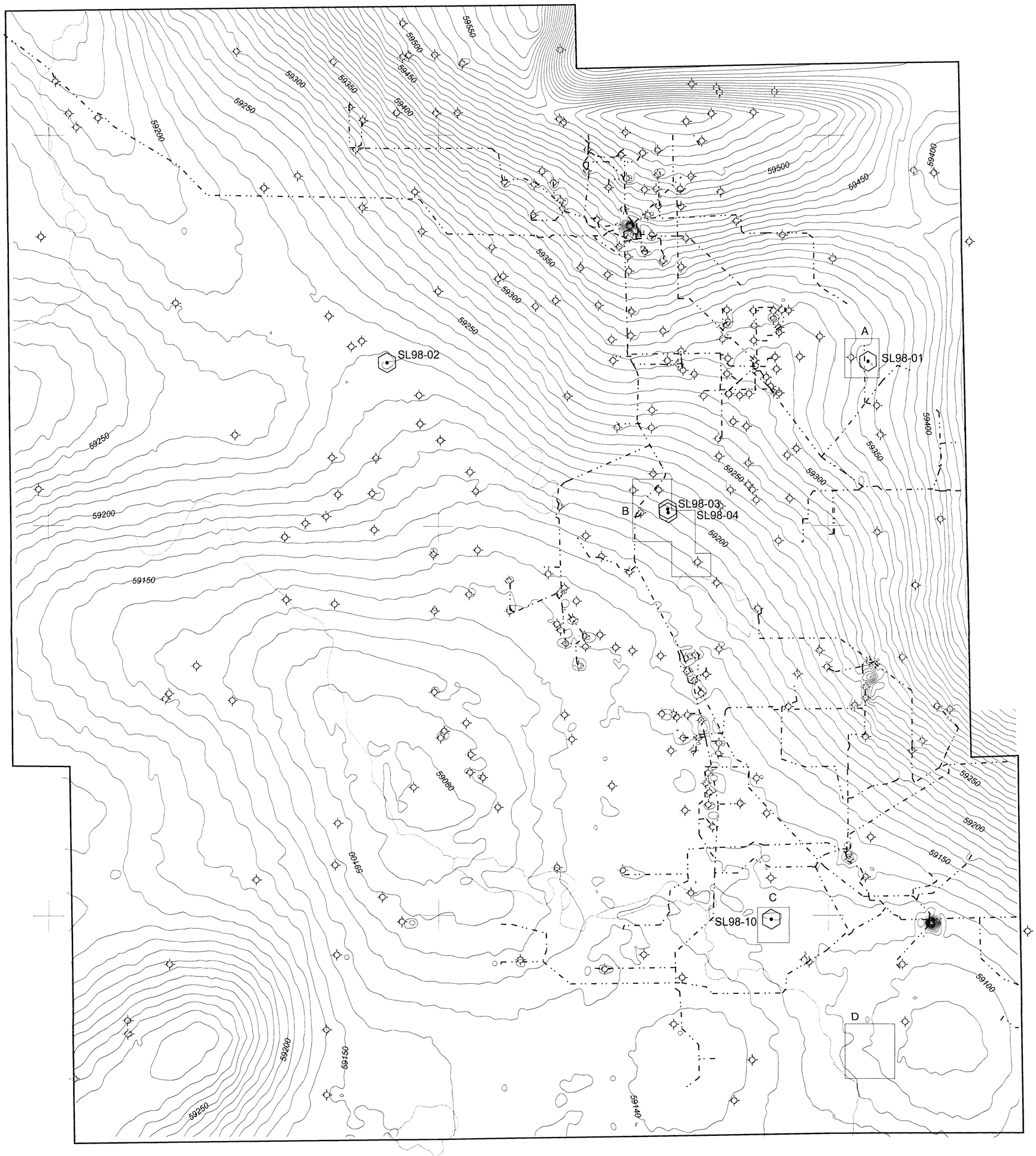
PROSPECT	Seal Lake	HOLE NUMBER	SL98-04		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020009	Hole Depth:	130.15 m	Started:	Mar 01 / 98
LLD:	14-23-83-14-W5	Inclination:	-55	Completed:	Mar 02 / 98
UTM:	555900 E 6230370 N	Azimuth:	150	Logged By:	Tom Carpenter
Grid:	Grid B - L 5800 E / 2650 N	Core Size:	NQ	DIP TEST	
Elevation:	715 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T. Thomas	Casing:	39.62 m	Angle:	n/a

From - To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 39.62	39.62	casing			
32.62 - 101.19	68.57	pebbly clay/silt, dark grey/brown to black, grit to pebble sized angular to rounded quartzite			
		clasts, rare granite clast and shale fragment, clast comprise 10 - 15% of material			
69.19 - 72.24	3.05	sand			
89.61 - 90.53	0.92	pebble content 30 - 35%			
101.19 - 108.81	7.62	silty clay, dark grey/brown, sand to grit sized fragments comprise 5% of material			
108.81 - 130.15	21.34	no core recovery			
130.15		EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Seal Lake	HOLE NUMBER	SL98-10		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397020052	Hole Depth:	145.39 m	Started:	Mar 03 / 98
LLD:	5-24-82-14-W5	Inclination:	-90	Completed:	Mar 04 / 98
UTM:	558540 E 6219900 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid C - L 700 N / 8540 E	Core Size:	NQ	DIP TEST	
Elevation:	675 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T. Thomas	Casing:	42.67 m	Angle:	n/a

From - To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0 - 42.67	42.67	casing			
42.67 - 44.81	2.14	pebbles of quartzite, arkose, and diorite			
44.81 - 72.24	27.43	pebbly clay, dark grey/brown to black, frequent rounded quartzite pebbles comprise 10%			
		of material			
44.81 - 60.05	15.24	no core recovered			
72.24 - 104.85	32.61	pebbly clay, sandy, dark grey/brown to black, frequent black organic fragments, blue quartz			
		grains, rare pebble			
104.85 - 113.08	8.23	pebbly clay, dark grey/brown to black, rare pebbles			
113.08 - 114.91	1.83	clayey shale, dark grey/brown, soft, bedded at 90 CA, whispy sand lenses			
114.91 - 126.80	11.89	sand, fine-grained, unconsolidated, organic rich layers near base of interval			
126.80 - 145.39	18.59	clayey shale, dark grey/brown, weakly consolidated, bedded 90 CA			
145.39		EOH			



SYMBOLS

Isomagnetic contour; contour interval 10 nT

A — Ground magnetometer geophysical grid; identifier

SL98-01 — Diamond drill hole; identifier

Oil or gas well

Pipeline

Property boundary

0 — 5

Kilometres

UTM NAD 27 Zone 11

19990020

NEW CLAYMORE RESOURCES LTD.

SEAL LAKE PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD CONTOURS

84 C/1, C/8

April, 1999

1999002
JUN 10 1999

ASSESSMENT REPORT

FAFNER PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020023 to 9397020025, 9397050013
NORTHERN ALBERTA

Geographic Co-ordinates
56° 25' 30" to 56° 36' 00" N
116° 41' 00" to 117° 11' 30" W

NTS Map Areas
84 C/7, C/10, C/11

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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SUMMARY

New Claymore Resources Ltd. Fafner prospect is located about 40 km northeast of the Town of Peace River in northern Alberta. The prospect is comprised of 4 Metallic and Industrial Mineral permits which encompass an area of 36,864 hectares (91,091 acres). The permits are registered in the name of New Claymore Resources Ltd.

The Precambrian basement underlying the Fafner prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of Cretaceous Peace River Formation sandstone, Shaftesbury Formation marine shale, feldspathic sandstone of the Dunvegan Formation, and marine shale of the Smoky Group. Glacial till and muskeg cover most of the prospect and although the drift thickness is relatively thin, bedrock exposure is sparse and generally restricted to banks of incised river valleys. Approximately 80 km northeast of the Fafner prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During the fall of 1997, Spectra Exploration Geoscience Corp. was contracted to fly a high sensitivity aeromagnetic geophysical survey over the Fafner prospect; in total 3,545 line kilometers of data were collected. Interpretation of the airborne data by Geophysical Exploration & Development Corporation identified 7 positive and 1 negative magnetic anomalies which may be representative of kimberlitic diatremes.

Additional exploration on the Fafner prospect to evaluate for the presence of kimberlitic intrusives is warranted and should include:

a) ground geophysical surveying over the 8 airborne anomalies;

b) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect;

c) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

d) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

e) acquisition of brokered seismic data over individual anomalies; and

f) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

Location, Prospect Description

The Fafner prospect consists of 4 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 36,864 hectares (91,091 acres). The prospect extends from about 56° 25' 30" to 56° 36' 00" north latitude and 116° 41' 00" to 117° 11' 30" west longitude, is located about 390 km northwest of the City of Edmonton and centered about 40 km northeast of the Town of Peace River (Figure 1). The permits 9397020023 to 9397020025 and 9397050013 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

TABLE 1

MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020023	Feb 18, 1997	5-18-086: 1-36	9,216
9397020024	Feb 28, 1997	5-18-087: 1-36	9,216
9397020025	Feb 28, 1997	5-19-087: 1-36	9,216
9397050013	May 21, 1997	5-20-086: 1-36	9,216
		TOTAL	36,864

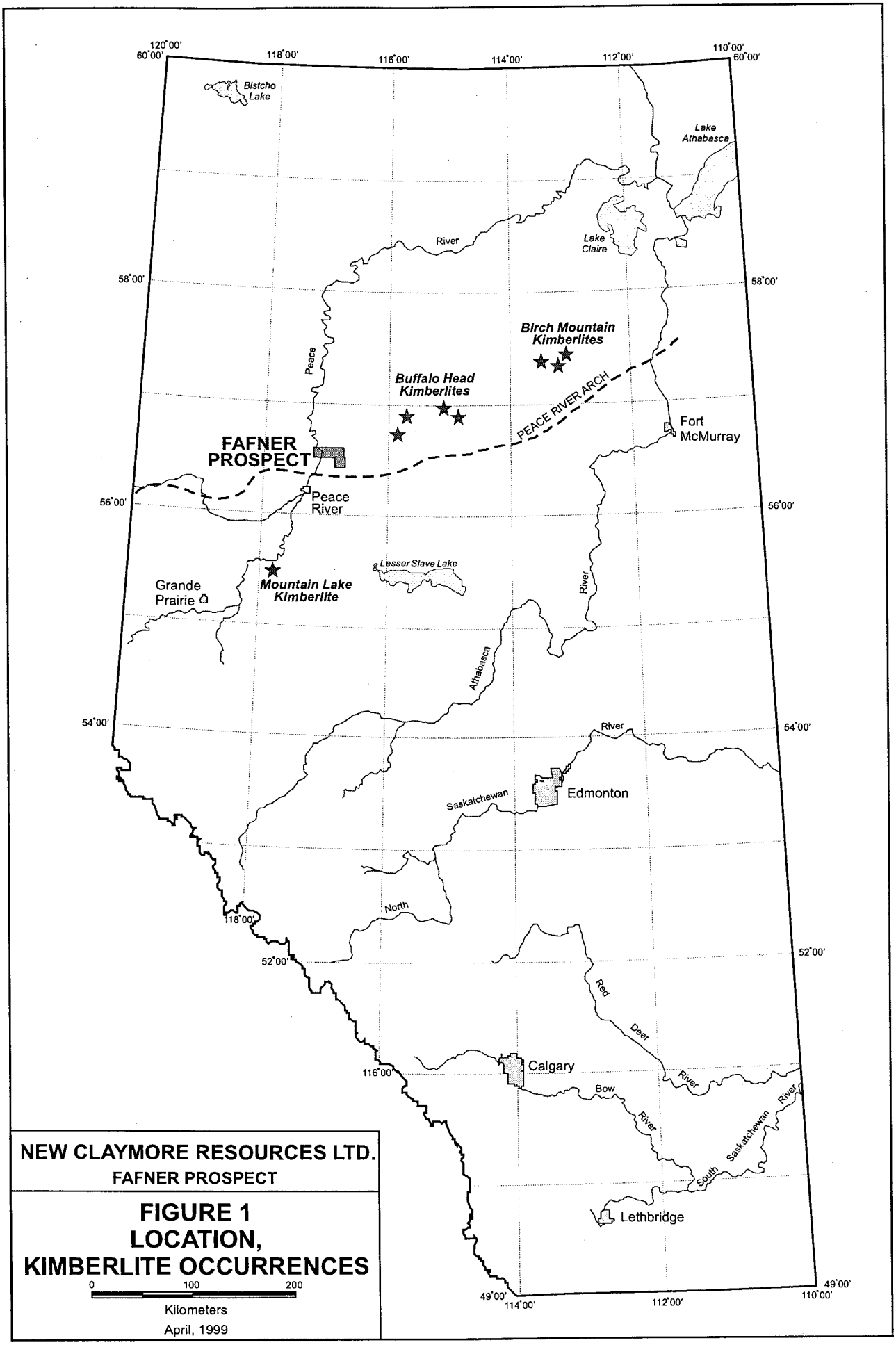
Access, Infrastructure, Physiography

Road access to the Fafner prospect on the east side of the Peace River is via secondary highway 986 then north along logging and oil and gas service roads; secondary highway 748 provides access to the prospect on the west side of the Peace River. Access to remote parts of the prospect is via all terrain vehicle and/or snowmachine along winter logging roads and seismic lines. Helicopter access may be utilized from the Town of Peace River. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The regional physiography of the area is characterized by flat lying topography with elevations ranging between 300 m above sea level (a.s.l.) along the Peace River valley to 600 m a.s.l. within the Buffalo Head Hills. Vegetation consists of stands of spruce and poplar trees with interspersed peat bogs and muskeg.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Fafner prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond



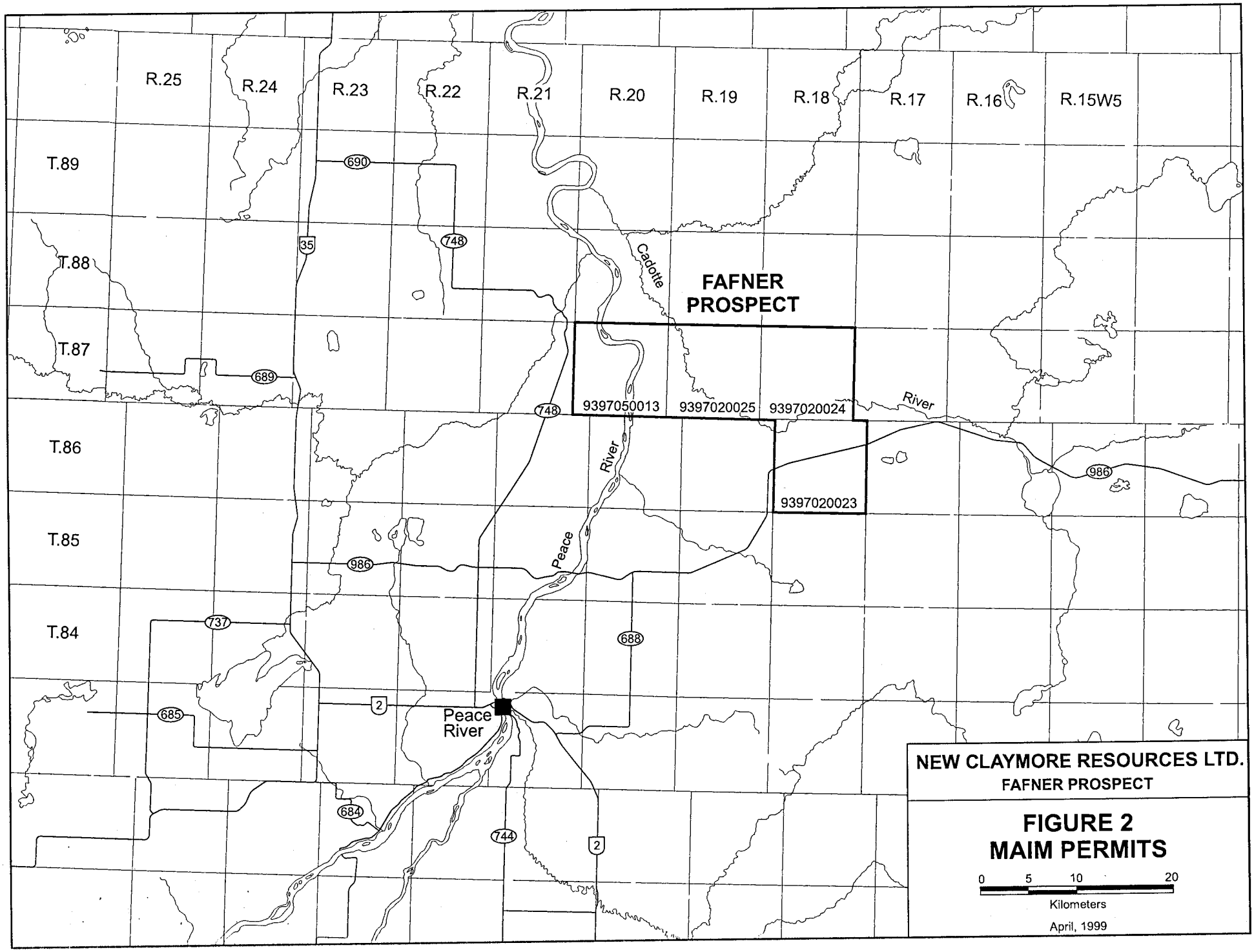
NEW CLAYMORE RESOURCES LTD.

FAFNER PROSPECT

FIGURE 1
LOCATION,
KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


R.25
R.24
R.23
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15W5
T.89
T.88
T.87
T.86
T.85
T.84
690
35
748
689
986
737
685
2
684
744
688
Cadotte
River
Peace
River
FAFNER
PROSPECT
9397050013
9397020025
9397020024
9397020023
Peace
River
NEW CLAYMORE RESOURCES LTD.
FAFNER PROSPECT
FIGURE 2
MAIM PERMITS
0
5
10
20
Kilometers
April, 1999

indicator mineral grains including pyropic garnets, eclogitic garnets, and chromites in glacial till samples; AGS till sample 369 collected 5 km south of the prospect yielded 1 peridotitic garnet and 1 eclogitic garnet which plots within the diamond inclusion field of MgO vs FeO vs CaO. Other AGS till samples were collected in the vicinity and in a down-ice direction from the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Peace River Trend (Dufresne et al., 1996). The Fafner prospect exists within the northeastern portion of the Peace River Trend.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 80 km northeast of the Fafner prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 240 km northeast of the Fafner prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced within upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

The Fafner prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Fafner prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Fafner prospect to consist of Cretaceous sediments including Peace River Formation shoreline complex quartzose

sandstone, marine fish-scale bearing units and bentonites of the Shaftesbury Formation, deltaic to marine sandstones of the Dunvegan Formation, and marine shale of the Smoky Group (Figure 3).

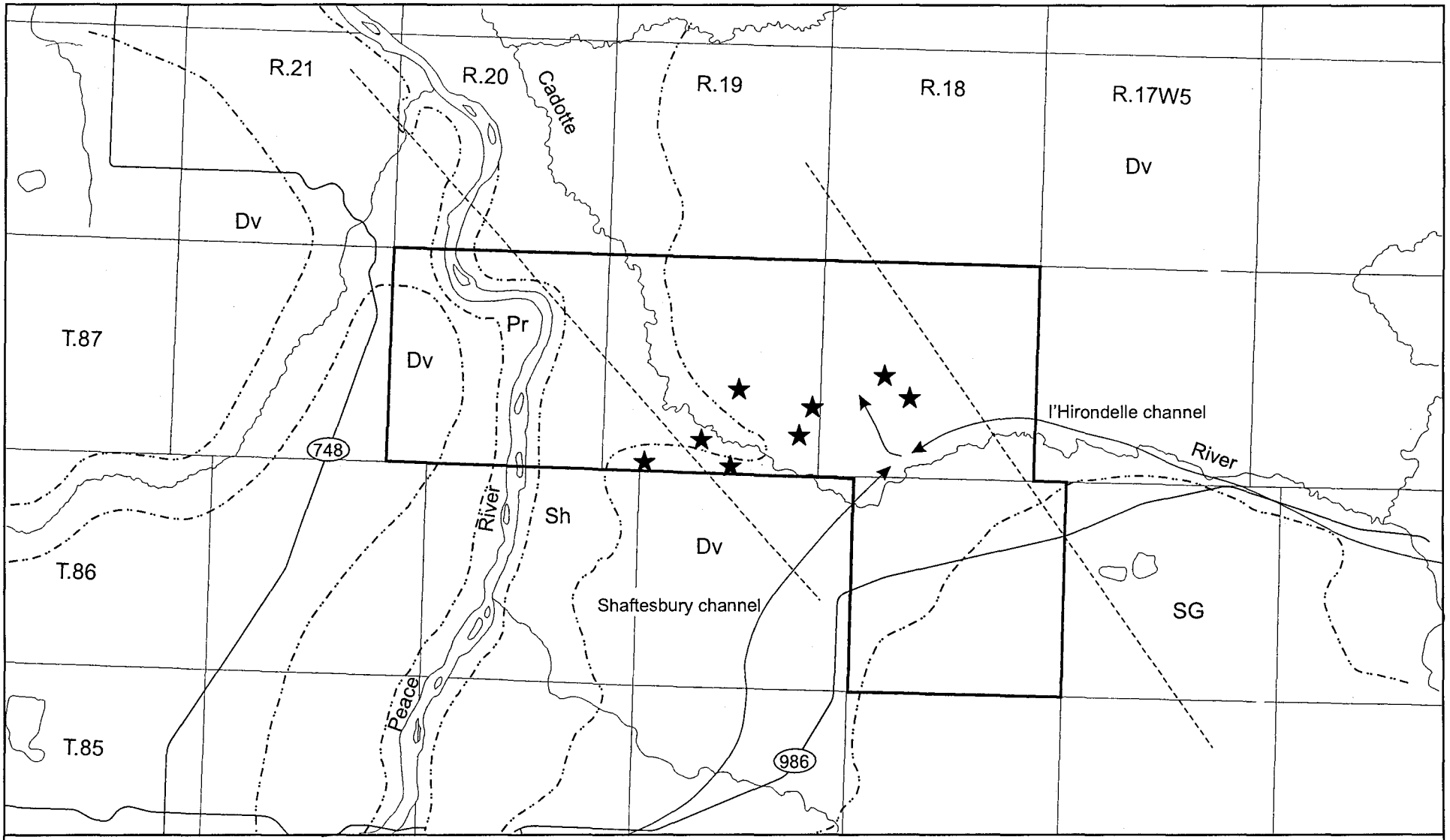
TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Fafner prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and sand. Glacial fluting in the vicinity of the prospect indicate ice movement was dominantly from the north to south. Drift thickness appears relatively shallow and increases from about 20 m depth along the eastern prospect boundary to a thickness of about 100 m within the Peace River valley. Two buried bedrock channels exist on the eastern portion of the Fafner prospect. The Shaftesbury channel trends in a northeasterly direction and is filled with up to 240 m of sediments including gravels and sands (Borneuf, 1981). The l'Hirondelle channel trends westerly and merges with the Shaftesbury channel in the eastern part of the prospect. The l'Hirondelle channel has been reported to contain 210 m to 240 m of surficial material including sand and gravel and has eroded through the base of the fish-scale marker bed within the Shaftesbury Formation shales.

Structural Geology

The Fafner prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a



SYMBOLS

★ Airborne magnetic geophysical anomaly

Interpreted geologic structure

Buried bedrock channel

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale
Pr - Peace River Formation shoreline sandstone

NEW CLAYMORE RESOURCES LTD.
FAFNER PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Fafner prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Fafner prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

Spectra Exploration Geoscience Corp. was contracted by New Claymore to fly a high resolution airborne magnetic survey over the Fafner prospect in the fall of 1997. The fixed wing survey totaled 3,545 line-km's and was drape flown at 100 m terrain clearance along north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was leveled, processed, and edited for cultural noise by the Geophysical Exploration & Development Corporation (GEDCO). Total magnetic field contour and flight line data was examined for discrete geophysical anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 8 geophysical targets were identified which possess characteristics of possible intrusive origin (Figure 3). Seven of the 8 geophysical anomalies are weak magnetic highs (1-7 nT) while 1 is a weak magnetic negative. The anomalies appear to be isolated and independent of any features including paleochannels or eskers. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Fafner prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing

kimberlites approximately 80 km to the northeast of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Fafner prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery has identified 8 geophysical targets which may be suggestive of kimberlitic intrusives. To date, no ground magnetometer geophysical surveys have been completed over the airborne magnetic anomalies.

Additional exploration on the Fafner prospect to evaluate for the presence of kimberlitic intrusives is warranted and recommended. Additional exploration should include:

a) ground geophysical surveys over the 8 airborne geophysical targets;

b) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of buried channel sediments must be considered when implementing this sampling;

c) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

d) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

e) acquisition of brokered seismic data over individual anomalies; and

f) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020023 to 9397020025, and 9397050013 is given in Table 3 (Appendix 1); total exploration expenditures amount to $63,641.66. The Fafner permits are contiguous and the dispersal of exploration expenditures is given in Table 4 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon a review of available published and unpublished reports on the Fafner prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.

this 30 day of April, 1999

REFERENCES

Borneuf, D. (1981) Hydrogeology of the Peace River Area, Alberta; Alberta Research Council Earth Sciences Report 81-2, 6 p., 1 map.

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G., and Edwards, W.A.D. (1996) The diamond potential of Alberta; Alberta Geological Survey Bulletin No. 63, 97 p., 33 figs., 5 appendices.

Hassan, H. (1998) Identification of possible targets for kimberlite exploration in Fafner prospect using HRAM data. Report prepared for New Claymore Resources Ltd. and Cambridge Minerals Ltd. by Geophysical Exploration & Development Corporation, 5 p.

Mossop, G.D. and Stetsen, I. (eds.) (1994) Geological Atlas of the Western Canada Sedimentary Basin. Published jointly by The Canadian Society of Petroleum Geologists and The Alberta Research Council, 510 p.

O'Connell, S.C., Dix, G.R., and Barclay, J.E. (1990) The origin, history, and regional structural development of the Peace River Arch, Western Canada; Bulletin of Canadian Petroleum Geology, vol. 38A, p. 4-24.

APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

TABLE 3
STATEMENT OF EXPENDITURES
MAIM PERMITS 9397020023 to 9397020025, 9397050013

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		9,000.00
Subcontracting Services		
Geophysical Contractors		
Gedco Geophysical Exploration	8,069.47	
RGI Resource GIS and Imaging Ltd.	1,750.00	
Spectra Exploration Geoscience Corp.	41,749.00	
Land Use and Permitting		
Licences / Recording Fees	~~2,000.00~~ 200.-	
		~~53,568.47~~ 51,768.47
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	240.00	
Reproduction / Computer Plots	45.70	
Office / Computer Consumables	12.30	
Computer Usage / Programs	210.00	
Communication - telephone, fax	27.65	
Postal, Courier, Freight	17.54	
Office Overhead	520.00	
		1,073.19
TOTAL		~~63,641.66~~ 61,841.66

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

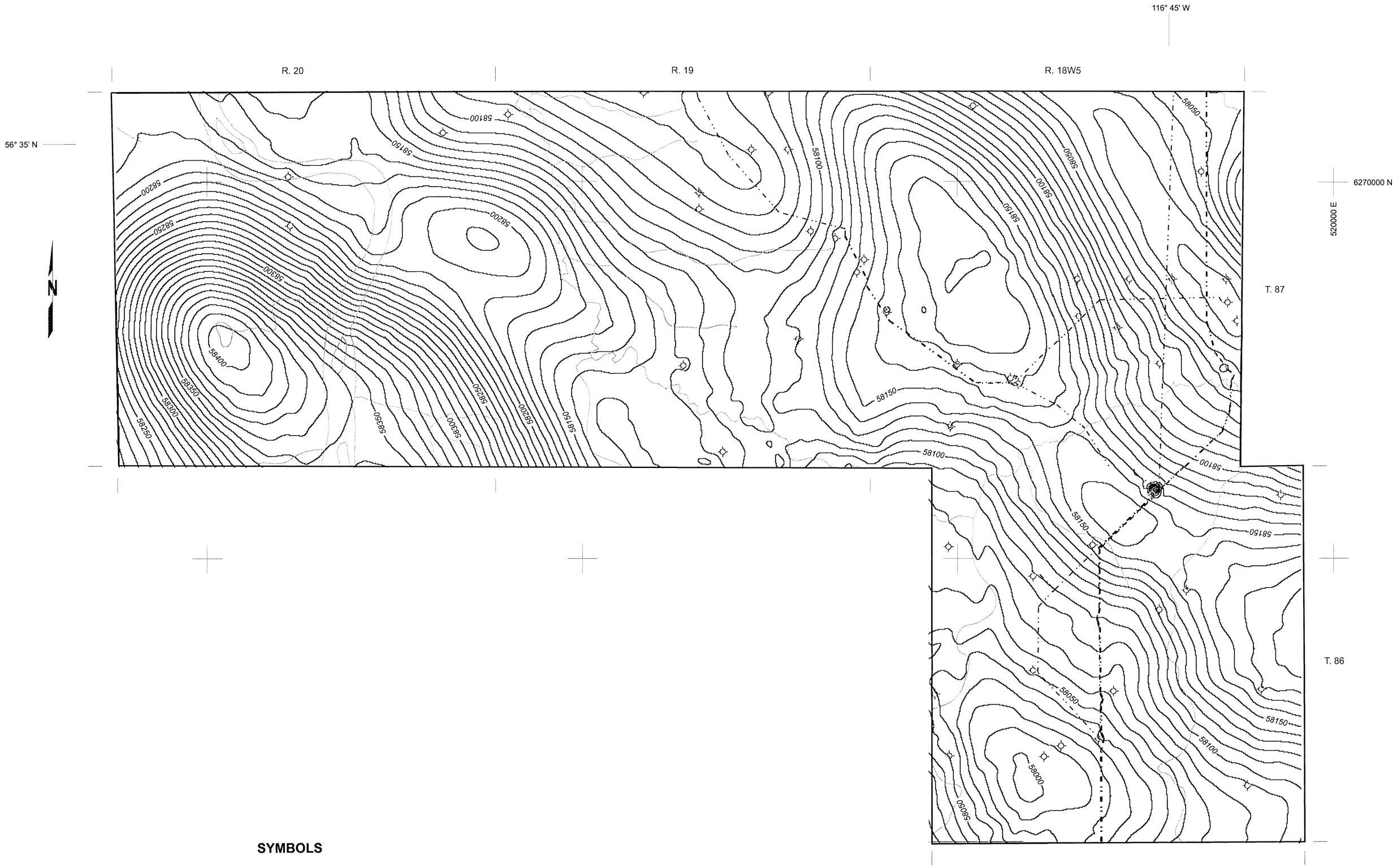
Signed: [redacted]

TABLE 4
COST ALLOCATION

MAIM PERMITS 9397020023 to 9397020025, 9397050013

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020023	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020024	9,216	February 28, 1997	5.00	46,080.00		46,080.00*
9397020025	9,216	February 28, 1997	5.00	46,080.00		0.00
9397050013	9,216	May 21, 1997	5.00	46,080.00		0.00
Total	36,864			184,320.00	63,641.66	92,160.00

* denotes assessment work conducted on contiguous land.



SYMBOLS

Isomagnetic contour; contour interval 10 nT

Oil or gas well

Pipeline

Property boundary

0 5

Kilometres

UTM NAD 27 Zone 11

min 9923

NEW CLAYMORE RESOURCES LTD.

FAFNER PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY TOTAL MAGNETIC FIELD CONTOURS

84 C\7, C\10, C\11

April, 1999

1999002D
JUN 10 1999

ASSESSMENT REPORT

SENTA PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020006 to 9397020008, 9397020014 to 9397020016,
9397020049 to 9397020051
NORTHERN ALBERTA

Geographic Co-ordinates
56° 04' 45" to 56° 20' 00" N
115° 34' 00" to 115° 57' 30" W

NTS Map Areas
84 B/4, B/5

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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LIST OF DRAWINGS

Drawing 01:	Airborne Magnetic Survey Total Magnetic Field Contours	in pocket

SUMMARY

New Claymore Resources Ltd. Senta prospect is located about 120 km northwest of the Town of Slave Lake in northern Alberta. The prospect is comprised of 9 Metallic and Industrial Mineral permits which encompass an area of 65,984 hectares (164,960 acres). The permits are registered in the name of New Claymore Resources Ltd.

The Precambrian basement underlying the Senta prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous Shaftesbury Formation marine shale conformably overlain by feldspathic sandstone of the Dunvegan Formation itself overlain by marine shale of the Smoky Group. Glacial till and muskeg cover the prospect with drift thickness exceeding 100 m depth. Approximately 30 km north of the Senta prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During May, 1997, High-Sense Geophysics Limited was contracted to fly a high resolution aeromagnetic geophysical survey over the Senta prospect; in total 4,300 line kilometers of data were collected. Interpretation of the airborne data by High-Sense Geophysics Limited and subsequently Intrepid Geophysics Ltd. identified 14 positive magnetic anomalies which may be representative of kimberlitic diatremes. During December, 1997, ground magnetometer geophysical surveys were completed over 3 of the airborne anomalies selected because of their magnetic signatures, proximity to interpreted geologic structures, and positive topographic expressions; in total 16.7 line-km of grid surveying and 14.9 line-km of ground magnetometer geophysical surveying was completed. The ground surveys delimited 2 magnetic anomalies which warrant further investigation.

Additional exploration on the Senta prospect to evaluate for the presence of kimberlitic intrusives is warranted and should include:

a) the expansion of the Cran grid to define the limits of the geophysical anomaly;

b) ground geophysical surveying over the remaining 11 airborne geophysical targets;

c) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

d) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

e) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium,

cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

f) acquisition of brokered seismic data over individual anomalies; and

g) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

Location, Prospect Description

The Senta prospect consists of 9 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 65,984 hectares (164,960 acres). The prospect extends from about 56° 04' 45" to 56° 20' 00" north latitude and 115° 34' 00" to 115° 57' 30" west longitude, is located about 300 km northwest of the City of Edmonton and about 120 km northwest of the Town of Slave Lake (Figure 1). The permits, 9397020006 to 9397020008, 9397020014 to 9397020016, and 9397020049 to 9397020051 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

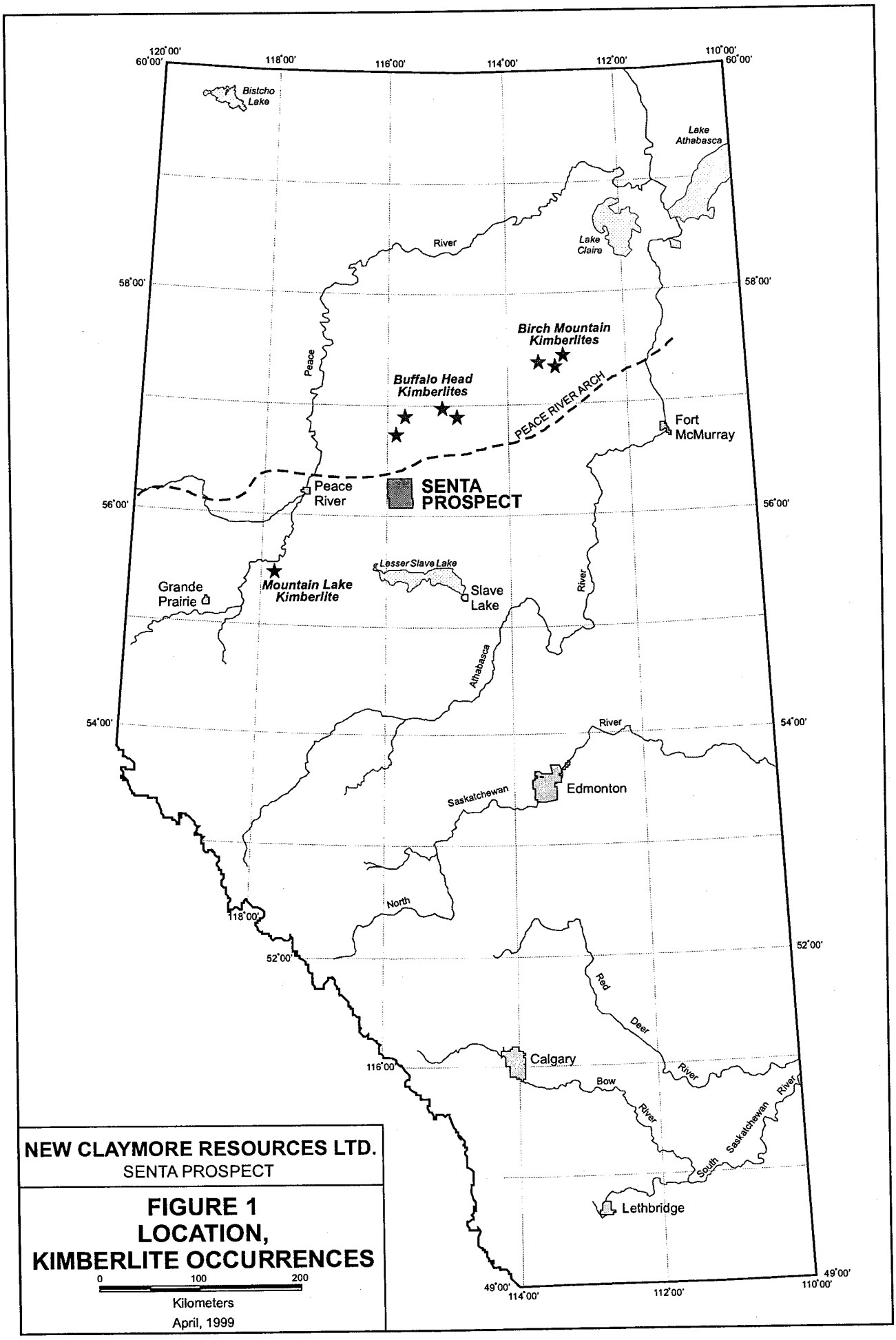
TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020006	Feb 18, 1997	5-11-083: 1-36	9,216
9397020007	Feb 18, 1997	5-12-083: 1-36	9,216
9397020008	Feb 18, 1997	5-13-083: 1-3;10-15;22-27; 34-36	4,608
9397020014	Feb 18, 1997	5-11-084: 1-36	9,216
9397020015	Feb 18, 1997	5-12-084: 1-19; 20S; 21S, NE; 22-24; 25S, NE; 26S; 27S; 28E; 30; 36E 5-13-84: 1-3; 10-15	9,216
9397020016	Feb 18, 1997	5-13-084: 22-27	1,536
9397020049	Feb 28, 1997	5-11-082: 1-11; 12S, L9, L10S, L10NE, L11S, L12, L13, L15N, L15SE, L16; 13N, SE, L5, L6; 14-36	9,152
9397020050	Feb 28, 1997	5-12-082: 1-36	9,216
9397020051	Feb 28, 1997	5-13-082: 1-3; 10-15; 22-27; 34-36	4,608
		TOTAL	65,984

Access, Infrastructure, Physiography

The Senta prospect is accessible by vehicle from the paved Slave Lake – Red Earth Creek Highway 88 via secondary highway 750 then northwest along oil and gas service roads. Seismic lines provide all terrain vehicle and/or snowmachine access to remote areas of the prospect. Infrastructure in the area is centered around the Town of Salve Lake which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The Senta prospect lies within the Interior Plains physiographic region of Canada and topographically within the low-lying Loon River Lowlands. Topographic relief is fairly level with an average elevation of about 670 metres above sea level and is dominated by knob and kettle glacial morphology. Vegetation is dominated by stands of poplar trees with white spruce and

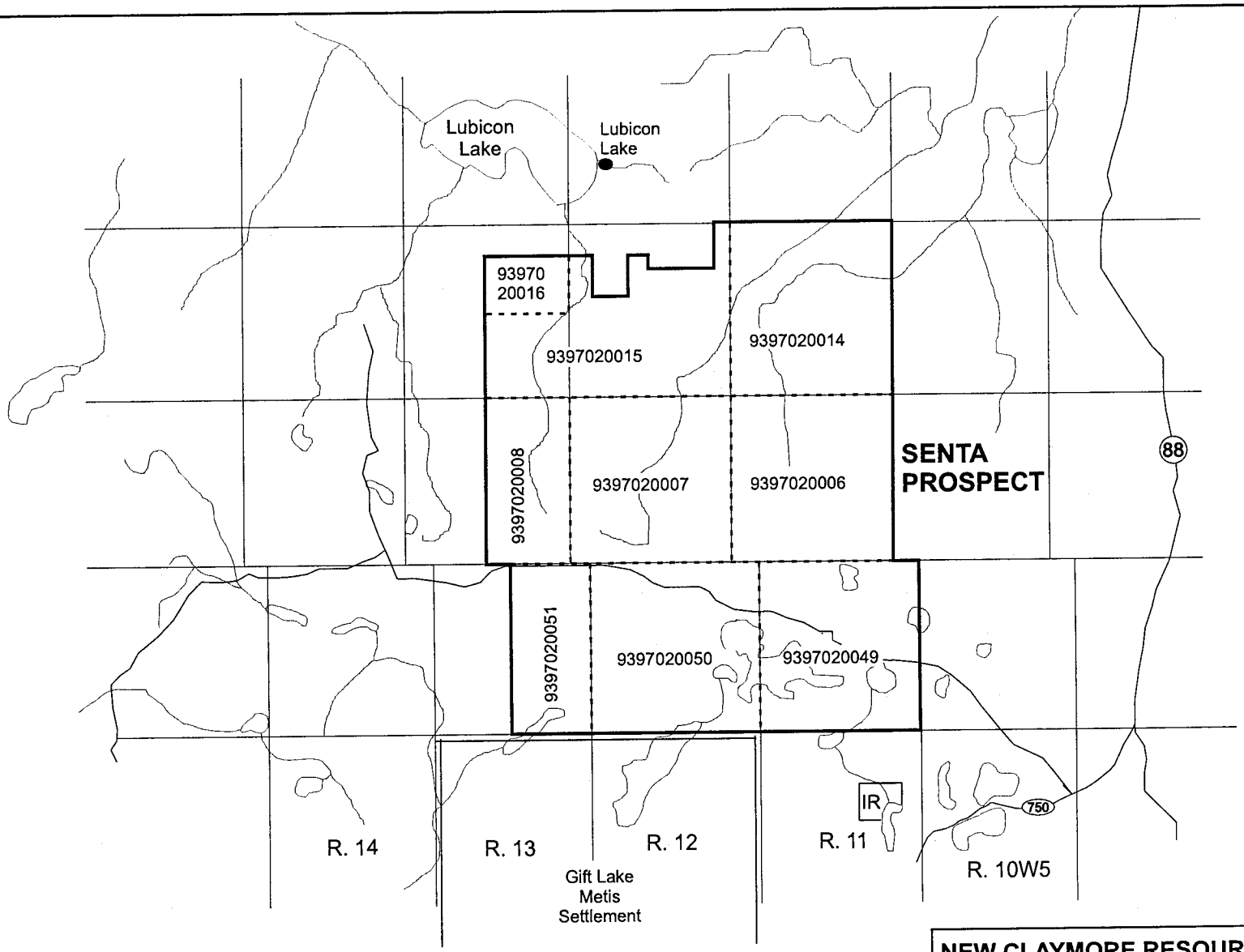


NEW CLAYMORE RESOURCES LTD.
SENTA PROSPECT

FIGURE 1
LOCATION,
KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999



NEW CLAYMORE RESOURCES LTD.
SENTA PROSPECT

FIGURE 2
MAIM PERMITS

0 5 10 20
Kilometers

April, 1999

jack pine occurring on topographic highs. Lakes, peat bogs, and black spruce covered muskeg exist in low lying areas.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Senta prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond indicator mineral grains including pyropic garnets, eclogitic garnets, and chrome diopside in glacial till samples. The till samples were collected to the east of the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Wabasca River Trend (Dufresne et al., 1996). The Senta prospect exists along the southeastern boundary of the Wabasca River Trend.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 30 km north of the Senta prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 200 km northeast of the Senta prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced with upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

The Senta prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Senta prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and

relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Senta prospect to consist of upper Cretaceous sediments including marine fish-scale bearing units and bentonites of the Shaftesbury Formation overlain by deltaic to marine sandstones of the Dunvegan Formation which are in turn overlain by marine shale of the Smoky Group (Figure 3).

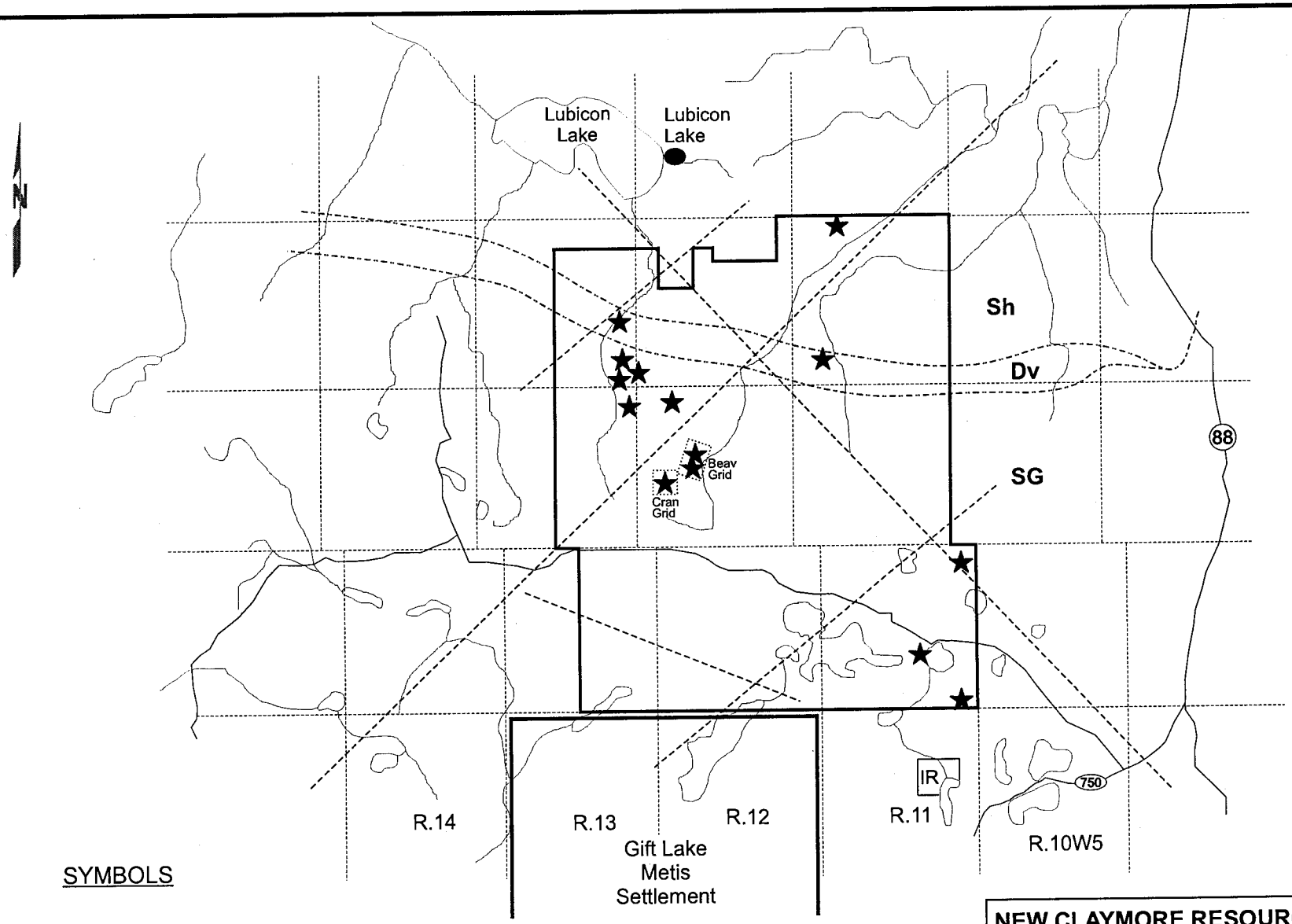
TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Senta prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground and hummocky disintegration moraine. Glacial fluting in the immediate vicinity of the prospect indicate ice movement was dominantly from the northeast to southwest. Drift thickness exceeds 200 m within the west-central portion of the prospect and thins to about 100 m along the eastern prospect boundary.

Structural Geology

The Senta prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular



SYMBOLS

★ Airborne magnetic geophysical anomaly

Cran ⬚ Ground magnetometer geophysical grid; identifier

Interpreted geologic structure

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale

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SENTA PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, GEOLOGY, STRUCTURE

0 5 10 20
Kilometers
April, 1999

pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Senta prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Senta prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

High-Sense Geophysics Ltd. (High-Sense) was contracted by New Claymore to fly a high sensitivity aeromagnetic geophysical survey over the entire Senta prospect in May of 1997. The 4,300 line-km fixed wing survey was drape flown at 80 m mean terrain clearance with north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was then leveled, processed, and edited for cultural noise by High-Sense and subsequently by Mr. Christopher Campbell of Intrepid Geophysics Ltd. The edited data was examined for small circular to elliptical shaped magnetic anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 14 geophysical targets possessing characteristics of kimberlitic diatremes were identified; a cluster of 3 magnetic anomalies were identified for follow-up by ground geophysics. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

Ground Geophysical Surveys

During December, 1997, 2 ground magnetometer geophysical surveys were completed over 3 airborne geophysical targets on the Senta prospect (Figure 3). The airborne targets identified for ground follow-up were selected based on magnetic signature, proximity to interpreted geologic structures, and positive topographic expression. In total, 16.7 line-km of grid lines were surveyed and 14.9 line-km of ground magnetometer surveying completed over the 2 grid areas. After a baseline was surveyed on an individual grid, cross lines were

established at 100 m intervals and on each cross line, stations were chained by topofil and marked at 25 m intervals. At 12.5 m stations along each cross line, a magnetometer reading was collected using a GEM System GSM-19 integrated Overhauser effect proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a GSM-19 basestation. The corrected magnetometer data was gridded, contoured, and used to generate Figure 4 and Figure 5 (Appendix 2).

The magnetic patterns for the 2 survey areas correlate with the airborne signatures and provide sharpened definition and ground verification and placement of the airborne anomalies. A review of the airborne and ground geophysical anomalies follows:

Cran Grid: a double peak, 600 m long, 15 nT airborne anomaly situated on the edge of a prominent basement magnetic high. The ground expression of this anomaly is elliptical in shape, about 200 m long x 100 m wide with an amplitude of about 20 nT which exists on the edge of a steep magnetic gradient (Figure 4). A second anomaly located about 300 m to the south continues past the southern grid boundary.

Beav Grid: covers both a broad complex anomaly about 600 m in length with an amplitude of 10 nT and a weaker circular shaped 6 nT anomaly. The distinctness of the airborne anomalies diminish on the ground survey which shows 2 'spot' magnetic signatures smaller in size than the airborne targets (Figure 5).

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Senta prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 30 km to the north of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Senta prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery has identified 14 geophysical targets which may be suggestive of kimberlitic intrusives. Ground geophysical surveys conducted over 3 of the airborne targets confirm the presence of 2 magnetic anomalies which warrant further investigation.

Additional exploration on the Senta prospect to evaluate for the presence of kimberlitic intrusives is warranted and recommended. Additional exploration should include:

a) the expansion of the Cran grid to define the limits of the geophysical anomalies;

b) ground geophysical surveying over the remaining 11 airborne anomalies;

c) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when

implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

d) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

e) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

f) acquisition of brokered seismic data over individual anomalies; and

g) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020006 to 9397020008, 9397020014 to 9397020016, 9397020049 to 9397020051 is given in Table 3 (Appendix 1); total exploration expenditures amount to $108,538.17. The Senta permits are contiguous and the dispersal of exploration expenditures is given in Table 4 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon field work completed by the author on the Senta prospect and on review of available published and unpublished reports on the prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.
this 30 day of April, 1999

REFERENCES

Ceroici, W. (1979) Hydrogeology of the Peerless Lake Area, Alberta; Alberta Research Council Earth Sciences Report 79-5, 10 p., 2 figs., 1 map.

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G., and Edwards, W.A.D. (1996) The diamond potential of Alberta; Alberta Geological Survey Bulletin No. 63, 97 p., 33 figs., 5 appendices.

Eby, T.W.F. (1997) Interpretation report for magnetometer survey data collected over Lubicon East (Senta) prospect area, Peace River, Alberta. Report prepared for New Claymore Resources Ltd., Everest Mines & Minerals Ltd., and Blackrun Ventures Inc. by High-Sense Geophysics Limited, 31 p.

Mossop, G.D. and Stetsen, I. (eds.) (1994) Geological Atlas of the Western Canada Sedimentary Basin. Published jointly by The Canadian Society of Petroleum Geologists and The Alberta Research Council, 510 p.

O'Connell, S.C., Dix, G.R., and Barclay, J.E. (1990) The origin, history, and regional structural development of the Peace River Arch, Western Canada; Bulletin of Canadian Petroleum Geology, vol. 38A, p. 4-24.

APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

TABLE 3
STATEMENT OF EXPENDITURES

MAIM PERMITS 9397020006 to 9397020008, 9397020014 to 9397020016, 9397020049 to 9397020051

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Field Geologists	10,800.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		19,800.00
Field Costs		
Accommodation / Meals	1,400.00	
Field Supplies	641.31	
Fuel	235.32	
		2,276.63
Rental Equipment		
Field Equipment Rental	360.00	
Geophysical Equipment Rental	1,296.00	
Quad Rental	2,160.00	
Vehicle Rental	926.00	
		4,742.00
Subcontracting Services		
Geological Consultants / Contractors		
Dahrouge Geological Consulting Ltd.	2,100.00	
Geophysical Contractors		
High-Sense Geophysics Ltd.	65,067.50	
Intrepid Geophysics Ltd.	7,600.00	
RGI Resource GIS and Imaging Ltd.	2,500.00	
Land Use and Permitting		
Licences / Recording Fees	~~3,500.00~~ 350.-	
		~~80,767.50~~ 77,617.50
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	65.00	
Reproduction / Computer Plots	48.00	
Office / Computer Consumables	24.20	
Computer Usage / Programs	210.00	
Communication - telephone, fax	48.70	
Postal, Courier, Freight	36.14	
Office Overhead	520.00	
		952.04
TOTAL		~~108,538.17~~ 105,388.17

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

Signed: [redacted]

TABLE 4
COST ALLOCATION

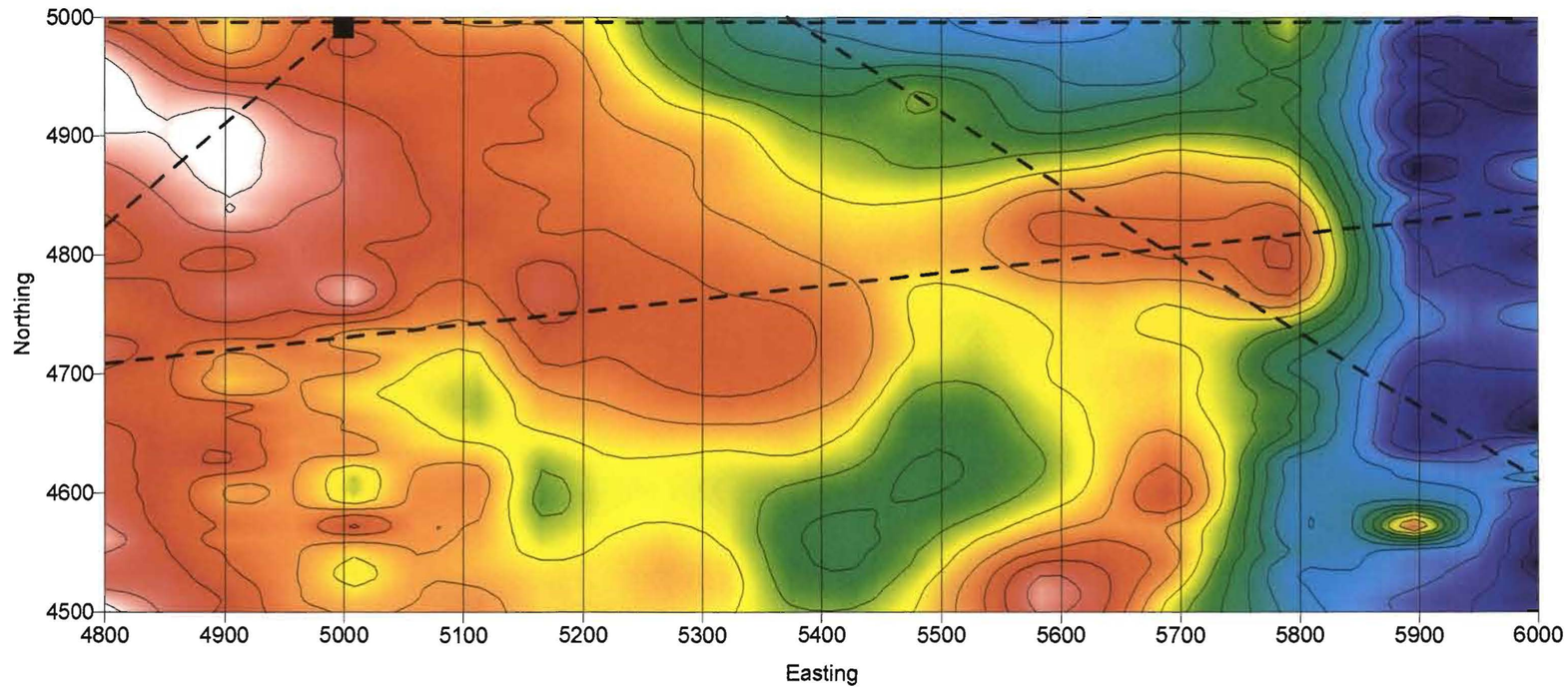
MAIM PERMITS 9397020006 to 9397020008, 9397020014 to 9397020016, 9397020049 to 9397020051

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020006	9,216	February 18, 1997	5.00	46,080.00		46,080.00*
9397020007	9,216	February 18, 1997	5.00	46,080.00		46,080.00*
9397020008	4,608	February 18, 1997	5.00	23,040.00		23,040.00*
9397020014	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020015	9,216	February 18, 1997	5.00	46,080.00		46,080.00
9397020016	1,536	February 18, 1997	5.00	7,680.00		7,680.00
9397020049	9,152	February 28, 1997	5.00	45,760.00		45,760.00*
9397020050	9,216	February 28, 1997	5.00	46,080.00		46,080.00*
9397020051	4,608	February 28, 1997	5.00	23,040.00		23,040.00*
Total	65,984			329,920.00	108,538.17	329,920.00

* denotes assessment work conducted on contiguous land.

APPENDIX 2

GROUND MAGNETOMETER SURVEY FIGURE 4 AND FIGURE 5



SYMBOLS

■ NAD 27 UTM co-ordinate
11V 0570442 E 6228545 N

– – – – – Seismic line

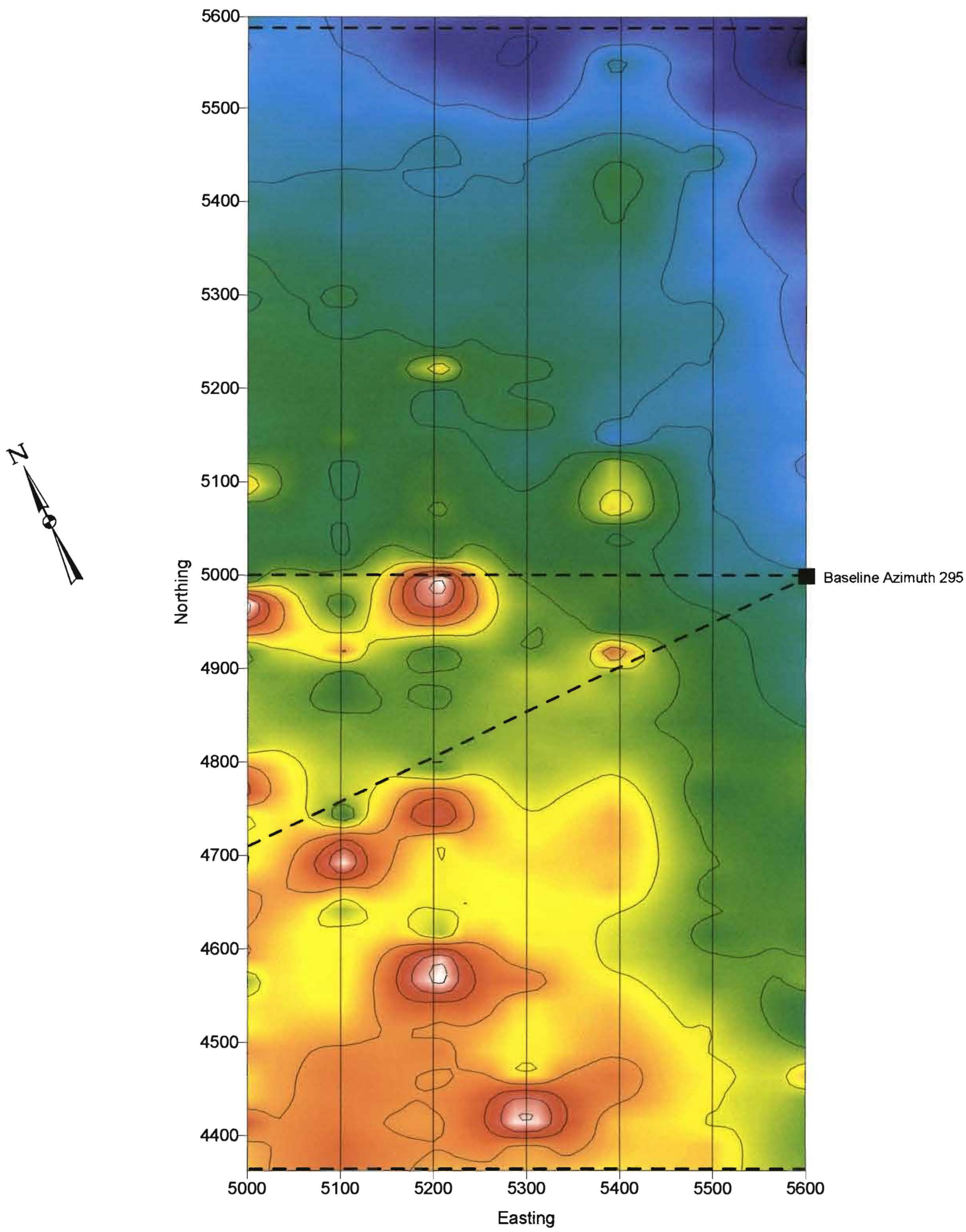
Isomagnetic contour
contour interval 5 nT

NEW CLAYMORE RESOURCES LTD.
SENTA PROSPECT

FIGURE 4
CRAN GRID
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

NAD 27 UTM co-ordinate
11V 0572770 E 6229310 N

Seismic line

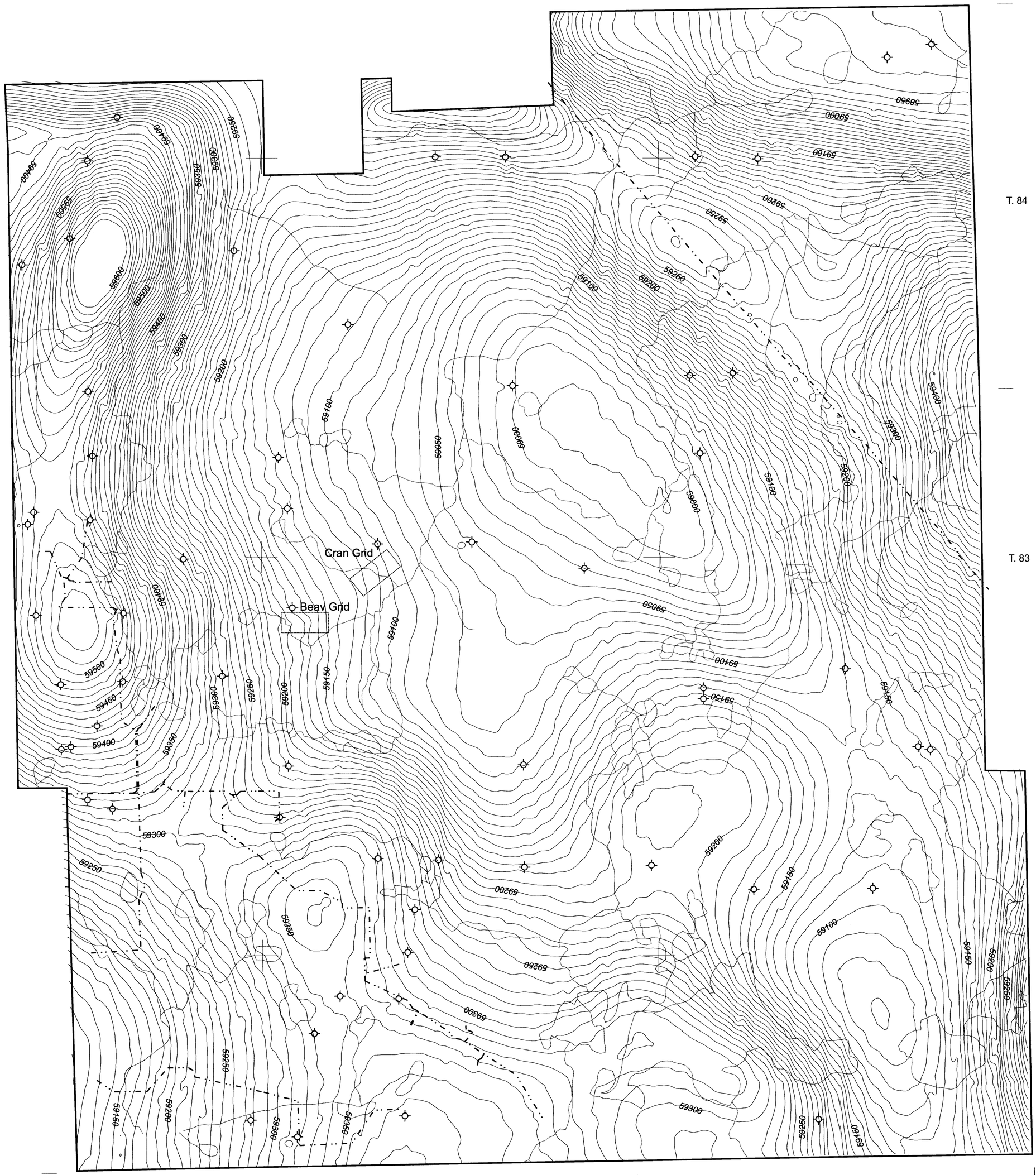
Isomagnetic contour
contour interval 5 nT

NEW CLAYMORE RESOURCES LTD.
SENTA PROSPECT

FIGURE 5
BEAV GRID
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

Isomagnetic contour; contour interval 10 nT

Cran — Ground magnetometer geophysical grid; identifier

Oil or gas well

Pipeline

Property boundary

0 — 5

Kilometres

UTM NAD 27 Zone 11

MIN 9920

NEW CLAYMORE RESOURCES LTD.

SENTA PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD CONTOURS

84 B\4, B\5

April, 1999

19990029
JUN 10 1999

ASSESSMENT REPORT

PEACE RIVER PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397050003 to 9397050012, 9397050014
NORTHERN ALBERTA

Geographic Co-ordinates
56° 09' 30" to 56° 36' 00" N
117° 00' 00" to 117° 38' 00" W

NTS Map Areas
84 C/3, C/4, C/5, C/6, C/11

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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Total Magnetic Field Contours ..... Appendix 2
Figure 13: Grid J Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 14: Grid K Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 15: Grid L Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 16: Grid M Ground Magnetometer Survey
Total Magnetic Field Contours ..... Appendix 2
Figure 17: Grid N Ground Magnetometer Survey
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Figure 22: Grid K HLEM Survey
Resistivity Colour Contour ..... Appendix 3
Figure 23: Mountain Lake Grid HLEM Survey
Resistivity Colour Contour ..... Appendix 3

LIST OF DRAWINGS

Drawing 01: Airborne Magnetic Survey
Total Magnetic Field Contours ..... in pocket

SUMMARY

New Claymore Resources Ltd. Peace River prospect is centered about 10 km north of the Town of Peace River in northern Alberta. The prospect is comprised of 11 Metallic and Industrial Mineral permits which encompass an area of 97,052 hectares (242,630 acres). The permits are registered in the name of New Claymore Resources Ltd. and are under option to Primero Industries Ltd.; all exploration on the Peace River prospect was conducted by Primero Industries Ltd.

The Precambrian basement underlying the Peace River prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous Shaftesbury Formation marine shale overlain by feldspathic sandstone of the Dunvegan Formation itself overlain by marine shale of the Smoky Group. Glacial till and sand and gravel deposits cover most of the prospect with drift thickness ranging from about 20 m to greater than 100 m within the Peace River valley. Approximately 110 km northeast of the Peace River prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments including the Shaftesbury Formation, Dunvegan Formation, and Smoky Group.

During April, 1997, High-Sense Geophysics Limited was contracted to fly a high resolution aeromagnetic geophysical survey over the Peace River prospect; in total 6,000 line kilometers of data were collected. Interpretation of the airborne data by Geophysical Exploration & Development Corporation and subsequently a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. aided in correlating magnetic anomalies with topographic features and regional structure. In total, 22 positive magnetic geophysical anomalies were identified which may be representative of kimberlitic diatremes. During October, 1997 through February, 1998, ground geophysical surveys including magnetometer and horizontal loop electromagnetics were completed over 15 of the airborne anomalies selected because of their positive magnetic signatures, proximity to interpreted geologic structures, and positive topographic expressions; in total 143.2 line-km of ground magnetometer and 41.0 line-km of electromagnetic surveying was completed. Based on an evaluation of the data, 454.8 m of diamond drilling was completed on 5 targets during February and March, 1998.

Although the results of the fieldwork and drilling were not positive in locating kimberlitic intrusives, the presence of a basement terrane known to host diamondiferous kimberlite intrusives, the existence of geologic structures possibly associated with kimberlite emplacement, and the presence of untested airborne magnetic targets on the Peace River prospect indicate that further exploration is warranted and should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;

b) the drill core should be processed for diamond indicator minerals;

c) ground magnetometer geophysical surveying over the remaining 7 airborne targets;

d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

e) electron microprobe quantitative analysis of all diamond indicator mineral grains recovered and comparison to kimberlite and diamond inclusion mineral chemistry;

f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

g) acquisition of brokered seismic data over individual anomalies; and

h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

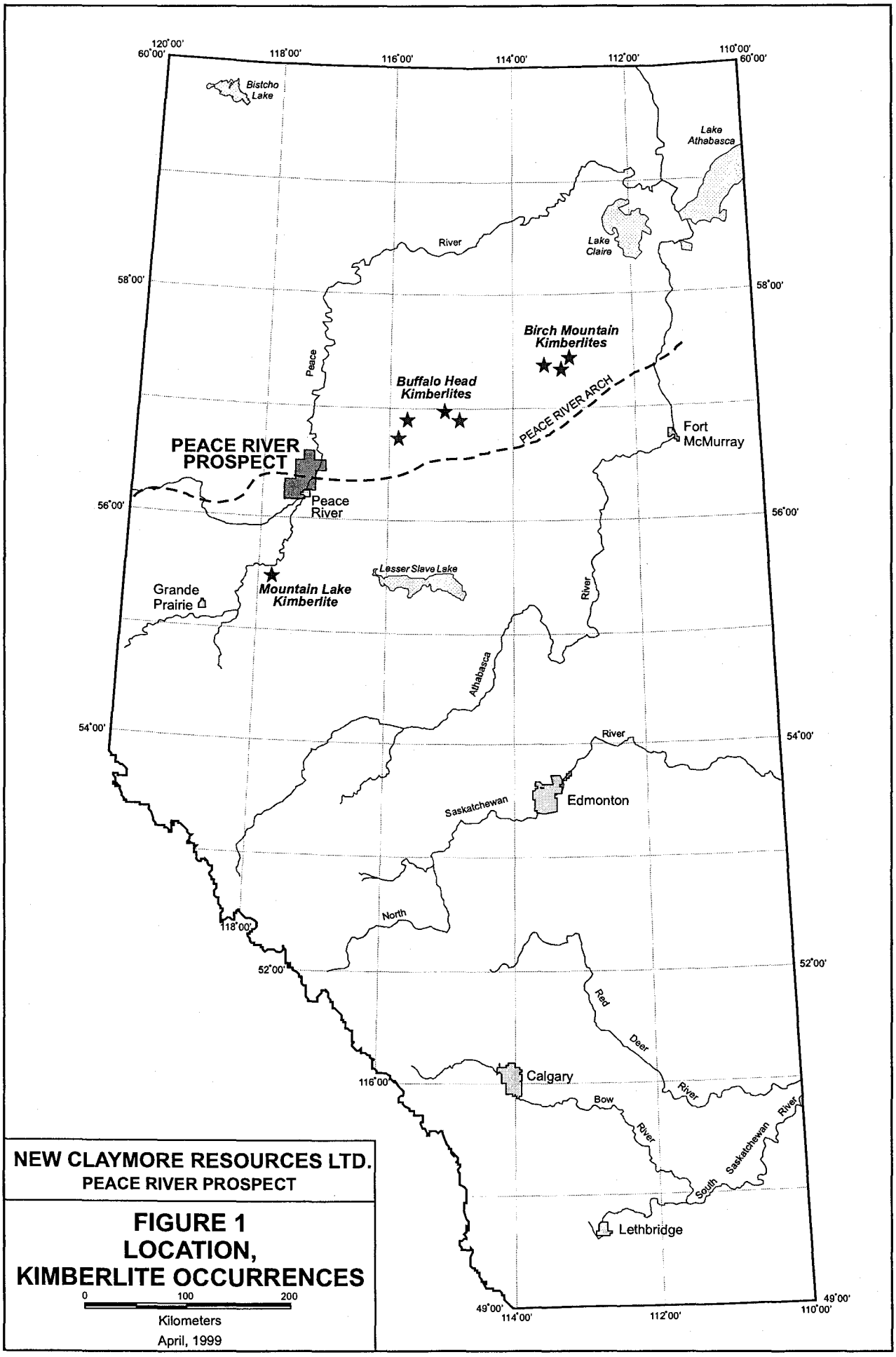
Location, Prospect Description

The Peace River prospect consists of 11 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 97,052 hectares (242,630 acres). The prospect extends from about 56° 09' 30" to 56° 36' 00" north latitude and 117° 00' 00" to 117° 38' 00" west longitude, is located about 400 km northwest of the City of Edmonton and centered about 10 km north of the Town of Peace River (Figure 1). The permits, 9397050003 to 9397050012 and 9397050014 are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397050003	May 21, 1997	5-22-083: 1-3; 4S, NP; 5-10; 11N, SE, SWP; 12-36	9,153
9397050004	May 21, 1997	5-23-083: 1-28; 29S, NE; 30S, NW; 31N, SW; 32N, SE; 33N; 34-36	8,832
9397050005	May 21, 1997	5-21-084: 1-10; 11S; 12S, NE; 13N, SE; 14N; 15-20; 21S, NE; 22-26; 27S, NE; 29-31; 32S, NW; 35; 36	7,873
9397050006	May 21, 1997	5-22-084: 1-16; 17S, NE; 18-36	9,152
9397050007	May 21, 1997	5-23-084: 1-5; 6S, NP; 7SP, N; 8-14; 15E; 16N; 17-22; 23E; 24-27; 28NW; 29-32; 33N, SW; 34-36	8,506
9397050008	May 21, 1997	5-21-085: 1; 2E, NWP; 3N; 5EP, W; 6-36	8,672
9397050009	May 21, 1997	5-22-085: 1-7; 8S, NW; 9-11; 12N, SE; 13-18; 20NE; 21-28; 29E; 31N; 32N, SE; 33; 34N, SW; 35; 36	8,000
9397050010	May 21, 1997	5-20-086: 1-36	9,216
9397050011	May 21, 1997	5-21-086: 1-36	9,216
9397050012	May 21, 1997	5-22-086: 1-36	9,216
9397050014	May 21, 1997	5-21-087: 1-36	9,216
		TOTAL	97,052

Primero Industries Ltd. (Primero) optioned the Peace River prospect in January, 1997 and to earn a 50 per cent interest in the prospect Primero agreed to issue New Claymore shares of the Company, make staged cash payments, and incur time specific exploration expenditures. Primero elected to terminate their option on the Peace River prospect in January, 1999 and until that time, all exploration on the prospect was conducted by personnel in the employ or under contract to Primero.

