# MAR 19920004: FT. FITZGERALD & ROBERT CREEK

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Cameco Corporation

# FORT FITZGERALD & ROBERT CREEK PROJECTS

## NTS 74E/16 & 74M/13 & 14

## SUMMARY OF 1990 EXPLORATION ACTIVITIES

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## SUMMARY

The 1990 geophysical program completed on the Fort Fitzgerald and Robert Creek Projects was conducted to ground verify airborne magnetic anomalies postulated to have kimberlite diatreme sources. The ground magnetic surveys were completed by an in-house crew during late May and early April, 1990, on five airborne magnetic anomalies interpreted from Geological Survey of Canada (GSC) airborne magnetic data.

Modelling the ground magnetic data collected over all anomalies indicates that the magnetic sources occur within the crystalline basement. All modelled parameters are within the limitations of kimberlitic diatremes.

Diamond drilling was completed on 3 anomalies within the Fort Fitzgerald area. All holes intersected magnetite-rich granite to granulites. Based on drill results it is recommended to drop all the properties.

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## 1.0 INTRODUCTION

The 1990 geophysical exploration program completed on the Fort Fitzgerald and Robert Creek Projects consisted of ground magnetic surveys over interpreted GSC airborne magnetic anomalies postulated to have kimberlitic affinities. A total of 30.8 km of ground magnetic coverage was completed over 5 airborne anomalies. Depth to source estimates of the anomalies are variable, however all appear to be within the crystalline basement.

Subsequent diamond drilling (not reported in this report) by Cameco intersected granitic rocks at 3 of these anomaly sites.

### 1.1 Location and Access

The Robert Creek project area is located in northeastern Alberta, within NTS 73E (Figure 1). The centre of the project lies at 57°50'latitude and 110°25'longitude. Access to the permit area was accomplished by helicopter from Fort McMurray, Alberta.

The Fort Fitzgerald Project area is located in northeastern Alberta, within NTS 74M (Figure 2). The centre of the project lies at 59°50' latitude and 111°40' longitude. Access to the anomalies within the project area was accomplished by use of a helicopter stationed at Fort Smith, Northwest Territories.

### 1.2 Physiography

The Robert Creek project area lies within the Athabasca Plains of northeastern Alberta. The permit area is forested, with abundant muskeg in the regions north-east and southwest of Richardson River. Topographic high regions are covered by sand plains.

111°00′

110°00′

58°00′

ATHABASCA GP.
SANDSTONE

Richardson

DEVONIAN
CARBONATES

PRECAMBRIAN
GRANITES

DEVONIAN
CARBONATES

Permit
689003001

ALBERTA

SASKATCHEWAN

River

River

RIVER

ATHABASCA

Marguerite

Firebag

Johnson
Lake

McClelland
Lake

River

CRETACEOUS SEDIMENTS

N

0 10km

Cameco

**ROBERT CREEK PROJECT**

**LOCATION MAP**

| | |
|---|---|
| Compiled By: G. DREVER 92/01/14 | Dwg No.: FF92002 |
| Drafted By: G. DREVER | |
| Scale: 1:250,000 | **Figure 1** |
| N.T.S.: 74E | |
| Disposition(s): PERMIT 6890030001 | |

112°00'

Salt River

Slave

PRECAMBRIAN SHIELD

NORTHWEST TERRITORIES

Schaefer Lakes

FORT SMITH

5

60°00'

60°00'

Tethul River

Permit 6890030004

ALBERTA

Permit 6890070003

Salt River

Permit 6890030002

Permit 6890030003

Fort Fitzgerald

Slave River

Dog River

DEVONIAN CARBONATES

WOOD BUFFALO NATIONAL PARK

Myers Lake

112°00'

N

LEGEND

Approximate location of Devonian / Precambrian Contact

0 5 10 15km

SCALE 1:250,000

Cameco

FORT FITZGERALD PROJECT

LOCATION MAP

| | |
|---|---|
| Compiled By: G. DREVER 92/01/14 | Dwg No.: FF92001 |
| Drafted By: G. DREVER | Figure 2 |
| Scale: 1:250,000 | |
| N.T.S.: 74M | |
| Disposition(s): | |

The Fort Fitzgerald project area is forested, with abundant muskeg in the regions southwest of the Slave River. Sand plains constitute higher elevations within the project area, while east of the Slave River, Precambrian outcrop dominates the terrain. Granitic exposures are topographic highs and are exposed along rivers and valleys.

Alluvium deposits occur on both sides of the Slave River and are locally extensive. The alluvium tends to be extensively forested with mature jack pine, spruce, aspen and birch.

## 1.3 Property and Tenure

The Robert Creek Project consists of one Metallic Mineral Permit (Figure 1) while the Fort Fitzgerald Project consists of four Metallic Mineral Permits totalling 96 ha (Figures 1 & 2). Table 1 shows the status of all permits.

**TABLE 1: Exploration Permit Statistics**

| Permit No. | Commencement Date | Expiry Date | Area (ha) | Assessment Required |
|---|---|---|---|---|
| 6890030001 | 27/03/90 | 27/03/93 | 16 | $160 |
| 6890030002 | 27/03/90 | 27/03/93 | 16 | $160 |
| 6890030003 | 27/03/90 | 27/03/93 | 32 | $320 |
| 6890030004 | 27/03/90 | 27/03/93 | 16 | $160 |
| 6890070003 | 16/07/90 | 16/07/93 | 16 | $160 |

## 1.4 Regional Geology

The project area lies near the northwestern rim of the Interior Platform, which is a series of Phanerozoic sediments unconformably overlying the Precambrian basement in a 600 to 1200 km wide belt between the Rocky Mountains and the outcropping Canadian Shield.

The area within the Robert Creek permit is underlain by Precambrian granitoid rocks of Archean age. A relatively thin veneer (up to 40 m) of

Devonian carbonates cover a portion of the granitoids and the Athabasca Sandstone Group immediately north of the permit area (Figure 1). Athabasca Group sediments occur to the north with Devonian and Cretaceous sediments overlapping from the south.

Areas, within the Fort Fitzgerald project, east of the Slave River are underlain by Hudsonian-aged 'Slave Granitoids' while Devonian carbonates are restricted to areas west of the river (Figure 2).

The Slave Granitoids are weakly foliated to gneissic, typically white to grey to pinkish red and characteristically garnetiferous with biotite envelopes surrounding the garnets. Within the Slave granitoids there are minor inclusions and lenses of metasediments ranging in composition from quartzites to pelitic schists and amphibolites.

The Devonian carbonates are typically flat lying and vary from poorly sorted pebbly sandstone to sandy dolostone to dolomitic limestone and limestone.

Glacial advance was from the east with evidence of glacial fluvial transport to the northwest (Godfrey, 1984). Quaternary deposit thicknesses vary from nil to >100 m with increasing thicknesses to the west. Alluvium deposits with thicknesses exceeding 30 m occur in a relatively wide belt (10's of kms) centred on the Slave River.

## 2.0 1990 EXPLORATION PROGRAM

The 1990 exploration program consisted of ground verifying five prospective GSC airborne magnetic anomalies with the aim of delineating kimberlite diatremes. Survey statistics are included as Appendix I.

EDA 350 portable proton precession magnetometers were used as field units and an EDA 375 was employed as a base station. Instrument specifications are included in Appendix II. The base station recorded the diurnal activity of the earth's magnetic field at 10 second intervals. Ideally each anomaly was surveyed by at least two operators on orthogonal traverses over the anomaly. Total field

magnetic readings were recorded at 10 m paced intervals on grid lines spaced at 100 m apart. The field data were corrected for diurnal variations using the base station readings. Data processing in the field and in the office was completed on a Compaq SLT 286 microcomputer using the Geosoft Mapping System software.

The dispositions are illustrated in Figures 1 & 2 while Figures 3 to 7 detail the grid lines and anomaly locations relative to the permit boundaries. Magnetic data are listed in Appendix III. The ground magnetic data were filtered with a 200m lowpass filter to remove short wavelength features and are presented as stacked profiles at a scale of 1:10 000 in Figures 3 to 7.

The magnetic data were modelled using the program MAGPIPE, developed in-house by Cameco's system group. The program calculates the magnetic response of a right vertical finite cylinder with variable parameters - depth, diameter and magnetic susceptibility. A model response is best fitted to the ground data using a least squares algorithm while varying iteratively the depth, diameter and magnetic susceptibility. The Fitzgerald No. 4 and 6 anomalies were also modelled as a tabular body using a 2.5D modelling program developed by Geosoft.

