

GM 55400

MAPPING OF BASEMENT AND STRUCTURE USING AEROMAGNETIC DATA, MISTASSINI AREA

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**MAPPING OF BASEMENT AND STRUCTURE
USING AEROMAGNETIC DATA,
MISTASSINI AREA, QUEBEC**

Project moyen nord
FOR

94-MN-01

INCO EXPLORATION AND TECHNICAL SERVICES INC.

**Submitted by: Paterson, Grant & Watson Limited
Toronto, Canada
March 28, 1995**

Ressources Naturelles
Secteur mines

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Bureau Régional Val-d'Or

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RESULTS OF INVERSE MAGNETIC MODELLING

APPENDIX A

1. INTRODUCTION

Early in 1995, INCO Exploration and Technical Services Inc. (IETS) commissioned a helicopter-borne geophysical survey in the Takwa River area of central Québec, just northeast of the northeast end of Lake Mistassini. The survey was undertaken by SIAL Géosciences Inc. (SGI), and incorporated a four frequency electromagnetic (EM) system, a magnetometer and a VLF-EM system. The survey lines were oriented at 25° E, at a spacing of 200 m. The nominal aircraft height was 60 m, giving an effective terrain clearance of 42 m for the magnetometer. The products prepared by SGI included 1:20,000 scale colour/contour maps of the total magnetic field (with EM anomalies superimposed) and of the computed vertical magnetic gradient.

In March, 1995, IETS engaged Paterson, Grant & Watson Limited (PGW) to undertake further processing, modelling and interpretation of the aeromagnetic data. The focus of this study is to determine the depth to magnetic basement and to prepare a structural interpretation from the magnetic data.

2. GEOLOGY

IETS supplied PGW with various pieces of published and proprietary material on the geology of the study area. The most useful information was derived from the following items:

- a) Takwa River Area, Mistassini Territory, Quebec Department of Natural Resources, Geological Report 124, by J.M. Neilson, 1966 (includes a colour map of outcrop geology at the 1:63,360 scale, Map 1571);
- b) Diamond Drilling Compilation, Mistassini Basin (32 P/7), by IETS, 1:50,000 scale map;
- c) Mineralization Controls in the Aphebian Formations, Chibougamau, Mistassini and Otish Areas by E.H. Chown, p.229-243, in Chibougamau - Stratigraphy and Mineralization, CIM Special Volume 34, 1984; and

- d) Stratigraphie et Sédimentologie de la Formation de Papaskwasati, Région du Lac Mistassini, Québec, Ministère des Richesses Naturelles, DPV-423, by Jean-Louis Caty, 1976.

The study area straddles the northeast edge of the Mistassini Basin, which overlies basement rocks of the Superior Province. Twenty kilometers to the southeast, the basin is fault-bounded by basement rocks of the Grenville Province. The Grenville Front has a northeast orientation in this area.

Most of the study area is covered by overburden of recent to Pleistocene age, incorporating swamp, muskeg, lacustrine and fluvial sand and gravel, and glacial till and stratified outwash sand. Drilling shows overburden thicknesses ranging from 0 to 65 m, generally thickening to the south and west.

Proterozoic Sedimentary Rocks

Within the study area, the only Proterozoic sedimentary formation of the Mistassini Group that outcrops is the Cheno River Formation, which consists of arkosic conglomerate, graywacke, pebbly conglomerate, sandstone and fine-grained dolomite. Where intersected by drilling, it shows thicknesses ranging between 8 m and 131 m, varying widely over short distances to the northeast. Towards the south and west, it is pinched out completely. It rests with "great unconformity" on the Superior basement rocks.

Although there does not appear to be any outcrop evidence, drilling shows that the Cheno Formation is overlain by the Lower Alanel Formation throughout most of the study area. The latter formation is composed of dolomitic rocks that range from shaly varieties through ferruginous types to massive grey dolomite. Where intersected by drilling, it shows thicknesses ranging between 18 m and 396 m, generally thickening southwards. Towards the edges of the basin to the northeast and northwest, it is pinched out completely.

The uppermost members (Témiscamie Formation and Upper Alanel Formation) of the Mistassini Group are not found within the study area. The lowermost member

(Papaskwasati Formation), a sandstone formation, outcrops sporadically near the north edge of the study area.

Superior Basement Rocks

The Superior basement rocks that outcrop in the study area are located mainly in the Takwa Mountains to the northeast. The oldest group consist of a wide band of east-southeast-oriented metasedimentary clastic rocks, incorporating graywacke, pebble conglomerate and arkose, feldspathic sandstone and quartzite, and mica, chlorite and hornblende schists. The schistose rocks may be derived from sediments or intercalated volcanic beds.

Mixed gneisses (paragneisses, granitic gneisses, biotite gneiss and granitic rocks) outcrop within the study area in a minor way. Most are located further to the north.

Basic intrusives (amphibolite and diabase) are located within, and likely associated with, the band of clastic metasediments. To the west, a gabbro intrusion outcrops within the overlying Cheno River Formation.

Granitic intrusives are found to the north and south of the band of clastic metasediments. Two varieties have been mapped, an albite-oligoclase granite, and a biotite granite/pegmatitic granite.

Quartz veins and younger lamprophyre dikes have been mapped to the north and east of the study area, in minor amounts. On a regional scale, the northwest-striking Mistassini dike swarm (quartz through olivine tholeiite to peridotite) are mapped from just west of the study area nearly to James Bay. These are cut by the north to northeast-striking Otish dike swarm (olivine tholeiite). The latter also cut the Mistassini Group sediments as dikes and sills.

The IETS drilling compilation does not provide any information on Superior basement lithology where these rocks were intersected. The depth to the contact between the basement and overlying Proterozoic sediments ranges between 15 m and 423 m, increasing to the south and west.

Structure

In the Superior basement, the contacts between the metasediments, gneisses and granitic rocks are gradational. The gabbro and diabase intrusions do show sharp contacts.

The bedding in the belt of clastic metasediments is oriented at approximately 120° azimuth. The beds show a near vertical dip. The foliation, schistosity and lineation within the basement rocks all trend sub-parallel to the bedding planes. Within the metasediments, the shearing is also oriented sub-parallel to the bedding, striking east to east-southeast

The metasedimentary band may represent the remnant of a fold limb, and consequently, the granites may have intruded along the fold axes of large fold structures. The major faults mapped in the area strike east (bounding the metasedimentary band to the north) to east-northeast. A second set strike northwest to north-northwest. All are mapped within the clastic metasediments. The Takwa Mountains may represent an uplifted fault block.

The Proterozoic sedimentary formations show horizontal to low angle, southerly dips. They overlie the Superior basement rocks with major unconformity. The outcropping Cheno River Formation in the north-central part of the study area shows indications of a drag fold structure, along northeast-striking axes. Two strike-slip fault sets are mapped in the Mistassini Group southwest of the study area, striking northeast (sinistral movement) and east (dextral movement) respectively. This faulting is associated with the Grenville Front. The fault zones show greenschist metamorphism in places.

3. MAGNETIC DATA PROCESSING AND MODELLING

The digital magnetic data provided to PGW by IETS consisted of a profile archive containing X and Y coordinates in the Universal Transverse Mercator projection, flight number, fiducial, original magnetics and corrected magnetics. Altimetry data were not included. Consequently, a uniform terrain clearance of 42 m for the mag-

netometer was assumed for preparing depth-related information. This is a safe assumption over most of the study area, where the topography is fairly gentle, but less so in the Takwa Mountains to the east, where the relief exceeds 300 m. This is confirmed by the magnetic data itself, which shows little flightline noise except in the mountains. Also provided were two grids of the total magnetic field. Both were prepared at a 50 m grid cell size using bi-directional gridding, one using a cubic spline and the other using a linear spline.

Data Processing

After examination of the grids provided, it was decided that more information could be extracted from the magnetic data by preparing a new total magnetic grid that retained more resolution and less aliasing (i.e. gridding noise). Consequently, various grids were prepared at a 40 m cell size using bi-directional (Akima spline, with and without trend enhancement perpendicular to the flightline direction) and minimum curvature gridding techniques. Overall, the best grid was produced using minimum curvature as it is much less biased to geological strike directions, which vary considerably in the study area. It does suffer from a “bull’s-eye” appearance over sharp anomalies but this can be minimized with a small amount of low pass filtering.

A grid of the International Geomagnetic Reference Field was computed for the date and location of the survey, and removed. In this area, the earth’s field is near planar, with a gradient of approximately 3 nT/km, increasing to the northwest.

The final total magnetic field grid was reduced-to-the-pole and downward continued 42 m (i.e. to the nominal ground surface). The pole reduction removes the effects of magnetic inclination and declination, and centers the positive anomaly over the magnetic source, if it dips vertically and is not affected by magnetic remanence. At this latitude, with an inclination of 75.9° N, the pole reduction will have little effect on anomalies unless their sources are fairly deep. The downward continuation provides a good approximation to the magnetic field that would be measured at ground surface, and improves the differentiation between near surface and buried magnetic sources. A low pass filter, consisting of a symmetric, cosine-squared roll-off, was

applied to the grid to pass all wavelengths exceeding 280 m and reject all wavelengths of less than 200 m. This has the effect of minimizing flightline noise, grid aliasing and any other short wavelength noise in the data that is otherwise amplified by the downward continuation process. Comparison of the unfiltered and filtered grids showed that little geological signal was removed by the low pass filter.

The first vertical derivative (i.e. vertical gradient) was computed from the pole reduced, downward continued field. The derivative grid is useful for improving definition of near-surface sources, as well as mapping structural features, both near-surface and at depth.

From the two processed grids, colour/contour maps were prepared at the 1:20,000 scale. The numbered flightlines with fiducials annotated were also superimposed on the map of the pole reduced field.

Modelling

The main focus of modelling the magnetic data was to determine the depth to basement. The modelling was accomplished by applying 3-D Euler deconvolution to the gridded data, and by inversion of individual anomalies using the profile data.

The Euler deconvolution technique utilizes the gridded total magnetic field, and its vertical and two horizontal derivatives, to locate the sources of magnetic anomalies in three dimensions. It is relatively immune to the effects of inclination, declination and magnetic remanence. The user specifies a structural index to indicate the target model that is being sought. The index ranges from 0.0 for a contact of considerable depth extent, to 3.0 for a prismatic body (e.g. a sphere). For this project, indices of 0.00, 0.10 and 0.25 were utilized to obtain solutions for the contact model (a depth-limited contact has an index of 0.5). As one would anticipate, the majority of the solutions for this area are focussed along the edges of the prominent magnetic anomalies, where the contacts between rocks of varying magnetic susceptibility occur, namely where the basement rocks come close to surface in the northeast, and along the northeast-striking dike that cuts across the area. However, solutions are also located throughout the survey area where weaker susceptibility contrasts are present.

The Euler technique provides a “goodness of fit” in the vertical and horizontal directions for each computed solution. After rejecting the poor-fitting solutions, and compensating for the terrain clearance of the magnetometer, a depth grid was prepared using the X, Y and Z locations of the remaining solutions. From this grid, a 1:20,000 scale colour/contour map was prepared of the “depth to magnetic sources”. We have refrained from calling it “depth to basement”, because it is quite apparent that much of the weaker magnetic responses in the southern and western portions of the area arise from sources located above the basement surface. One could attempt to filter out the magnetic anomalies from the “above basement” sources. However, a true depth to basement cannot be determined throughout the area as some of the basement rocks appear to be non-magnetic (possibly unmetamorphosed sediments).

Forty-three relatively well-defined magnetic anomalies were selected for inverse modelling. Reasonable results were obtained for all of these anomalies. The final model for each anomaly is presented in Appendix A. The results are also compiled in plan form on the interpretation map, showing the location of the model center (at the intersection of the strike and dip axes; the center may be offset along strike), strike and dip directions, depth to the top of the model below surface and the dip. When reviewing the modelling results in plan, one should also refer to the final models to appreciate the anomalies that were modelled.

The original profile data was utilized for the modelling. Most anomalies were modelled using a dipping prismatic body of limited depth extent and fixed ends along strike. A few anomalies, that show continuity along strike, were modelled using a dipping prismatic body of infinite strike and depth extent.

The inverse modelling was complicated by a few factors. A number of anomalies strike at a low angle to the flightline direction. As a result, the model dips in such cases may be shallower than the true dips of the magnetic sources. Elsewhere, the flanks of some anomalies overlap with adjacent anomalies, also reducing the constraints on the modelled dips. Finally, the modelled anomaly may incorporate superimposed anomaly components due to overlying sources. Where this occurs, we excluded these “bumps” on the main anomaly from the modelling to better define the basement source.

4. INTERPRETATION

The interpretation utilized both the magnetic maps and the modelling results. The locations of contacts and faults were derived mainly using the first vertical derivative map. The pole reduced map was useful to delineate the deeper sources and aid in lithological identification. The map of the depth to magnetic sources helped to refine the structural interpretation that was apparent qualitatively from the magnetic maps. The inverse models provide useful information on the geometry and magnetic susceptibility of individual sources.

Lithology

The magnetic data provides a much clearer picture of the basement lithology than can be determined from surface mapping, particularly in the northeast portion of the study area. Six magnetic units have been identified, most of which correspond to basement rocks that show some surface exposure (as shown on Map 1571 from Geological Report 124, Quebec Department of Natural Resources).

The mapping of the Superior clastic metasediments (Map 1571 unit 4) suggests that a portion of this group may be metavolcanic rocks. Where this unit is mapped, the magnetic responses are often fairly weak or are ascribed to basic intrusives. However, there is some correspondence with magnetic lineaments several hundred meters wide. Four main, subparallel bands are apparent in the northeast portion of the area, striking west at the east boundary and curving to a northwest strike at the north boundary. These four main bands break down into narrower bands in places. Their magnetic responses are strongly indicative of moderately mafic metavolcanic rocks (greenstones). The weakly to non-magnetic rocks lying in between these mafic bands are likely the clastic metasediments. The magnetic lows in the northeast corner of the area are more pronounced, possibly reflecting a felsic granitic intrusion (Map 1571 unit 7).

Several strong, electromagnetic conductors lie parallel to these bands of metavolcanics and metasediments, particularly near the contacts. These should be investigated to determine whether they simply reflect conductive horizons, or are responding to

sulphide mineralization.

Within the study area, the exposures of mixed gneisses (Map 1571 unit 5) are limited to the northeast corner. Where magnetic rocks are present, they are interpreted as either metavolcanics or dikes. The regional aeromagnetic data suggests that the gneisses are essentially non-magnetic.

The strongest magnetic responses are associated with a basic intrusive complex (Map 1571 unit 6 - amphibolite/diabase) near the eastern boundary of the area. It is located within the bands of metavolcanics and metasediments and cuts them at an oblique angle, striking west-southwest. It measures 4.5 km along strike and up to 700 m in width, breaking into two parallel bands.

The gabbro intrusion mapped to the west, intruding the Cheno River Formation, does not show any corresponding magnetic response. It is located in between two bands of interpreted metavolcanics.

A small, isolated mafic intrusive is interpreted in the south-central portion of the area, centered near 658500 E, 5696600 N. Drill hole TK-4, located 400 m to the north, bottomed out in sediments at a depth of 227 m. Magnetic model #21 provides a depth of 67 m to the top of the anomaly source, suggesting that this feature has intruded well into the sediments (both the Cheno River and Lower Albanel Formations). It also appears that the intrusive is associated with one or more electromagnetic anomalies. The geometry of the magnetic model (near vertical), apparent susceptibility of 0.0056 emu, and associated electromagnetic response suggest that the anomaly source may be a kimberlite pipe.

The granite (Map 1571 unit 7) mapped to the south of the metasediments, near the eastern boundary of the area, shows a fairly strong magnetic response. The anomalies break down into several magnetic highs, of a few hundred meters in width, that generally show a west to west-southwest orientation. To the west, the anomalies weaken, noticeably on the pole reduced map. This is interpreted as a transition to less mafic, basement rocks.

Two basic dikes are interpreted, neither of which are shown in the mapped geology. A northwest-striking dike is interpreted in the northeast corner of the area. It has been differentiated from the nearby bands of metavolcanics, which it appears to cut and offset, by its narrow width on the pole reduced map and its oblique strike direction. Dikes of a similar orientation are evident throughout the surrounding area from the regional aeromagnetic data, forming part of the Mistassini dike swarm.

The dike striking northeast across the western part of the area displays a prominent magnetic response. It forms part of the Otish dike swarm (olivine tholeiite in composition), and cuts both the Superior basement rocks and the overlying Mistassini Group sediments. Near the southwest boundary, a splay is interpreted northwest of the main dike. Near the center of the area, a broader anomaly is centered on the dike reflecting a deeper source. On the interpretation map, it is generically labelled as "intermediate basement". It may reflect a dike-related sill at depth. A similar situation may occur near the southwest boundary. Several strong electromagnetic anomalies are along much of the contact on the northwest side of the dike.

To the south and west, the magnetic responses are less pronounced other than over the particular features mentioned above. A number of elliptical anomalies have been interpreted to reflect intermediate basement rocks of undetermined lithology. A plausible source would granitic intrusions. In many cases, the anomaly orientations lie subparallel to interpreted faults. Some are associated with several, string electromagnetic anomalies.

The magnetic responses over the remainder of the south and west over appear to reflect weakly magnetic sources within the Mistassini Group sediments, quite possibly the more ferruginous components of the Lower Albanel Formation. They also suggest a higher concentration of magnetic minerals in the northeast-striking faults. A number of electromagnetic anomalies are located in these areas, but do not appear to form any particular pattern.

Structure

Two major fault sets are apparent from the magnetic maps, an older north to north-west-striking set showing mainly normal/reverse movement, and a younger north-east-striking set showing mainly strike-slip (sinistral) movement. Both sets have been active since the emplacement of the northeast-striking Otish dike (1465 Ma or older), and likely reflect deformation along the Grenville Front (1100 Ma) and later reverse fault movements. The magnetic modelling shows vertical throws exceeding 100 m in places, evident along the Otish dike and within the bands of interpreted metavolcanics. The dike provides a good marker for such movement where there is little magnetic response from the basement to the southwest. The depth to magnetic sources map provides a good depiction of the vertical movement within the metavolcanics.

The younger, northeast-striking, strike-slip faults are most prevalent in the eastern part of the area, and are easily recognized as offsets in the various magnetic features. They can be traced throughout much of the Mistassini Group sediments to the southwest as they lend a directional texture to the weak magnetic anomalies there. To the west, these faults take on a more easterly strike.

The northeast part of the area, hosting the shallower portions of the metavolcanic bands and the amphibolite/diabase intrusion, show a lower amplitude magnetic background than the area immediately to the south and west. The break in this background response can be traced fairly easily, striking west-northwest at the eastern boundary to northwest at the northern boundary. This was interpreted to possibly reflect a felsic phase of granitic intrusion as the basement country rock. It also indicates an uplifted block, incorporating the Takwa Mountains, as theorized in the literature. However, such a block also extends westwards beneath the flatter ground to the eastern shores of Lac Brideaux.

The depth to magnetic sources map reflects the intermediate to mafic basement rocks, and the intrasedimentary intrusions, where present. The basement rocks are relatively deep for the most part. Elsewhere, the depths are generally quite shallow, and reflect magnetic minerals within the Mistassini Group sediments.

5. CONCLUSIONS

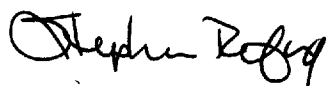
The objectives of this study were to determine the depth to magnetic basement and to prepare a structural interpretation from the magnetic data. As described above, we have been largely successful at accomplishing these tasks. Our knowledge of the lithology and structure of the Superior Province basement rocks is improved markedly from what had been determined previously from surface mapping and drilling of the Mistassini Group sediments. The logging of basement rocks from available drill holes would help to refine the interpretation of the basement lithologies. The incorporation of apparent resistivity computed from the electromagnetic data would also be useful for lithological discrimination, both in the basement rocks and sediments.

The determination of the "depth to basement" was not successful throughout the entire study area, primarily because most of the basement rocks to the south and west are essentially non-magnetic. The "depth to magnetic sources", however, is extremely useful in quantifying structural movement, particularly vertical, that affects the basement rocks and the overlying Mistassini Group sediments. The majority of the electromagnetic anomalies appear to be associated with the mafic rocks of varying lithology. The modelled depths to the electromagnetic conductors may provide further insight into the area's structure.

The source(s) of the magnetic anomalies within the Mistassini Group sediments may be determined by magnetic susceptibility logging of the existing drill cores. Such work might lead to the identification of magnetic marker horizons within the sediments.