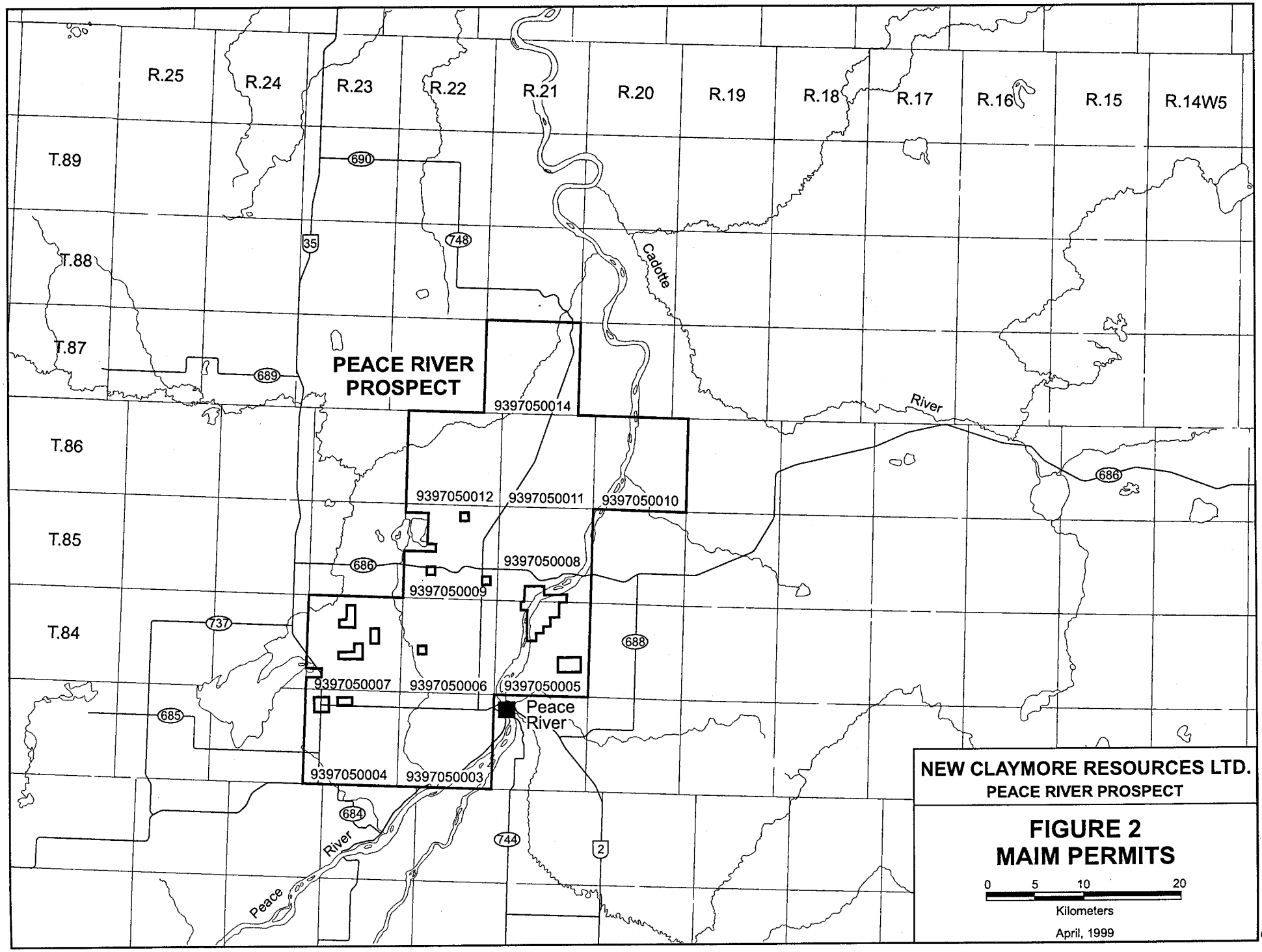


NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 1
LOCATION, KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


R.25
R.24
R.23
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15
R.14W5
T.89
T.88
T.87
T.86
T.85
T.84
690
35
748
689
686
737
688
685
684
744
2
Cadotte
River
Peace
River
PEACE RIVER
PROSPECT
9397050014
9397050012
9397050011
9397050010
9397050008
9397050009
9397050007
9397050006
9397050005
9397050004
9397050003
Peace
River
NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT
FIGURE 2
MAIM PERMITS
0
5
10
20
Kilometers
April, 1999

Access, Infrastructure, Physiography

Vehicle access to the central and western portions of the Peace River prospect is via paved and/or all weather rural gravel roads laid out on a 1 mile section grid. Seismic lines and logging trails provide all terrain vehicle and/or snowmachine access to remote areas of the prospect on the east side of the Peace River. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The Peace River prospect lies within the Interior Plains physiographic region of Canada and topographic relief is flat to gently rolling with an average elevation of about 550 metres above sea level. Vegetation is dominated by stands of poplar with white spruce and jack pine occurring on topographic highs. Lakes, peat bogs, and black spruce covered muskeg exist in low lying areas although most of the prospect is dominated by lands cleared for agricultural use.

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Peace River prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond indicator mineral grains including pyropic garnets, eclogitic garnets, chrome diopsides, and chromites in glacial till samples. The till samples were collected to the south and west of the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Peace River Trend (Dufresne et al., 1996); the Peace River prospect lies within the central portion of the Peace River Trend. AGS sand and gravel sample #413 collected near the southwest prospect boundary yielded 3 chrome diopside and 3 chromite grains.

During the period 1993 to 1997, Ultrasonic Industrial Services Ltd. held MAIM permits situated within and surrounding the Peace River prospect. Exploration included examination of regional Geological of Canada aeromagnetic maps and limited heavy mineral sampling; in total, 12 aeromagnetic targets were identified which may be representative of kimberlitic diatremes and Hawkins (1993) did not report any diamond indicator mineral results. Hawkins (1993) makes reference to sampling of overburden material completed by Consolidated Carina Resources Corp. in an area north of Carmon Lake (W5-18-85) which recovered 44 pyrope garnet and 14 chrome diopside grains; published details of this work appear unavailable.

Between 1994 to 1995, Ridgeway Petroleum Corp. and Horseshoe Gold Mining Inc. explored for kimberlitic diatremes on their Horseshoe project. The exploration area was located along the eastern boundary of the Peace River prospect and work included an airborne magnetic survey, ground magnetometer surveys, and diamond drilling. Single line ground

magnetic profile surveys were completed over 5 of 26 positive magnetic targets identified from the airborne survey and 4 of the ground surveyed targets were tested by diamond drilling. In total, 351.5 m of NQ core was drilled and the drill logs and lithologic descriptions indicate that no kimberlitic material was intersected; the minimum depth to bedrock of Smoky Group marine shale was 49 m (Marchand, 1995).

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 110 km northeast of the Peace River prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

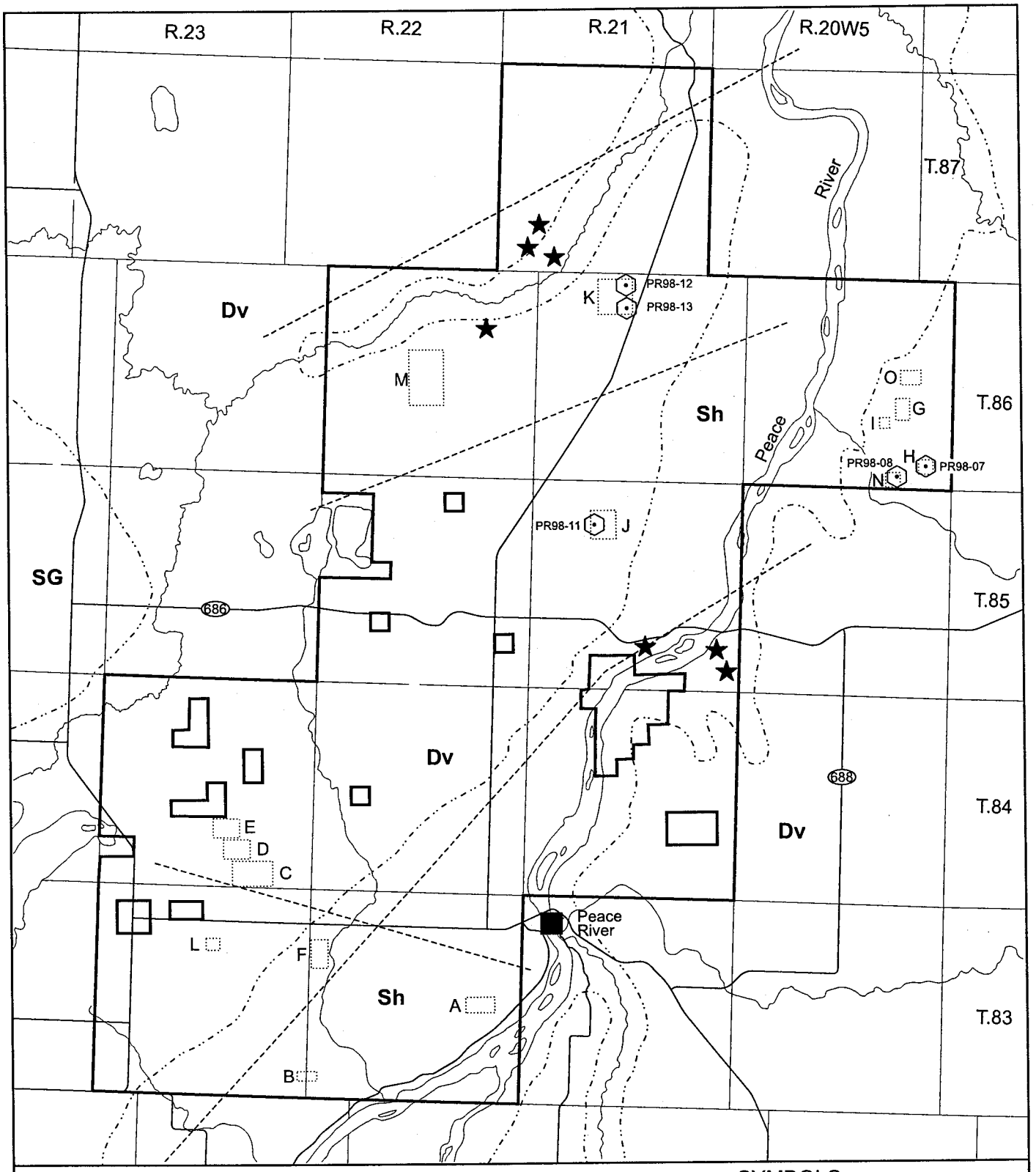
About 270 km northeast of the Peace River prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced with upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

The Peace River prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Peace River prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Peace River prospect to consist of upper Cretaceous sediments including marine fish-scale bearing units of the Shaftesbury Formation overlain by deltaic to marine sandstones of the Dunvegan Formation which are overlain by marine shale of the Smoky Group (Figure 3).



NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, DRILLING, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

SYMBOLS

★ Airborne magnetic geophysical anomaly; anomalies on ground grids excluded

D ☐ Ground magnetometer geophysical grid; identifier

PR98-11 Diamond drill hole; identifier

Interpreted geologic structure

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale

TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Peace River prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and deposits of sand and gravel. Glacial fluting in the immediate vicinity of the prospect indicate ice movement was dominantly from north to south. Drift thickness appears relatively thin with depths of about 20 m in the north-central portion of the prospect to in excess of 100 m within the Peace River valley.

Structural Geology

The Peace River prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo

Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Peace River prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Peace River prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Survey

High-Sense Geophysics Ltd. (High-Sense) was contracted to fly a high resolution aeromagnetic geophysical survey over the Peace River prospect in April, 1997. The 6,000 line-km fixed wing survey was drape flown at 80 m mean terrain clearance with north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was then leveled, processed, and edited for cultural noise by High-Sense and subsequently Geophysical Exploration & Development Corporation (GEDCO). The edited data was examined for small circular to elliptical magnetic anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 22 geophysical targets possessing characteristics of kimberlitic diatremes were identified. Subsequently, a review of satellite imagery and digital elevation models by Resource GIS and Imaging Ltd. (RGI) aided in correlating the airborne magnetic anomalies with topographic features and regional structure. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report (Drawing 01).

Ground Geophysical Surveys

Between October, 1997 and February, 1998, ground magnetometer geophysical surveys were completed over 15 airborne geophysical targets on the Peace River prospect. The airborne targets identified for ground follow-up were selected based on magnetic signature, proximity to interpreted geologic structures, and positive topographic expression. In total, 143.2 line-km of ground magnetometer surveying was completed by Hendex Exploration Services Ltd. over grid areas A through O (Figure 3). After a baseline was surveyed on an individual grid, cross lines were established at 200 m intervals and on each cross line, stations were chained by topofil and marked at 10 m intervals. At 10 m stations along each cross line, a magnetometer reading was collected using an Omni proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a stationary base-station. The

corrected magnetometer data was gridded, contoured, and used to generate Figure 4 to Figure 19 (Appendix 2).

During February, 1998, SJ Geophysics Ltd. was contracted to conduct ground based horizontal loop electromagnetic (HLEM) surveys over grid areas C, H, J, and K on the Peace River prospect (Figure 3). The intention of the HLEM surveys was to detect localized resistive features associated with airborne and ground geophysical magnetic highs and to aid in determining the depth to target. Prior to the Peace River prospect survey, an orientation HLEM survey totaling 17.0 line-km's was completed over the Mountain Lake kimberlite located about 100 km southwest of the Peace River prospect. The orientation survey detected an isolated resistivity low within a uniformly resistive background. The Mountain Lake kimberlite is expressed as a resistivity low where the surrounding Wapiti Formation sandstone shows as a resistivity high; the data is presented as a resistivity contour plot on Figure 23 (Appendix 3). In total, 41.0 line-km of ground HLEM surveying was completed over the grid areas C, H, J, and K. The surveys were completed using a Max-Min I-10 system with a coil separation of 160 m and data gathered at 40 m stations along grid-lines separated by 100 m intervals. The results for grid areas H and K are presented as resistivity contour plots on Figure 20 and Figure 22 (Appendix 3); due to the strong influence of power lines, pipelines, and background noise, the results for grid areas C and J are presented as stacked profiles on Figure 19 and Figure 21 (Appendix 3). In general, the HLEM data over grid areas C, J, and K did not identify any localized resistive features and overall the ground conductivity showed little variation with increasing depth. Because there was relatively little resistivity contrast between the overburden and underlying bedrock, it was not possible to determine overburden depth. On Grid H, the HLEM survey delimited 1 weak resistivity anomaly in the center of the grid area which weakens toward the east.

The magnetic patterns for the 15 ground magnetic surveys correlate with the airborne signatures and provide sharpened definition and ground verification and placement of the airborne anomalies. A review of the ground geophysical anomalies is given in Table 3.

TABLE 3
SUMMARY OF GROUND MAGNETOMETER SURVEYS

GRID IDENTIFIER	LOCATION Easting	Northing	DESCRIPTION Diameter (m)	Amplitude (nT)	Comment
A	476500	6229500	1,200	30	a weak, broad magnetic signature
B	470950	6226850	20	30	a sharp, single line 'spot' anomaly
C	465650	6234400	n/a	n/a	multiple small 'spot' anomalies
D	466700	6237000	n/a	n/a	several linear anomalies extending from a basement high
E	466000	6238200	150	15	a linear anomaly extending from a basement high
F	477110	6231600	50	15	single line 'spot' anomaly on basement high
G	497900	6156500	n/a	n/a	no anomaly visible
H	498500	6253500	150	30	sharp multi-line isolated elliptical anomaly
I	496850	6256300	n/a	n/a	no anomaly visible
J	483500	6250500	100	15	weak broad elliptical anomaly
K	484500	6261250	80	30	sharp elliptical anomaly which exists along a magnetic linear
L	466600	6231500	60	10	two large circular anomalies along a magnetic linear
M	475000	6265800	n/a	n/a	large basement magnetic high
N	497700	6252750	80	25	circular shaped anomaly on large basement high
O	498250	6257700	60	15	elliptical shaped anomaly on edge of basement high

Diamond Drilling

A total of 454.8 m of diamond drilling in 5 drill holes (PR98-07, PR98-08, PR98-11, PR98-12, PR98-13) was completed on the Peace River prospect during February and March, 1998. Diamond drilling was performed by J. T. Thomas Diamond Drilling and the NQ core recovered is stored at the Mineral Core Research Facility in Edmonton. Drilling intersected bedrock in all 5 drill holes which consisted of grey silty shale and mudstone of the Smoky Group. As no kimberlitic material was intersected, no drill core was submitted for analysis. A summary of the drill hole data is provided in Table 4; drilling records and lithologic descriptions are provided in Appendix 4.

TABLE 4
DIAMOND DRILL HOLE SUMMARY

DRILL HOLE IDENTIFIER	UTM COORDINATE Easting	Northing	GEOPHYSICAL GRID	AZIMUTH / DIP	DEPTH TO BEDROCK (m)	DRILL HOLE DEPTH (m)
PR98-07	498700	6253520	H	-90	41.15	84.43
PR98-08	497690	6252850	N	-90	103.63	134.42
PR98-11	483380	6250700	J	075 / -55	57.91	127.10
PR98-12	484405	6261520	K	-90	23.47	60.96
PR98-13	484450	6261200	K	-90	29.57	47.85

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Peace River prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 110 km northeast of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Peace River prospect. Interpretation of aeromagnetic, digital elevation models, and Landsat imagery identified 22 geophysical targets which may be suggestive of kimberlitic intrusives. Ground magnetometer geophysical surveys conducted over 15 of the targets confirmed the presence of 5 magnetic anomalies which warranted further investigation; the inclusion of HLEM surveys delimited 1 weak resistive feature on Grid H but failed to upgrade the other targets and did not aid in determining depth to bedrock. The 5 drill holes completed intersected bedrock comprised of shale and mudstone which indicates the magnetic anomalies may not be related to mafic intrusives but sourced from the concentration of magnetic minerals within surficial sediments or in preglacial to glacial channels that exist at or near the bedrock – drift interface although no direct evidence for the magnetic anomalies has been identified. Further, drill hole PR98-07 was collared approximately 100 m east of the coincident location of the peak of the ground magnetic anomaly and HLEM resistive feature. Therefore, in addition to the assessment of the 7 untested airborne geophysical anomalies, continued exploration on the Peace River prospect should include determining the source of the drilled magnetic anomalies and if examination of drill core fails to provide evidence, the targets should be reviewed and possibly drilled in locations and to depths adequate to explain the magnetic anomaly. Additional exploration on the Peace River prospect should include:

a) magnetic susceptibility measurements taken on the drill core and any magnetic sources identified and the sources processed for magnetite or other magnetic mineral content;

b) the drill core should be processed for diamond indicator minerals;

c) ground magnetometer geophysical surveying over the remaining 7 airborne targets;

d) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect, although the thickness of drift cover must be considered when implementing this sampling. The use of an auger drill to penetrate the thick sequence of overburden to collect basal till samples would be required;

e) electron microprobe quantitative analysis of all diamond indicator mineral grains recovered and comparison to kimberlite and diamond inclusion mineral chemistry;

f) soil and/or loam sampling over and/or down-ice from individual anomalies utilizing enzyme leach geochemical analysis for elements including nickel, chromium, niobium,

cesium, titanium, strontium, and magnesium. Enzyme leach analysis provides geochemical signatures for anomalies in complex glacial sequences and thick accumulations of overburden;

g) acquisition of brokered seismic data over individual anomalies; and

h) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397050003 to 9397050012, and 9397050014 is given in Table 5 (Appendix 1); total exploration expenditures amount to $432,440.48. The Peace River permits are contiguous and the dispersal of exploration expenditures is given in Table 6 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon a review of published and unpublished reports on the Peace River prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.

this 30 day of April, 1999

REFERENCES

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APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

NEW CLAYMORE RESOURCES LTD.
11003 – 84 Avenue
Edmonton, Alberta T6G 0V6
Phone (403) 433 – 3181
Fax (403) 433 – 1721

September 28, 1999

Alberta Geological Survey
4th Floor, Twin Atria
4999 – 98 Avenue
Edmonton, Alberta
T6B 2X3

Mr. Tim Berezniuk:

Regarding the assessment reports for the Carmon Creek, Peace River, and Seal Lake prospects and our conversation regarding the statement of expenditures, find attached a list of subcontractors and a description of services they provided. If you require any further information, please contact Tony Rich at (780) 433-3181.

Subcontractor	Description of Service Provided
BJ Holdings Inc.	Peace River core warehouse and apartment rental
Dawson Geological Consultants Ltd.	project supervision, field geologist, drilling supervision, report writing
Discovery Consultants	field geologists
D.W. Coats	consultant for tendering drilling bids and logistics
G. Belik & Associates	project supervision, field geologist, drilling geologist
Gedco Geophysical Exploration	airborne data interpretation
Geosoft Inc	airborne and ground magnetic data software and interpretation
Hendex Exploration Services Ltd.	ground magnetic data collection
High-Sense Geophysics Ltd.	airborne geophysical data collection
Jonathan George	senior project supervision
Lucero Resource Corp.	joint venture partner, office staff, field geology, drilling supervision, report writing, logistics
MacMillan Construction	drilling related road construction, drill pad construction, camp construction
Orequest Consultants Ltd.	independent professional geologist for stock exchange requirements
Pacific Geophysical Ltd.	ground geophysical data interpretation
RGI Resource GIS and Imaging Ltd.	digital topography and satellite imagery data collection and interpretation
SJ Geophysics Ltd.	ground HLEM data collection
William Pelton	geophysical interpretation of airborne GEOTEM data

Sincerely,

[redacted]

Todd Faragher
New Claymore Resources Ltd.

TABLE 5
STATEMENT OF EXPENDITURES
MAIM PERMITS 9397050003 to 9397050012, 9397050014

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		9,000.00
Field Costs		
Accommodation / Meals	11,861.55	
Field Supplies	10,562.58	
Fuel	585.00	
Freight	180.00	
Travel Costs	6,387.85	
		29,576.98
Rental Equipment		
Field Equipment Rental	5,250.00	
Geophysical Equipment Rental	2,805.81	
Vehicle Operation and Repair	620.00	
Warehouse Rent	650.00	
		9,325.81
Subcontracting Services		
Construction Contractors		
MacMillan Construction	1,569.00	
Drilling Contractors		
J.T. Thomas Diamond Drilling Ltd.	61,884.53	
Geological Consultants / Contractors		
BJ Holdings Inc.	28,470.00	
Dawson Geological Consultants Ltd.	17,900.00	
Discovery Consultants	7,780.51	
[redacted]	91.67	
G. Belik & Associates	5,441.00	
Lucero Resource Corp.	6,289.13	
Geophysical Contractors		
Gedco Geophysical Exploration	18,106.29	
Geosoft Inc	1,200.00	
Hendex Exploration Services Ltd.	25,848.55	
High-Sense Geophysics Ltd.	119,960.19	
RGI Resource GIS and Imaging Ltd.	21,731.70	
SJ Geophysics Ltd.	30,144.77	
[redacted]	2,852.03	
Helicopter Contractors		
Canadian Helicopters	28,732.15	
Land Use and Permitting		
Road Usage Fee - Unocal Canada	1,000.00	
Licences / Recording Fees	~~1,100.00~~ 200.-	
Lorrnel Consultants	820.16	
		~~380,921.68~~ 380,021.68
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	570.62	
Reproduction / Computer Plots	294.83	
Office / Computer Consumables	1,415.67	
Computer Usage / Programs	210.00	
Communication - telephone, fax	363.67	
Postal, Courier, Freight	241.22	
Office Overhead	520.00	
		3,616.01
TOTAL		~~432,440.48~~ 431,540.48

I certify that these expenditures are valid and were incurred in conducting assessment work on the above listed permits; all accounts were provided by Primero Industries Ltd.

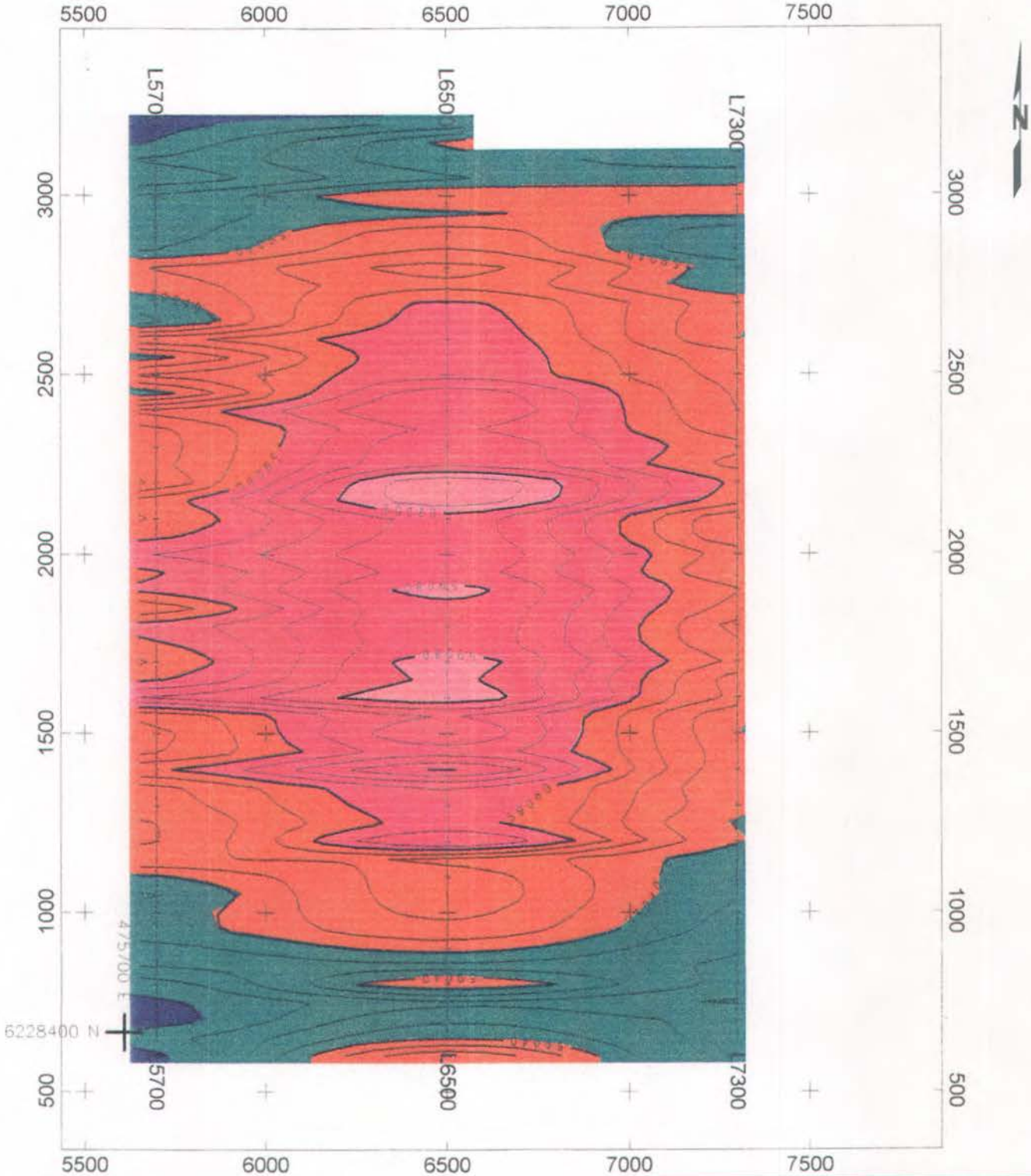
Signed: [redacted]

TABLE 6
COST ALLOCATION
MAIM PERMITS 9397050003 to 9397050012, 9397050014

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397050003	9,153	May 21, 1997	5.00	45,765.00		0.00
9397050004	8,832	May 21, 1997	5.00	44,160.00		0.00
9397050005	7,873	May 21, 1997	5.00	39,365.00		0.00
9397050006	9,152	May 21, 1997	5.00	45,760.00		0.00
9397050007	8,506	May 21, 1997	5.00	42,530.00		0.00
9397050008	8,672	May 21, 1997	5.00	43,360.00		0.00
9397050009	8,000	May 21, 1997	5.00	40,000.00		0.00
9397050010	9,216	May 21, 1997	5.00	46,080.00		0.00
9397050011	9,216	May 21, 1997	5.00	46,080.00		0.00
9397050012	9,216	May 21, 1997	5.00	46,080.00		0.00
9397050014	9,216	May 21, 1997	5.00	46,080.00		0.00
Total	97,052			485,260.00	432,440.48	0.00

APPENDIX 2

GROUND MAGNETOMETER SURVEY FIGURE 4 TO FIGURE 18



SYMBOLS

Isomagnetic contour
contour interval 5 nT

250 0.0 250 500

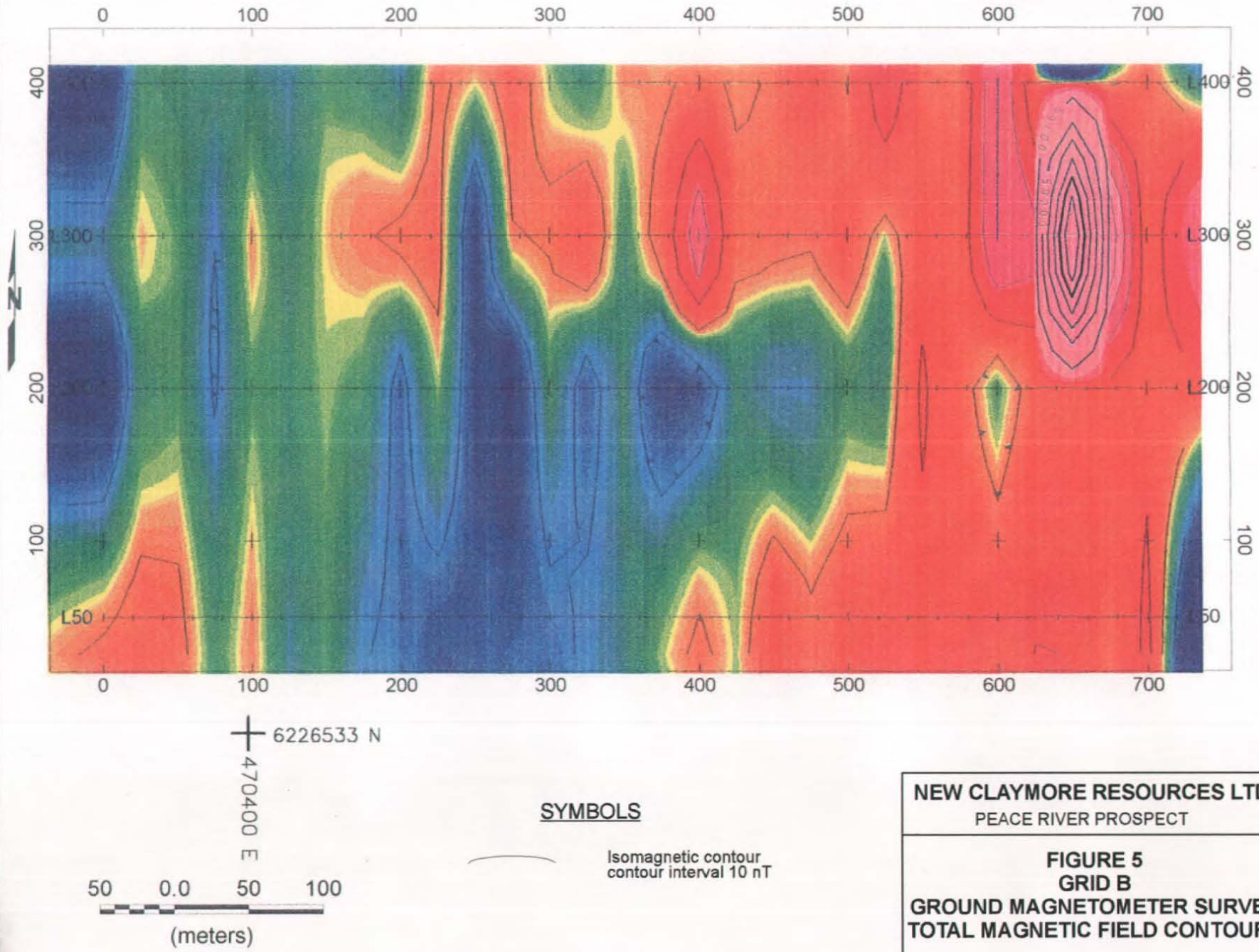
(meters)

NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 4
GRID A
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



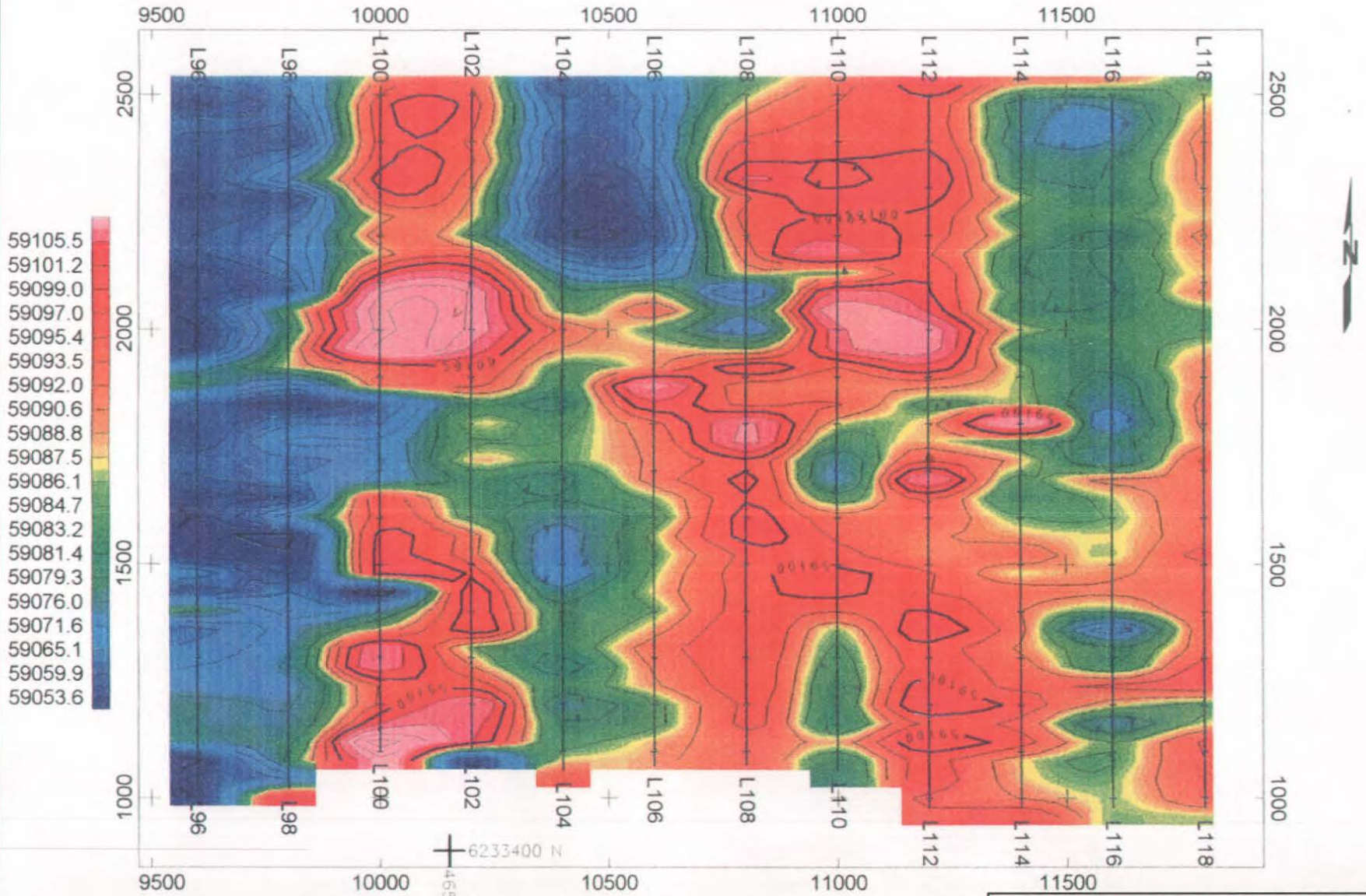
SYMBOLS

Isomagnetic contour
contour interval 10 nT

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 5
GRID B
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

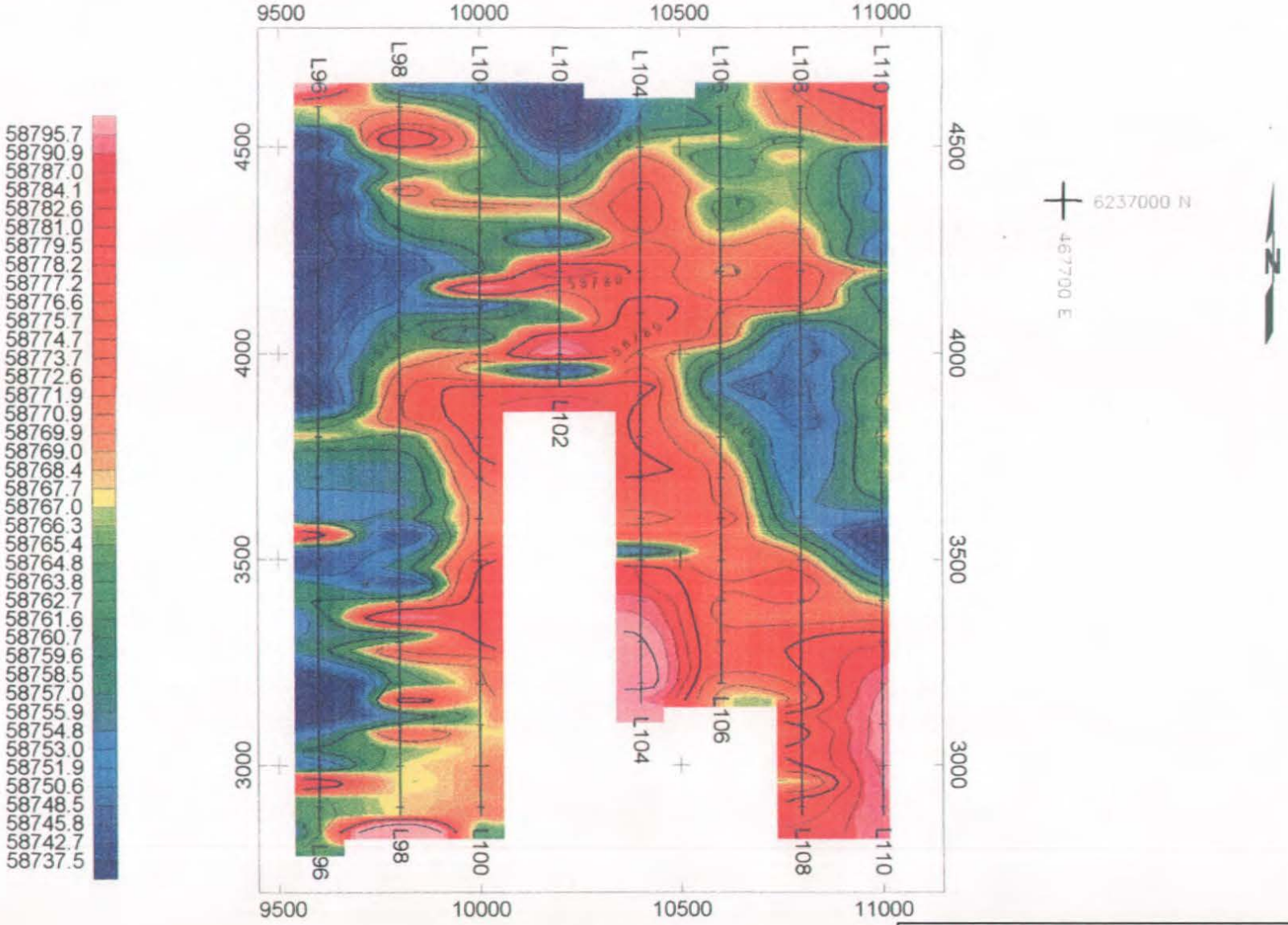
Isomagnetic contour
contour interval 5 nT

250 0.0 250
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 6
GRID C
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

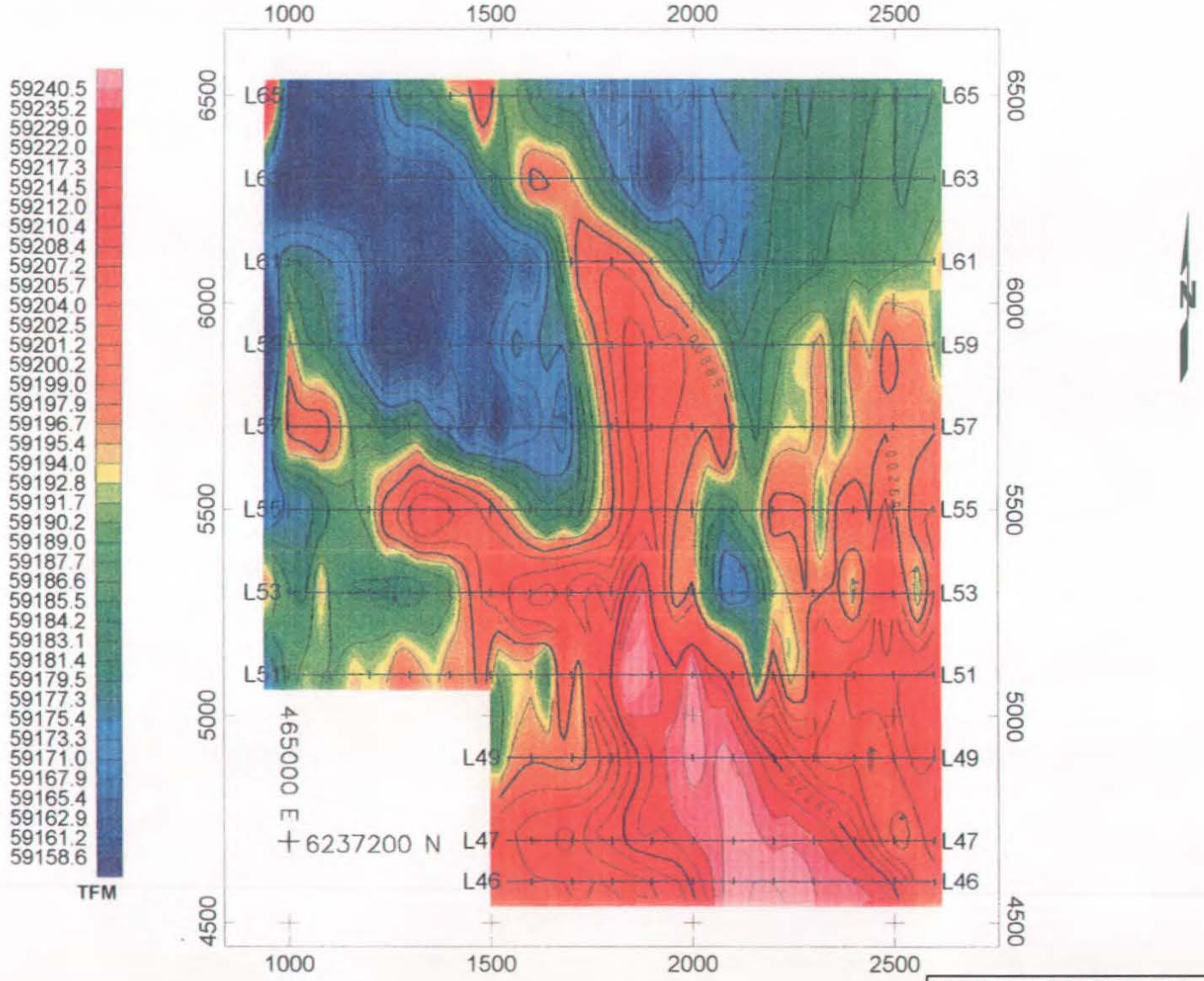
Isomagnetic contour
contour interval 5 nT

250 0.0 250 500
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 7
GRID D
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

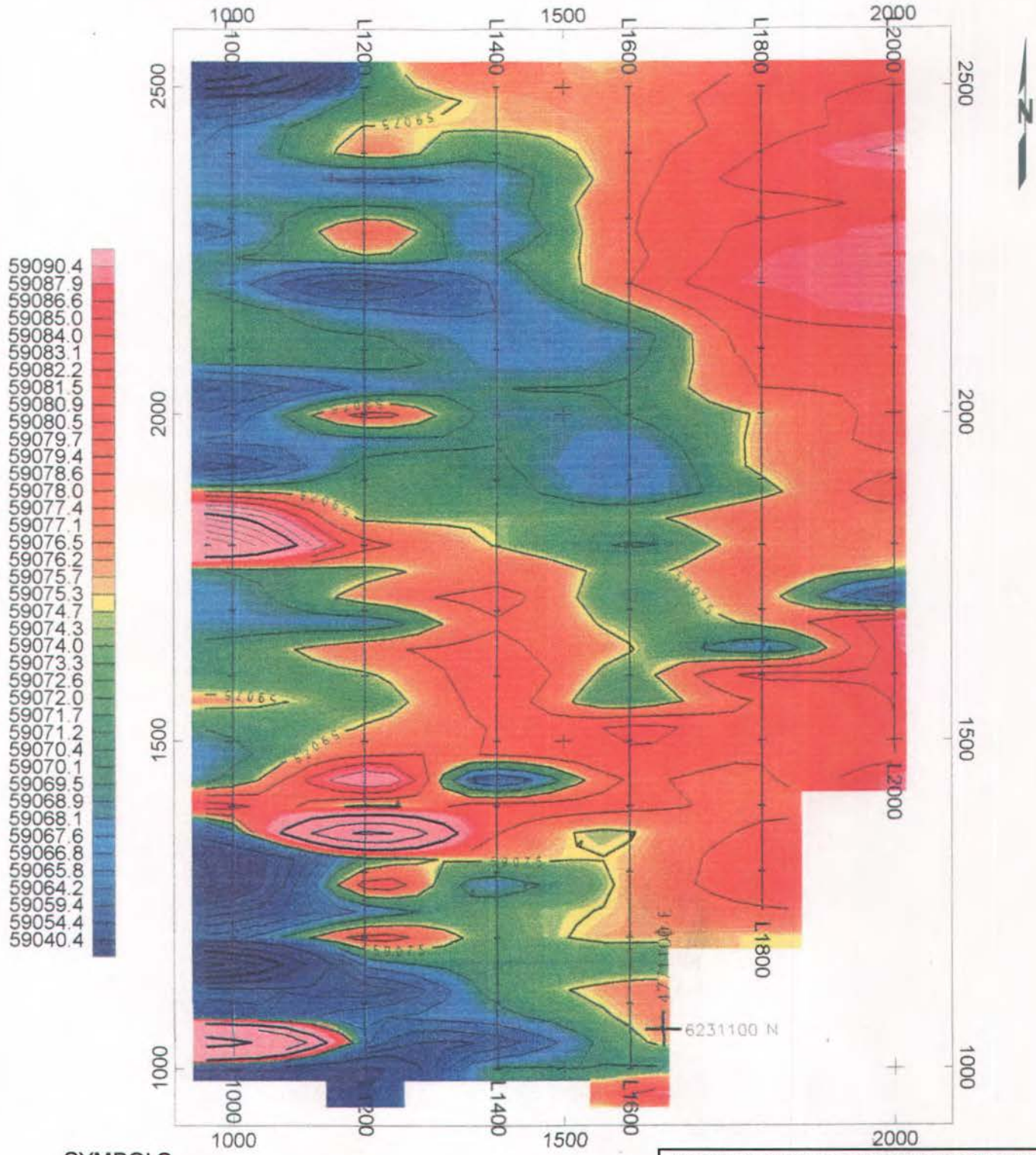
Isomagnetic contour
contour interval 5 nT

250 0.0 250 500
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 8
GRID E
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

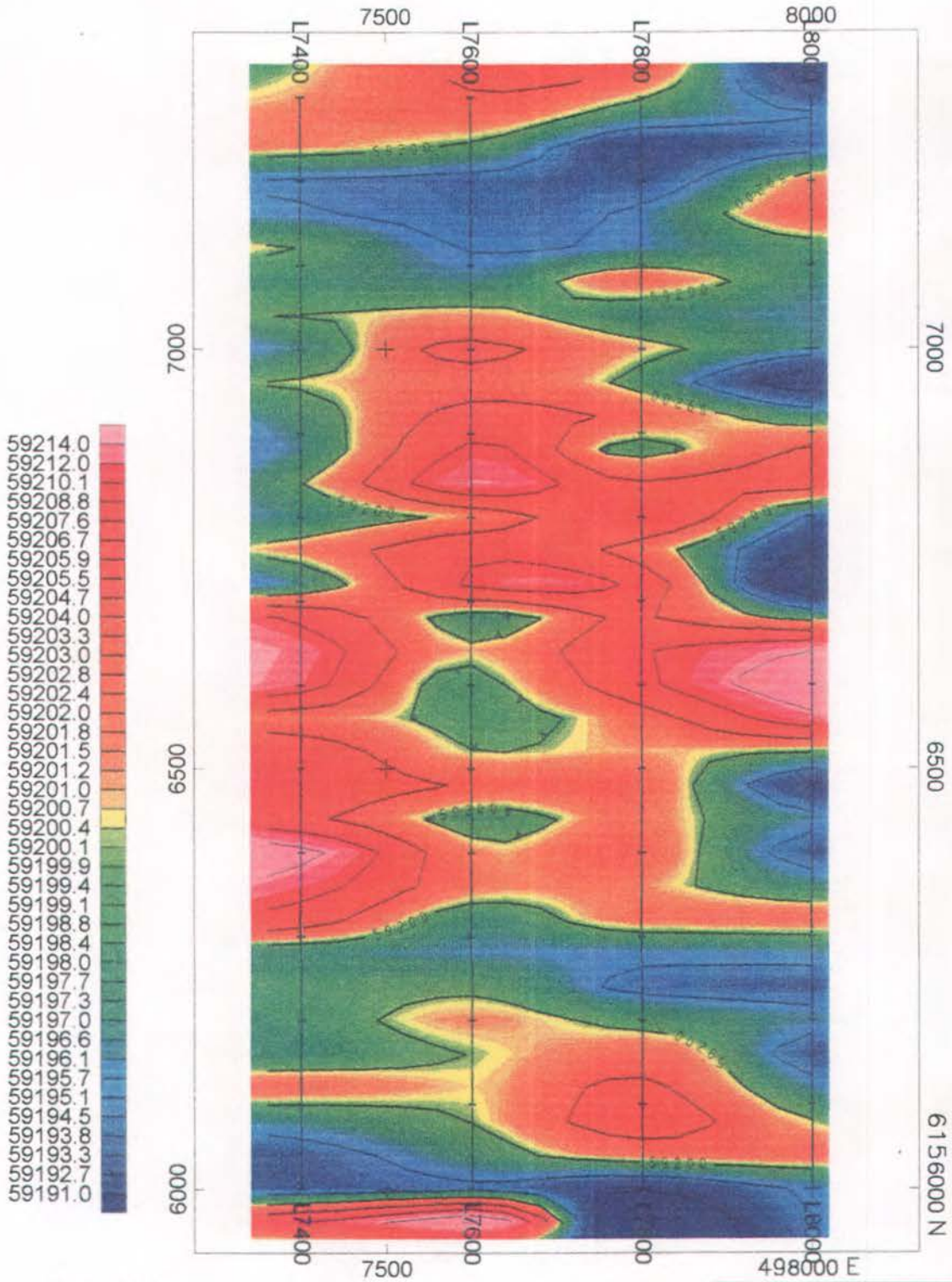
100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 9
GRID F
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

100 0.0 100 200

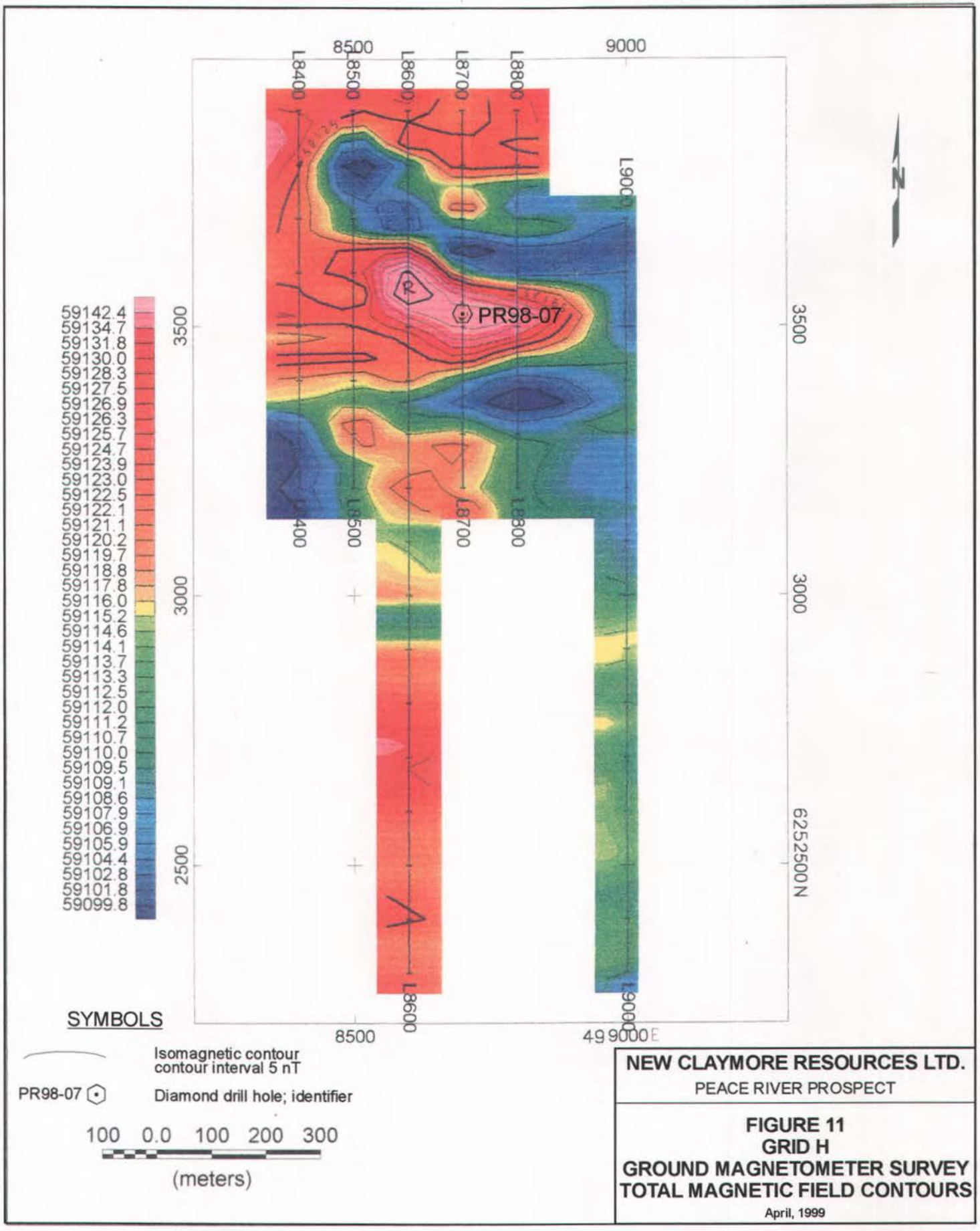
(meters)

NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 10
GRID G
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999

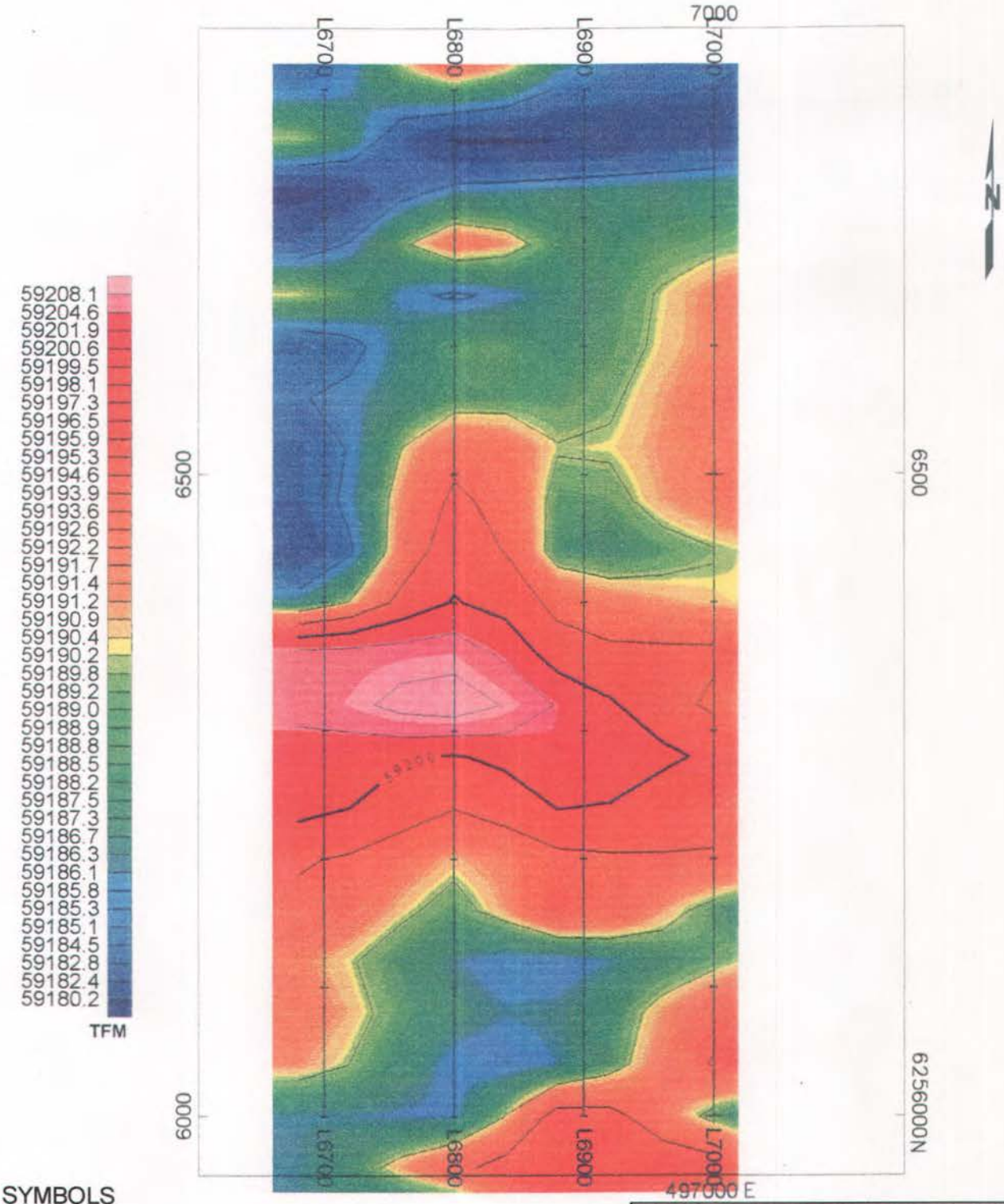


NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 11
GRID H
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



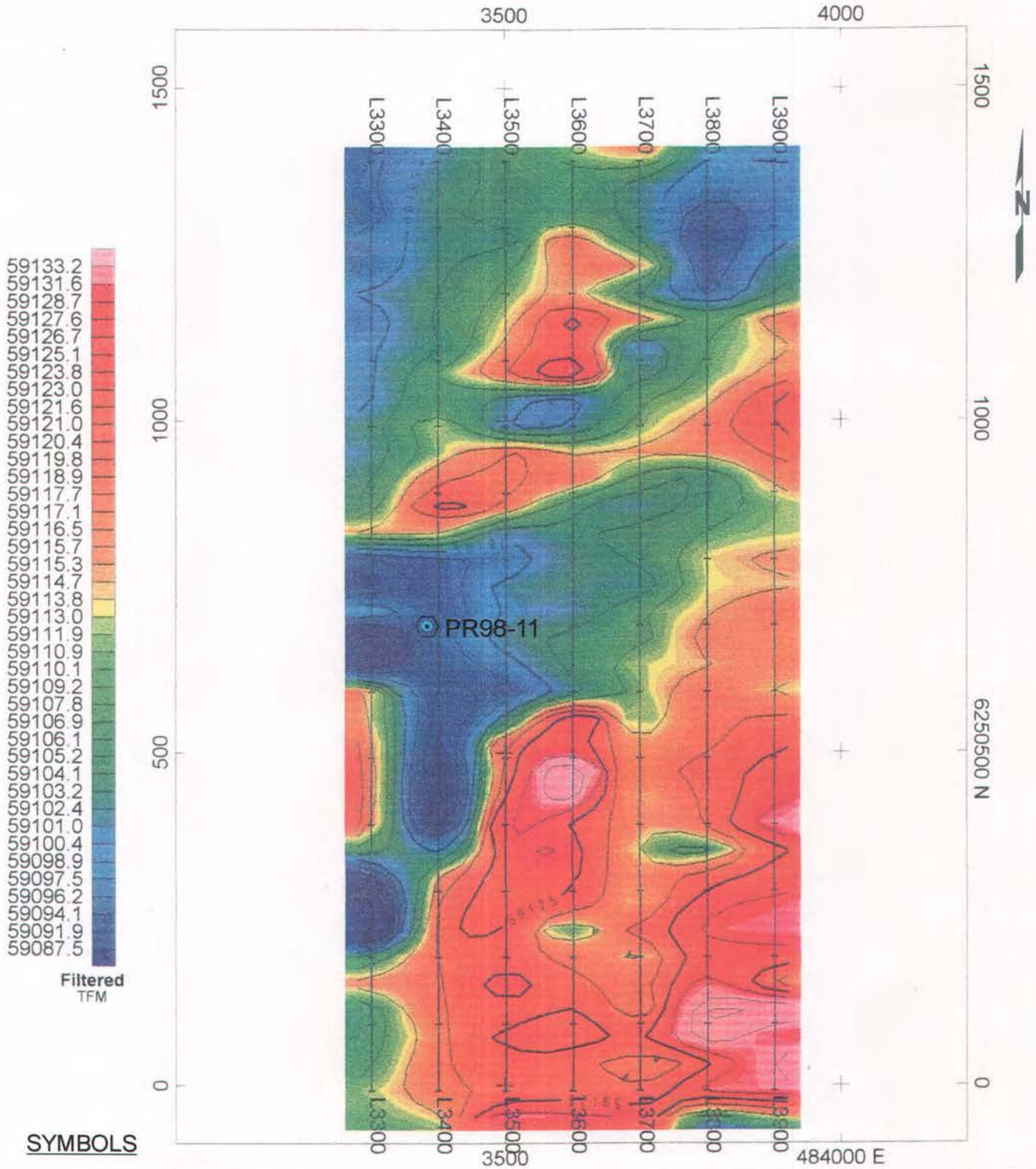
SYMBOLS

Isomagnetic contour
contour interval 5 nT

50 0.0 50 100 150
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 12
GRID I
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS
April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

PR98-11 Diamond drill hole; identifier

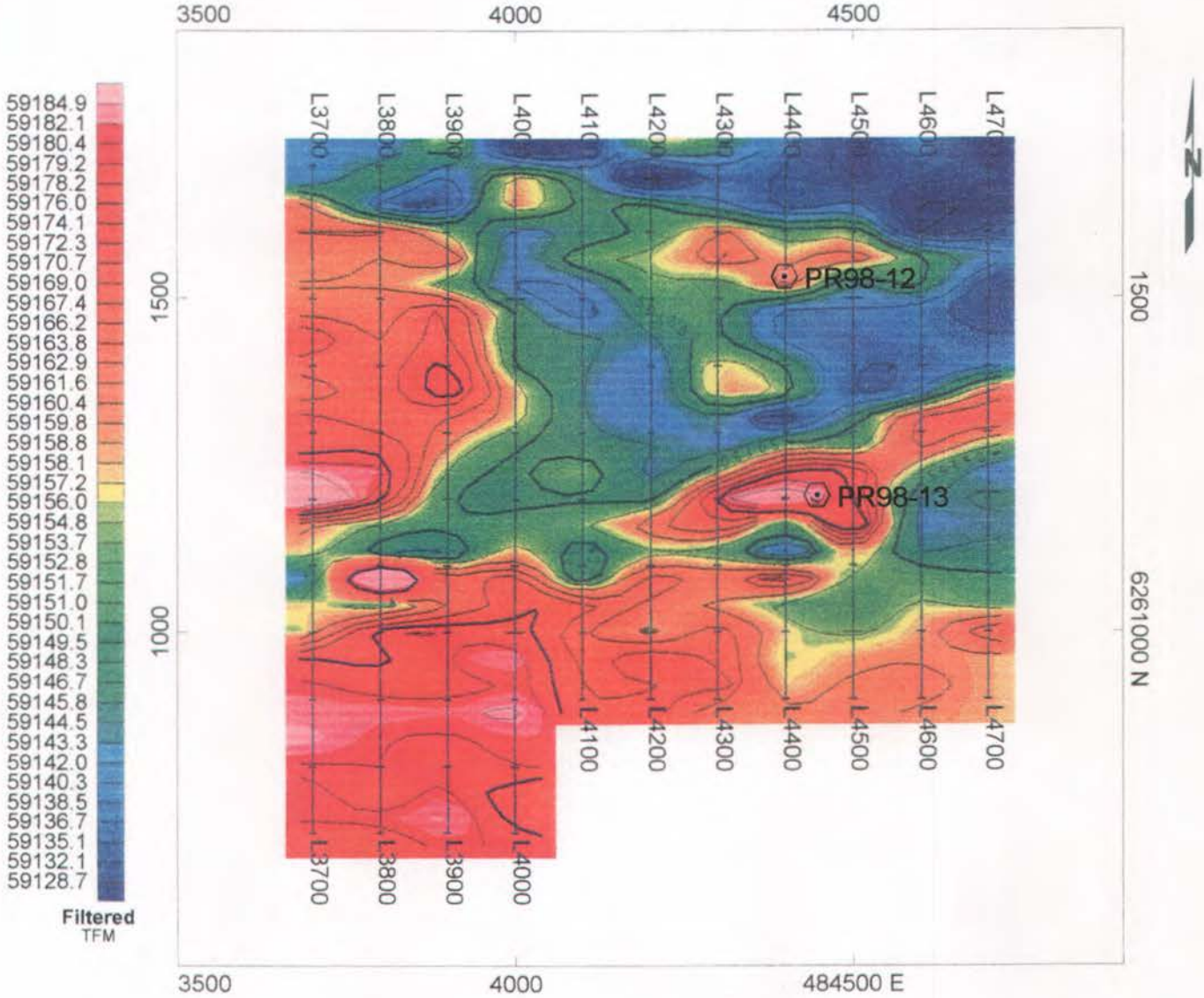
100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 13
GRID J
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

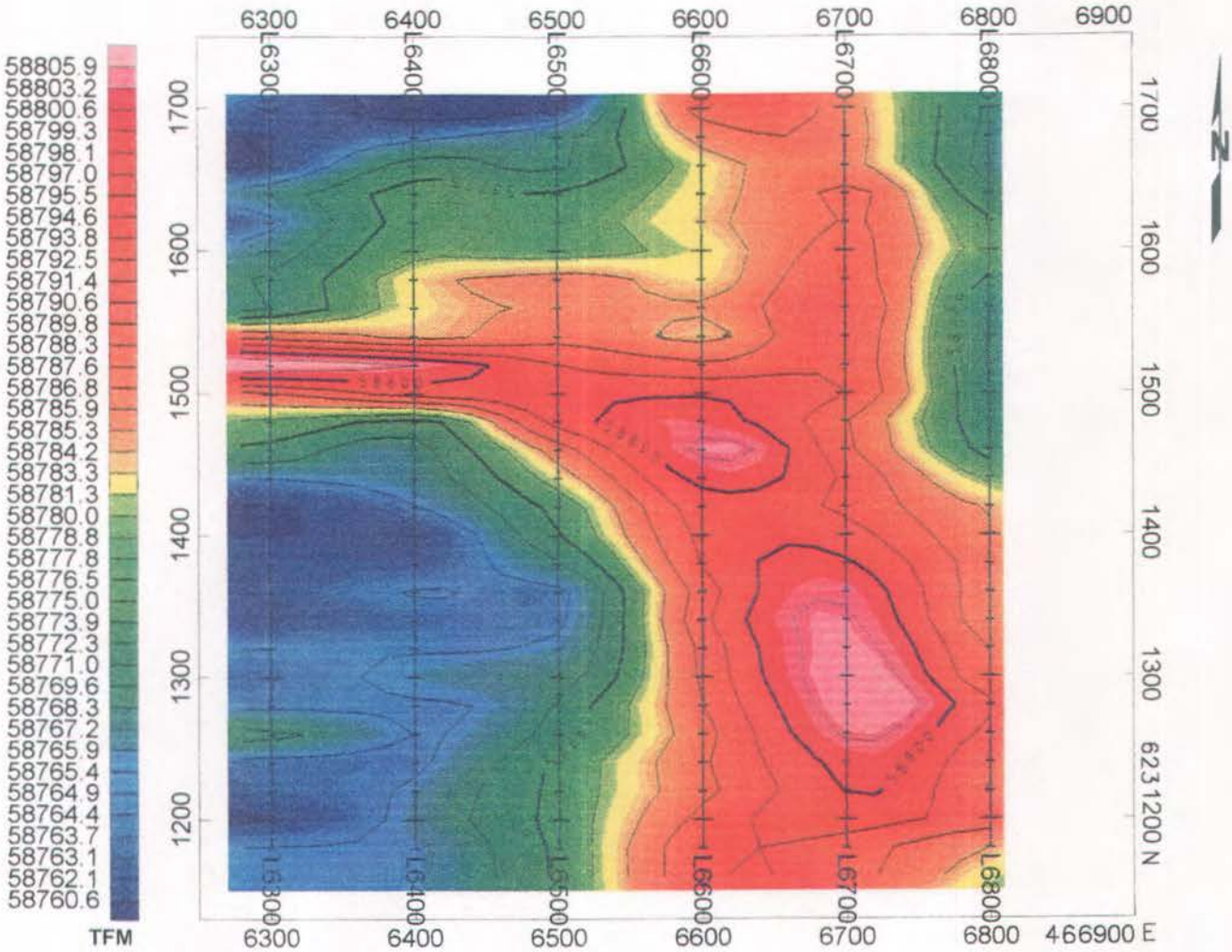
Isomagnetic contour
contour interval 5 nT

PR98-12 Diamond drill hole; identifier

100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 14
GRID K
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS
April, 1999



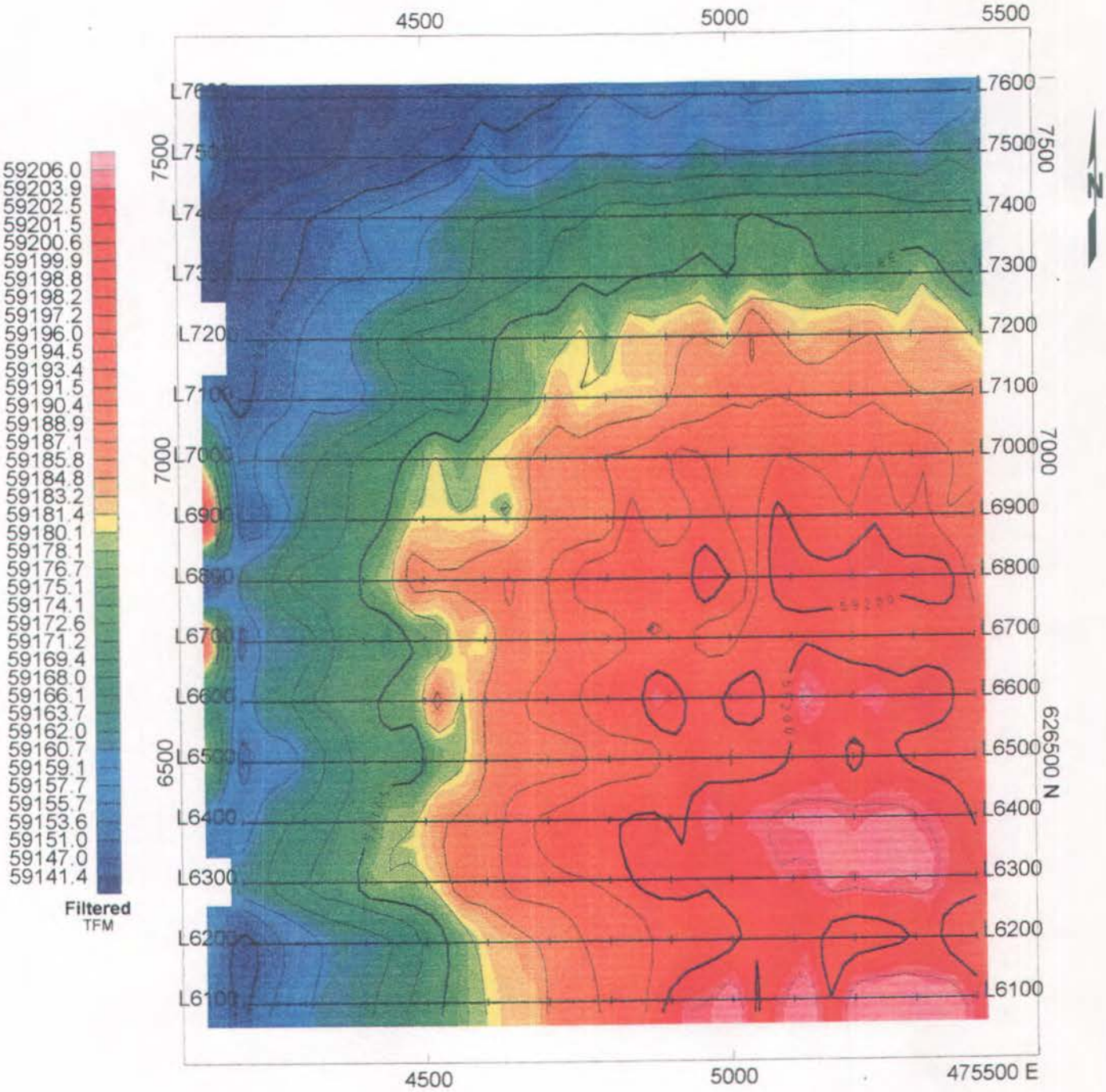
SYMBOLS

Isomagnetic contour
contour interval 5 nT

50 0.0 50 100 150
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 15
GRID L
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS
April, 1999



SYMBOLS

Isomagnetic contour
contour interval 5 nT

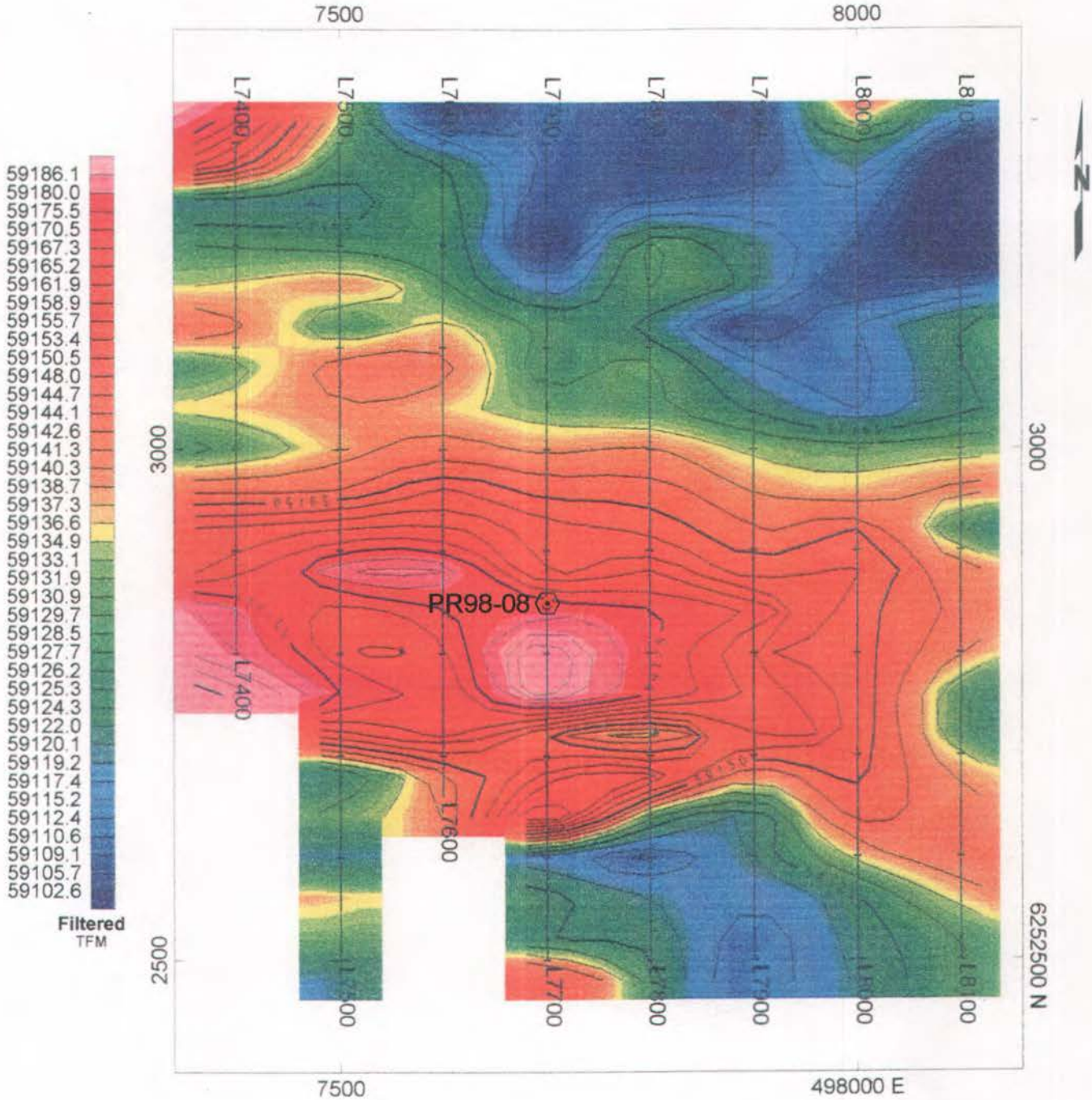
100 0.0 100 200 300
(meters)

NEW CLAYMORE RESOURCES LTD.