Appendix IV includes the results of the modelling on the magnetic data collected over the anomalies.

## 3.0 GEOPHYSICAL RESULTS

Magnetic surveys measure the combined effect of the earth's magnetic field and the near surface magnetic fields of magnetic minerals, primarily magnetite, which is a common accessory mineral in most rocks. The distribution of magnetite reflects the original mineralogy of the rock and its subsequent metamorphic and tectonic history. Known economic diamondiferous kimberlite diatremes have a surface diameter of 10's of metres to over one km. Near surface magnetic anomalies delineated by the ground magnetic surveys displaying a similar width are, therefore, of high priority regardless of the magnetic amplitude. The results of the ground magnetic surveys are summarized in Table 2.

**TABLE 2: Summary of Ground magnetic Surveys**

| ANOMALY DESIGNATION | NTS MAP | UTM CO-ORDINATES | | DATE SURVEYED | MAGNETIC DATA | | | | MODELLED PARAMETERS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | STATISTICS | | AMPLITUDE | DIAMETER | DIAMETER | DEPTH | SUSCEPTIBILITY |
| | | EASTING | NORTHING | | (man-days) | (line-km) | (gammas) | (m) | (m) | (m) | (micro cgs) |
| *ROBERT 2* | 74E/16 | 538000 | 6414300 | 29-Mar-90 | 2.0 | 14.7 | 1200 | 50 | 50 | 30 | 20000 |
| *FITZGERALD 3* | 74M/14 | 476300 | 6644550 | 02-Apr-90 | 1.5 | 5.8 | 2000 | 175 | 175 | 35 | 9000 |
| *FITZGERALD 4* | 74M/13 | 445650 | 6638820 | 03-Apr-90 | 1.0 | 3.6 | 1700 | 600 | 600 | 150 | 8000 |
| *FITZGERALD 5* | 74M/13 | 461600 | 6632900 | 03-Apr-90 | 0.5 | 1.6 | 450 | 100 | 100 | 80 | 7200 |
| *FITZGERALD 6* | 74M/13 | 461000 | 6649270 | 03-Apr-90 | 1.5 | 5.1 | 1600 | 200 | 200 | 60 | 6000 |

### 3.1 Robert Creek 2 Anomaly

A set of orthogonal traverse lines were originally surveyed over the anomaly located immediately north of Richardson River (Figure 3). A localized magnetic high with an amplitude of 500 nT was defined. After processing the ground data, a decision was made to return to the anomaly the following day and expand the magnetic coverage. A circular magnetic high was delineated north east of the original magnetic high with an amplitude of 1200 nT. Depth estimates for the source are 30 m. It was postulated at the time that the very localized magnetic high could represent a separate higher magnetic intrusive pulse of the postulated diatreme, and the lower amplitude anomaly constitutes the main postulated diatreme body.

### 3.3 Fort Fitzgerald 3 Anomaly

A grid based magnetic survey was completed over the Fort Fitzgerald No. 3 anomaly for a total of 5.8 km of coverage. A high amplitude anomaly of 2100 nT was defined and outlined (Figure 4). The shape of the anomaly is slightly linear and the presence of multiple magnetic peaks may indicate a number of small bodies. Modelling the ground magnetic data indicates the observed anomaly to have an estimated source depth of 20 to 40 m.

### 3.4 Fort Fitzgerald 4 Anomaly

One traverse of 2.0 km and a short cross line over the peak of the ground magnetic anomaly were completed over the anomaly (Figure 5). The results of the magnetic survey defined a large 1600 nT, deep seated feature. Depth estimates of 270 m indicate a basement source.

### 3.5 Fort Fitzgerald 5 Anomaly

The ground magnetic survey of one set of orthogonal lines over Anomaly No. 5 delineated a small localized feature with maximum amplitude of 450 nT and depth to source estimates of 80 m (Figure 6). This depth