Respectfully Submitted,

PATERSON, GRANT & WATSON LIMITED



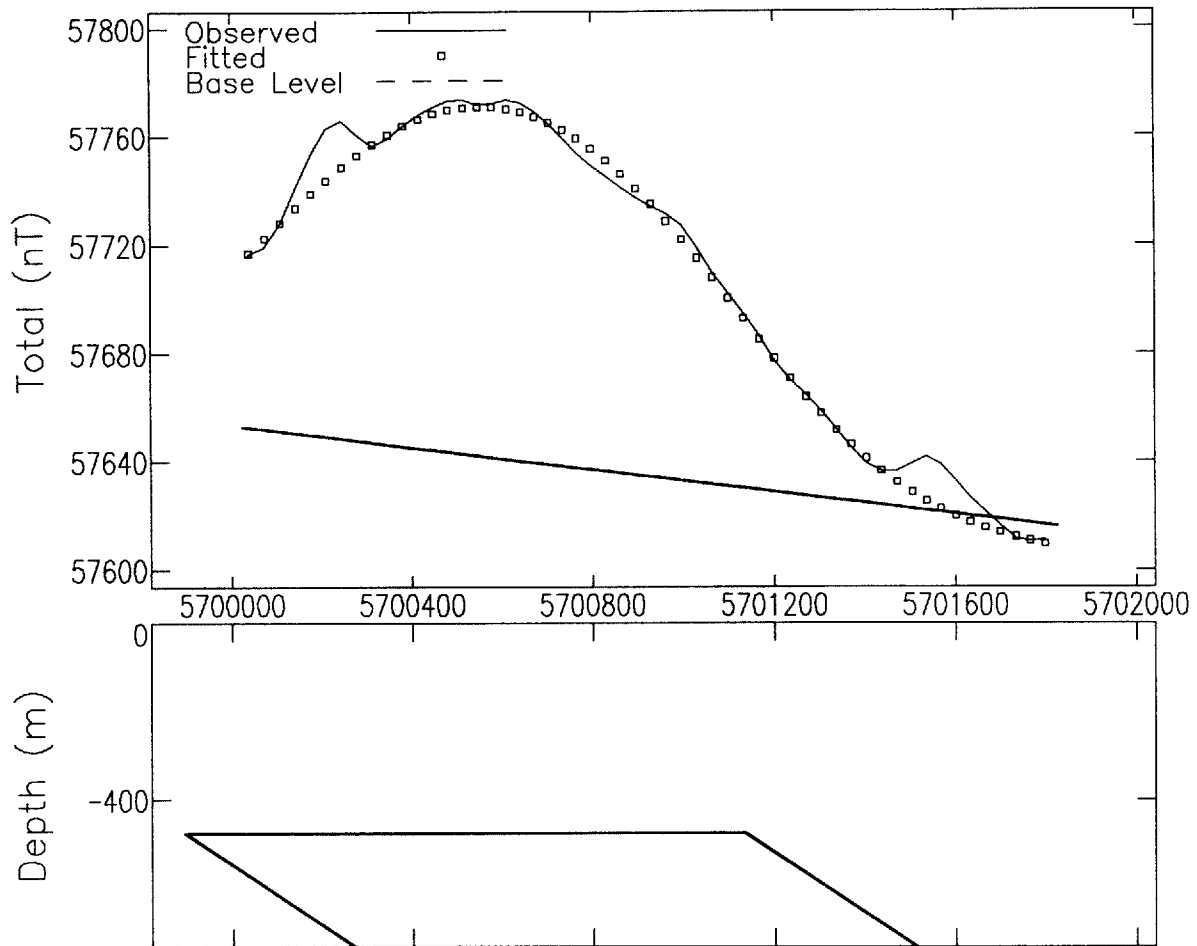
Stephen W. Reford, B.A.Sc., P.Eng.
Vice-President

APPENDIX A

RESULTS OF INVERSE MAGNETIC MODELLING

Mistassini Model 1

1202L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	475 m
Half Width	F	635 m
Half Length	X	300 m
Offset	X	50.0 m
Dip	L	146 deg
Thickness	F	269 m
Susceptibility	F	0.00349 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5700514 m
Cross Position	X	641242.4 m
Base Level	F	57642.85 nT
Base Slope	X	-.02 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

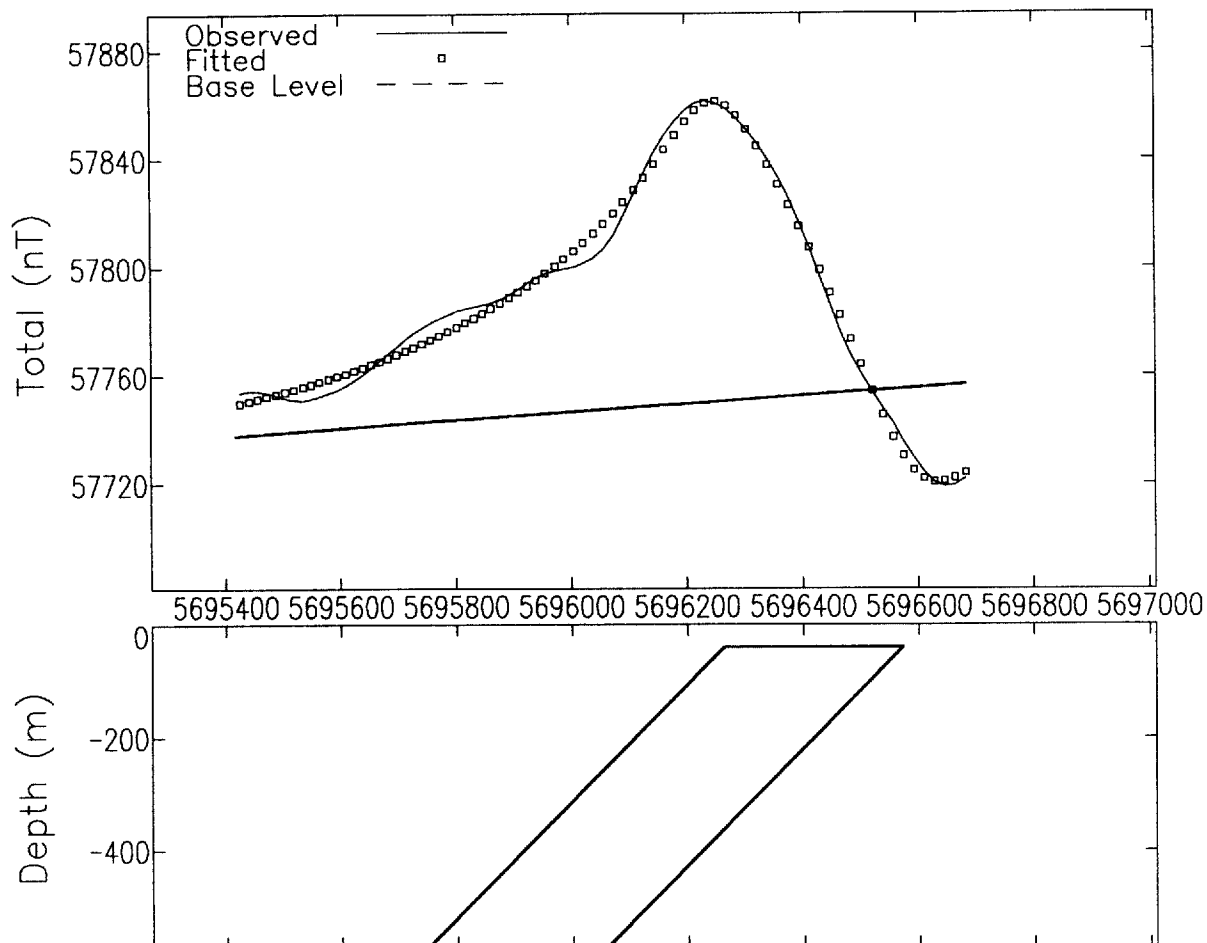
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	173 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini - Model 2

2301L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	40.1 m
Half Width	F	159 m
Half Length	X	450 m
Offset	X	50.0 m
Dip	F	135 deg
Thickness	F	985 m
Susceptibility	F	0.000656 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5696418 m
Cross Position	X	642542.4 m
Base Level	F	57752.78 nT
Base Slope	F	.0144887 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

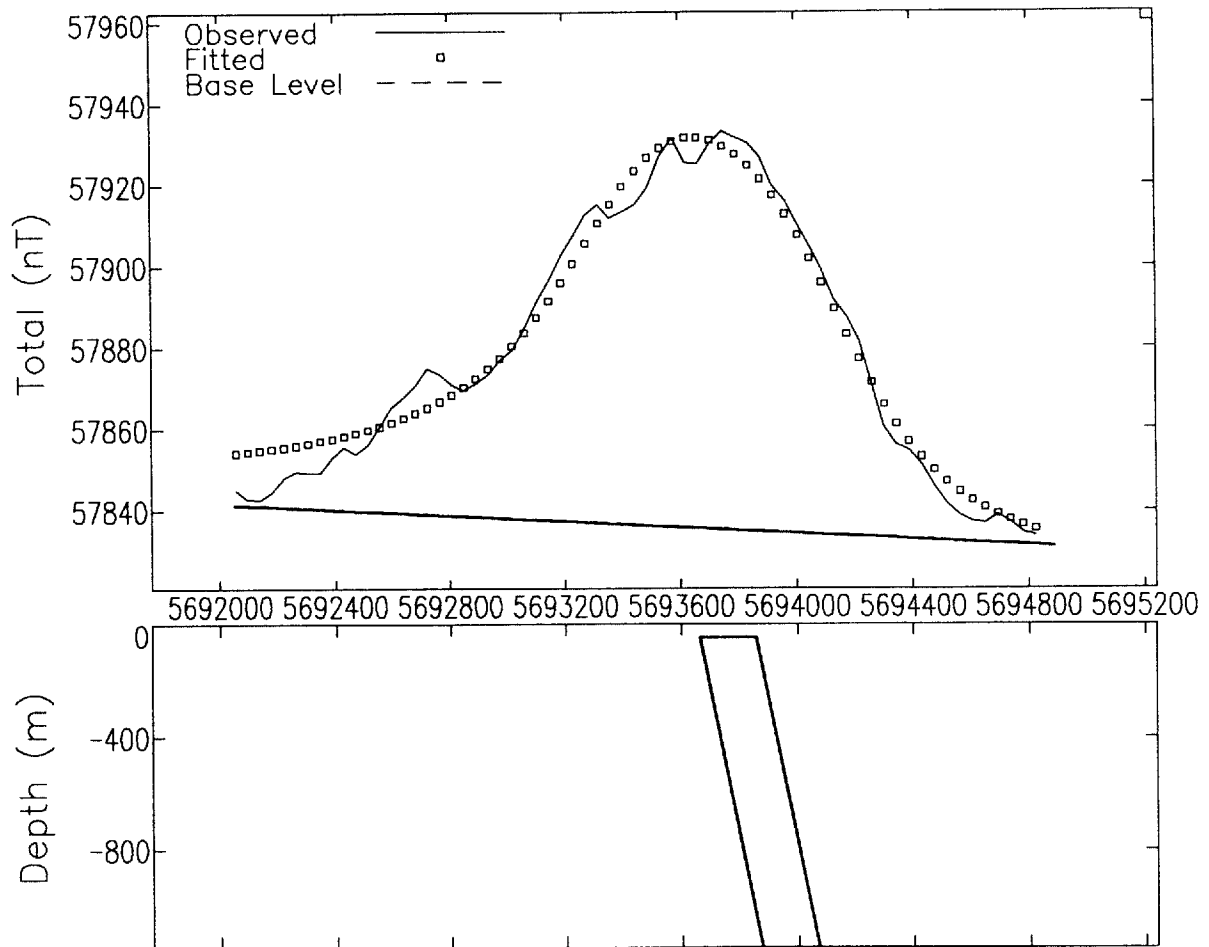
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	335 deg
Line Direction	-0 deg
Main Direction	13 deg
Main Offset	
Cross Direction	-77 deg
Cross Offset	

Mistassini Model 3

3312L 02



MODEL PARAMETERS:

Model Type	L	Tabular
Depth	F	46.9 m
Half Width	F	100 m
Dip	F	79 deg
Susceptibility	F	0.000518 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5693759 m
Cross Position	X	644004.5 m
Base Level	X	57835.26 nT
Base Slope	X	-.0034984 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

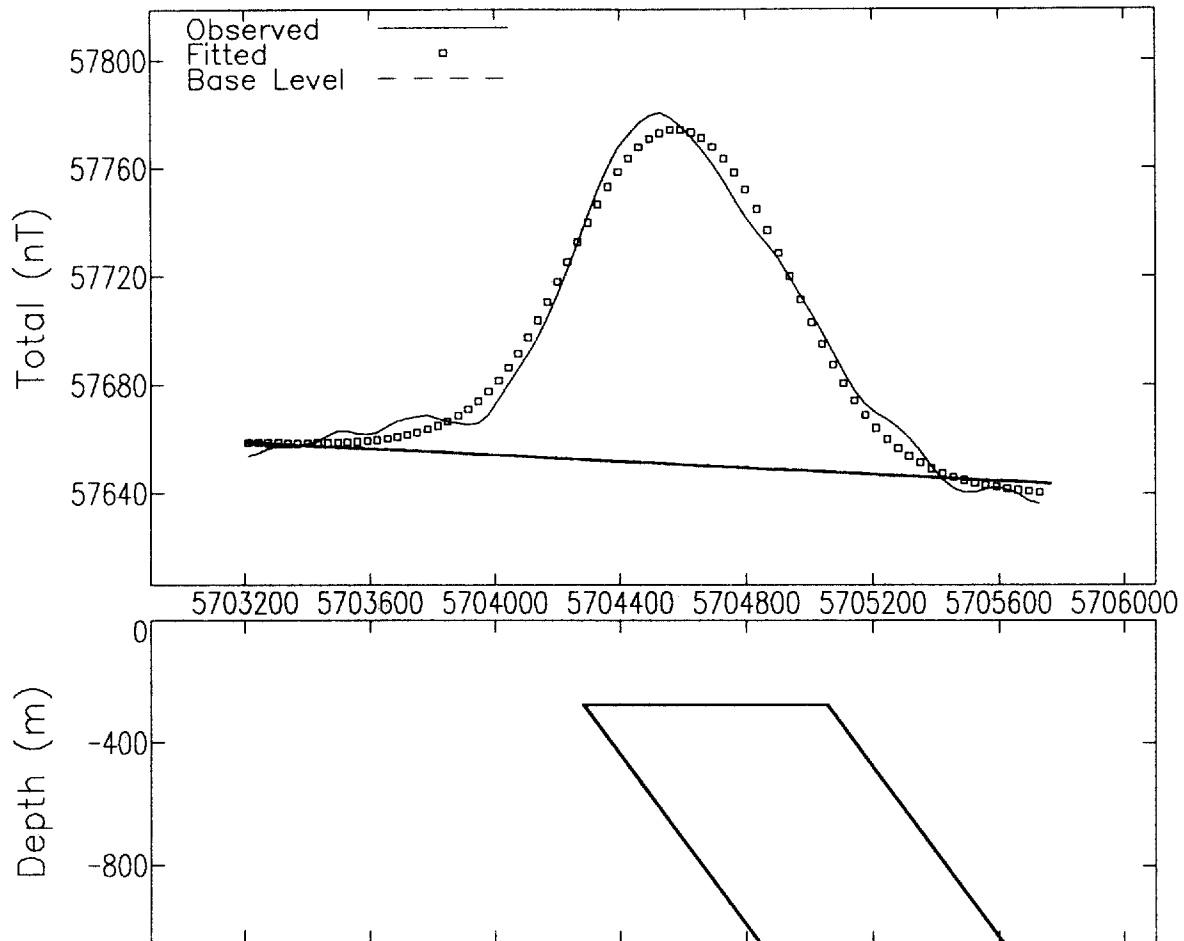
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	310 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 4

2101L 04



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	275 m
Half Width	F	396 m
Half Length	X	325 m
Offset	X	-75.0 m
Dip	F	54 deg
Thickness	F	24150 m
Susceptibility	F	0.00137 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5704671 m
Cross Position	X	644014.4 m
Base Level	F	57650.04 nT
Base Slope	F	-0.0057628 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

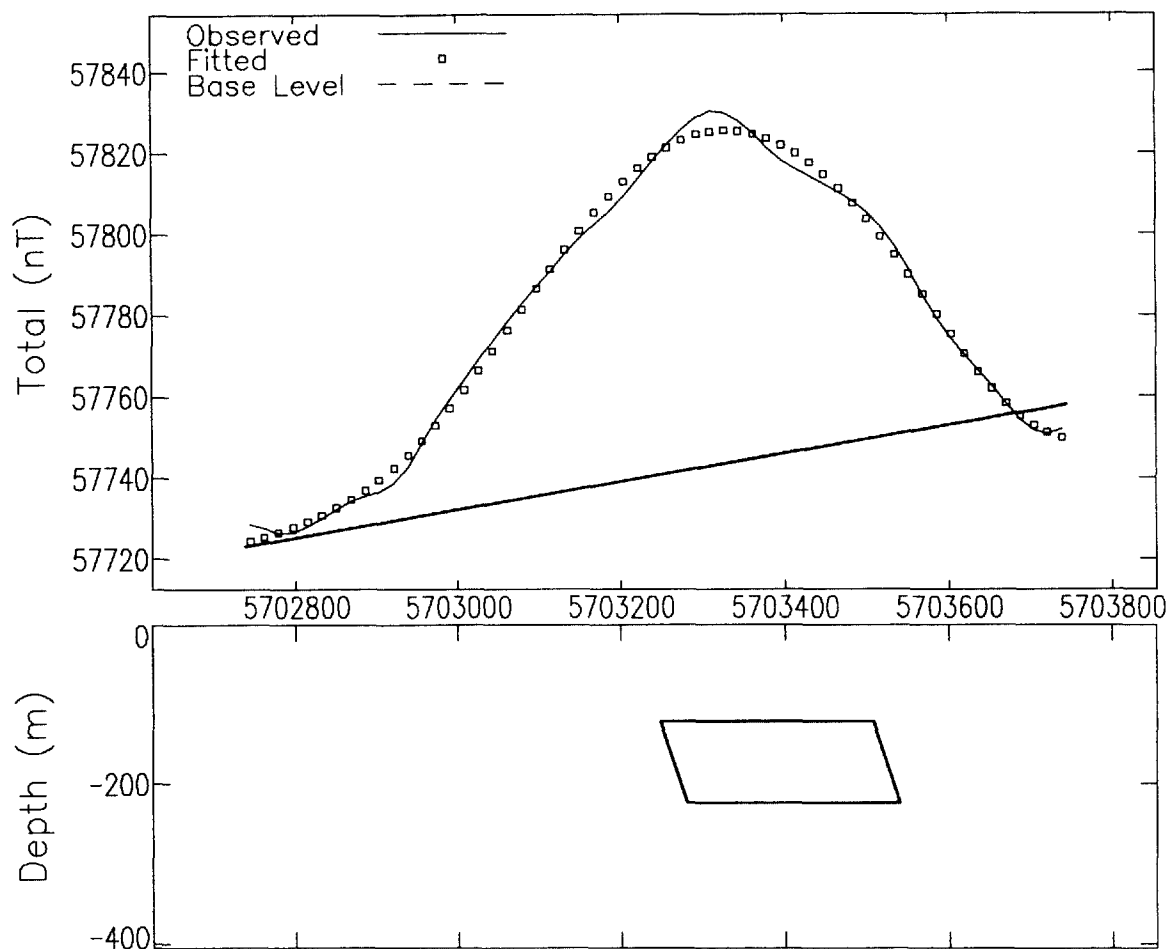
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	74 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 5

2701L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	122 m
Half Width	F	133 m
Half Length	X	350 m
Offset	X	50.0 m
Dip	F	72 deg
Thickness	F	103 m
Susceptibility	F	0.00154 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5703378 m
Cross Position	X	644960.8 m
Base Level	F	57745.15 nT
Base Slope	F	.033531 nT/m
Base Curvature	X	0 nT/m2

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

GEOMAGNETIC FIELD:

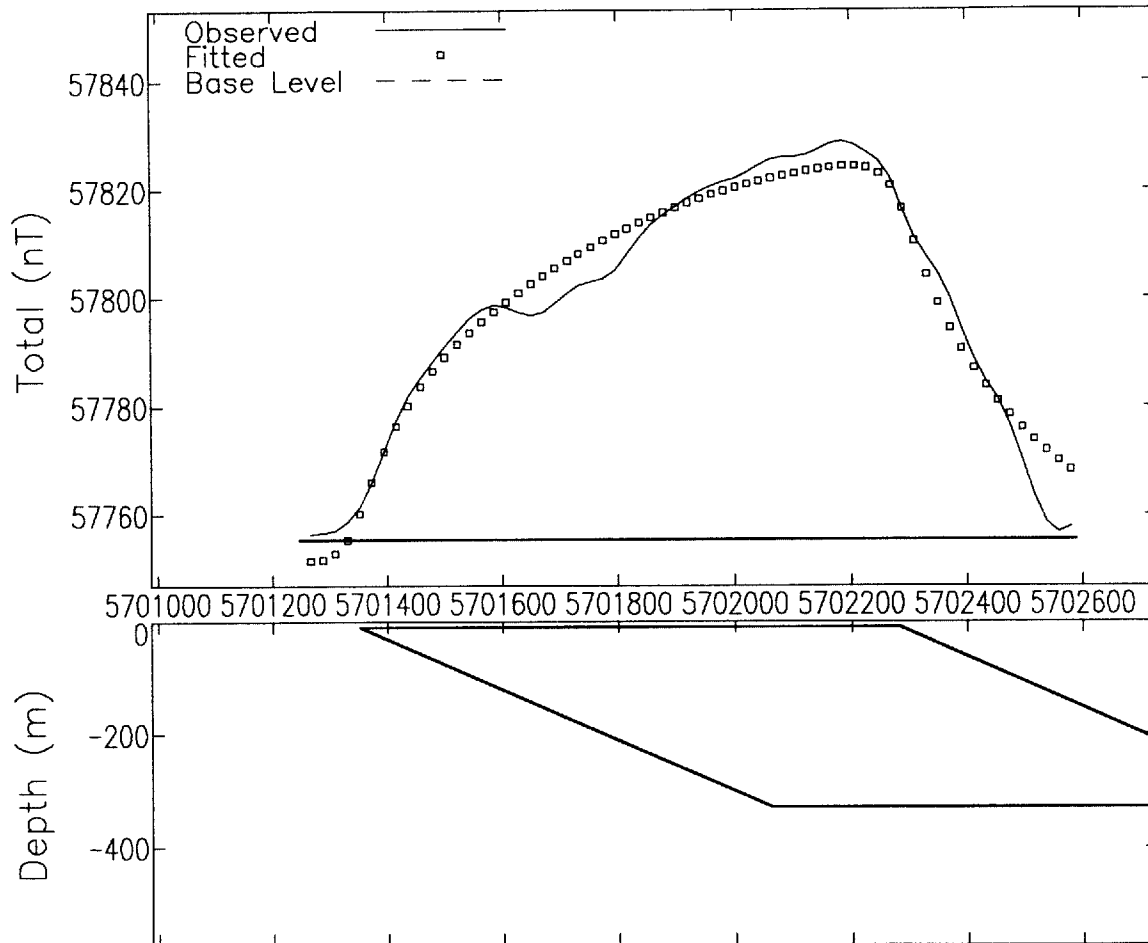
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	304 deg
Line Direction	0 deg
Main Direction	13 deg
Main Offset	
Cross Direction	-77 deg
Cross Offset	

Mistassini Model 6

4402L 02



MODEL PARAMETERS:

Model Type	L	Tabular2
Depth	F	10.4 m
Half Width	F	477 m
Half Length	X	200 m
Offset	X	0 m
Dip	F	24 deg
Thickness	F	318 m
Susceptibility	F	0.000336 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701817 m
Cross Position	X	648078.8 m
Base Level	X	57755.42 nT
Base Slope	X	0 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