PEACE RIVER PROSPECT

FIGURE 16
GRID M
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999



SYMBOLS

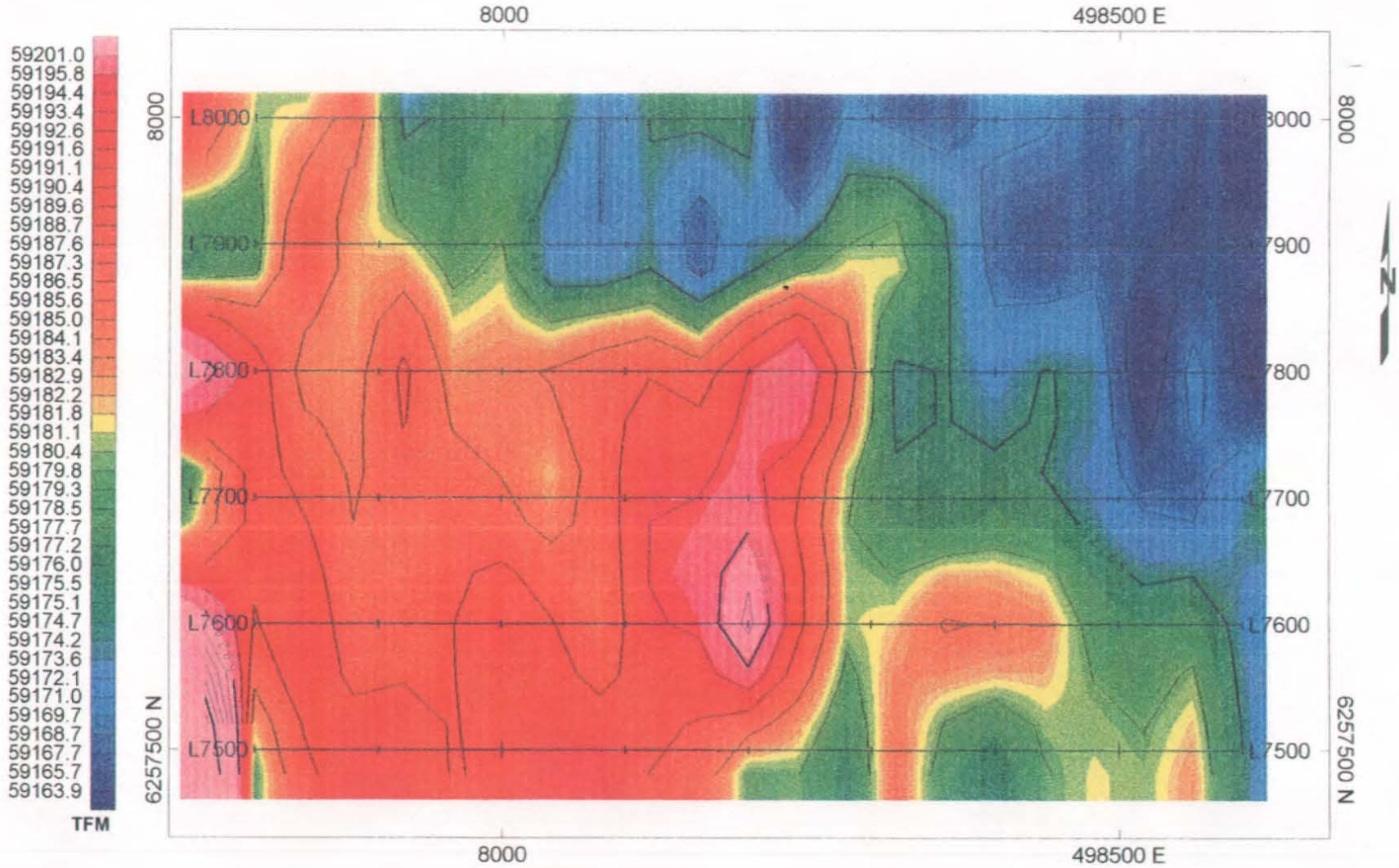
Isomagnetic contour
contour interval 5 nT

PR98-08 Diamond drill hole; identifier

100 0.0 100 200
(meters)

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 17
GRID N
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS
April, 1999



SYMBOLS

50 0.0 50 100 150
(meters)

Isomagnetic contour
contour interval 5 nT

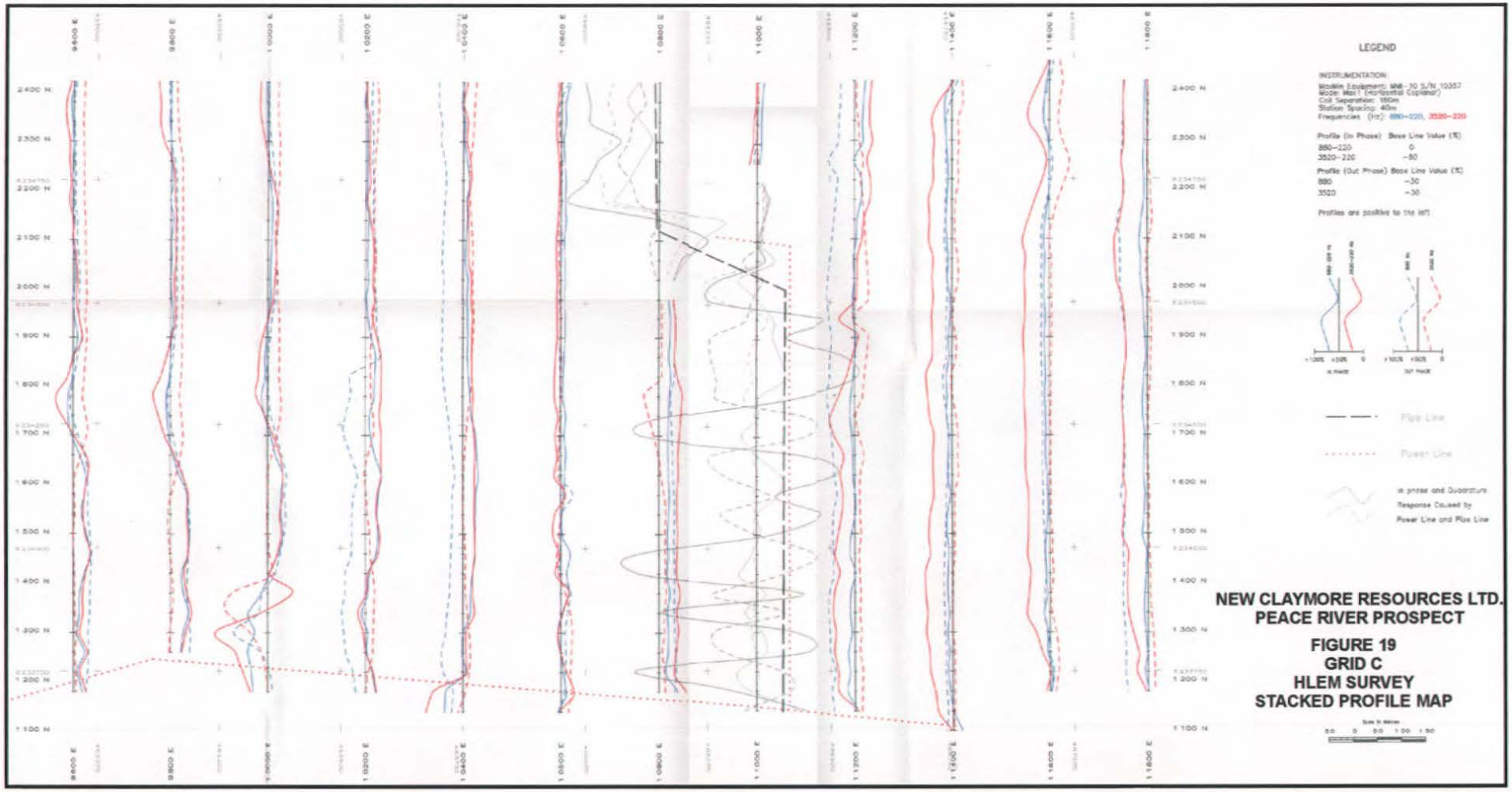
NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 18
GRID O
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

April, 1999

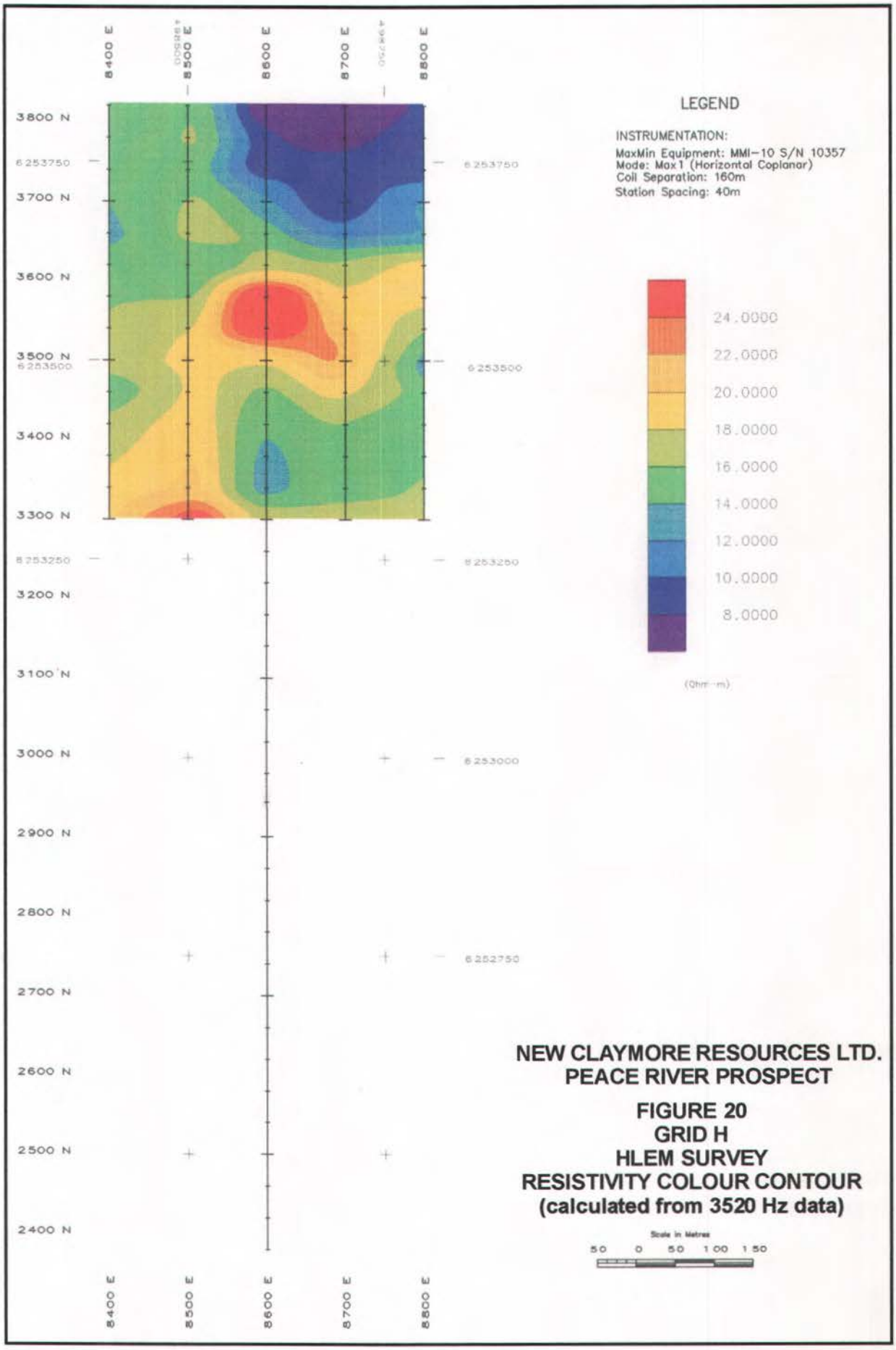
APPENDIX 3

HLEM SURVEY PROFILE AND RESISTIVITY COLOUR CONTOUR
FIGURE 19 TO FIGURE 23



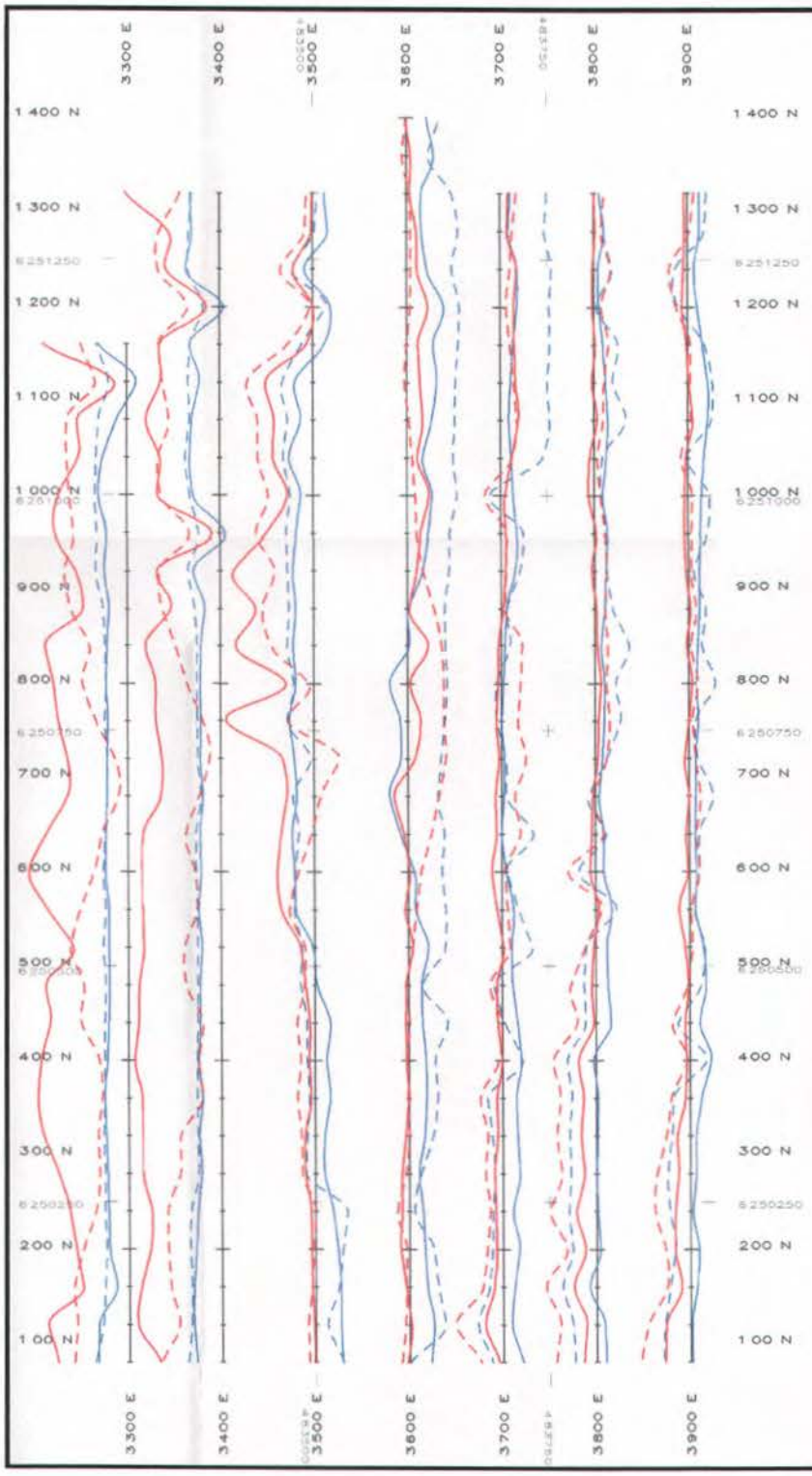
NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 19
GRID C
HLEM SURVEY
STACKED PROFILE MAP



NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 20
GRID H
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)



LEGEND

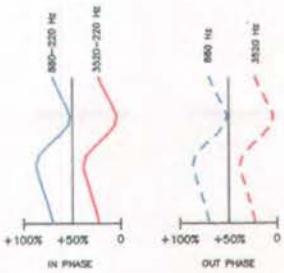
INSTRUMENTATION:

MaxMin Equipment: MMI-10 S/N 10357
Mode: Max1 (Horizontal Coplanar)
Coil Separation: 160m
Station Spacing: 40m
Frequencies (Hz): 880-220, 3520-220

Profile (In Phase)	Base Line Value (%)
880-220	-25
3520-220	-100

Profile (Out Phase)	Base Line Value (%)
880	-25
3520	-25

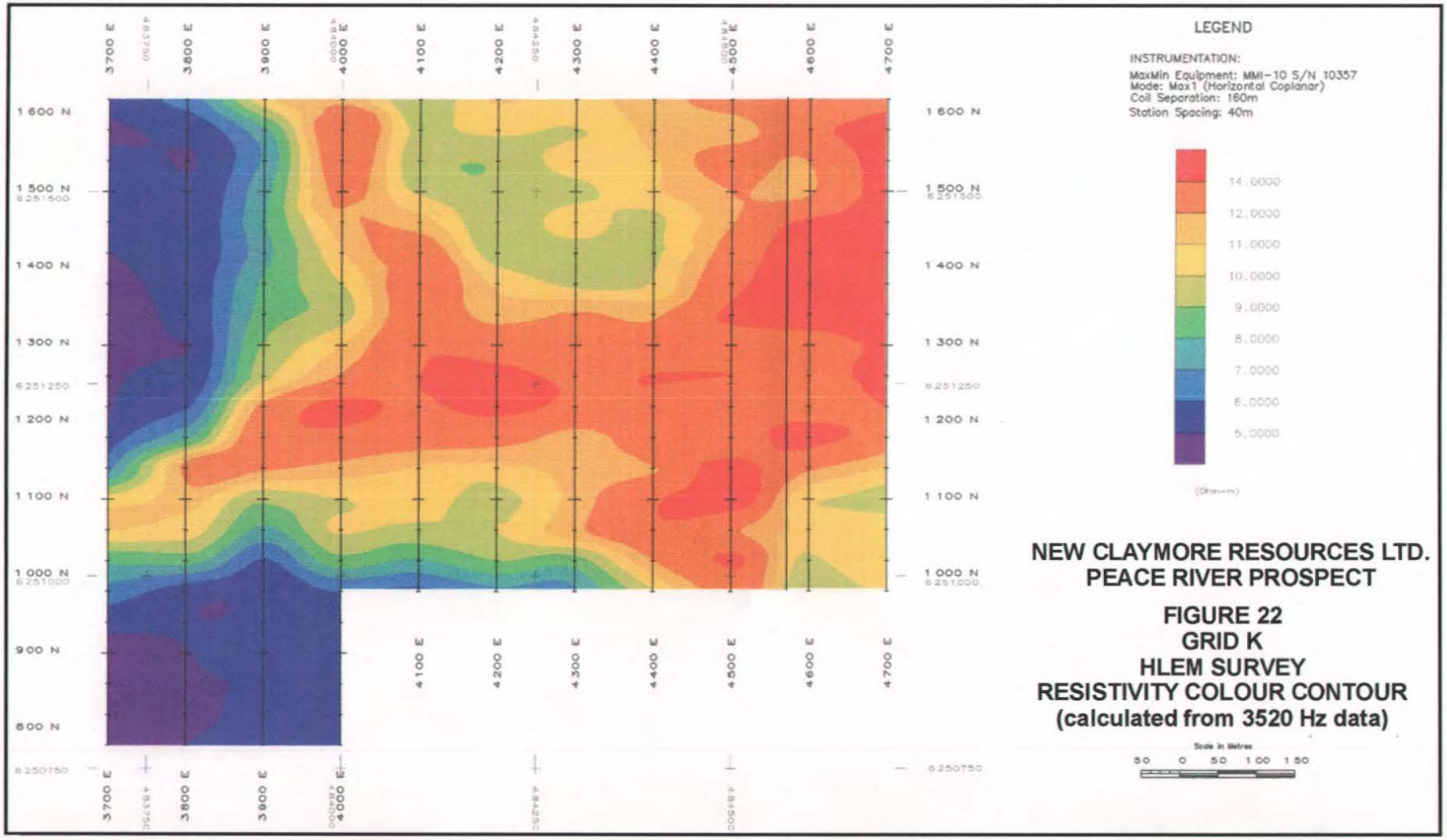
Profiles are positive to the left



NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

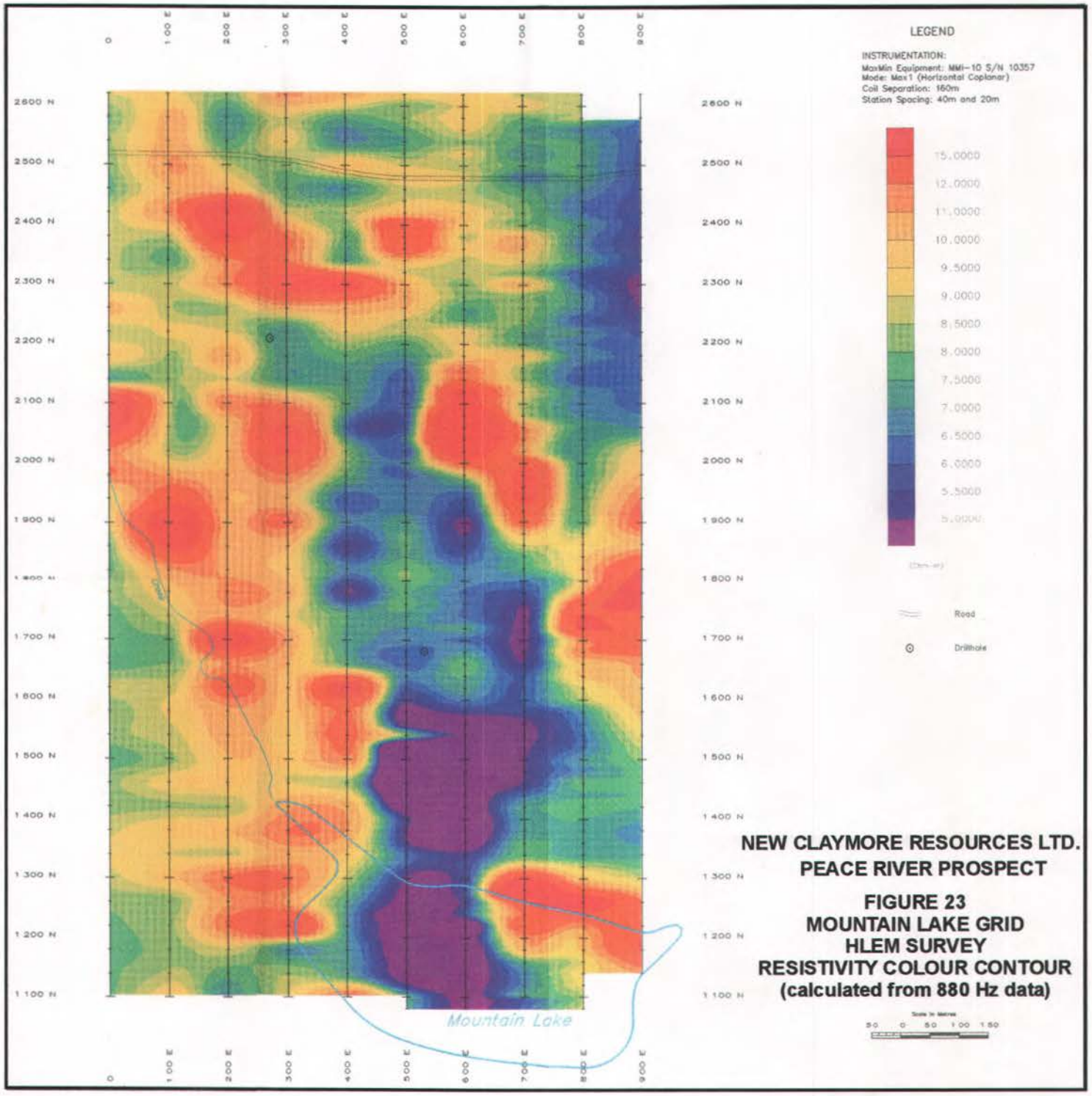
FIGURE 21
GRID J
HLEM SURVEY
STACKED PROFILE MAP

Scale in Metres
50 0 50 100 150



NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 22
GRID K
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 3520 Hz data)



NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

FIGURE 23
MOUNTAIN LAKE GRID
HLEM SURVEY
RESISTIVITY COLOUR CONTOUR
(calculated from 880 Hz data)

APPENDIX 4

DRILLING RECORD AND LITHOLOGIC DESCRIPTIONS

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Peace River	HOLE NUMBER	PR98-07		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397050010	Hole Depth:	84.43 m	Started:	Feb 05 / 98
LLD:	6-1-86-20-W5	Inclination:	-90	Completed:	Feb 06 / 98
UTM:	498700 E 6253520 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid H - L 8700 E / 3550 N	Core Size:	NQ	DIP TEST	
Elevation:	565 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	41.15	41.15	no core recovered			
41.15	47.85	6.70	shale, dark grey brown, clay rich, soft, poorly consolidated, broken 90 CA, rare whispy sand			
47.85	50.90	3.05	clay, rare quartzite pebbles			
50.90	60.35	9.45	shale, dark grey, clay rich, layers of limy sand, broken 70-80 CA			
60.35	75.90	15.55	shale, dark brown/grey, clay rich, indurated, whispy sand layers, broken 60-65 CA			
75.90	84.43	8.53	shale, clay rich, silty sand layers 65-70 CA			
84.43			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Peace River	HOLE NUMBER	PR98-08		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397050010	Hole Depth:	134.42 m	Started:	Feb 02 / 98
LLD:	2-2-86-20-W5	Inclination:	-90	Completed:	Feb 04 / 98
UTM:	497690 E 6252850 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid H - L 7700 E / 6252850 N	Core Size:	NQ	DIP TEST	
Elevation:	550 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	n/a	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	103.63	103.63	no core recovered			
103.63	121.31	17.68	shale, dark brown/black, clay rich, indurated, laminations 90 CA, frequent whispy sand laye			
121.31	134.42	13.11	shale, dark brown/black, clay rich, well indurated, laminations 90 CA, frequent whispy			
			sand layers			
134.42			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Peace River	HOLE NUMBER	PR98-11		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397050008	Hole Depth:	127.10 m	Started:	Mar 05 / 98
LLD:	9-29-85-21-W5	Inclination:	-55	Completed:	Mar 07 / 98
UTM:	483380 E 6250700 N	Azimuth:	075	Logged By:	Tom Carpenter
Grid:	Grid J - L 3380 E / 700 N	Core Size:	NQ	DIP TEST	
Elevation:	555 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	30.48	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	30.48	30.48	casing			
30.48	50.90	20.42	till, pebbles in compact dark grey/brown clay			
50.90	57.91	7.01	as above with quartzite pebbles			
57.91	94.49	36.58	shale, dark brown/grey, clay rich, soft, broken 55 CA, frequent light brown dolomite(?)			
			layers to 4 cm thick strongly indurated throughout, rare whispy sand layers			
			92.96 - 93.88 worm burrows, pyrite blebs, biotite flakes to 2 mm in diameter along			
			fracture planes			
94.49	127.10	32.61	shale, clay rich, waxy, indurated, strongly laminated 55-60 CA			
127.10			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

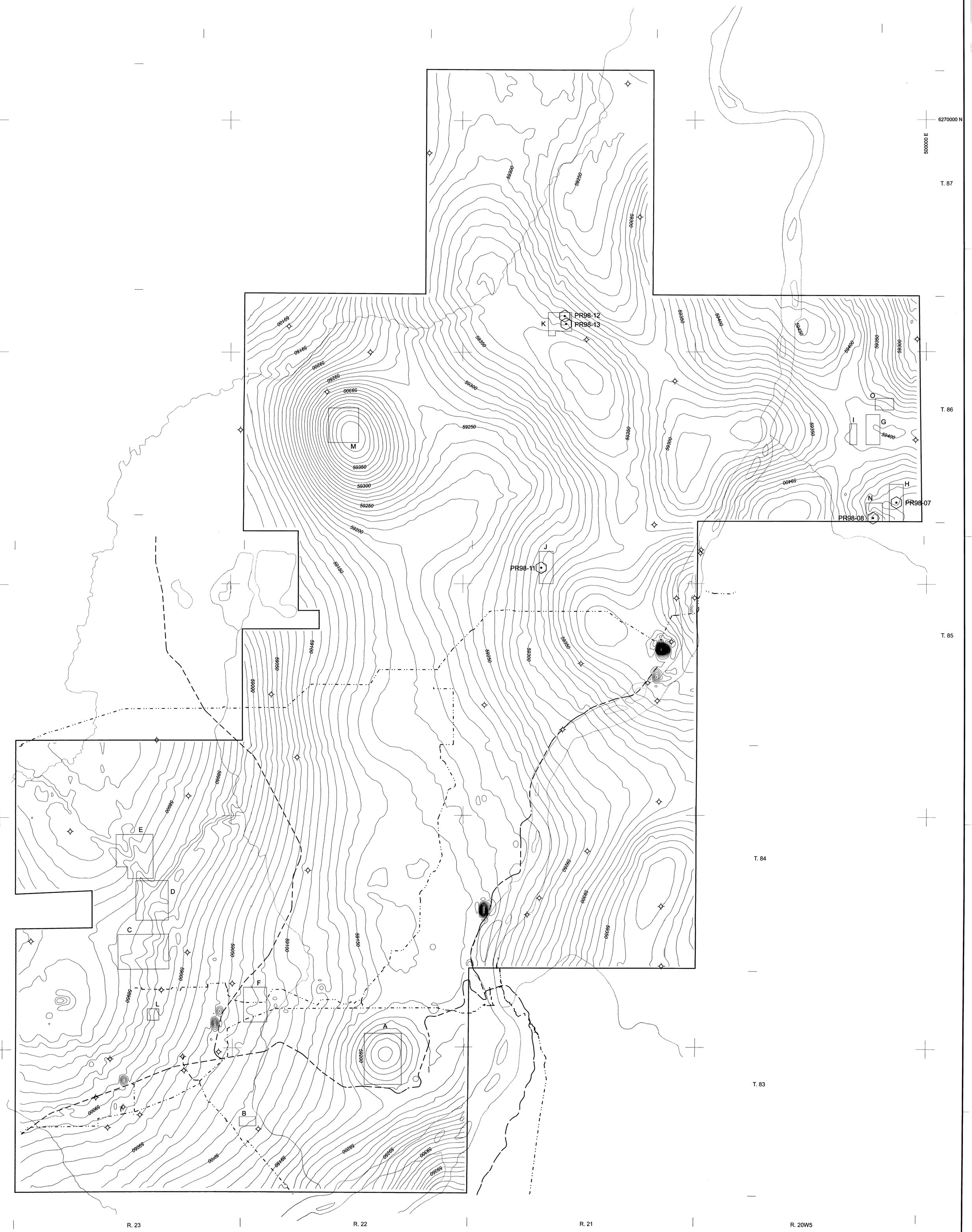
PROSPECT	Peace River	HOLE NUMBER	PR98-12		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397050011	Hole Depth:	60.96 m	Started:	Feb 14 / 98
LLD:	6-33-86-21-W5	Inclination:	-90	Completed:	Feb 15 / 98
UTM:	484405 E 6261520 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid K - L 4400 E / 1520 N	Core Size:	NQ	DIP TEST	
Elevation:	560 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	15.24	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	15.24	15.24	casing			
15.24	23.47	8.23	clay, dark grey/brown, soft, organic rich layers			
23.47	48.77	25.30	shale, dark grey/brown, clay rich, broken 80 CA, whispy sand layers 85-90 CA, possible			
			worm burrows			
48.77	60.96	12.19	shale, dark grey/brown, clay rich, strong banded 90 CA, frequent thin grey sand layers			
60.96			EOH			

NEW CLAYMORE RESOURCES LTD.
DRILLING RECORD AND LITHOLOGIC DESCRIPTION

PROSPECT	Peace River	HOLE NUMBER	PR98-13		Page 1 of 1
LOCATION		DESCRIPTION		DATE	
Permit Number:	9397050011	Hole Depth:	47.85 m	Started:	Feb 15 / 98
LLD:	2-33-86-21-W5	Inclination:	-90	Completed:	Feb 15 / 98
UTM:	484450 E 6261200 N	Azimuth:	n/a	Logged By:	Tom Carpenter
Grid:	Grid K - L 4450 E / 1200 N	Core Size:	NQ	DIP TEST	
Elevation:	560 m	Floor Height:	n/a	Type:	n/a
		Stick-up:	n/a	Depth:	n/a
CONTRACTOR	J.T.Thomas	Casing:	12.19	Angle:	n/a

From (m)	To (m)	Interval (m)	Description	Alteration	Mineralization	Sample Number
0	12.19	12.19	casing			
12.19	26.52	14.33	clay, dark grey/brown, sandy, rare organic rich layers			
26.52	29.57	3.05	rounded quartzite pebbles			
29.57	41.00	11.43	shale, dark grey/brown, clay rich, whispy sand layers with mica flakes			
41.00	47.85	6.85	shale, clay rich, strong banding 80-90 CA, whispy sand layers			
47.85			EOH			



SYMBOLS

Isomagnetic contour; contour interval 10 nT

A — Ground magnetometer geophysical grid; identifier

PR98-11 — Diamond drill hole; identifier

Oil or gas well

Pipeline

Rail line

Property boundary

0 — 5

Kilometres

UTM NAD 27 Zone 11

19990028

NEW CLAYMORE RESOURCES LTD.
PEACE RIVER PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD CONTOURS

84 C/3, C/4, C/5, C/6, C/11
April, 1999

19990020
JUN 10 1999

ASSESSMENT REPORT

KEPPLER CREEK PROSPECT

NEW CLAYMORE RESOURCES LTD.
METALLIC AND INDUSTRIAL MINERAL PERMITS
9397020030, 9397050103 to 9397050114
NORTHERN ALBERTA

Geographic Co-ordinates
56° 46' 30" to 57° 13' 00" N
116° 45' 00" to 117° 14' 00" W

NTS Map Areas
84 C/14, C/15
84 F/2, F/3

New Claymore Resources Ltd.
11003 - 84 Avenue
Edmonton, Alberta T6G 0V6

April, 1999

T. Faragher
B. Ryziuk

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SUMMARY

New Claymore Resources Ltd. Keppler Creek prospect is located about 70 km north of the Town of Peace River in north-central Alberta. The prospect is comprised of 13 Metallic and Industrial Mineral permits which encompass an area of 119,808 hectares (299,520 acres). The permits are registered in the name of New Claymore Resources Ltd.

The Precambrian basement underlying the Keppler Creek prospect is interpreted as belonging to the lower Proterozoic Buffalo Head Terrane. Bedrock geology on the prospect consists of upper Cretaceous Shaftesbury Formation marine shale conformably overlain by feldspathic sandstone of the Dunvegan Formation. Glacial till and muskeg cover most of the prospect and although the drift thickness is relatively thin, bedrock exposure is sparse and generally restricted to banks of incised river valleys. Approximately 80 km east of the Keppler Creek prospect, 31 kimberlite intrusives sourced from below the Buffalo Head Terrane intrude through a thick sequence of Phanerozoic sediments which include the Shaftesbury and Dunvegan Formations.

During the fall of 1997, Spectra Exploration Geoscience Corp. was contracted to fly an airborne magnetic survey over the Keppler Creek prospect and in the spring of 1998, Geoterrex-Dighem was contracted to fly an airborne magnetic and GEOTEM electromagnetic multicoil survey over 10 per cent of the Keppler Creek prospect; in total 9,630 line kilometers of data were collected. Interpretation of the airborne data identified 33 magnetic anomalies which may be representative of kimberlitic diatremes. During July, 1998, ground magnetometer geophysical surveys were completed over 8 airborne anomalies selected because of their magnetic and electromagnetic signatures, proximity to interpreted geologic structures, and positive topographic expressions; in total 59.1 line-km of grid surveying and 53.7 line-km of ground magnetometer geophysical surveying was completed. The ground surveys delimited 5 magnetic anomalies which warrant further investigation. Limited glacial till diamond indicator mineral sampling on the prospect recovered 64 mineral grains including 3 possible eclogite garnets, 1 possible chrome diopside, 2 possible chromites, and 58 possible picroilmenites.

Additional exploration on the Keppler Creek prospect is warranted and should include:

a) the expansion of ground geophysical grids T and O to define the limits of the magnetic anomalies;

b) ground geophysical surveying over the remaining 25 airborne anomalies;

c) systematic diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect;

d) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;

e) soil and/or loam sampling over and/or down-ice from individual anomalies accompanied by geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium;

f) acquisition of brokered seismic data over individual anomalies; and

g) drill testing of select anomalies to a depth adequate to explain the geophysical target.

INTRODUCTION

Location, Prospect Description

The Keppler Creek prospect consists of 13 contiguous Metallic and Industrial Mineral (MAIM) permits located in northern Alberta which cover an area of 119,808 hectares (299,520 acres). The prospect extends from about 56° 46' 30" to 57° 13' 00" north latitude and 116° 45' 00" to 117° 14' 00" west longitude, is located about 450 km northwest of the City of Edmonton and about 70 km north of the Town of Peace River (Figure 1). The permits, 9397020030 and 9397050103 to 9397050114, are registered in the name of New Claymore Resources Ltd. (New Claymore) and their status and location are given in Table 1 and Figure 2.

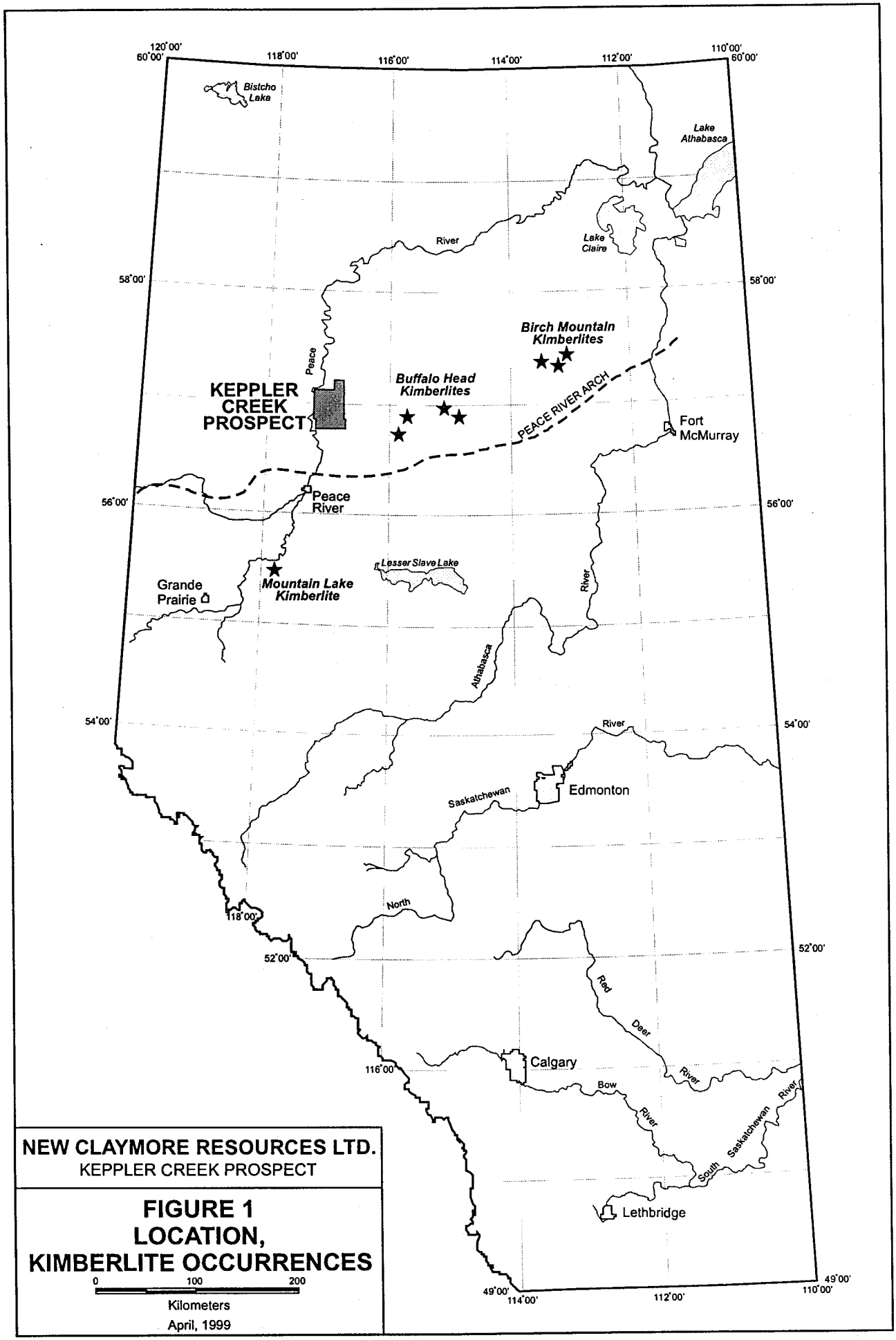
TABLE 1
MAIM PERMIT DESCRIPTION

PERMIT NUMBER	COMMENCEMENT OF PERMIT TERM	LEGAL DESCRIPTION OF LANDS	AREA OF OPTION (hectares)
9397020030	Feb 28, 1997	5-18-090: 1-36	9,216
9397050103	May 30, 1997	5-19-090: 1-36	9,216
9397050104	May 30, 1997	5-20-090: 1-36	9,216
9397050105	May 30, 1997	5-18-091: 1-36	9,216
9397050106	May 30, 1997	5-19-091: 1-36	9,216
9397050107	May 30, 1997	5-20-091: 1-36	9,216
9397050108	May 30, 1997	5-18-092: 1-36	9,216
9397050109	May 30, 1997	5-19-092: 1-36	9,216
9397050110	May 30, 1997	5-20-092: 1-36	9,216
9397050111	May 30, 1997	5-18-093: 1-36	9,216
9397050112	May 30, 1997	5-19-093: 1-36	9,216
9397050113	May 30, 1997	5-20-093: 1-36	9,216
9397050114	May 30, 1997	5-18-094: 1-36	9,216
		TOTAL	119,808

Access, Infrastructure, Physiography

Road access to the Keppler Creek prospect is via secondary highway 986 then north along logging and oil and gas service roads. Access to remote parts of the prospect is via all terrain vehicle and/or snowmachine along winter logging roads and seismic lines. Helicopter access was utilized from the Town of Peace River for the ground geophysical field work. Infrastructure in the area is centered around the Town of Peace River which includes accommodation, food, supplies, vehicles, fuel, and aircraft.

The regional physiography of the area is characterized by flat lying topography with elevations ranging between 550 m above sea level (a.s.l.) along the Peace River valley to 620 m a.s.l. within the Buffalo Head Hills. Vegetation consists of stands of spruce and poplar trees with interspersed peat bogs and muskeg.



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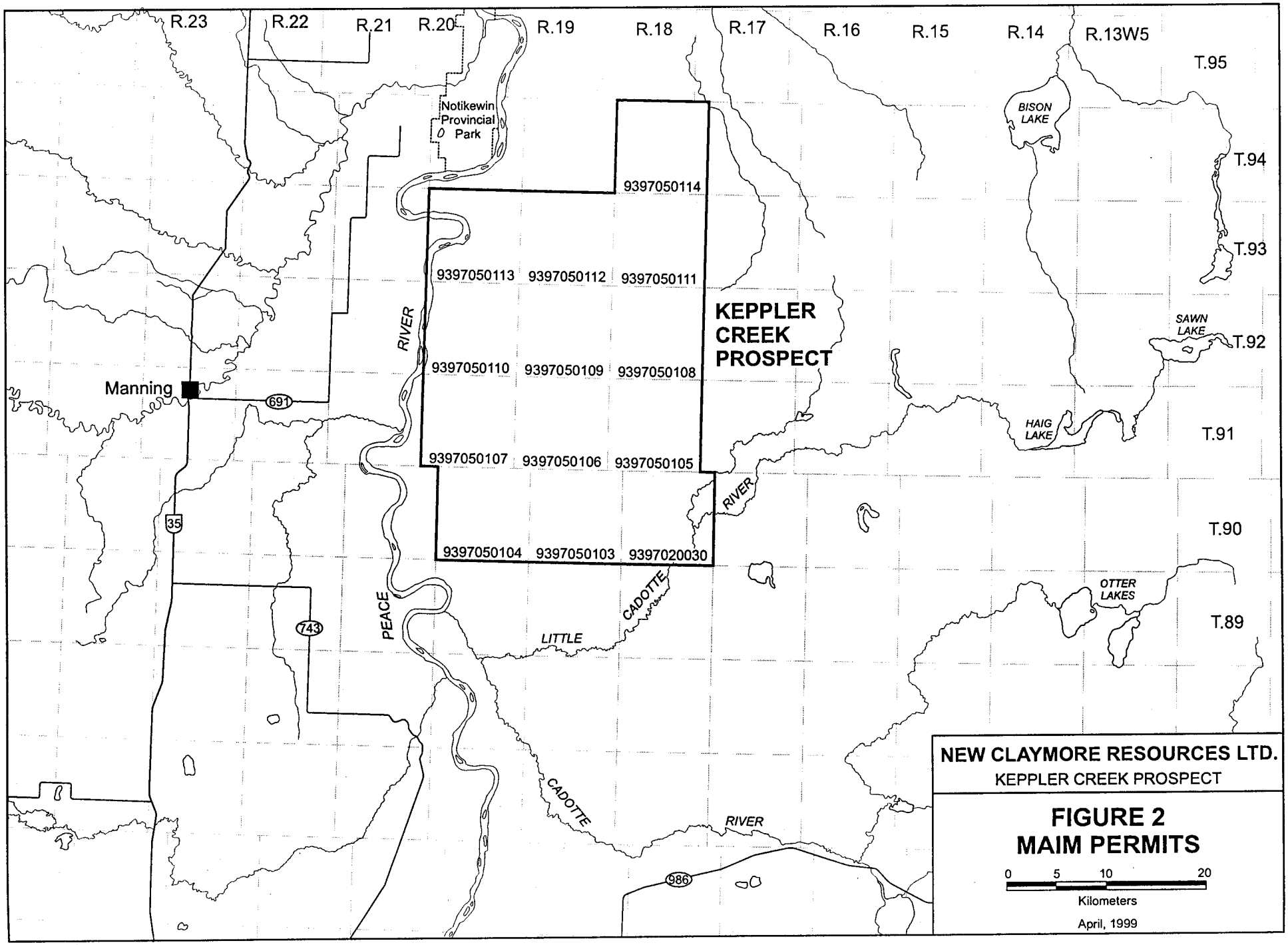
KEPPLER CREEK PROSPECT

FIGURE 1
LOCATION,
KIMBERLITE OCCURRENCES

0 100 200
Kilometers

April, 1999


R.23
R.22
R.21
R.20
R.19
R.18
R.17
R.16
R.15
R.14
R.13W5
T.95
T.94
T.93
T.92
T.91
T.90
T.89
Notikewin Provincial Park
BISON LAKE
SAWN LAKE
HAIG LAKE
OTTER LAKES
9397050114
9397050113
9397050112
9397050111
9397050110
9397050109
9397050108
9397050107
9397050106
9397050105
9397050104
9397050103
9397020030
KEPPLER CREEK PROSPECT
Manning
691
35
743
986
PEACE RIVER
LITTLE CADOTTE RIVER
CADOTTE RIVER
NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT
FIGURE 2
MAIM PERMITS
0 5 10 20
Kilometers
April, 1999

Previous Exploration

Reconnaissance diamond indicator mineral sampling has been conducted in the region of the Keppler Creek prospect by the Alberta Geologic Survey (AGS) and several private companies. Information made public by the AGS describe the discovery of several diamond indicator mineral grains including pyropic garnets, eclogitic garnets, and chromites in glacial till samples. The till samples were collected in the vicinity and in a down-ice direction from the prospect and the indicator grains could be indicative of diamondiferous kimberlites existing within an area known as the Peace River Trend (Dufresne et al., 1996). The Keppler Creek prospect exists along the northern boundary of the Peace River Trend.

Ashton Mining of Canada Inc. in partnership with Alberta Energy Company Ltd. and Pure Gold Minerals Inc. have identified 31 kimberlite intrusives within the Buffalo Head Hills of northern Alberta (Figure 1). The diamond bearing kimberlites are located about 80 km east of the Keppler Creek prospect, intrude through the Buffalo Head basement terrane, and occur within the upper Cretaceous aged Shaftesbury Formation, Dunvegan Formation, and Smoky Group sedimentary package. The kimberlites were discovered utilizing high resolution aeromagnetics (HRAM) and subsequently confirmed by diamond indicator mineral sampling, ground geophysics, and drilling.

About 210 km to the east of the Keppler Creek prospect, Kennecott Canada Exploration Inc. in joint venture with Montello Resources Ltd. and Redwood Resources Ltd. have identified 7 kimberlite intrusives within the Birch Mountains of northeastern Alberta (Figure 1). The intrusives appear to be sourced from beneath the Taltson Arc and emplaced within upper Cretaceous Smoky Group marine shales; the Taltson is a magmatic belt of strained plutonic and metasedimentary rocks of Proterozoic (2.0-1.8 Ga) age (Ross et al., 1991).

REGIONAL GEOLOGY

Basement and Prospect Geology

The Keppler Creek prospect lies near the western edge of the Western Canada Sedimentary basin and is situated near the axis of the northeast trending Peace River Arch (Figure 1). The crystalline basement underlying the Keppler Creek prospect belongs to the lower Proterozoic (2.0 to 2.4 Ga) Buffalo Head Terrane. The Buffalo Head Terrane is a magmatic belt composed predominately of felsic to intermediate metaplutonic rocks with subordinate metavolcanic rocks which were accreted approximately 2.0 billion years ago. Due to its age, thickness, and relatively stable history since accretion, the Buffalo Head Terrane is currently the focus of extensive diamond exploration in northern Alberta.

Overlying the basement rocks, a thick sequence of Phanerozoic strata exists (Table 2). Regional mapping by Green et al. (1970) shows the bedrock geology on the Keppler Creek prospect to consist of upper Cretaceous sediments including marine fish-scale bearing units and bentonites of the Shaftesbury Formation which are overlain by deltaic to marine sandstones of the Dunvegan Formation (Figure 3).

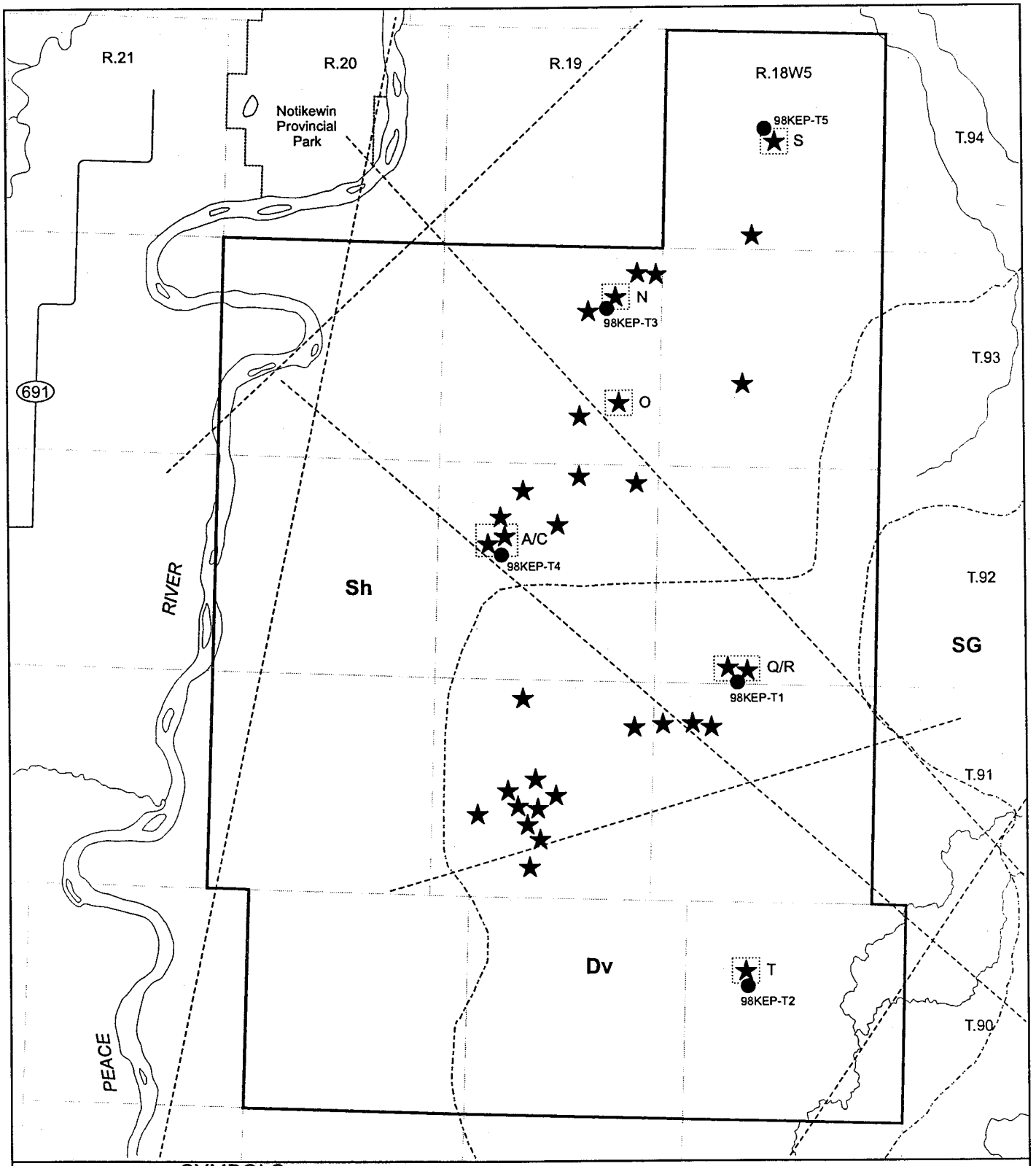
TABLE 2
REGIONAL STRATIGRAPHY

Age	Name	Description
Quaternary		unconsolidated glacial drift
Cretaceous	Smoky Group	marine shale
	Dunvegan Formation	deltaic to marine sandstone
	Shaftesbury Formation	marine shale
	Peace River Formation	shoreline sandstone, marine shale
	Spirit River Formation	marine shale
Mississippian	Banff Formation	marine limestone
	Exshaw Formation	marine limestone
Devonian	Wabamun Group	marine limestone, evaporites
	Winterburn Group	marine carbonates, siliclastics
	Ireton Formation	marine shale
	Beaverhill Lake Group	marine limestone
	Watt Mountain Formation	marginal marine shale, limestone
	Muskeg Formation	supratidal evaporites
	Keg River Formation	shallow marine limestone
	Granite Wash	
Precambrian		crystalline basement

Glacial deposits on the Keppler Creek prospect are widespread and bedrock exposure sparse. Surficial material is predominately till in the form of ground moraine and sand. Glacial fluting in the vicinity of the prospect indicate ice movement was dominantly from the north to south. On the northeastern portion of the prospect bedrock is exposed while drift thickness increases to the south and west attaining a depth of about 120 m within the Peace River valley.

Structural Geology

The Keppler Creek prospect is located near the axis of the northeast trending Peace River Arch, a tectonic zone where the crystalline basement is up to 800 m to 1,000 m above the regional basement elevation (Ross et al., 1991). The Peace River Arch has undergone periodic uplift and subsidence from the late Proterozoic until at least the late Cretaceous which has generated a zone of structural disturbance up to 140 km wide. This pattern of uplift and subsidence has imposed a structural control on the deposition of the Phanerozoic strata and caused a reticular pattern of basement faults which may not only be responsible for structurally



SYMBOLS

★ Airborne magnetic / electromagnetic geophysical anomaly

T ⬚ Ground magnetometer geophysical grid; identifier

● 98KEP-T1 Diamond indicator mineral till sample site; identifier

Interpreted geologic structure

Geologic contact:
SG - Smoky Group marine shale
Dv - Dunvegan Formation deltaic to marine sandstone
Sh - Shaftesbury Formation marine shale

NEW CLAYMORE RESOURCES LTD.

KEPPLER CREEK PROSPECT

FIGURE 3
GEOPHYSICAL ANOMALIES, TILL SAMPLES, GEOLOGY, STRUCTURE

0 5 10
Kilometers
April, 1999

controlled oil and gas pools, but may have provided potential pathways for deep-seated intrusive magmas.

During the mid Cretaceous to early Tertiary, compressive forces associated with the orogenic event which led to the formation of the Rocky Mountains caused the Peace River Arch to be emergent and caused the reactivation of many prominent basement faults; the Buffalo Head kimberlites are believed to have been emplaced during the mid- to upper Cretaceous time period. As with the Buffalo Head kimberlites, the Keppler Creek prospect is situated near the axis of the Peace River Arch and the prospect is underlain by several northwest and northeast trending basement faults noticeable on satellite imagery (Figure 3). Several prospective shallow source aeromagnetic anomalies exist on the Keppler Creek prospect in close proximity to linear topographic features which may be the surface expression of deep seated tectonic structures affecting the overlying sedimentary strata.

EXPLORATION

Airborne Geophysical Surveys

Spectra Exploration Geoscience Corp. (Spectra) was contracted by New Claymore to fly a high resolution airborne magnetic survey over the entire Keppler Creek prospect in the fall of 1997. The 8,810 line-km fixed wing survey was drape flown at 100 m terrain clearance with north-south trending traverse lines spaced at 200 m intervals. The total field magnetic data collected was then leveled, processed, and edited for cultural noise by the Geophysical Exploration & Development Corporation (GEDCO). The edited data was examined for small circular to oval shaped magnetic anomalies of limited areal extent (< 1 km) and on the basis of magnetic intensity, size, shape, interpreted depth, and relation to present day or paleodrainage, 21 geophysical targets possessing characteristics of kimberlitic diatremes were identified.

During May, 1998, Geoterrex-Dighem (Geoterrex) flew a low level fixed wing airborne magnetic and deep penetrating electromagnetic multicoil survey (GEOTEM) over 10 per cent of the prospect; the area selected for the Geoterrex survey contained the highest concentration of Gedco selected geophysical targets. The GEOTEM survey was drape flown at 120 m terrain clearance along north-south flight lines spaced at 200 m intervals; the towed magnetometer sensor height was 73 m above ground and the electromagnetic system receiver 70 m above ground. The survey totaled 820 line-km, covered 10 per cent of the prospect, and provided deep penetrating electromagnetic and refined magnetic data over 14 of the GEDCO targets.

Prior to the Keppler Creek prospect survey, an orientation GEOTEM survey totaling 1,026 line-km's was flown over an area known to contain several of the Buffalo Head kimberlites. The orientation survey detected 13 highly magnetic and strong localized resistive

features known to be kimberlites and provided valuable information toward the interpretation of the Keppler Creek prospect data. Geophysical consultant Mr. William Pelton was contracted to process and interpret the orientation and Keppler Creek GEOTEM survey data and prioritize any geophysical anomalies identified. After data processing and leveling, total magnetic field contour and flight line magnetic and electromagnetic profiles were examined for discrete geophysical anomalies of limited areal extent and on the basis of magnetic intensity, size, shape, electromagnetic signature, relation to present day or paleodrainage and interpreted regional geologic structures, 20 geophysical targets were identified which possess characteristics of possible intrusive origin. The contoured total field magnetic intensity map is contained in a map pocket at the end of the report; radar altimeter elevation, total magnetic field intensity, and X and Z channel resistivity profiles for the Keppler Creek prospect are given in Appendix 4 and for the Buffalo Head kimberlites in Appendix 5.

Ground Geophysical Surveys

During July, 1998, 6 ground magnetometer geophysical surveys were completed over 8 airborne geophysical targets on the Keppler Creek prospect (Figure 3). The airborne targets identified for ground follow-up were selected based on magnetic and coincident electromagnetic signatures, proximity to interpreted geologic structures, and positive topographic expression. In total, 59.1 line-km of grid lines were surveyed and 53.7 line-km of ground magnetometer surveying completed over the 6 grid areas. After a baseline was surveyed on an individual grid, cross lines were established at 100 m intervals and on each cross line, stations were chained by topofil and marked at 25 m intervals. At 12.5 m stations along each cross line, a magnetometer reading was collected using a GEM System GSM-19 integrated Overhauser effect proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a GSM-19 basestation. The corrected magnetometer data was gridded, contoured, and used to generate Figure 4 to Figure 9 (Appendix 2).

The magnetic patterns for the 6 areas surveyed correlate with the airborne signatures and provide sharpened definition and ground verification and placement of the airborne anomalies. A review of the airborne and ground geophysical anomalies follows:

Anomaly S: a circular, 150 m diameter, 10 nT airborne anomaly associated with a weak electromagnetic resistive signature exists on a subtle, 1 km long, northeast trending, magnetically weak linear feature. The ground expression of this anomaly is also circular in shape, about 200 m in diameter with an amplitude of 40 nT with a small dipole along its northern edge (Figure 4).

Anomaly T: an isolated, 3 line, 16 nT, circular airborne anomaly associated with a weak conductive electromagnetic signature. On the ground survey, the anomaly is 20 nT in amplitude, 120 m wide, and has a westerly trend which continues past the western grid boundary (Figure 5).

Anomaly O: a large, 800 x 500 m, significant magnetic anomaly which occurs along a northwest trending structural feature. The airborne anomaly has an amplitude of 22 nT with a very steep gradient on its edges indicative of a magnetic body with a vertical orientation. On the ground, the anomaly forms a V-shape consisting of a complex of individual magnetic highs. The largest anomaly trends north-south, is 400 m long and attains a maximum amplitude of 50 nT (Figure 6). The ground anomaly maintains a steep gradient along its edges and trends to the north and west past the grid boundaries.

Anomaly A/C: constitute 2 airborne anomalies about 500 m apart situated along a northwest trending structural feature. Anomaly A is a sharp, single line, 16 nT anomaly associated with a shallow sourced resistive feature. Anomaly C is circular in shape, 150 m in diameter with an amplitude of 10 nT. On the ground survey, anomaly A is circular, 70 m in diameter with an amplitude of 60 nT with a strong dipole on its northern edge (Figure 7). Anomaly C has an irregular shape consisting of multiple magnetic highs, the largest of which attains an amplitude of 40 nT.

Anomaly N: a series of aeromagnetic highs along a northeast trending linear 1,000 m long x 250 m wide. The maximum amplitude of a single anomaly is 14 nT and the magnetic feature corresponds with a broad electromagnetic conductor. The ground survey shows this anomaly is comprised of 3 linear, parallel magnetic highs characteristic of near-surface accumulations of magnetic minerals in paleochannel or glacial sediments (Figure 8).

Anomaly Q/R: exist on a small topographic high situated between two northerly flowing creeks. The airborne anomalies constitute a set of magnetic lows which form a horseshoe shape and both anomalies are associated with sharp, shallow sourced electromagnetic resistive features. The distinctness of the magnetic low airborne response is diminished on the ground survey which may be the result of the anomaly being related to a large scale geologic feature which exists at depth (Figure 9).

Glacial Till Diamond Indicator Mineral Sampling

During July, 1998 glacial till samples were collected from grid areas S, T, A/C, N, and Q/R; no sample material was available at Grid O due to an extremely thick layer of organic material. Sample sites were generally located down-ice from the geophysical anomaly and at each sample site enough material was collected from a depth of 1.0 to 1.5 m to fill a 20 liter pail. Processing of the samples and preliminary mineral identification was performed by the Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan.

Processing and diamond indicator mineral picking by the SRC focused on the recovery of pyrope and eclogite garnet, olivine, chrome diopside, chromite, and picroilmenite mineral

grains. In total, 64 mineral grains including 4 silicates and 60 oxides were recovered from the 5 samples and identified as possible diamond indicator mineral grains; selected indicator mineral grain results are given in Appendix 3. Silicate indicator minerals including 3 possible eclogite garnets and 1 possible chrome diopside were recovered from sample 98KEP-T1 (Grid Q/R). Oxide mineral grains totaling 58 possible picroilmenites were evenly distributed between the 5 samples; 2 possible chromites were recovered, 1 from sample 98KEP-T1 (Grid Q/R) and the second from sample 98KEP-T3 (Grid N). Electron microprobing is required to determine the quantitative major and trace element chemistry of the selected grains for mineral identification and comparison to mineral compositions indicative of kimberlite and diamond inclusion chemistry.

CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of geologic and geophysical information available, it can be concluded that the Keppler Creek prospect exists in an area favourable for hosting kimberlitic intrusives. The Buffalo Head basement terrane and overlying sedimentary strata host diamond bearing kimberlites approximately 80 km to the east of the prospect and geologic structures believed to be associated with the emplacement of the intrusives exist within or near the Keppler Creek prospect. Interpretation of aeromagnetic and electromagnetic geophysical data, digital elevation models, and Landsat imagery has identified 33 geophysical targets which may be suggestive of kimberlitic intrusives. Ground geophysical surveys conducted over 8 of the airborne targets confirm the presence of 5 magnetic anomalies which warrant further investigation.

Additional exploration on the Keppler Creek prospect to evaluate for the presence of kimberlitic intrusives is warranted and recommended. Additional exploration should include:

a) the expansion of grids T and O to define the limits of the geophysical anomalies;
b) ground geophysical surveying over the remaining 25 airborne anomalies;
c) diamond indicator mineral till sampling along east-west oriented fences which traverse the prospect;
d) electron microprobe quantitative analysis of diamond indicator mineral grains and comparison to kimberlite and diamond inclusion mineral chemistry;
e) soil and/or loam sampling over and/or down-ice from individual anomalies accompanied by geochemical analysis for elements including nickel, chromium, niobium, cesium, titanium, strontium, and magnesium;
f) acquisition of brokered seismic data over individual anomalies; and
g) drill testing of select anomalies to a depth adequate to explain the geophysical target.

STATEMENT OF EXPENDITURES, COST ALLOCATION

A statement of expenditures for work completed on MAIM permits 9397020030, 9397050103 to 9397050114 is given in Table 3 (Appendix 1); total exploration expenditures amount to $250,882.78. The Keppler Creek permits are contiguous and the dispersal of exploration expenditures is given in Table 4 (Appendix 1).

QUALIFICATIONS

I, Todd Faragher of [redacted] T7X 3N2 of the town of Spruce Grove, in the Province of Alberta hereby certify:

1) That I am a geologist residing at the above address.
2) That I graduated with a B.Sc. in geology from the University of Alberta, 1988.
3) That I have practiced my profession as a geologist from 1988 till present.
4) That this report is based upon field work completed by the author on the Keppler Creek prospect and on review of available published and unpublished reports on the prospect and surrounding area.
5) That I currently hold a stock option to purchase 16,000 common shares of New Claymore Resources Ltd. at a fixed priced set October 1, 1998.
6) That I authorize the distribution of this report by Alberta Energy at the end of a term of confidentiality of one year commencing on the date which Alberta Energy receives this report.

Signed:

[redacted]

Todd Faragher, B.Sc.

this 30 day of April, 1999

REFERENCES

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APPENDIX 1

STATEMENT OF EXPENDITURES,

COST ALLOCATION

TABLE 3
STATEMENT OF EXPENDITURES
MAIM PERMITS 9397020030, 9397050103 to 9397050114

DESCRIPTION	COST ($)	TOTAL COST ($)
Salary and Wages		
Senior Supervision	3,600.00	
Field Geologists	10,290.00	
Report Preparation	4,200.00	
Drafting	800.00	
Clerical	400.00	
		19,290.00
Field Costs		
Accommodation / Meals	2,749.28	
Field Supplies	1,455.54	
Freight	260.00	
		4,464.82
Rental Equipment		
Field Equipment Rental	367.64	
Geophysical Equipment Rental	2,430.00	
Quad Rental	1,600.00	
Vehicle Operation and Repair	1,611.46	
		6,009.10
Subcontracting Services		
Geological Consultants		
Saskatchewan Research Council	901.08	
Geophysical Contractors		
Gedco Geophysical Exploration	12,517.00	
Geoterrex	57,572.05	
Geoterrex - Ashton orientation	6,644.91	
Intrepid Geophysics Ltd.	4,500.00	
RGI Resource GIS and Imaging Ltd.	8,822.85	
Spectra Exploration Geoscience Corp.	99,600.00	
[redacted]	9,750.00	
Helicopter Contractors		
Canadian Helicopters	12,040.50	
Land Use and Permitting		
Licences / Recording Fees	~~6,500.00~~ 650.-	
Lorrnel Consultants	1,172.00	
		~~220,020.39~~ 214,170.39
Office Charges, Administrative, General		
Maps, Reports, Publications, Photographs	166.10	
Reproduction / Computer Plots	95.00	
Office / Computer Consumables	22.50	
Computer Usage / Programs	210.00	
Communication - telephone, fax	36.12	
Postal, Courier, Freight	48.75	
Office Overhead	520.00	
		1,098.47
TOTAL		~~250,882.78~~ 245,032.78

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

Signed: [redacted]

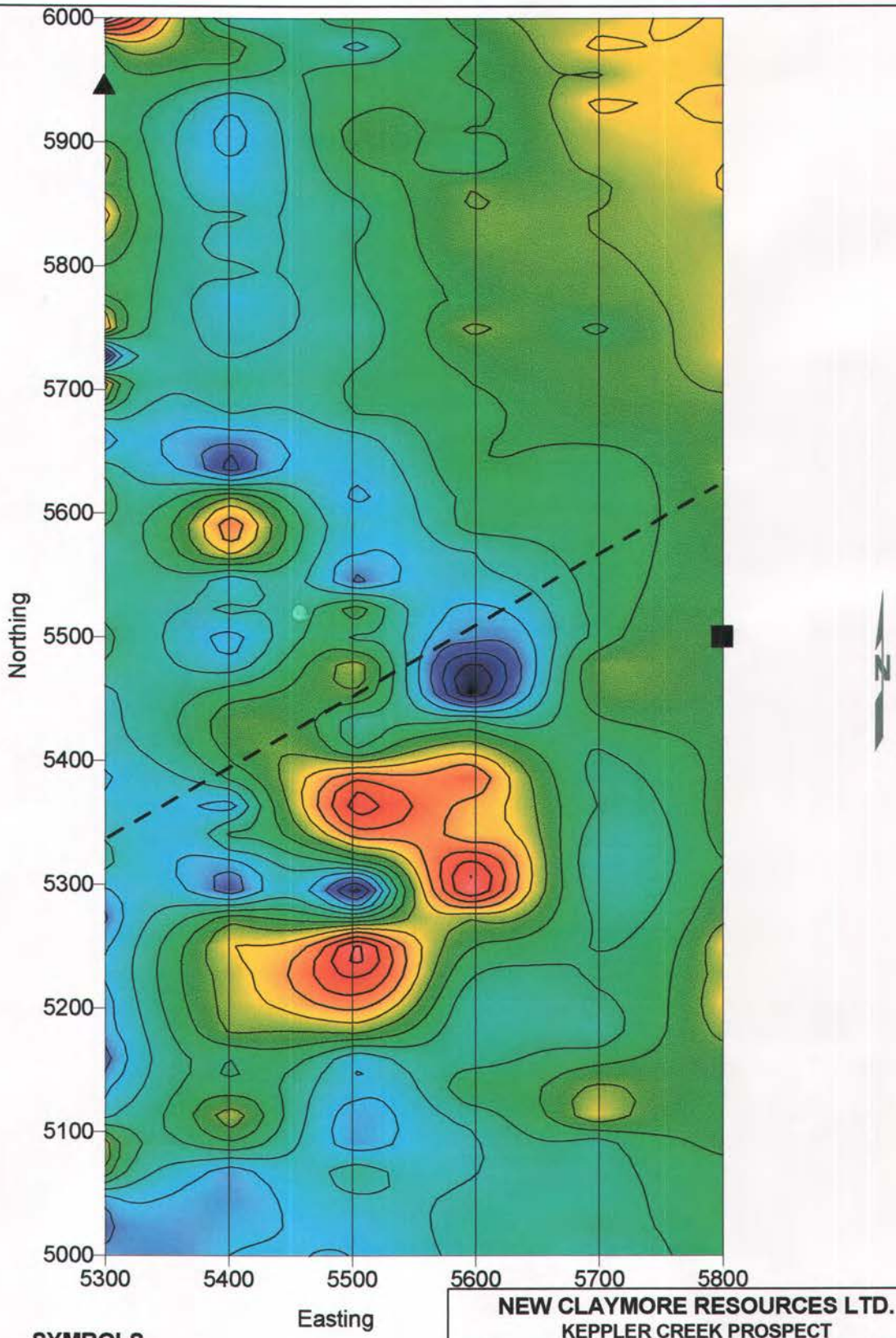
TABLE 4
COST ALLOCATION
MAIM PERMITS 9397020030, 9397050103 to 9397050114

MAIM Permit Number	Permit Area (ha)	Permit Commencement Date	Assessment Work Requirement ($ / ha)	Assessment Amount Due ($)	Exploration Expenditures ($)	Assigned Assessment Amount ($)
9397020030	9,216	February 28, 1997	5.00	46,080.00		46,080.00
9397050103	9,216	May 30, 1997	5.00	46,080.00		46,080.00
9397050104	9,216	May 30, 1997	5.00	46,080.00		0.00
9397050105	9,216	May 30, 1997	5.00	46,080.00		46,080.00
9397050106	9,216	May 30, 1997	5.00	46,080.00		46,080.00
9397050107	9,216	May 30, 1997	5.00	46,080.00		0.00
9397050108	9,216	May 30, 1997	5.00	46,080.00		46,080.00
9397050109	9,216	May 30, 1997	5.00	46,080.00		46,080.00*
9397050110	9,216	May 30, 1997	5.00	46,080.00		0.00
9397050111	9,216	May 30, 1997	5.00	46,080.00		46,080.00*
9397050112	9,216	May 30, 1997	5.00	46,080.00		46,080.00*
9397050113	9,216	May 30, 1997	5.00	46,080.00		0.00
9397050114	9,216	May 30, 1997	5.00	46,080.00		46,080.00*
Total	119,808			599,040.00	250,882.78	414,720.00

* denotes assessment work conducted on contiguous land.