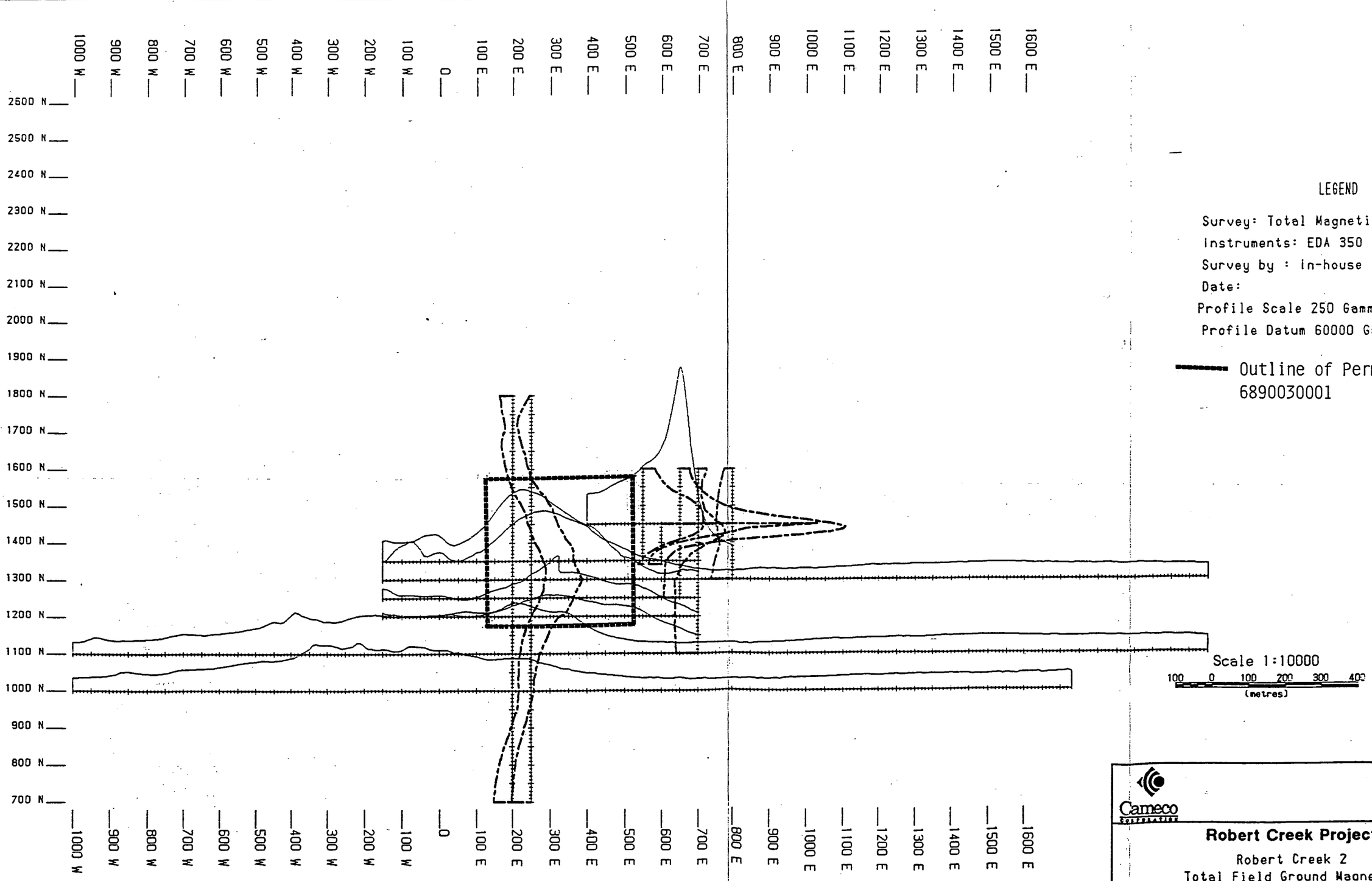



Figure 3

Cameco Corporation

**Robert Creek Project**

Robert Creek 2
Total Field Ground Magnetic

Compiled by: B.E.S.
Disp:
Date: Jan. 1990

Drawn: HP7585B

NTS:74E/5

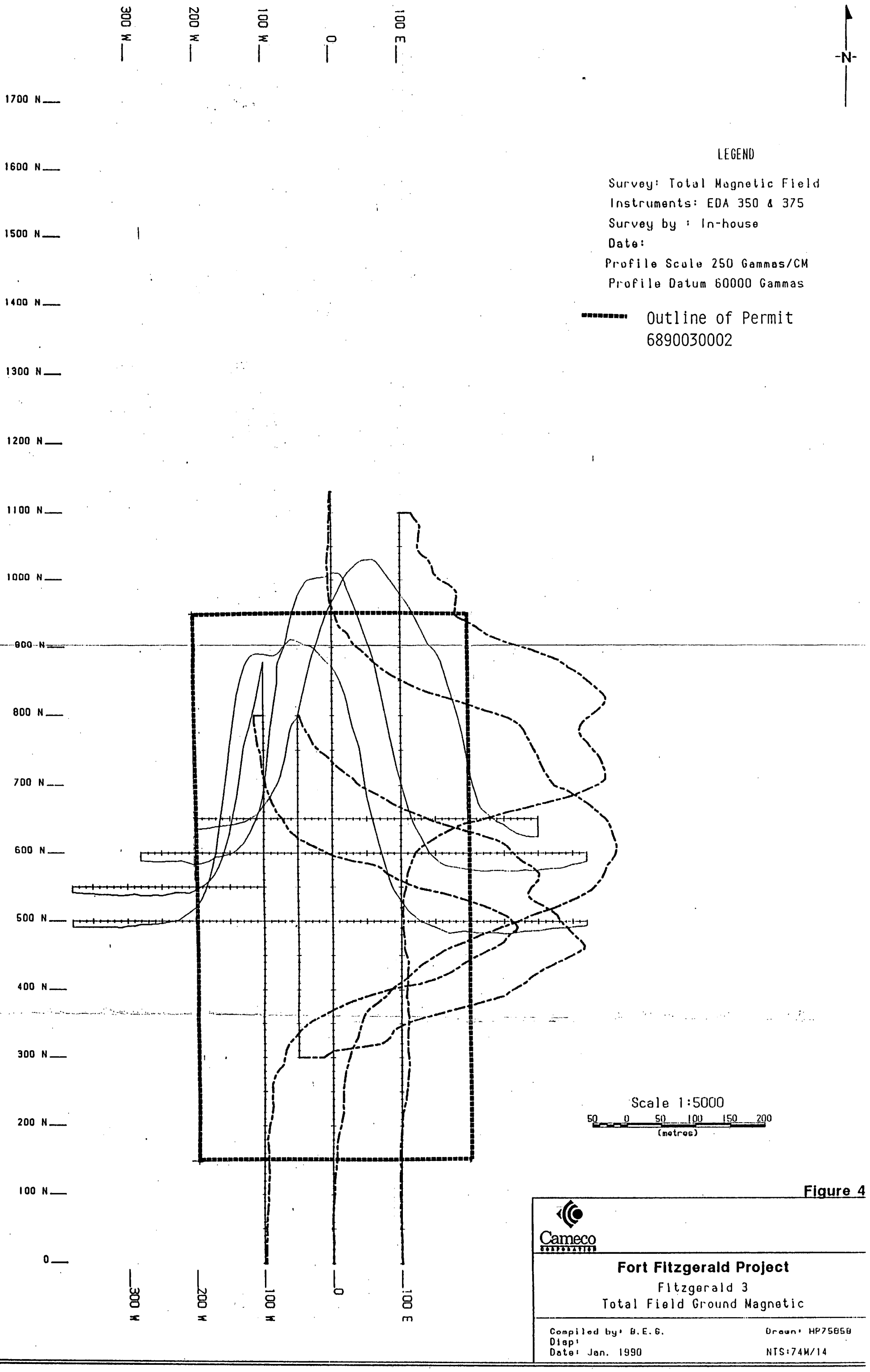



Figure 4

Cameco CORPORATION

**Fort Fitzgerald Project**

Fitzgerald 3

Total Field Ground Magnetic

Compiled by: B.E.G. Drawn: HP75858

Dispt

Date: Jan. 1990 NTS:74M/14

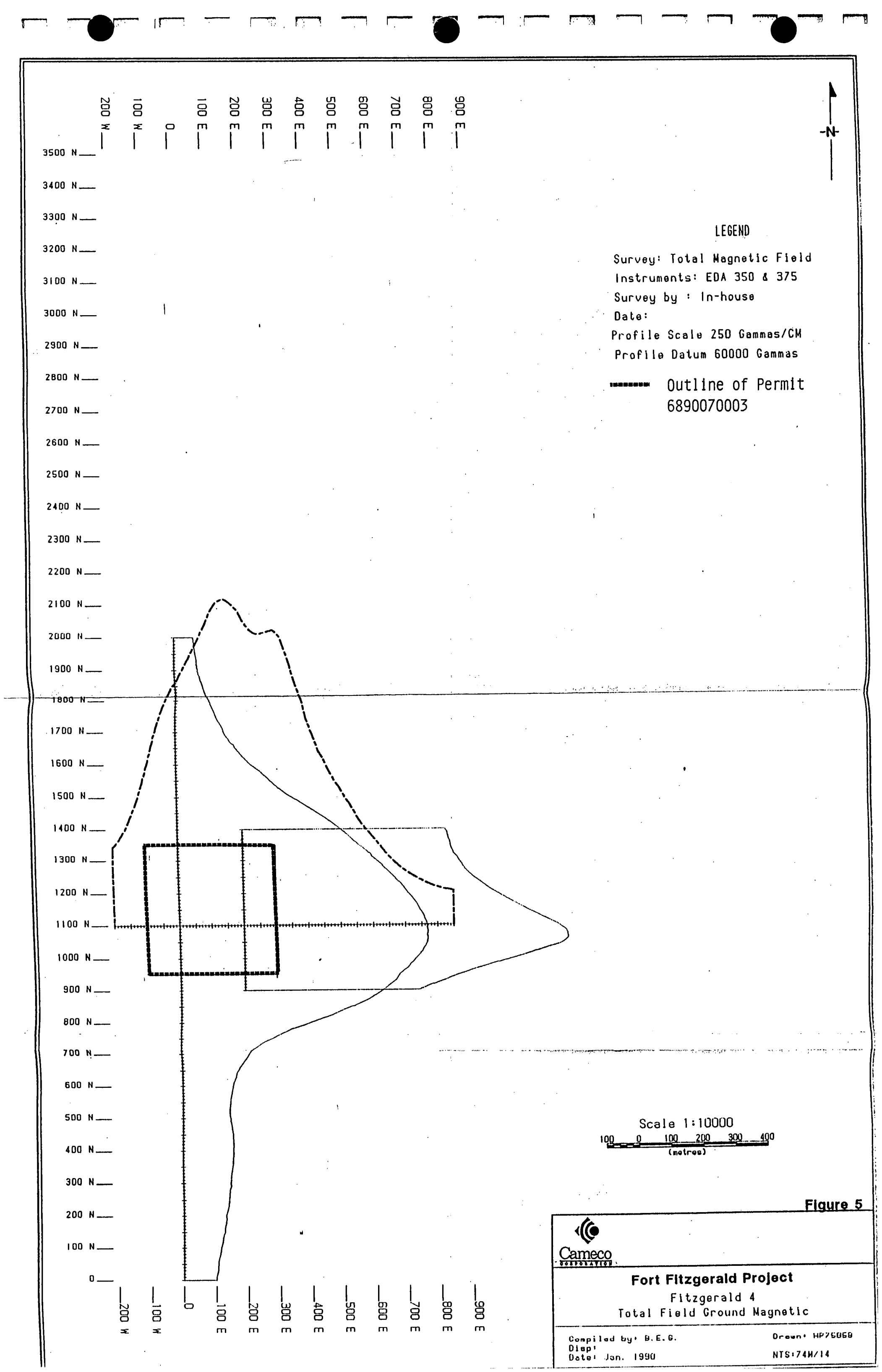



Figure 5

Cameco Corporation

**Fort Fitzgerald Project**

Fitzgerald 4

Total Field Ground Magnetic

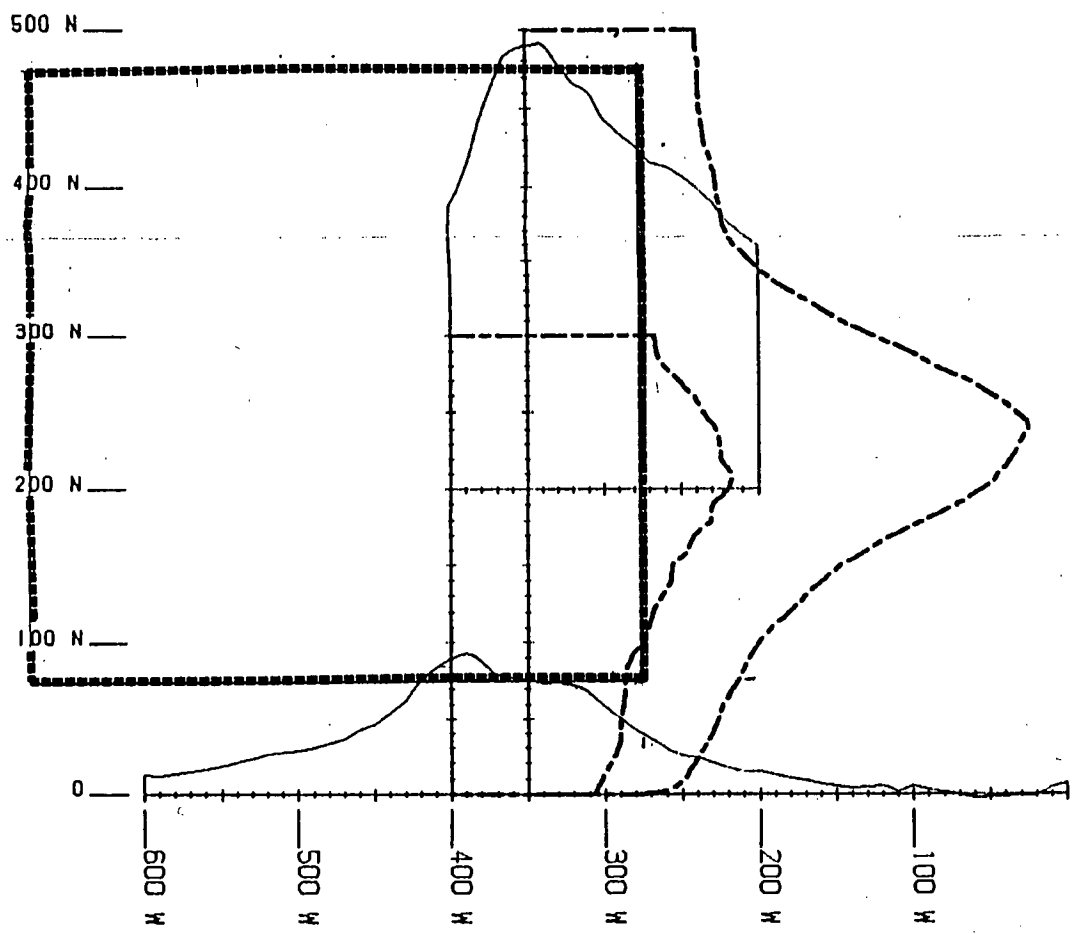
Compiled by: B.E.G. Drawn: HP75060

Disp:

Date: Jan. 1990 NTS:74H/14

600 W 500 W 400 W 300 W 200 W 100 W

1700 N
1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N
900 N
800 N
700 N
600 N




N

LEGEND

Survey: Total Magnetic Field
Instruments: EDA 350 & 375
Survey by : In-house
Date:
Profile Scale 100 Gammas/CM
Profile Datum 60000 Gammas

Outline of Permit 6890030003

Scale 1:5000

50 0 50 100 150 200
(metres)

**Figure 6**

Cameco CORPORATION

## Fort Fitzgerald Project

Fitzgerald 5
Total Field Ground Magnetic

Compiled by: B.E.G.