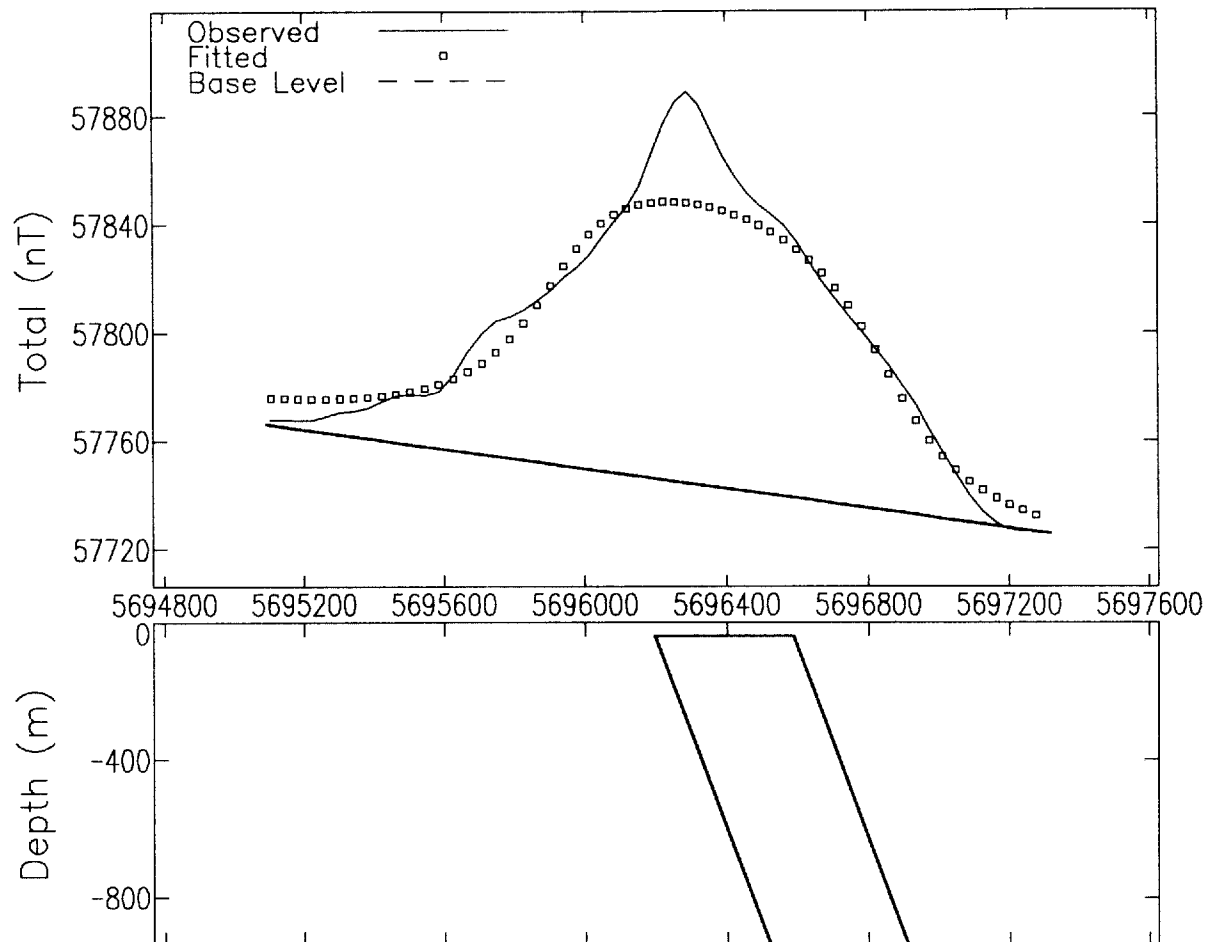
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	16 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 7

5101L 02



MODEL PARAMETERS:

Model Type	F	Tabular
Depth	F	39.3 m
Half Width	F	200 m
Dip	F	70 deg
Susceptibility	F	0.000408 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5696392 m
Cross Position	X	648277.7 m
Base Level	X	57742.47 nT
Base Slope	X	-0.0177523 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

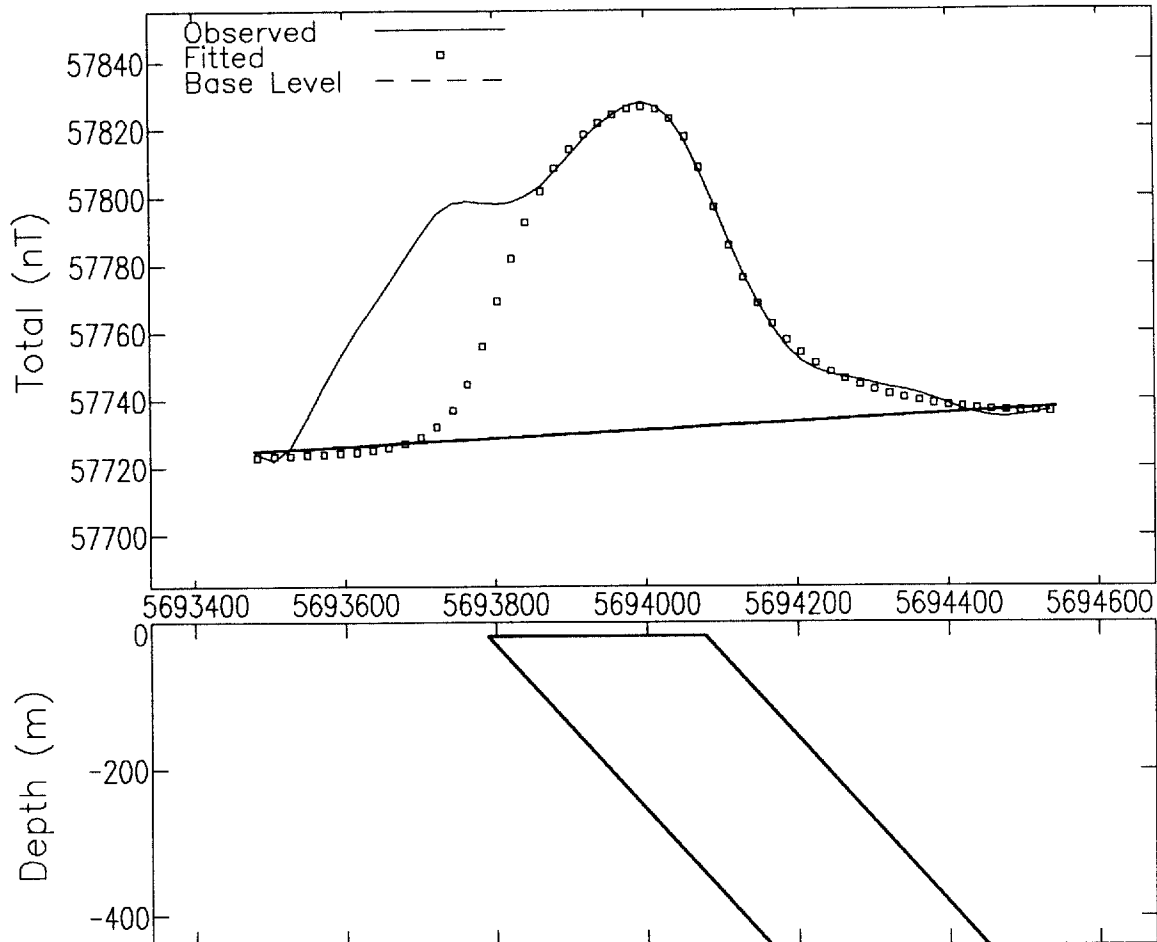
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	320 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 8

5802L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	19.0 m
Half Width	F	147 m
Half Length	X	200 m
Offset	X	0 m
Dip	F	48 deg
Thickness	F	515 m
Susceptibility	F	0.000507 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5693934 m
Cross Position	X	649169.8 m
Base Level	X	57730.29 nT
Base Slope	X	.0117597 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

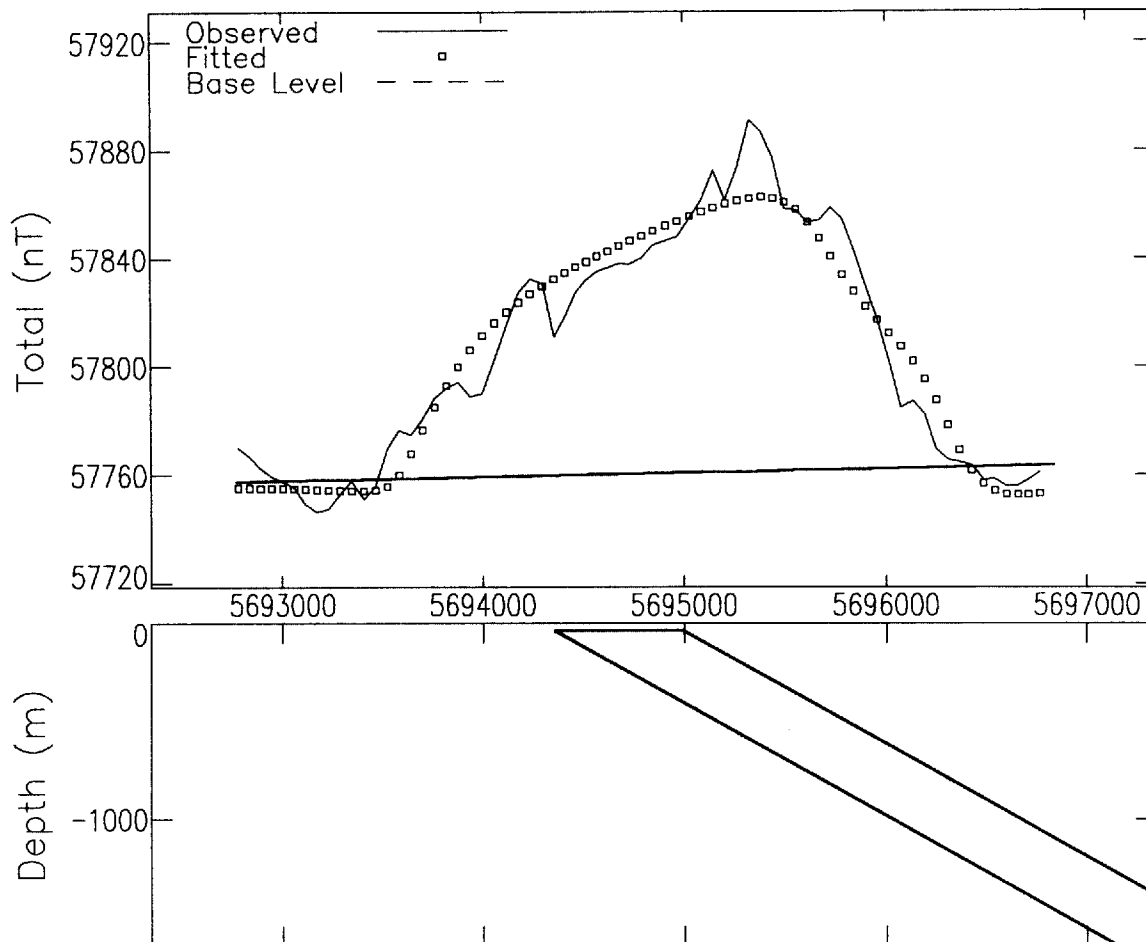
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	30 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 9

7101L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	37.4 m
Half Width	F	327 m
Half Length	X	1350 m
Offset	X	-300 m
Dip	F	29 deg
Thickness	F	2224 m
Susceptibility	F	0.000609 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5694676 m
Cross Position	X	651995.1 m
Base Level	F	57760.35 nT
Base Slope	F	.0014571 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

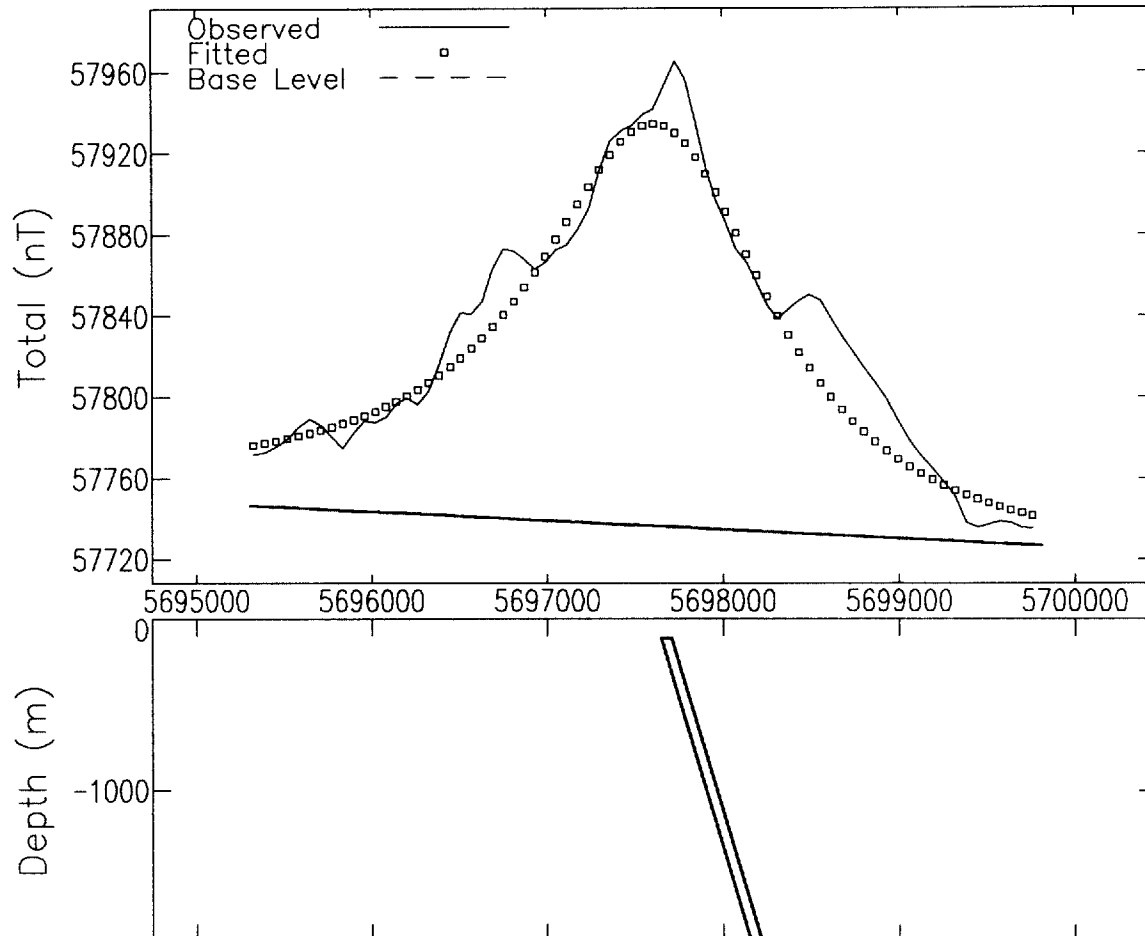
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	315 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 10

6202L 02



MODEL PARAMETERS:

Model Type		Tabular
Depth	F	116 m
Half Width	F	30.6 m
Dip	F	73 deg
Susceptibility	L	0.00481 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697680 m
Cross Position	X	650827.8 m
Base Level	L	57736.17 nT
Base Slope	F	-.0043414 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

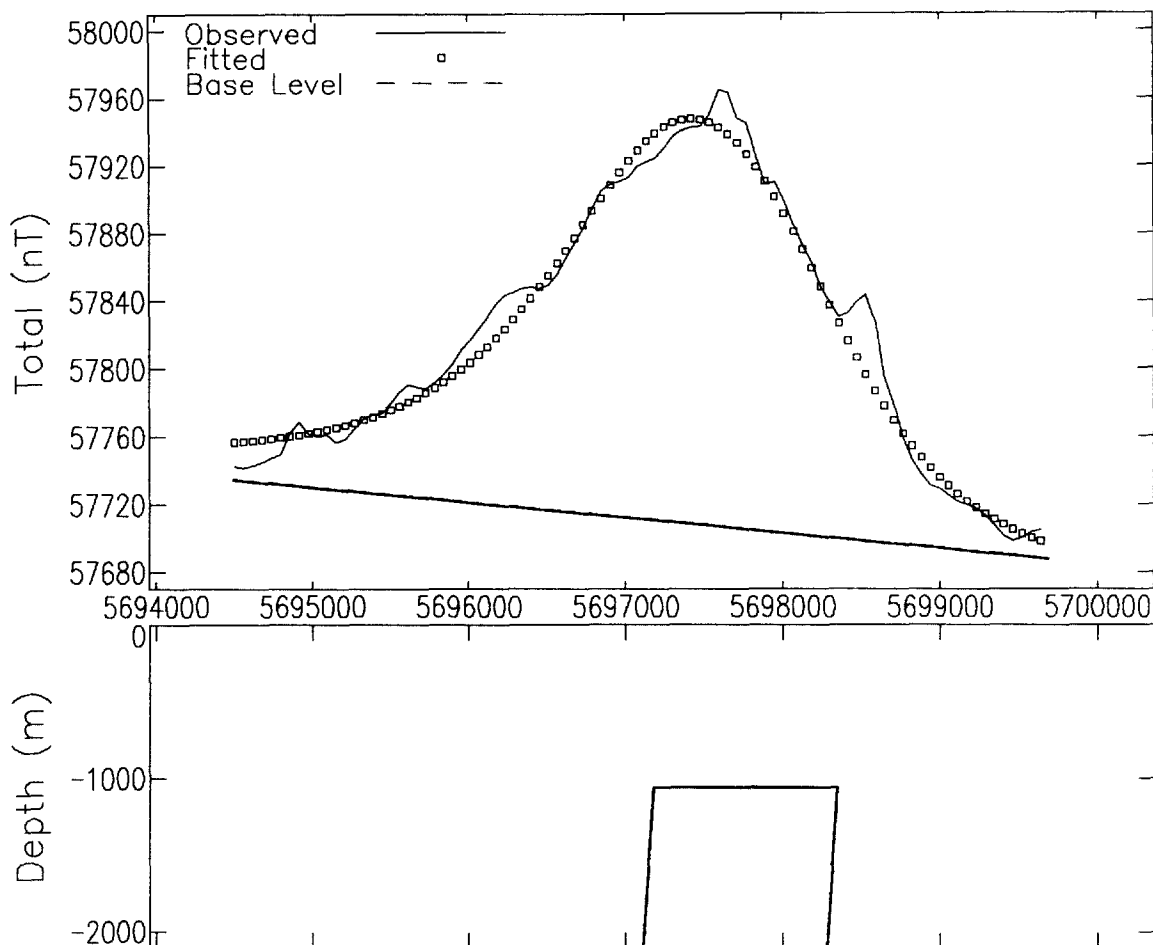
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	307 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 11

5901L 03



MODEL PARAMETERS:

Model Type	F	Tabular2
Depth	F	1061 m
Half Width	L	600 m
Half Length	X	625 m
Offset	X	125 m
Dip	F	94 deg
Thickness	L	52706 m
Susceptibility	L	0.00477 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697760 m
Cross Position	X	650237.1 m
Base Level	F	57705.07 nT
Base Slope	F	-0.0088091 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

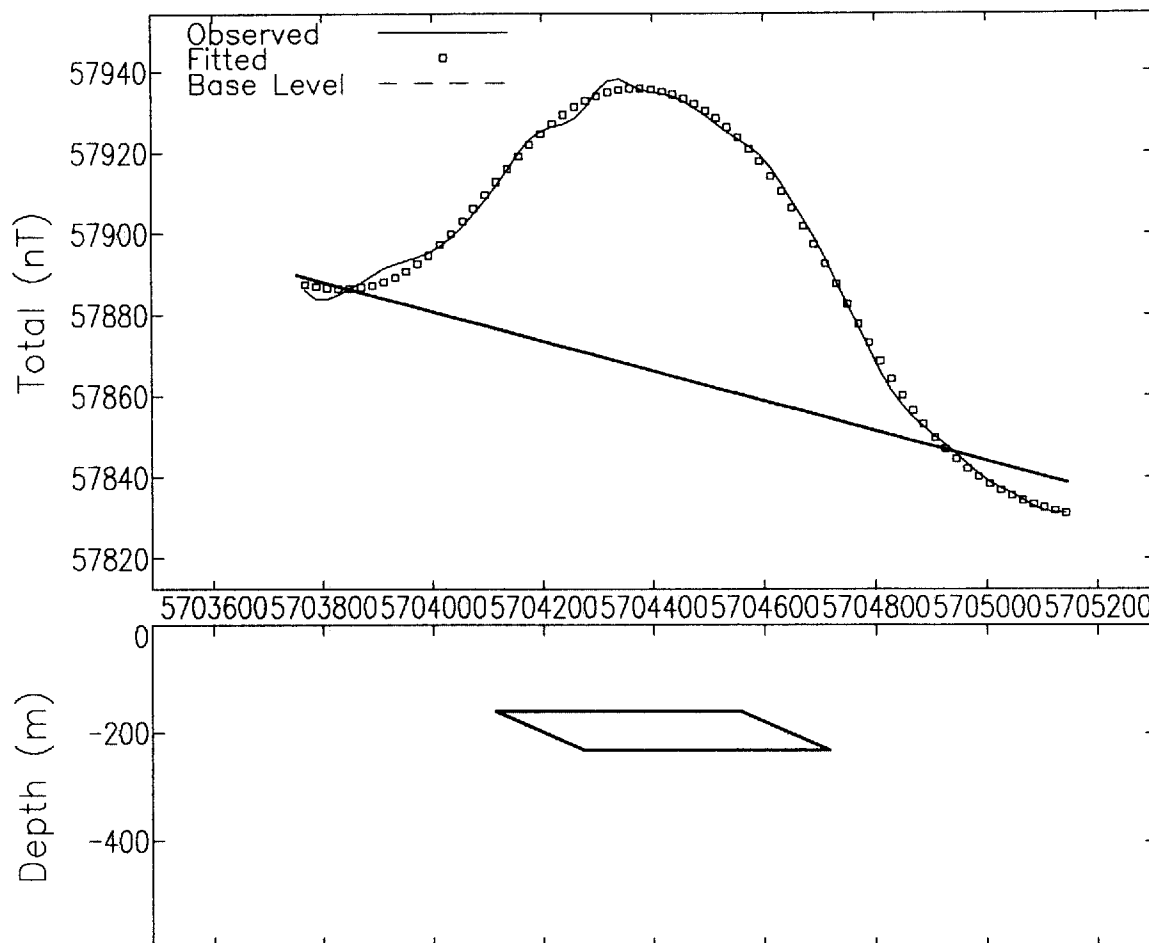
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	312 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 12