APPENDIX 2

GROUND MAGNETOMETER SURVEY FIGURE 4 TO FIGURE 9



SYMBOLS

NAD 27 UTM co-ordinate
11V 0510884 E 6335841 N

Till sample 98KEP-T5

Seismic line

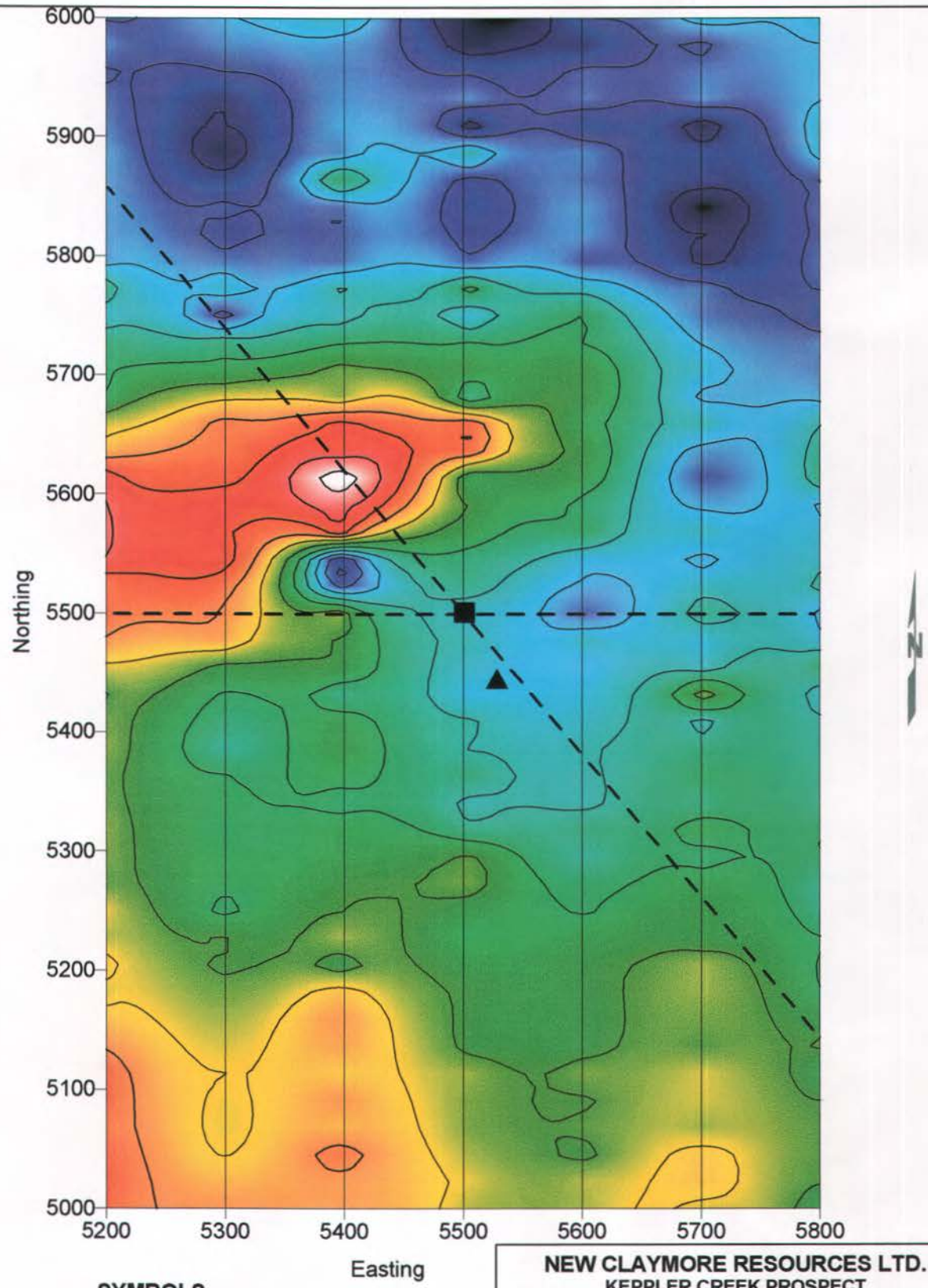
Isomagnetic contour
contour interval 10 nT

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 4
GRID S
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

■ NAD 27 UTM co-ordinate
11U 0510600 E 6298090 N

▲ Till sample 98KEP-T2

- - - - - - Seismic line

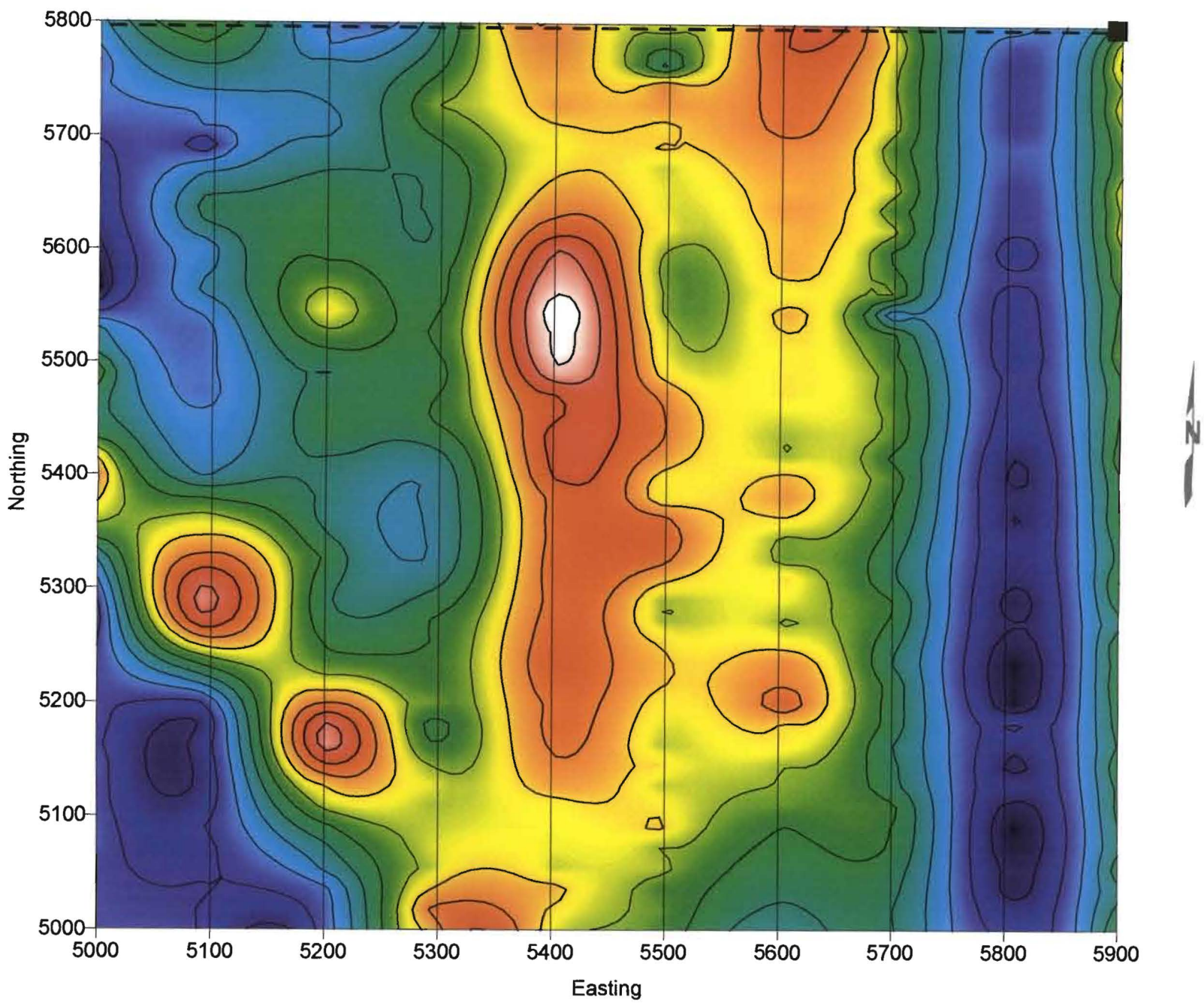
Isomagnetic contour
contour interval 5 nT

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 5
GRID T
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

NAD 27 UTM co-ordinate
11V 0504908 E 6324019 N

Seismic line

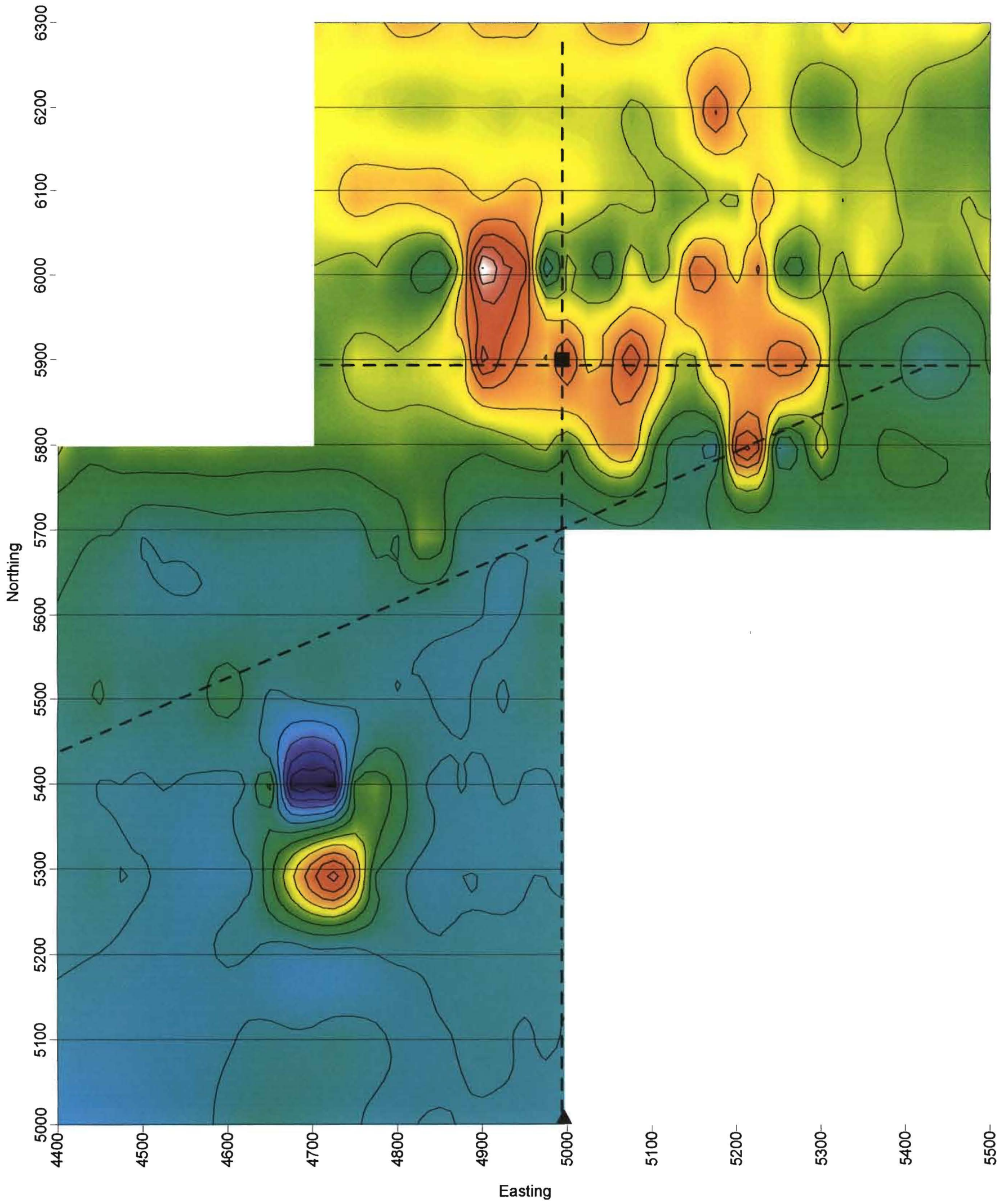
Isomagnetic contour
contour interval 10 nT

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 6
GRID O
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

NAD 27 UTM co-ordinate
11V 0499333 E 6317711 N

Till sample 98KEP-T4

Seismic line

Isomagnetic contour
contour interval 20 nT

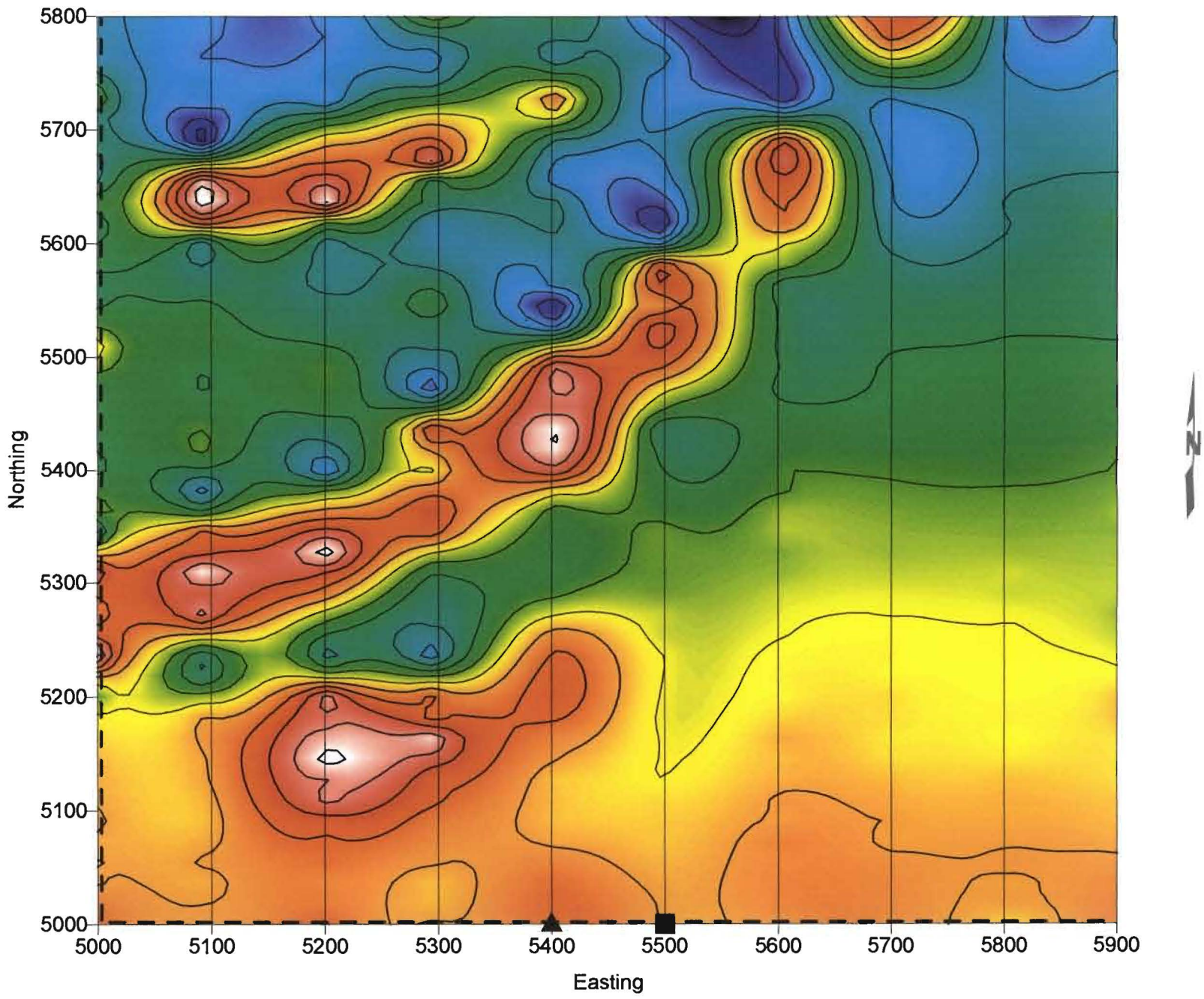
N

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 7
GRID A/C
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



SYMBOLS

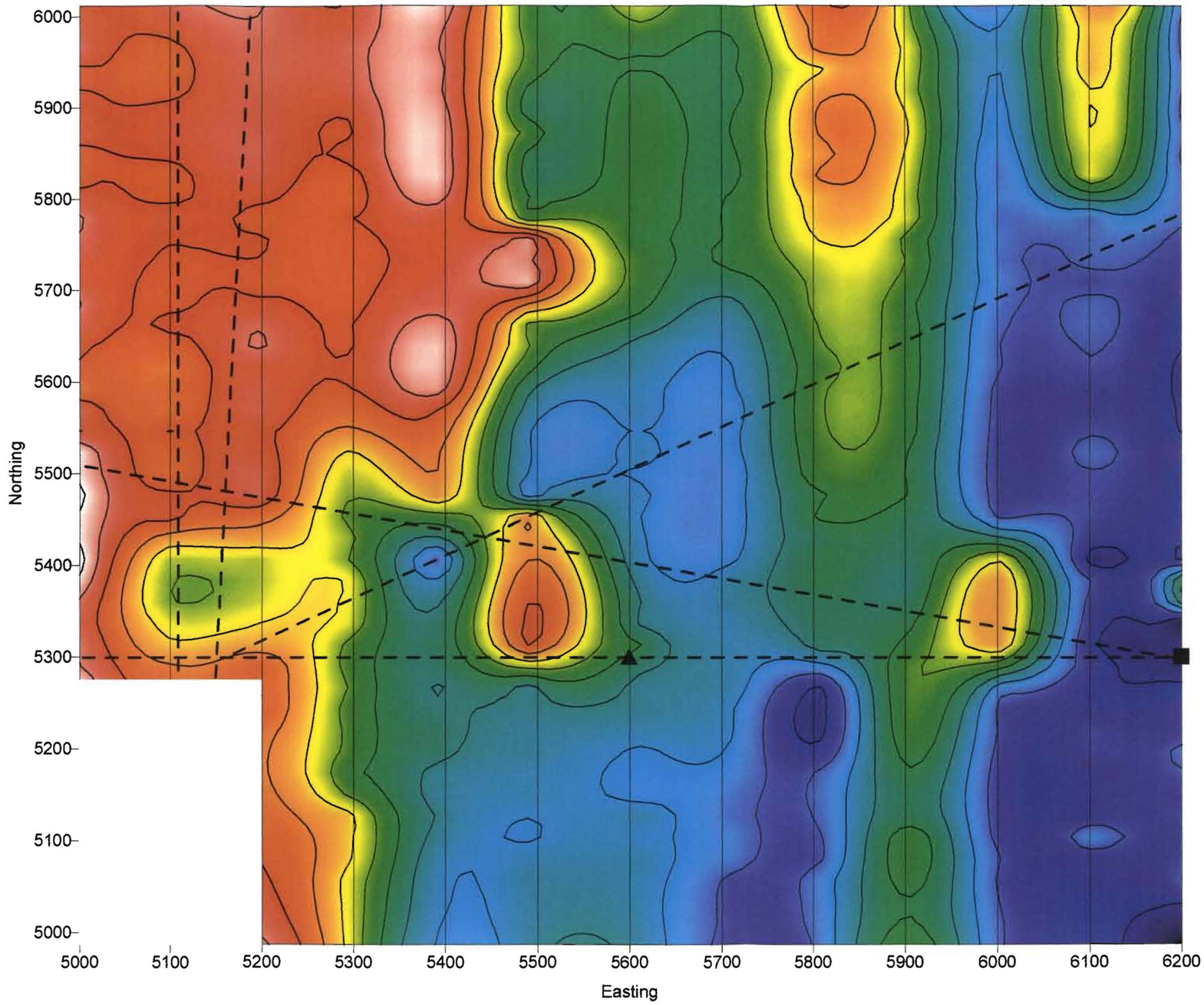
- ■ NAD 27 UTM co-ordinate 11V 0504154 E 6327780 N
- ▲ Till sample 98KEP-T3
- Seismic line
- Isomagnetic contour contour interval 10 nT

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 8
GRID N
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999



N

SYMBOLS

- NAD 27 UTM co-ordinate 11V 0510675 E 6311450 N
- Till sample 98KEP-T1
- Seismic line
- Isomagnetic contour contour interval 10 nT

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

FIGURE 9
GRID Q/R
GROUND MAGNETOMETER SURVEY
TOTAL MAGNETIC FIELD CONTOURS

Scale 0 100 200 Metres

April, 1999

APPENDIX 3

SELECTED DIAMOND INDICATOR MINERAL GRAINS

APPENDIX 3
SELECTED DIAMOND INDICATOR MINERAL GRAINS

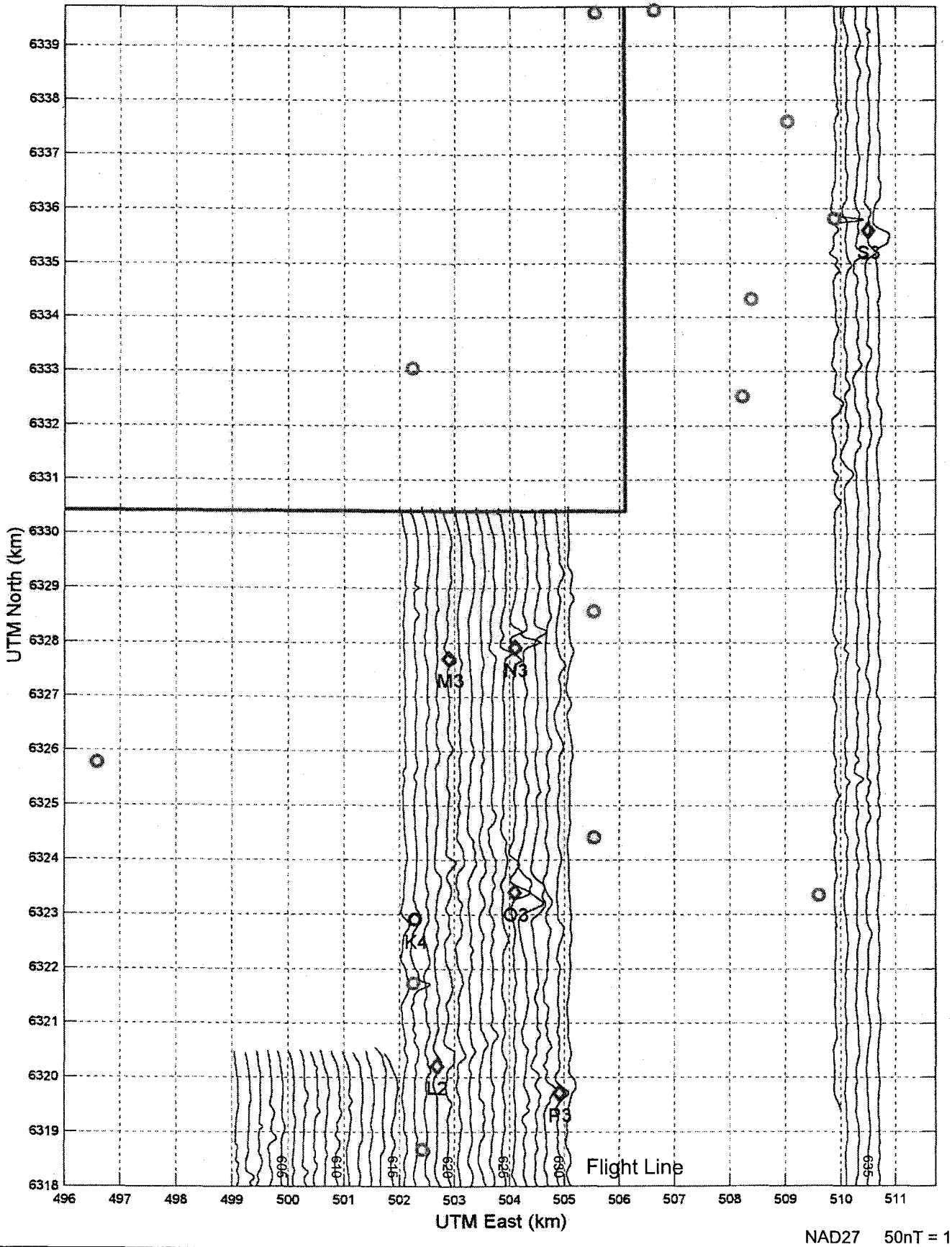
Prospect	Sample Number	UTM Coordinates		Indicator Mineral Grains											
		Easting	Northing	Pyrope		Chrome Diopside		Eclogite		Olivine		Picroilmenite		Chromite	
				Def	Pos	Def	Pos	Def	Pos	Def	Pos	Def	Pos	Def	Pos
Keppler Creek	98KEP-T1	510075	6311450	0	0	0	1	0	3	0	0	0	15	0	1
	98KEP-T2	510685	6298034	0	0	0	0	0	0	0	0	0	15	0	0
	98KEP-T3	504055	6327780	0	0	0	0	0	0	0	0	0	6	1	0
	98KEP-T4	499330	6316811	0	0	0	0	0	0	0	0	0	15	0	0
	98KEP-T5	510384	6336291	0	0	0	0	0	0	0	0	0	7	0	0

APPENDIX 4

GEOTEM MAGNETIC AND ELECTROMAGNETIC SURVEY

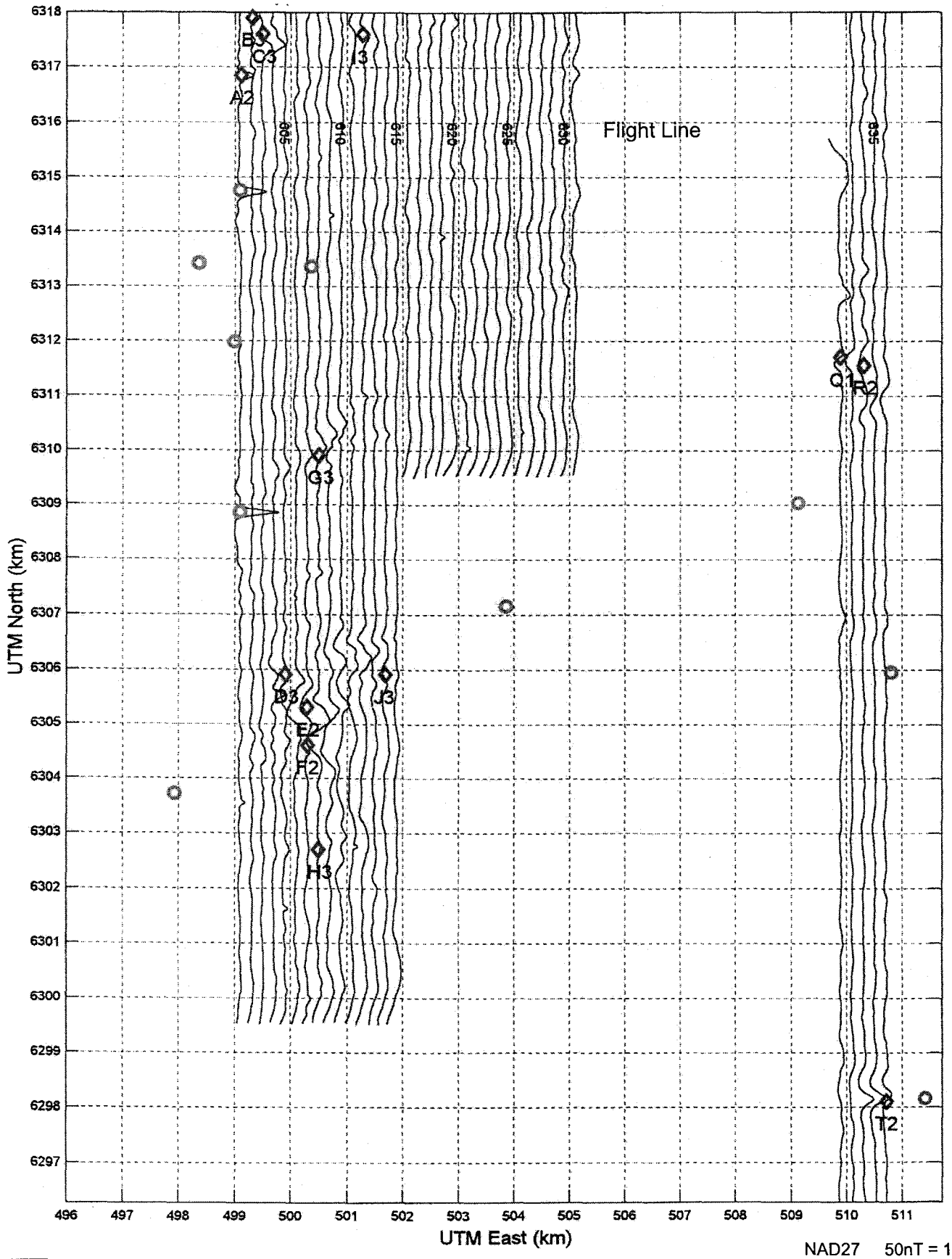
FLIGHT LINE PROFILES – KEPPLER CREEK PROSPECT

Geoterrex Survey of Keppler Creek Prospect - North Half
Total Magnetic Field Stack Plot,
Flight Line Reference For GEOTEM Survey

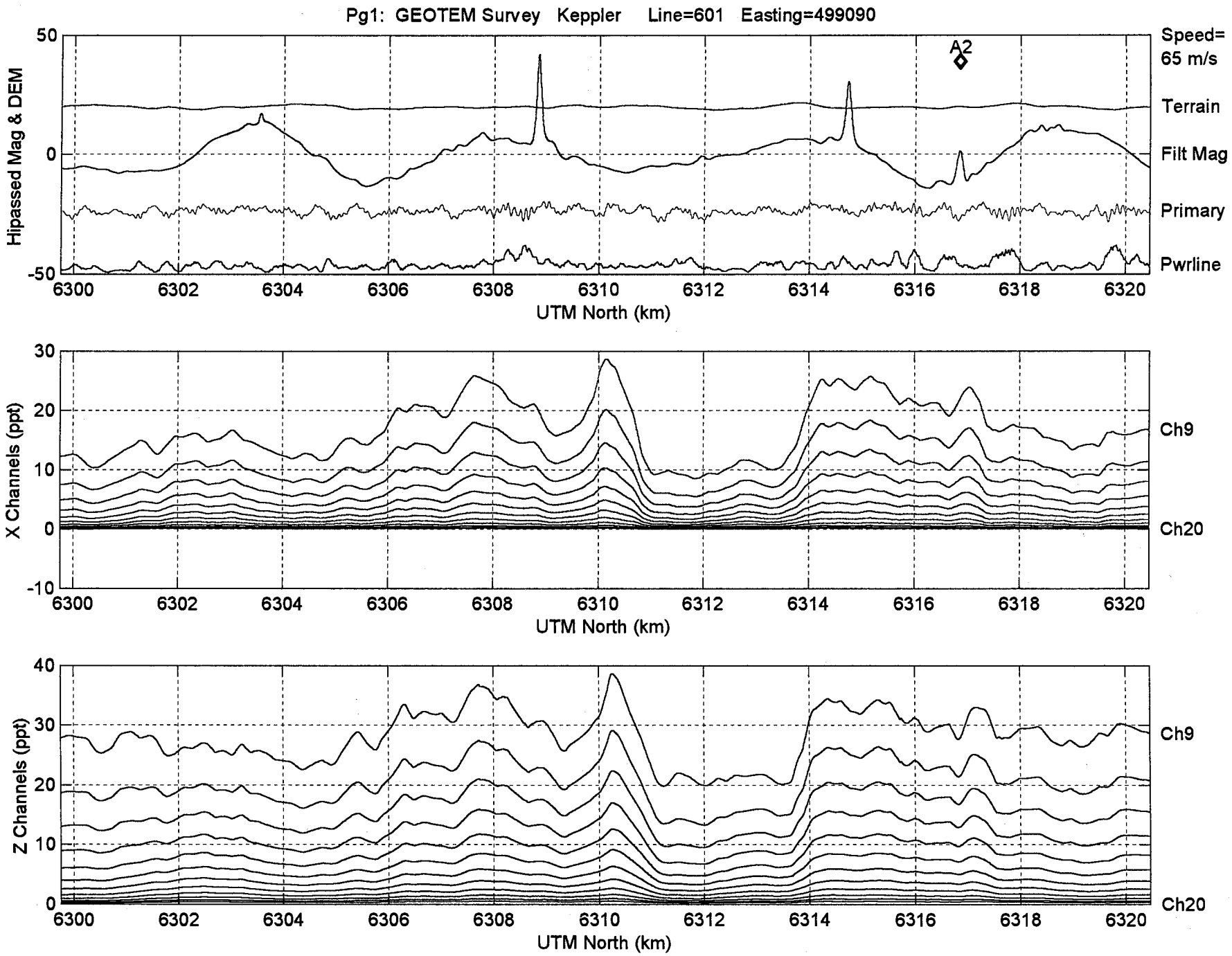


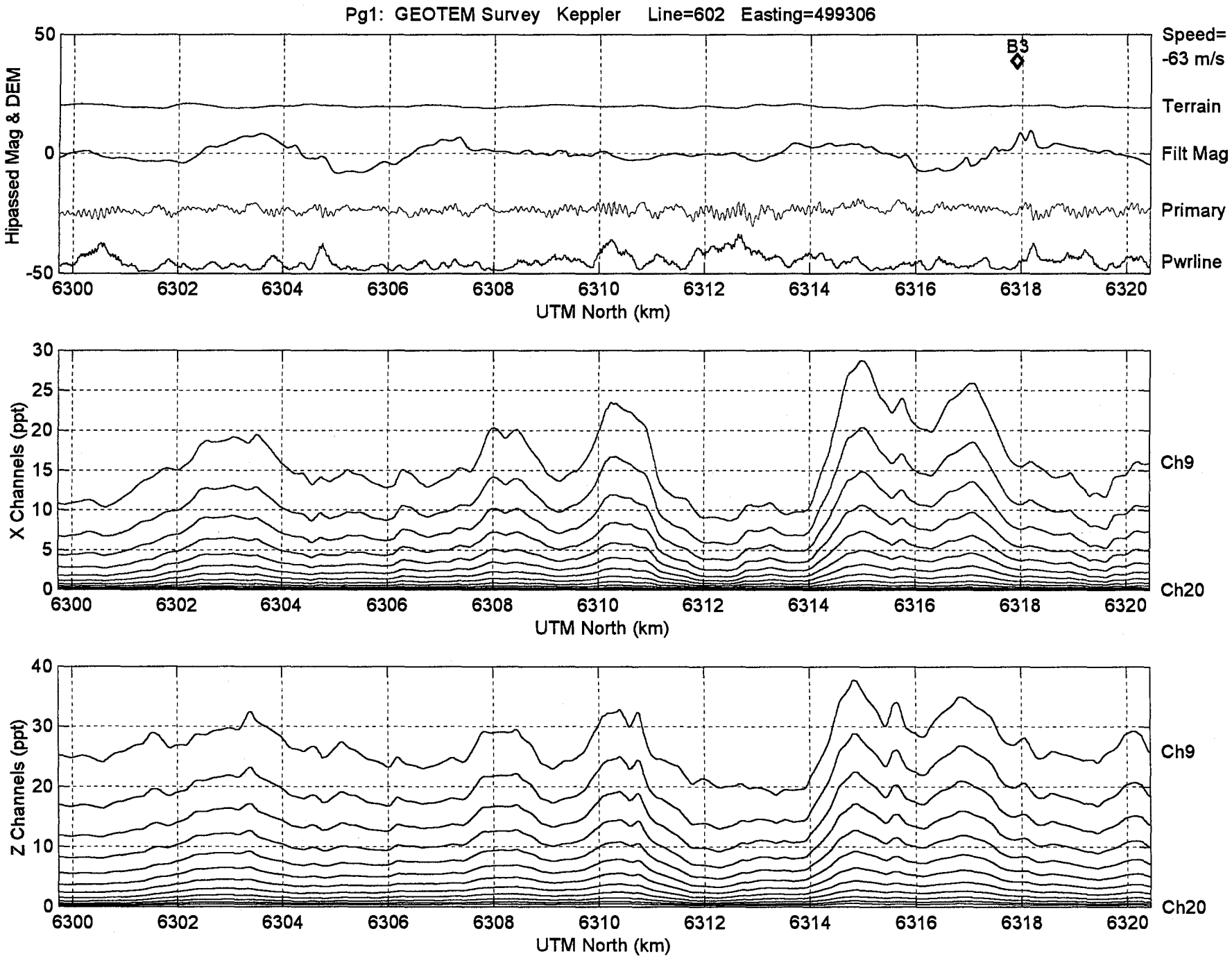
NAD27 50nT = 1 km

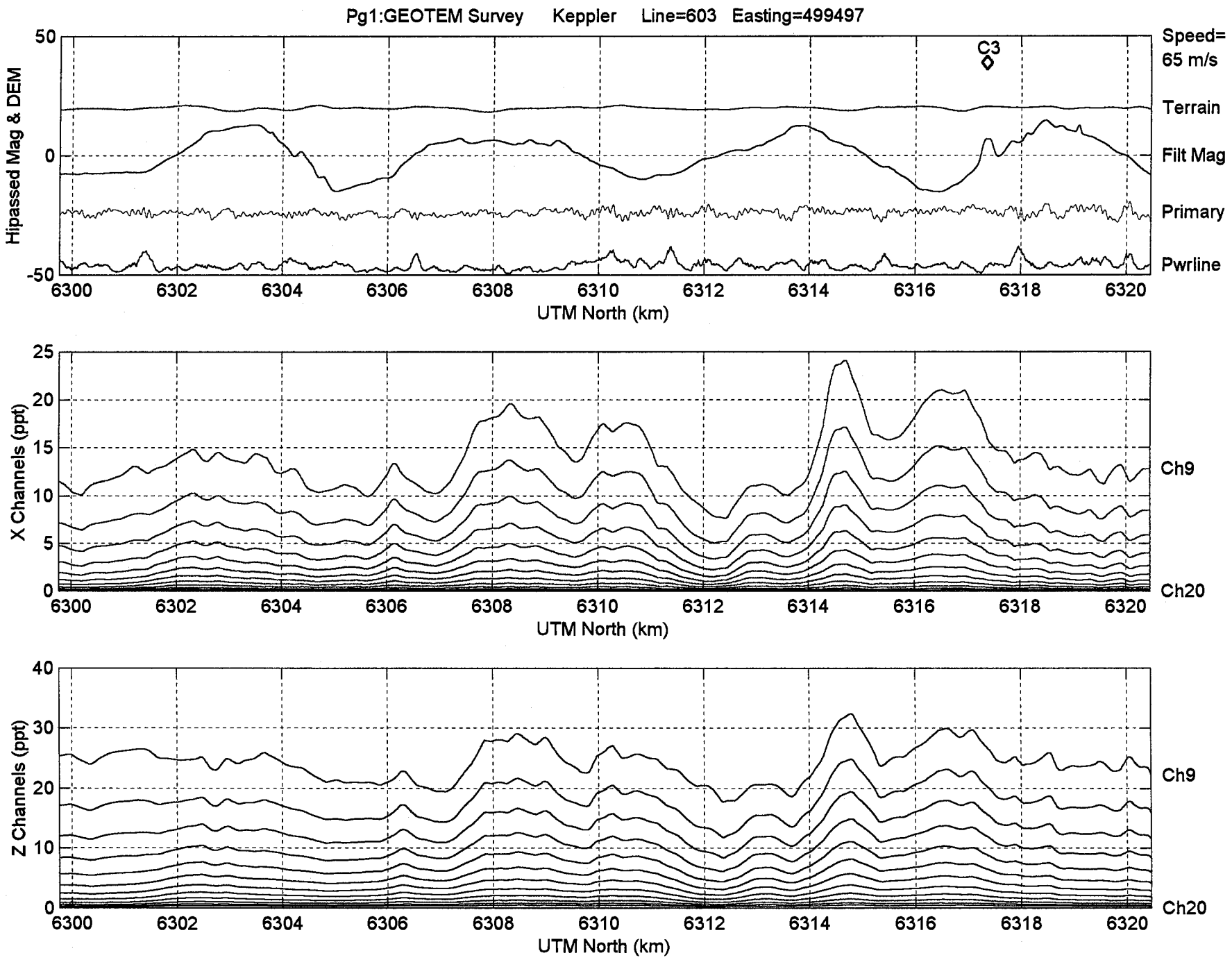
Geoterrex Survey of Keppler Creek Prospect - South Half
Total Magnetic Field Stack Plot,
Flight Line Reference For GEOTEM Survey

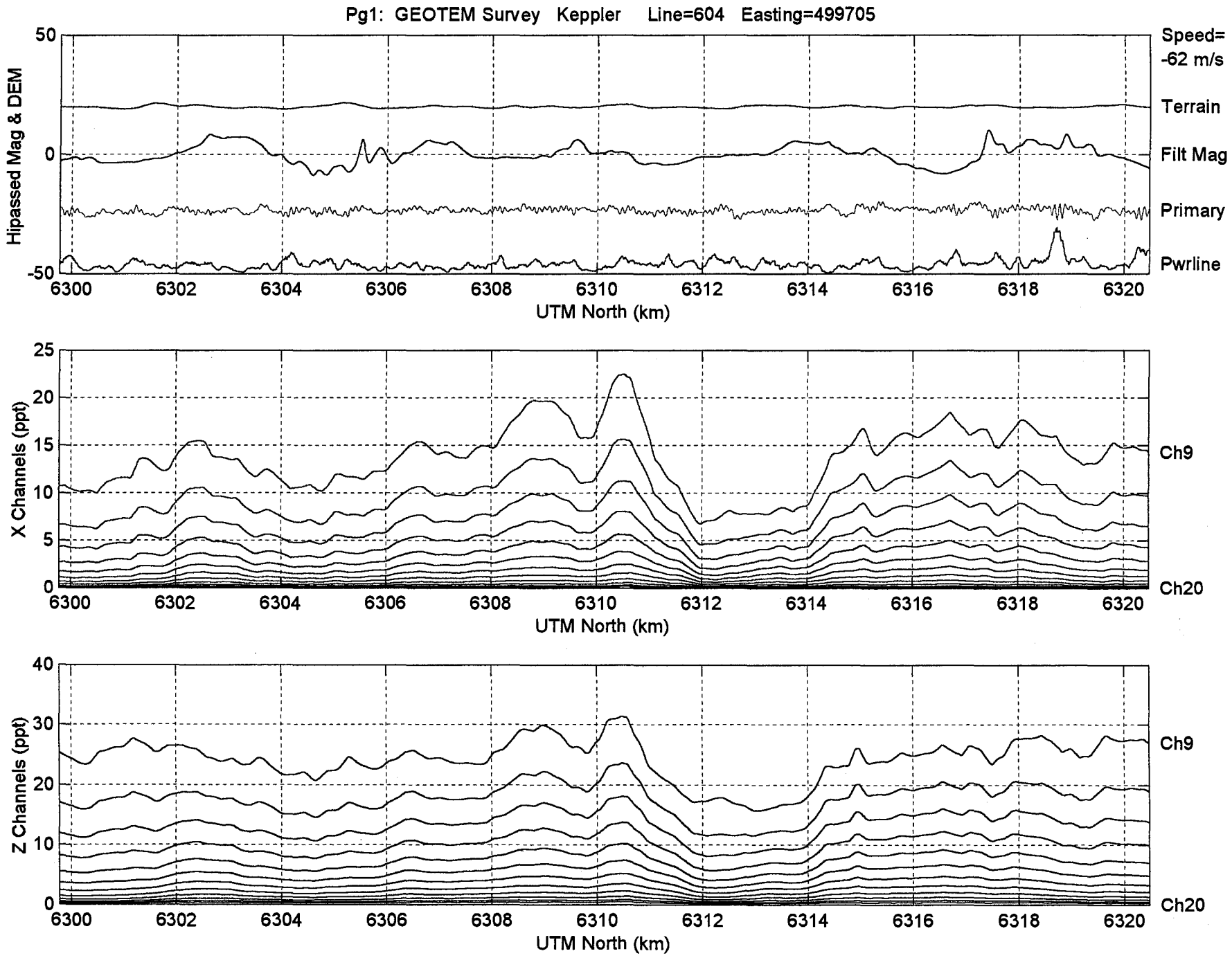


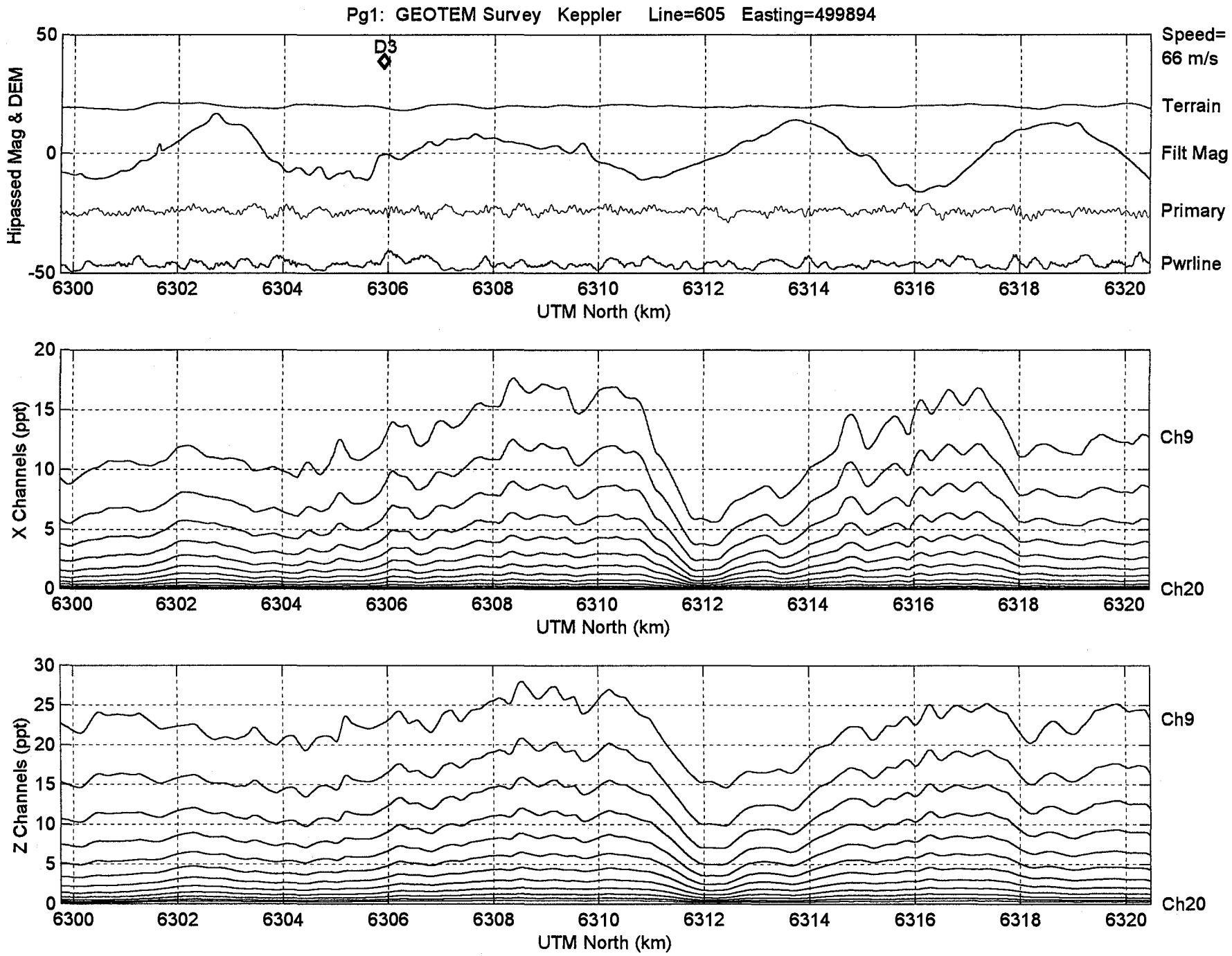
NAD27 50nT = 1 km

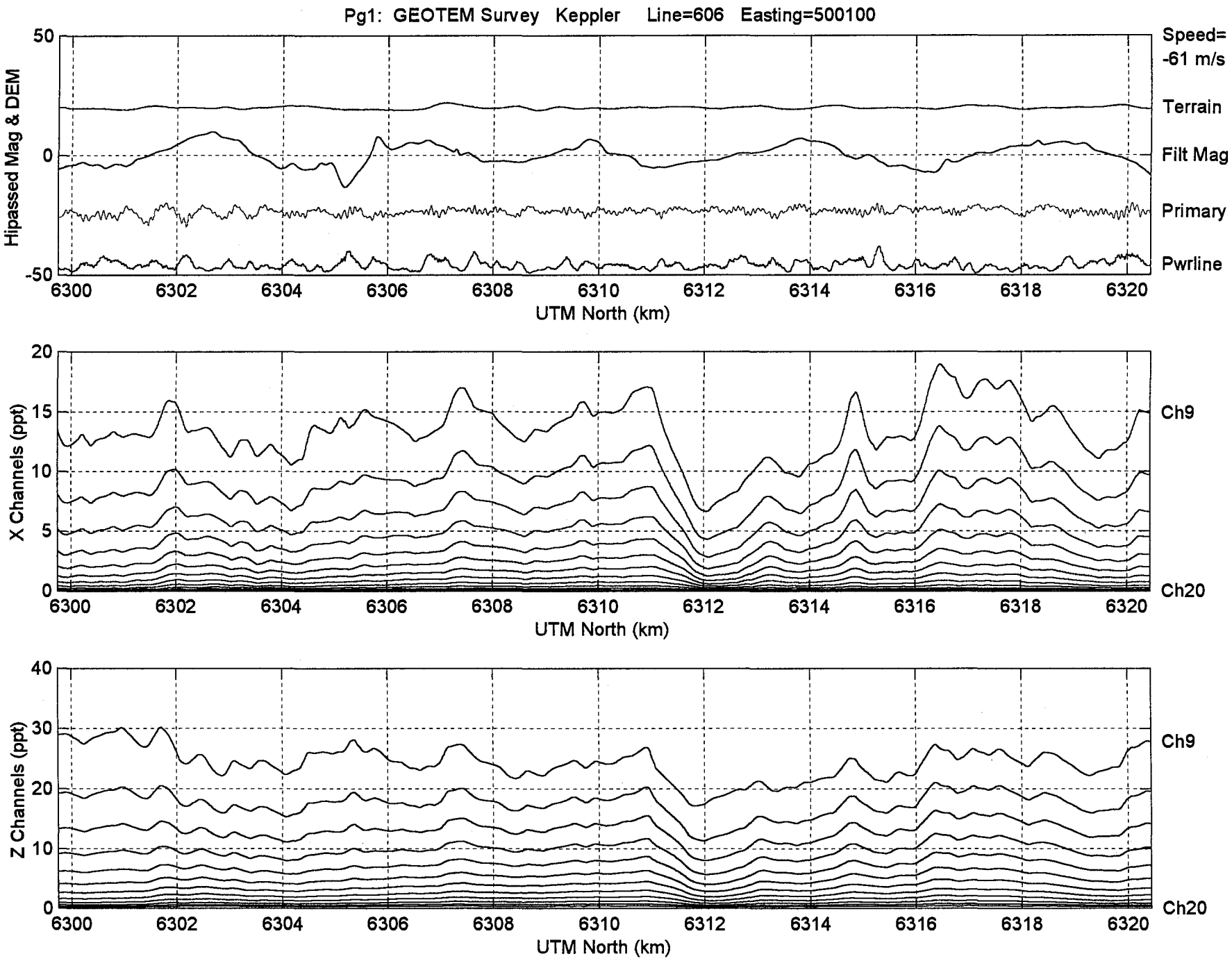

Pg1: GEOTEM Survey Keppler Line=601 Easting=499090
Hipassed Mag & DEM
50
0
-50
A2
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

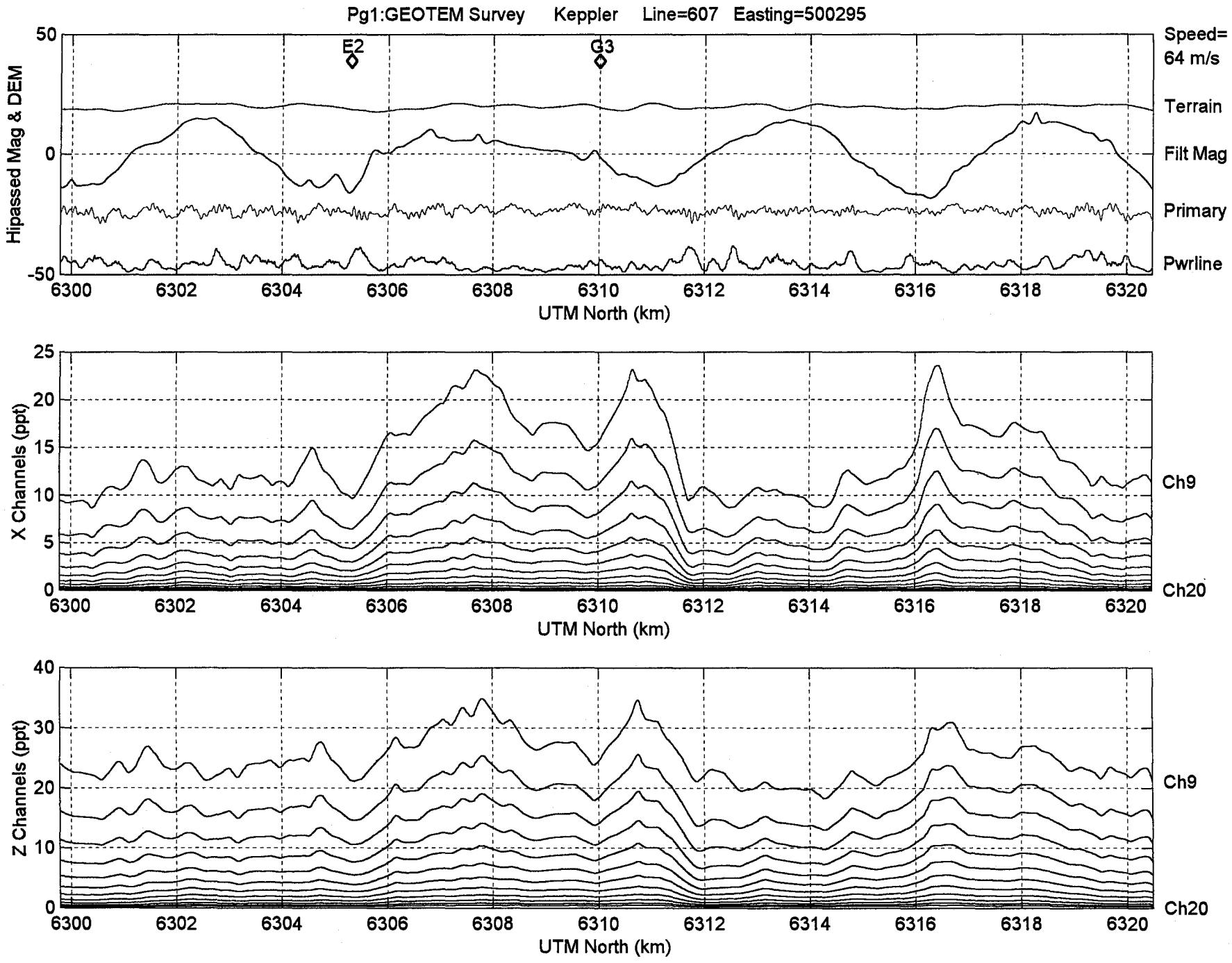

Pg1: GEOTEM Survey Keppler Line=602 Easting=499306
Hipassed Mag & DEM
50
0
-50
B3
Speed=
-63 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

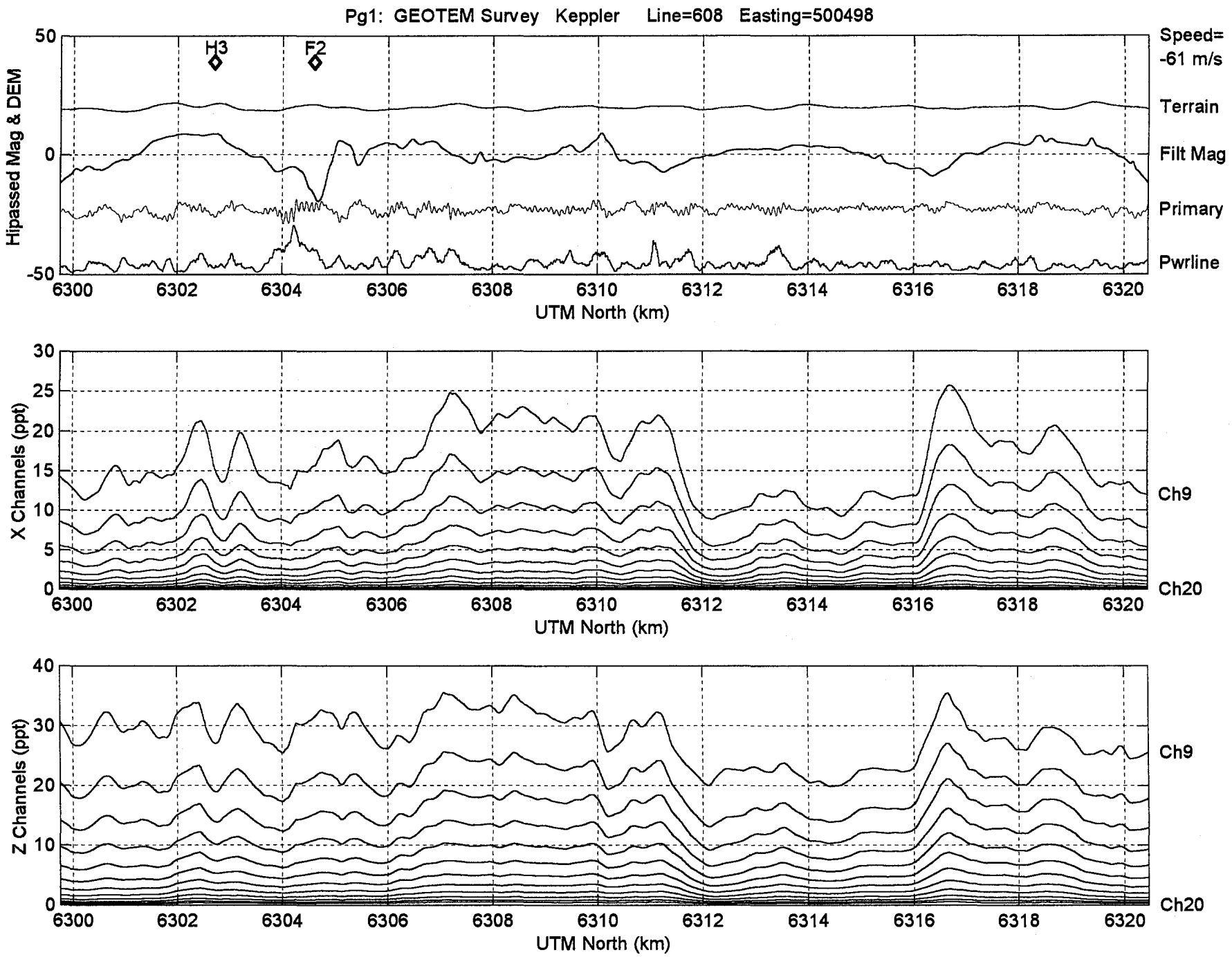

Pg1:GEOTEM Survey Keppler Line=603 Easting=499497
Hipassed Mag & DEM
50
0
-50
C3
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

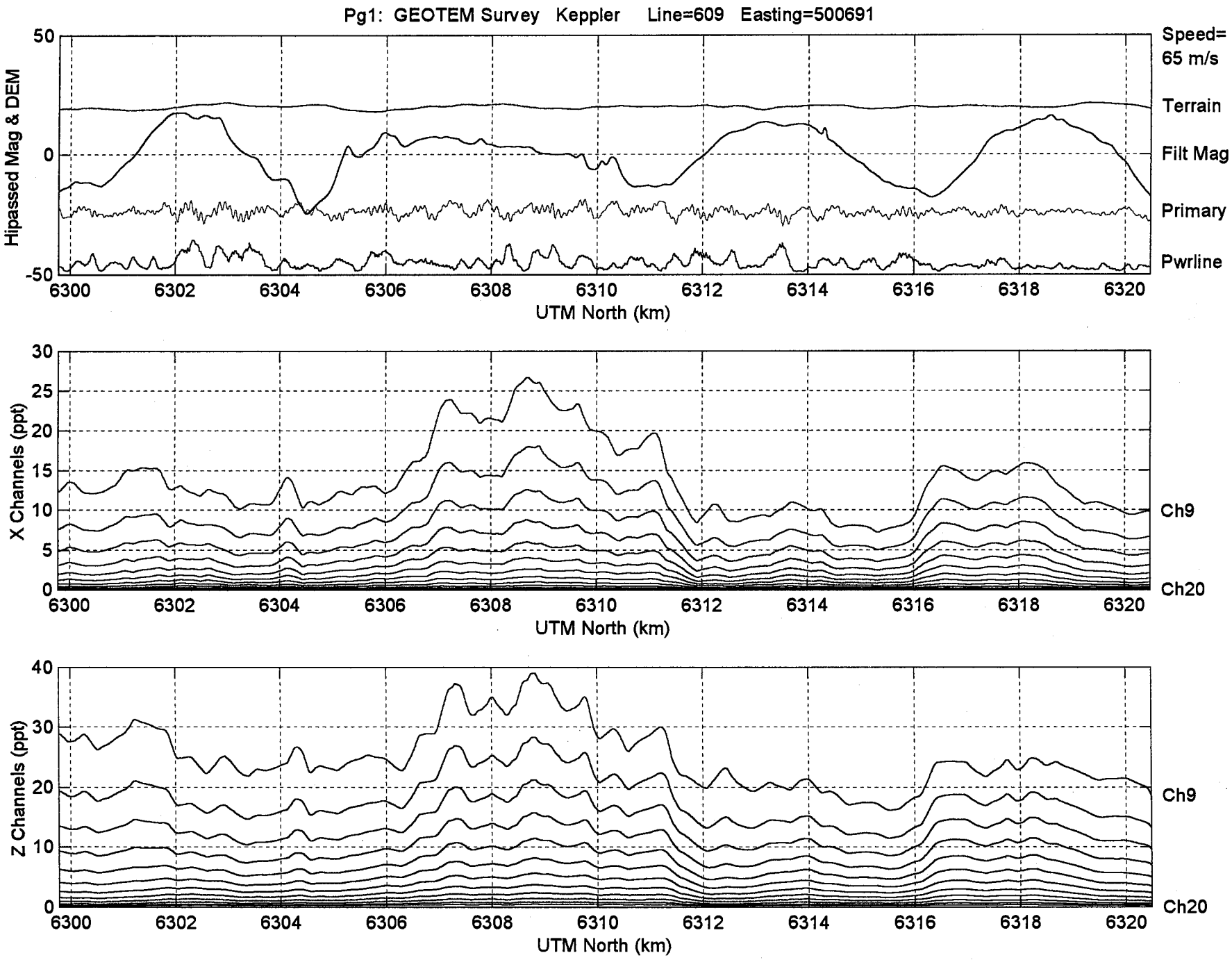

Pg1: GEOTEM Survey Keppler Line=604 Easting=499705
Hipassed Mag & DEM
50
0
-50
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

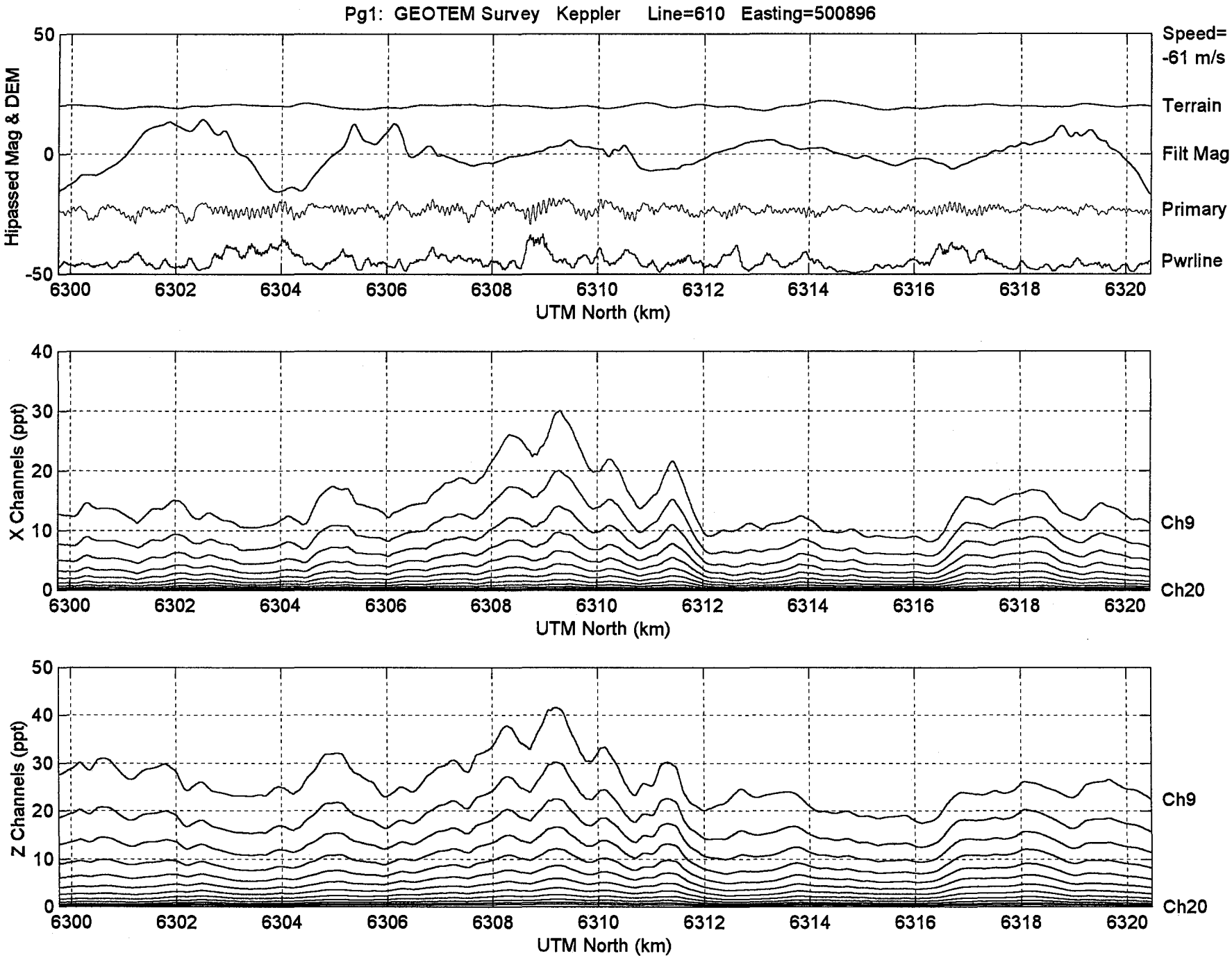

Pg1: GEOTEM Survey Keppler Line=605 Easting=499894
Hipassed Mag & DEM
50
0
-50
D3
Speed=
66 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)

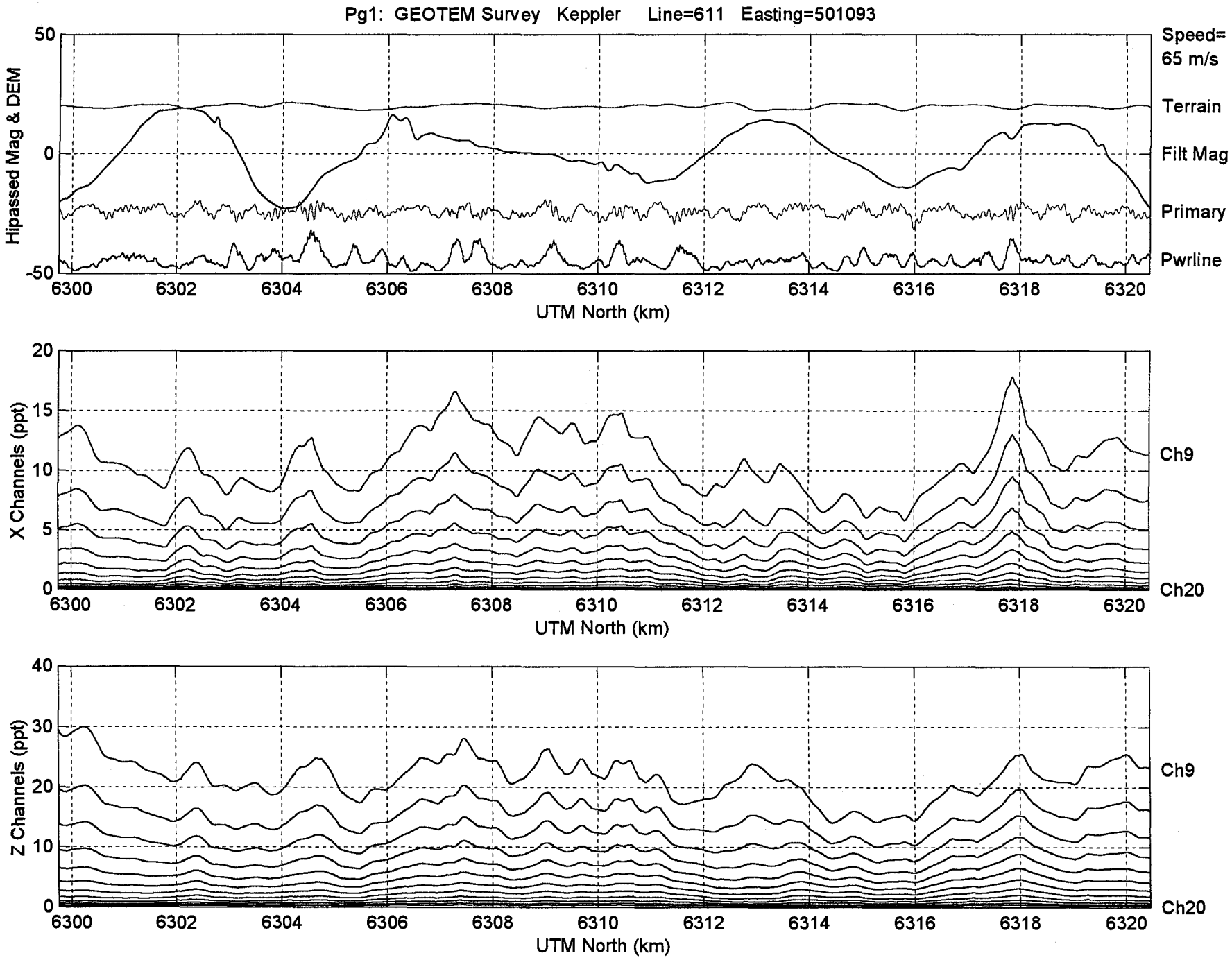

Pg1: GEOTEM Survey Keppler Line=606 Easting=500100
Hipassed Mag & DEM
50
0
-50
Speed=
-61 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

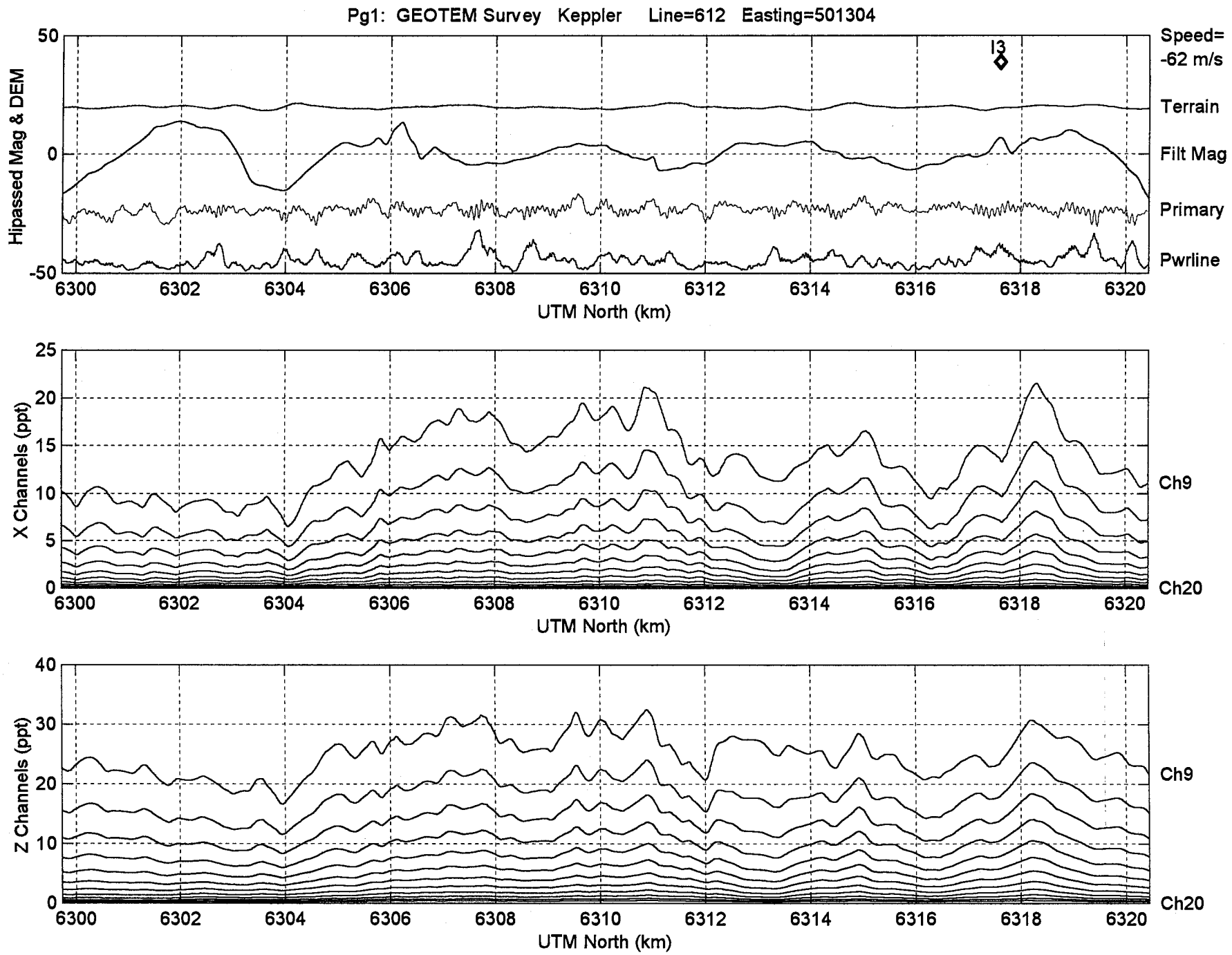

Pg1:GEOTEM Survey Keppler Line=607 Easting=500295
Hipassed Mag & DEM
E2
G3
Speed=
64 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
Ch9
Ch20
UTM North (km)

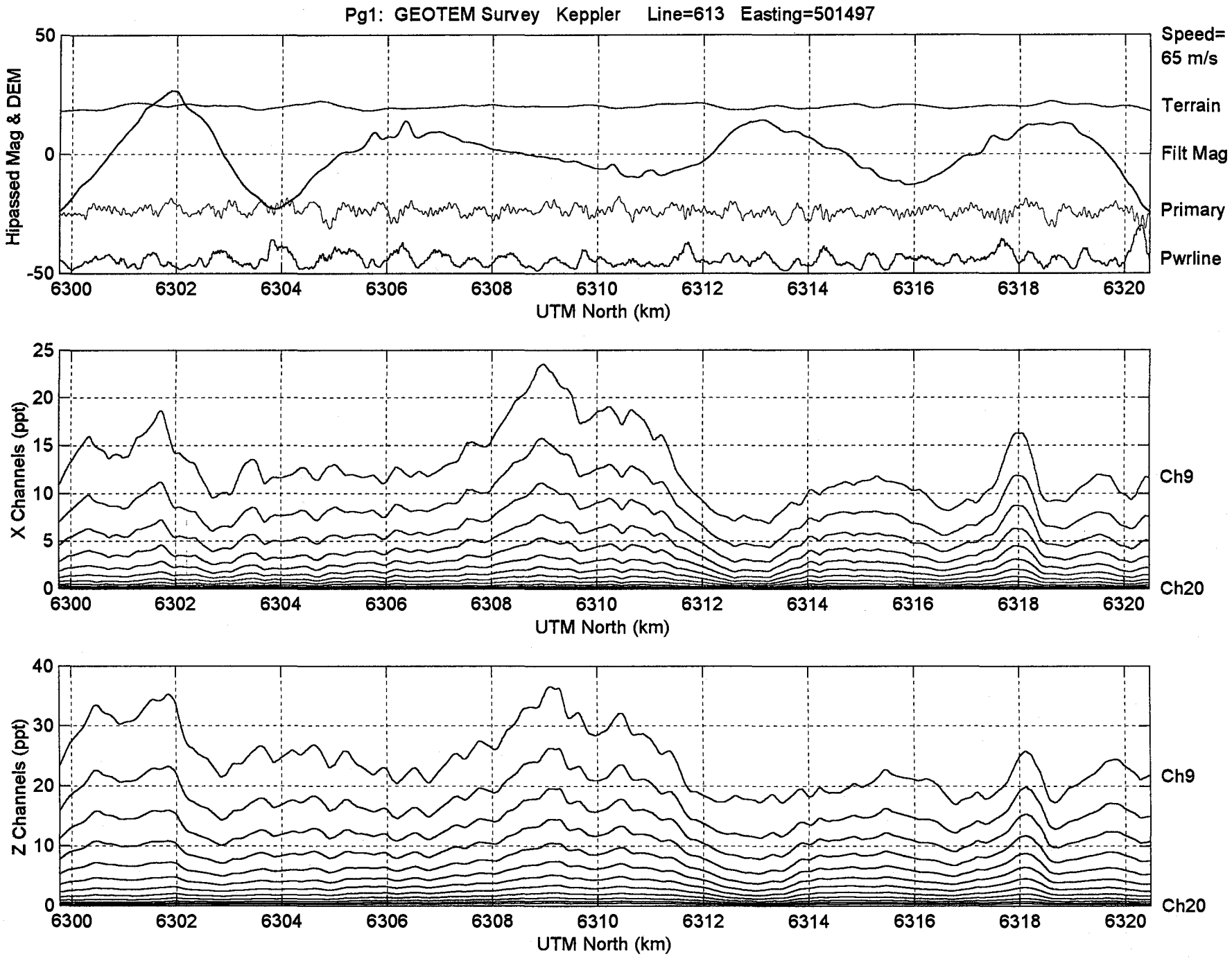

Pg1: GEOTEM Survey Keppler Line=608 Easting=500498
Hipassed Mag & DEM
50
0
-50
H3
F2
Speed=
-61 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

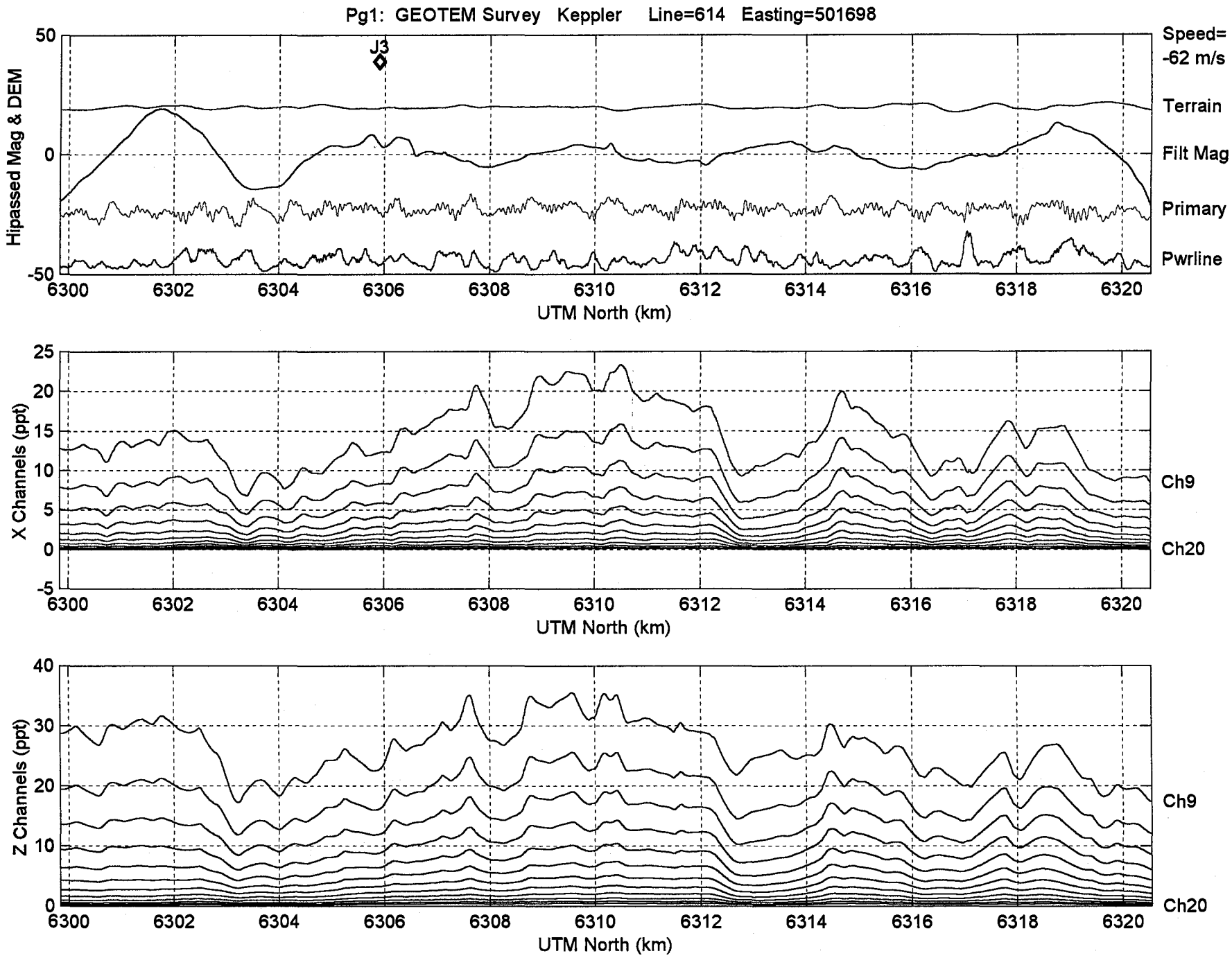

Pg1: GEOTEM Survey Keppler Line=609 Easting=500691
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

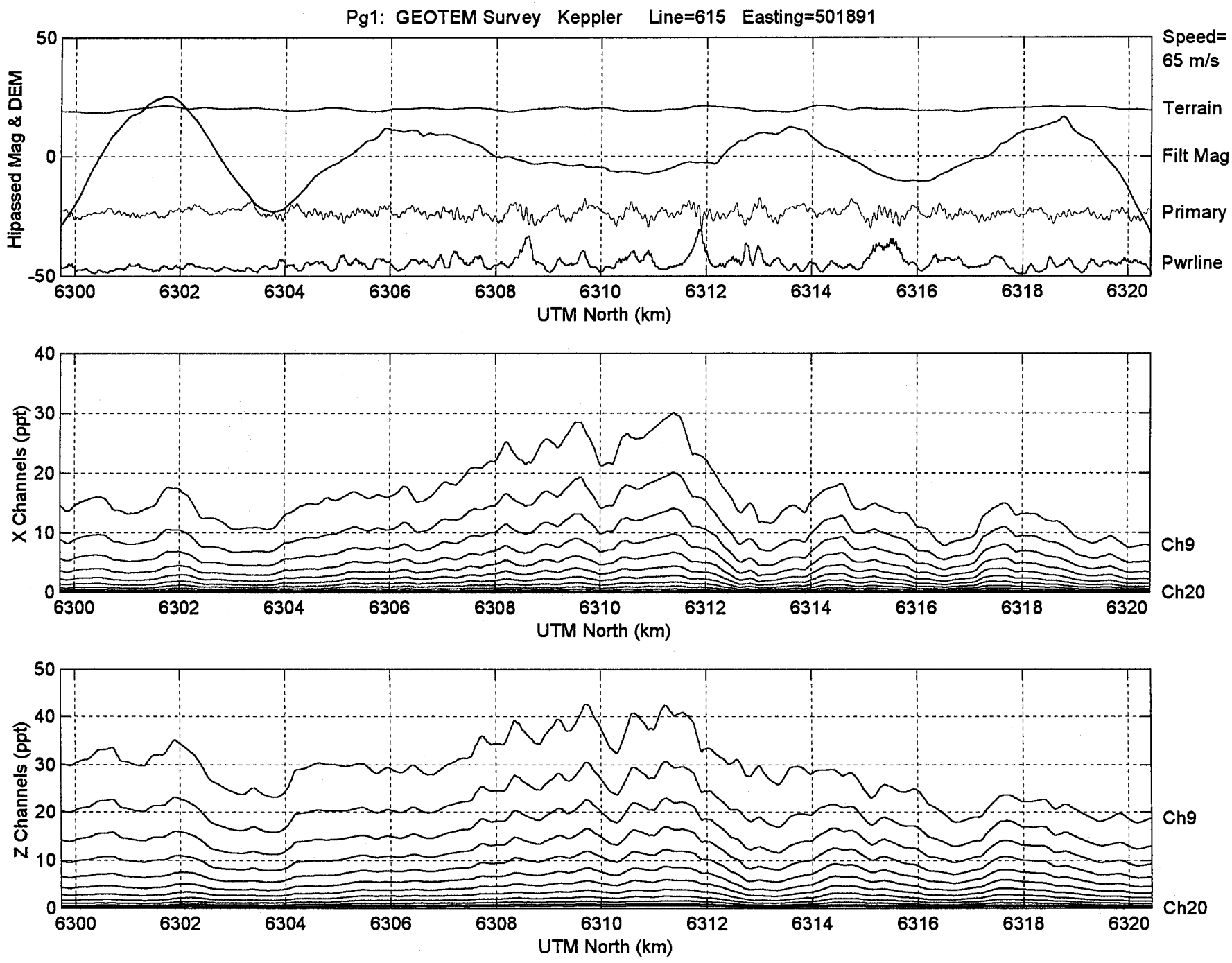

Pg1: GEOTEM Survey Keppler Line=610 Easting=500896
Hipassed Mag & DEM
50
0
-50
Speed=
-61 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
50
40
30
20
10
0
Ch9
Ch20
UTM North (km)