Disp:
Date: Jan. 1990

Drawn: HP75850
NTS:74M/14

estimate corresponds to extrapolated depths to the Precambrian basement underlying the Devonian sediments.

### 3.6 Fort Fitzgerald 6 Anomaly

Two parallel line plus 4 orthogonal line were completed over the magnetic anomaly (Figure 7). An anomaly was delineated with an amplitude of 1600 nT and diameter of 200 m. Modelled depth estimates of 60 m indicate a near surface basement source.

## 4.0 DISCUSSIONS

The limited ground magnetic coverage completed on the Fort Fitzgerald and Robert Creek Projects delineated 5 potential kimberlite bodies.

Based on positive geophysical results, a 3 hole diamond drill program was completed in the Fort Fitzgerald area. Drilling proved that the anomalies are a result of magnetite-rich granulites/granites rather than kimberlites.

## 5.0 CONCLUSIONS

Although the 1990 geophysical exploration program did not positively identify kimberlite diatremes, near surface magnetic bodies were detected.

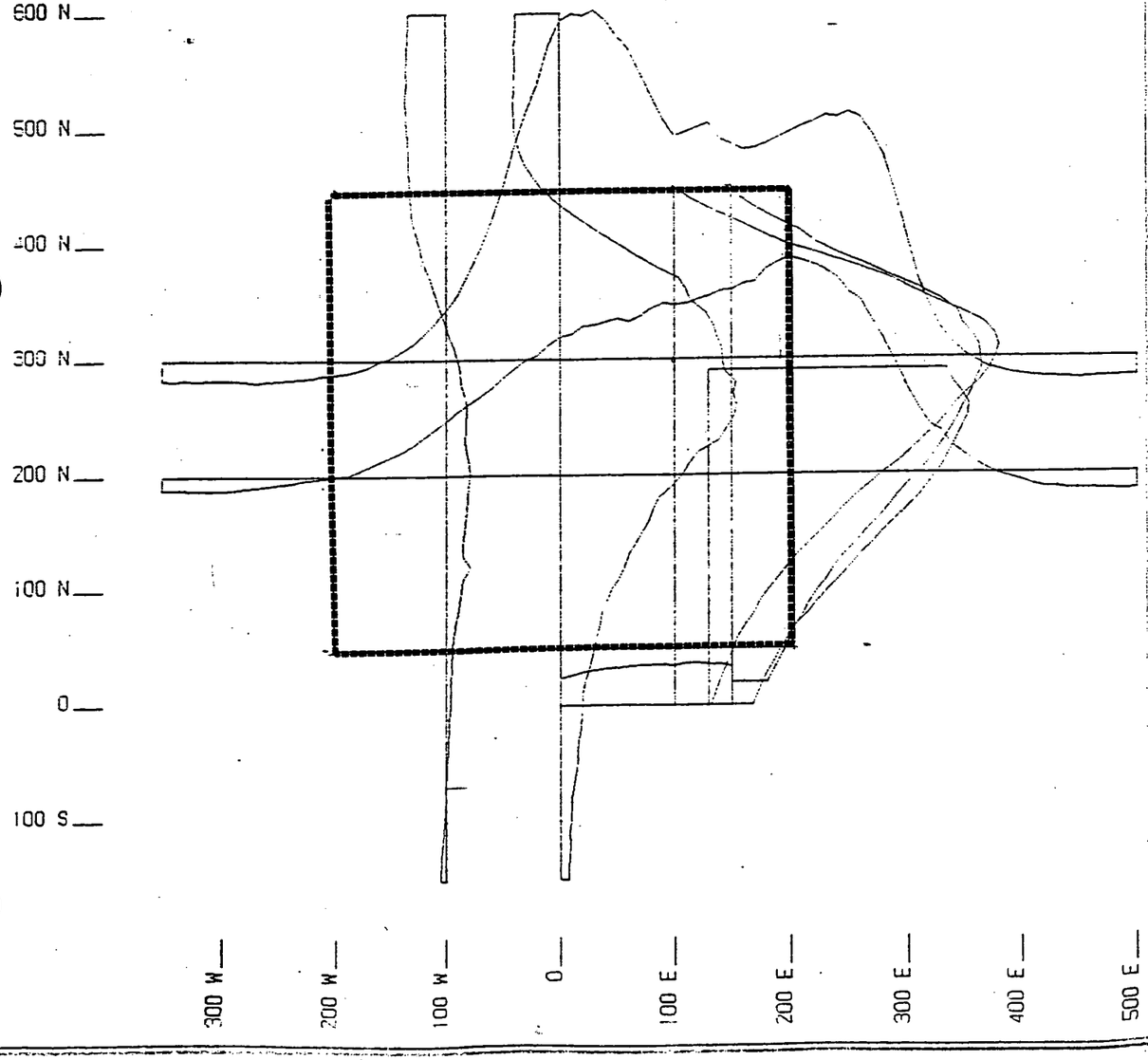
Unfortunately, drilling proved these features to be magnetite-rich granites, thus, the projects have been considerably down-graded.