5501L 02



MODEL PARAMETERS:

Model Type	F	Tabular2
Depth	F	160 m
Half Width	F	227 m
Half Length	X	500 m
Offset	X	150 m
Dip	F	24 deg
Thickness	F	72.1 m
Susceptibility	F	0.00191 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5704335 m
Cross Position	X	650919.6 m
Base Level	F	57868.43 nT
Base Slope	F	-.0357553 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

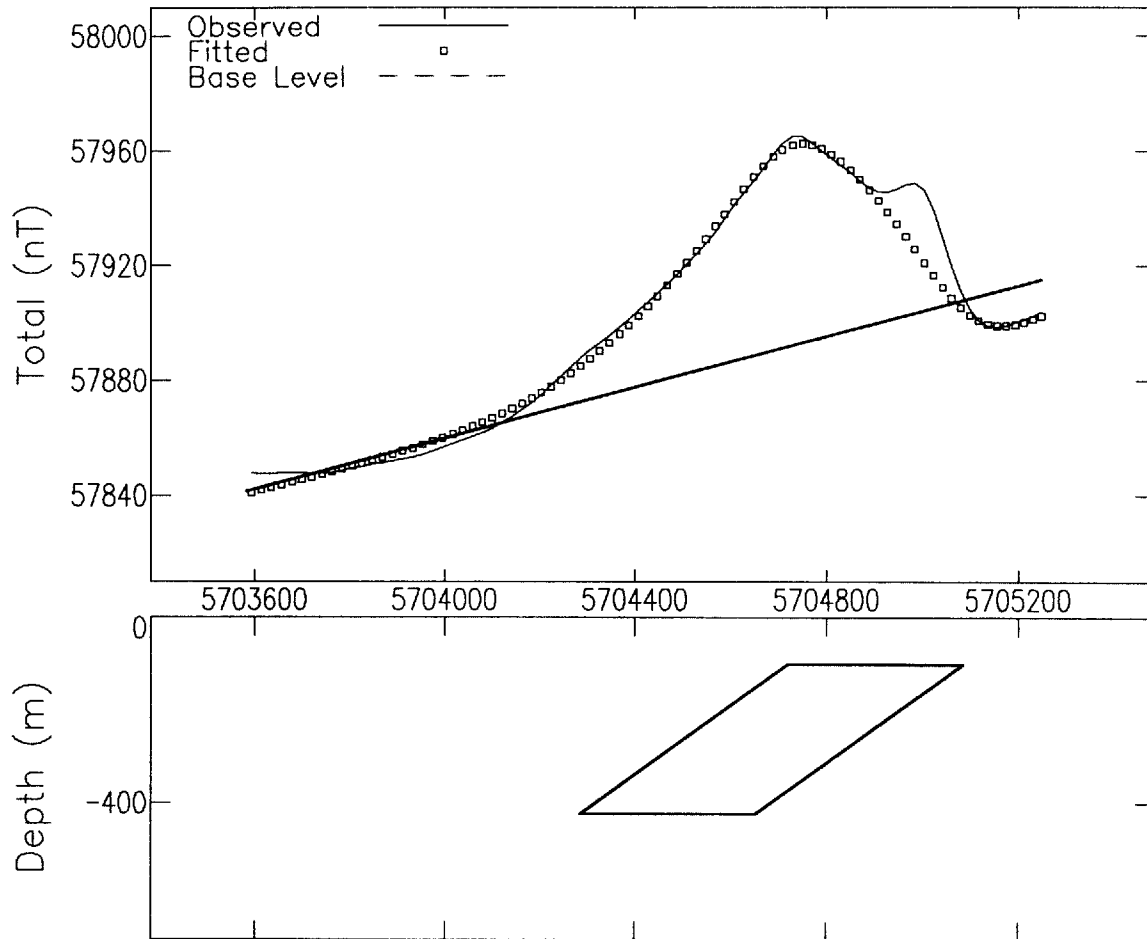
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	70 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 13

6202L 04



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	101 m
Half Width	F	187 m
Half Length	X	475 m
Offset	X	-75.0 m
Dip	L	144 deg
Thickness	F	322 m
Susceptibility	F	0.000663 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5704902 m
Cross Position	X	652482.8 m
Base Level	F	57899.78 nT
Base Slope	F	.0431012 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

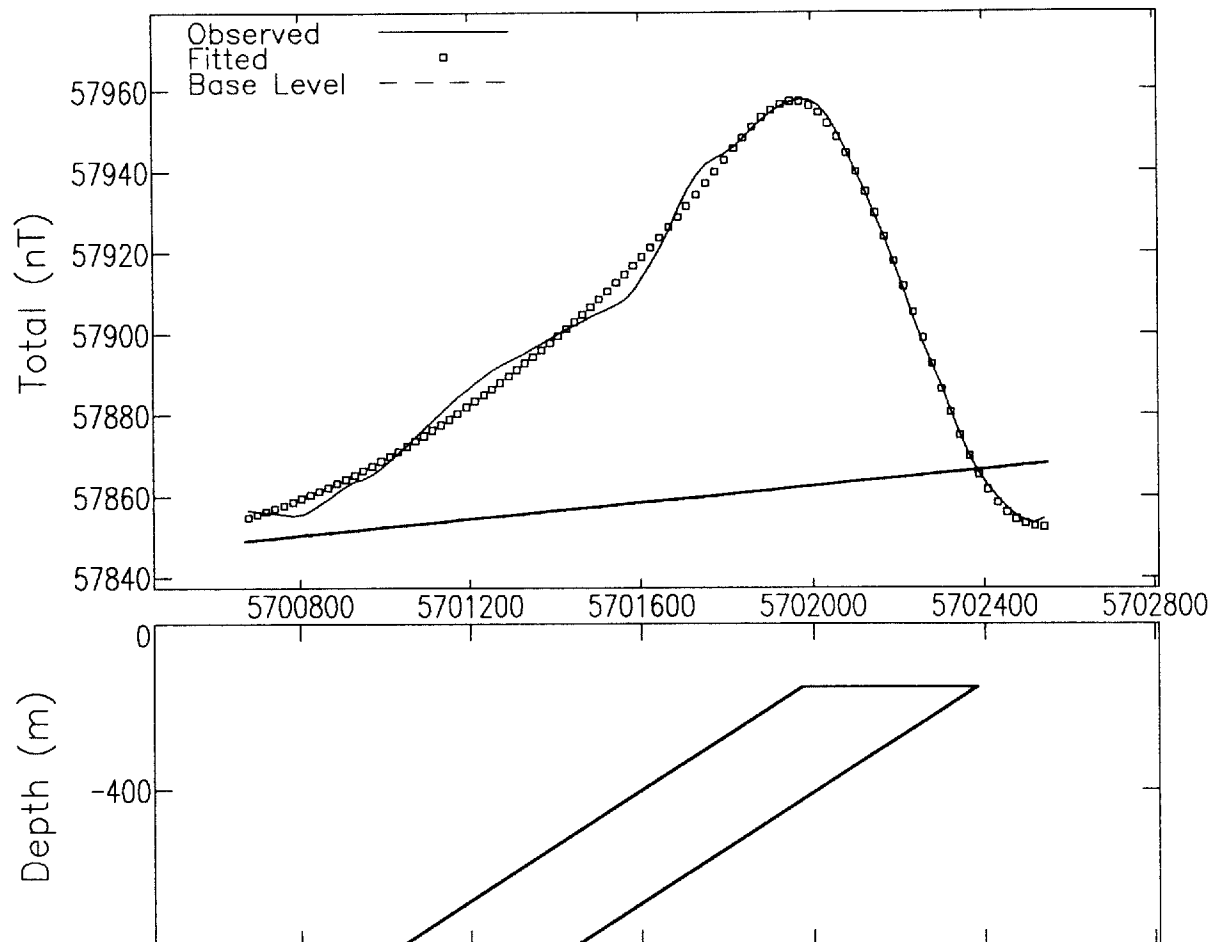
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	40 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 14

7002L 03



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	153 m
Half Width	F	210 m
Half Length	X	500 m
Offset	X	-50.0 m
Dip	F	147 deg
Thickness	F	710 m
Susceptibility	F	0.00103 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5702179 m
Cross Position	X	653506.9 m
Base Level	F	57864.32 nT
Base Slope	L	.0098665 nT/m
Base Curvature	X	0 nT/m2

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

GEOMAGNETIC FIELD:

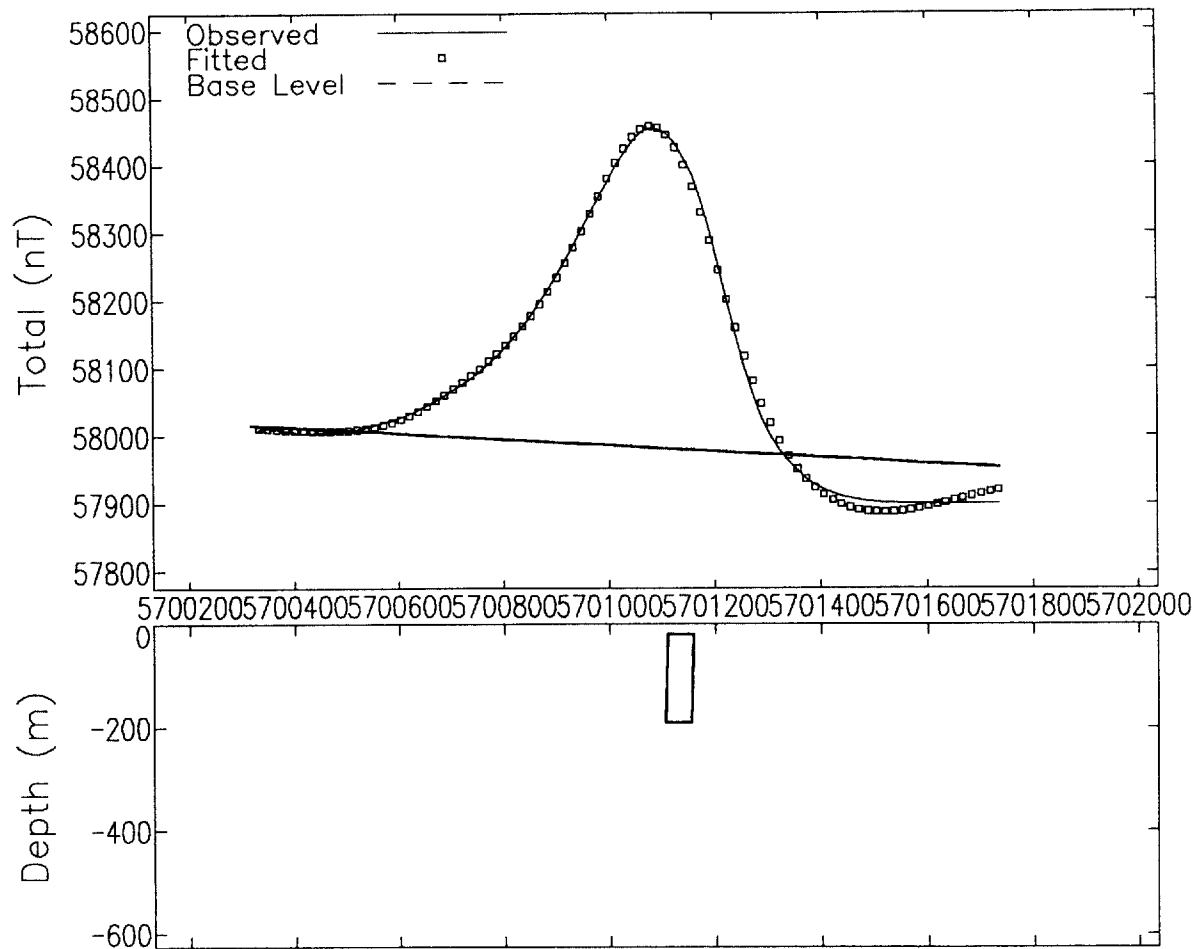
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	45 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 15

7301L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	20.5 m
Half Width	L	24.3 m
Half Length	X	500 m
Offset	X	0 m
Dip	F	92 deg
Thickness	F	171 m
Susceptibility	F	0.00798 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701135 m
Cross Position	X	653868.3 m
Base Level	F	57979.86 nT
Base Slope	F	-.0435554 nT/m
Base Curvature	X	0 nT/m2

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

GEOMAGNETIC FIELD:

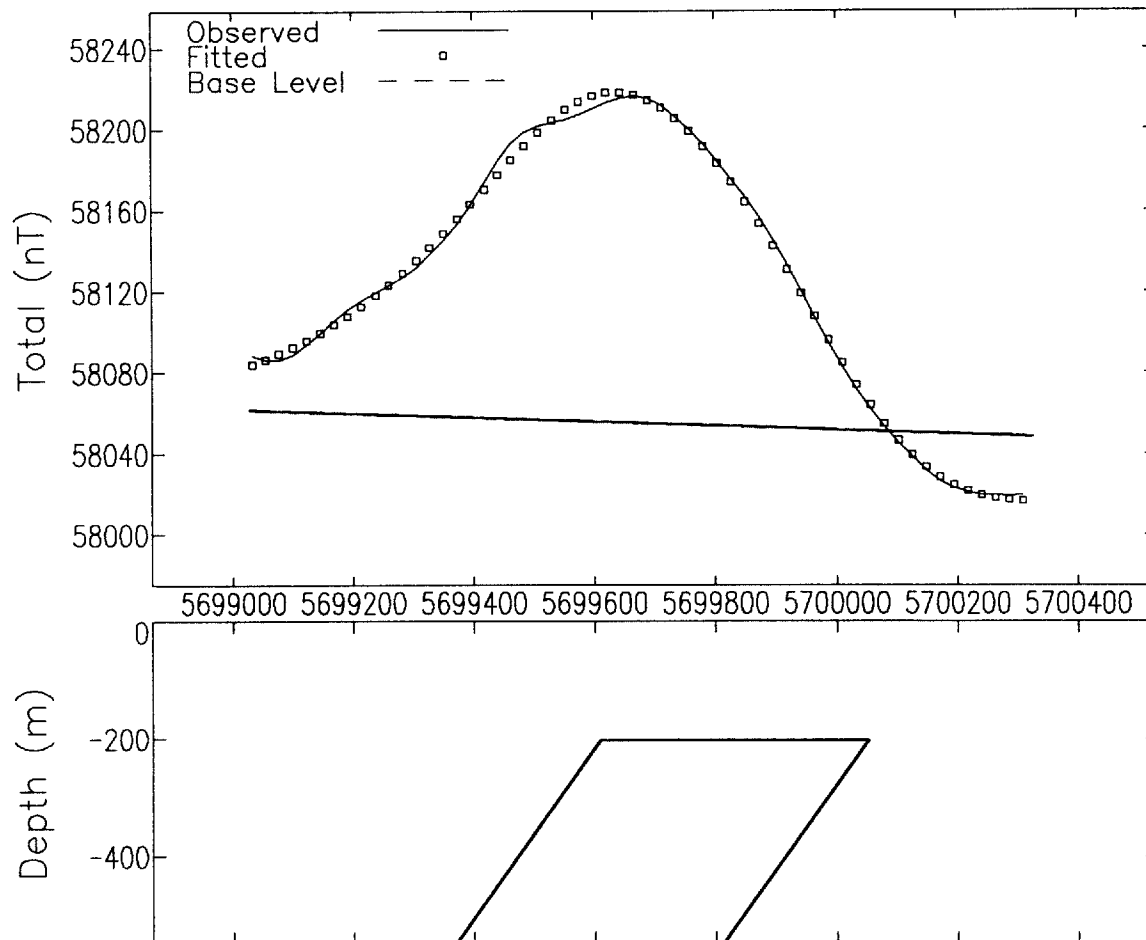
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	315 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 16

7802L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	203 m
Half Width	F	227 m
Half Length	X	900 m
Offset	X	250 m
Dip	F	125 deg
Thickness	F	379 m
Susceptibility	F	0.00179 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5699831 m
Cross Position	X	654624.1 m
Base Level	F	58053.39 nT
Base Slope	F	-.009752 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

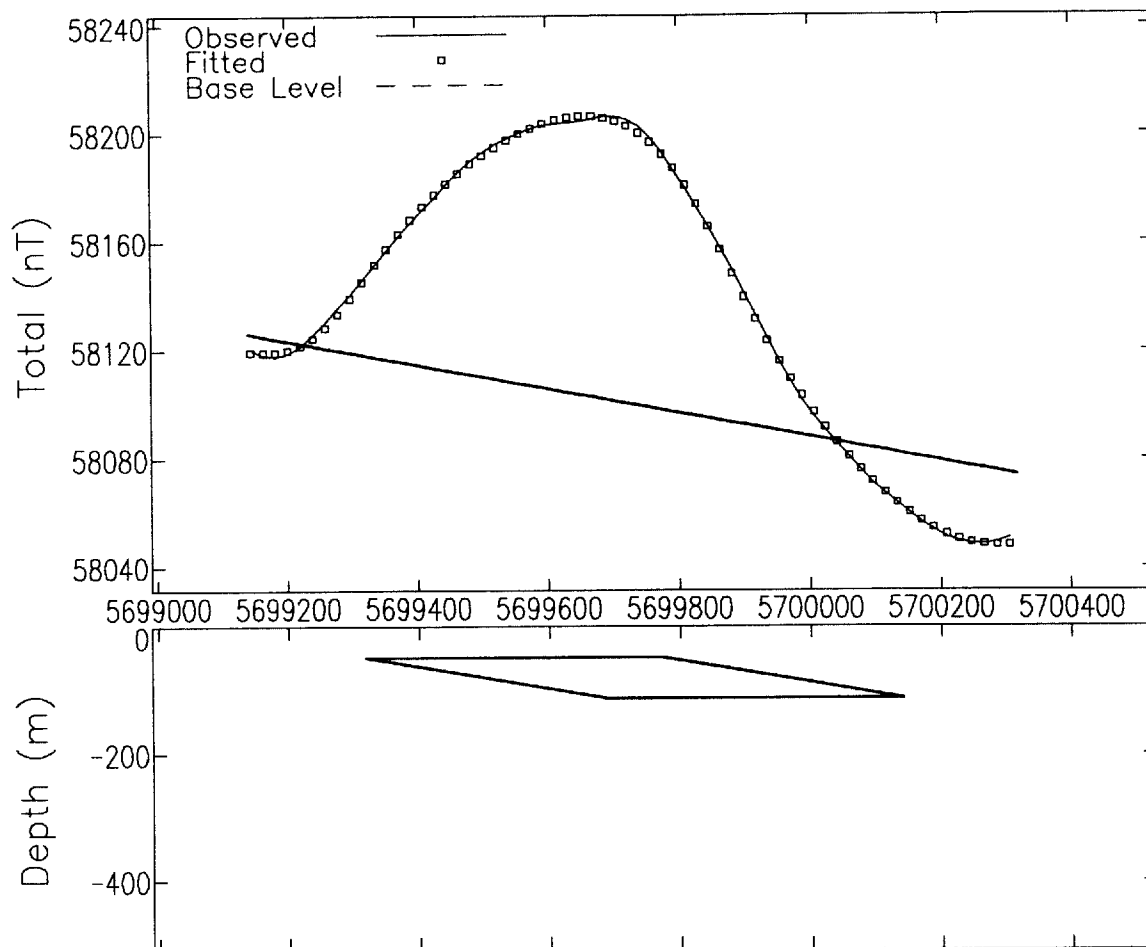
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	0 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 17

7901L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	48.4 m
Half Width	F	233 m
Half Length	X	525 m
Offset	X	-175 m
Dip	L	10 deg
Thickness	F	65.0 m
Susceptibility	F	0.00205 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5699546 m
Cross Position	X	654752.3 m
Base Level	F	58108.21 nT
Base Slope	F	-.0431955 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

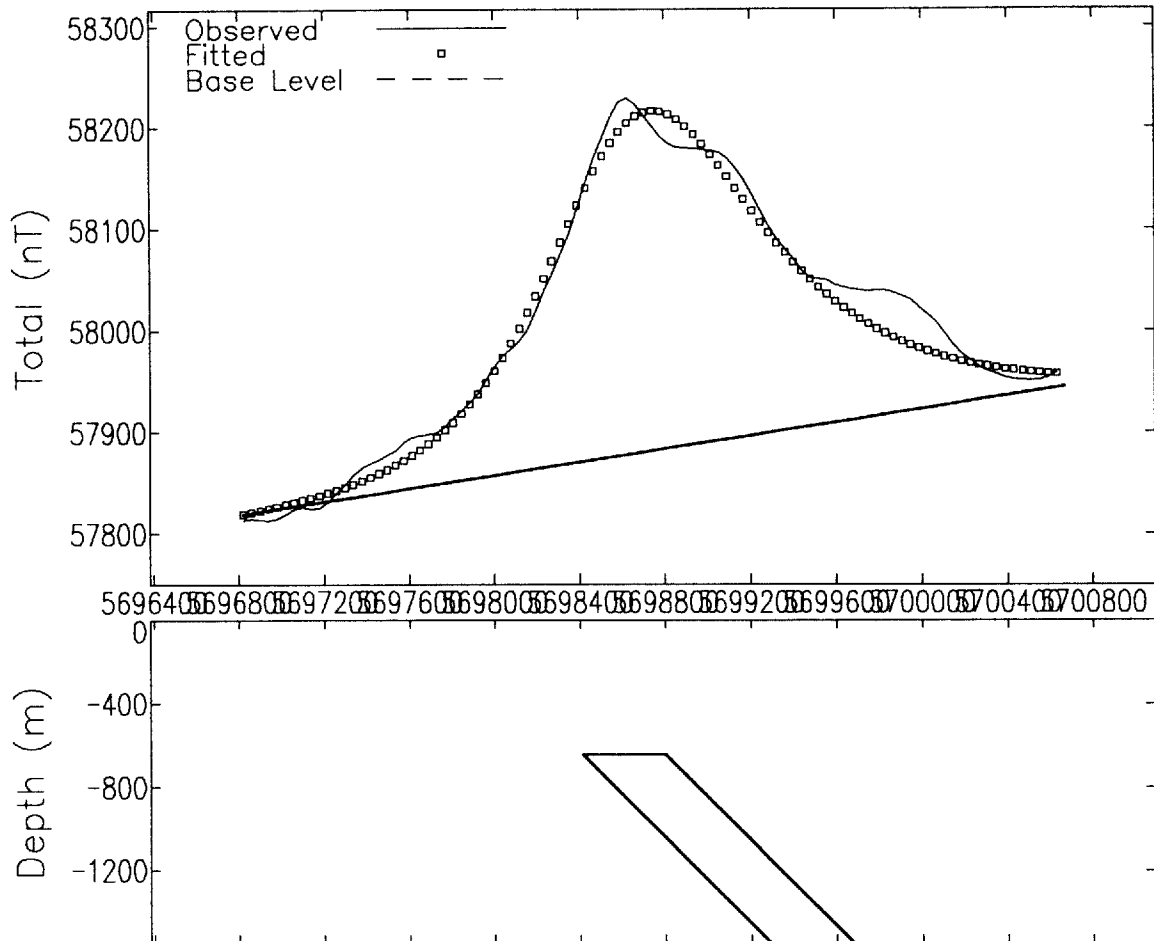
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	351 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 18