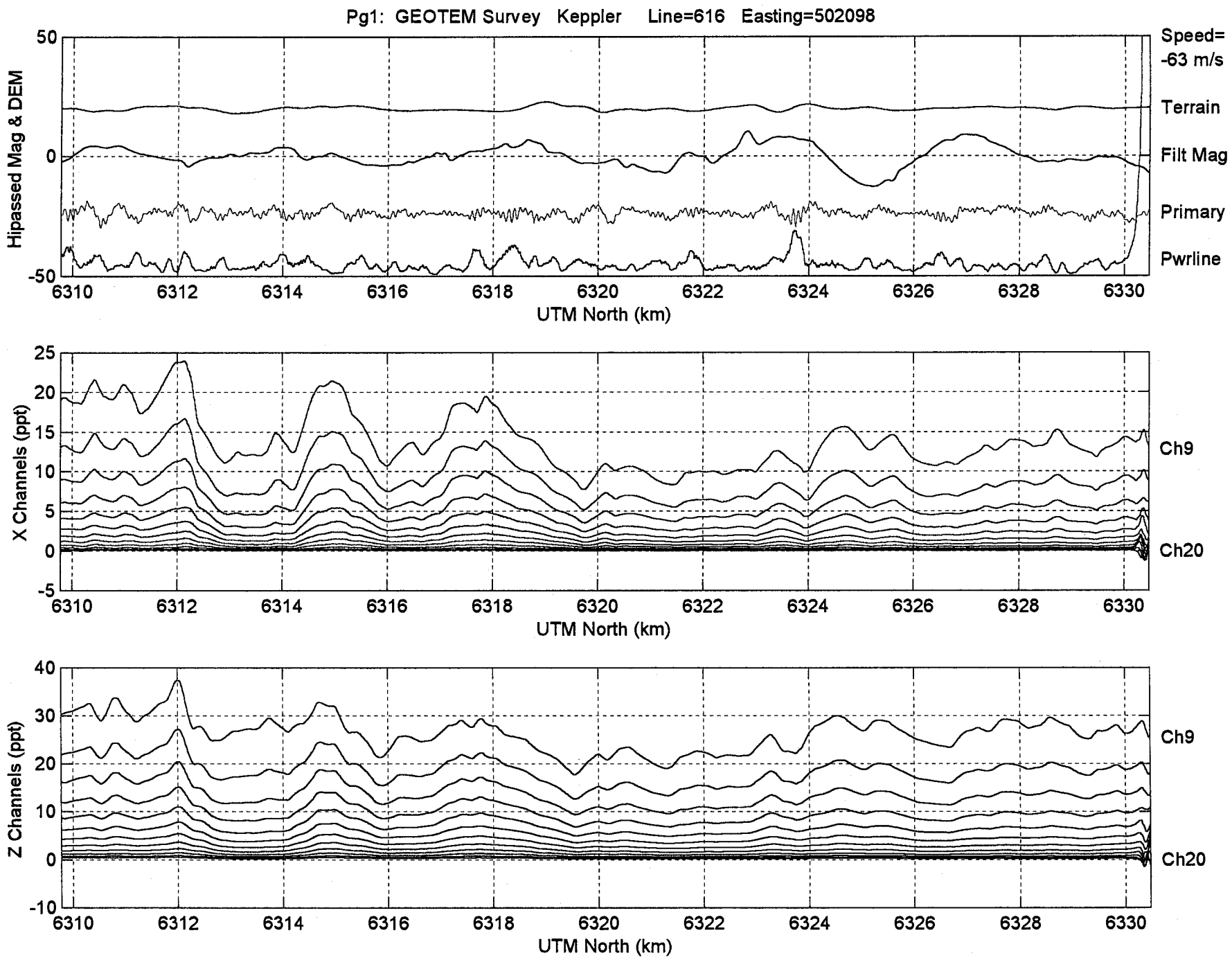

Pg1: GEOTEM Survey Keppler Line=611 Easting=501093
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

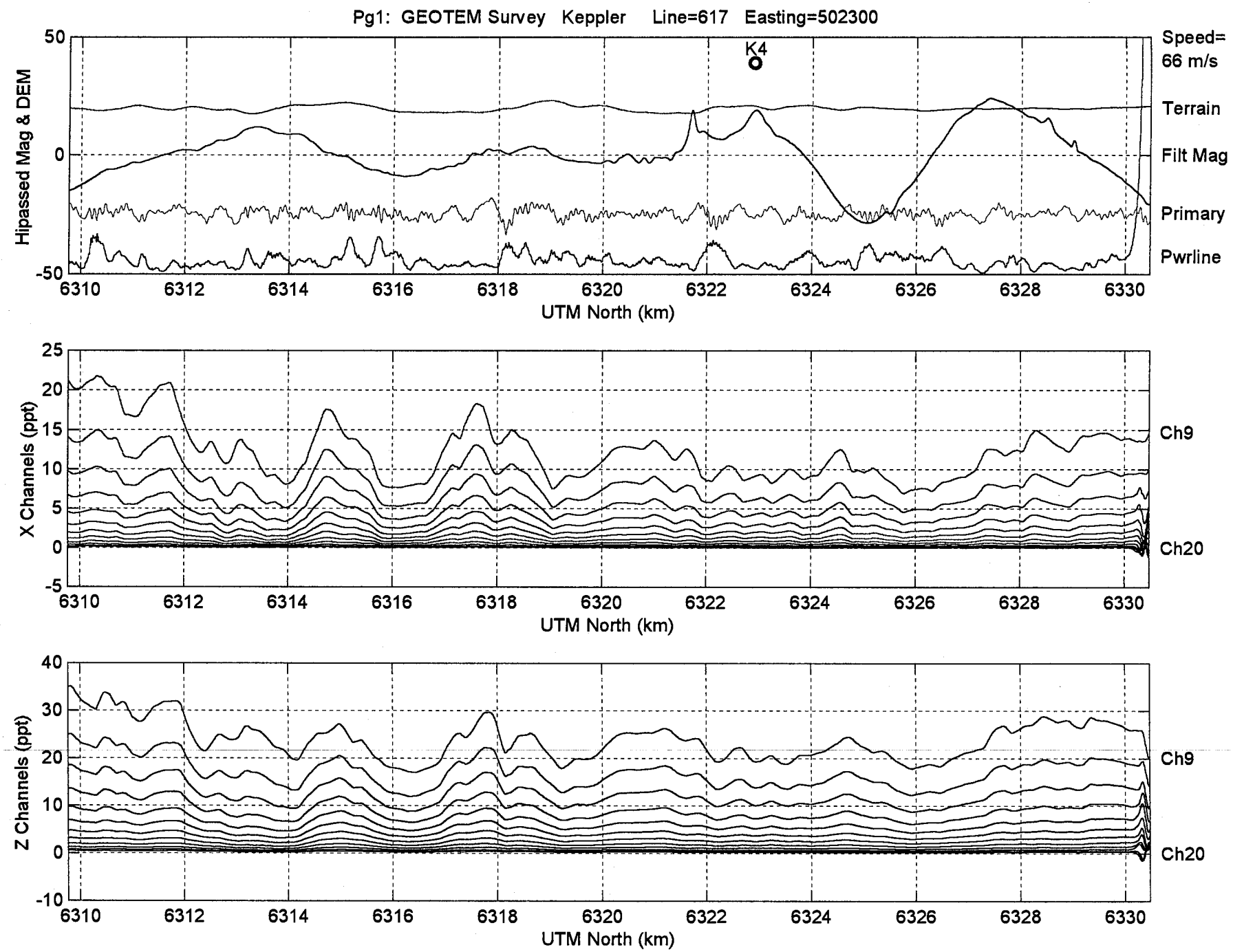

Pg1: GEOTEM Survey Keppler Line=612 Easting=501304
Hipassed Mag & DEM
50
0
-50
I3
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

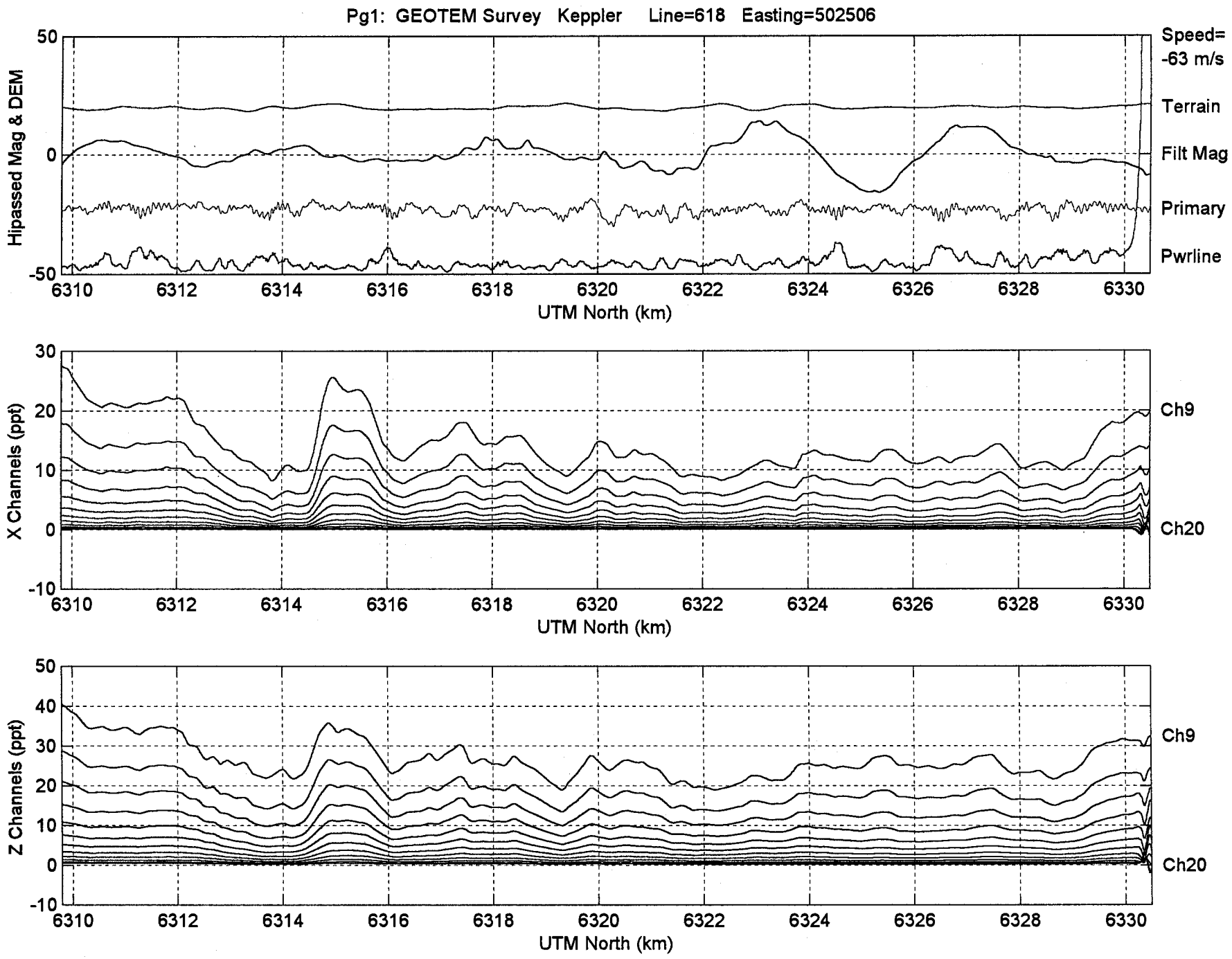

Pg1: GEOTEM Survey Keppler Line=613 Easting=501497
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

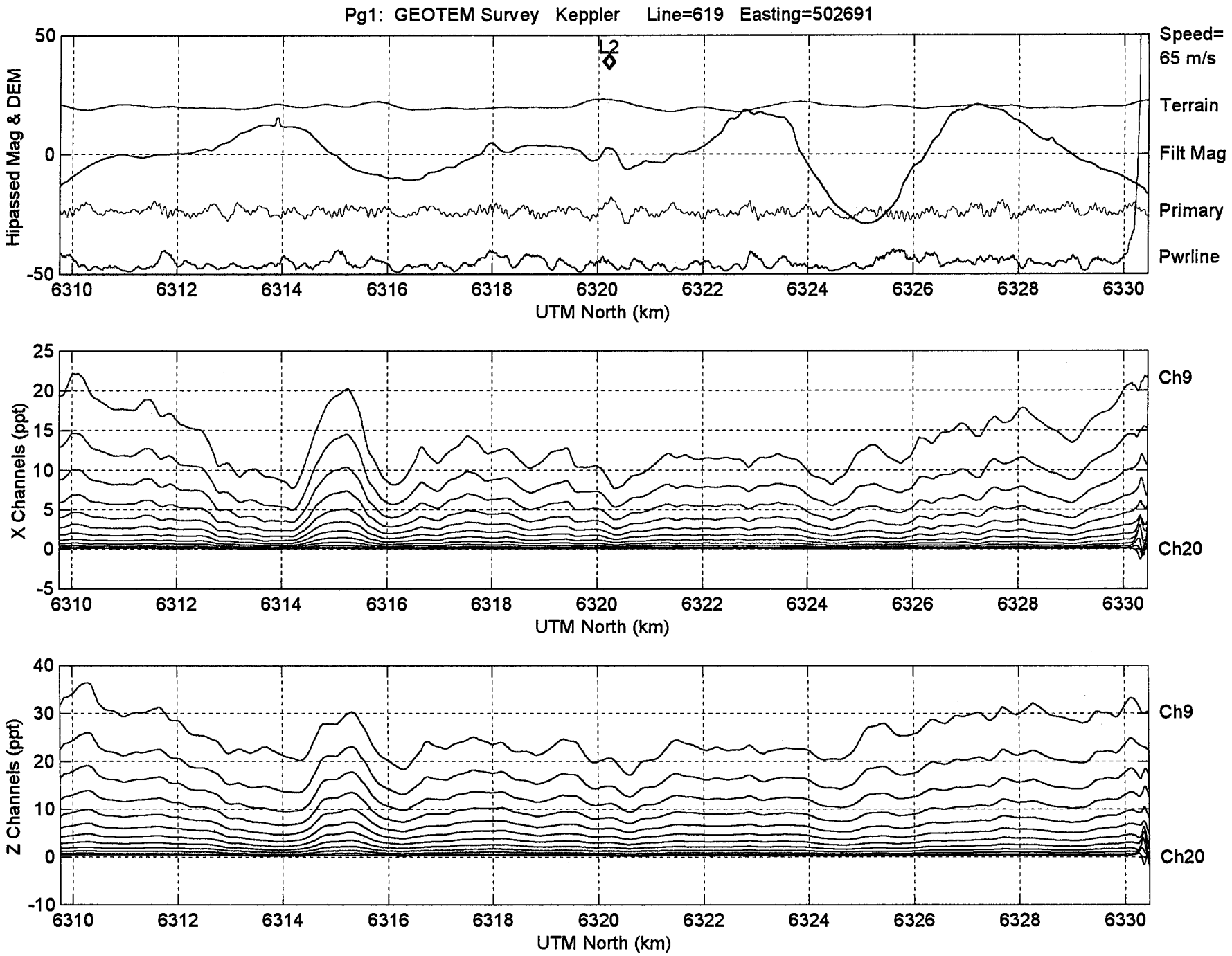

Pg1: GEOTEM Survey Keppler Line=614 Easting=501698
Hipassed Mag & DEM
50
0
-50
J3
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

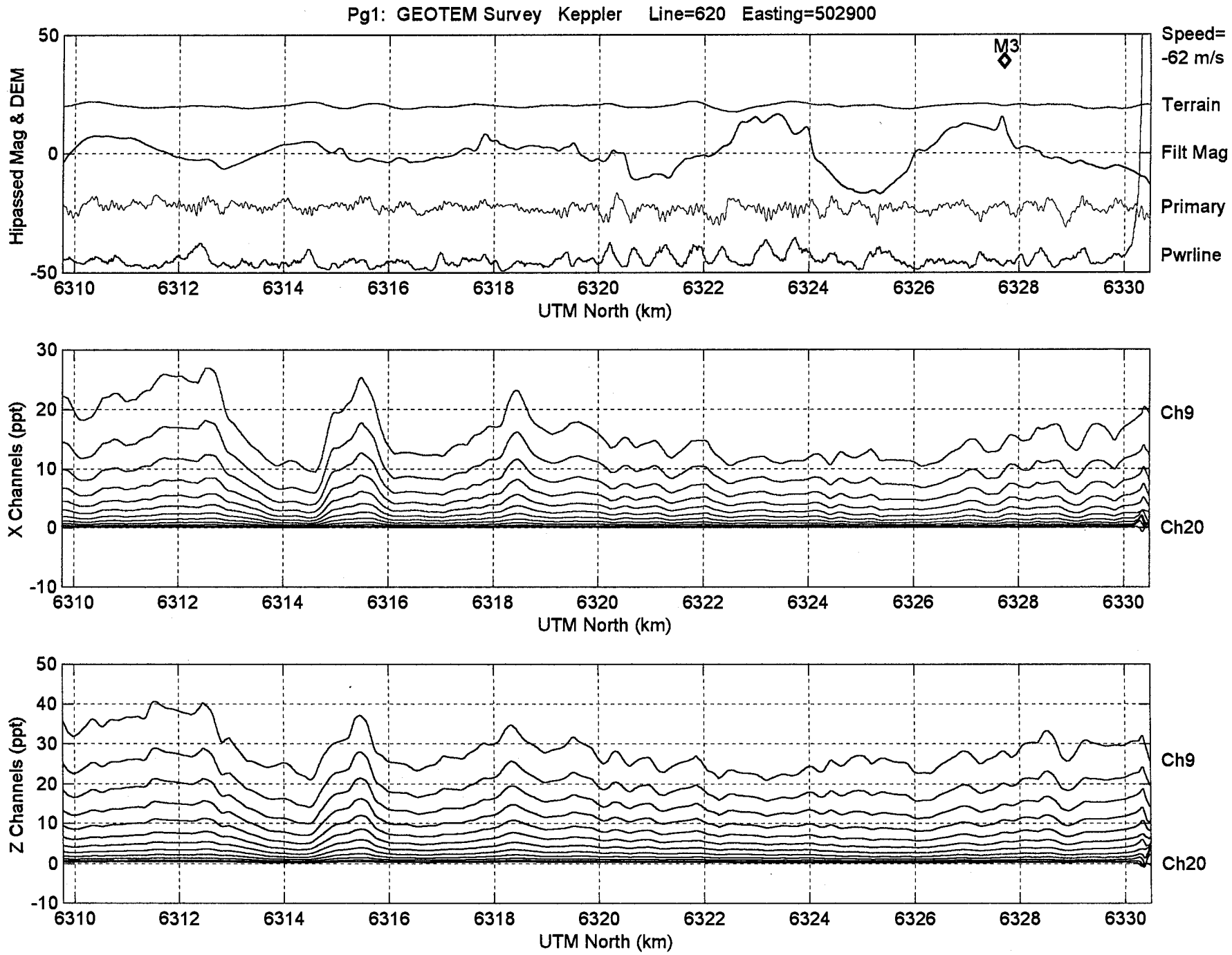

Pg1: GEOTEM Survey Keppler Line=615 Easting=501891
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6300
6302
6304
6306
6308
6310
6312
6314
6316
6318
6320
UTM North (km)
X Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
50
40
30
20
10
0
Ch9
Ch20
UTM North (km)

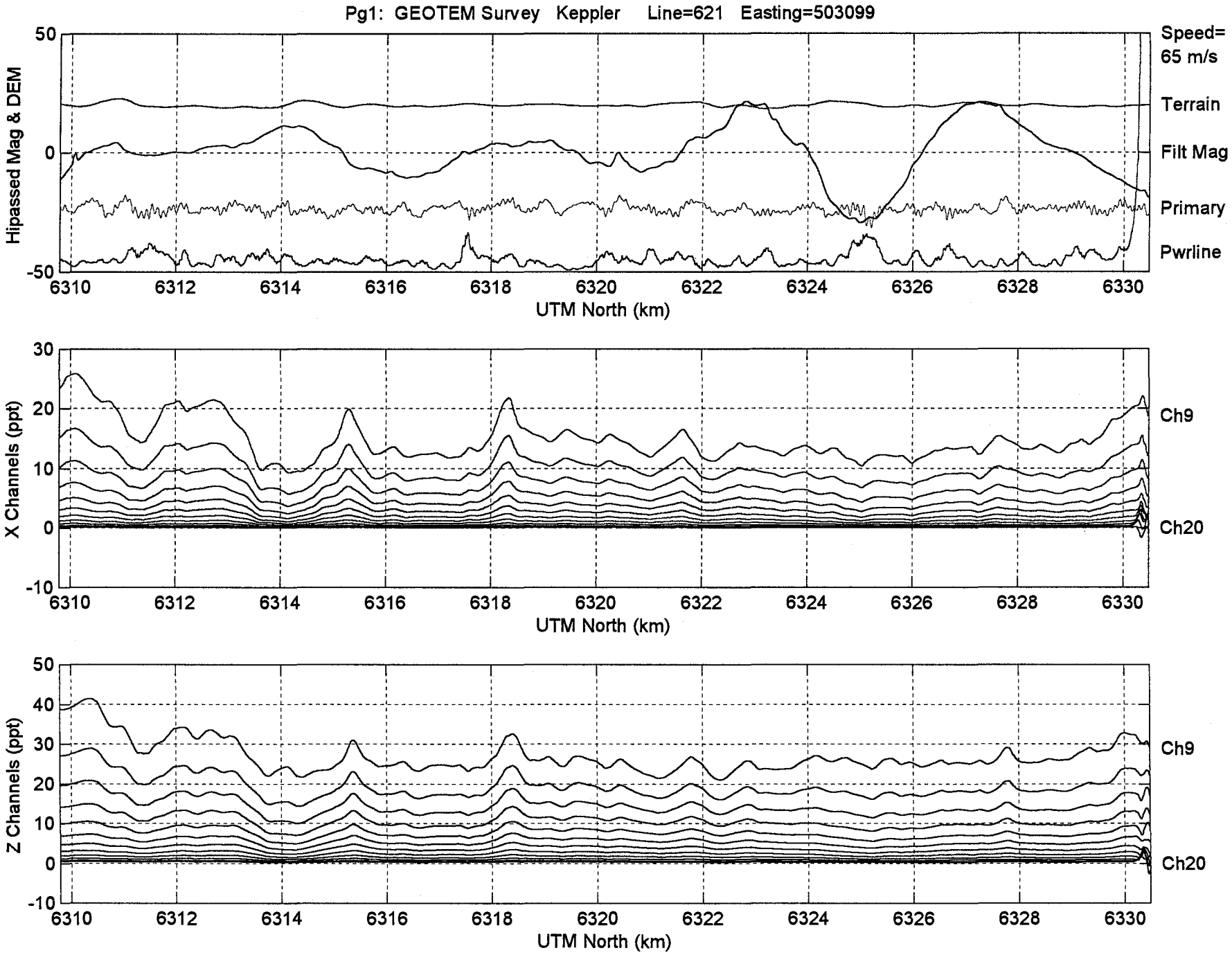

Pg1: GEOTEM Survey Keppler Line=616 Easting=502098
Hipassed Mag & DEM
Speed= -63 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
Ch9
Ch20
UTM North (km)

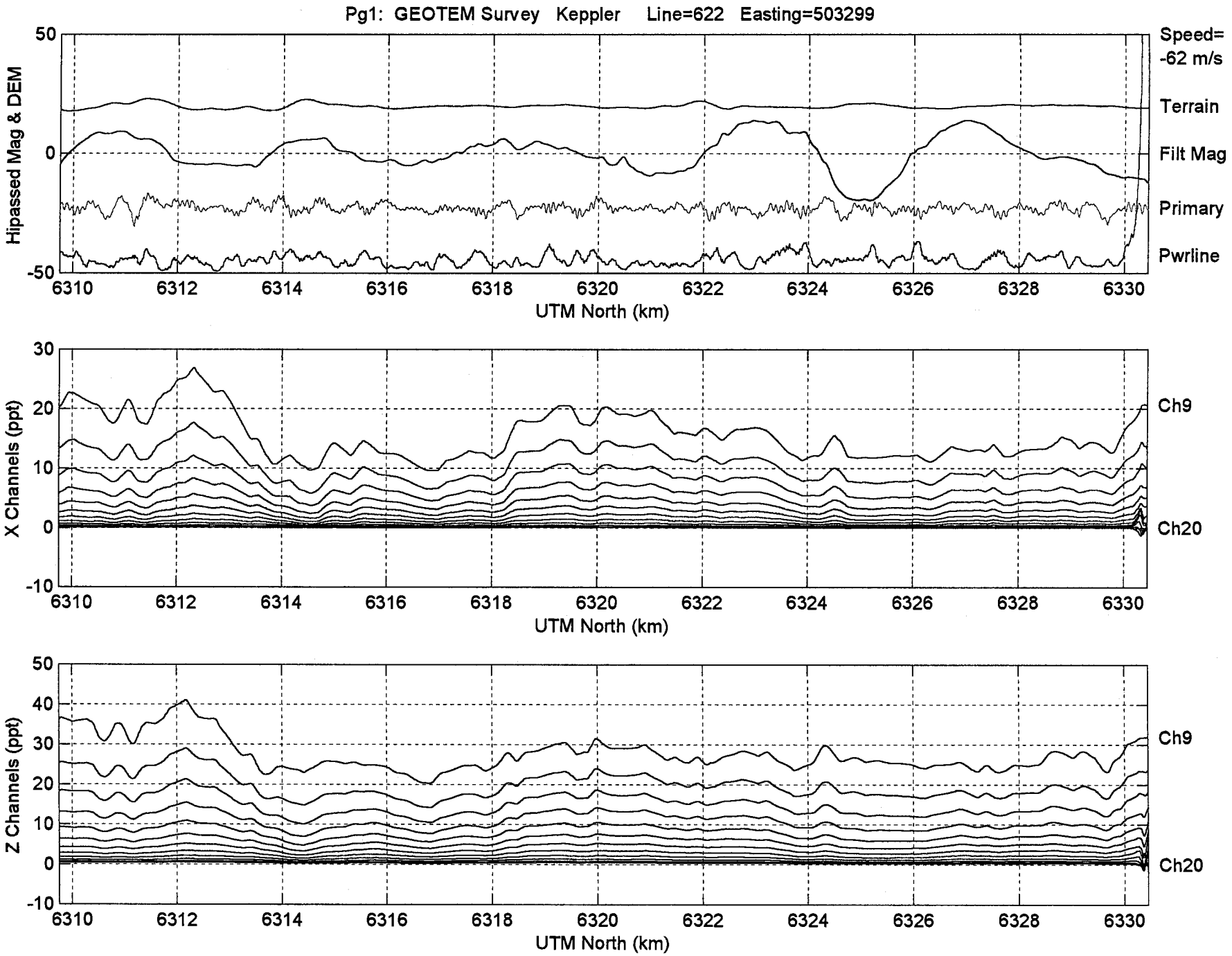

Pg1: GEOTEM Survey Keppler Line=617 Easting=502300
Hipassed Mag & DEM
50
0
-50
K4
Speed=
66 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)

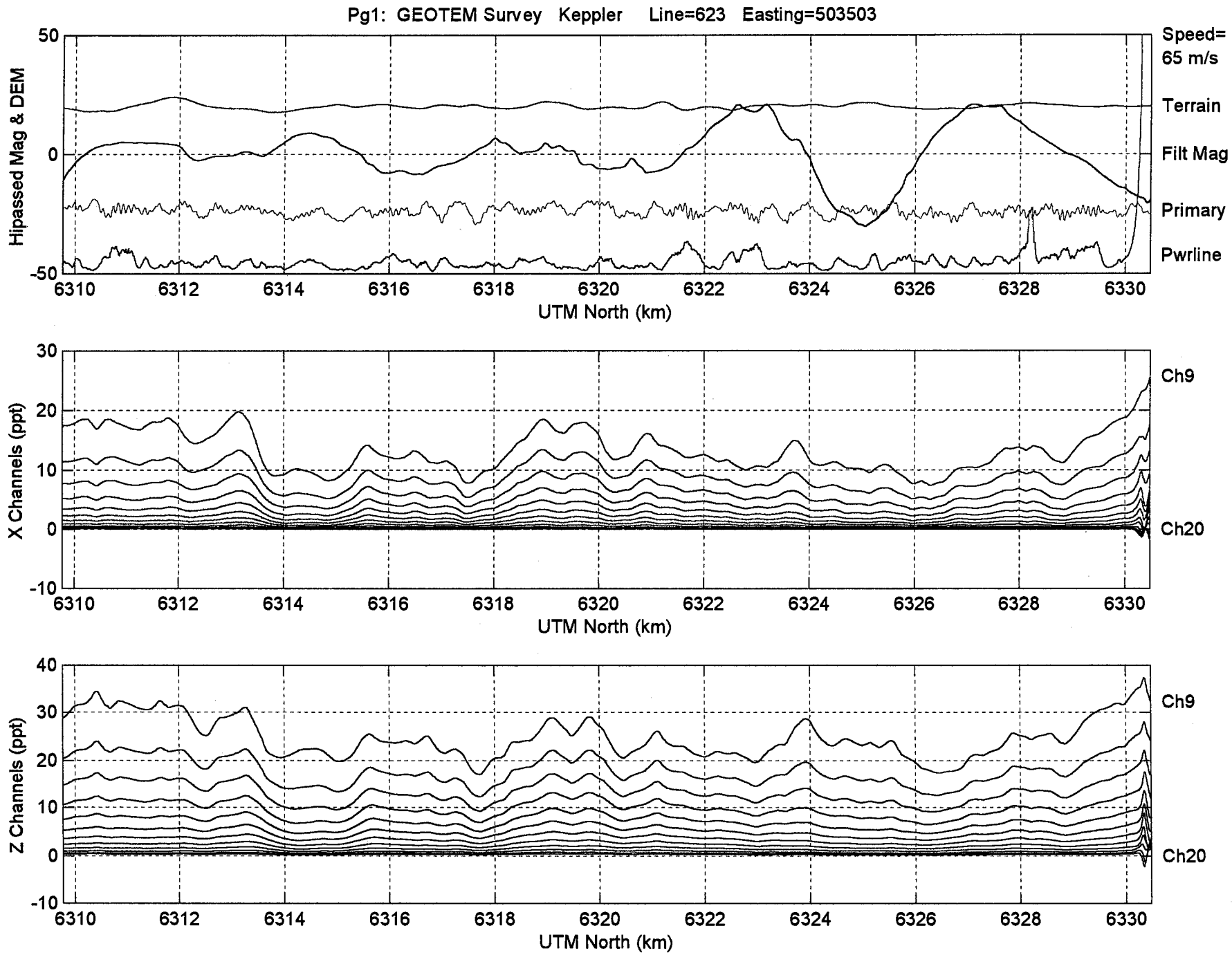

Pg1: GEOTEM Survey Keppler Line=618 Easting=502506
Hipassed Mag & DEM
Speed= -63 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
Z Channels (ppt)

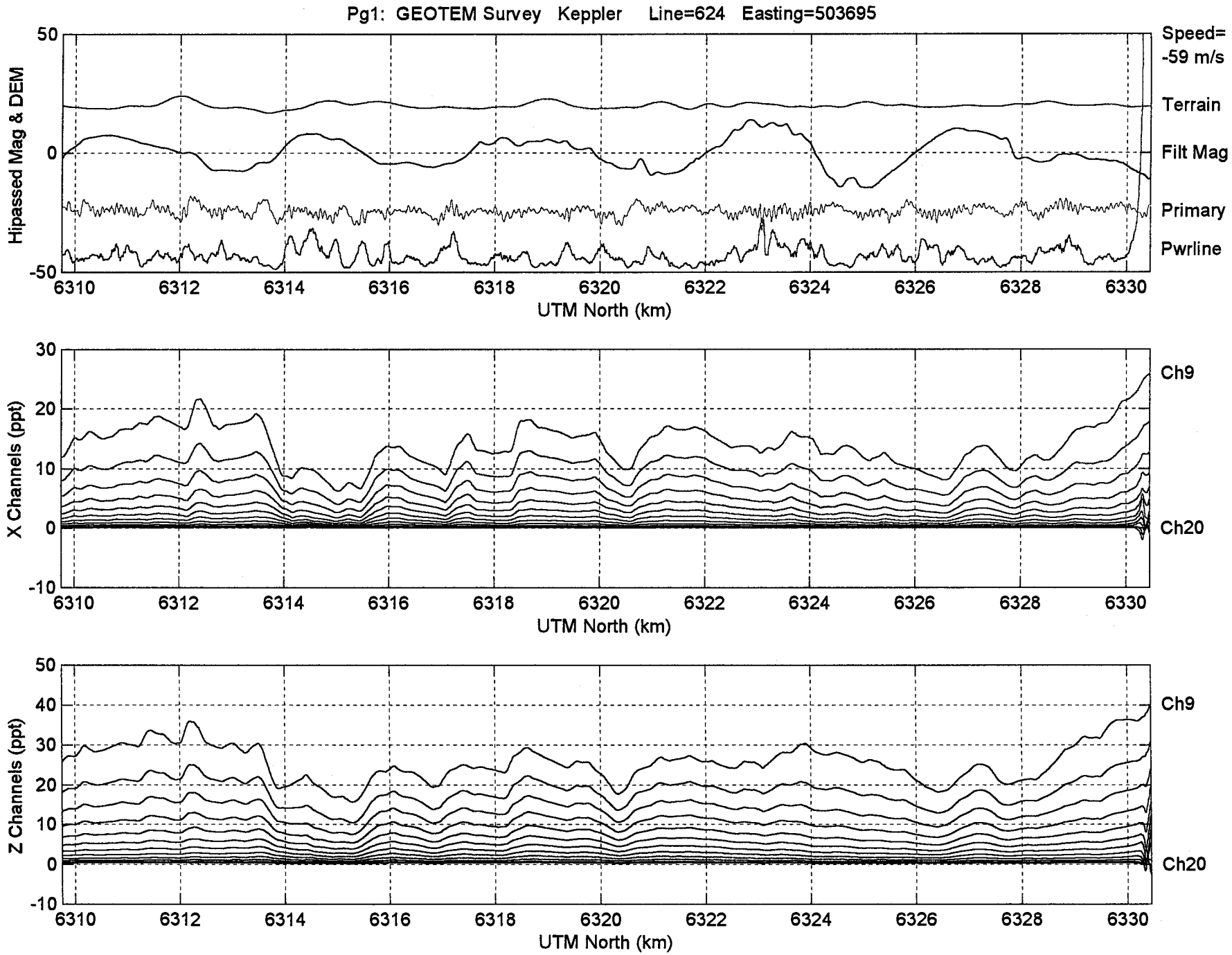

Pg1: GEOTEM Survey Keppler Line=619 Easting=502691
Hipassed Mag & DEM
50
0
-50
L2
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
Z Channels (ppt)
40
30
20
10
0
-10

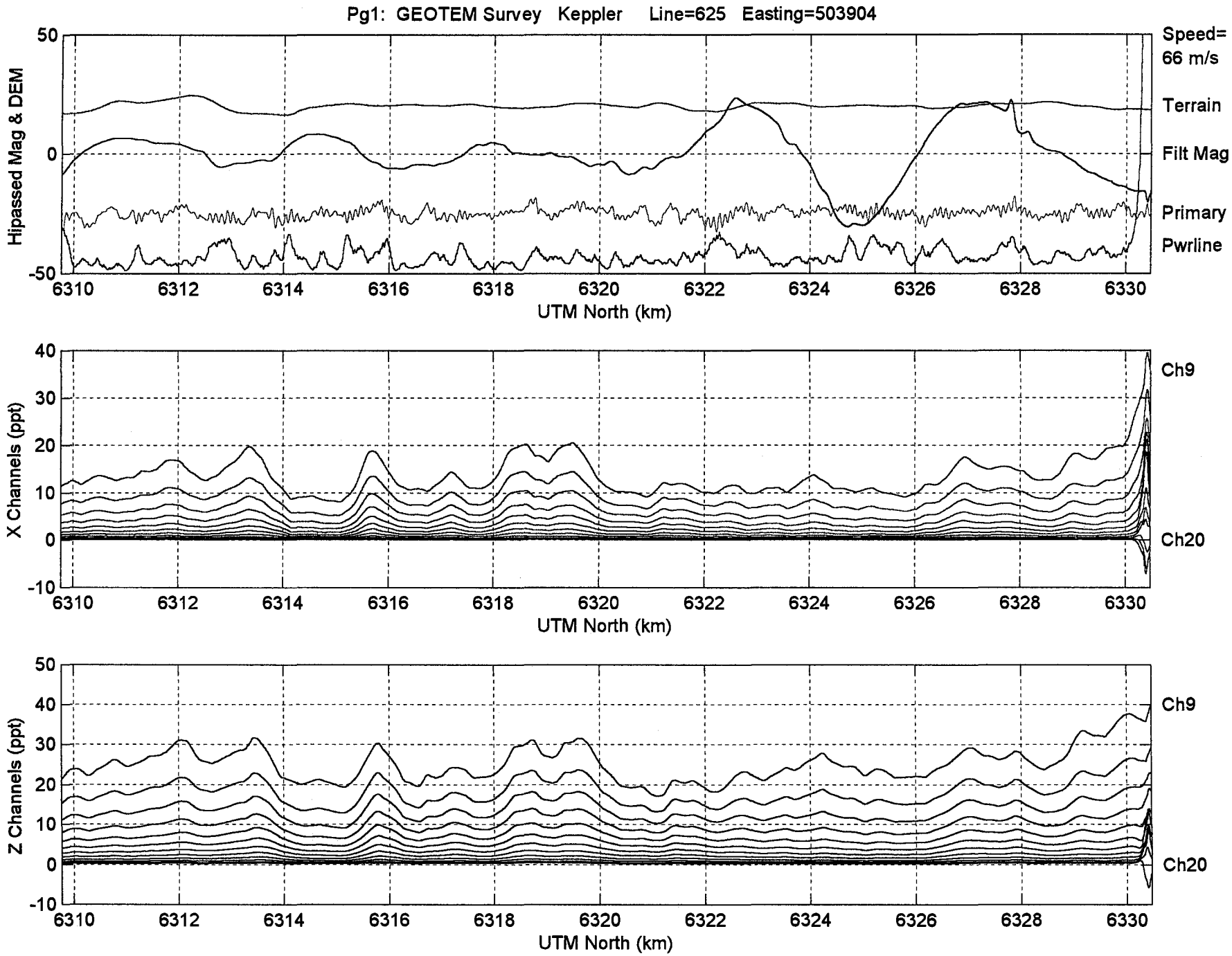

Pg1: GEOTEM Survey Keppler Line=620 Easting=502900
Hipassed Mag & DEM
50
0
-50
M3
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
Z Channels (ppt)
50
40
30
20
10
0
-10

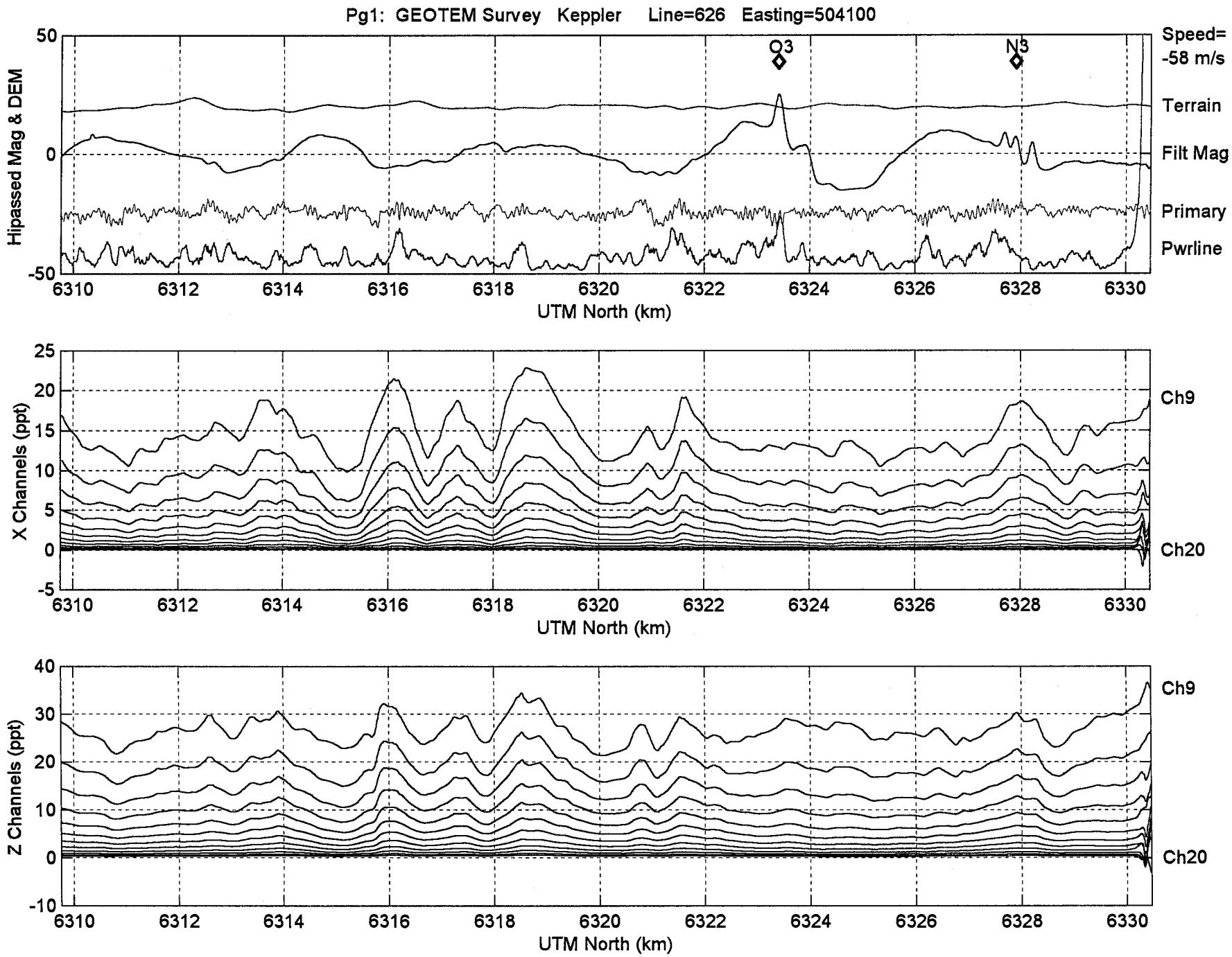

Pg1: GEOTEM Survey Keppler Line=621 Easting=503099
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
50
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)

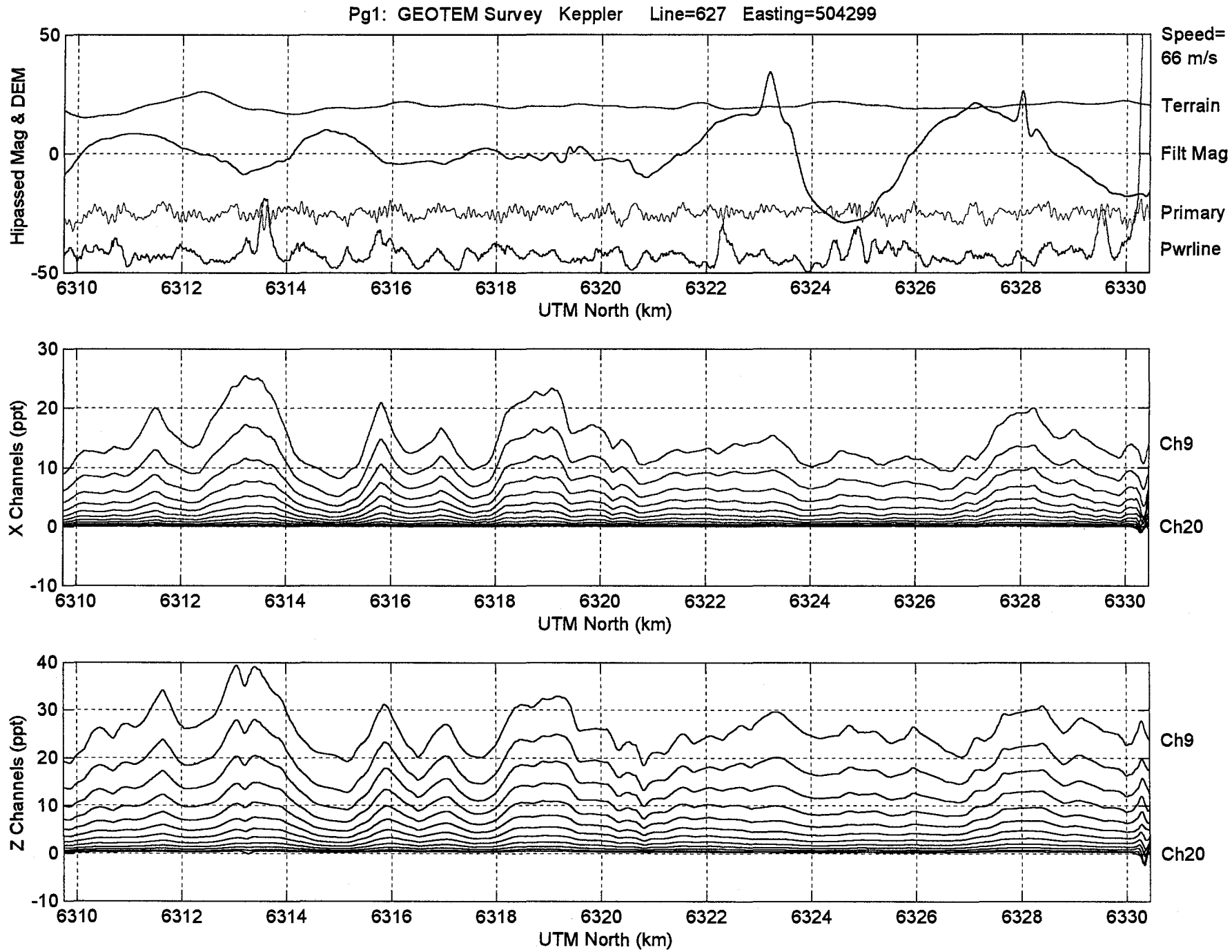

Pg1: GEOTEM Survey Keppler Line=622 Easting=503299
Hipassed Mag & DEM
Speed= -62 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
Ch9
Ch20
UTM North (km)

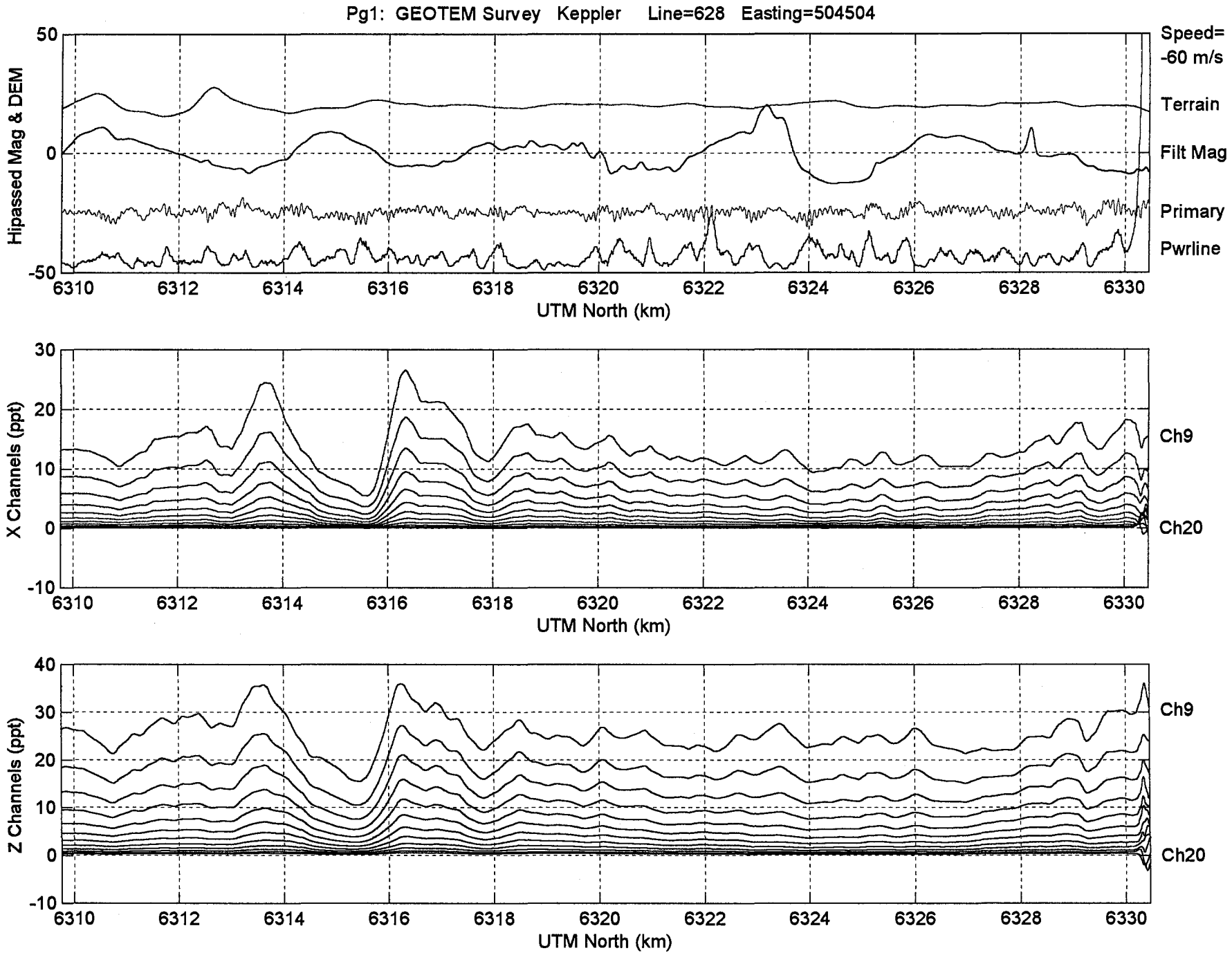

Pg1: GEOTEM Survey Keppler Line=623 Easting=503503
Hipassed Mag & DEM
50
0
-50
Speed=
65 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
Z Channels (ppt)
40
30
20
10
0
-10
Ch9
Ch20

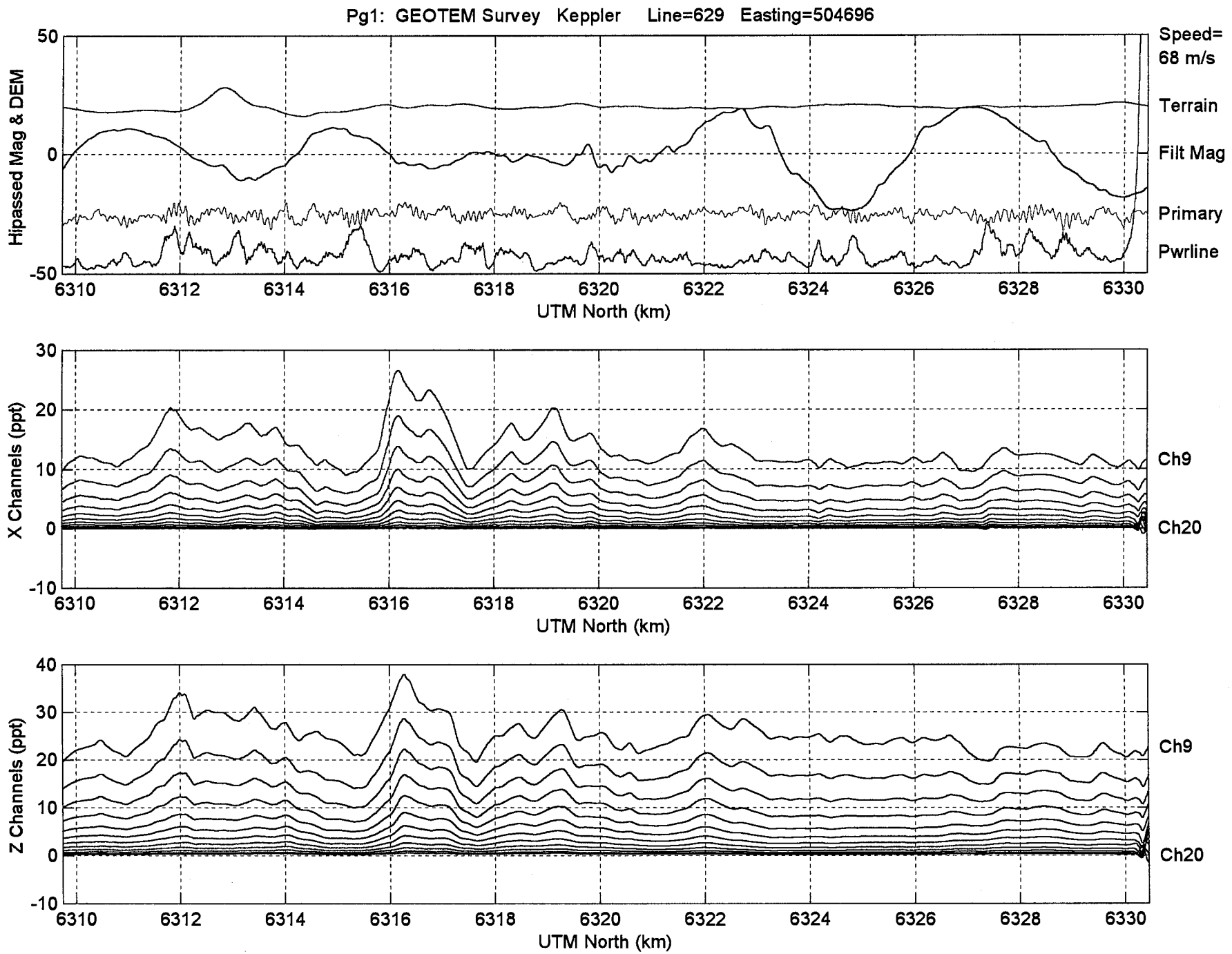

Pg1: GEOTEM Survey Keppler Line=624 Easting=503695
Hipassed Mag & DEM
50
0
-50
Speed=
-59 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
50
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)

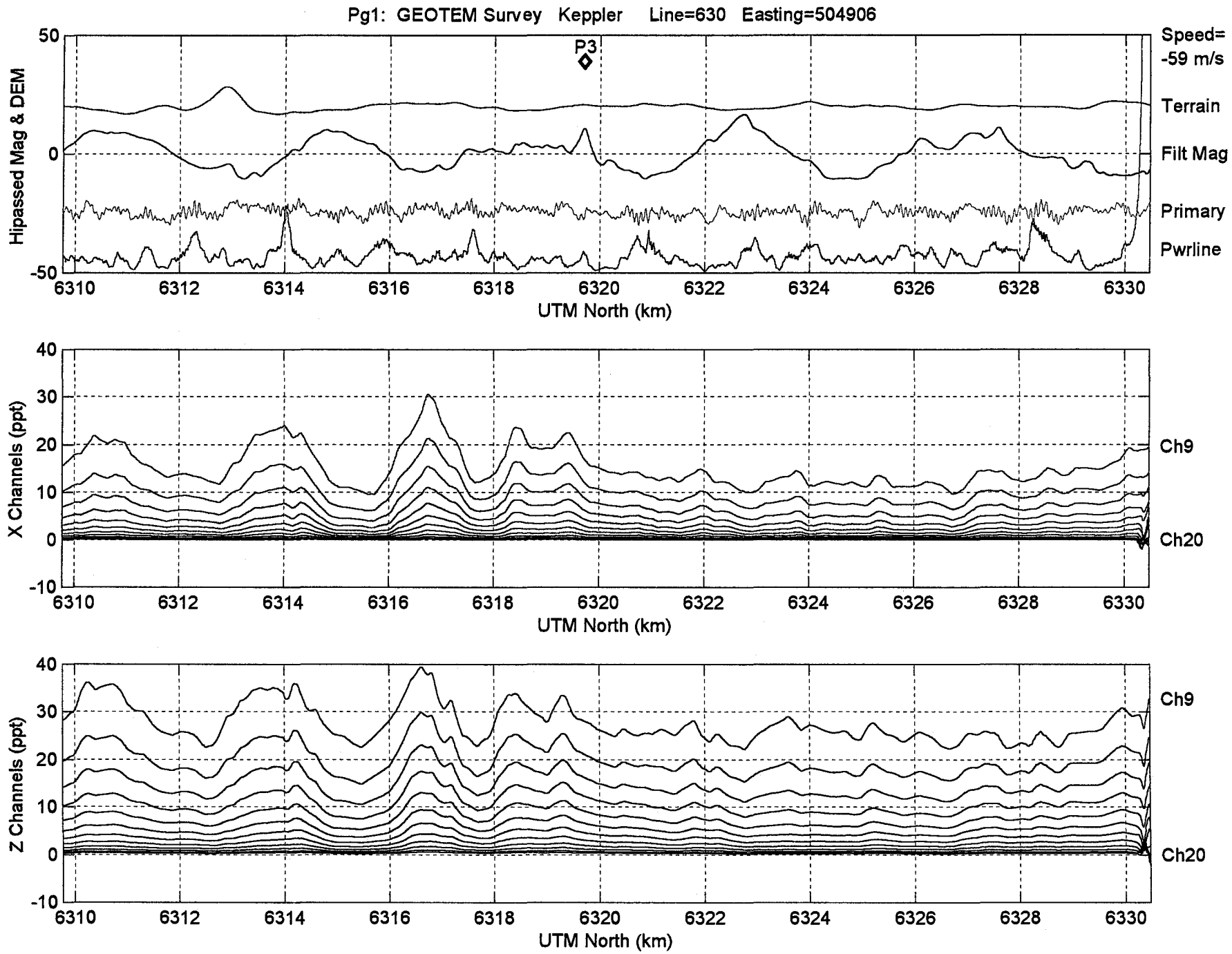

Pg1: GEOTEM Survey Keppler Line=625 Easting=503904
Hipassed Mag & DEM
Speed= 66 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
Z Channels (ppt)

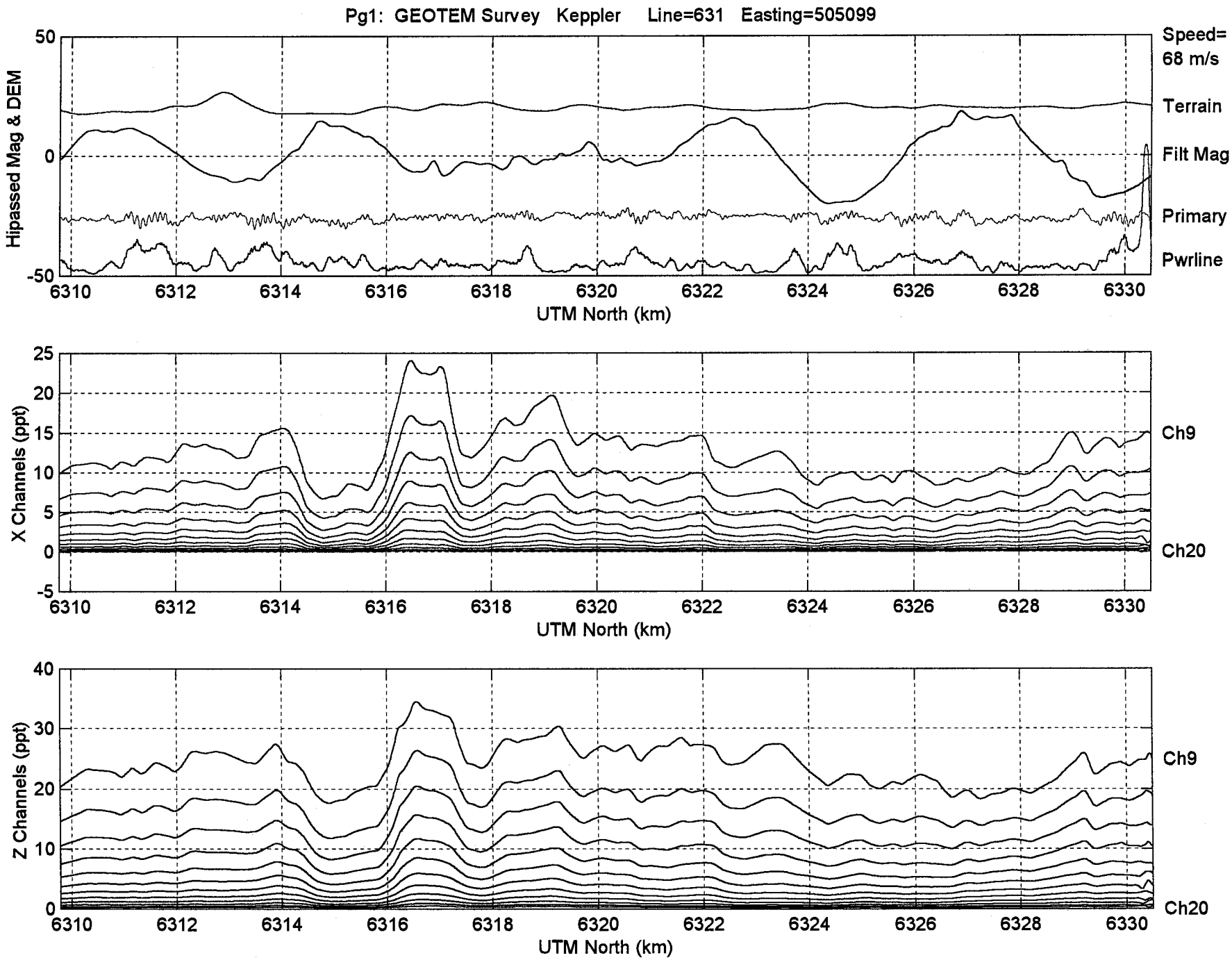

Pg1: GEOTEM Survey Keppler Line=626 Easting=504100
Hipassed Mag & DEM
50
0
-50
O3
N3
Speed=
-58 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
Z Channels (ppt)
40
30
20
10
0
-10

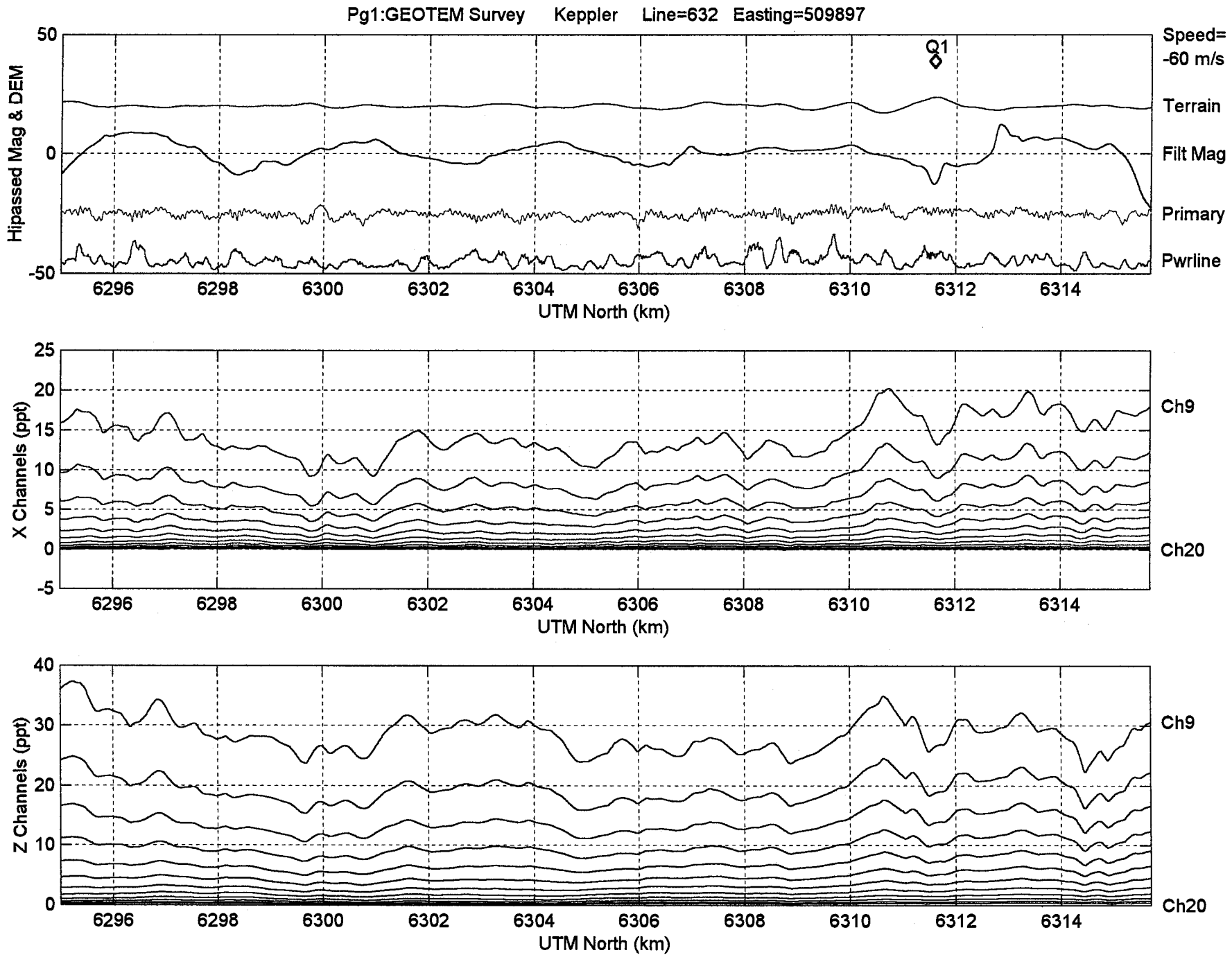

Pg1: GEOTEM Survey Keppler Line=627 Easting=504299
Hipassed Mag & DEM
50
0
-50
Speed=
66 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
Z Channels (ppt)
40
30
20
10
0
-10

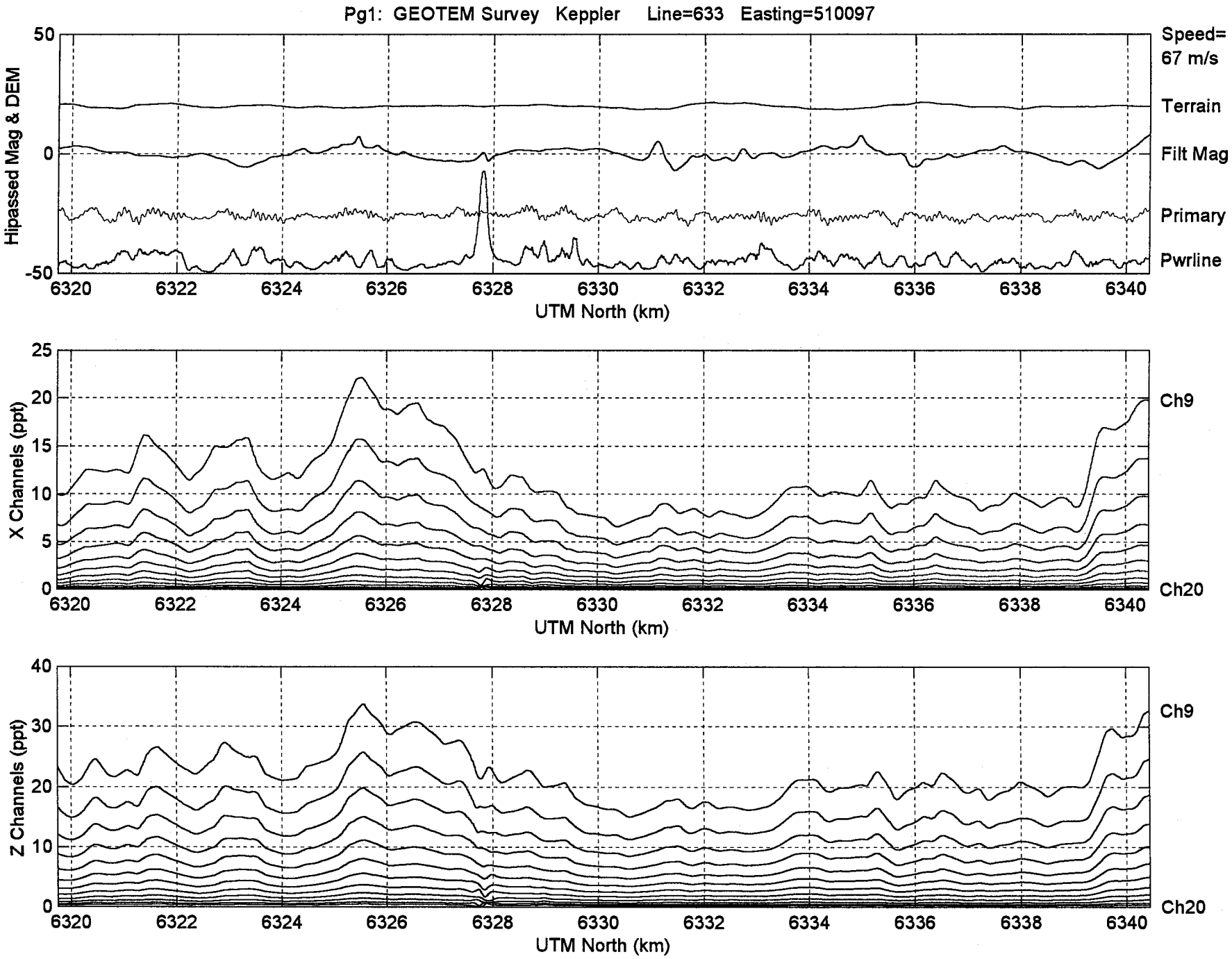

Pg1: GEOTEM Survey Keppler Line=628 Easting=504504
Hipassed Mag & DEM
Speed= -60 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
Ch9
Ch20
UTM North (km)

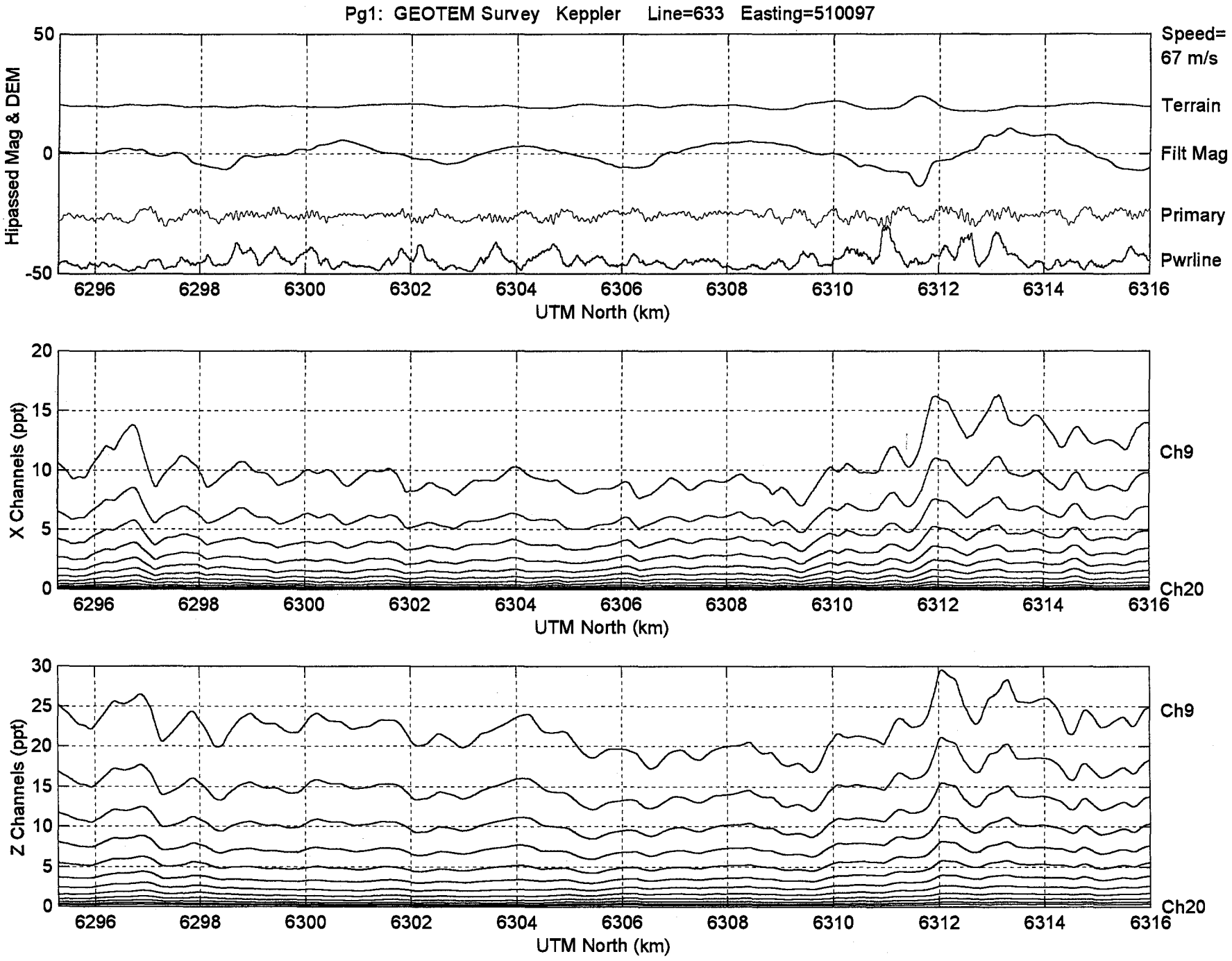

Pg1: GEOTEM Survey Keppler Line=629 Easting=504696
Hipassed Mag & DEM
50
0
-50
Speed=
68 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
Z Channels (ppt)
40

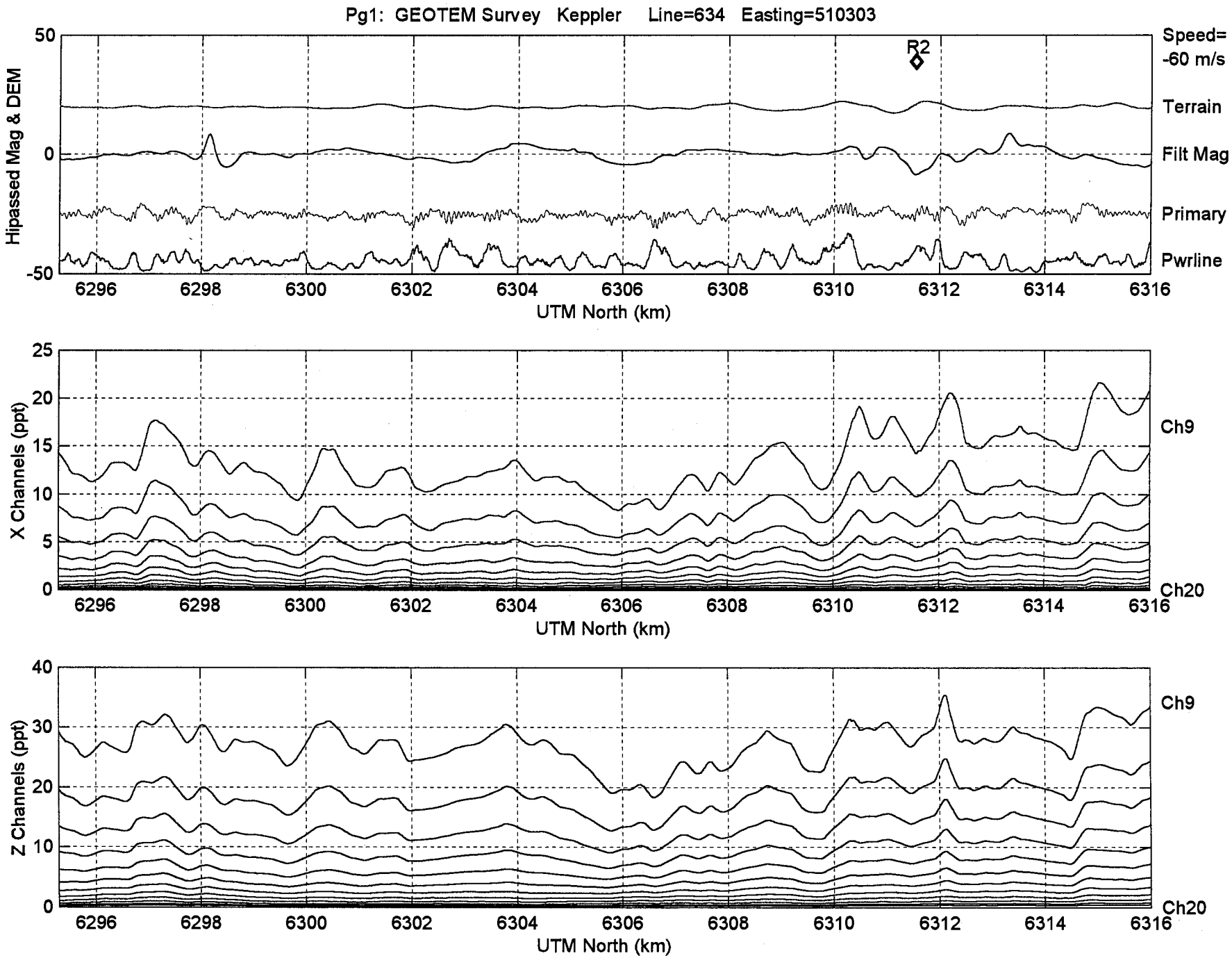

Pg1: GEOTEM Survey Keppler Line=630 Easting=504906
Hipassed Mag & DEM
50
0
-50
P3
Speed=
-59 m/s
Terrain
Filt Mag
Primary
Pwrline
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
40
30
20
10
0
-10
Ch9
Ch20
Z Channels (ppt)