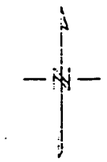
## 6.0 RECOMMENDATIONS

It is recommended to allow all 5 permits to lapse. No further work is recommended.

## 7.0 REFERENCES

J.D. Godfrey; 1984; Geology of the Fitzgerald, Tulip-Mercredi-Charles Lakes District, Alberta; Earth Sciences Report 84-7; Alberta Research Council.




Scale 1:5000

50 0 50 100 150 200
(metres)

Outline of Permit 6890030004

Survey : Total Magnetic Field
Instrument: EDA PPM 375 &350
Survey by: In-house
Date: April 1990
Profile Scale: 250 nT per cm
Profile Datum: 60000 nT

**Figure 7**

Cameco Corporation

**Fort Fitzgerald Project**

Fitzgerald No. 6
Total Field
Ground Magnetics

Compiled by: G.M.N.
Disp:
NTS: 74 M/14

# APPENDIX I

# ASSESSMENT DATA

## Expenditure and Assessment data

| *ITEM* | M.M.P. 6890030001 | M.M.P. 6890030002 | M.M.P. 6890030003 | M.M.P. 6890030004 | M.M.P. 6890070003 |
|---|---|---|---|---|---|
| PERSONNEL | | | | | |
| Travel | $730 | $730 | $730 | $730 | $730 |
| Survey | $525 | $788 | $263 | $525 | $525 |
| Report | $630 | $735 | $630 | $630 | $630 |
| Drafting | $250 | $250 | $250 | $250 | $250 |
| TRAVEL & TRANSPORTATION | | | | | |
| Air Charter | | $250 | $250 | $250 | $250 |
| Food & Lodging | $380 | $338 | $338 | $338 | $338 |
| Helicopter | $1,950 | $1,160 | $540 | $420 | $753 |
| EQUIPMENT RENTAL | | | | | |
| Vehicle | $768 | $200 | $200 | $200 | $200 |
| Magnetometers | $120 | $75 | $45 | $50 | $50 |
| Computer | $80 | $50 | $50 | $50 | $50 |
| ***TOTAL EXPENDITURE*** | ***$5,433*** | ***$4,575*** | ***$3,295*** | ***$3,443*** | ***$3,776*** |
| TOTAL MAN-DAYS | 8.5 | 10.2 | 7.8 | 9.0 | 9.0 |
| TOTAL LINE-KM SURVEYED | 14.7 | 5.8 | 1.6 | 5.1 | 3.6 |
| KM SURVEYED WITHIN PERMIT | 2.5 | 3.9 | 1.2 | 2.6 | 1.2 |
| % SURVEY WITHIN PERMIT | 17.0 | 67.2 | 75.0 | 51.0 | 33.3 |
| ***EXPENDITURE PRORATED*** | ***$924*** | ***$3,076*** | ***$2,471*** | ***$1,755*** | ***$1,259*** |
| ASSESSMENT REQUIRED | $160 | $320 | $160 | $160 | $160 |
| EXCESS ASSESSMENT | $764 | $2,756 | $2,311 | $1,595 | $1,099 |

# APPENDIX II

# INSTRUMENT SPECIFICATIONS

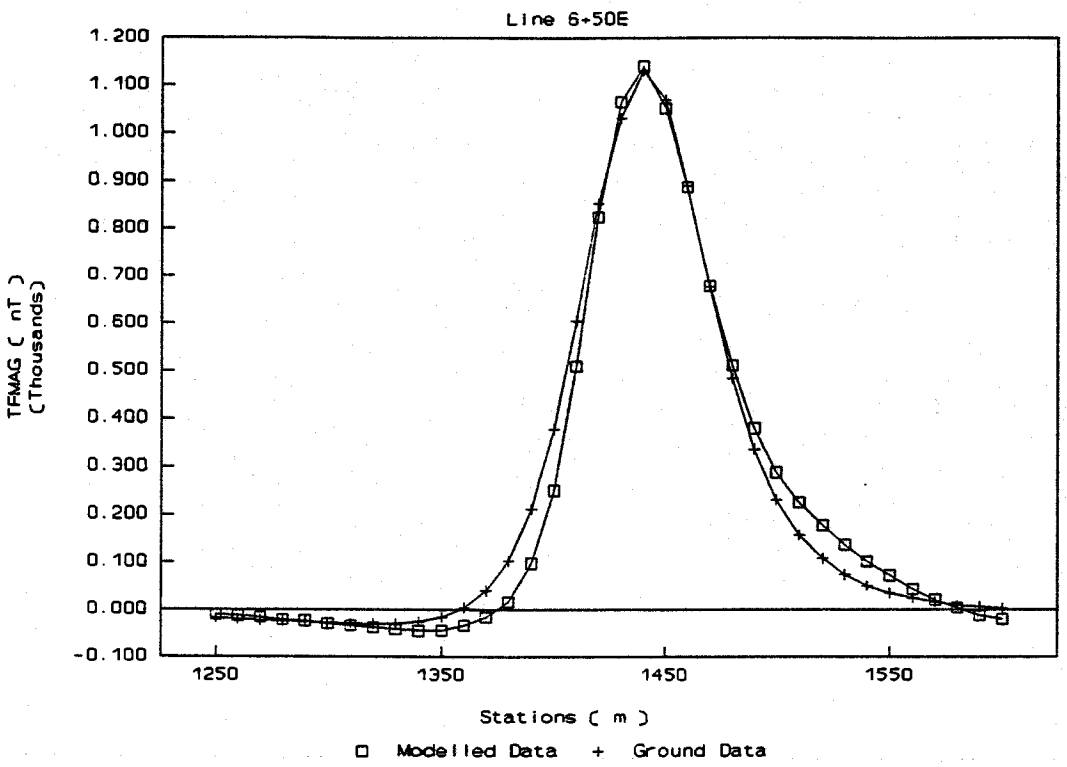
EDA PPM 350/375

| | |
|---|---|
| Dynamic range | 18 000 to 93 000 gammas |
| Processing sensitivity (total field) | ± 0.02 gammas |
| Statistical error resolution | 0.01 gammas |
| Mathematical truncation error | ± 0.02 gammas |
| Absolute accuracy | ± 15 ppm at 23°C<br>50 ppm over operating temperature range |
| Display resolution (total field) | 0.1 gammas |
| Automatic tuning | ± 15% of last stored total field value |
| Tuning method | Keyboard entry provides tuning increments of 1000 gammas from 18 000 to 93 000 gammas. Microprocessor calculates precise tuning frequency. |
| Tracking range | 18 000 to 93 000 gammas |
| Tuning mechanism | Sensor is tuned under microprocessor control, utilizing a specially developed tuning algorithm. |
| Out of auto-tuning range indicator | Descriptor on display (TUNE) commences to flash on and off. Audio alarm activated also. (New field value must be entered into system). |
| Display | Custom designed, ruggedized liquid crystal display with an operating temperature range of -35°C to + 50°C at 100% R.H. The display contains siz numeric digits, two decimal points, battery monitor, signal amplitude monitor and function descriptors. |