8701L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	647 m
Half Width	F	199 m
Half Length	X	650 m
Offset	X	-150 m
Dip	F	45 deg
Thickness	F	1906 m
Susceptibility	L	0.0115 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5698605 m
Cross Position	X	656174.2 m
Base Level	F	57877.3 nT
Base Slope	F	.0319236 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

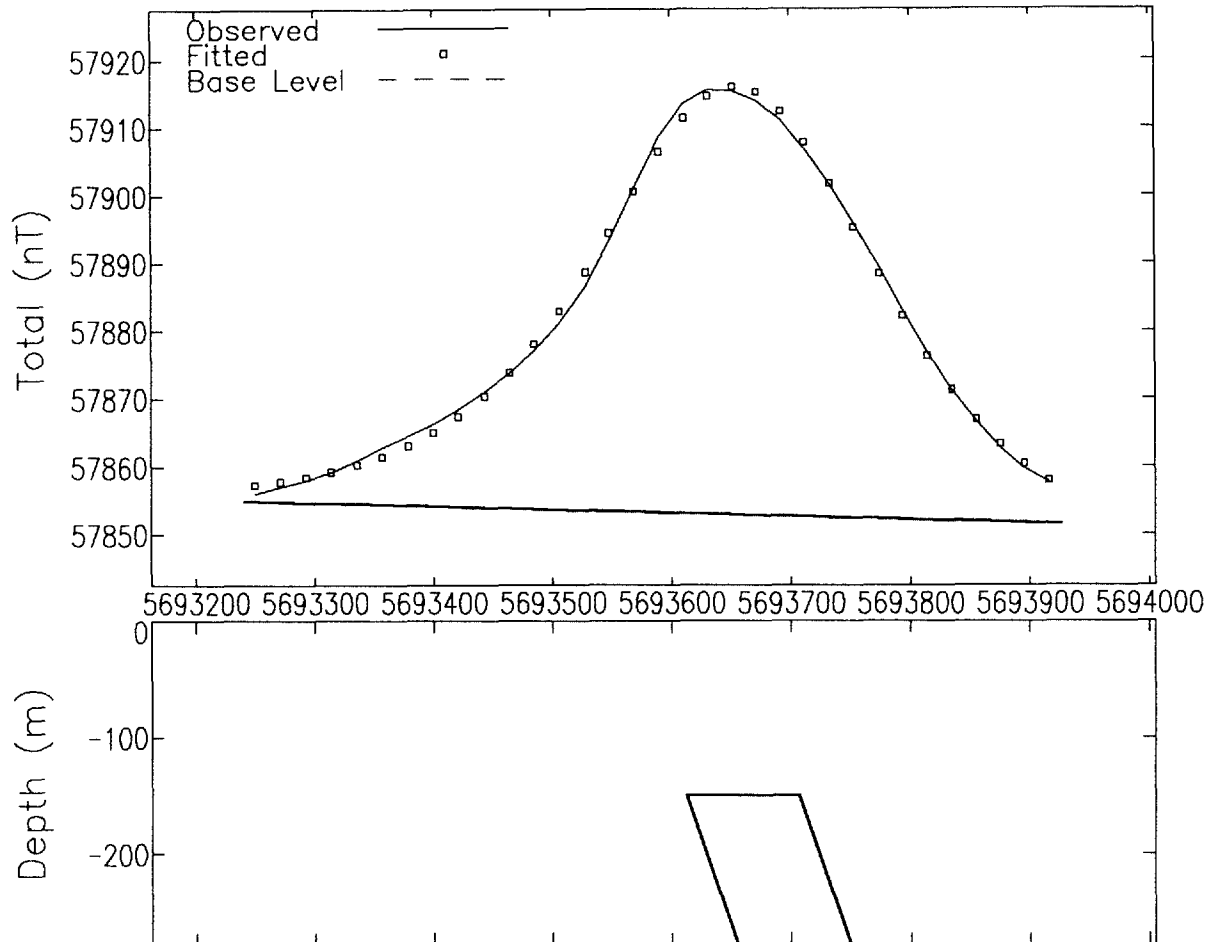
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	27 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 19

9402L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	149 m
Half Width	F	48.5 m
Half Length	X	50.0 m
Offset	X	0 m
Dip	F	71 deg
Thickness	F	365 m
Susceptibility	F	0.00561 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5693659 m
Cross Position	X	656481 m
Base Level	F	57852.88 nT
Base Slope	L	-.0048867 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

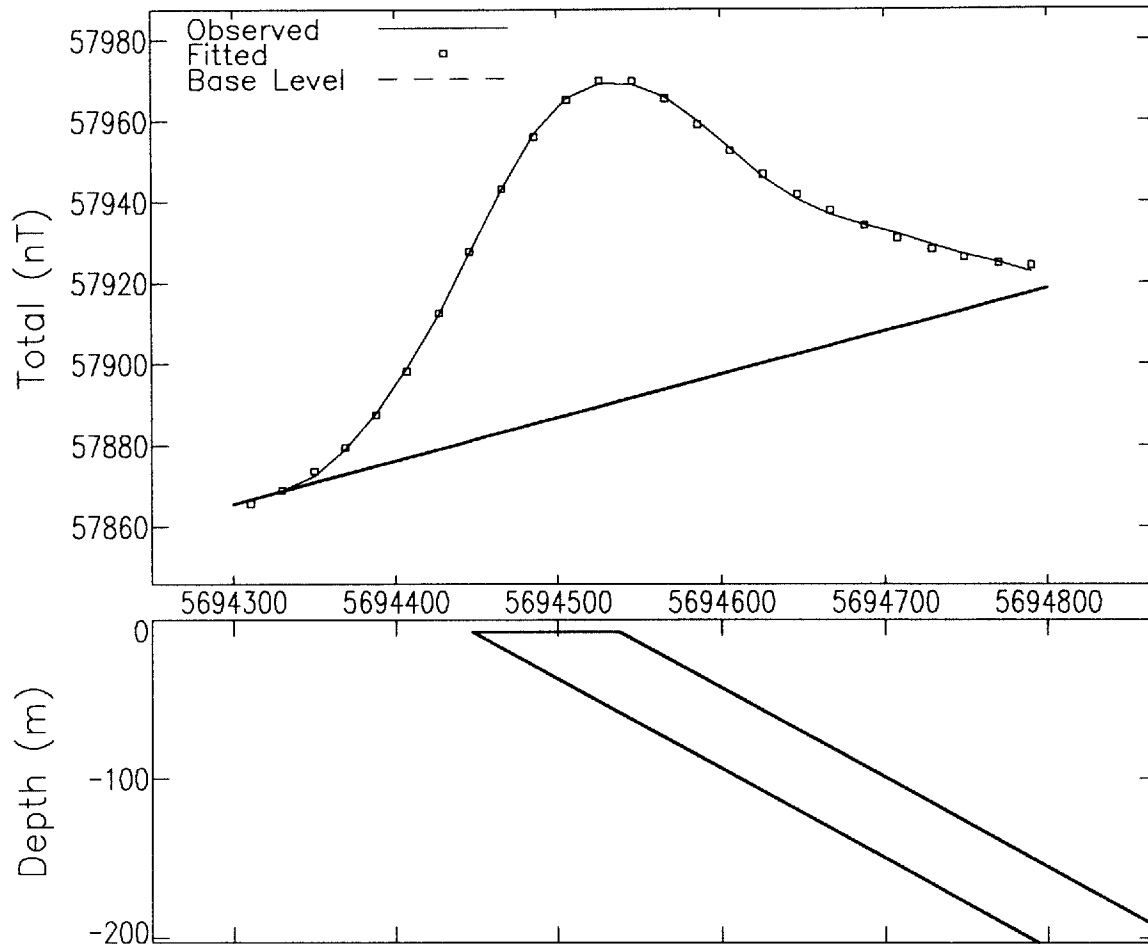
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	38 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 20

10202L 04



MODEL PARAMETERS:

Model Type		Tabular2
Depth	L	7.86 m
Half Width	F	46.5 m
Half Length	X	475 m
Offset	X	275 m
Dip	F	29 deg
Thickness	F	4866 m
Susceptibility	F	0.000947 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5694493 m
Cross Position	X	658337.1 m
Base Level	F	57886 nT
Base Slope	F	.1033605 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

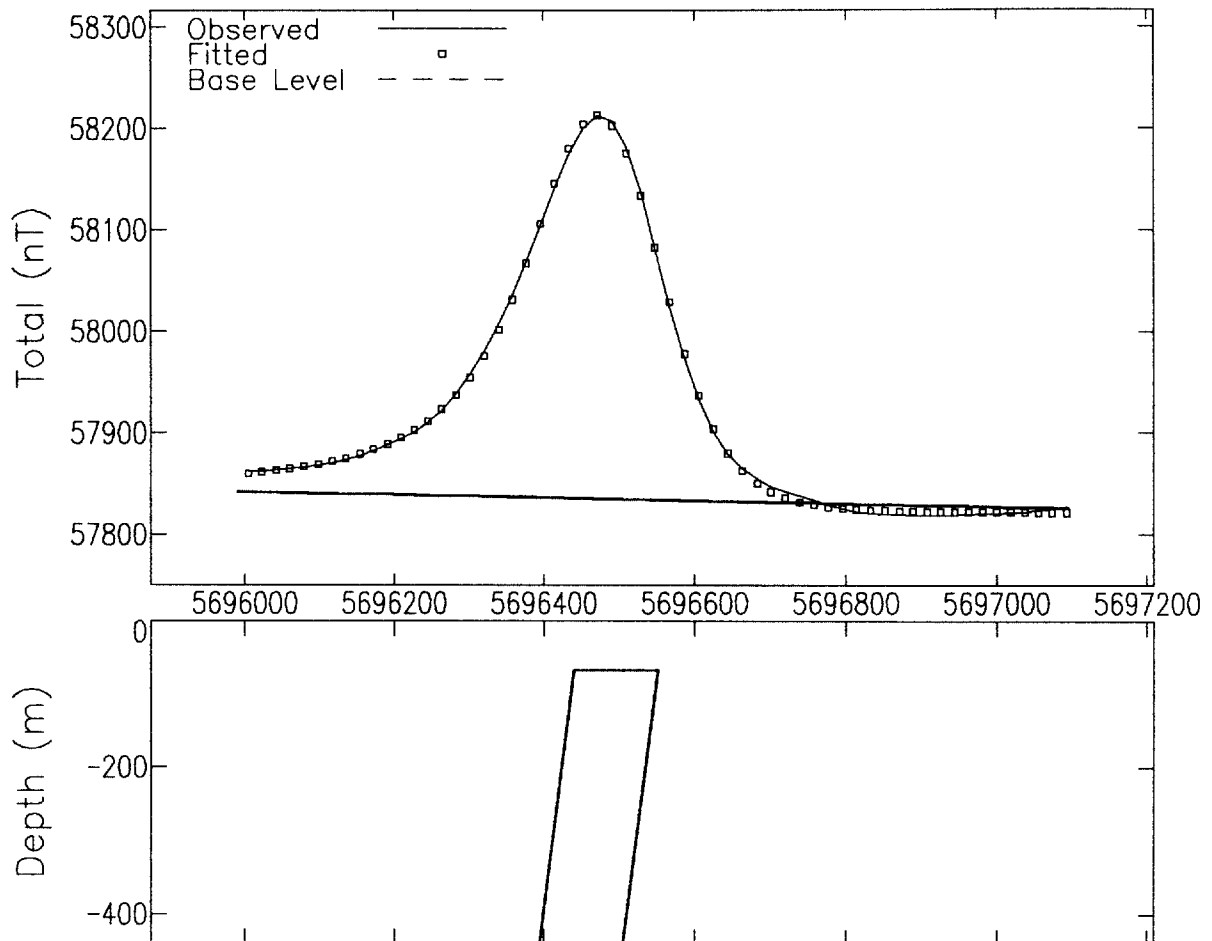
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	340 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 21

10101L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	67.1 m
Half Width	F	56.8 m
Half Length	X	100 m
Offset	X	0 m
Dip	F	97 deg
Thickness	F	10893 m
Susceptibility	L	0.00564 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5696497 m
Cross Position	X	658566.2 m
Base Level	F	57834.77 nT
Base Slope	F	-0.0144491 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

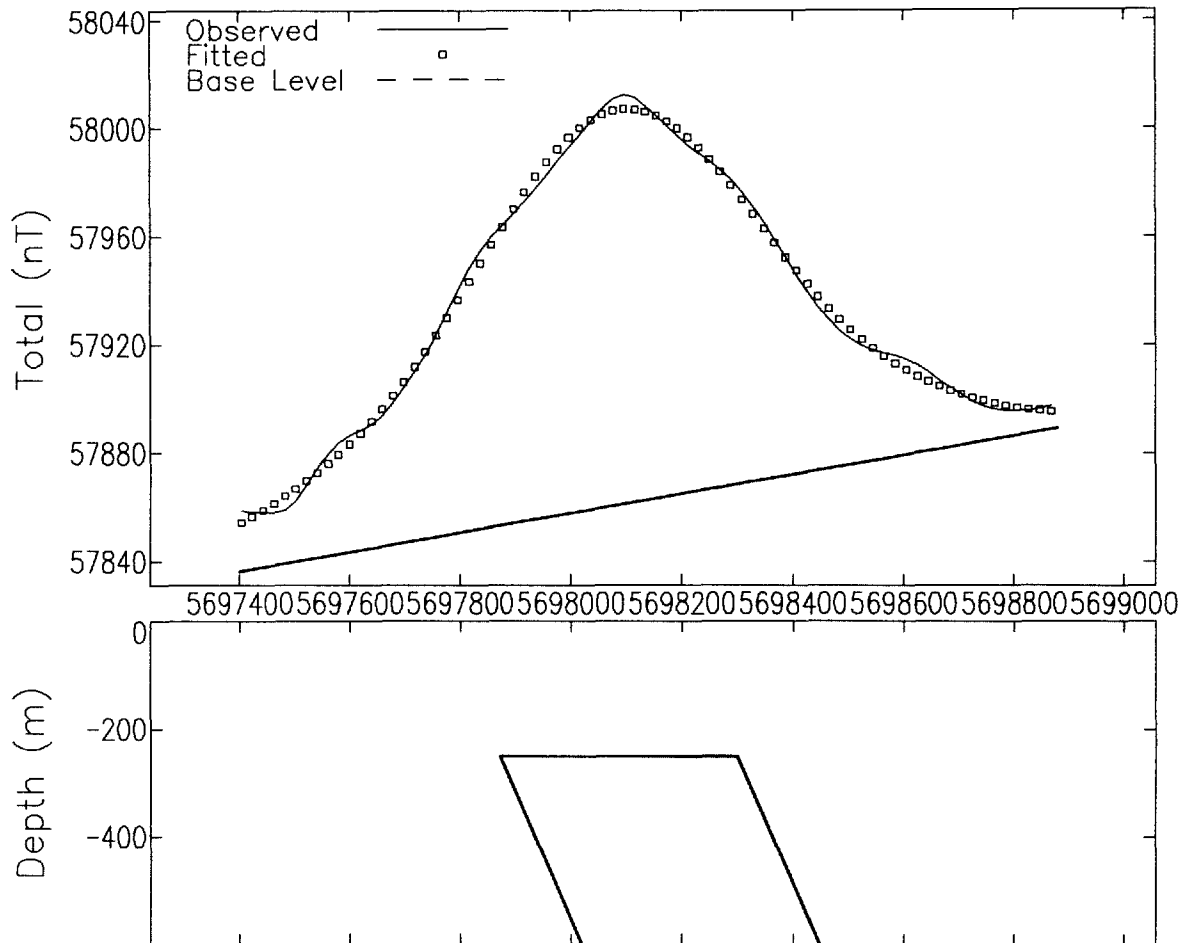
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	50 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 22

10011L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	250 m
Half Width	F	219 m
Half Length	X	1200 m
Offset	X	0 m
Dip	F	66 deg
Thickness	F	1695 m
Susceptibility	F	0.00124 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5698086 m
Cross Position	X	658727.6 m
Base Level	F	57860.79 nT
Base Slope	L	.0348913 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

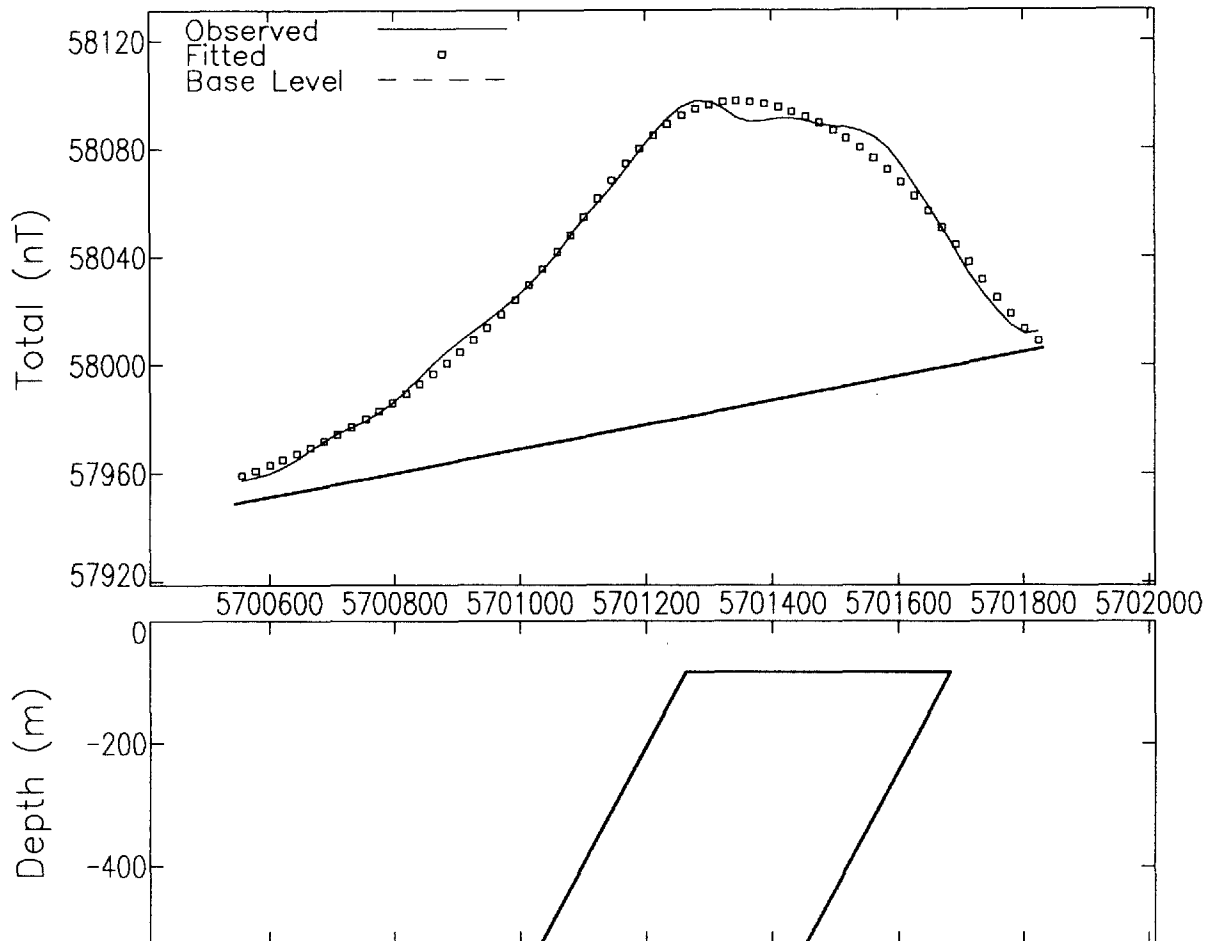
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	18 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 23

8802L 03



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	83.0 m
Half Width	F	216 m
Half Length	X	450 m
Offset	X	-100 m
Dip	F	118 deg
Thickness	F	1006 m
Susceptibility	F	0.000627 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701474 m
Cross Position	X	657019.5 m
Base Level	L	57990.16 nT
Base Slope	L	.0435316 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