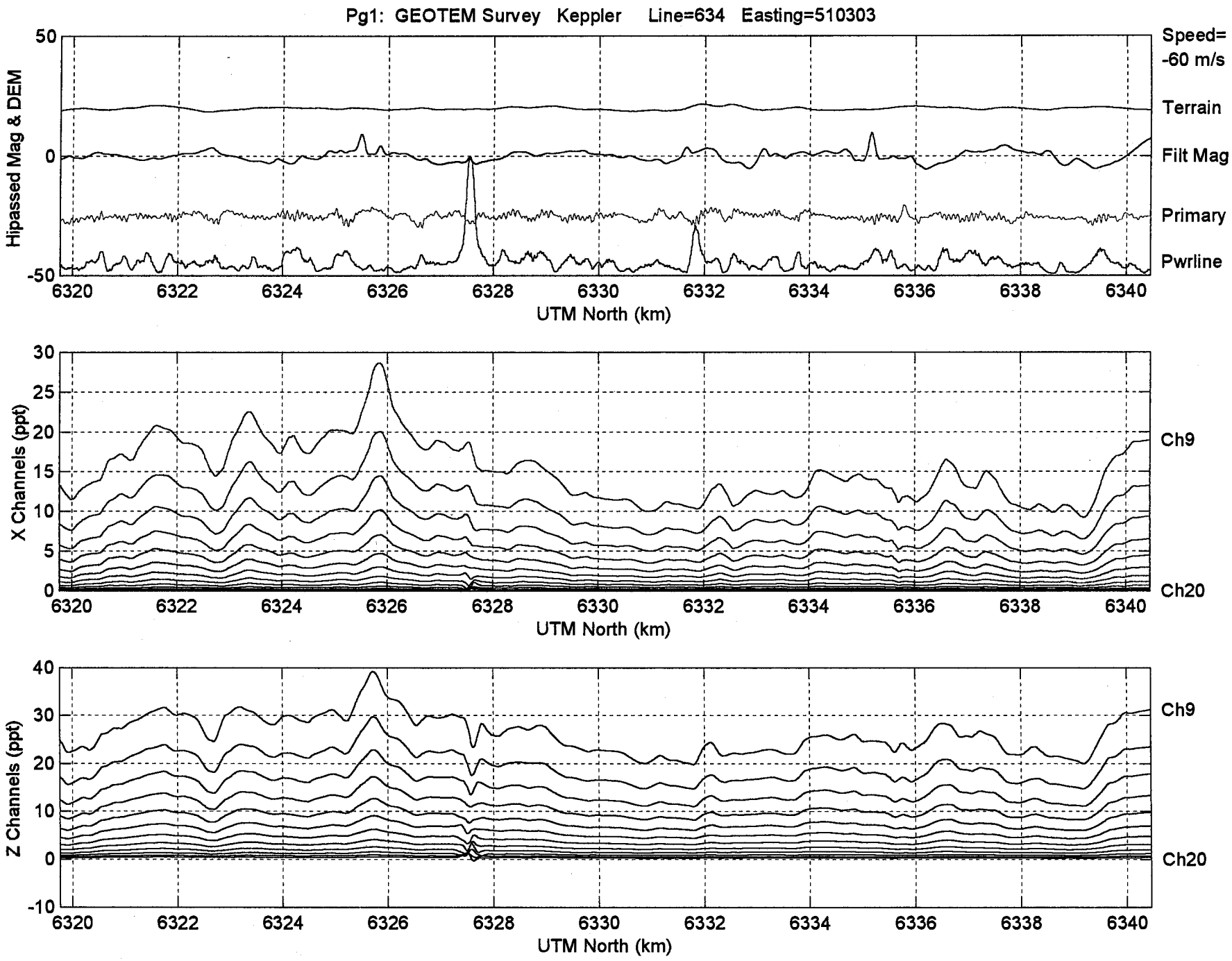

Pg1: GEOTEM Survey Keppler Line=631 Easting=505099
Speed= 68 m/s
Terrain
Filt Mag
Primary
Pwrline
Hipassed Mag & DEM
50
0
-50
6310
6312
6314
6316
6318
6320
6322
6324
6326
6328
6330
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
Z Channels (ppt)
40
30
20
10
0

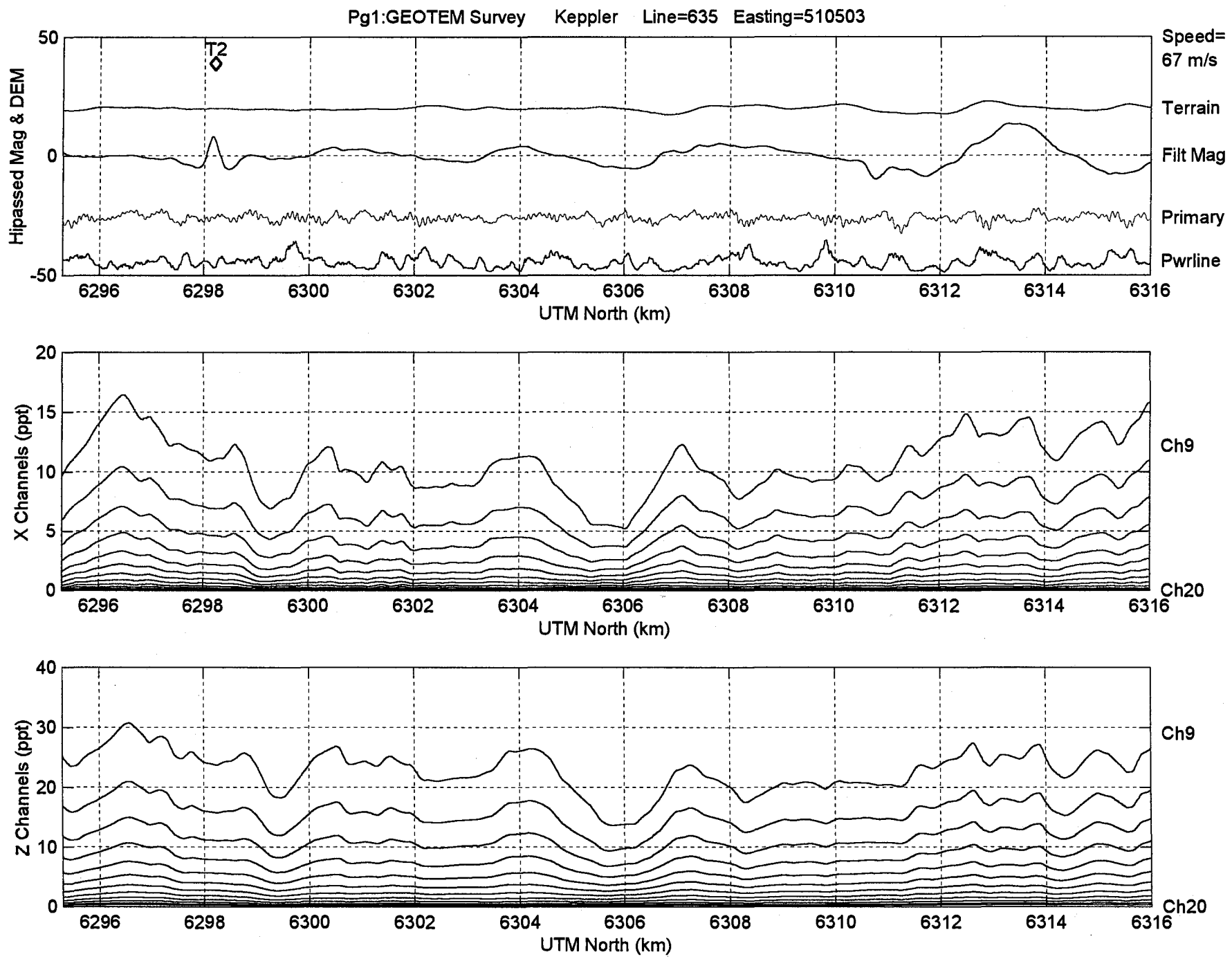

Pg1:GEOTEM Survey Keppler Line=632 Easting=509897
Hipassed Mag & DEM
50
0
-50
Q1
Speed=
-60 m/s
Terrain
Filt Mag
Primary
Pwrline
6296
6298
6300
6302
6304
6306
6308
6310
6312
6314
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

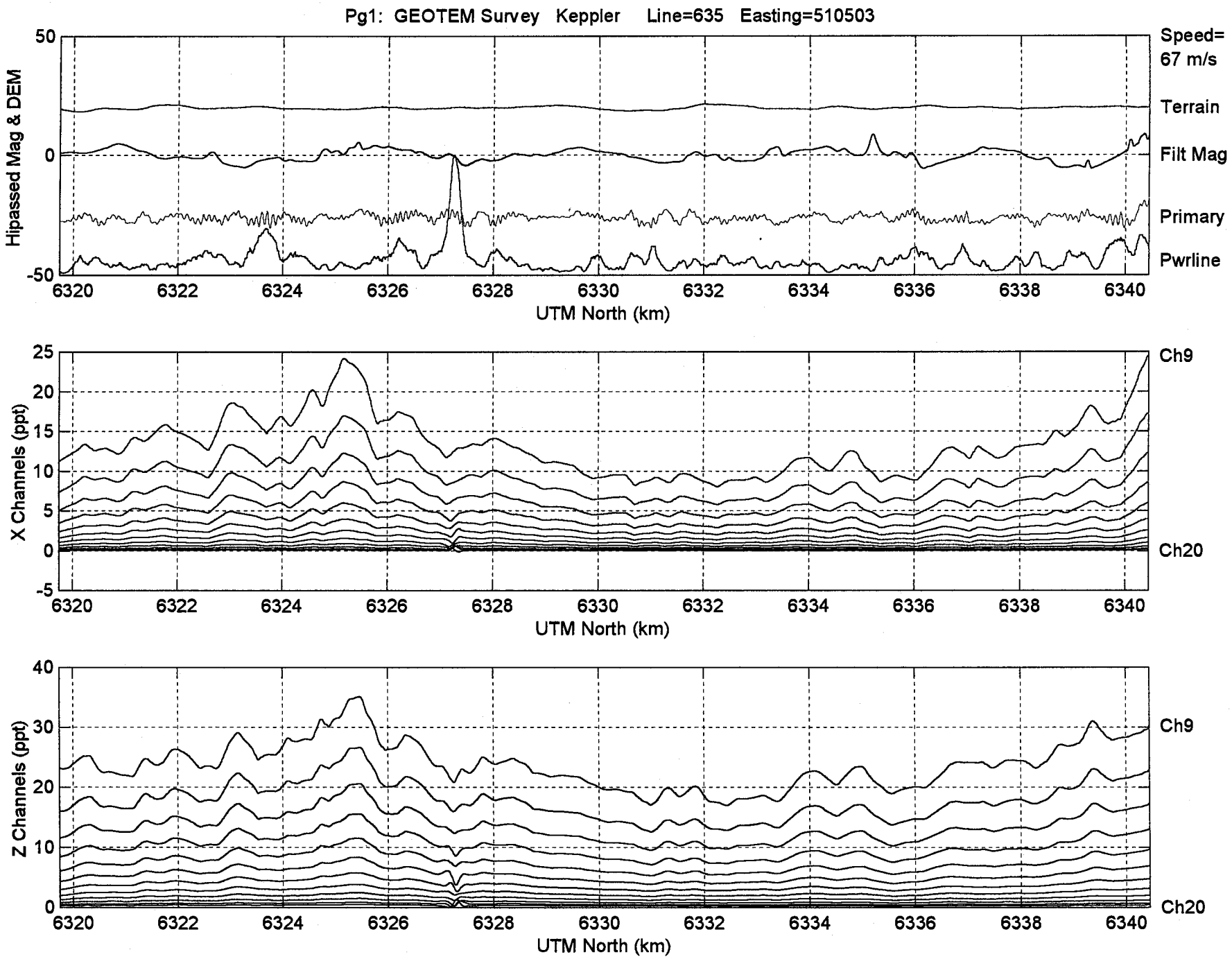

Pg1: GEOTEM Survey Keppler Line=633 Easting=510097
Hipassed Mag & DEM
50
0
-50
Speed=
67 m/s
Terrain
Filt Mag
Primary
Pwrline
6320
6322
6324
6326
6328
6330
6332
6334
6336
6338
6340
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

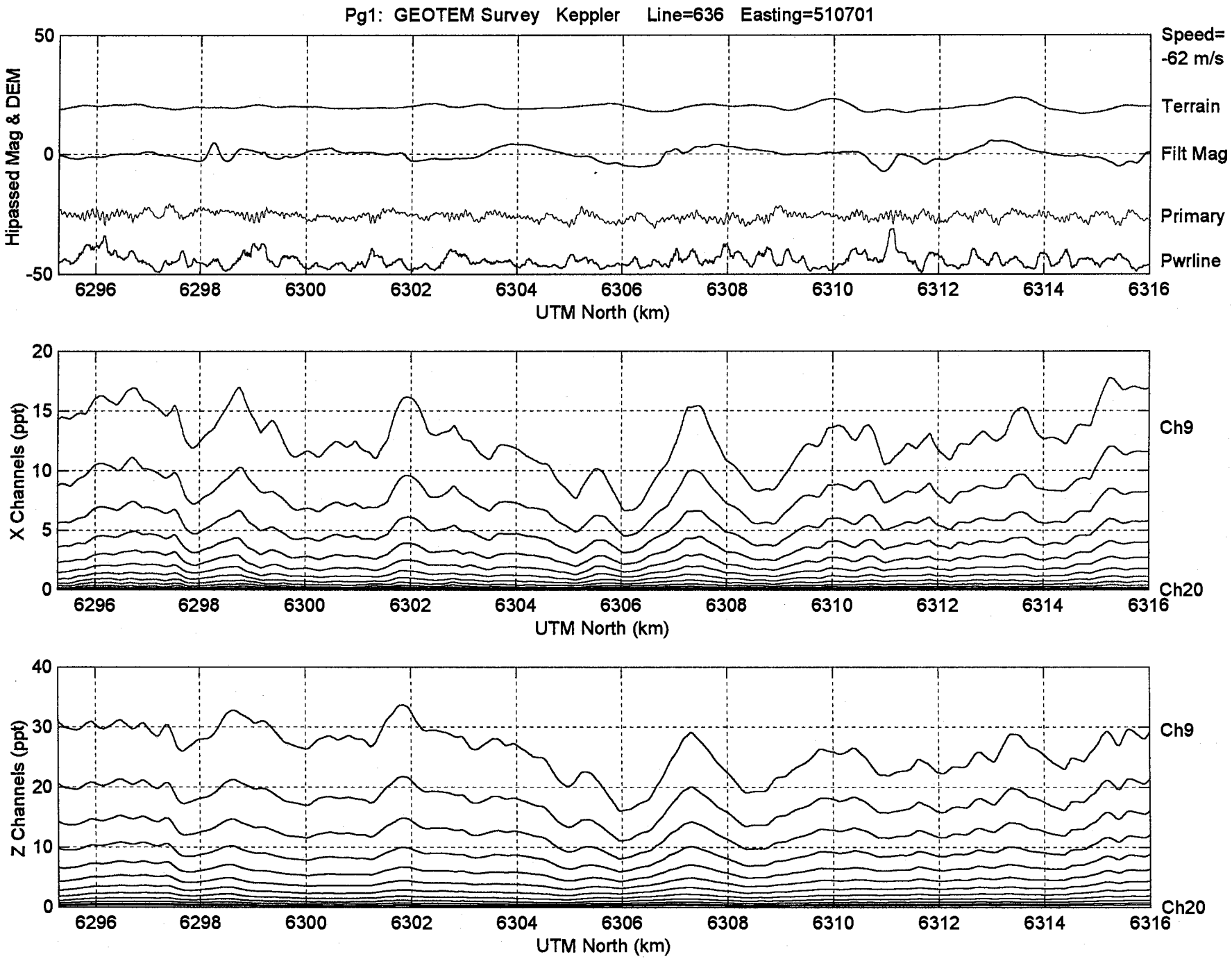

Pg1: GEOTEM Survey Keppler Line=633 Easting=510097
Hipassed Mag & DEM
50
0
-50
Speed=
67 m/s
Terrain
Filt Mag
Primary
Pwrline
6296
6298
6300
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)

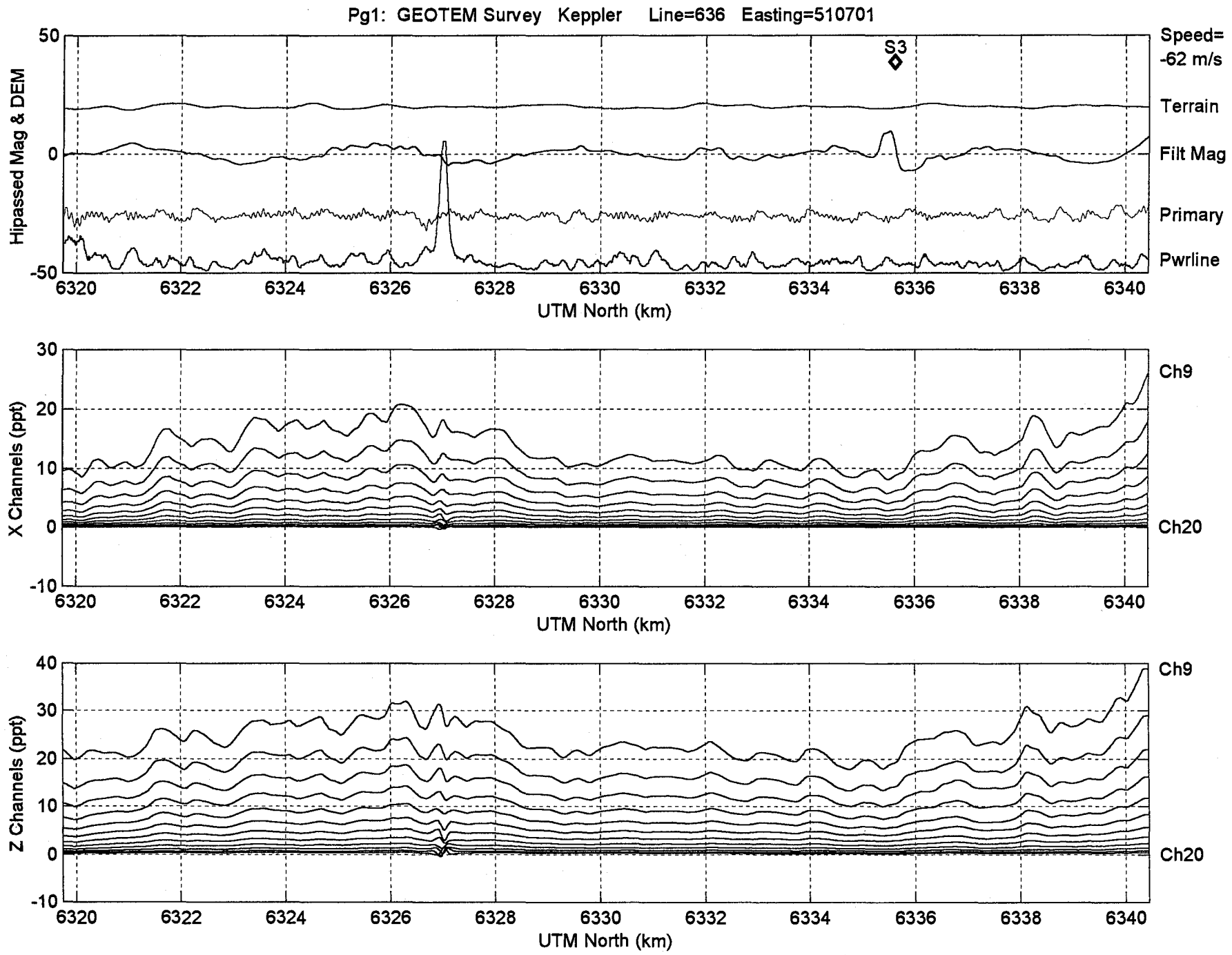

Pg1: GEOTEM Survey Keppler Line=634 Easting=510303
Hipassed Mag & DEM
50
0
-50
R2
Speed=
-60 m/s
Terrain
Filt Mag
Primary
Pwrline
6296
6298
6300
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)

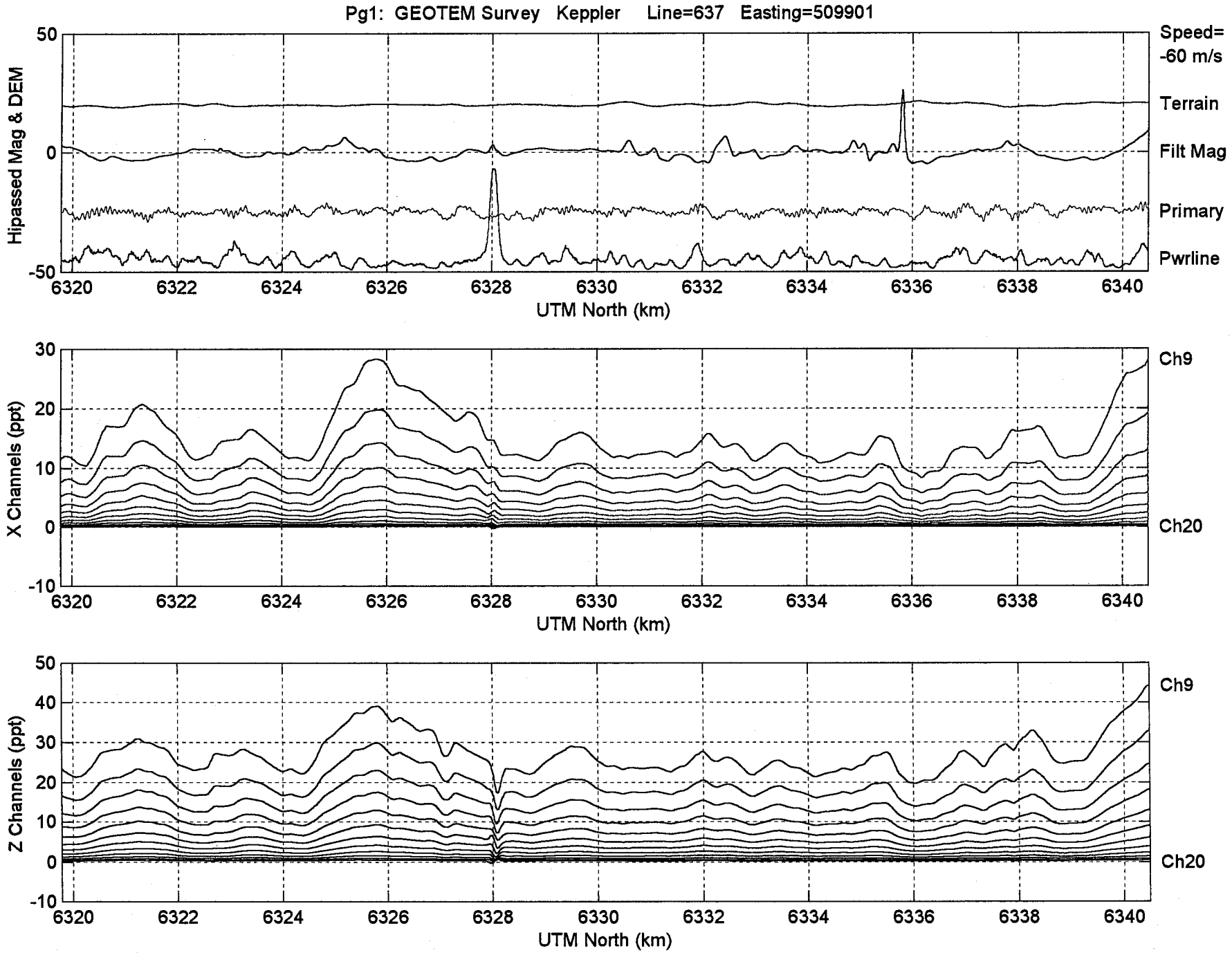

Pg1: GEOTEM Survey Keppler Line=634 Easting=510303
Hipassed Mag & DEM
50
0
-50
Speed=
-60 m/s
Terrain
Filt Mag
Primary
Pwrline
6320
6322
6324
6326
6328
6330
6332
6334
6336
6338
6340
UTM North (km)
X Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)


Pg1:GEOTEM Survey Keppler Line=635 Easting=510503
Hipassed Mag & DEM
50
0
-50
T2
Speed=
67 m/s
Terrain
Filt Mag
Primary
Pwrline
6296
6298
6300
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)


Pg1: GEOTEM Survey Keppler Line=635 Easting=510503
Hipassed Mag & DEM
Speed= 67 m/s
Terrain
Filt Mag
Primary
Pwrline
UTM North (km)
X Channels (ppt)
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
Ch9
Ch20
UTM North (km)


Pg1: GEOTEM Survey Keppler Line=636 Easting=510701
Hipassed Mag & DEM
50
0
-50
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6296
6298
6300
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
UTM North (km)


Pg1: GEOTEM Survey Keppler Line=636 Easting=510701
Hipassed Mag & DEM
50
0
-50
S3
Speed=
-62 m/s
Terrain
Filt Mag
Primary
Pwrline
6320
6322
6324
6326
6328
6330
6332
6334
6336
6338
6340
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)

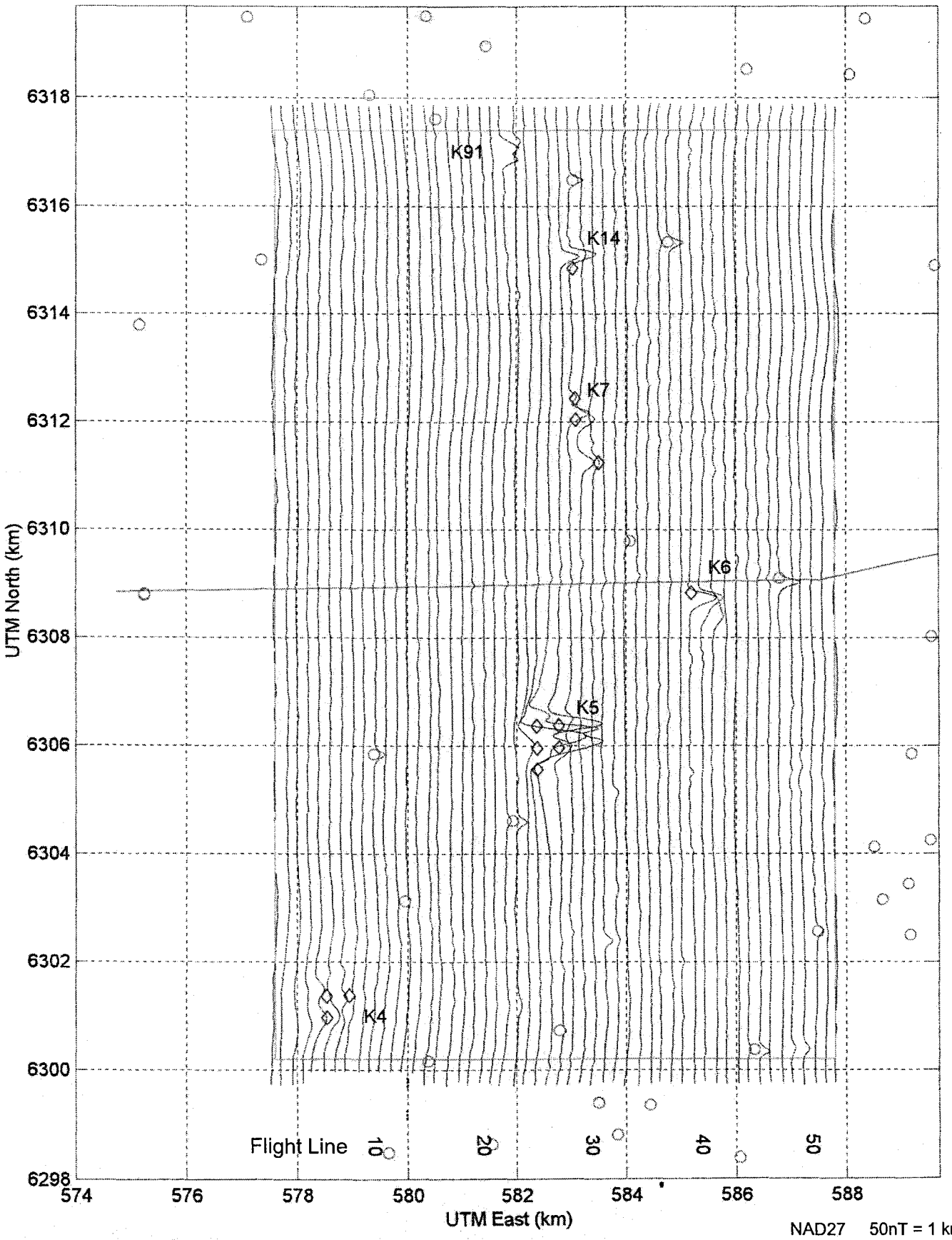

Pg1: GEOTEM Survey Keppler Line=637 Easting=509901
Hipassed Mag & DEM
50
0
-50
Speed=
-60 m/s
Terrain
Filt Mag
Primary
Pwrline
6320
6322
6324
6326
6328
6330
6332
6334
6336
6338
6340
UTM North (km)
X Channels (ppt)
30
20
10
0
-10
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
50
40
30
20
10
0
-10
Ch9
Ch20
UTM North (km)

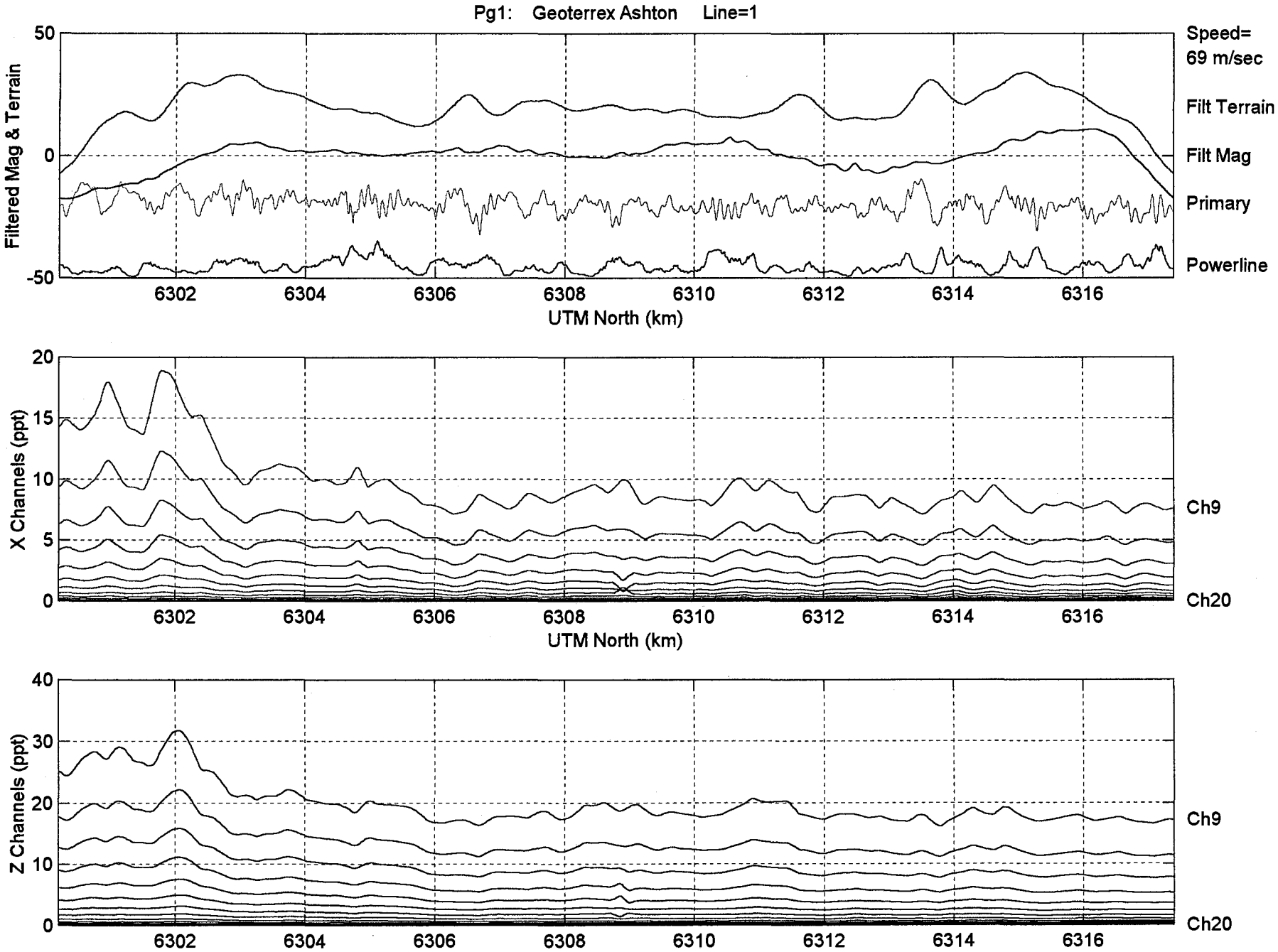
APPENDIX 5

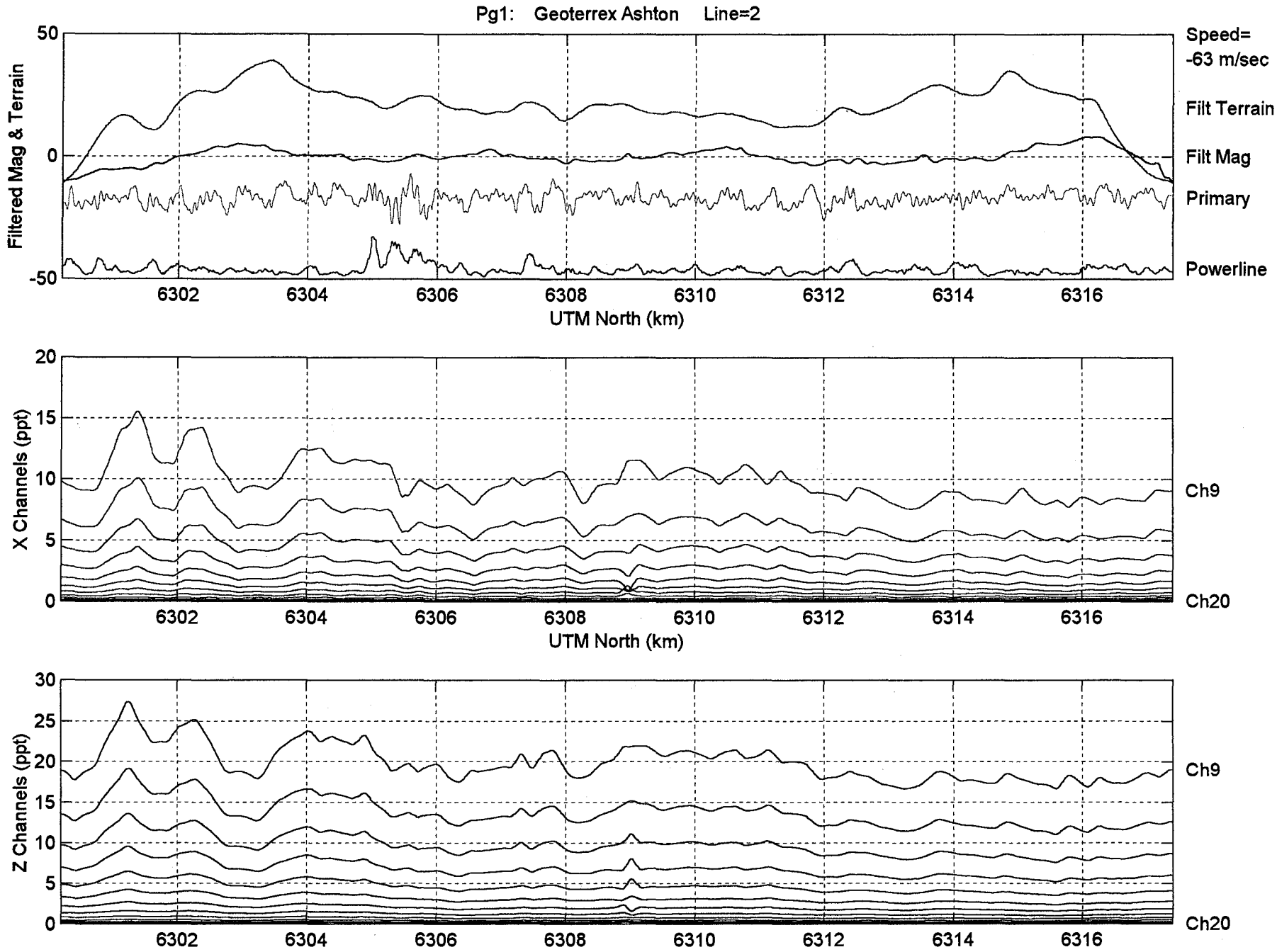
GEOTEM MAGNETIC AND ELECTROMAGNETIC SURVEY

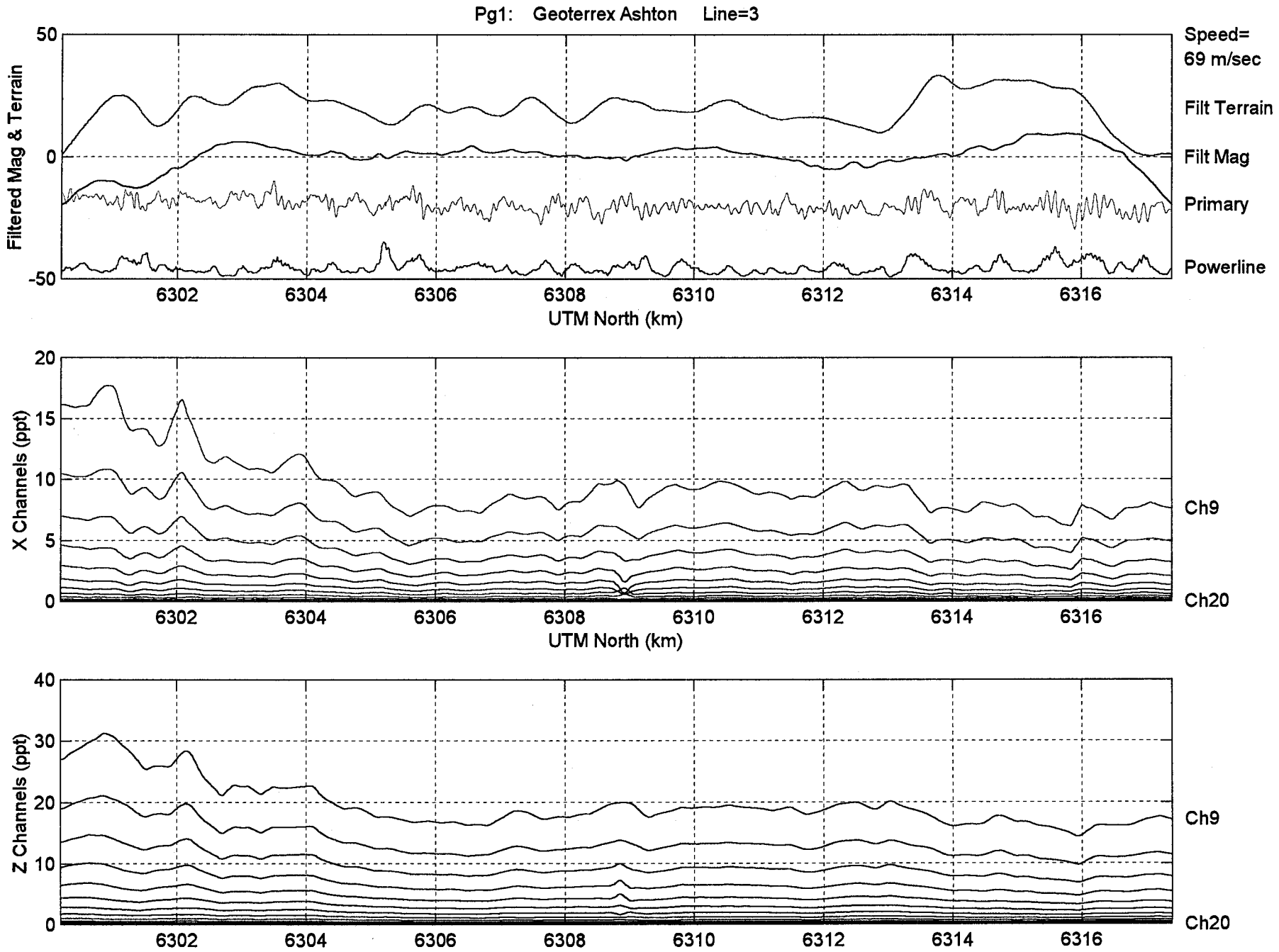
FLIGHT LINE PROFILES – BUFFALO HEAD KIMBERLITES

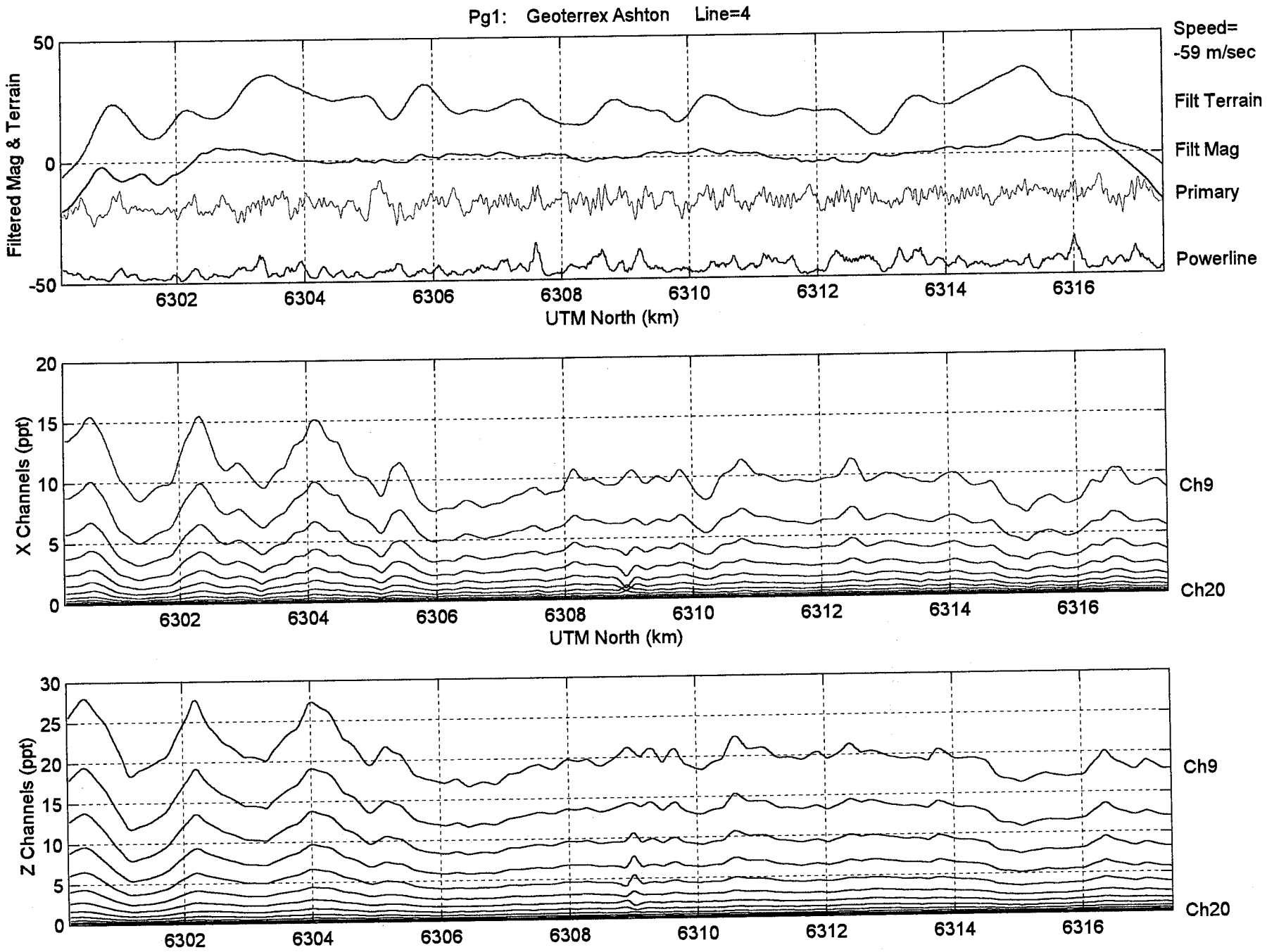
Geoterrex Survey of Buffalo Head Kimberlites
Total Magnetic Field Stack Plot,
Flight Line Reference For GEOTEM Survey

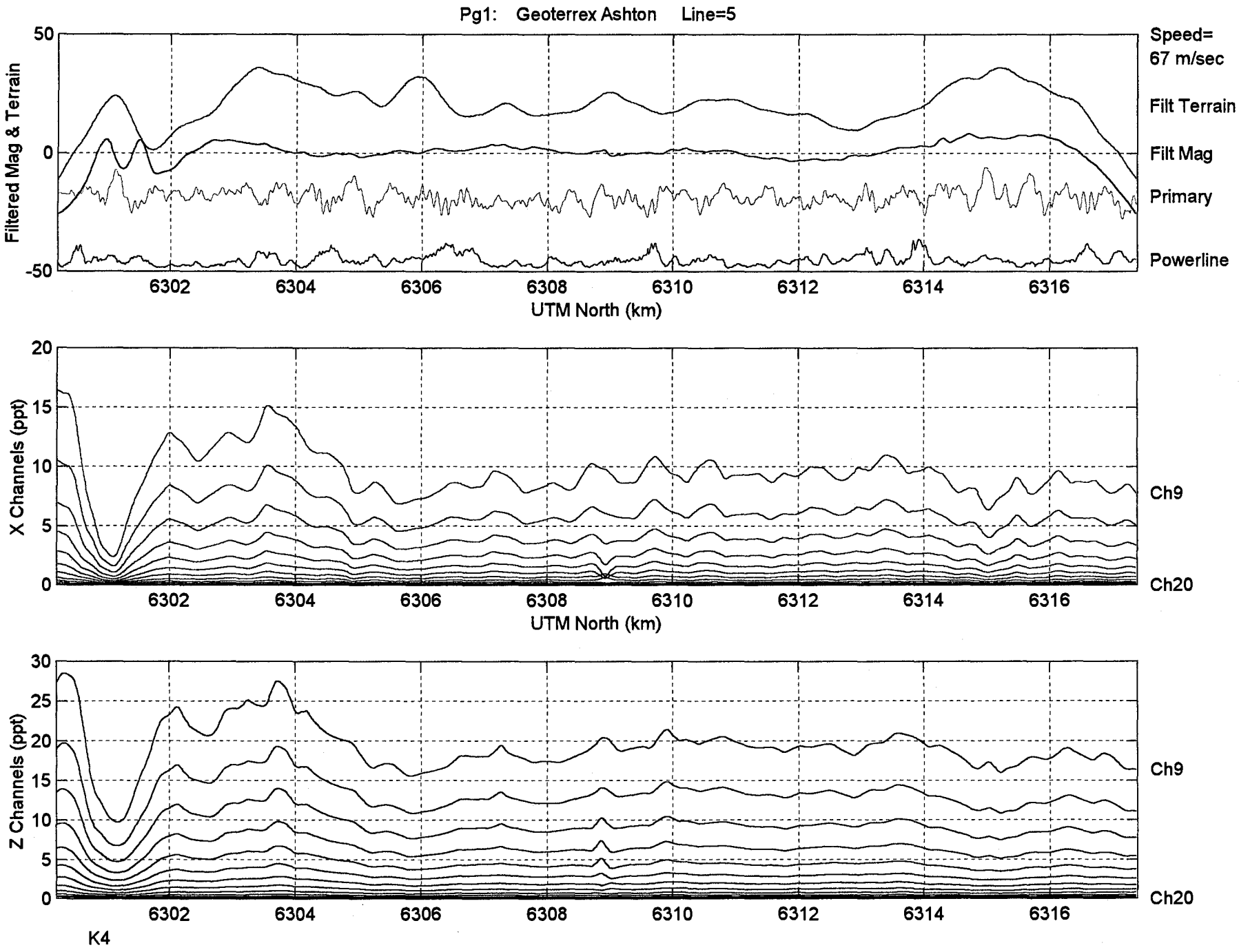


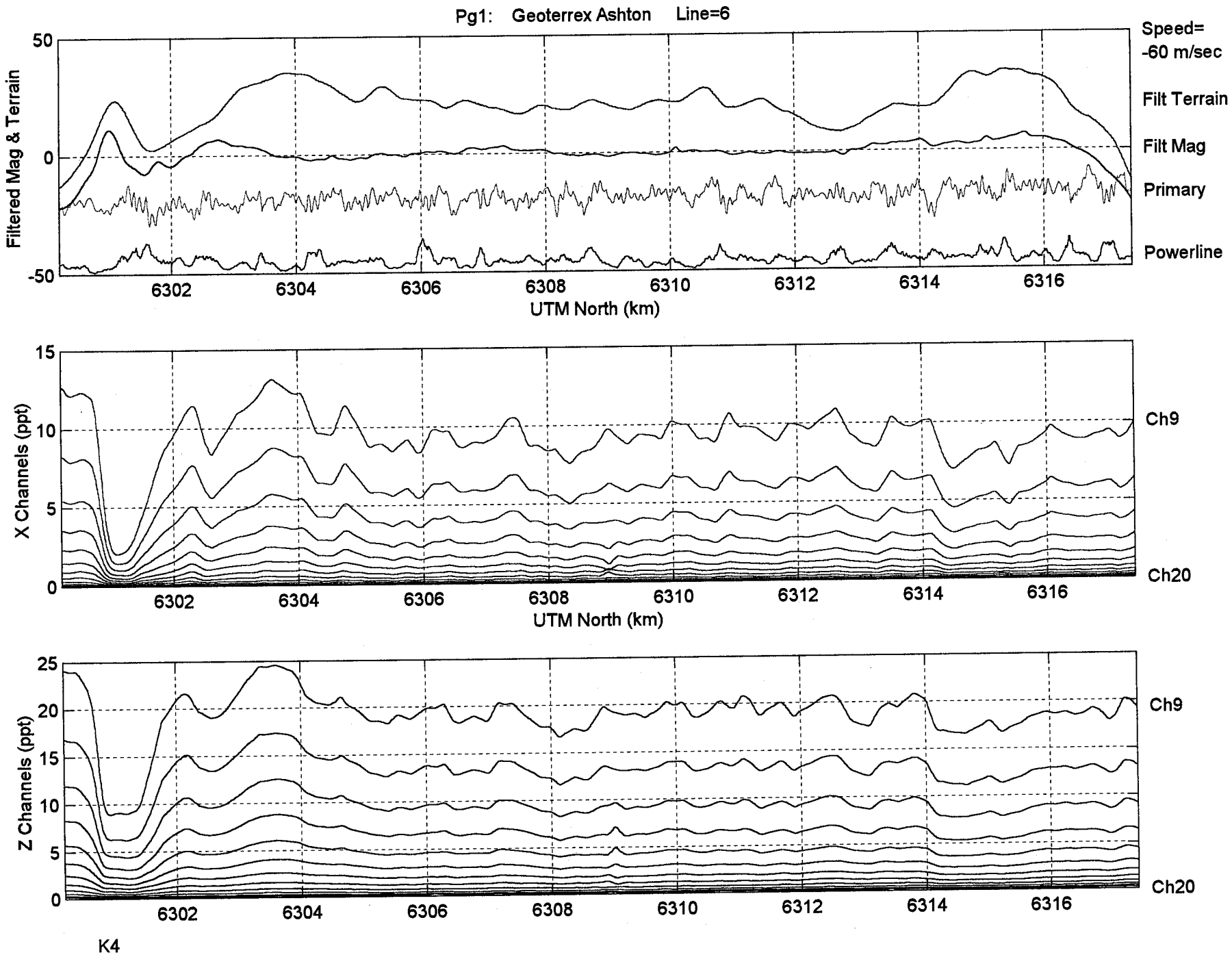

Pg1: Geoterrex Ashton Line=1
Filtered Mag & Terrain
50
0
-50
Speed=
69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20

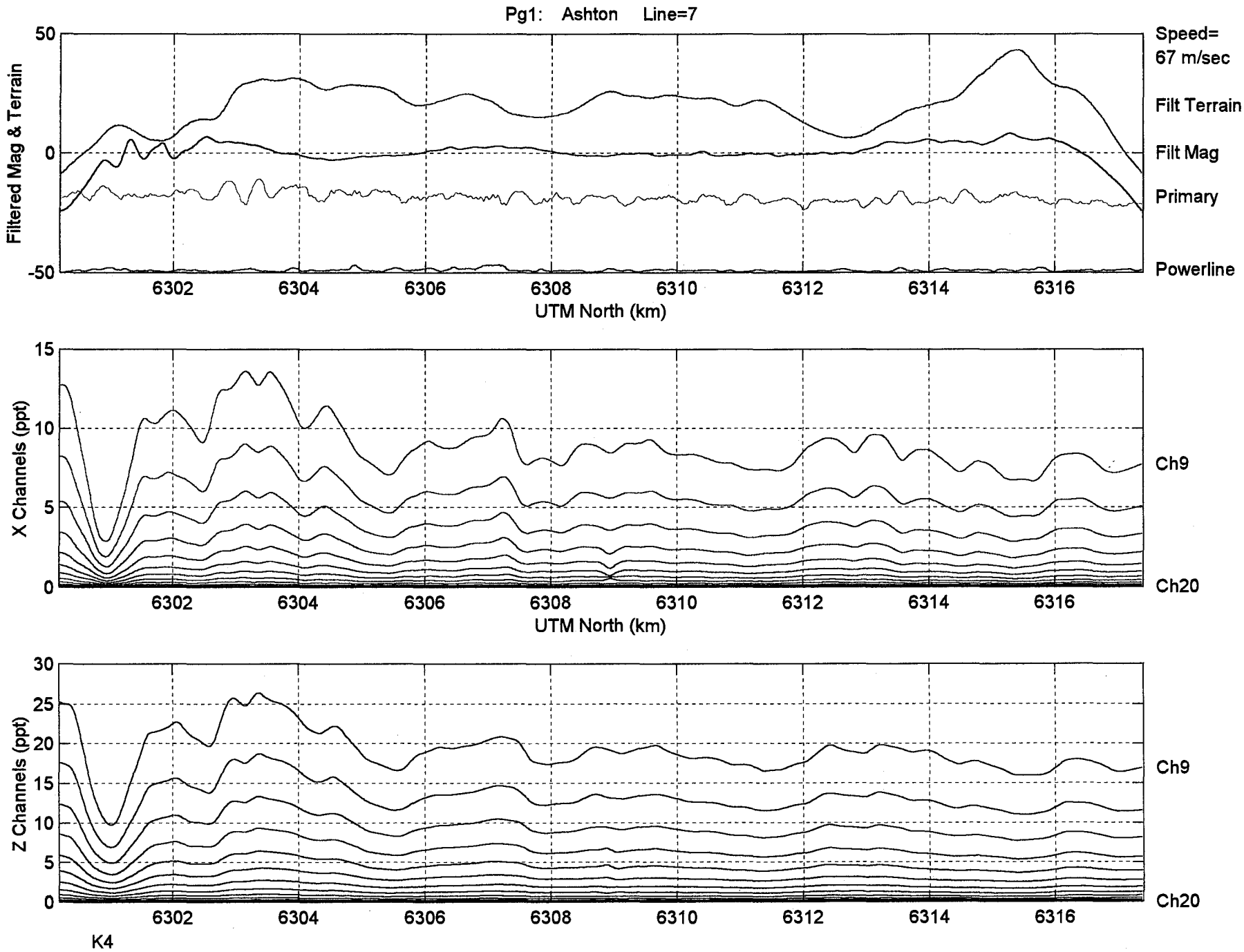

Pg1: Geoterrex Ashton Line=2
Filtered Mag & Terrain
50
0
-50
Speed=
-63 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

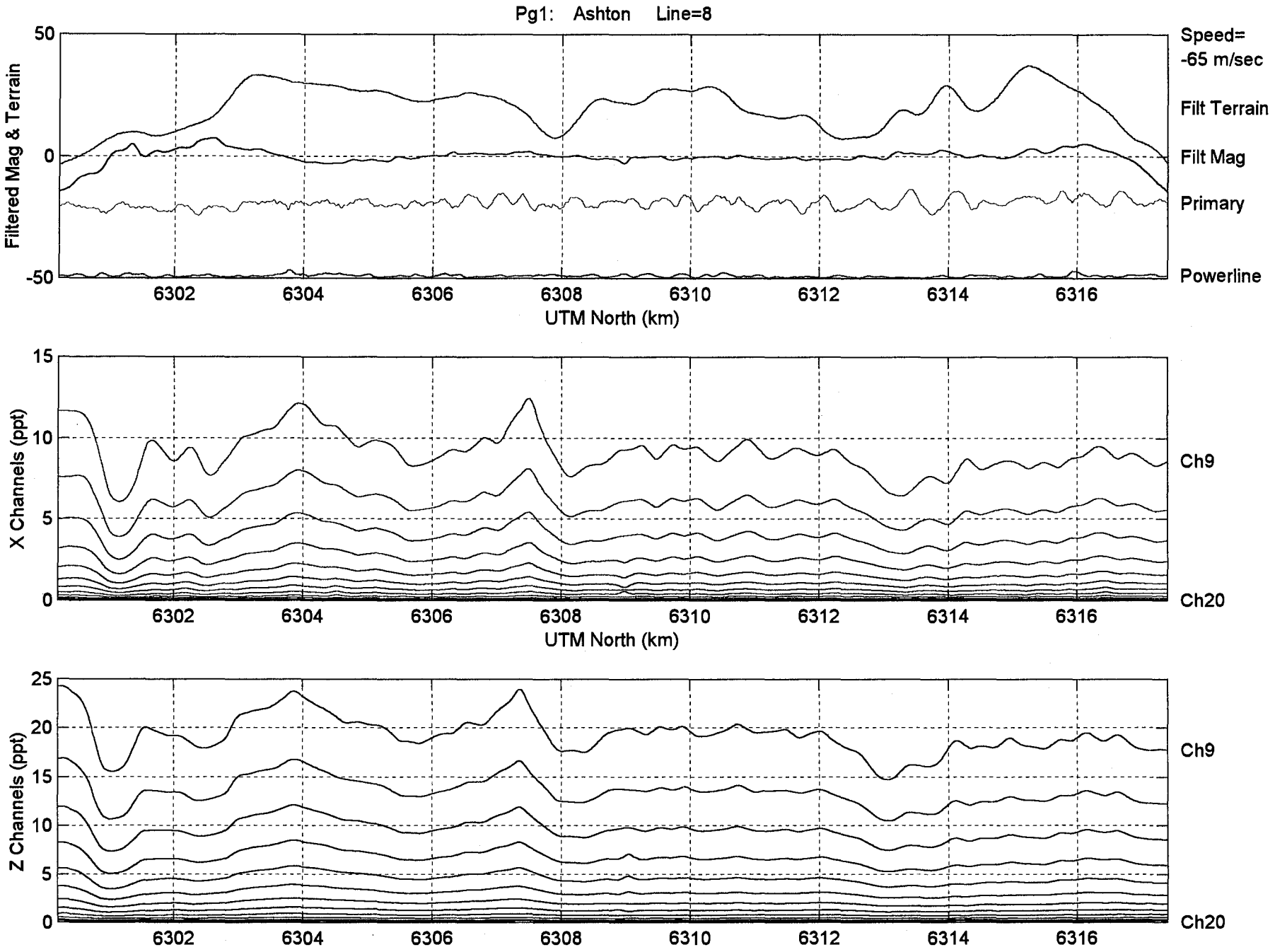

Pg1: Geoterrex Ashton Line=3
Speed= 69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20

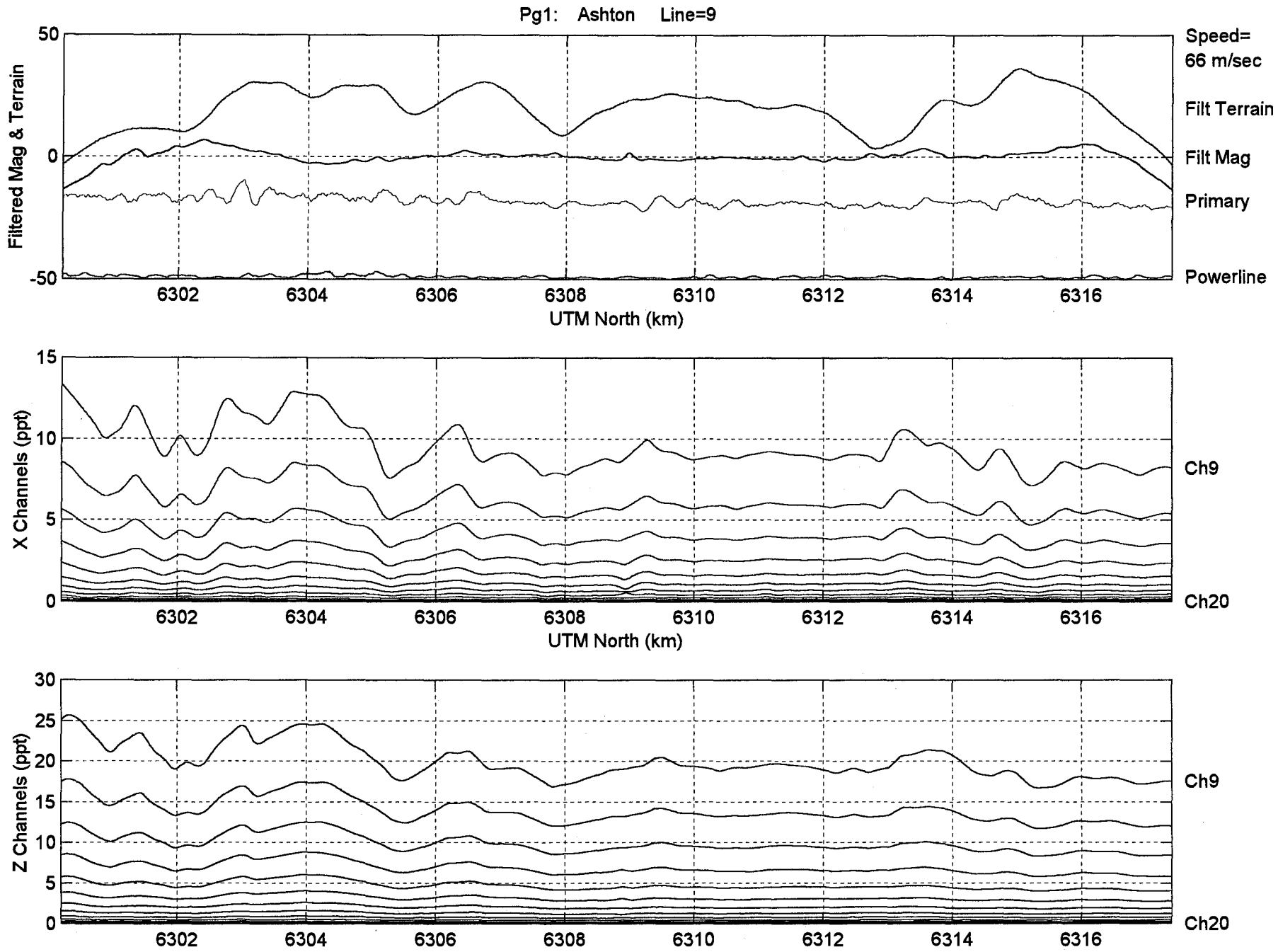

Pg1: Geoterrex Ashton Line=4
Speed=
-59 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

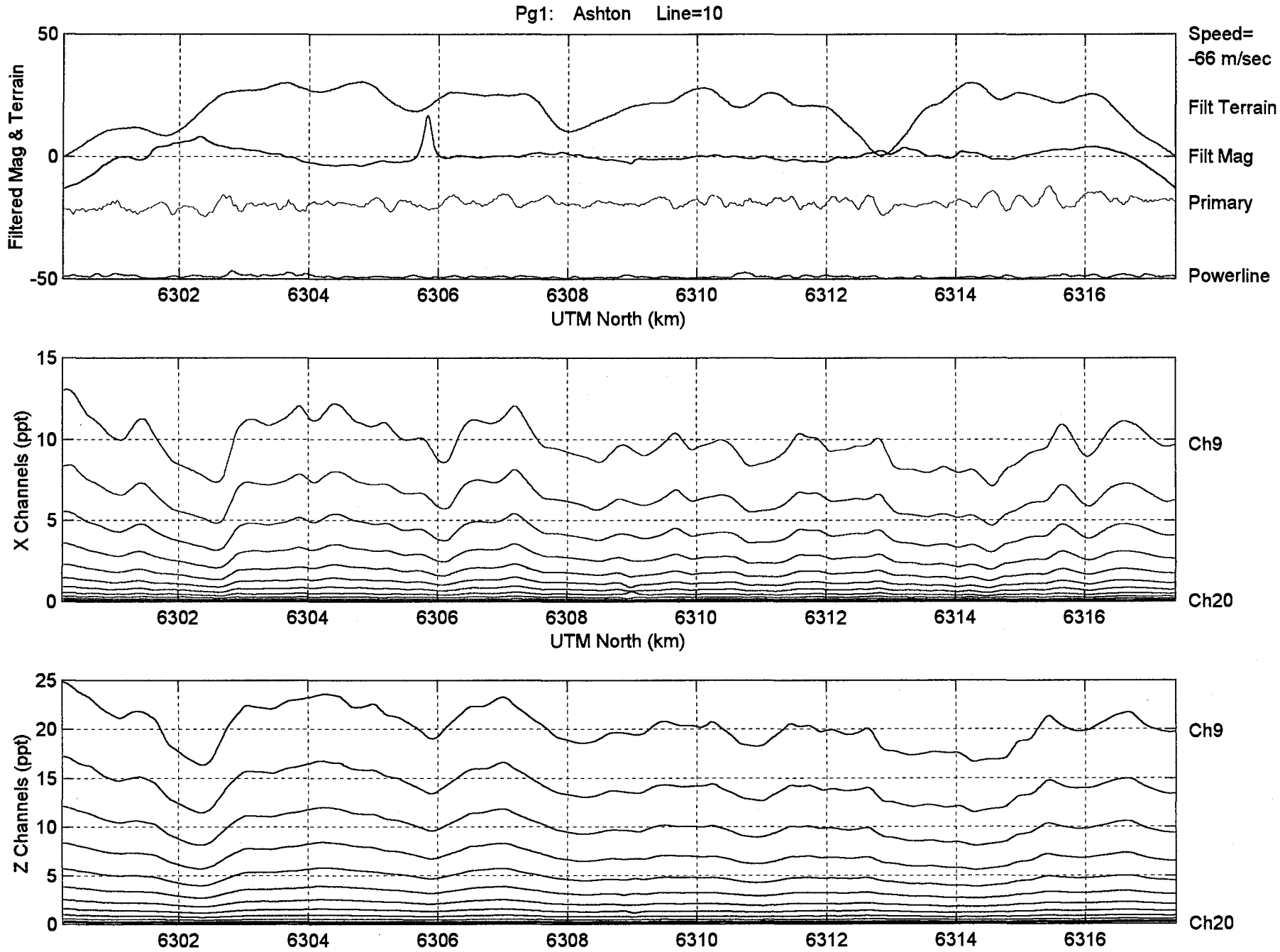

Pg1: Geoterrex Ashton Line=5
Filtered Mag & Terrain
50
0
-50
Speed=
67 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
K4

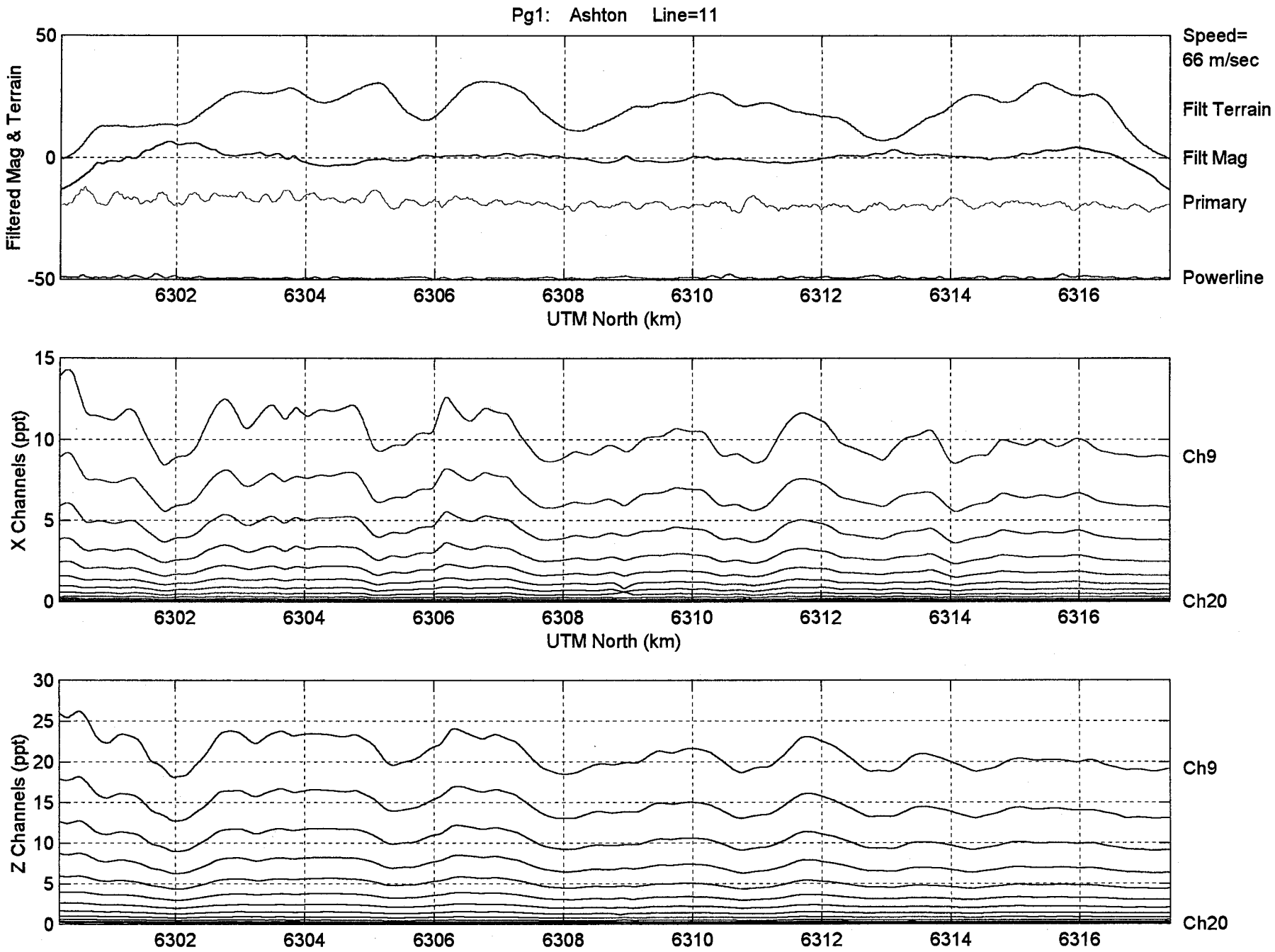

Pg1: Geoterrex Ashton Line=6
Speed= -60 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
K4

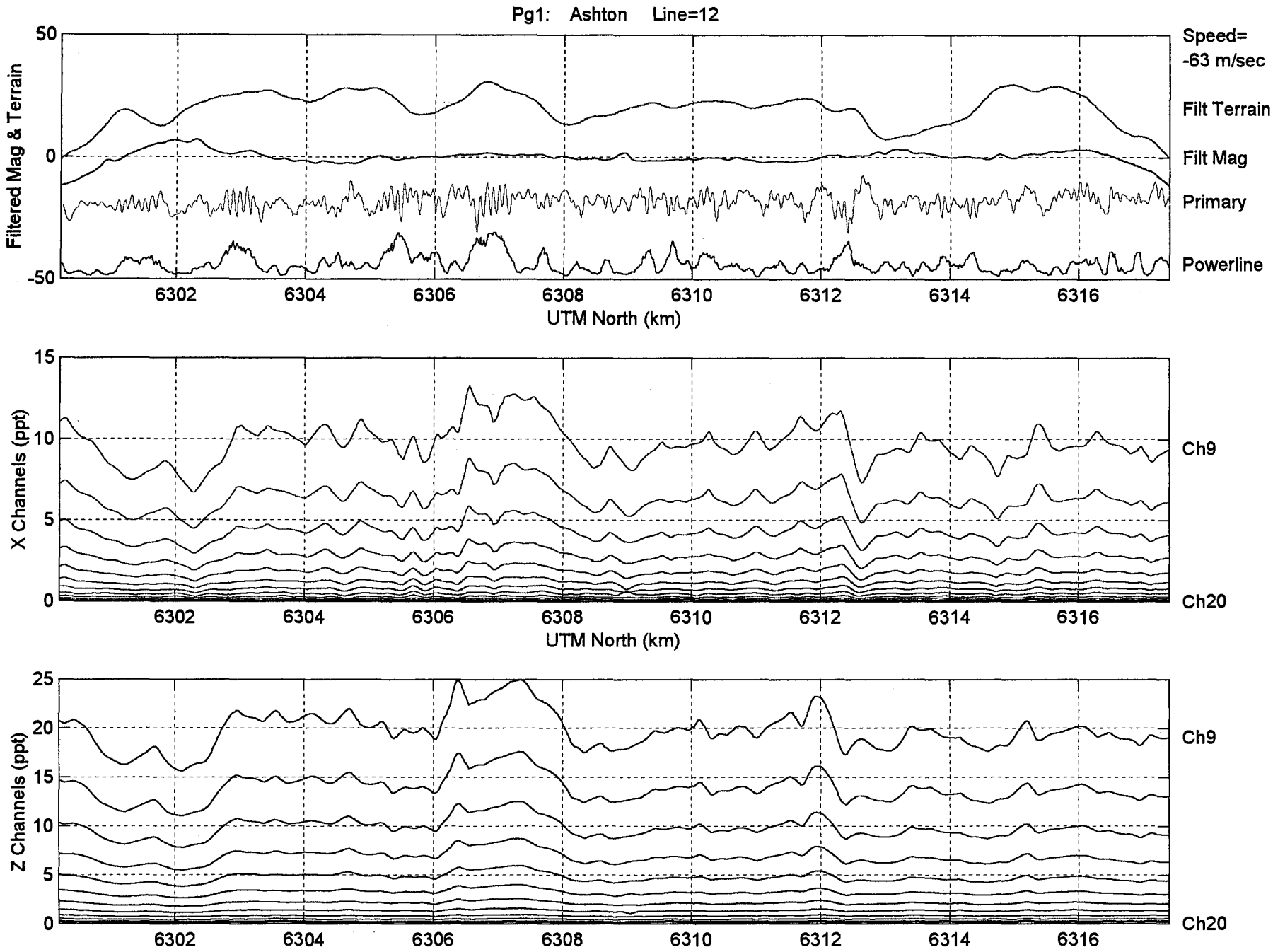

Pg1: Ashton Line=7
Filtered Mag & Terrain
50
0
-50
Speed=
67 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
K4

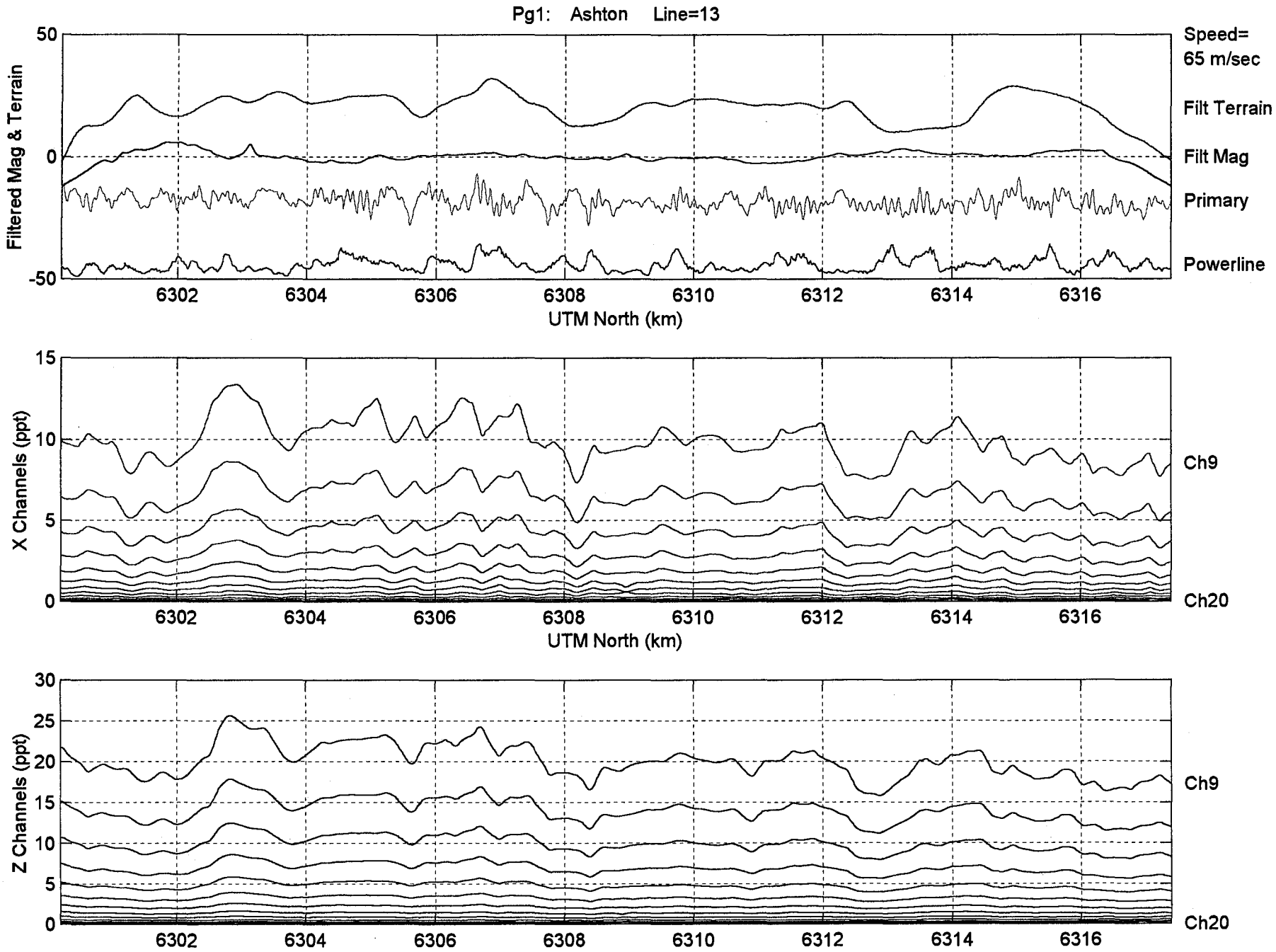

Pg1: Ashton Line=8
Filtered Mag & Terrain
50
0
-50
Speed=
-65 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