# APPENDIX III

# MAGNETIC MODELLING RESULTS

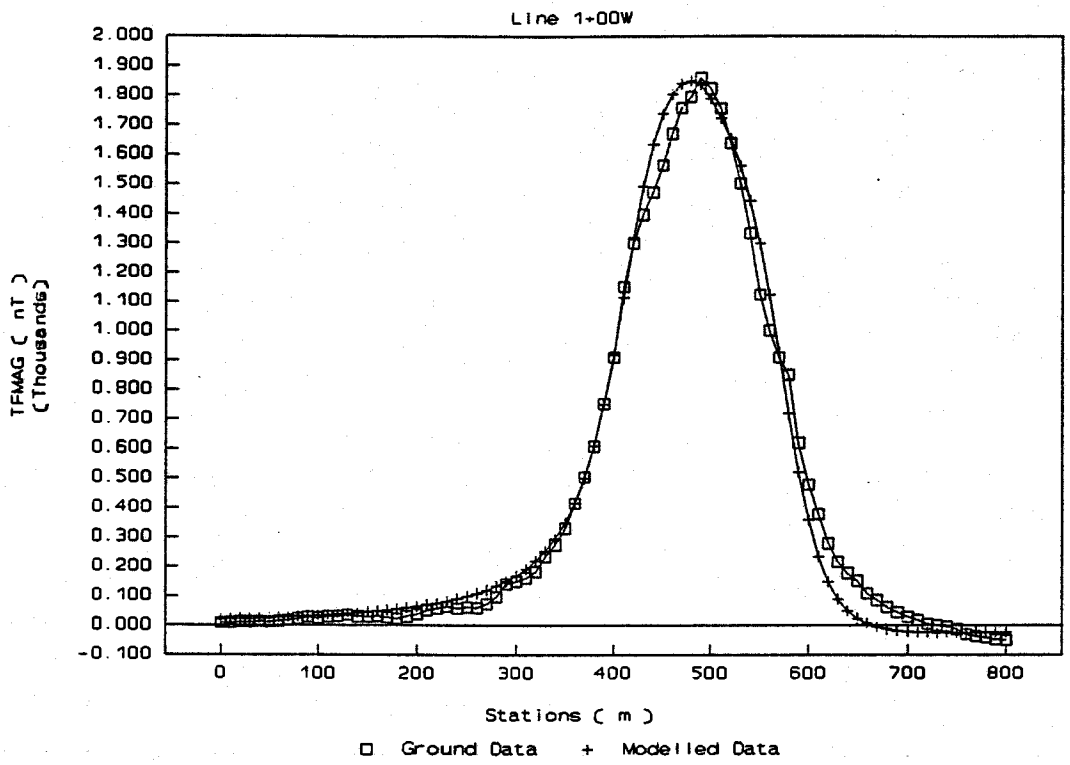
# Robert Creek No. 2




Initial values for pipe model

| | |
|---|---|
| 50 | Diameter of pipe (m) |
| 35 | Depth to top of pipe below ground surface (m) |
| 100 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 1435 | Coordinate of centre of pipe in current units (metres or fids) |
| 20000 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 180 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |

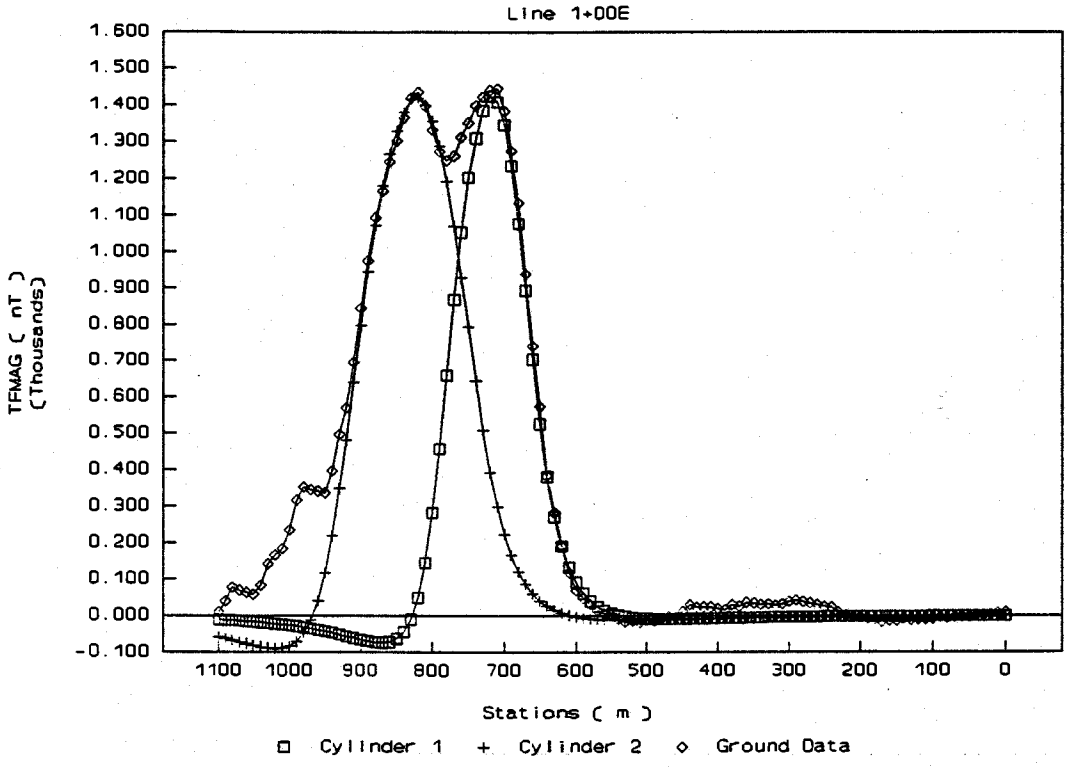
# Fitzgerald No. 3




**Initial values for pipe model**

| | |
|---|---|
| 170 | Diameter of pipe (m) |
| 40 | Depth to top of pipe below ground surface (m) |
| 9999 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 500 | Coordinate of centre of pipe in current units (metres or fids) |
| 9000 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 0 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 24 | Declination of ambient field (degrees); East is positive |

# Fitzgerald No. 3

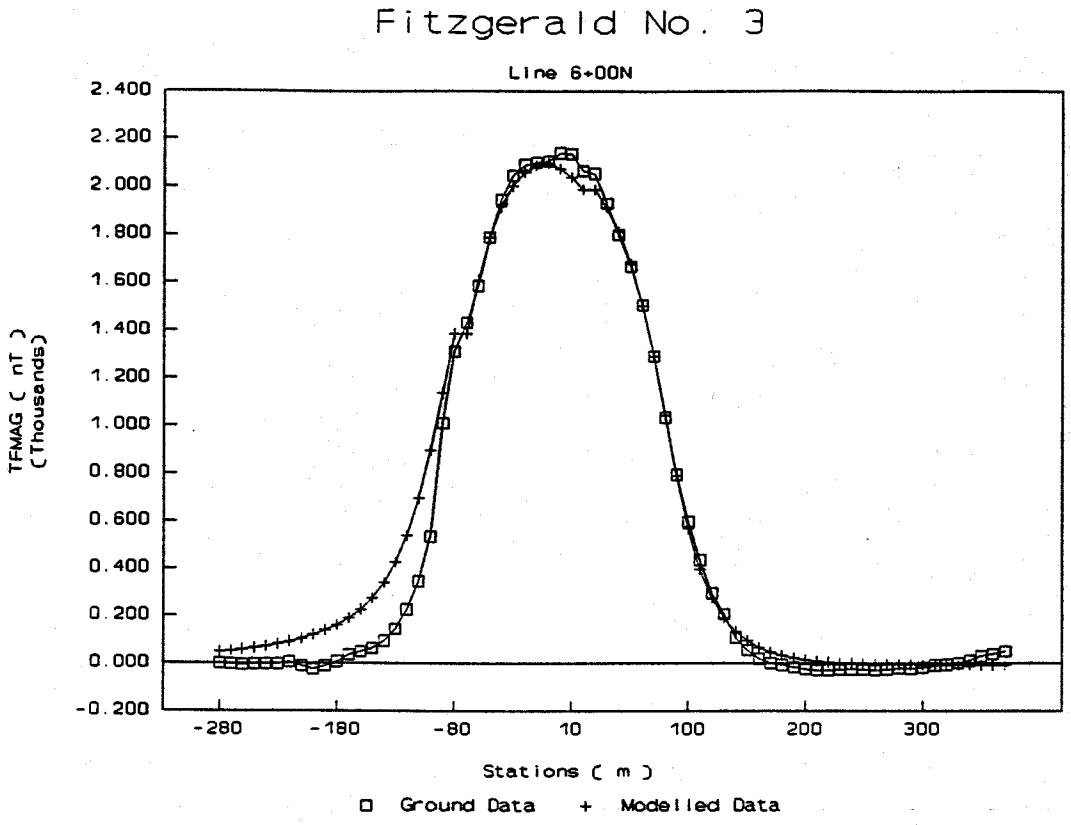



Initial values for pipe model: Cylinder 1

| | |
|---|---|
| 120 | Diameter of pipe (m) |
| 40 | Depth to top of pipe below ground surface (m) |
| 100 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 730 | Coordinate of centre of pipe in current units (metres or fids) |
| 11200 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 0 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |