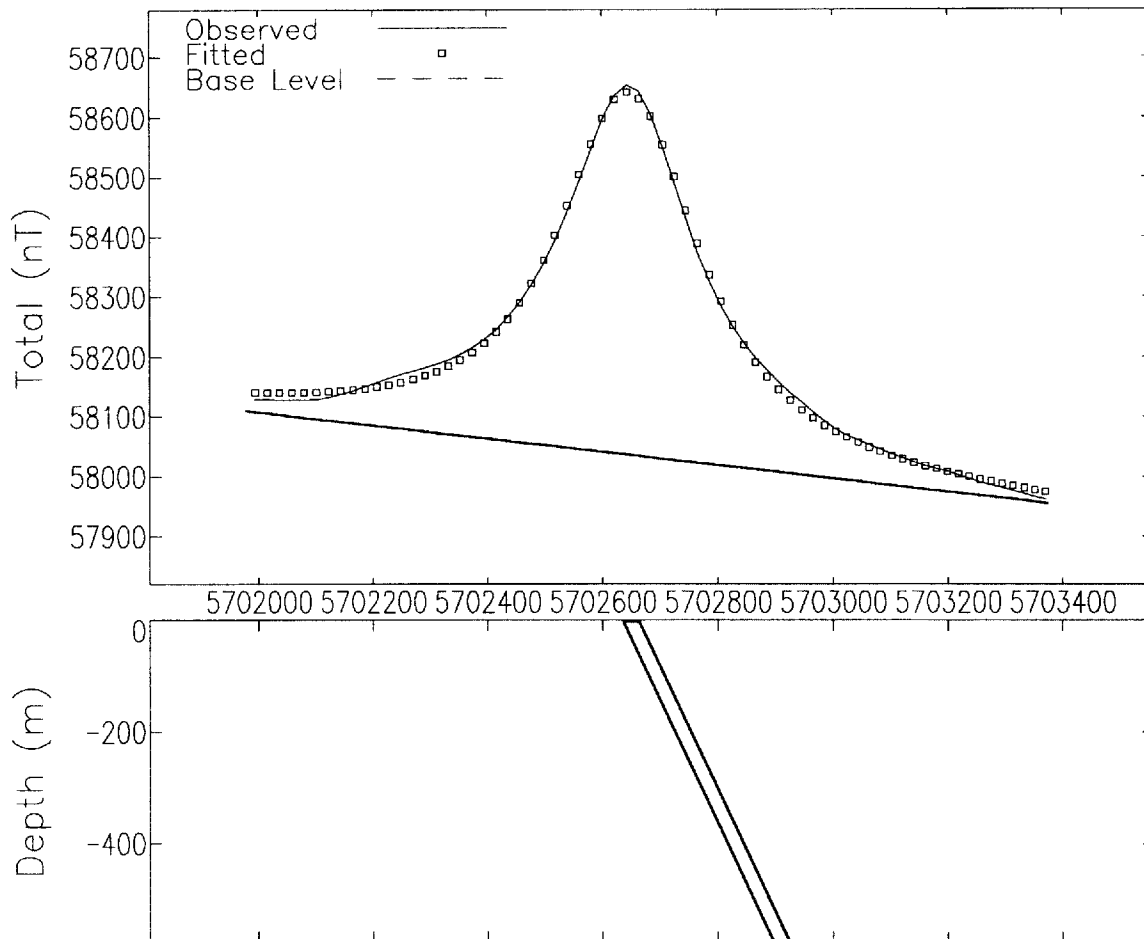
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	72 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 24

8602L 04



MODEL PARAMETERS:

Model Type	F	Tabular
Depth	F	3.46 m
Half Width	F	13.8 m
Dip	F	65 deg
Susceptibility	L	0.00997 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5702650 m
Cross Position	X	656899.4 m
Base Level	F	58035.15 nT
Base Slope	F	-0.1077191 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

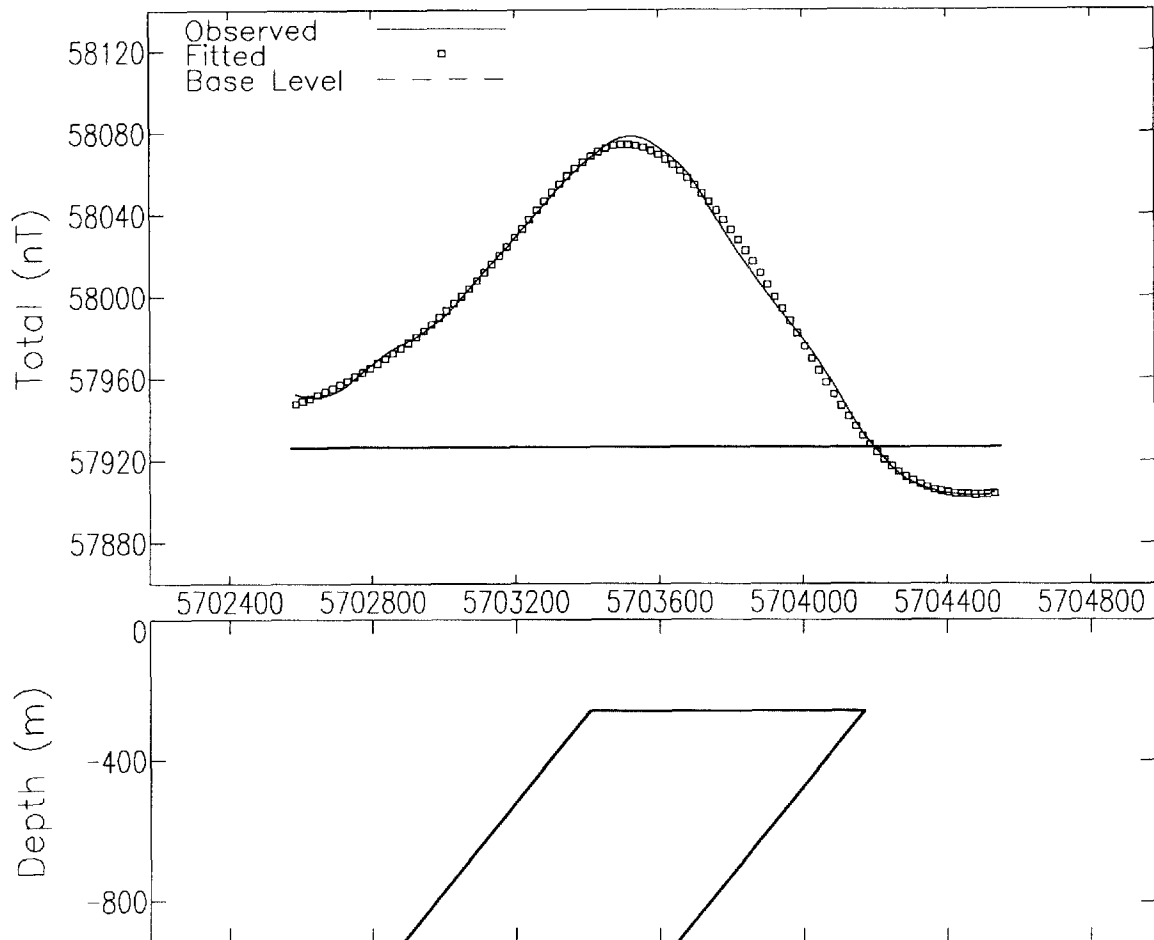
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	314 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 25

8002L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	260 m
Half Width	F	389 m
Half Length	X	875 m
Offset	X	25.0 m
Dip	L	129 deg
Thickness	F	843 m
Susceptibility	F	0.00114 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5703788 m
Cross Position	X	655905.3 m
Base Level	F	57926.59 nT
Base Slope	F	.0001765 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

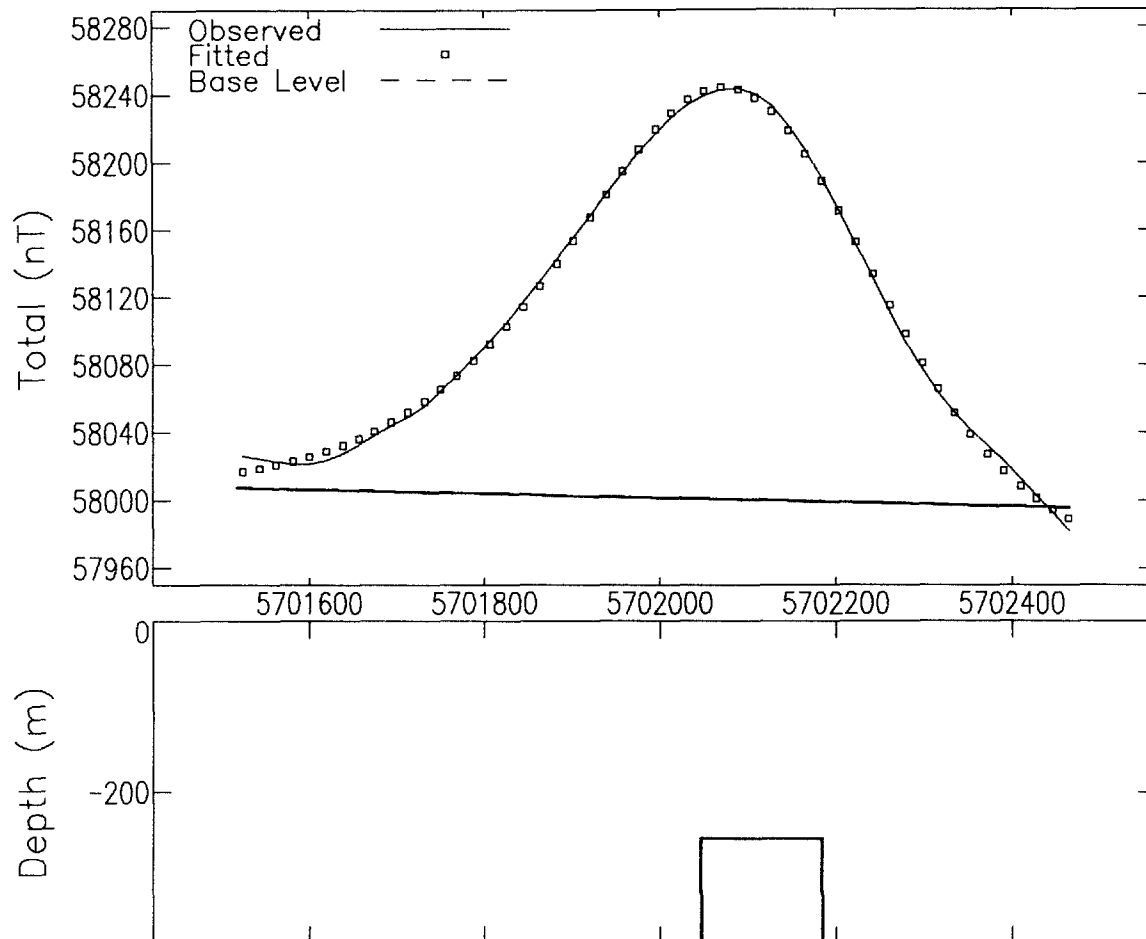
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	30 deg
Line Direction	24 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 26

10101L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	254 m
Half Width	F	70.7 m
Half Length	X	550 m
Offset	X	100 m
Dip	F	89 deg
Thickness	F	200 m
Susceptibility	F	0.0110 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5702115 m
Cross Position	X	659847.8 m
Base Level	F	57999.97 nT
Base Slope	F	-0.0121863 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

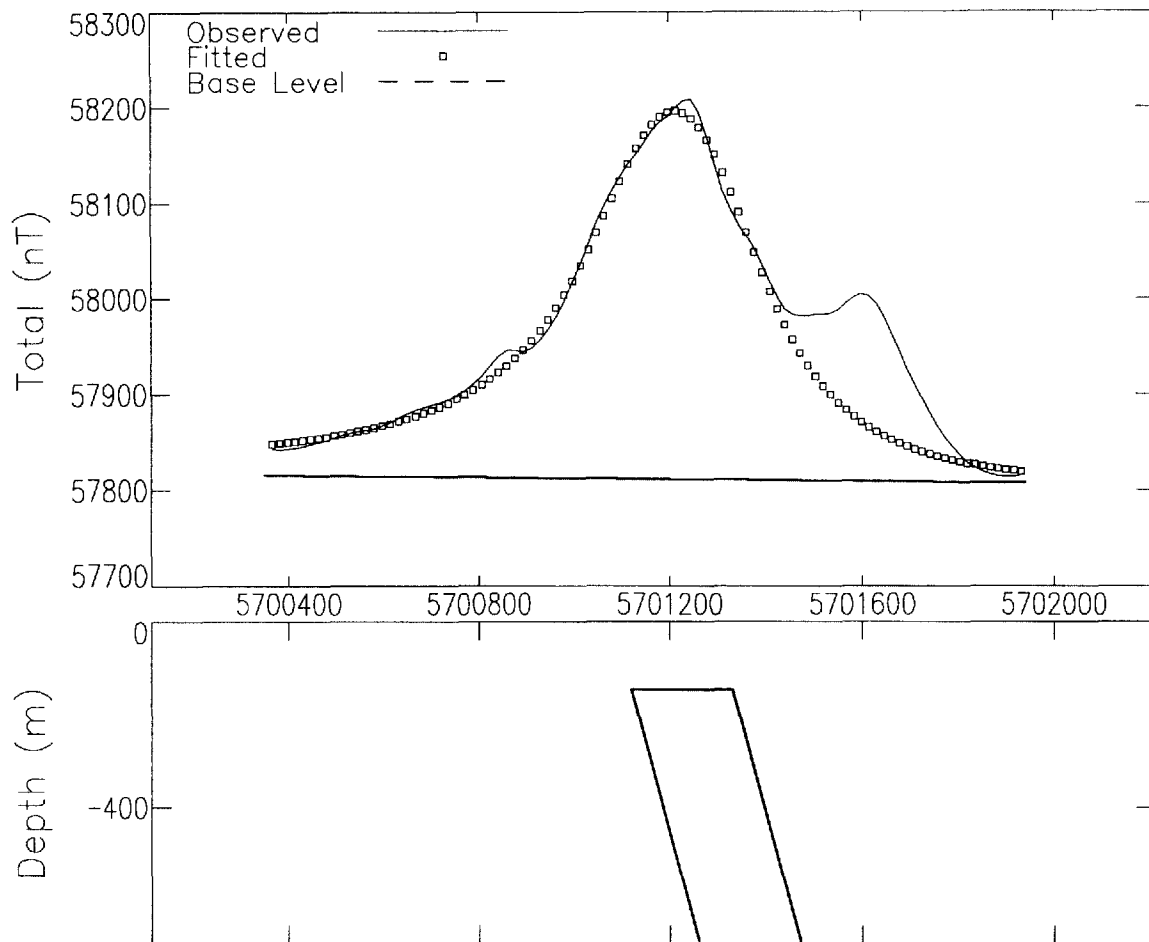
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	28 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 27

11301L 03



MODEL PARAMETERS:

Model Type	F	Tabular
Depth	F	146 m
Half Width	F	109 m
Dip	F	75 deg
Susceptibility	F	0.00342 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701225 m
Cross Position	X	662110.2 m
Base Level	L	57811.15 nT
Base Slope	F	-0.0047951 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

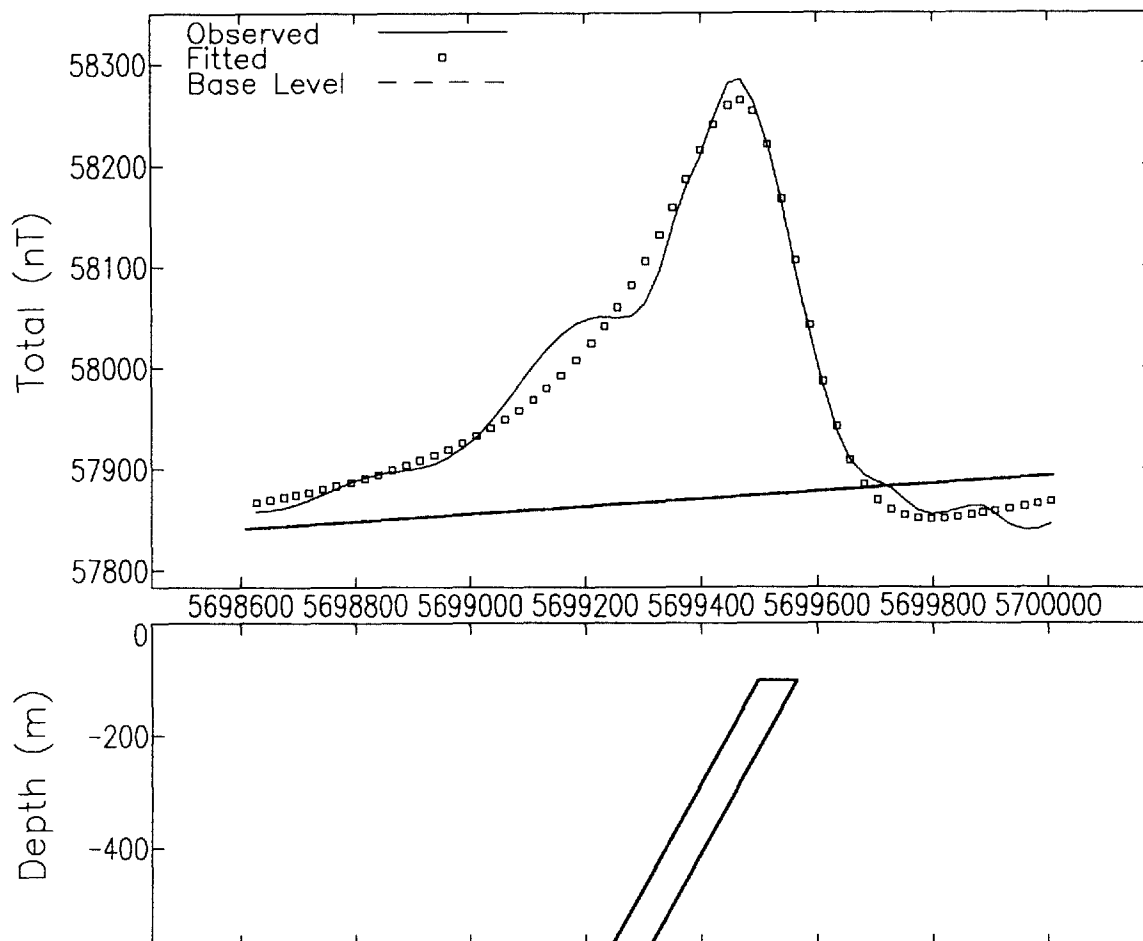
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	17 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 28

11802L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	102 m
Half Width	F	34.0 m
Half Length	X	300 m
Offset	X	50.0 m
Dip	F	119 deg
Thickness	F	1721 m
Susceptibility	F	0.0102 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5699532 m
Cross Position	X	662759.6 m
Base Level	F	57875.01 nT
Base Slope	F	.0364653 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

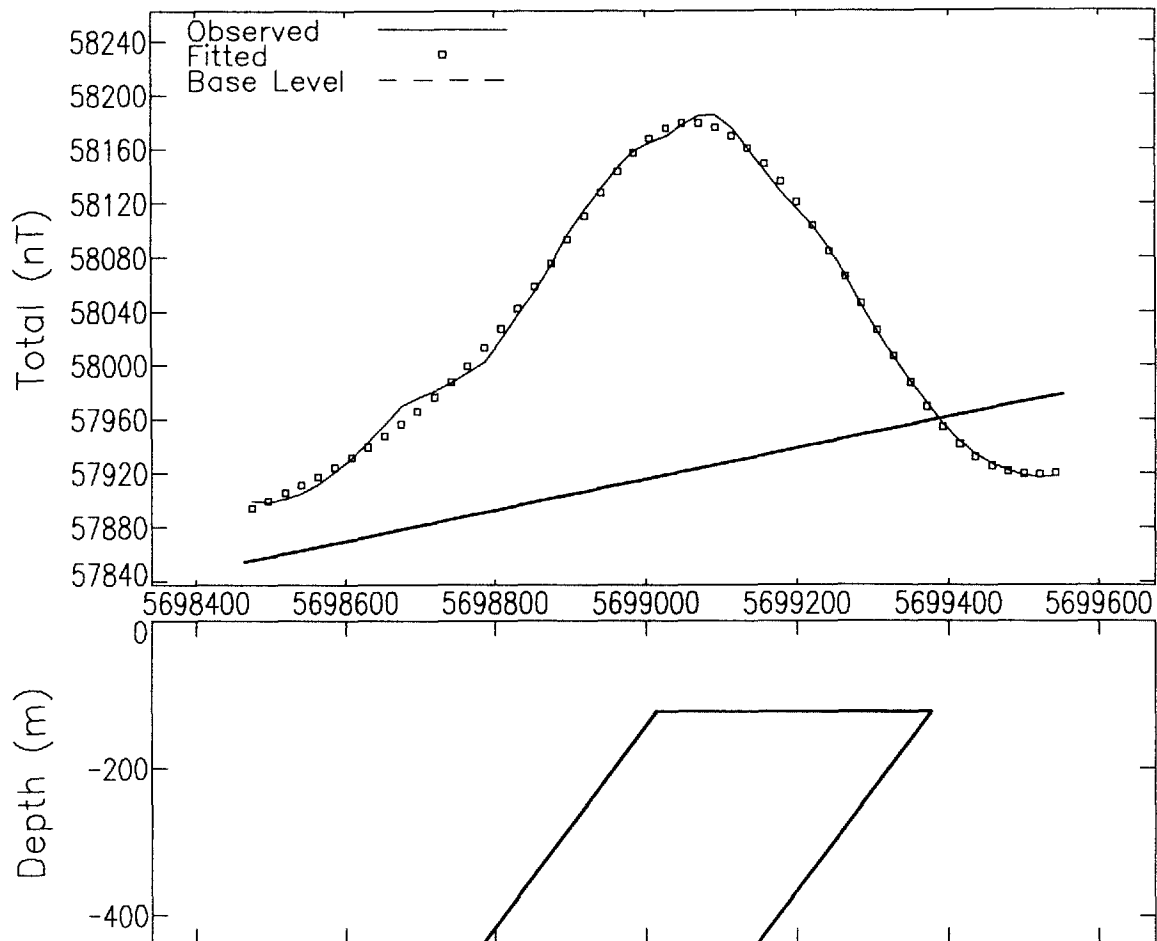
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	13 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 29

11512L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	123 m
Half Width	F	186 m
Half Length	X	475 m
Offset	X	-225 m
Dip	F	127 deg
Thickness	F	1174 m
Susceptibility	F	0.00229 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5699196 m
Cross Position	X	662069.9 m
Base Level	F	57937.98 nT
Base Slope	F	.1123489 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