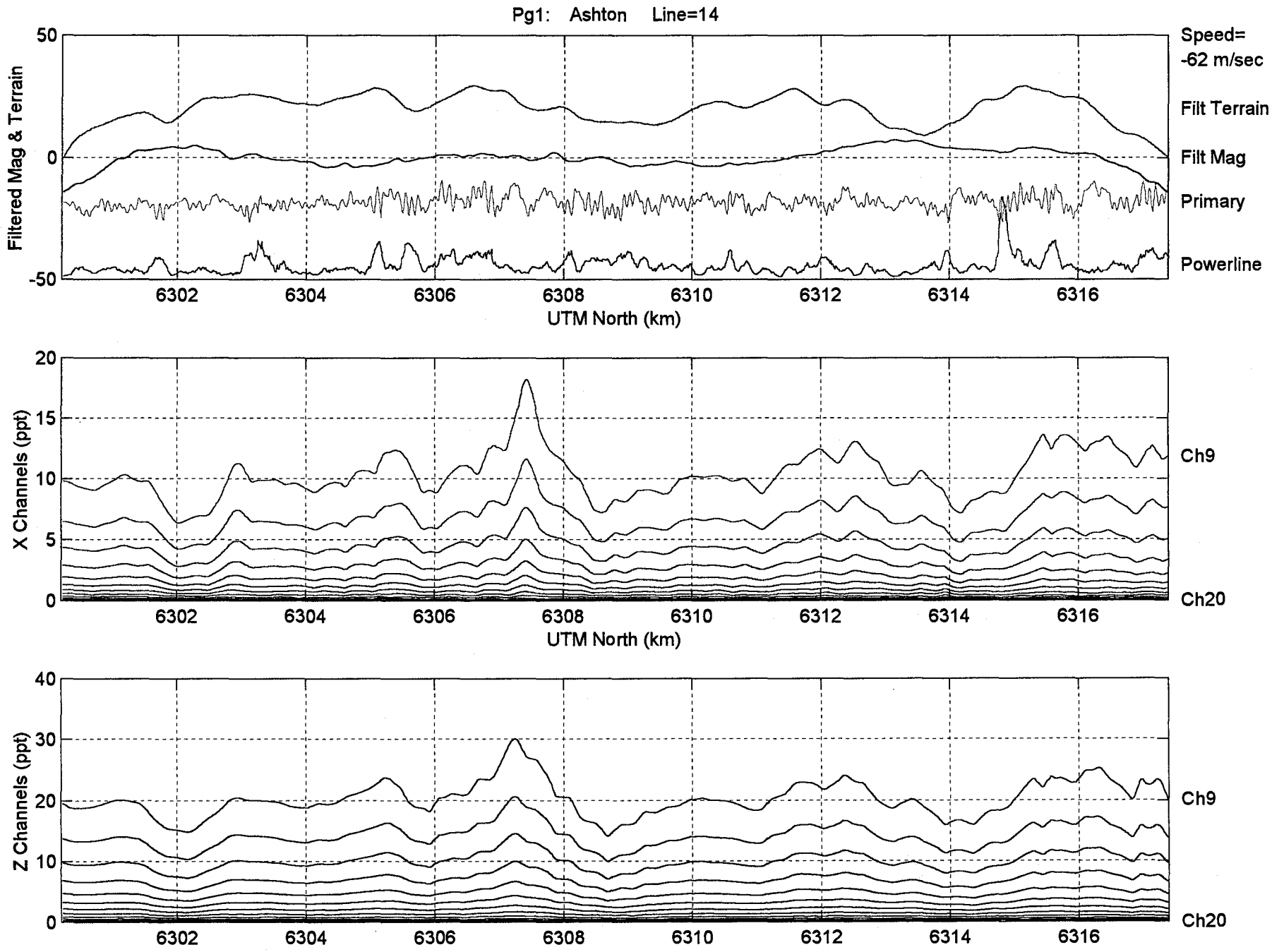

Pg1: Ashton Line=9
Filtered Mag & Terrain
50
0
-50
Speed=
66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

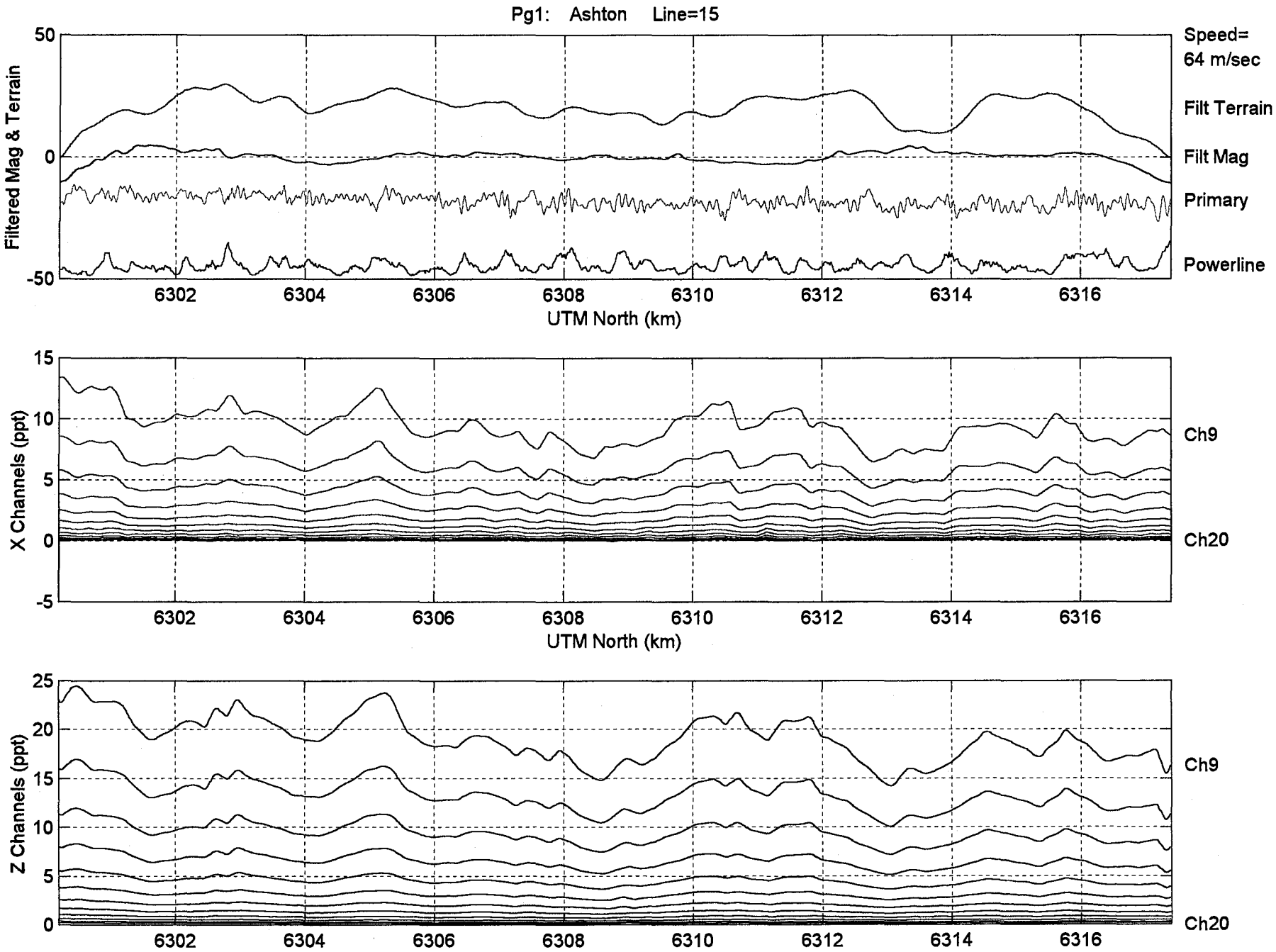

Pg1: Ashton Line=10
Filtered Mag & Terrain
50
0
-50
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

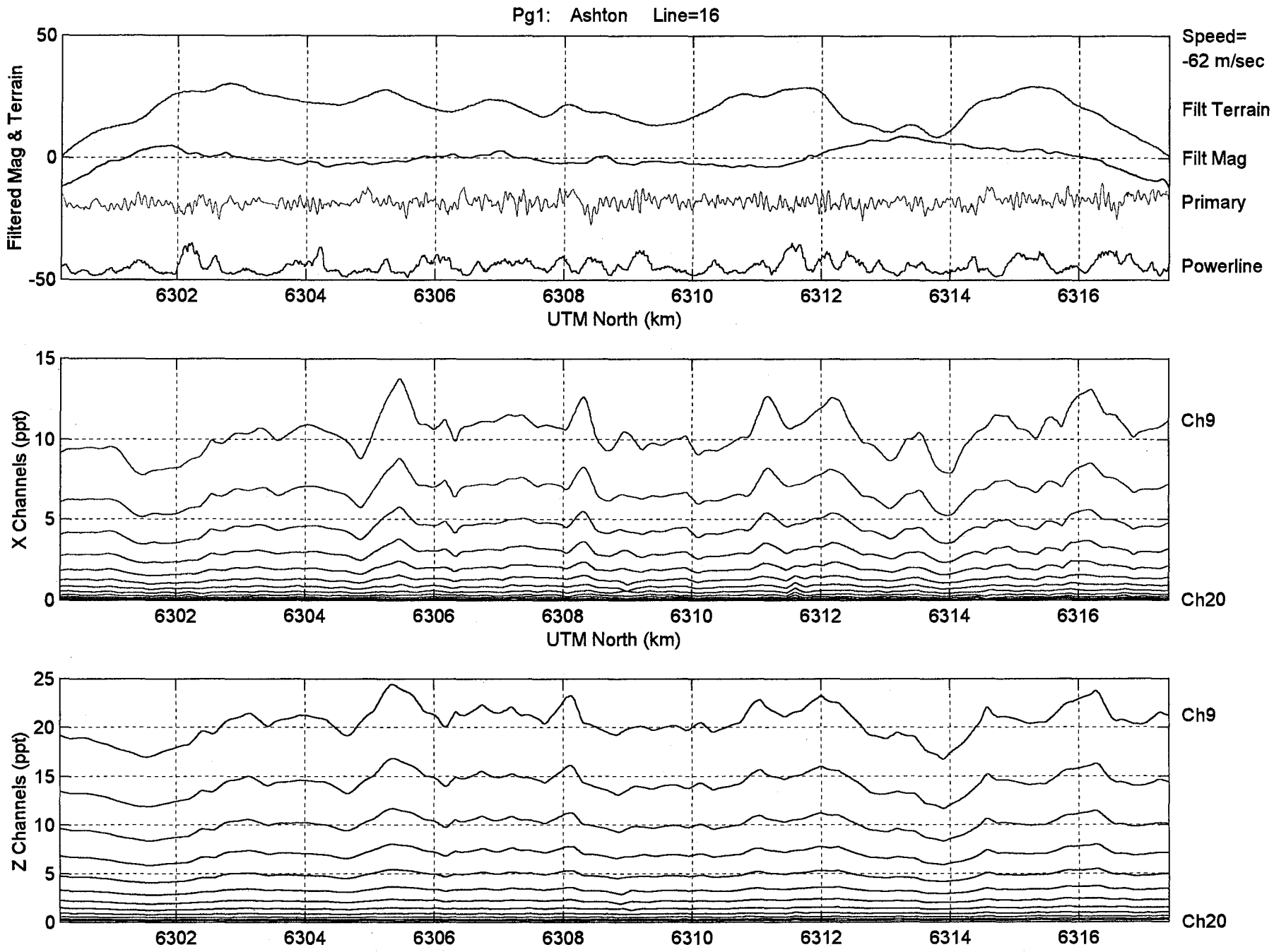

Pg1: Ashton Line=11
Filtered Mag & Terrain
50
0
-50
Speed=
66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

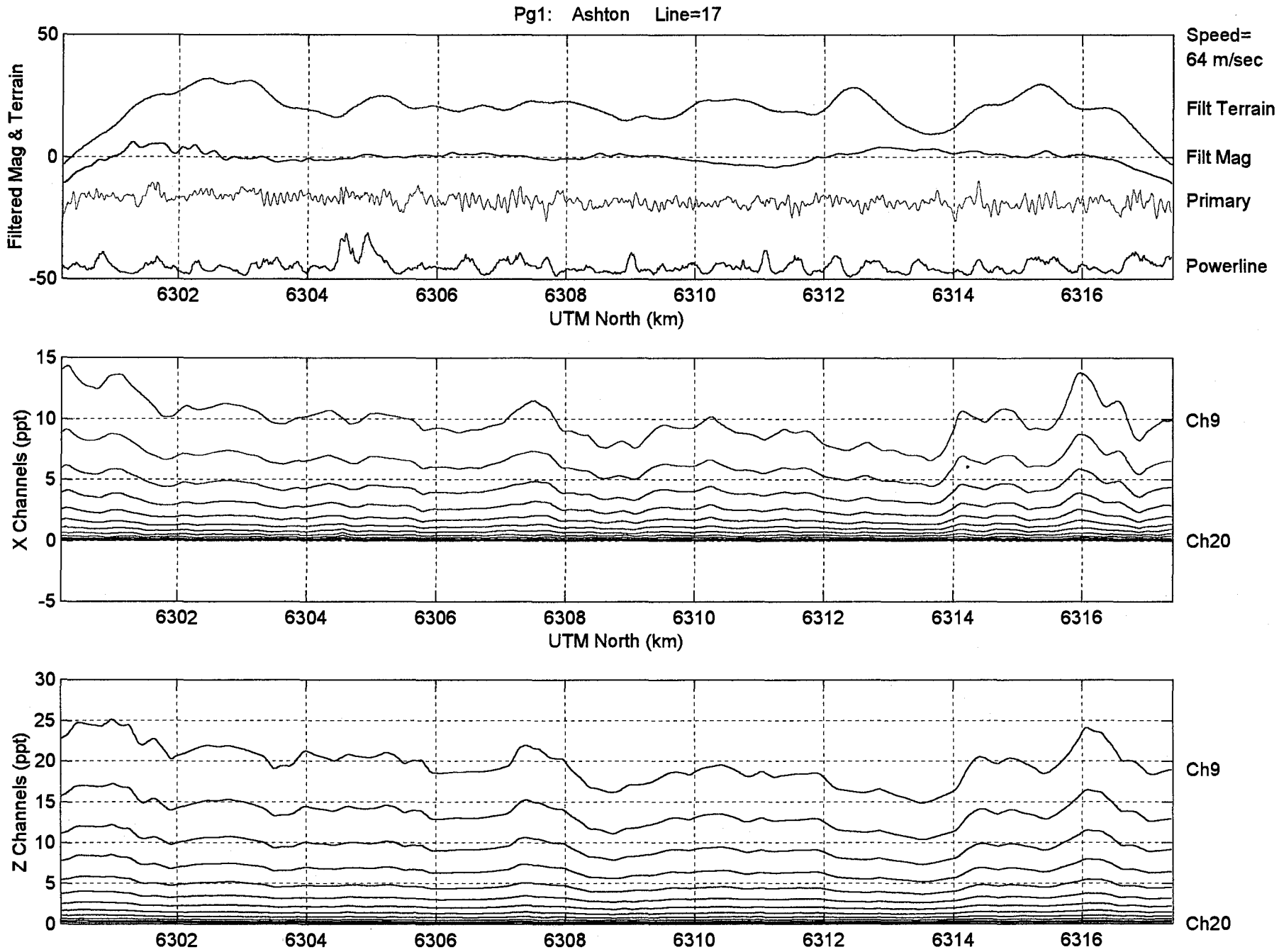

Pg1: Ashton Line=12
Filtered Mag & Terrain
50
0
-50
Speed=
-63 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

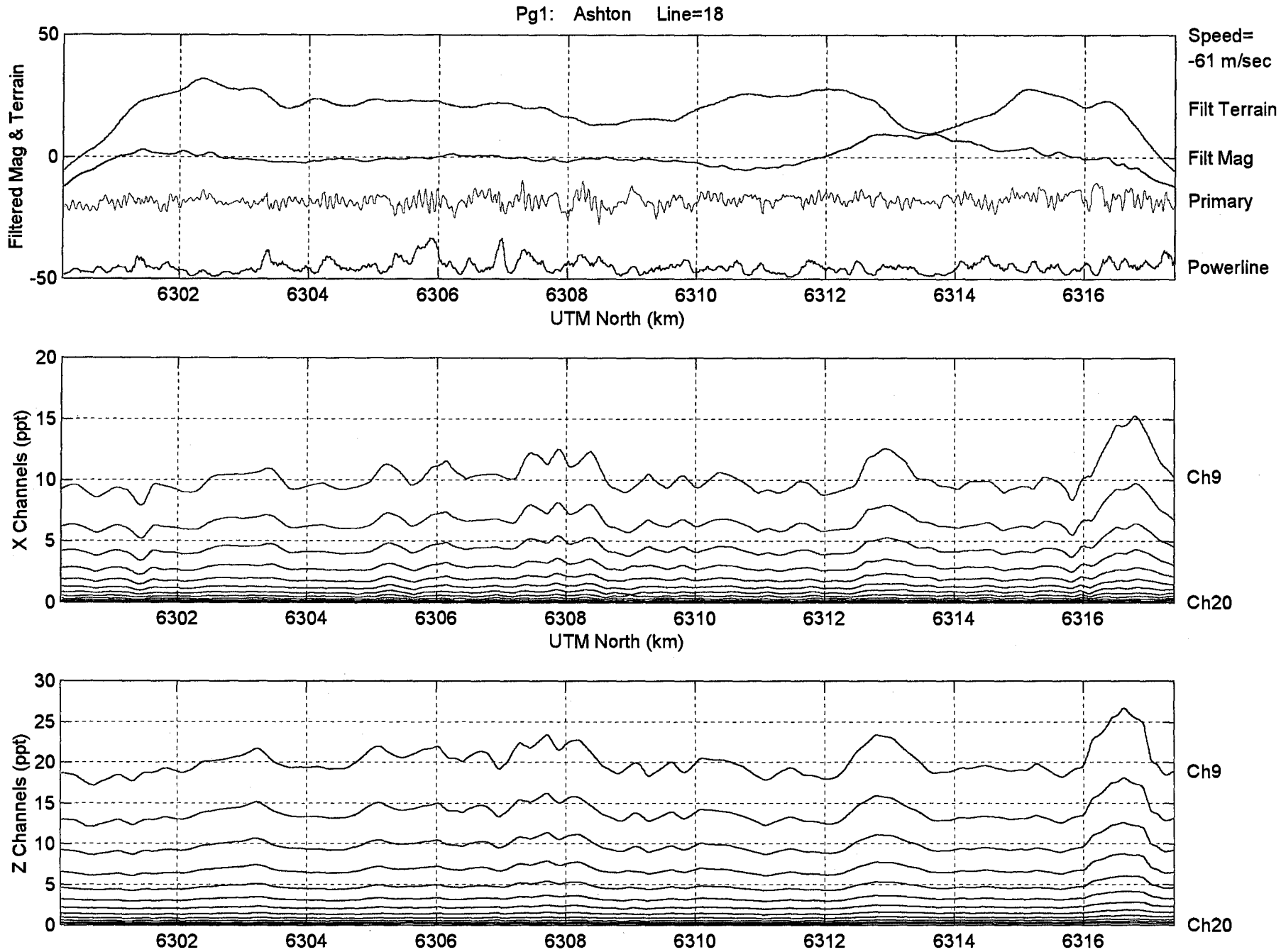

Pg1: Ashton Line=13
Filtered Mag & Terrain
50
0
-50
Speed=
65 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

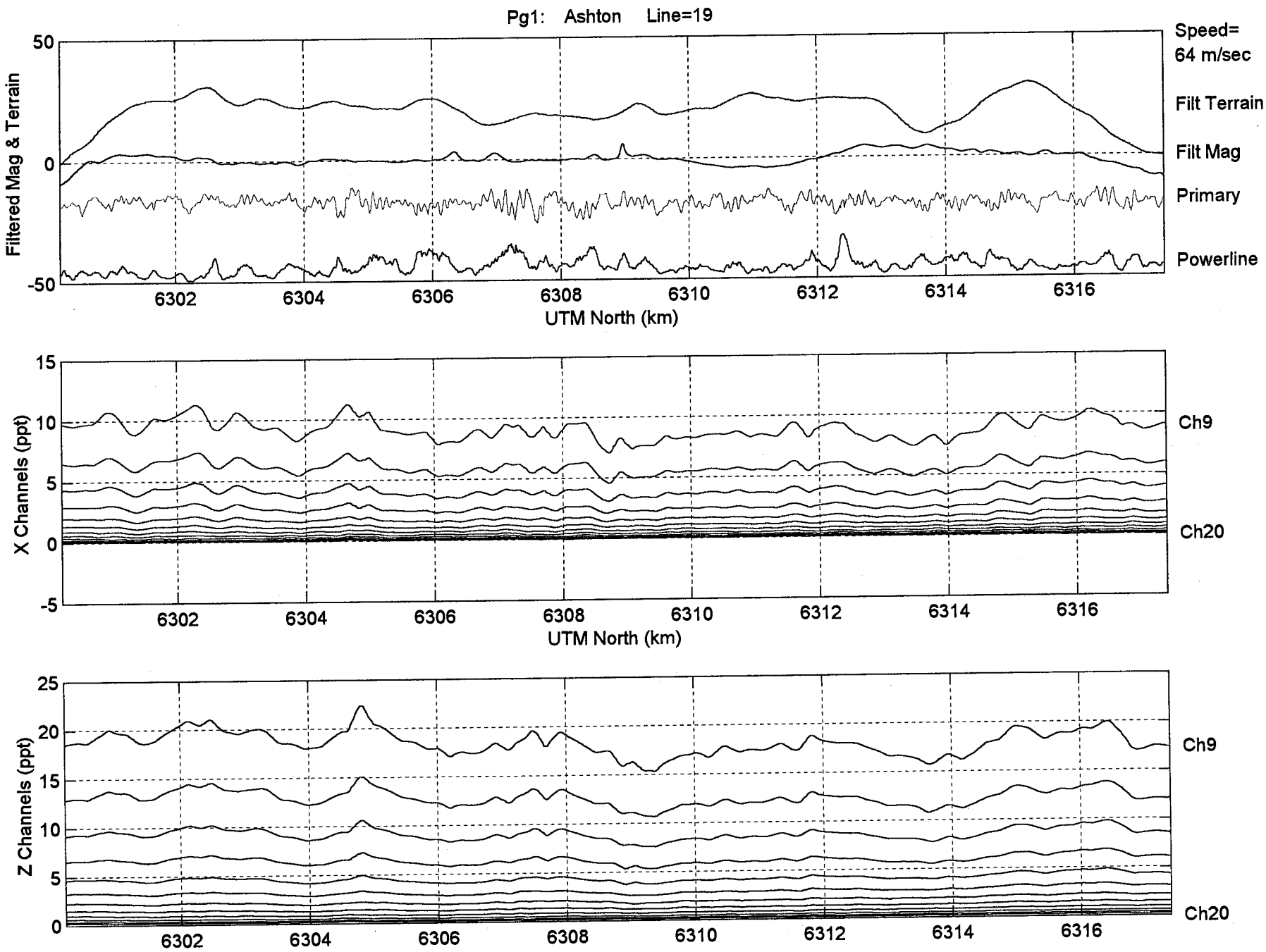

Pg1: Ashton Line=14
Filtered Mag & Terrain
50
0
-50
Speed=
-62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

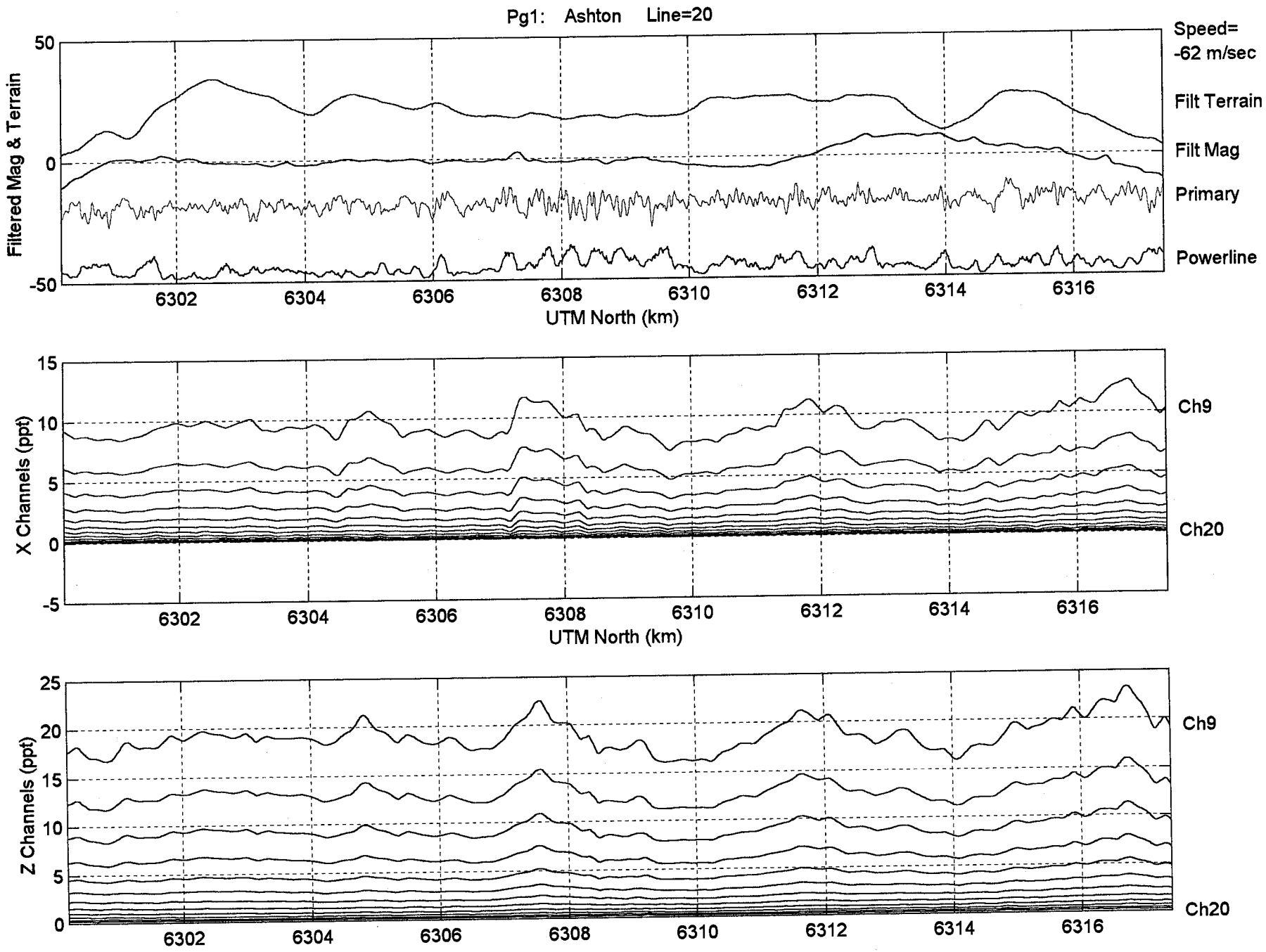

Pg1: Ashton Line=15
Filtered Mag & Terrain
50
0
-50
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
-5
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

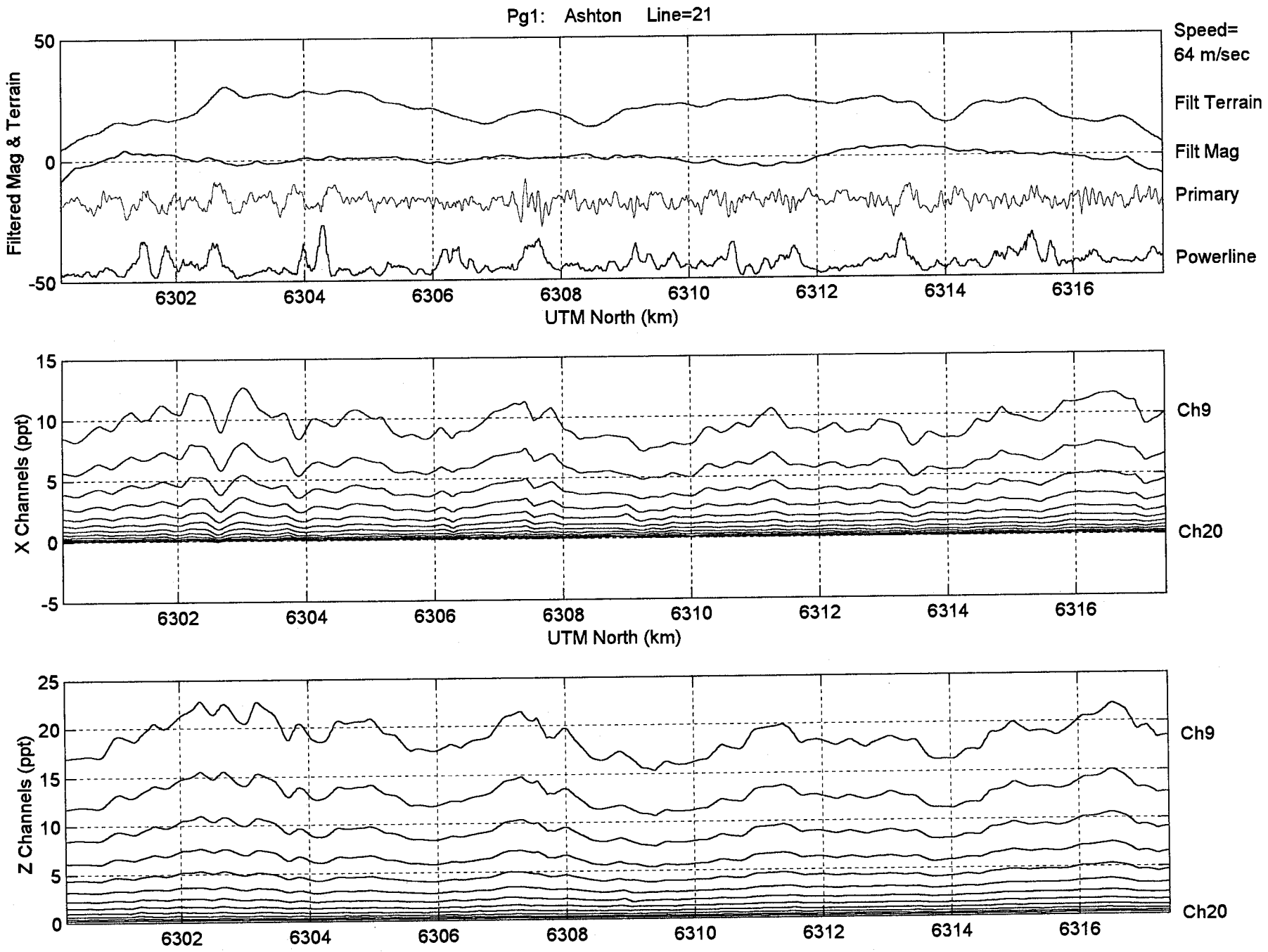

Pg1: Ashton Line=16
Filtered Mag & Terrain
50
0
-50
Speed=
-62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

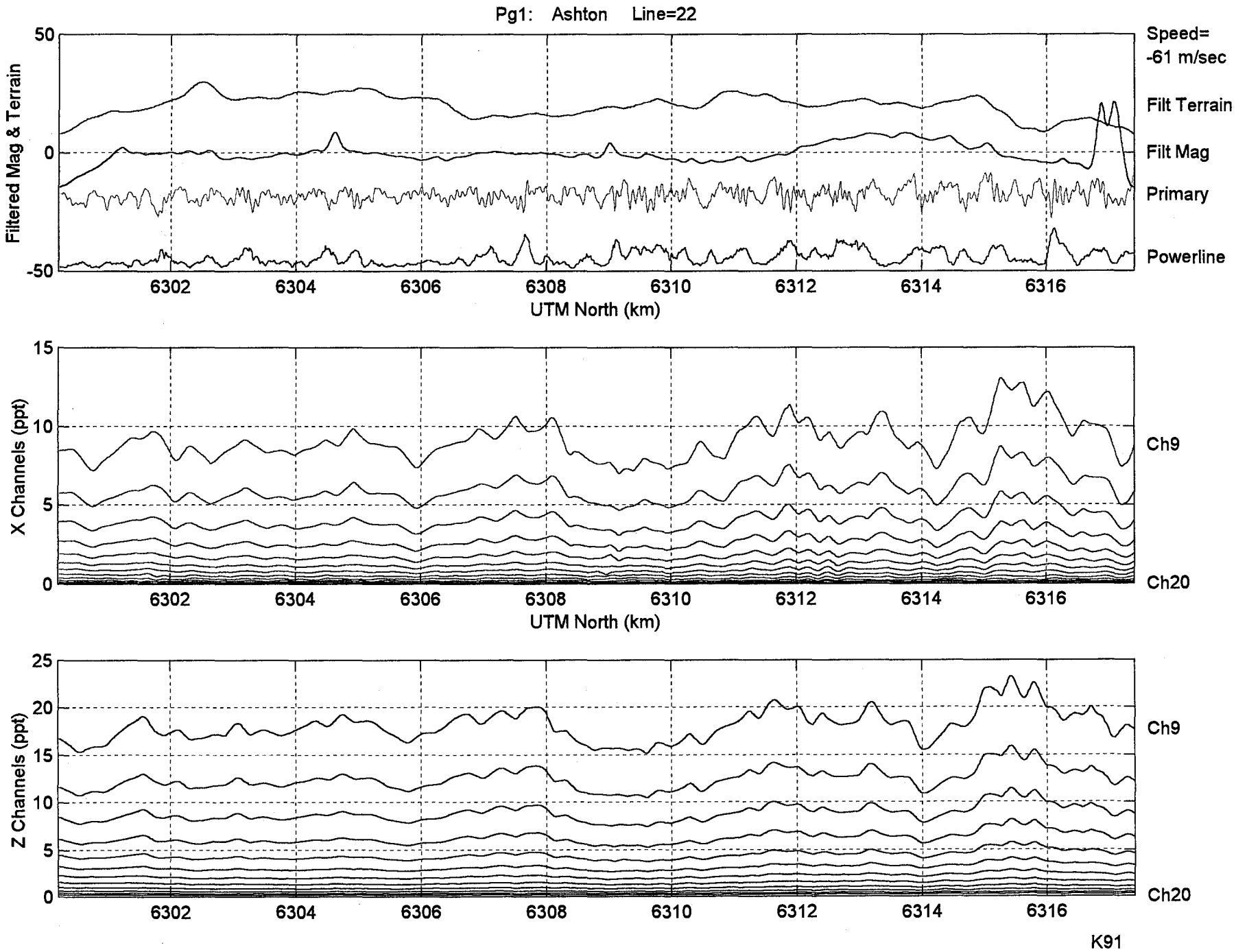

Pg1: Ashton Line=17
Filtered Mag & Terrain
50
0
-50
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
-5
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

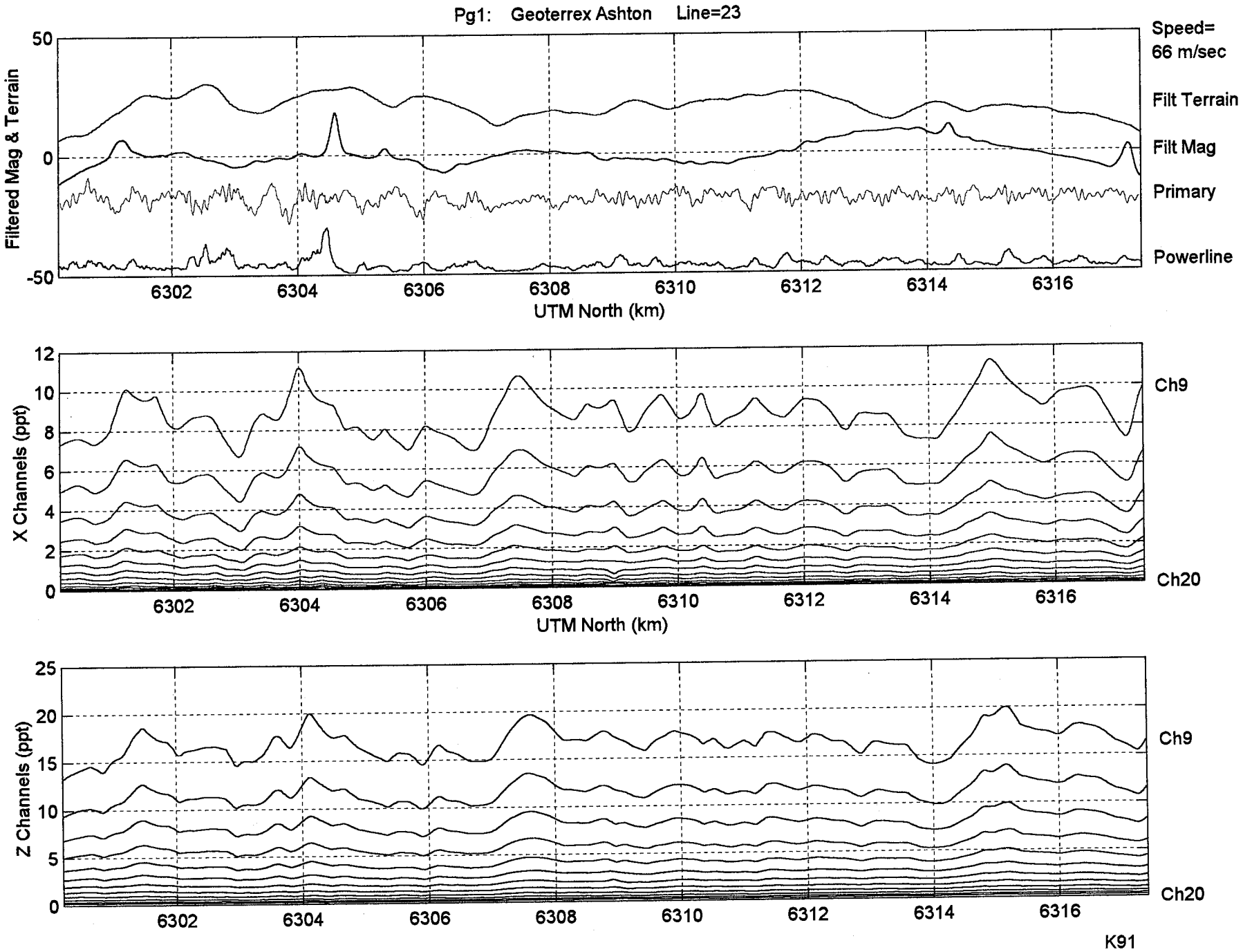

Pg1: Ashton Line=18
Filtered Mag & Terrain
50
0
-50
Speed=
-61 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

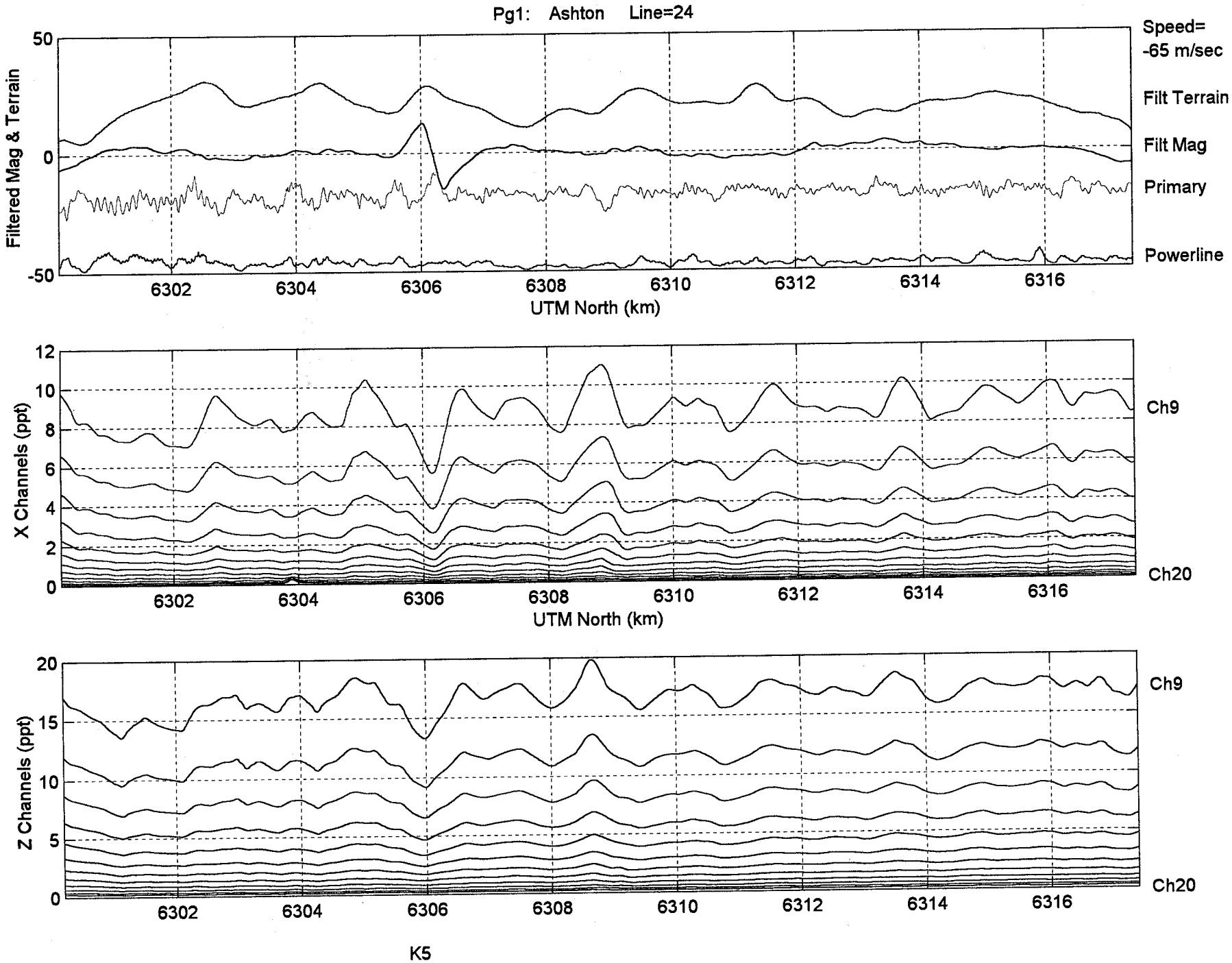

Pg1: Ashton Line=19
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

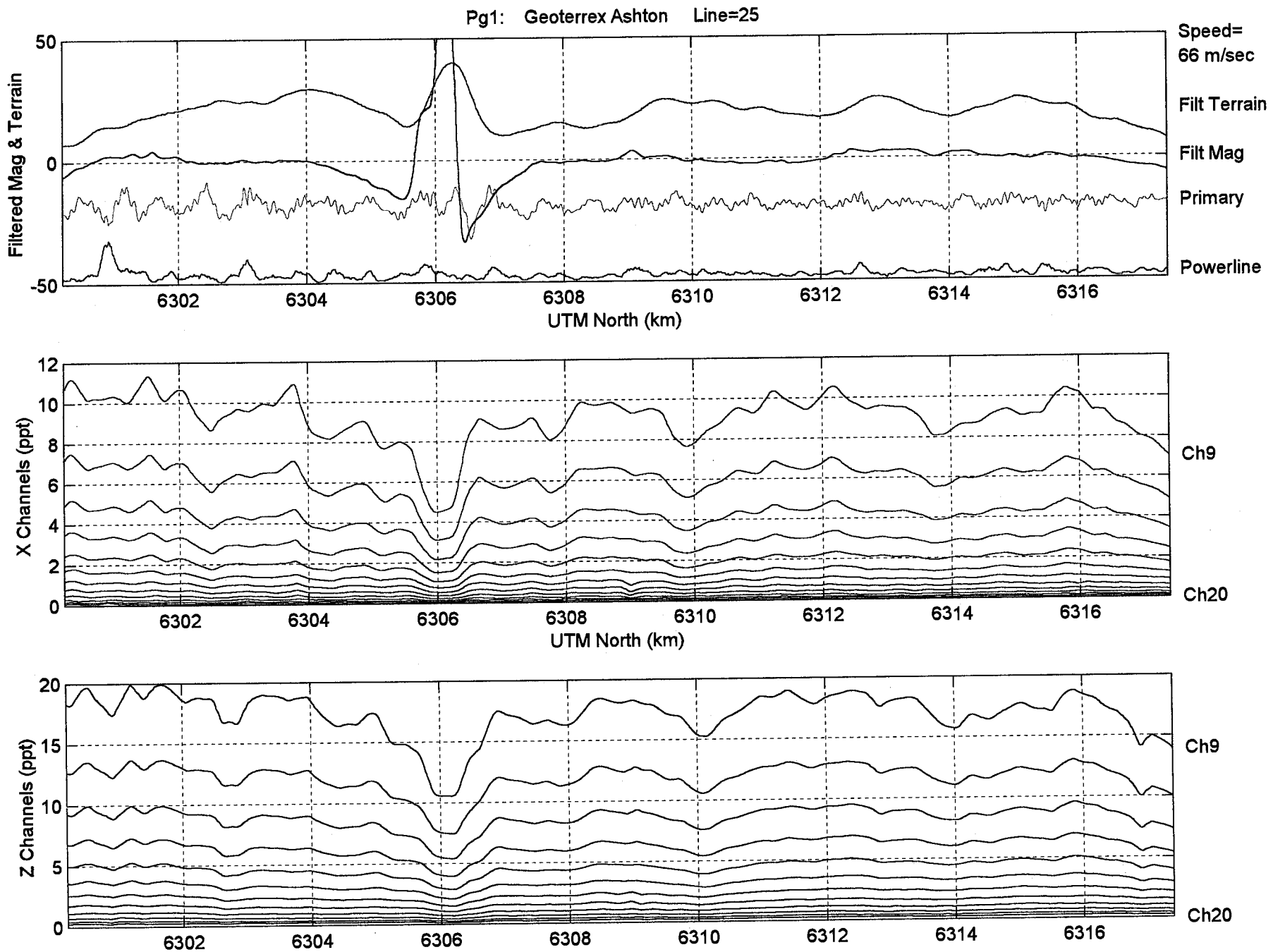

Pg1: Ashton Line=20
Speed=
-62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20


Pg1: Ashton Line=21
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
-5
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

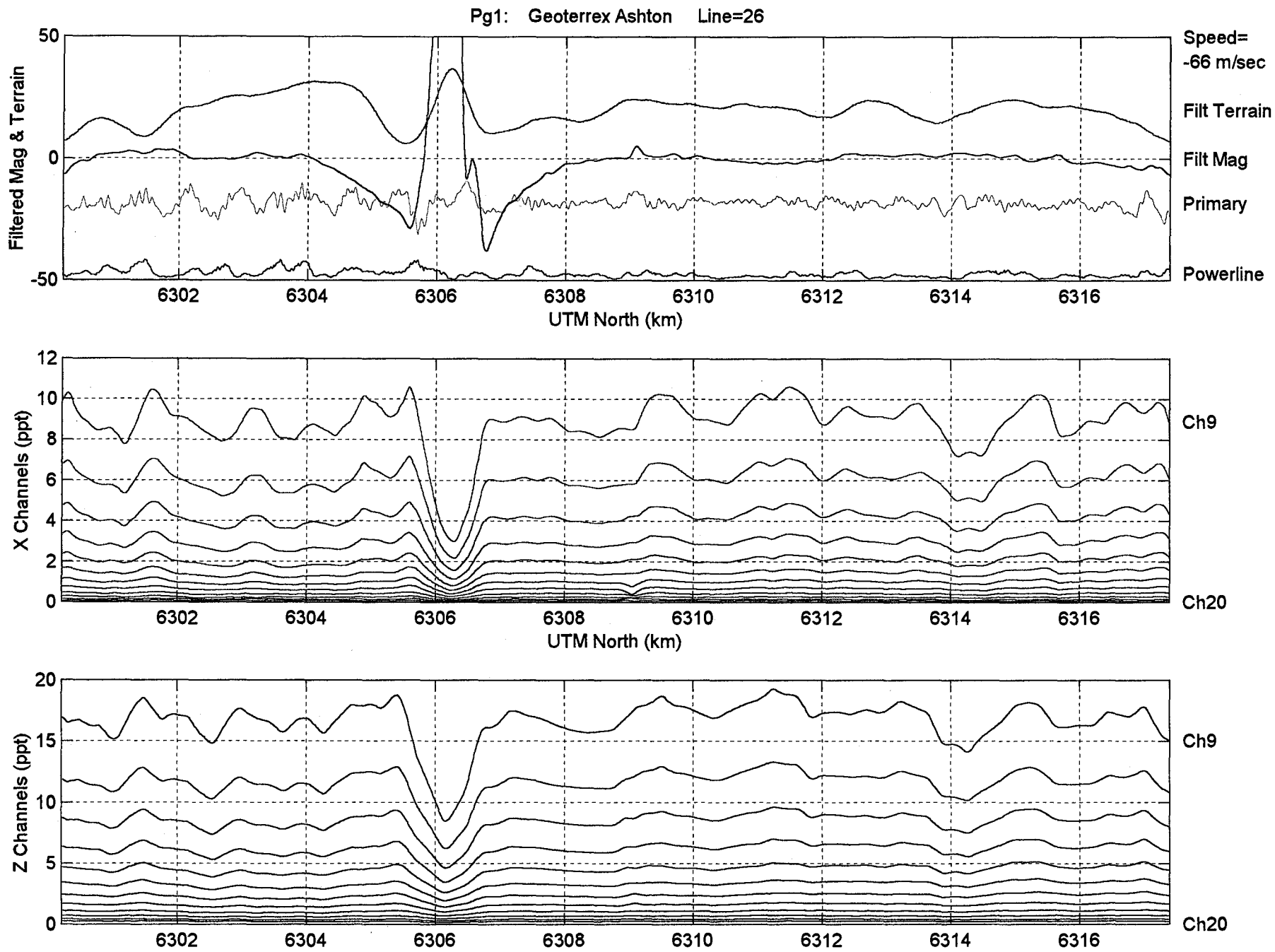

Pg1: Ashton Line=22
Speed=
-61 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
K91


Pg1: Geoterrex Ashton Line=23
Speed= 66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
12
10
8
6
4
2
0
Ch9
Ch20
Z Channels (ppt)
25
20
15
10
5
0
K91

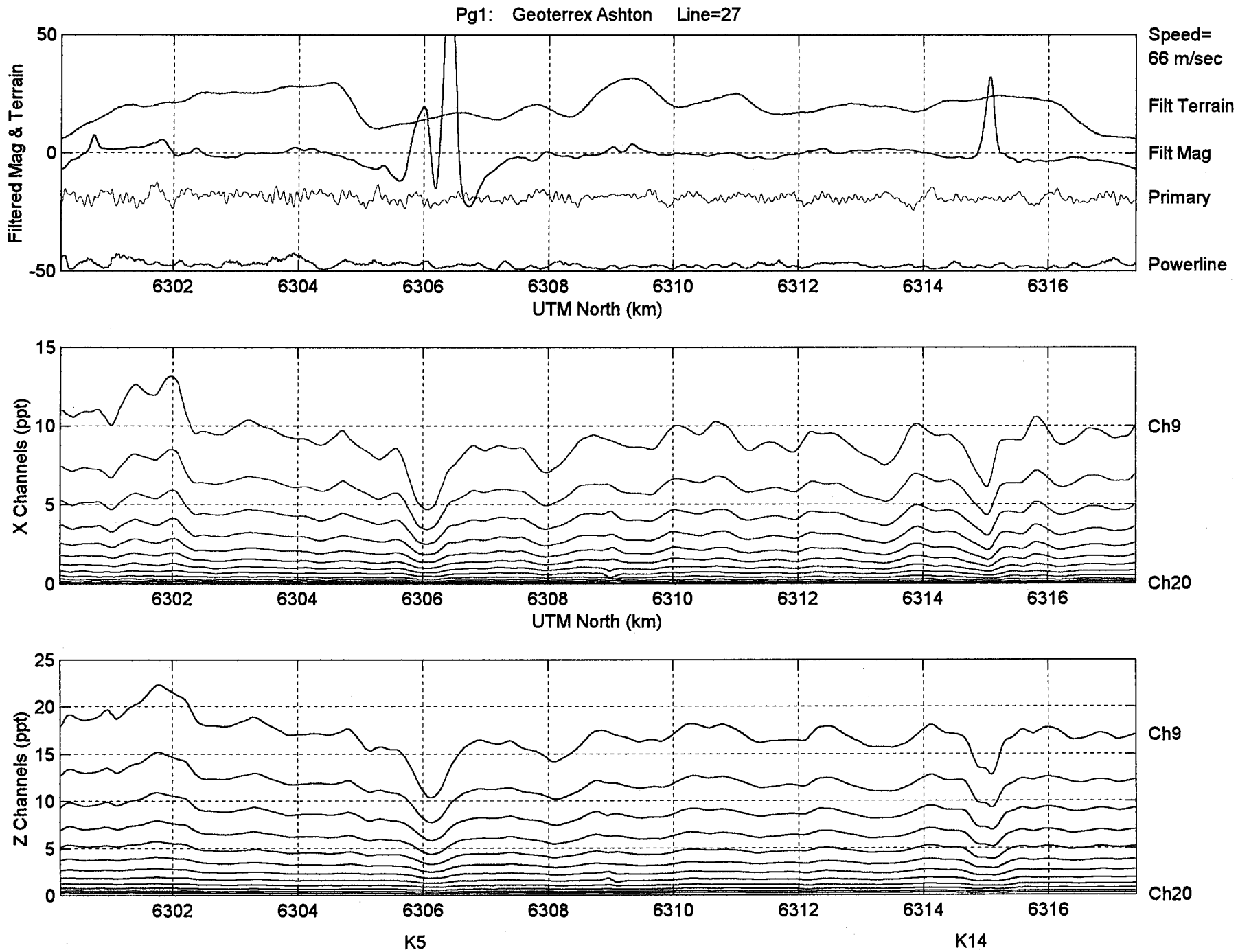

Pg1: Ashton Line=24
Speed=
-65 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
12
10
8
6
4
2
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
20
15
10
5
0
Ch9
Ch20
K5

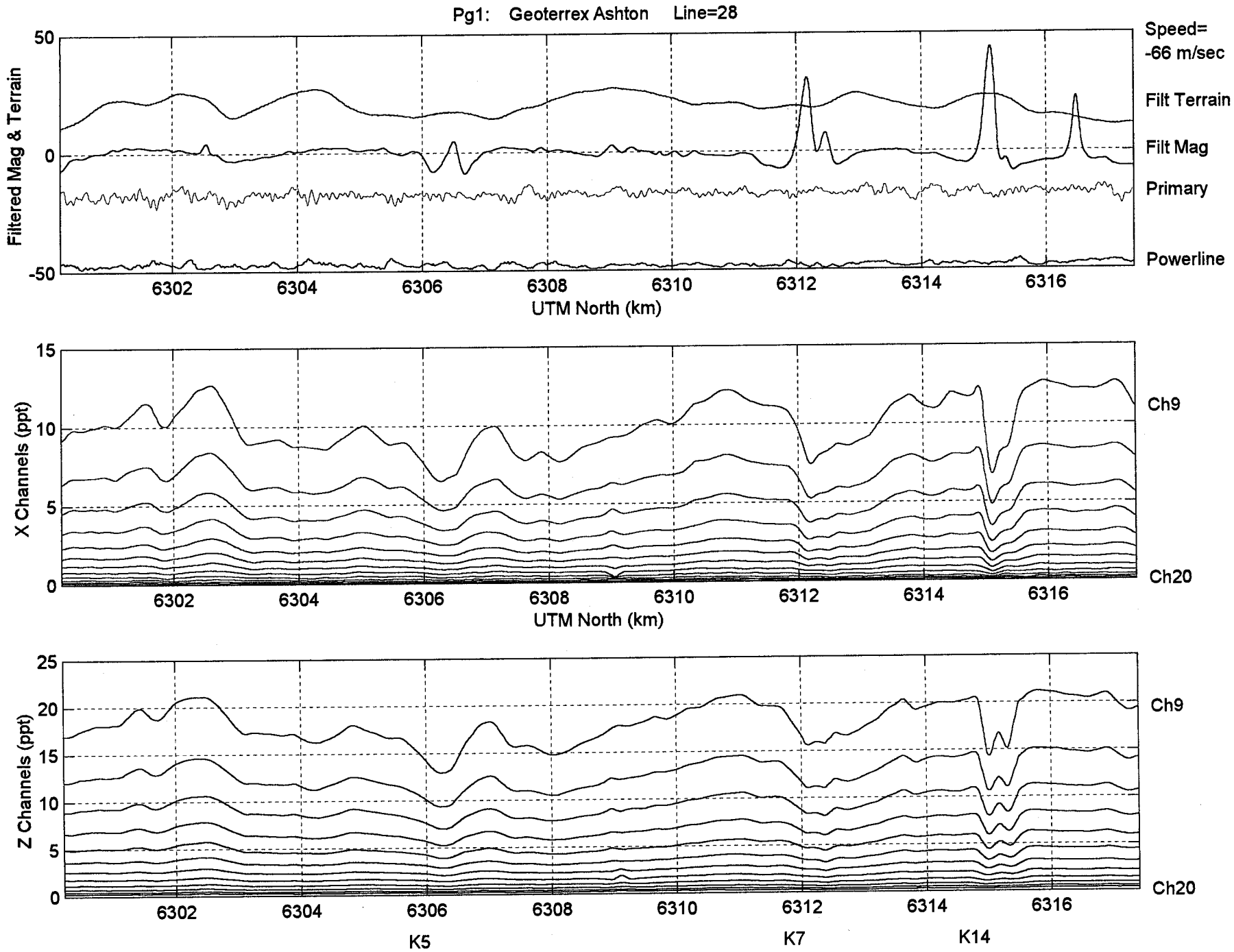

Pg1: Geoterrex Ashton Line=25
Speed= 66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
12
10
8
6
4
2
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
20
15
10
5
0
Ch9
Ch20

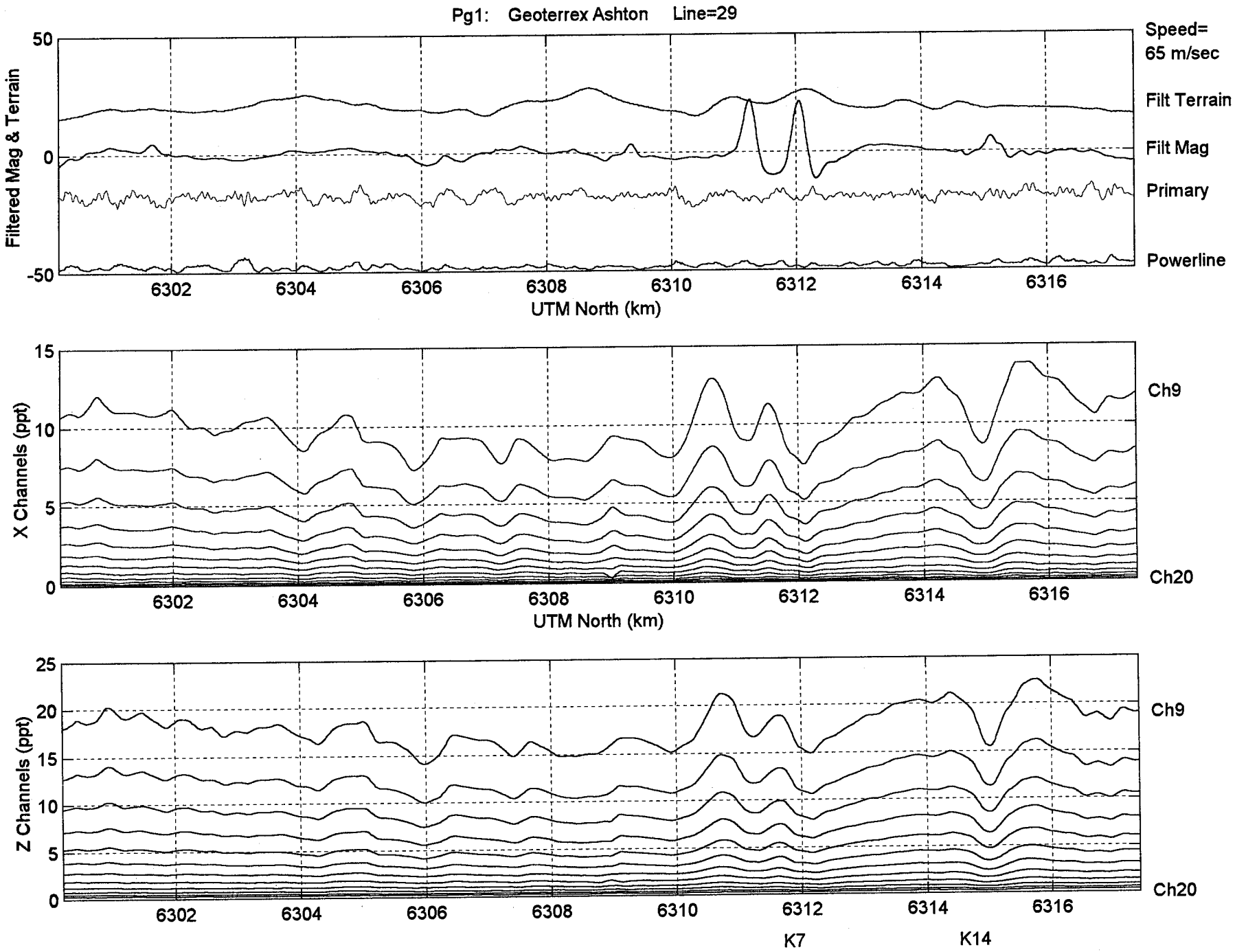
K5

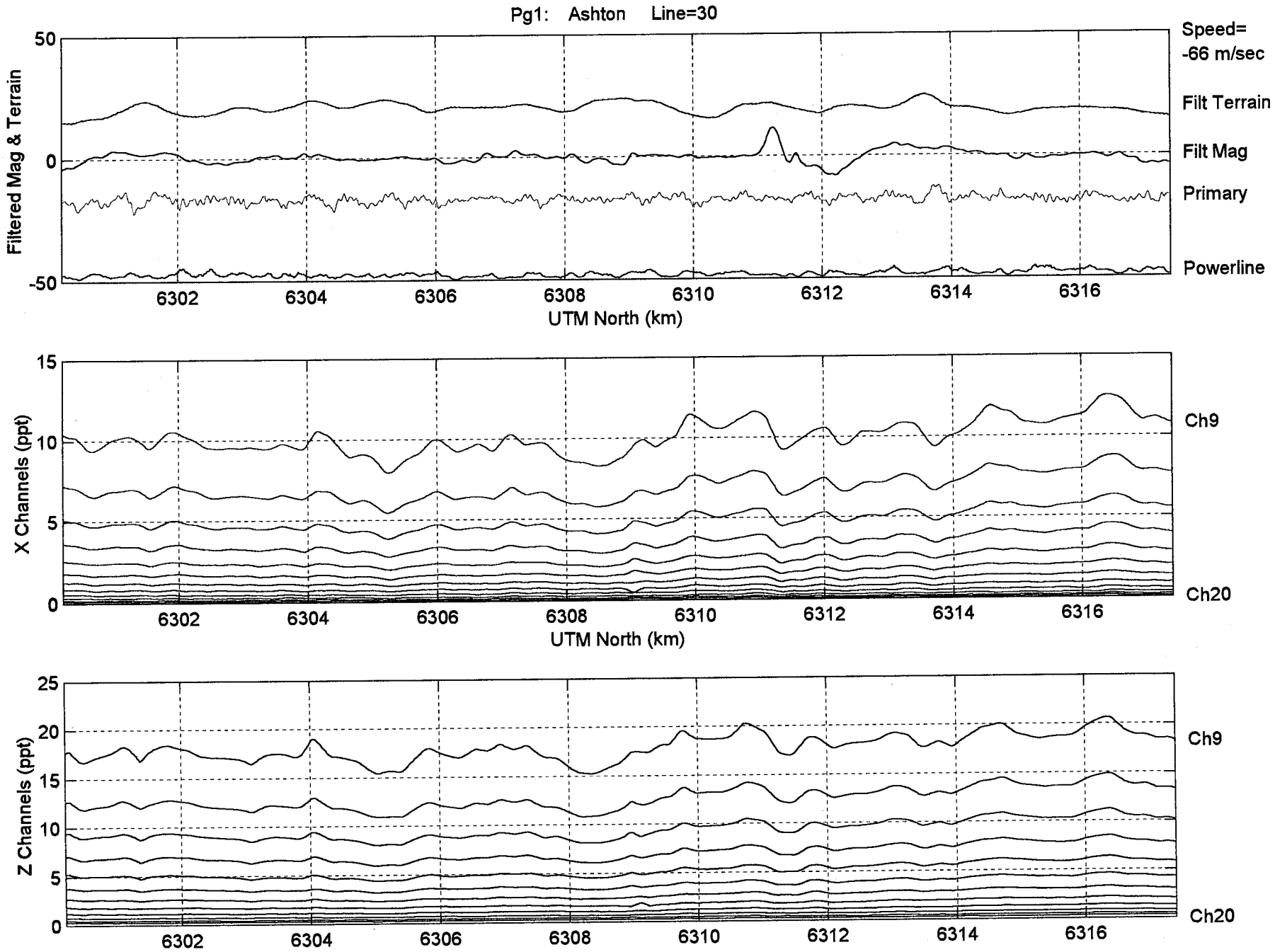

Pg1: Geoterrex Ashton Line=26
Filtered Mag & Terrain
50
0
-50
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
12
10
8
6
4
2
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
20
15
10
5
0
Ch9
Ch20

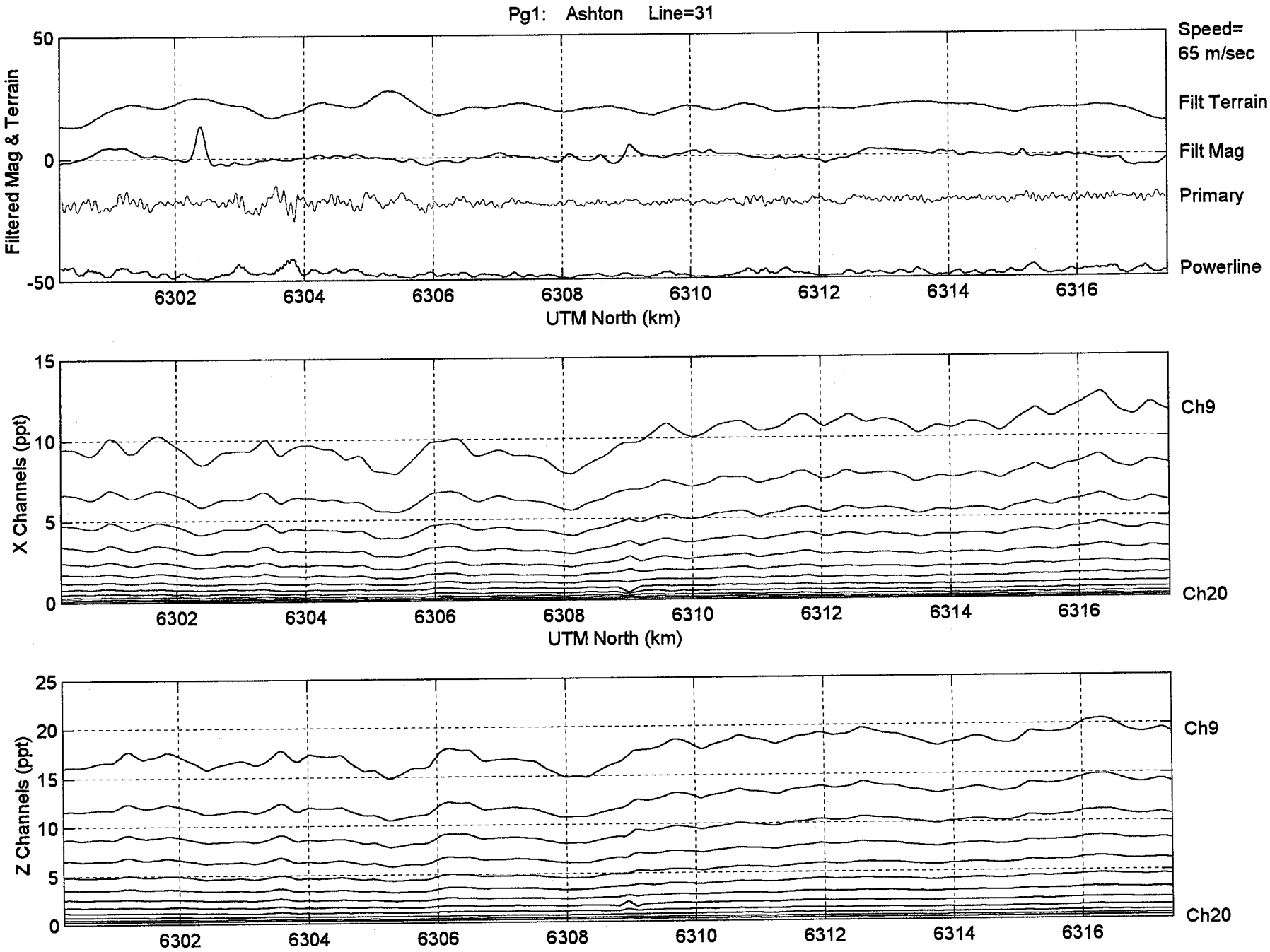
K5

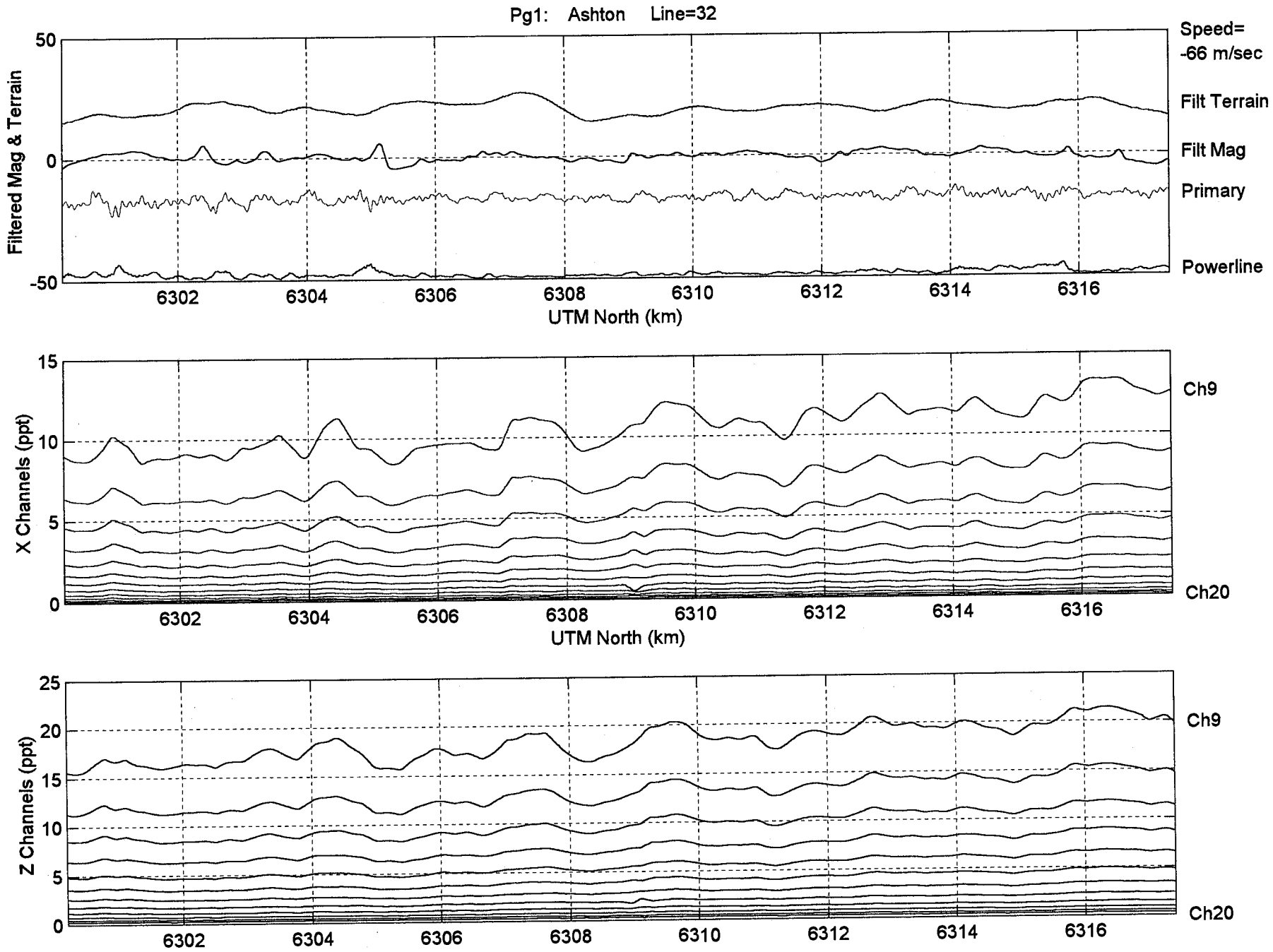

Pg1: Geoterrex Ashton Line=27
Filtered Mag & Terrain
50
0
-50
Speed=
66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
K5
K14

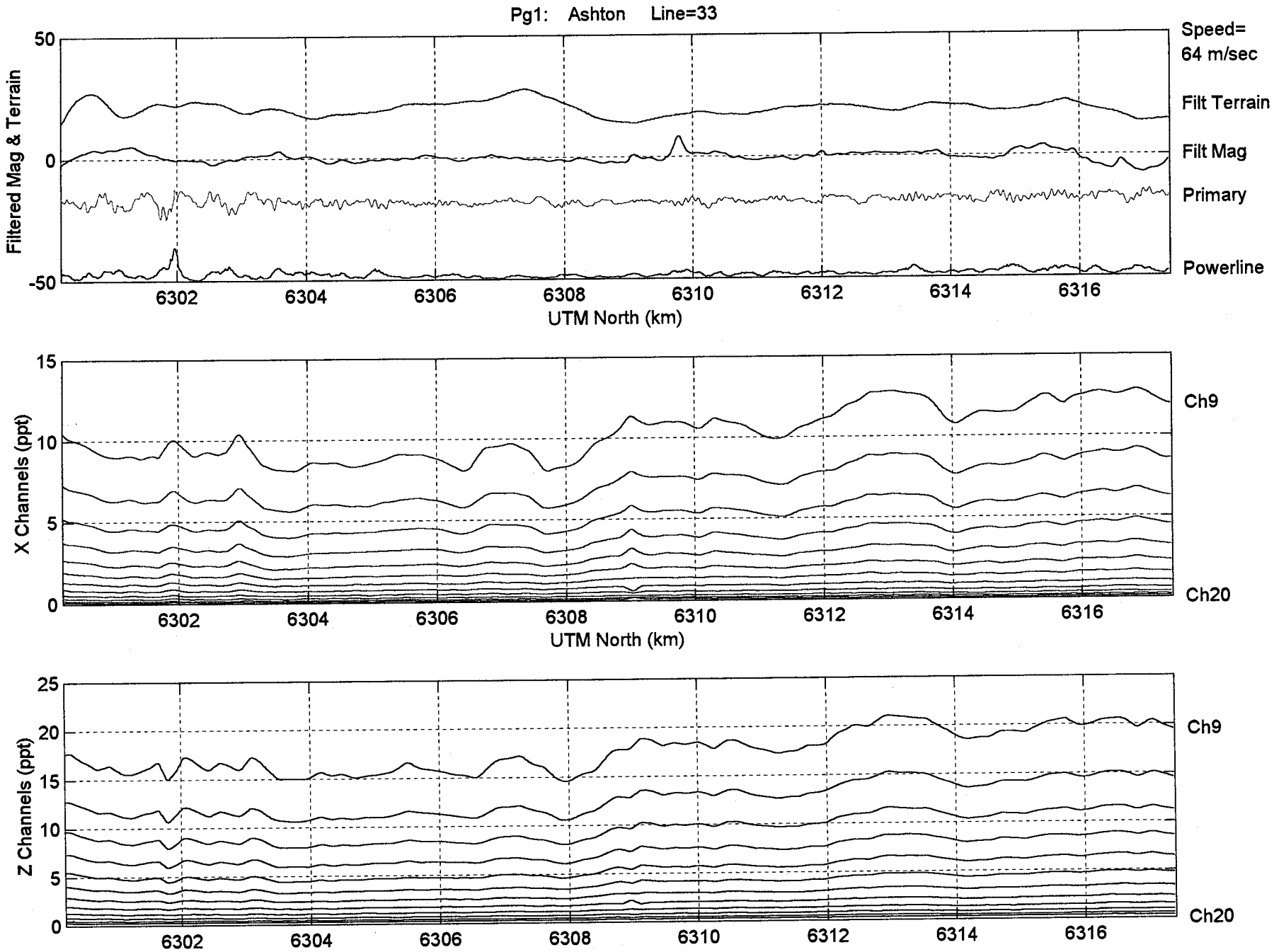

Pg1: Geoterrex Ashton Line=28
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
K5
K7
K14