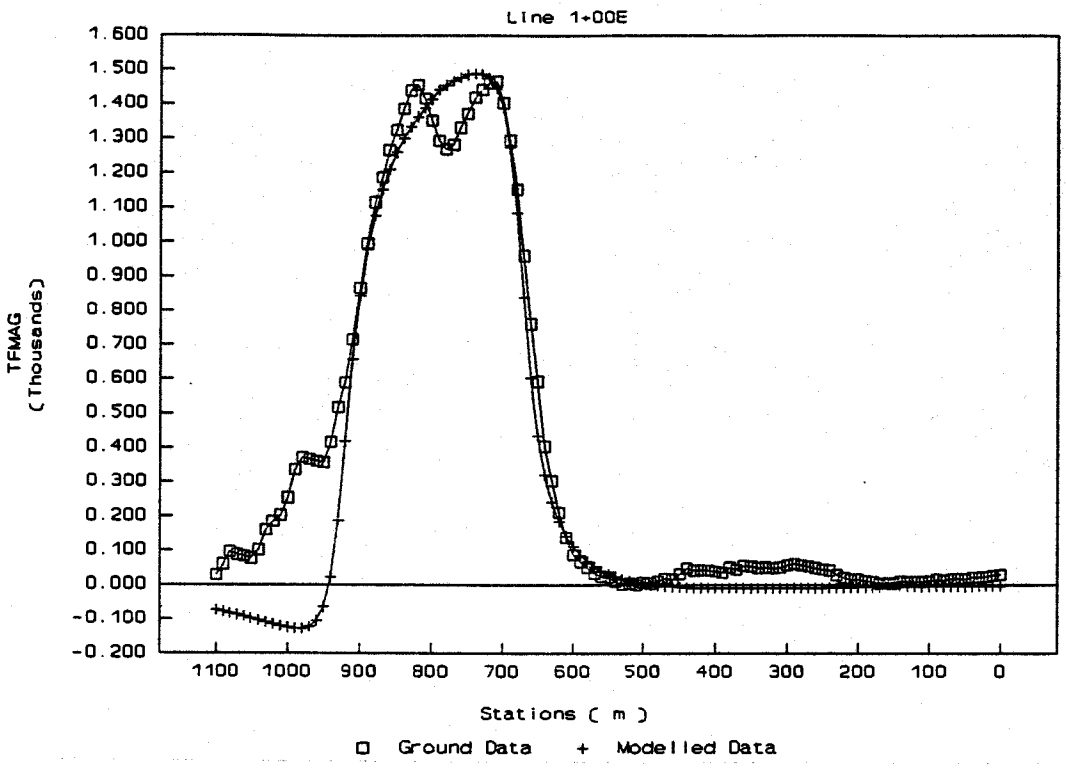
Initial values for pipe model: Cylinder 2

| | |
|---|---|
| 170 | Diameter of pipe (m) |
| 55 | Depth to top of pipe below ground surface (m) |
| 100 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 840 | Coordinate of centre of pipe in current units (metres or fids) |
| 12000 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 0 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |



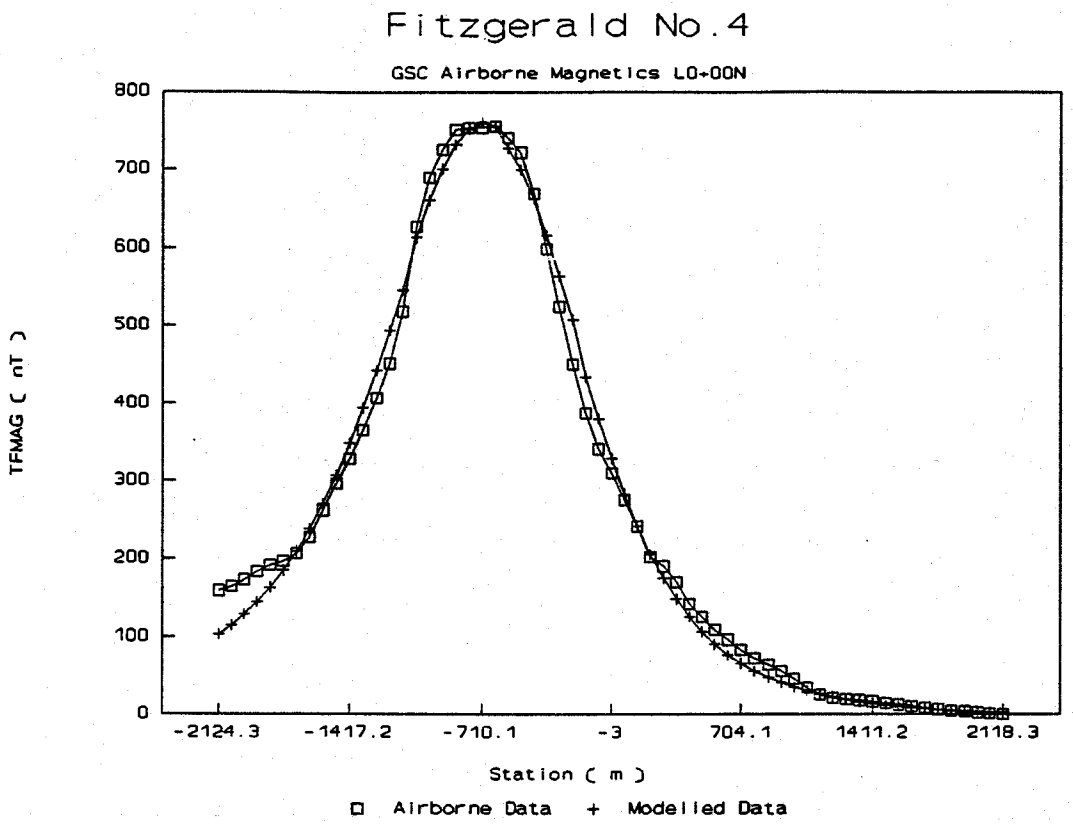

Initial values for pipe model

| | |
|---|---|
| 175 | Diameter of pipe (m) |
| 35 | Depth to top of pipe below ground surface (m) |
| 9999 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 0 | Coordinate of centre of pipe in current units (metres or fids) |
| 9500 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 90 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |




Initial values for pipe model

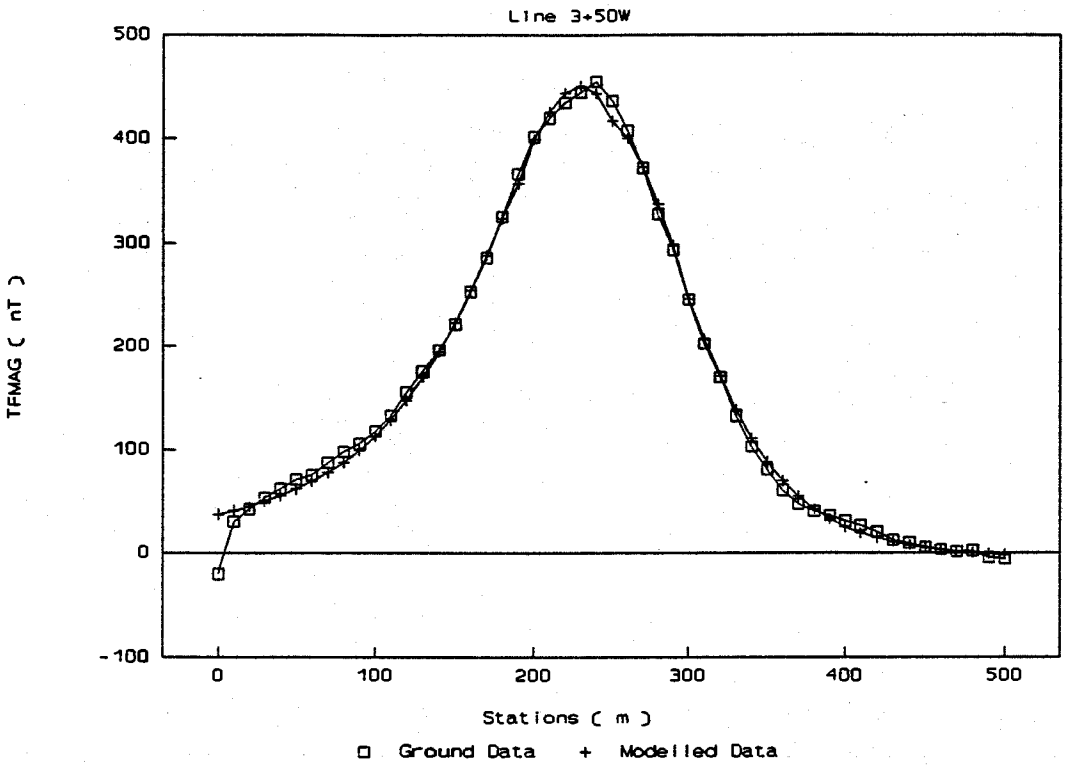
| | |
|---|---|
| 250 | Diameter of pipe (m) |
| 20 | Depth to top of pipe below ground surface (m) |
| 300 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 800 | Coordinate of centre of pipe in current units (metres or fids) |
| 5200 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 0 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |