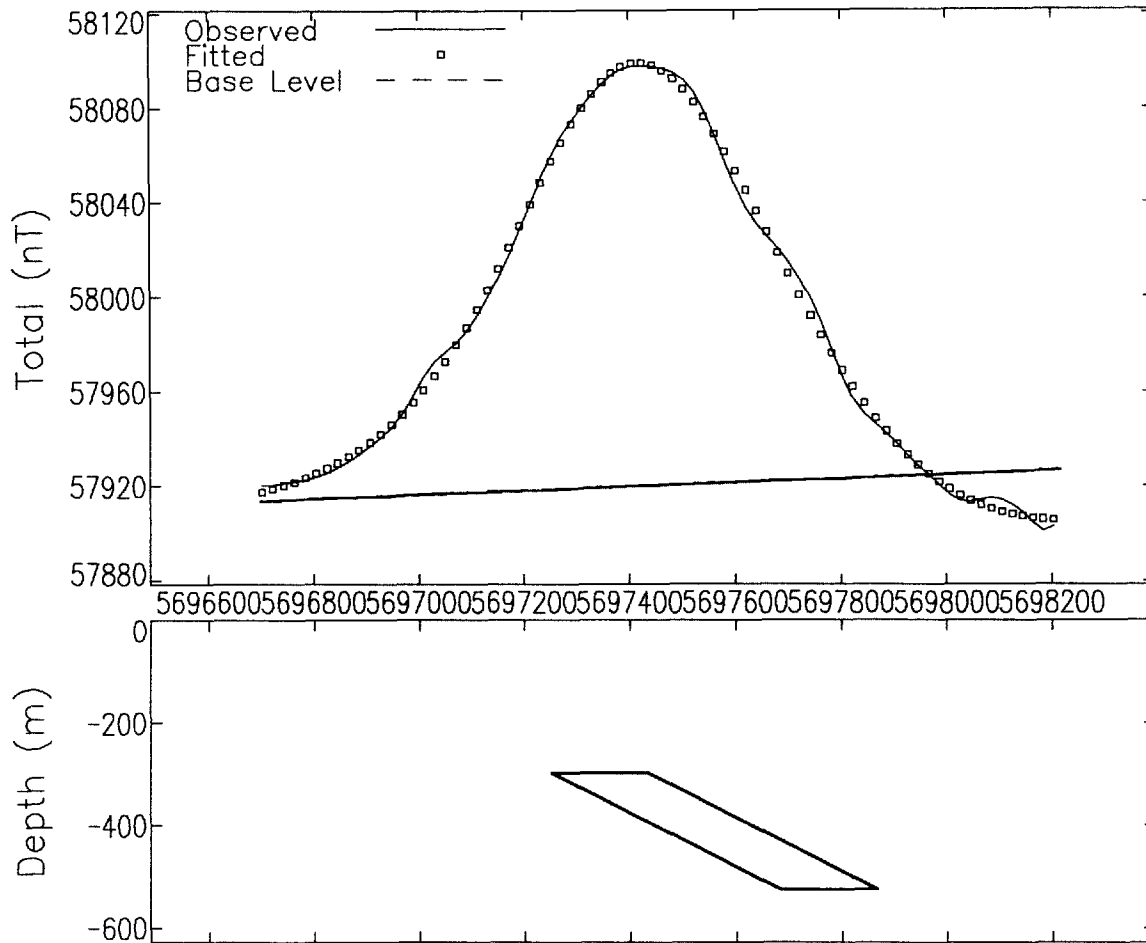
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	2 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 30

11711L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	298 m
Half Width	F	93.3 m
Half Length	X	800 m
Offset	X	50.0 m
Dip	F	27 deg
Thickness	F	228 m
Susceptibility	F	0.00833 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697343 m
Cross Position	X	662045.1 m
Base Level	F	57919.25 nT
Base Slope	F	.0082599 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

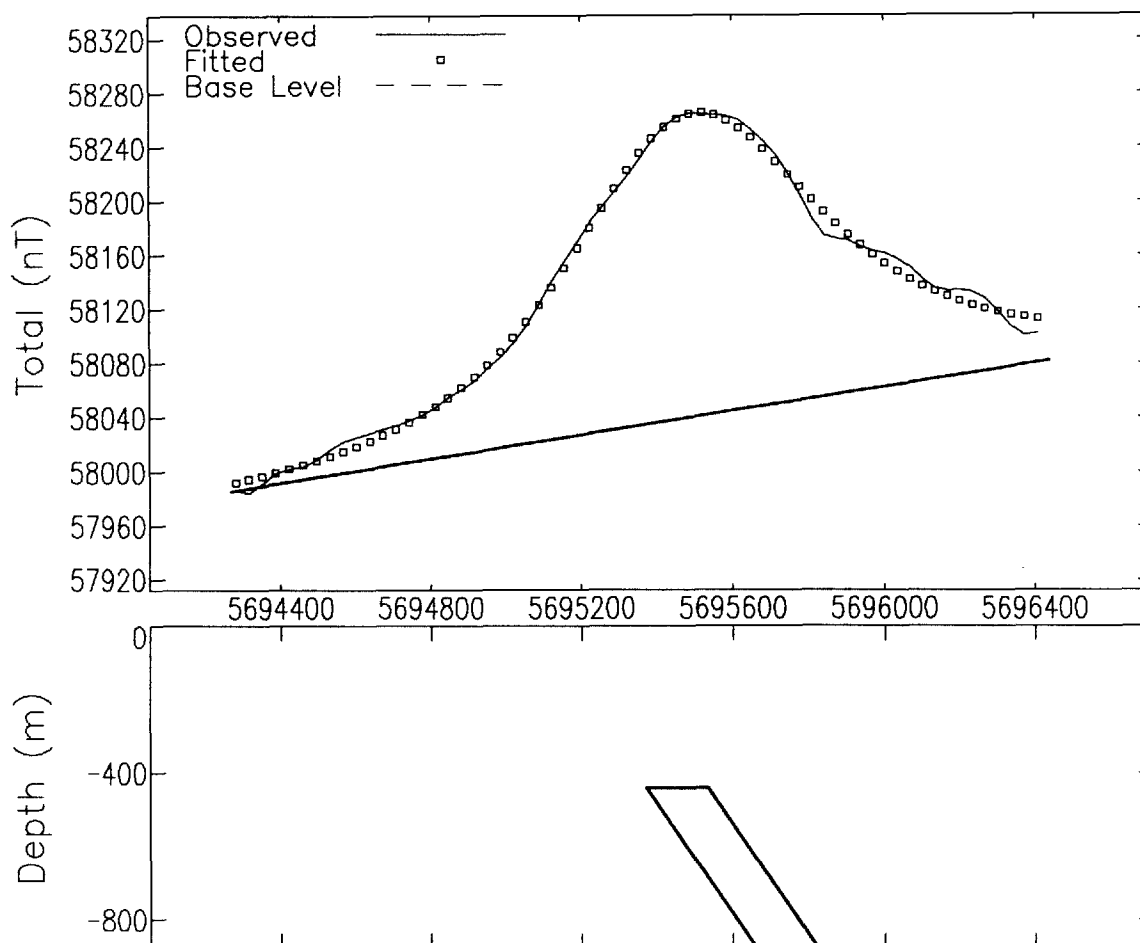
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	5 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 31

12701L 02 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	441 m
Half Width	F	83.0 m
Half Length	X	400 m
Offset	X	-50.0 m
Dip	F	56 deg
Thickness	F	2121 m
Susceptibility	F	0.0114 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5695452 m
Cross Position	X	663654.8 m
Base Level	F	58038.06 nT
Base Slope	F	.0429693 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

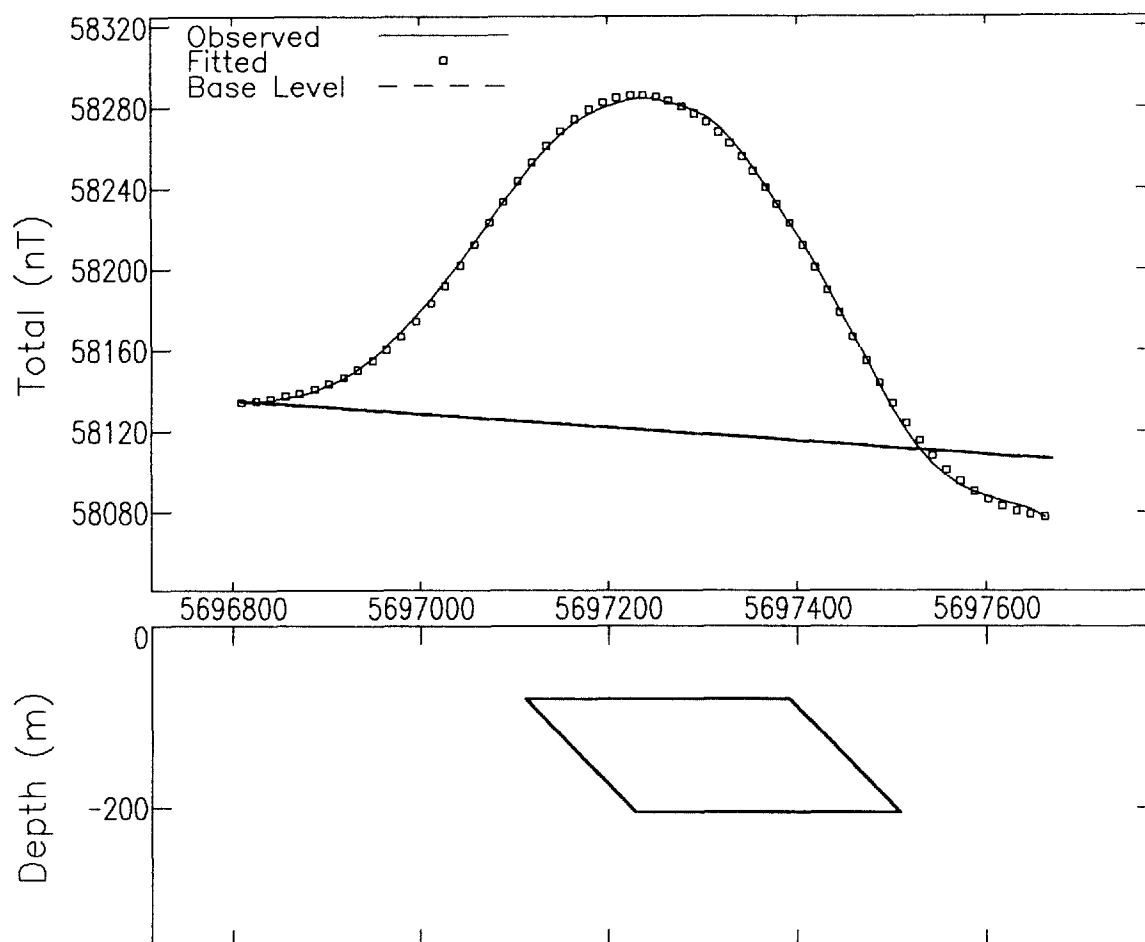
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	21 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 32

12701L 05



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	79.8 m
Half Width	F	144 m
Half Length	X	650 m
Offset	X	250 m
Dip	F	46 deg
Thickness	F	125 m
Susceptibility	F	0.00209 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697252 m
Cross Position	X	664061.9 m
Base Level	F	58120.16 nT
Base Slope	F	-.0322536 nT/m
Base Curvature	X	0 nT/m2

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

GEOMAGNETIC FIELD:

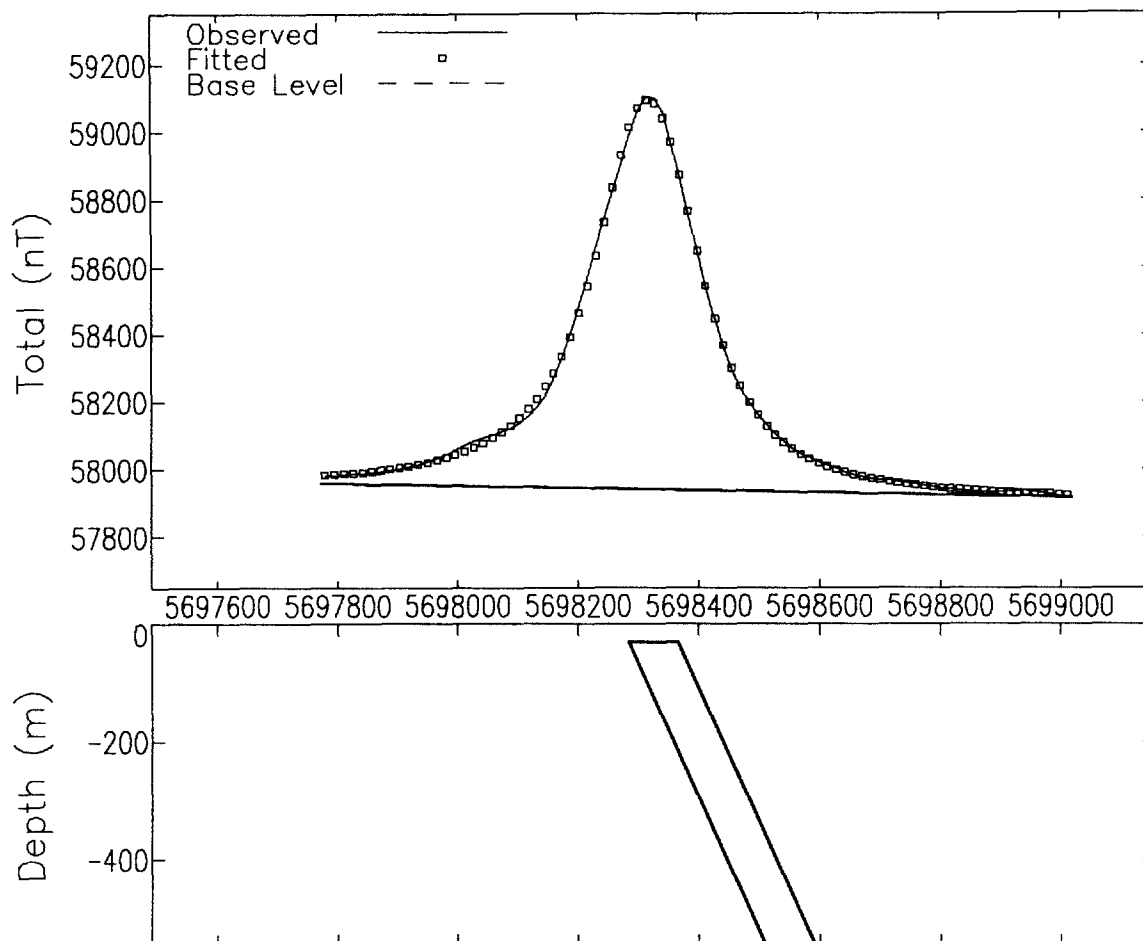
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	346 deg
Line Direction	27 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 33

13502L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	30.8 m
Half Width	F	41.5 m
Half Length	X	425 m
Offset	X	-25.0 m
Dip	F	66 deg
Thickness	F	12543 m
Susceptibility	F	0.0108 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5698325 m
Cross Position	X	665974.6 m
Base Level	F	57939.98 nT
Base Slope	F	-0.0343464 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

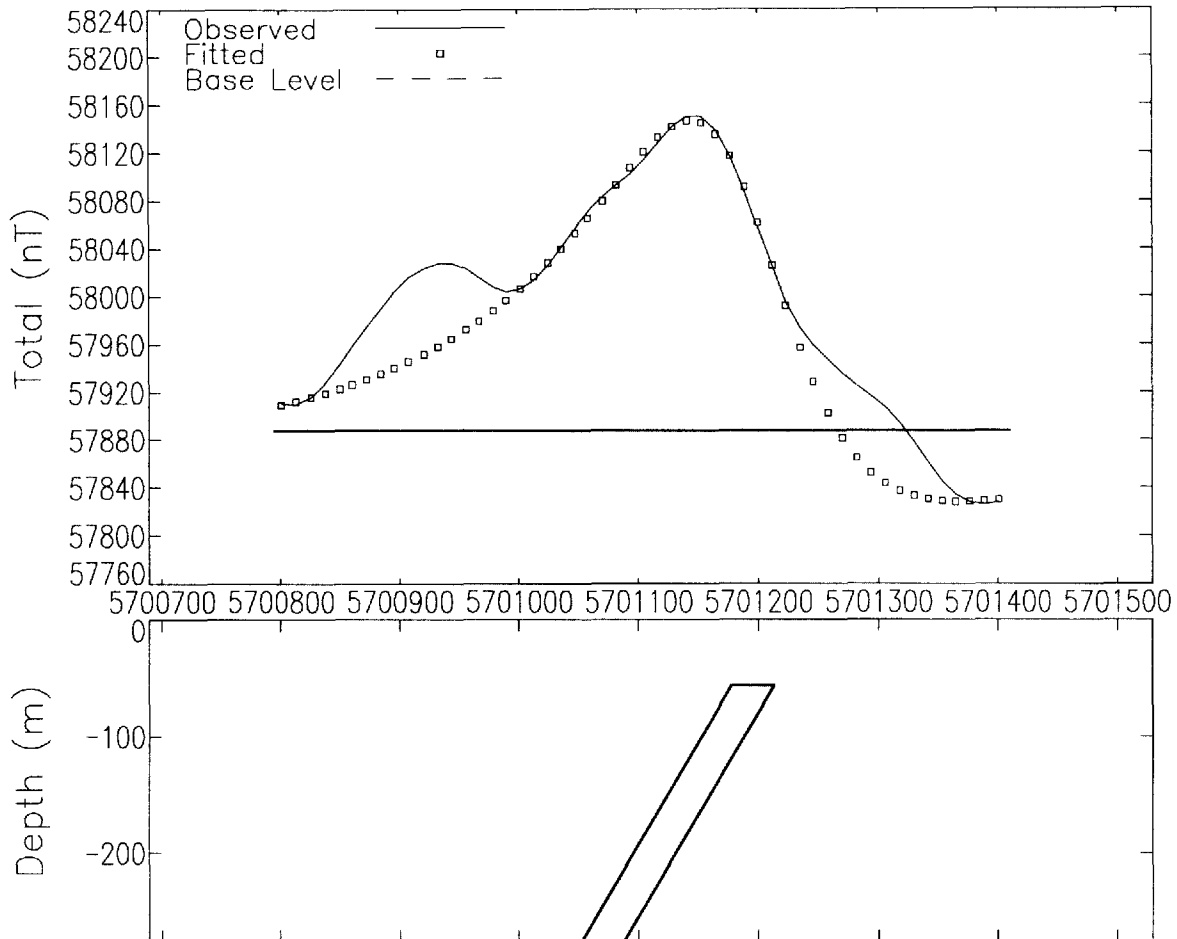
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	347 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 34

12901L 04



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	56.8 m
Half Width	F	18.1 m
Half Length	X	875 m
Offset	X	-200 m
Dip	F	120 deg
Thickness	F	348 m
Susceptibility	L	0.00986 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701196 m
Cross Position	X	665397.8 m
Base Level	F	57887.39 nT
Base Slope	L	-0.0010481 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

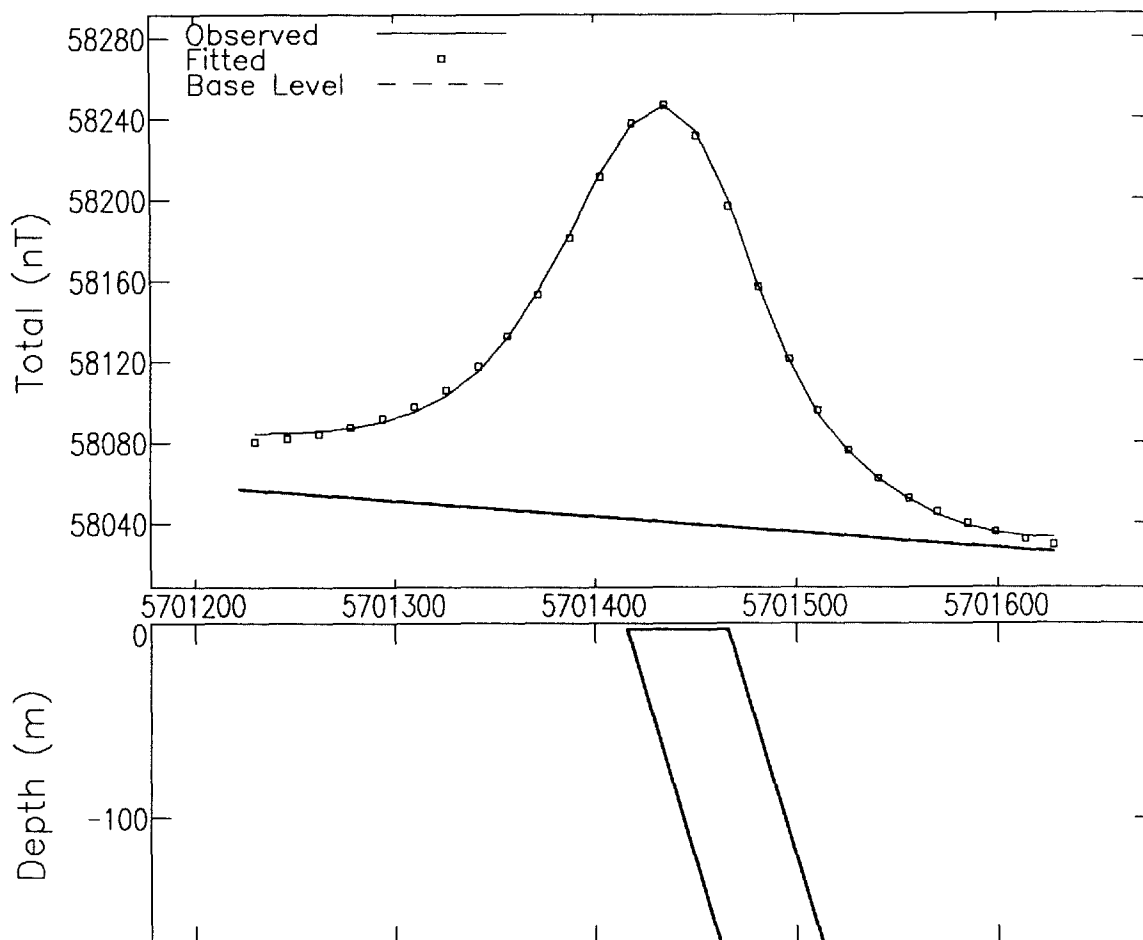
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	18 deg
Line Direction	24 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 35

15102L 01



MODEL PARAMETERS:

Model Type	L	Tabular
Depth	F	3.23 m
Half Width	F	26.2 m
Dip	F	73 deg
Susceptibility	F	0.00181 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5701441 m
Cross Position	X	669963.5 m
Base Level	F	58040.26 nT
Base Slope	F	-0.0748619 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