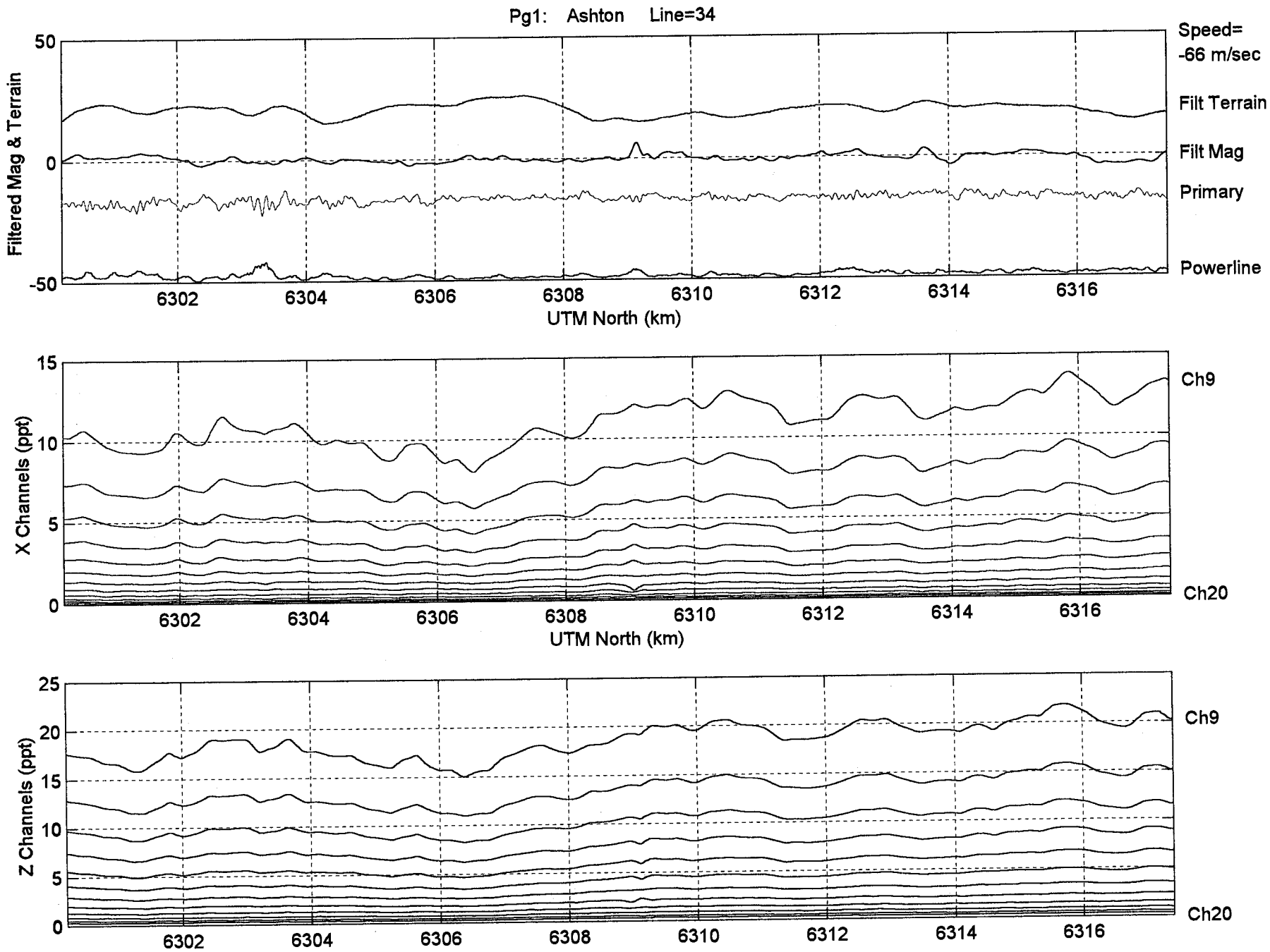

Pg1: Geoterrex Ashton Line=29
Speed=
65 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
Z Channels (ppt)
25
20
15
10
5
0
K7
K14

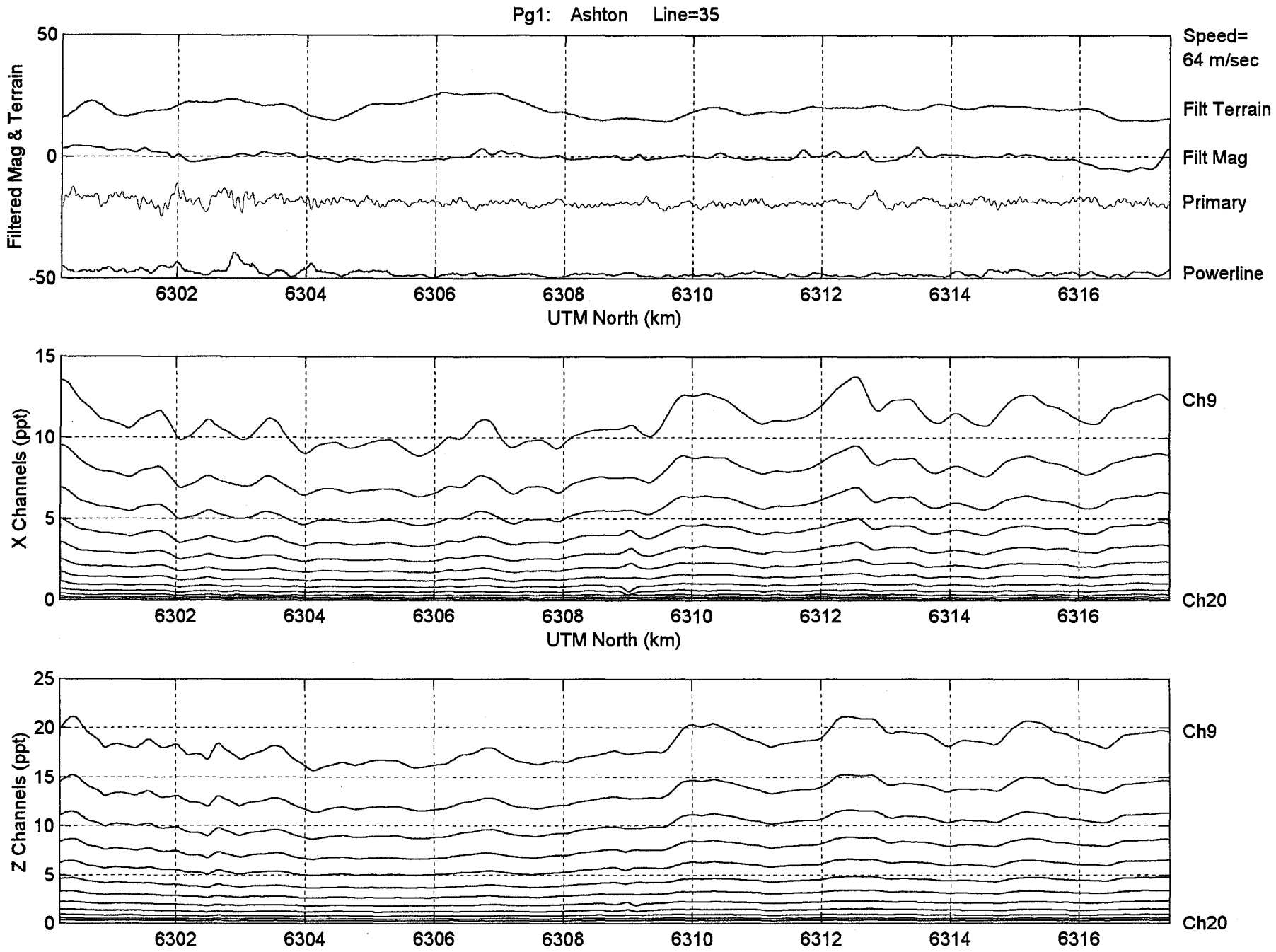

Pg1: Ashton Line=30
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

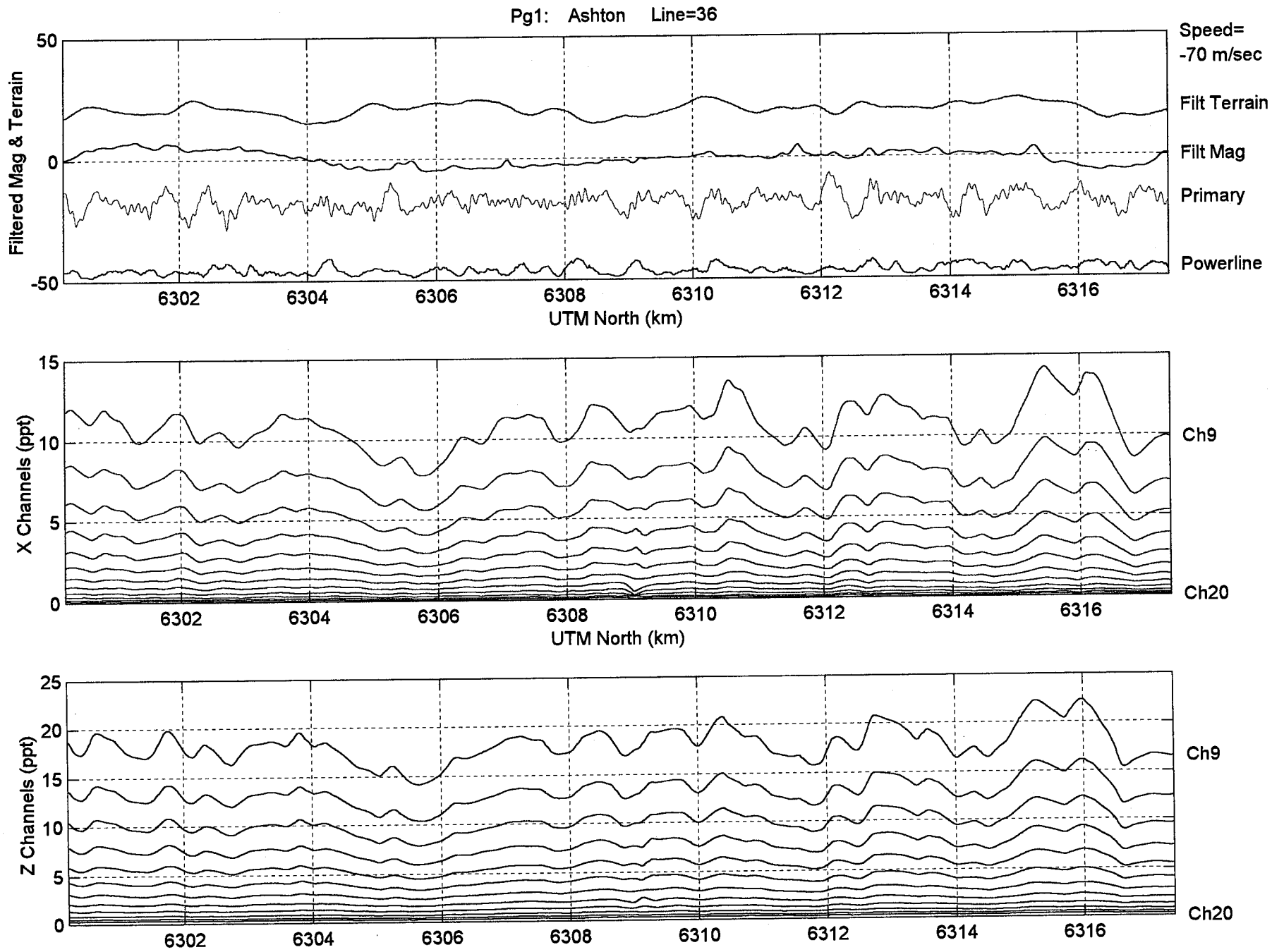

Pg1: Ashton Line=31
Speed=
65 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

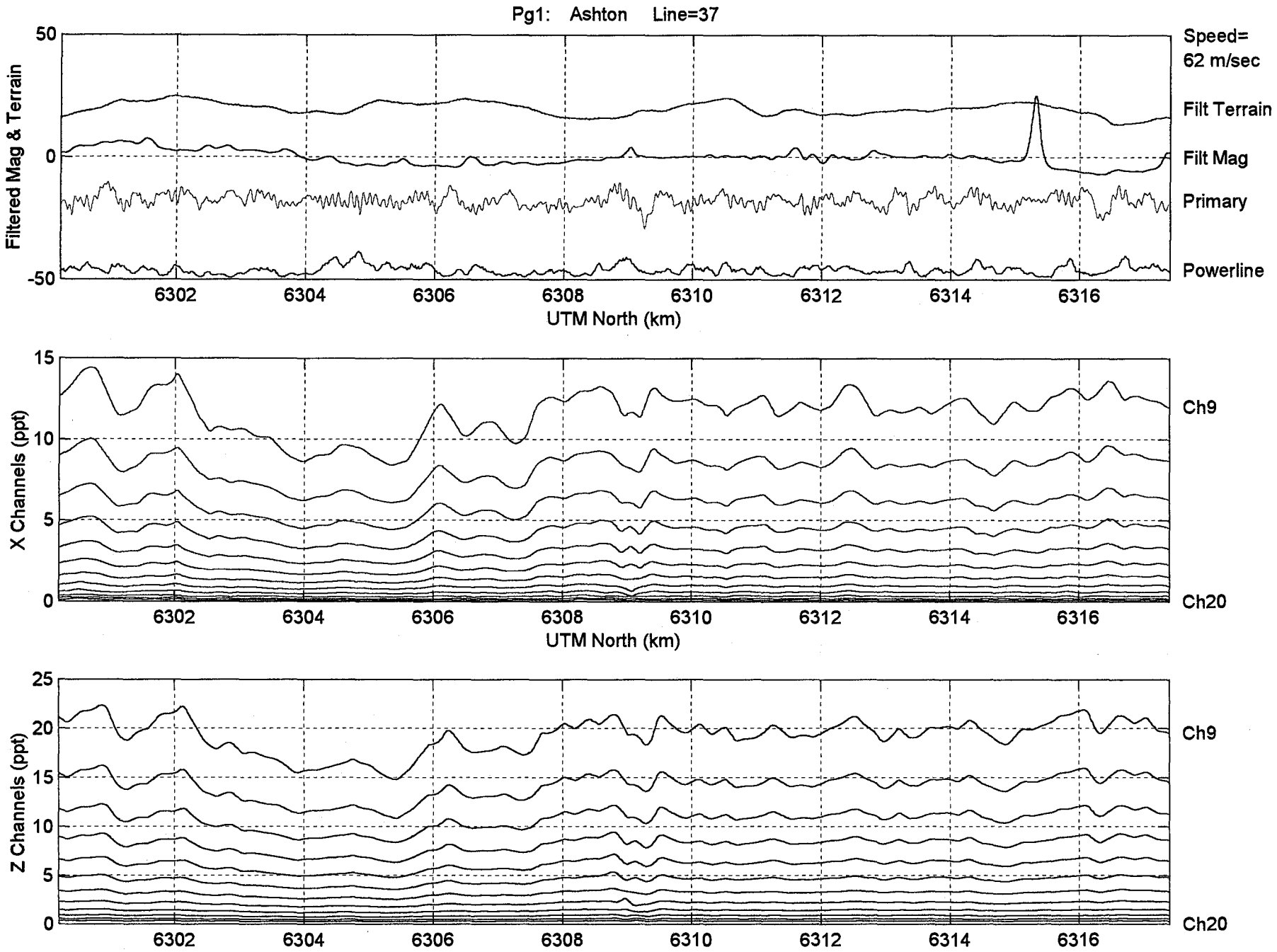

Pg1: Ashton Line=32
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

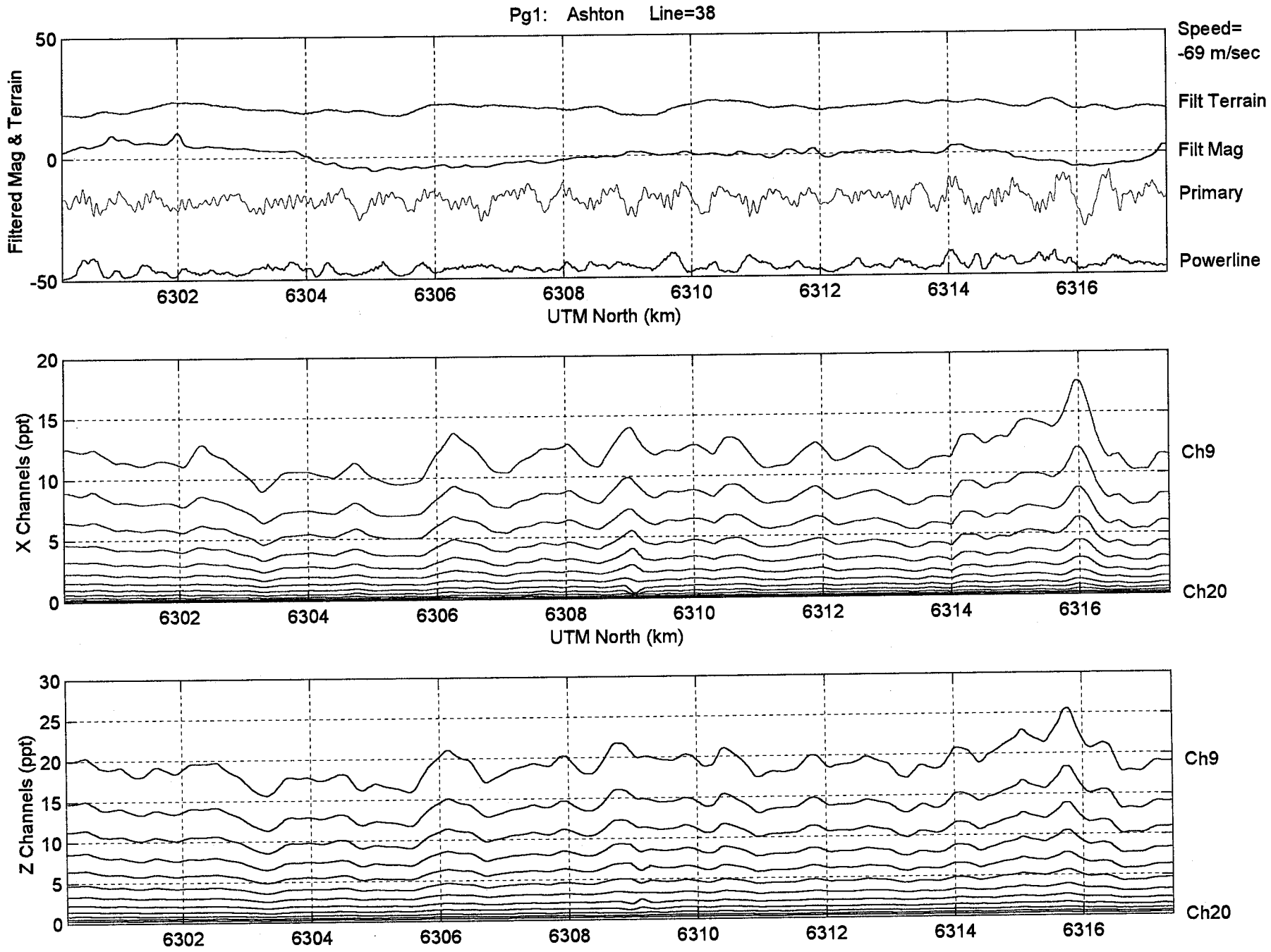

Pg1: Ashton Line=33
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

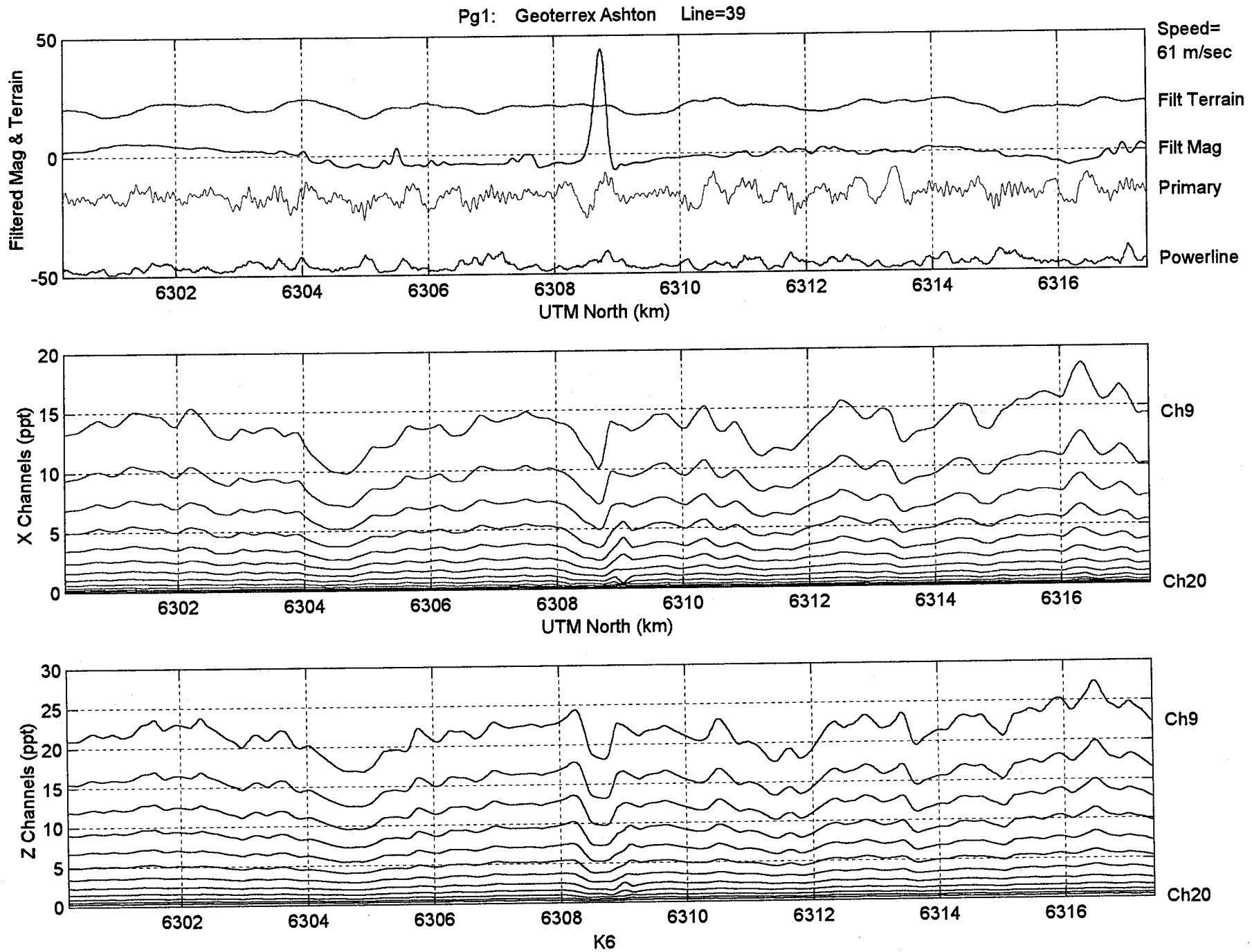

Pg1: Ashton Line=34
Speed=
-66 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

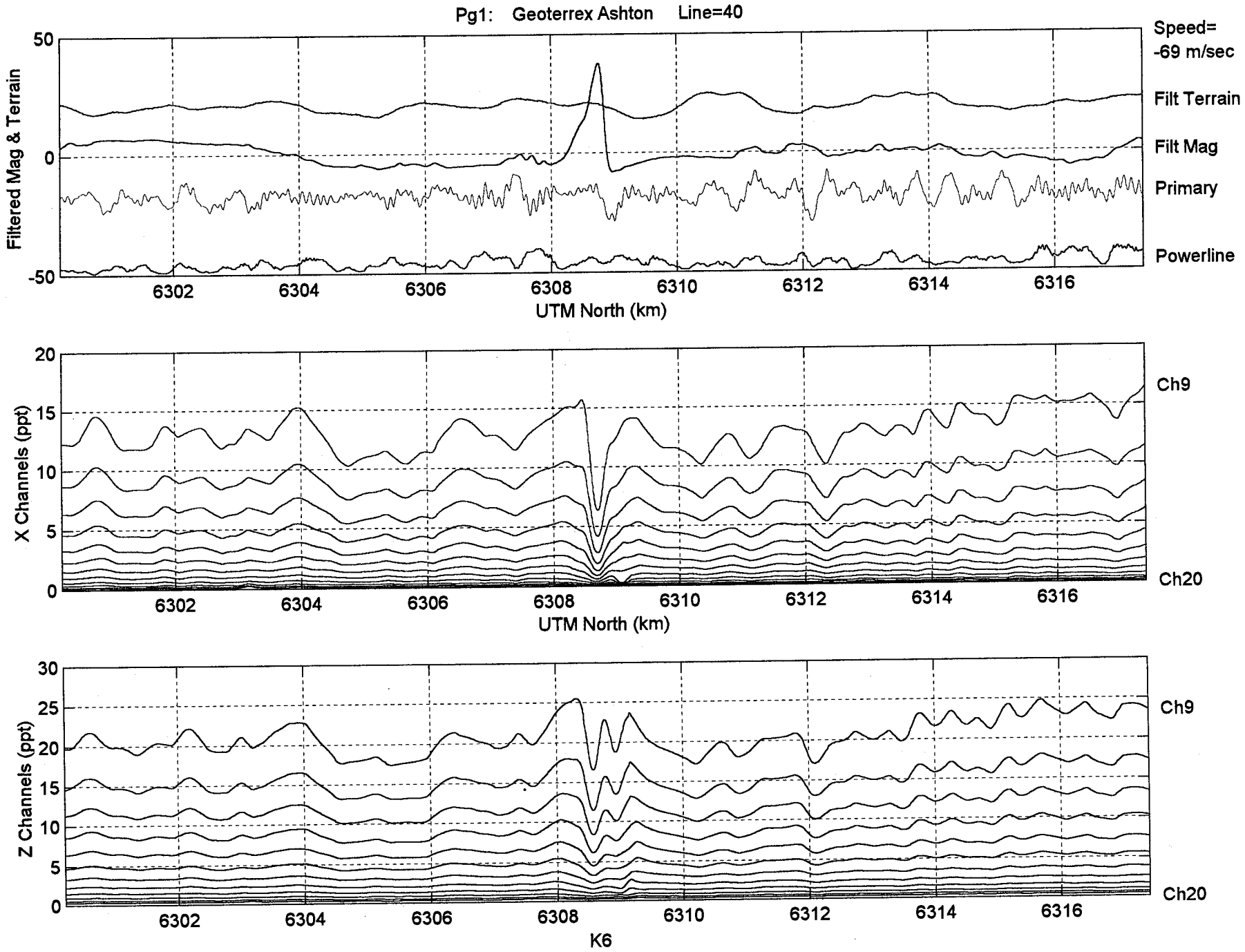

Pg1: Ashton Line=35
Filtered Mag & Terrain
50
0
-50
Speed=
64 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

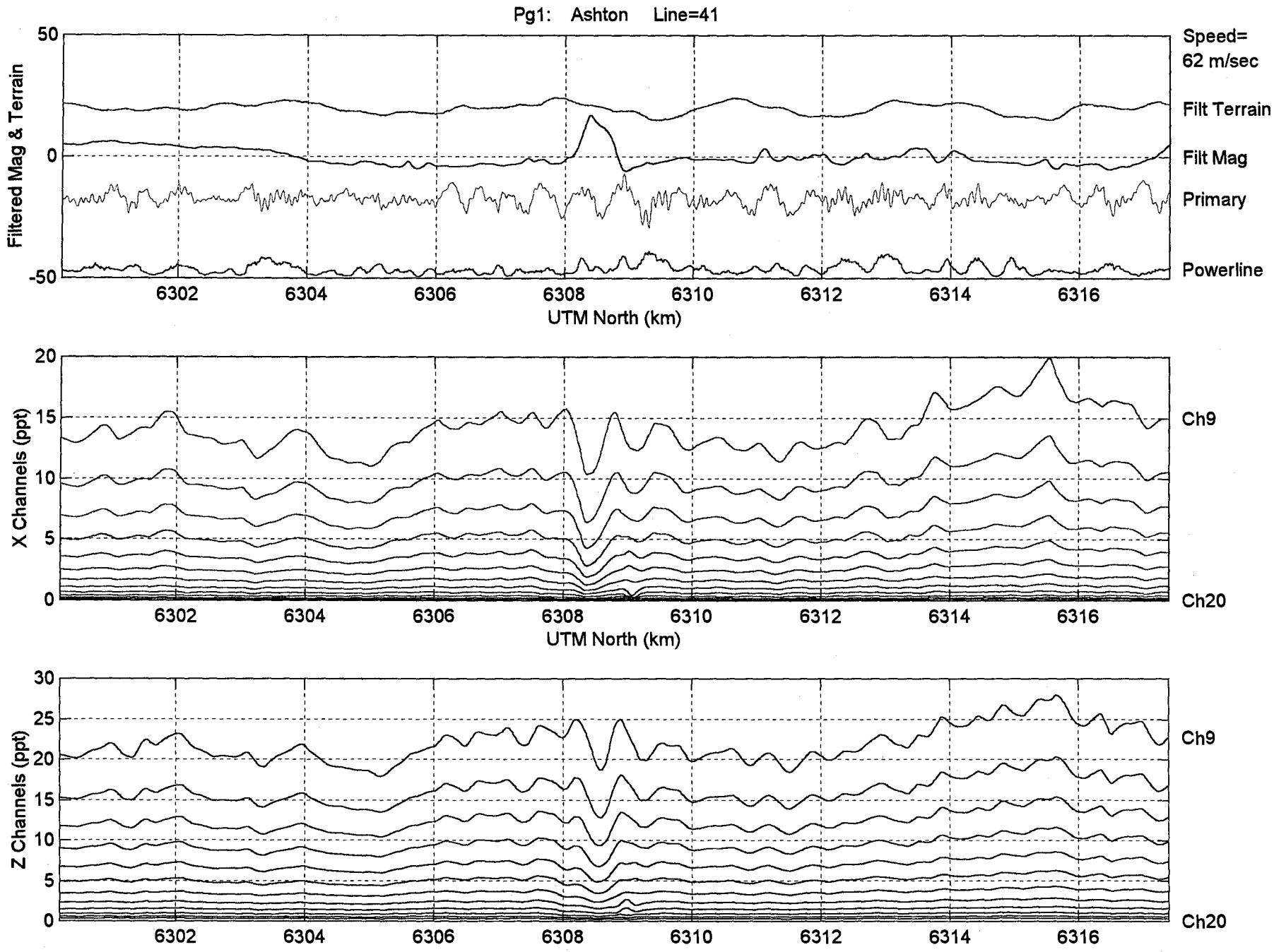

Pg1: Ashton Line=36
Speed=
-70 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

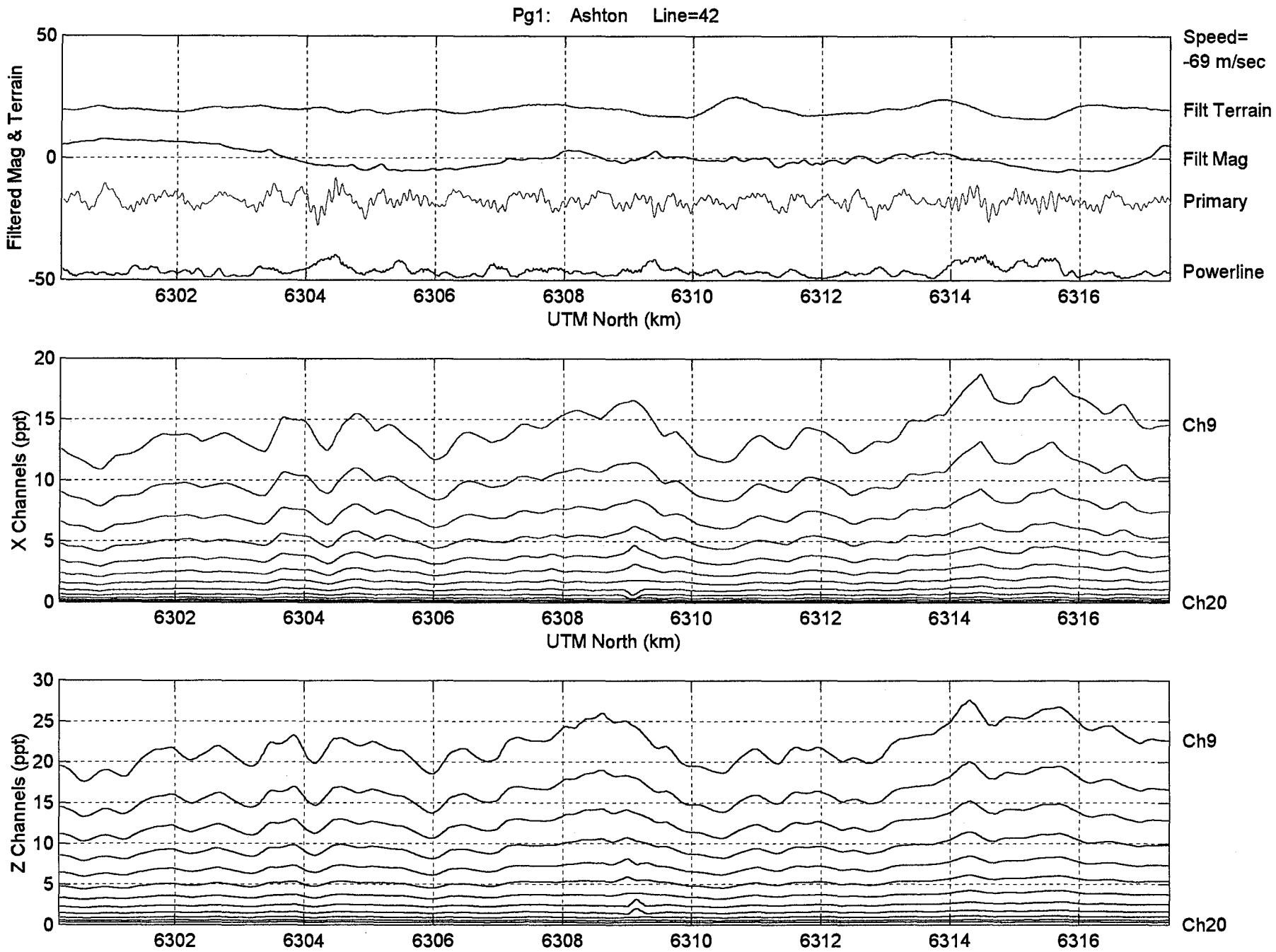

Pg1: Ashton Line=37
Filtered Mag & Terrain
50
0
-50
Speed=
62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20

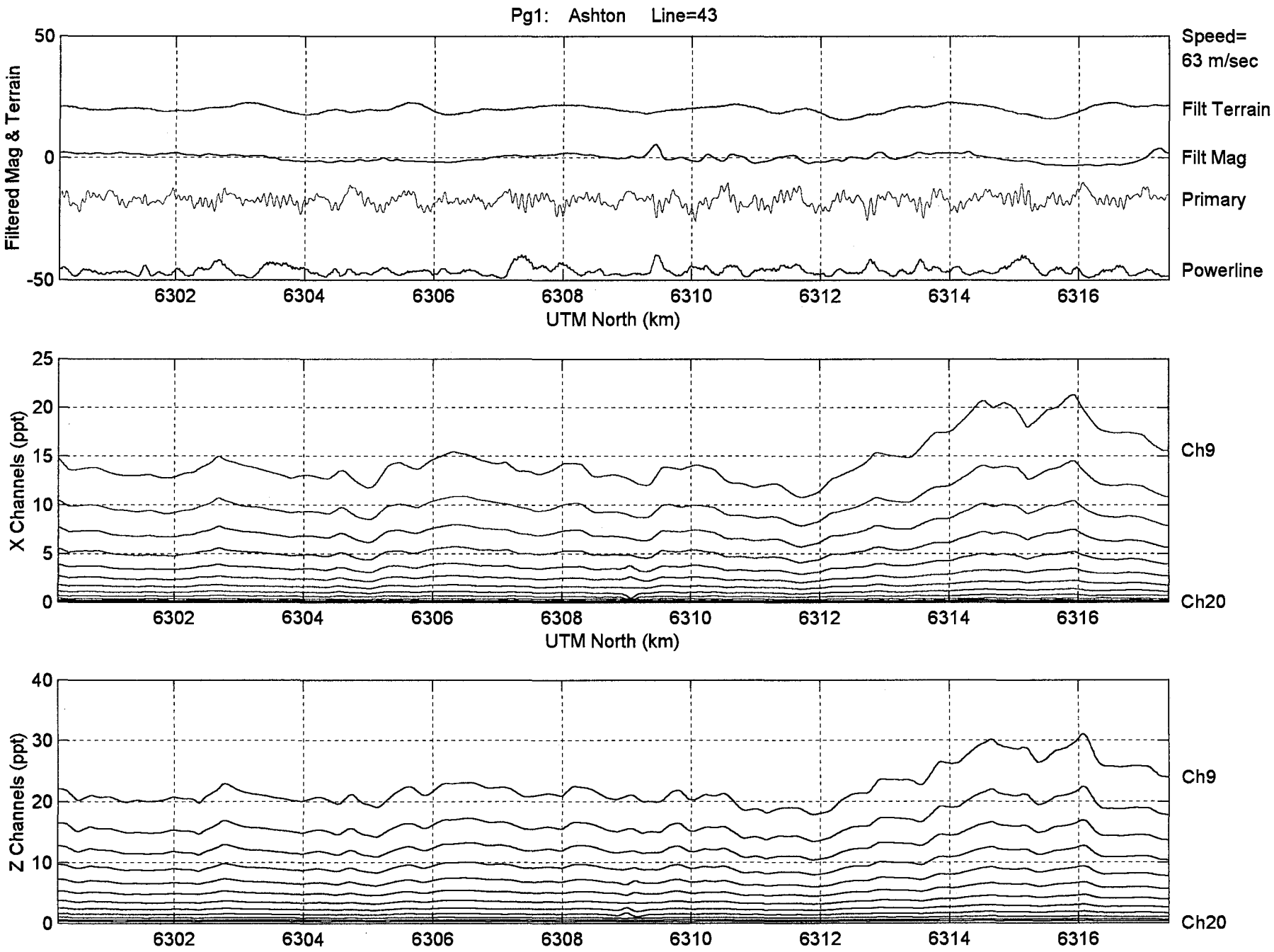

Pg1: Ashton Line=38
Speed=
-69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

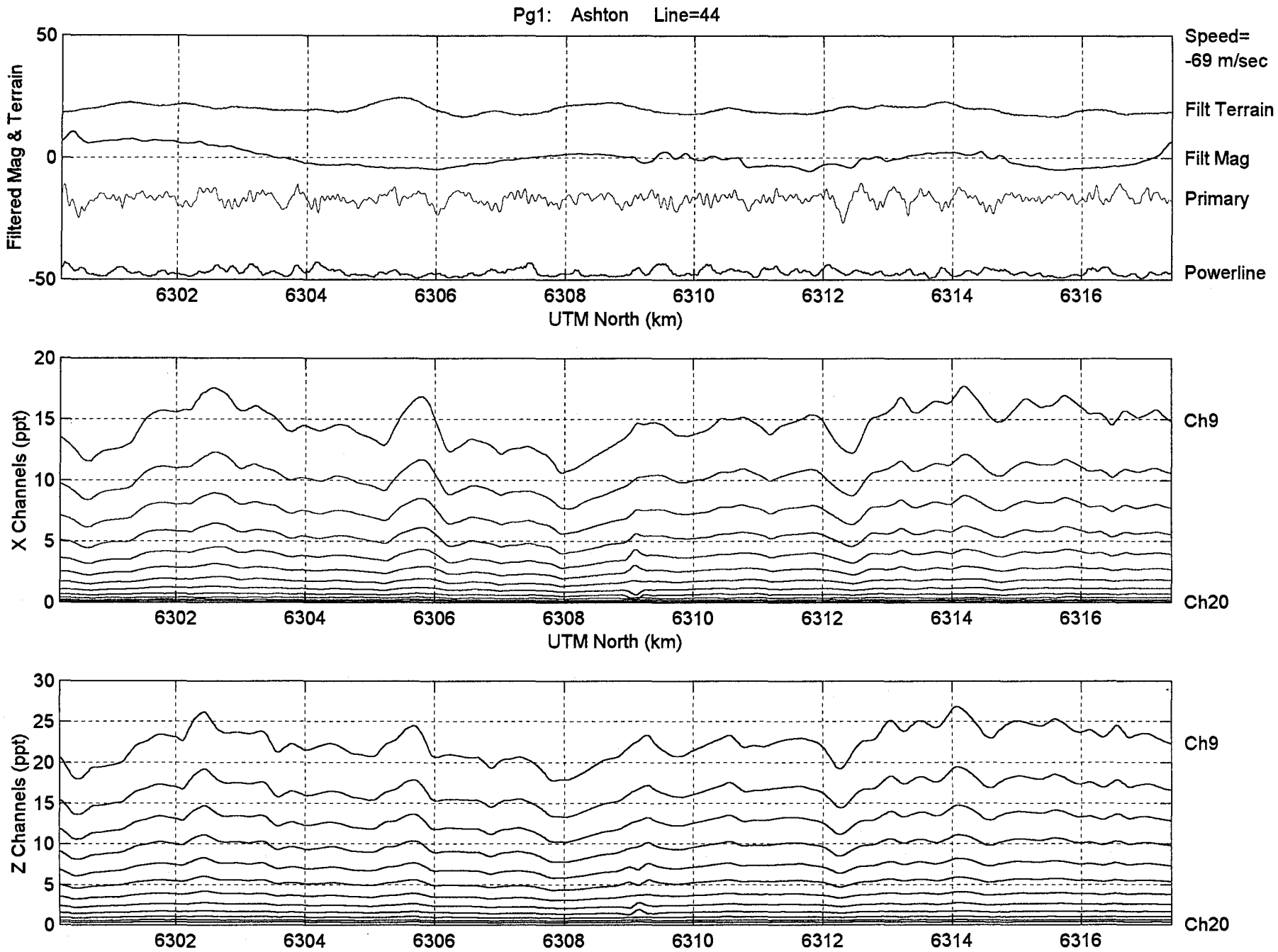

Pg1: Geoterrex Ashton Line=39
Speed=
61 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
K6

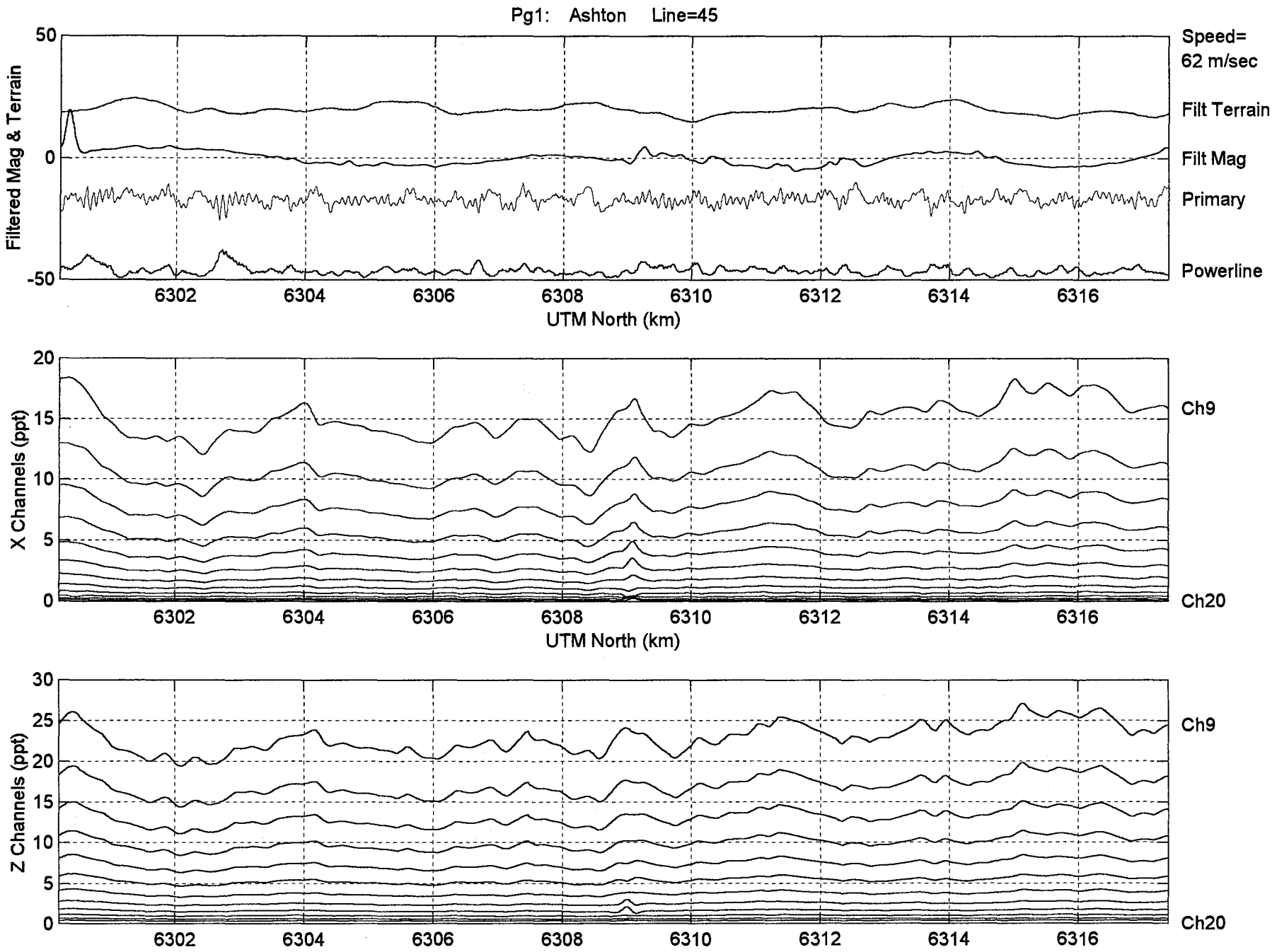

Pg1: Geoterrex Ashton Line=40
Speed=
-69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
K6

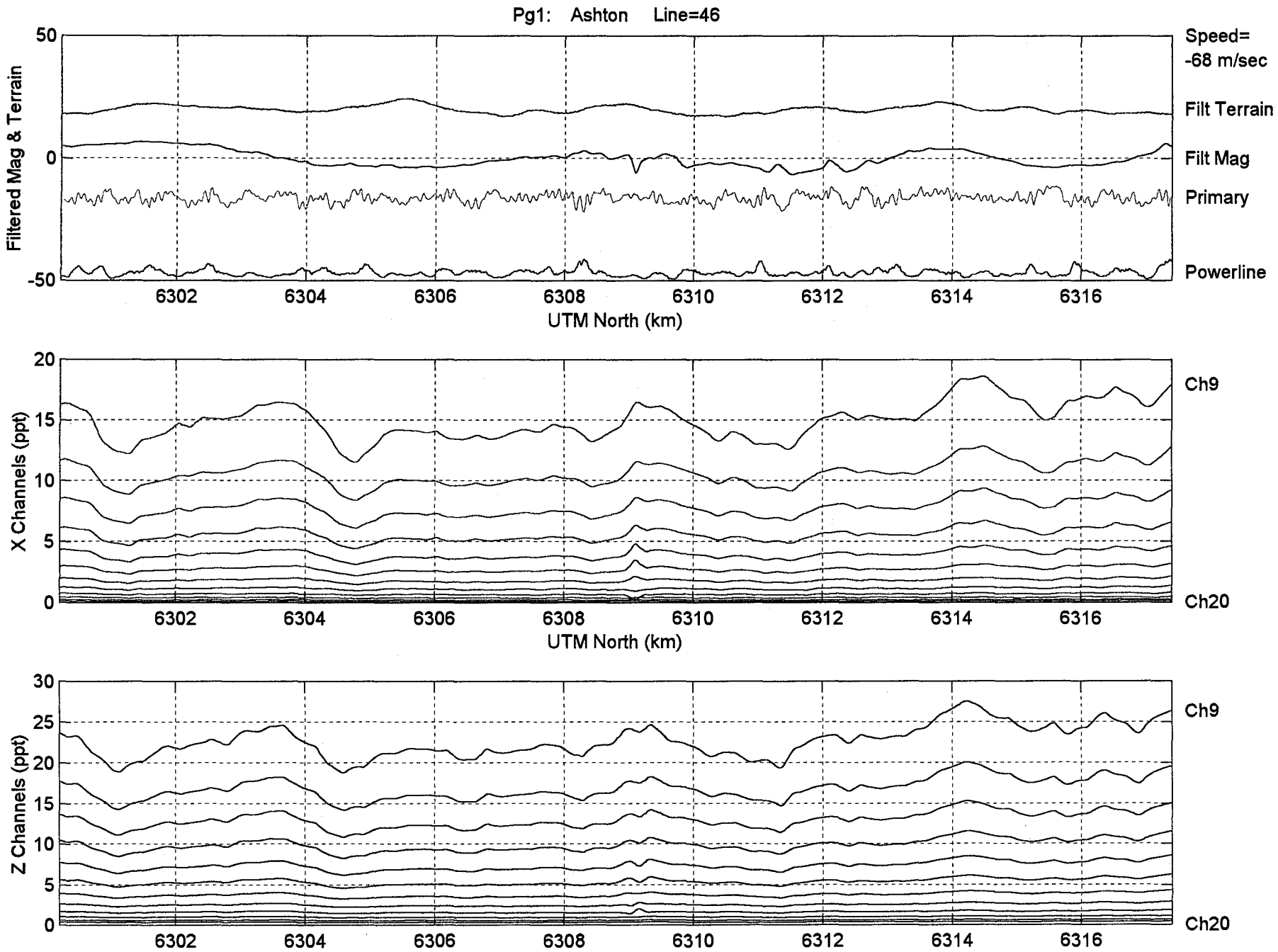

Pg1: Ashton Line=41
Filtered Mag & Terrain
50
0
-50
Speed=
62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

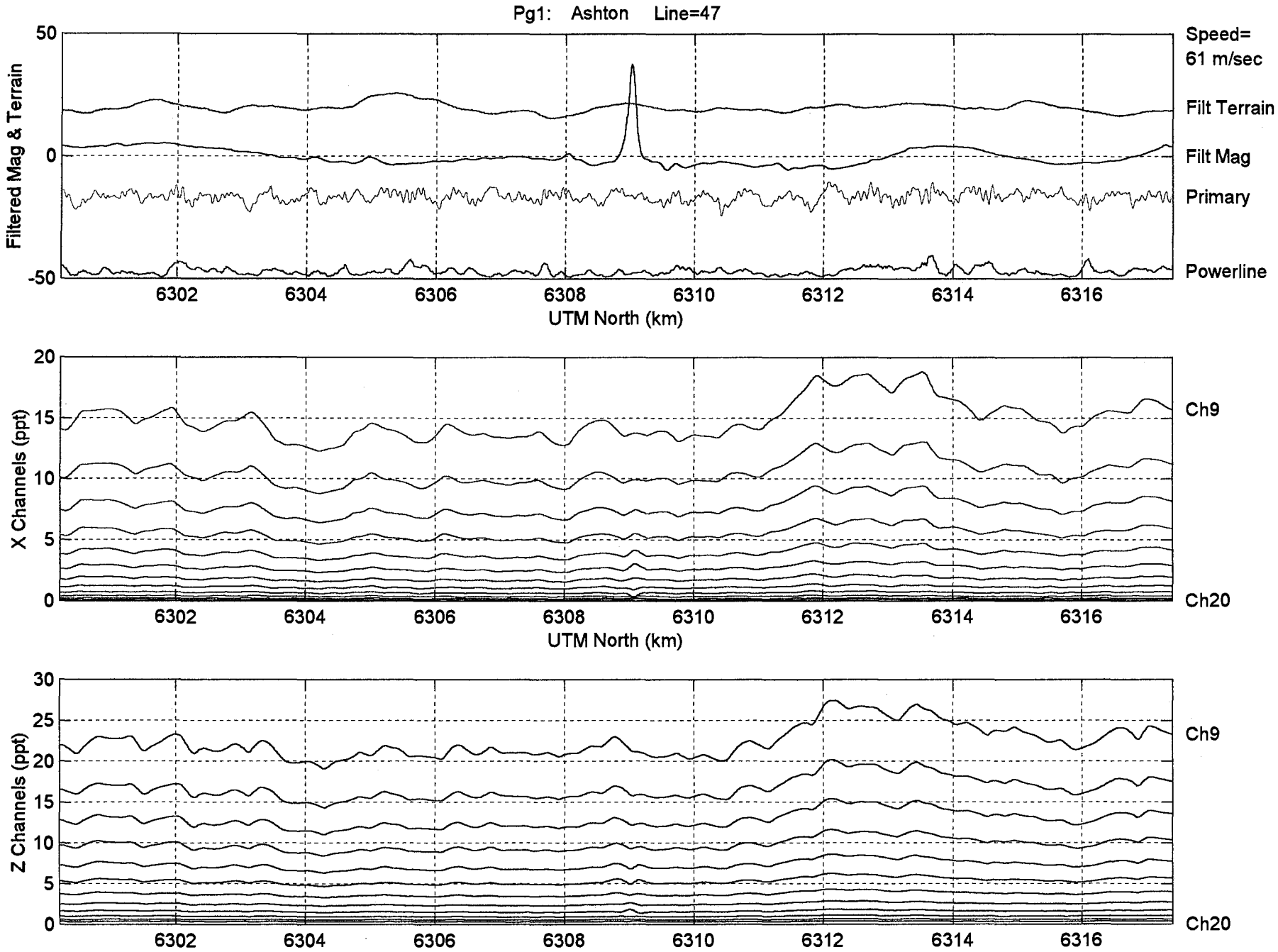

Pg1: Ashton Line=42
Filtered Mag & Terrain
50
0
-50
Speed=
-69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

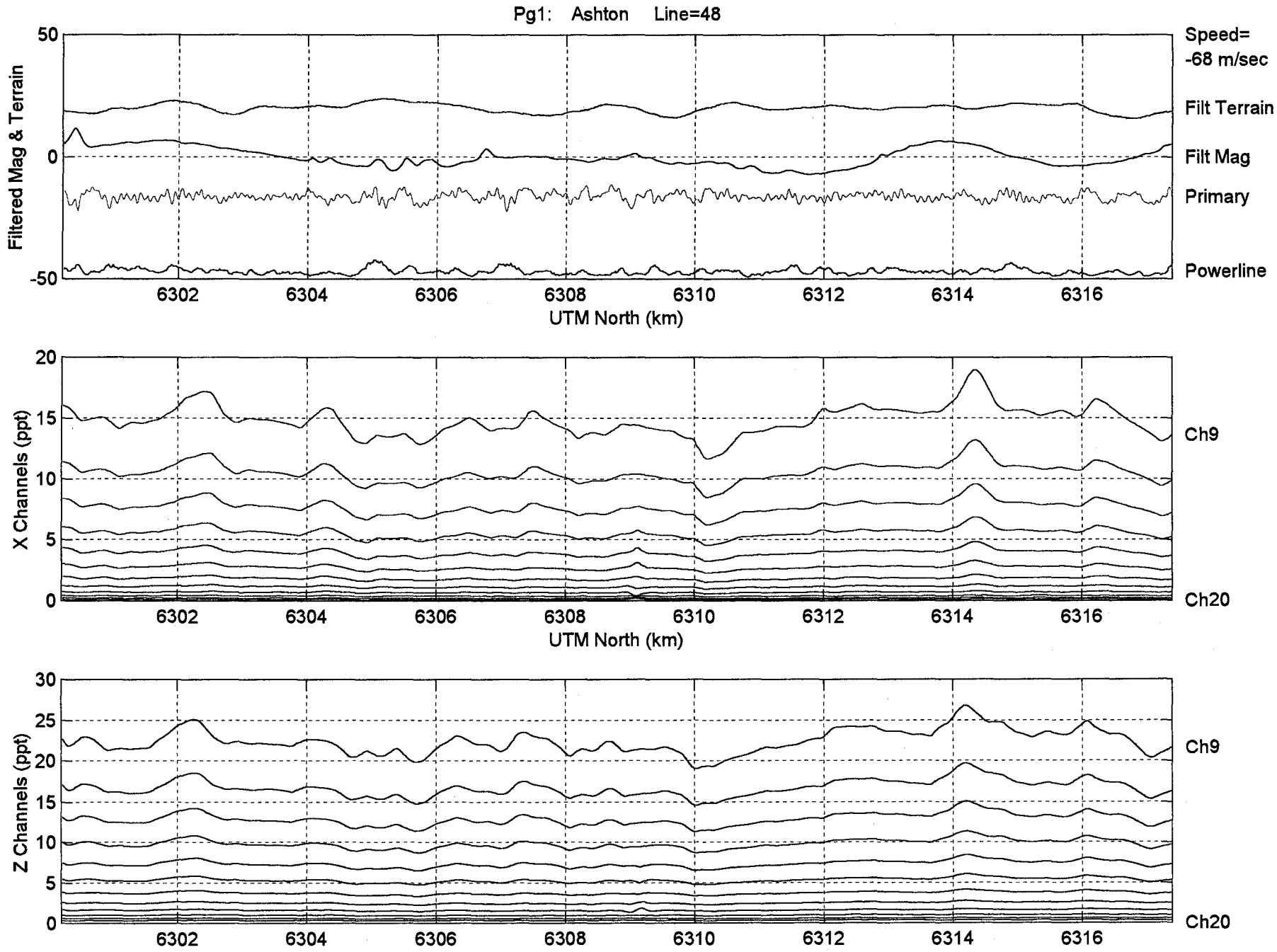

Pg1: Ashton Line=43
Filtered Mag & Terrain
50
0
-50
Speed=
63 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
40
30
20
10
0
Ch9
Ch20

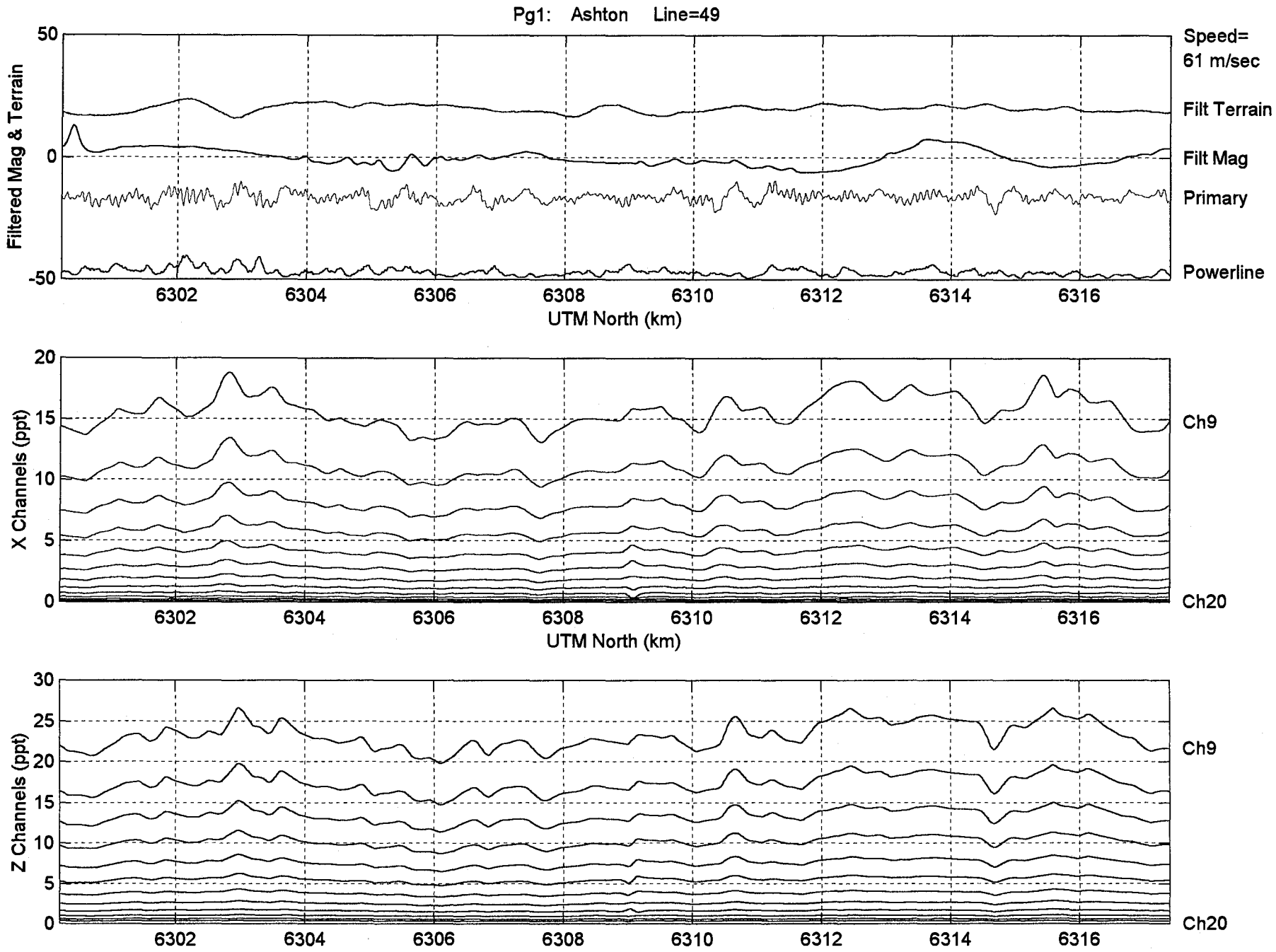

Pg1: Ashton Line=44
Filtered Mag & Terrain
50
0
-50
Speed=
-69 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

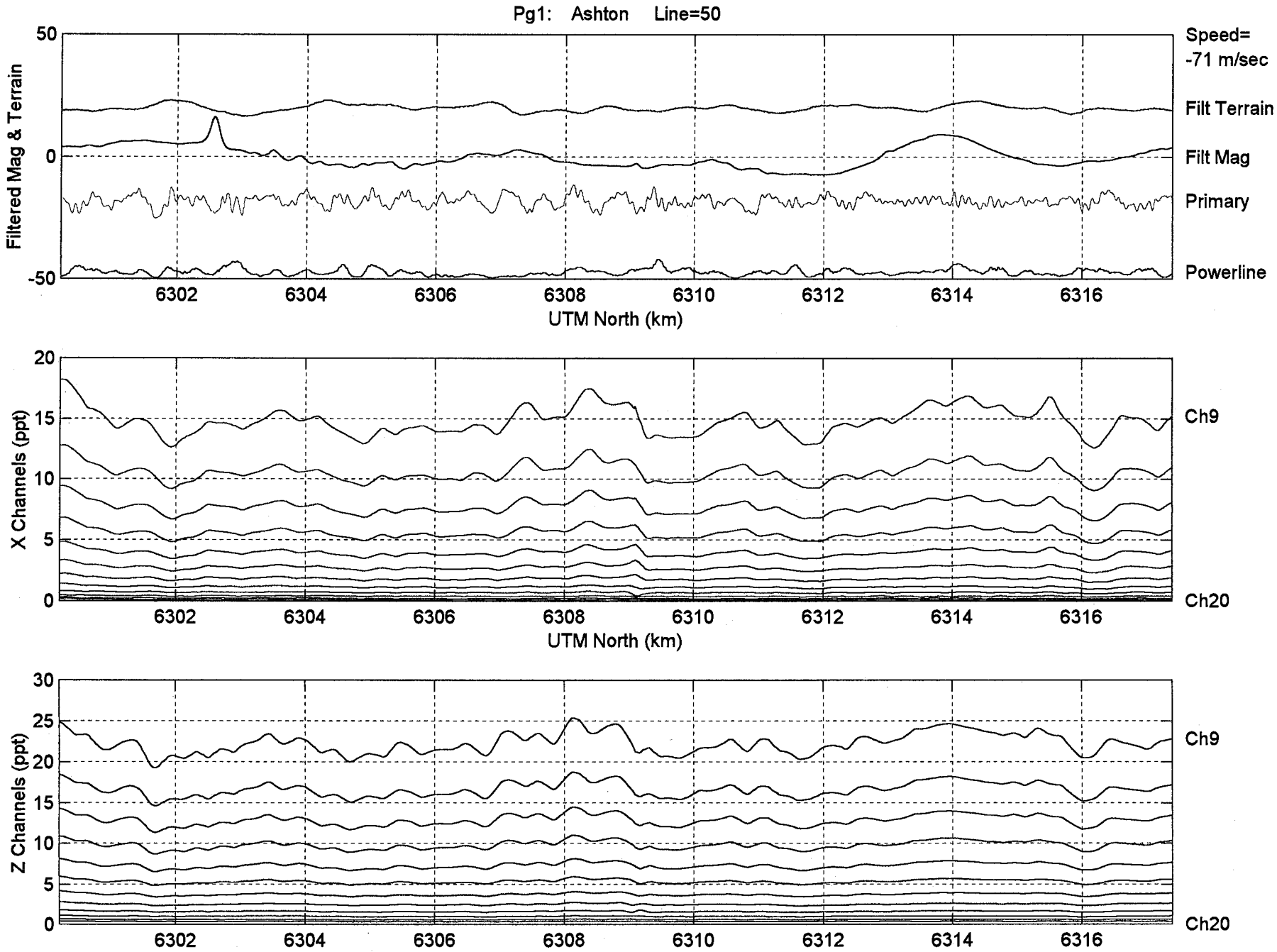

Pg1: Ashton Line=45
Filtered Mag & Terrain
50
0
-50
Speed=
62 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316

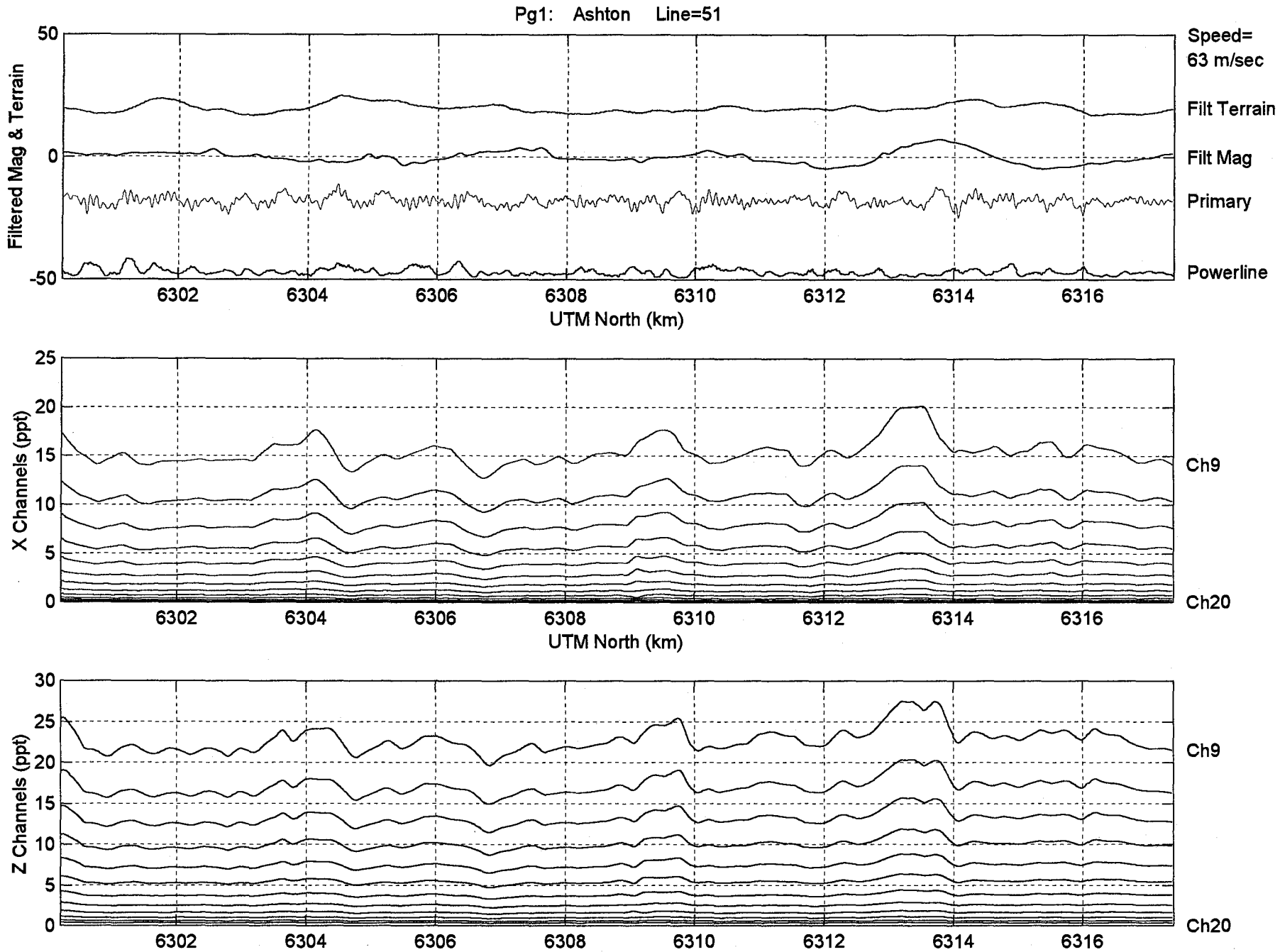

Pg1: Ashton Line=46
Filtered Mag & Terrain
50
0
-50
Speed=
-68 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

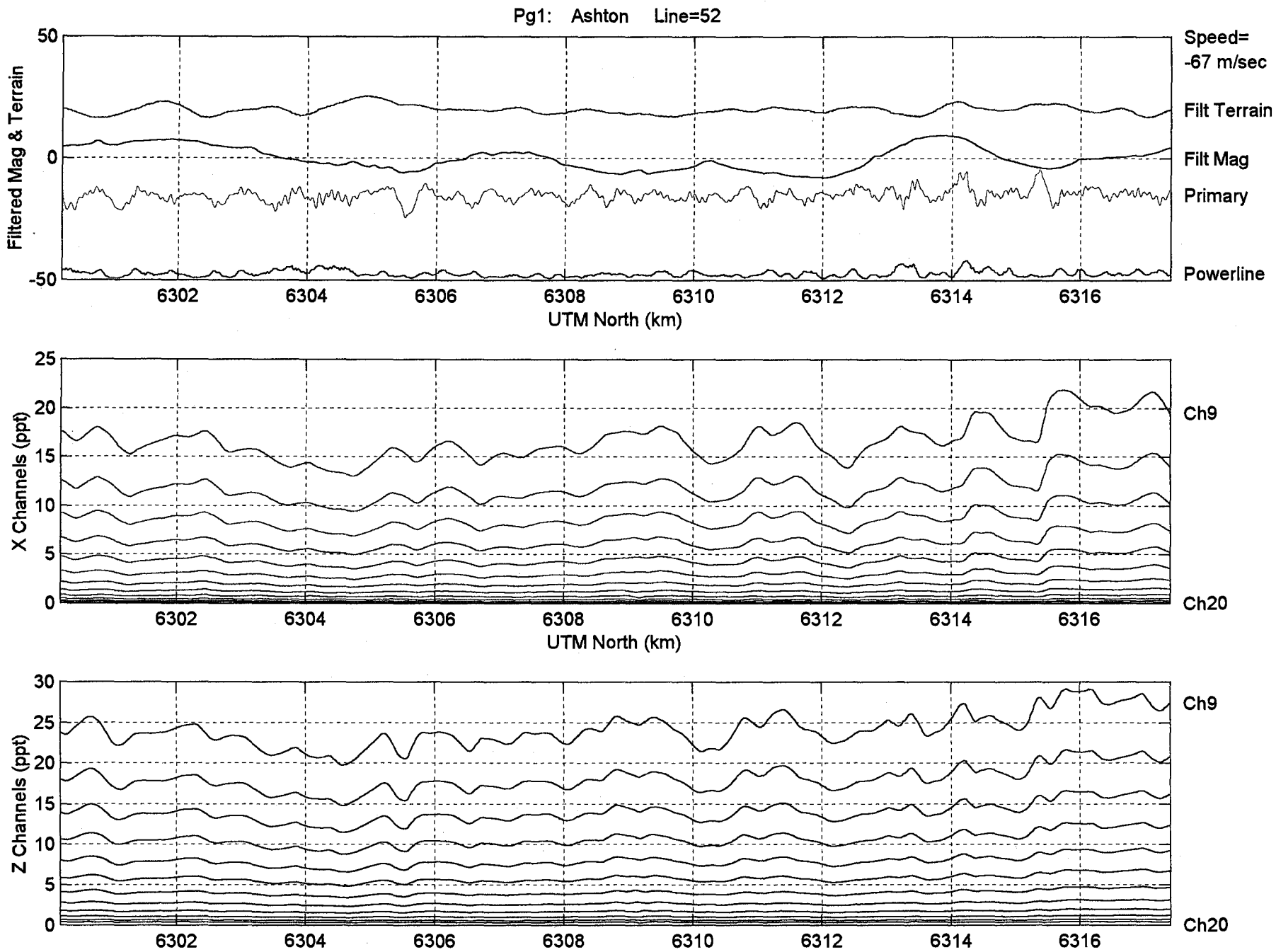

Pg1: Ashton Line=47
Filtered Mag & Terrain
50
0
-50
Speed=
61 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20

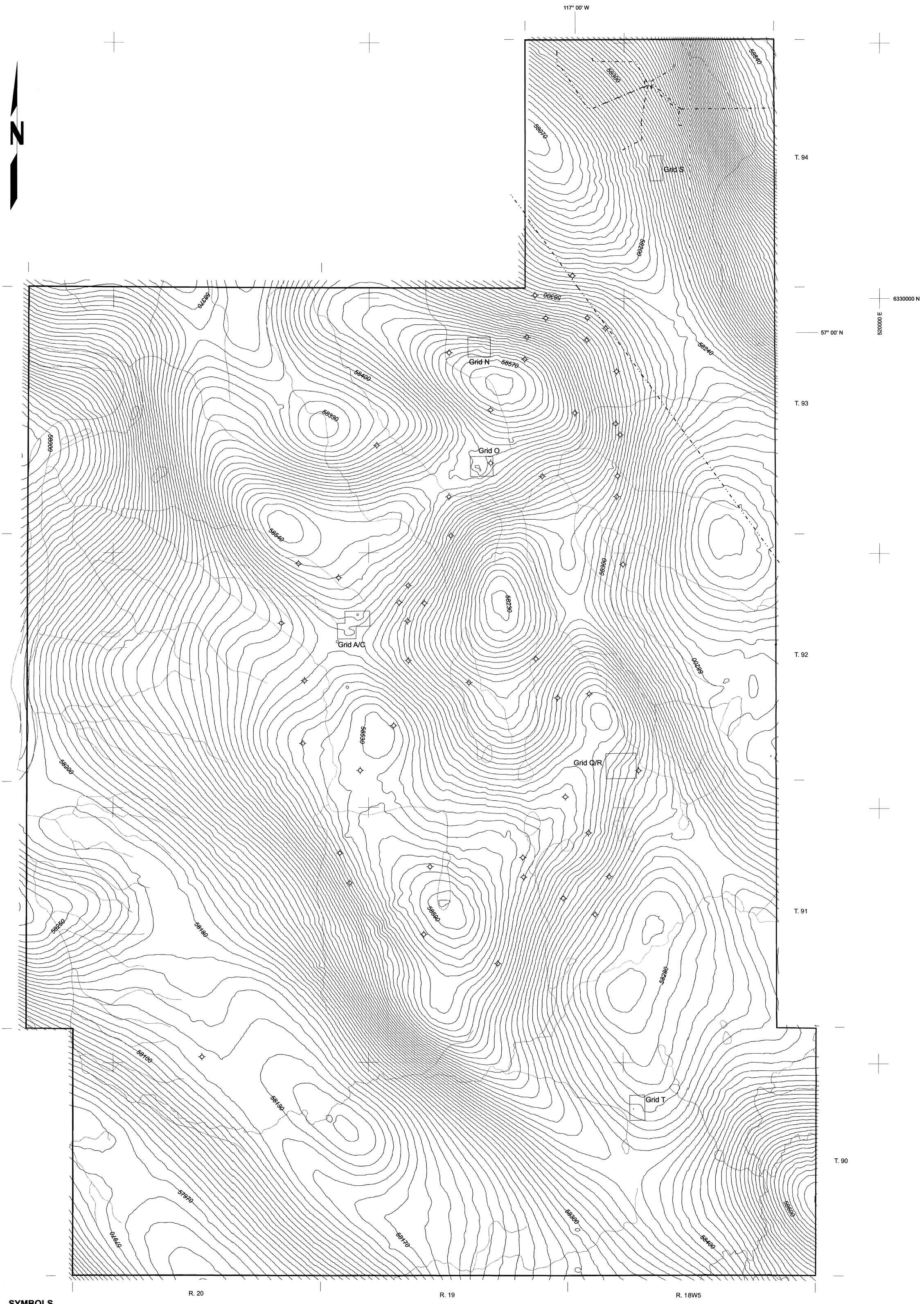

Pg1: Ashton Line=48
Filtered Mag & Terrain
50
0
-50
Speed=
-68 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20


Pg1: Ashton Line=49
Filtered Mag & Terrain
50
0
-50
Speed=
61 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20
6302
6304
6306
6308
6310
6312
6314
6316


Pg1: Ashton Line=50
Speed=
-71 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20


Pg1: Ashton Line=51
Filtered Mag & Terrain
50
0
-50
Speed=
63 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20


Pg1: Ashton Line=52
Speed=
-67 m/sec
Filt Terrain
Filt Mag
Primary
Powerline
Filtered Mag & Terrain
50
0
-50
6302
6304
6306
6308
6310
6312
6314
6316
UTM North (km)
X Channels (ppt)
25
20
15
10
5
0
Ch9
Ch20
UTM North (km)
Z Channels (ppt)
30
25
20
15
10
5
0
Ch9
Ch20



SYMBOLS

- Isomagnetic contour; contour interval 10 nT
- Grid T — Ground magnetometer geophysical grid; identifier
- Oil or gas well
- Pipeline
- Property boundary

0 — 5
Kilometres
UTM NAD 27 Zone 11

1999a120

NEW CLAYMORE RESOURCES LTD.
KEPPLER CREEK PROSPECT

DRAWING 01

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD CONTOURS

84 C\14, C\15, 84 F\2, 84F/3
April, 1999