Initial values for pipe model

| | |
|---|---|
| 900 | Diameter of pipe (m) |
| 400 | Depth to top of pipe below ground surface (m) |
| 9999 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| -650 | Coordinate of centre of pipe in current units (metres or fids) |
| 13000 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 300 | Elevation of profile above ground level (m) |
| 90 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |

Fitzgerald No. 5

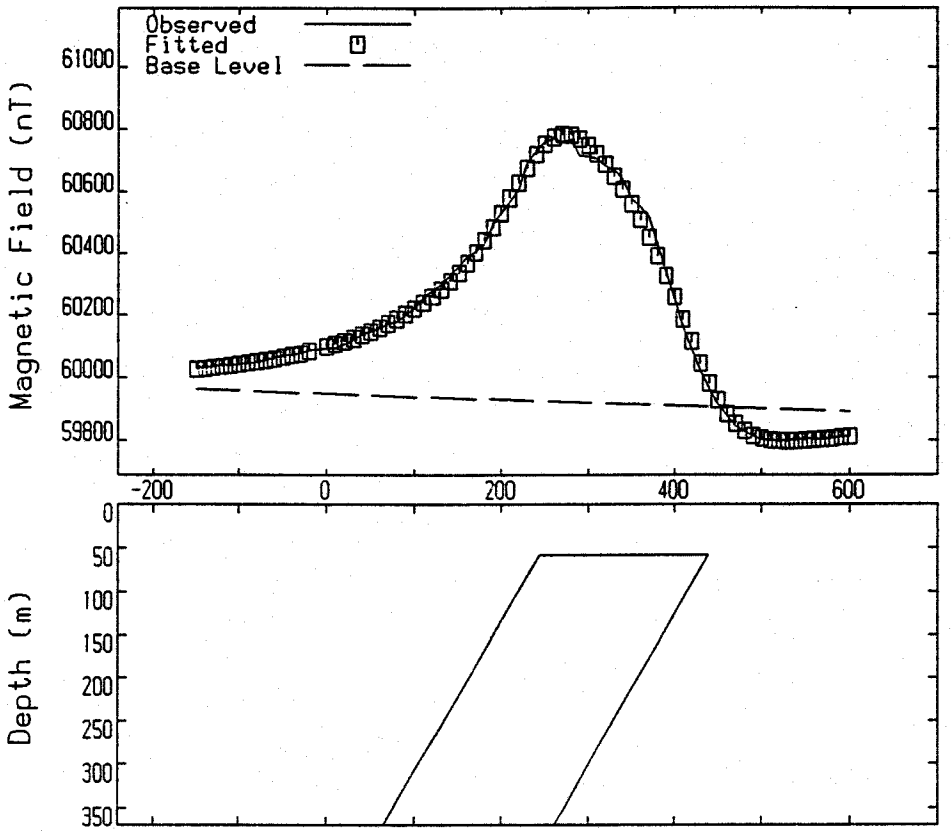



Initial values for pipe model

| | |
|---|---|
| 108 | Diameter of pipe (m) |
| 80 | Depth to top of pipe below ground surface (m) |
| 9999 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 245 | Coordinate of centre of pipe in current units (metres or fids) |
| 7400 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 0 | Mag profile direction (degrees). Clockwise from North |
| 80 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |

# Fitzgerald No. 6

Line 0+00E




MODEL PARAMETERS:

| | | |
|---|---|---|
| Model Type | | TABULAR2 |
| Depth | F | 57.9 m |
| Half Width | F | 97.6 m |
| Length Left | X | 200 m |
| Length Right | X | 200 m |
| Dip | F | 120 deg |
| Thickness | F | 674 m |
| Susceptibility | F | 0.00437 emu |
| Remnance Ratio | X | 0 |
| Remnance Incl | X | 0 deg |
| Remnance Decl | X | 0 deg |
| Position | F | 341.2998 m |
| Base Level | F | 59916.04 nT |
| Base Slope | F | -.0956501 nT/m |

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

GEOMAGNETIC FIELD:

| | |
|---|---|
| Field Strength | 60000 nT |
| Inclination | 80 deg |
| Declination | 26 deg |

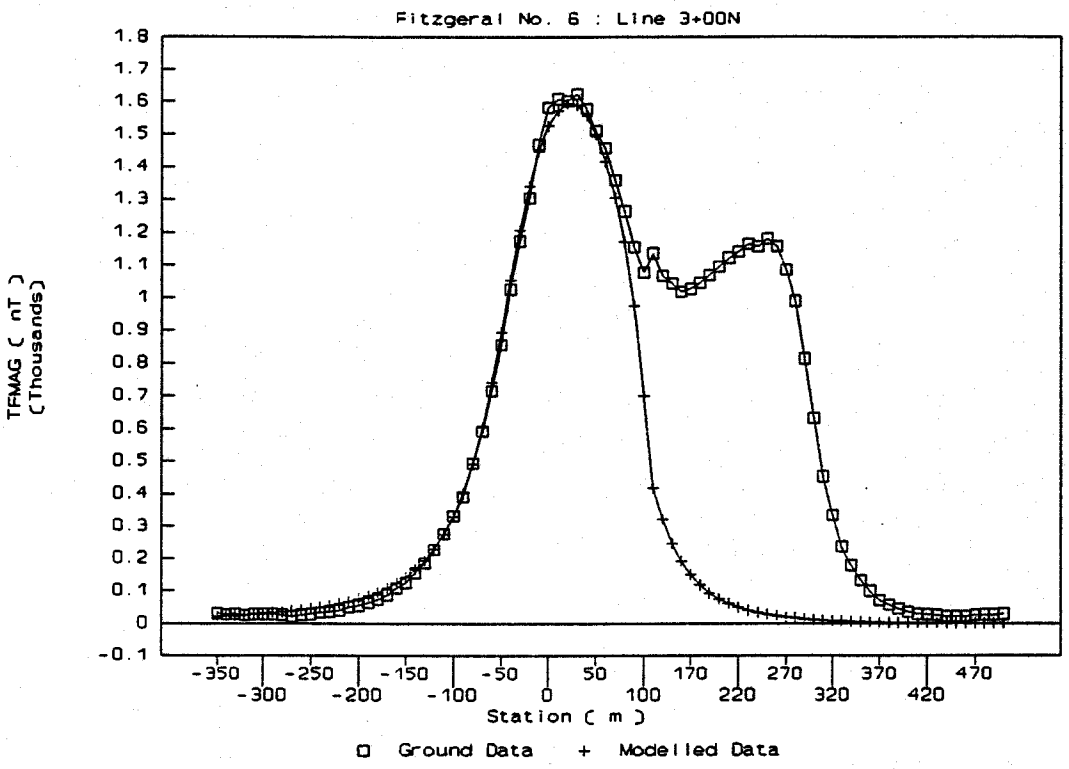
PLAN DIRECTIONS:

| | |
|---|---|
| Strike Perp | 0 deg |
| Line Direction | 0 deg |

Sensor Height 2.5 m

Geosoft MAGMOD-3 Modelling Result 90/08/29

# Fort Fitzgerald Project




PIPE MODELLING RESULTS: Fitzgerald No. 6

| | |
|---|---|
| 150 | Diameter of pipe (m) |
| 50 | Depth to top of pipe below ground surface (m) |
| 9999 | Depth extent of pipe (m) |
| 0 | Offset from pipe centre at closest approach (m); N & E are positive |
| 30 | Coordinate of centre of pipe in current units (metres or fids) |
| 10100 | Magnetic Susceptibility in micro cgs units |
| 60000 | Ambient Total Field value in nT |
| 2.5 | Elevation of profile above ground level (m) |
| 90 | Mag profile direction (degrees). Clockwise from North |
| 81 | Inclination of ambient field (degrees); positive towards North |
| 26 | Declination of ambient field (degrees); East is positive |