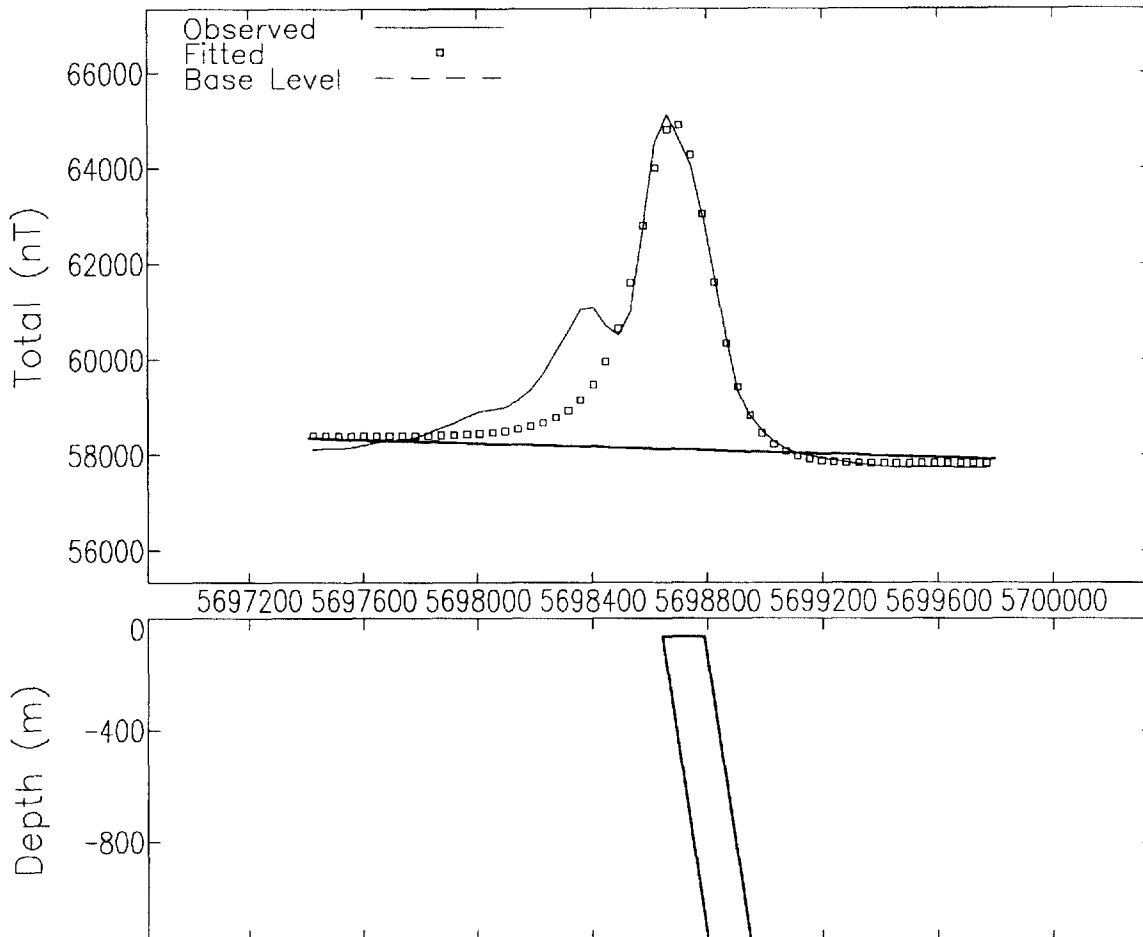
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	356 deg
Line Direction	27 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 36

14401L 03



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	65.1 m
Half Width	F	75.4 m
Half Length	X	500 m
Offset	X	-250 m
Dip	F	81 deg
Thickness	L	24020 m
Susceptibility	F	0.0545 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5698716 m
Cross Position	X	667893.4 m
Base Level	F	58110.33 nT
Base Slope	F	-0.1788248 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

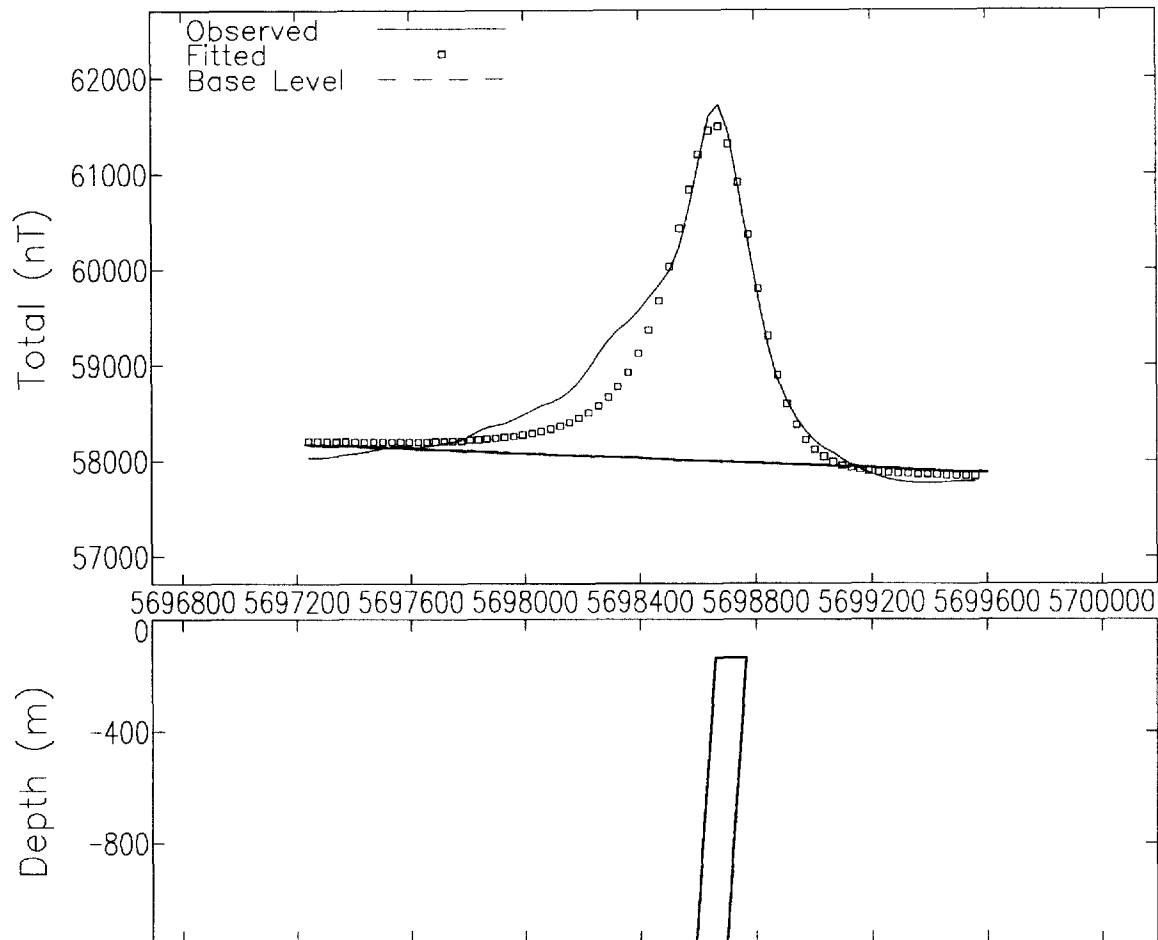
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	348 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 37

14702L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	137 m
Half Width	F	54.8 m
Half Length	X	175 m
Offset	X	25.0 m
Dip	F	94 deg
Thickness	L	23772 m
Susceptibility	F	0.0791 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5698713 m
Cross Position	X	668511.3 m
Base Level	F	57987.74 nT
Base Slope	F	-1219043 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

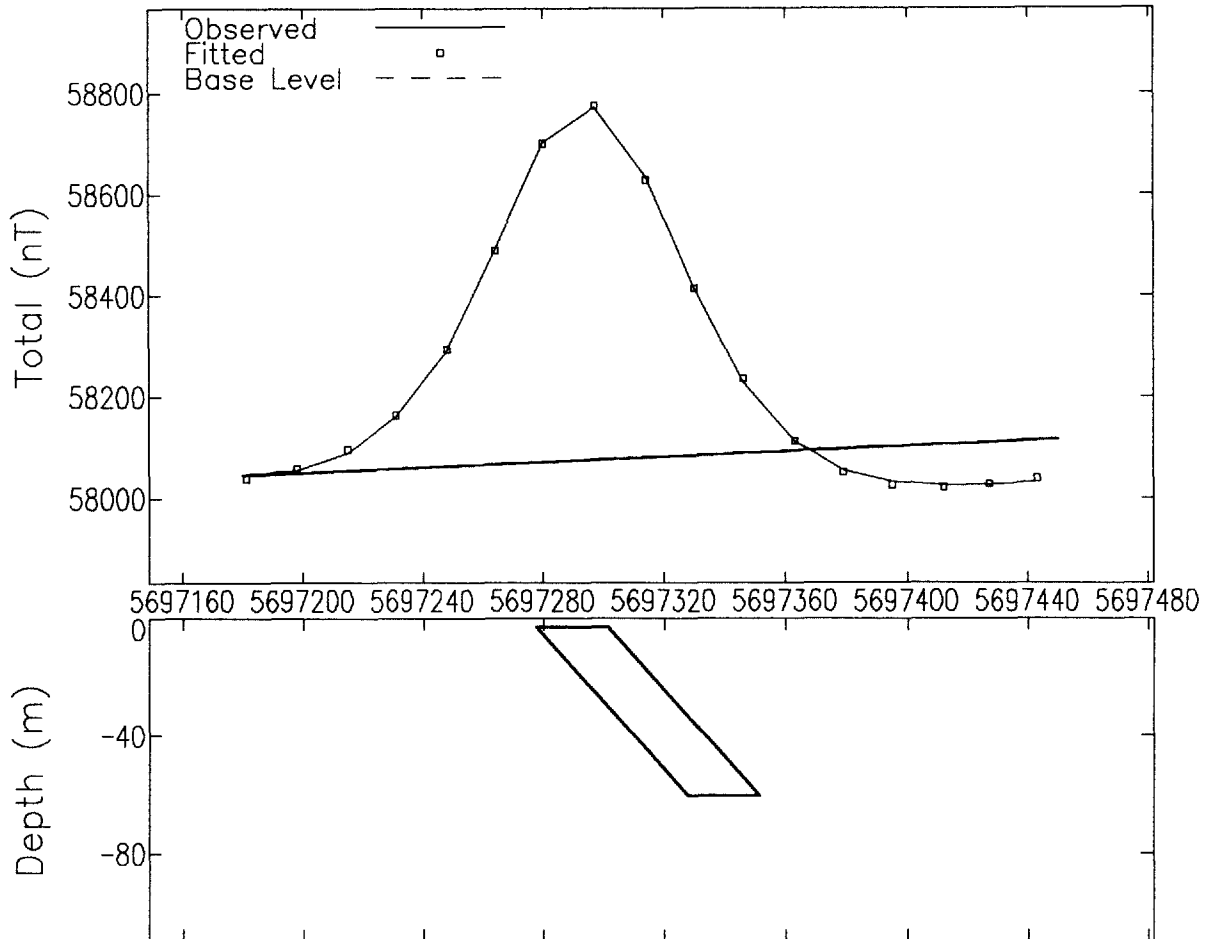
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	355 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 38

14801L 01



MODEL PARAMETERS:

Model Type	L	Tabular2
Depth	F	2.93 m
Half Width	F	12.0 m
Half Length	X	150 m
Offset	X	0 m
Dip	F	48 deg
Thickness	F	57.5 m
Susceptibility	F	0.0227 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697289 m
Cross Position	X	668388.6 m
Base Level	F	58073.46 nT
Base Slope	F	.2561676 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

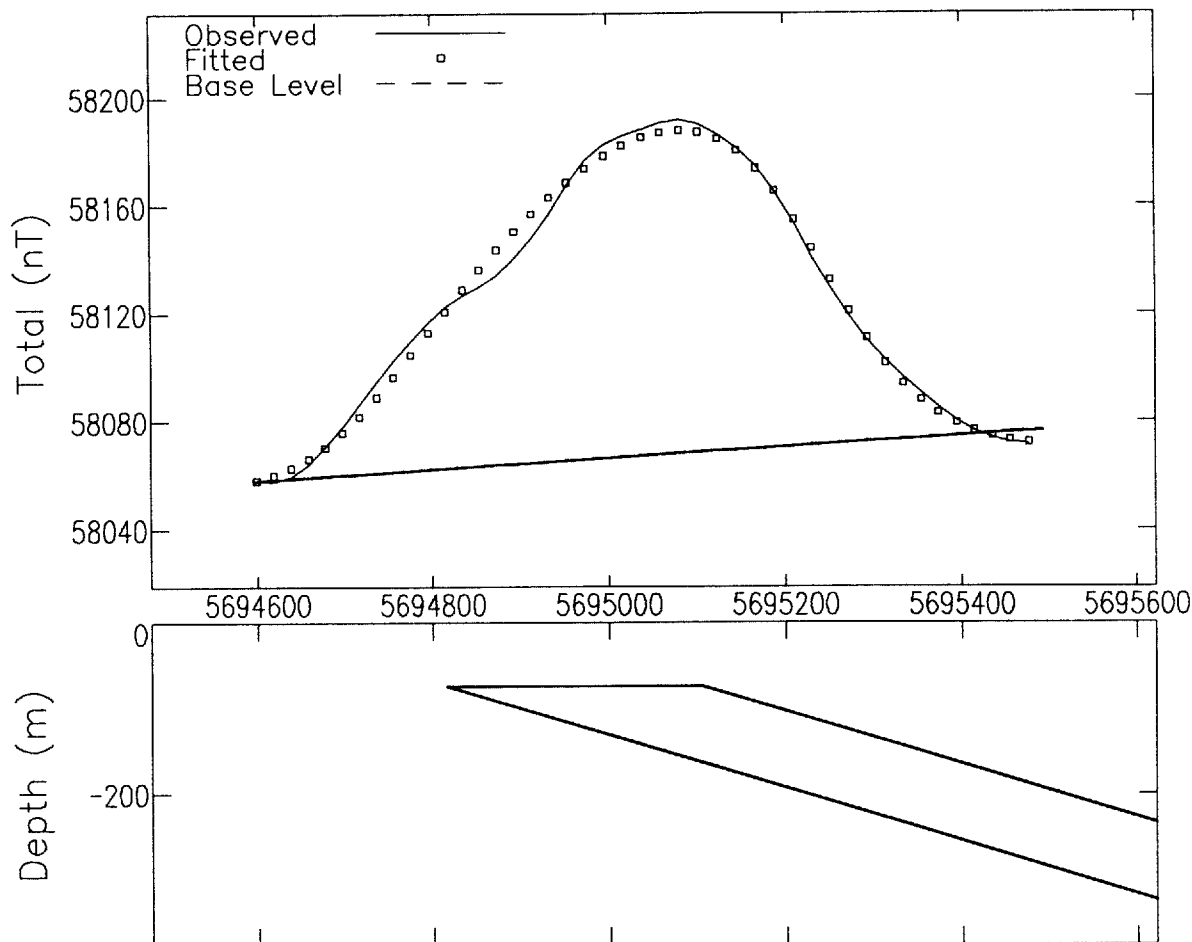
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	21 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 39

14302L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	74.2 m
Half Width	F	148 m
Half Length	X	250 m
Offset	X	0 m
Dip	F	17 deg
Thickness	F	869 m
Susceptibility	F	0.00177 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5694960 m
Cross Position	X	666839.3 m
Base Level	F	58065.59 nT
Base Slope	F	.0201243 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

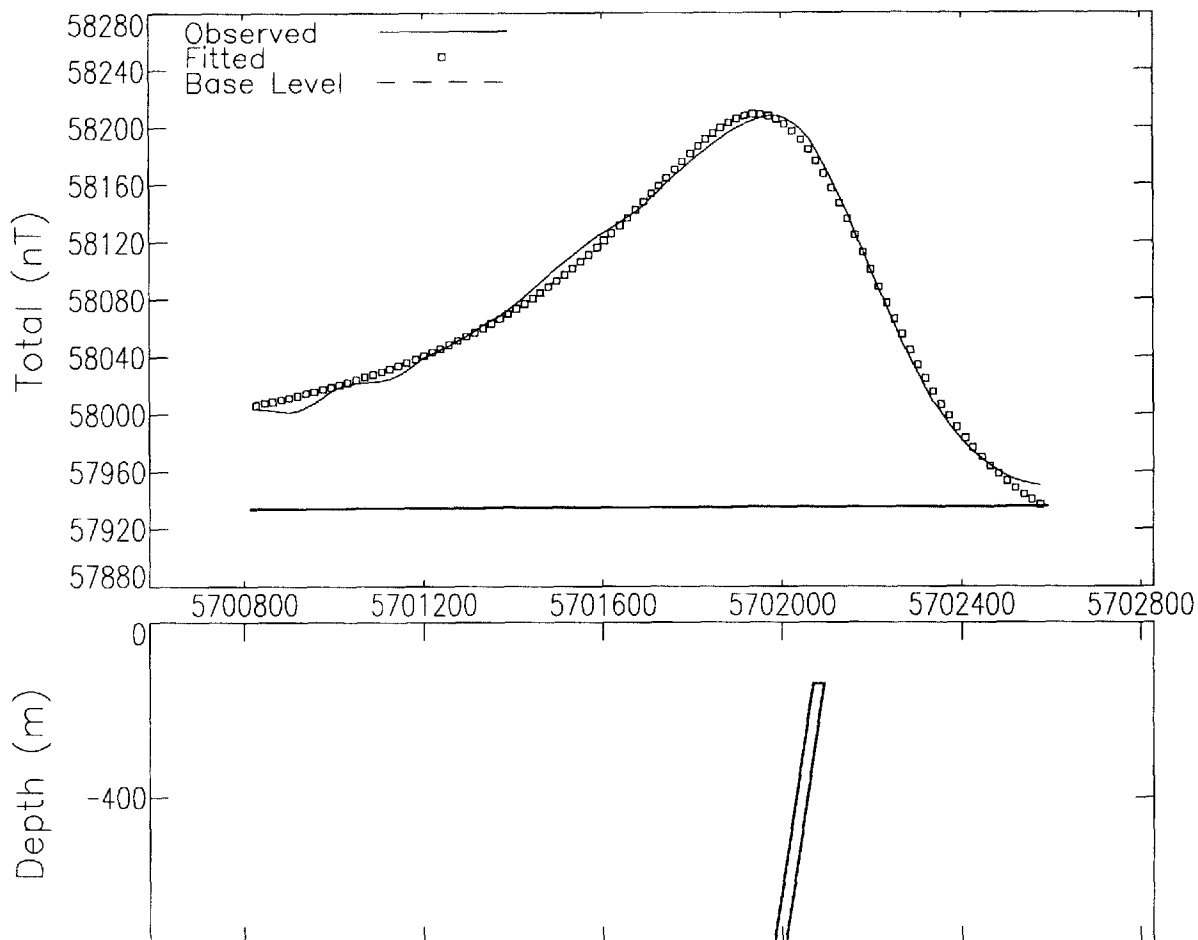
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	335 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 40

8101L 03



MODEL PARAMETERS:

Model Type	F	Tabular
Depth	F	140 m
Half Width	F	12.4 m
Dip	F	98 deg
Susceptibility	L	0.0198 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5702081 m
Cross Position	X	655732.8 m
Base Level	F	57935.27 nT
Base Slope	L	.0008579 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

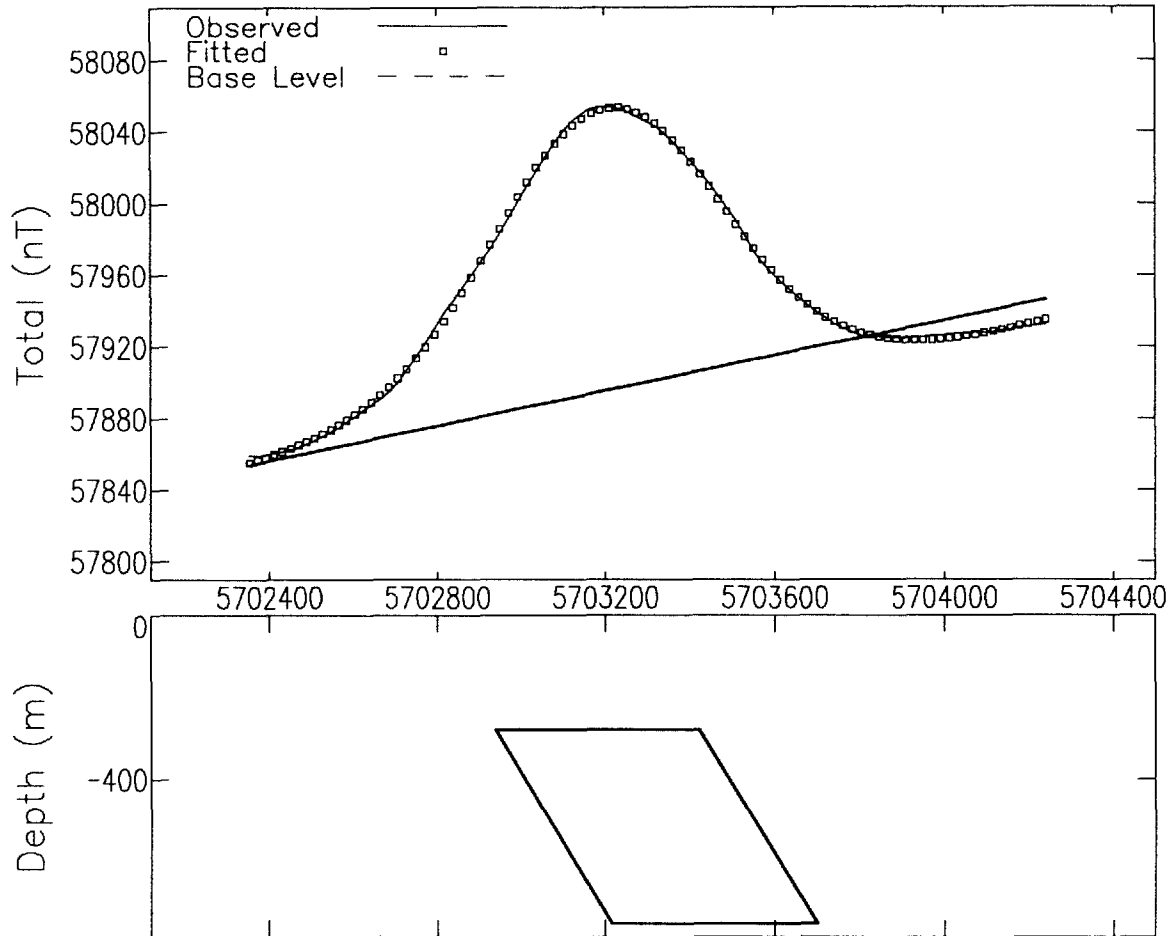
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	323 deg
Line Direction	25 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 41

7202L 02



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	280 m
Half Width	F	249 m
Half Length	X	500 m
Offset	X	-50.0 m
Dip	F	59 deg
Thickness	F	472 m
Susceptibility	F	0.00208 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5703180 m
Cross Position	X	654148 m
Base Level	F	57894.54 nT
Base Slope	F	.0476457 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

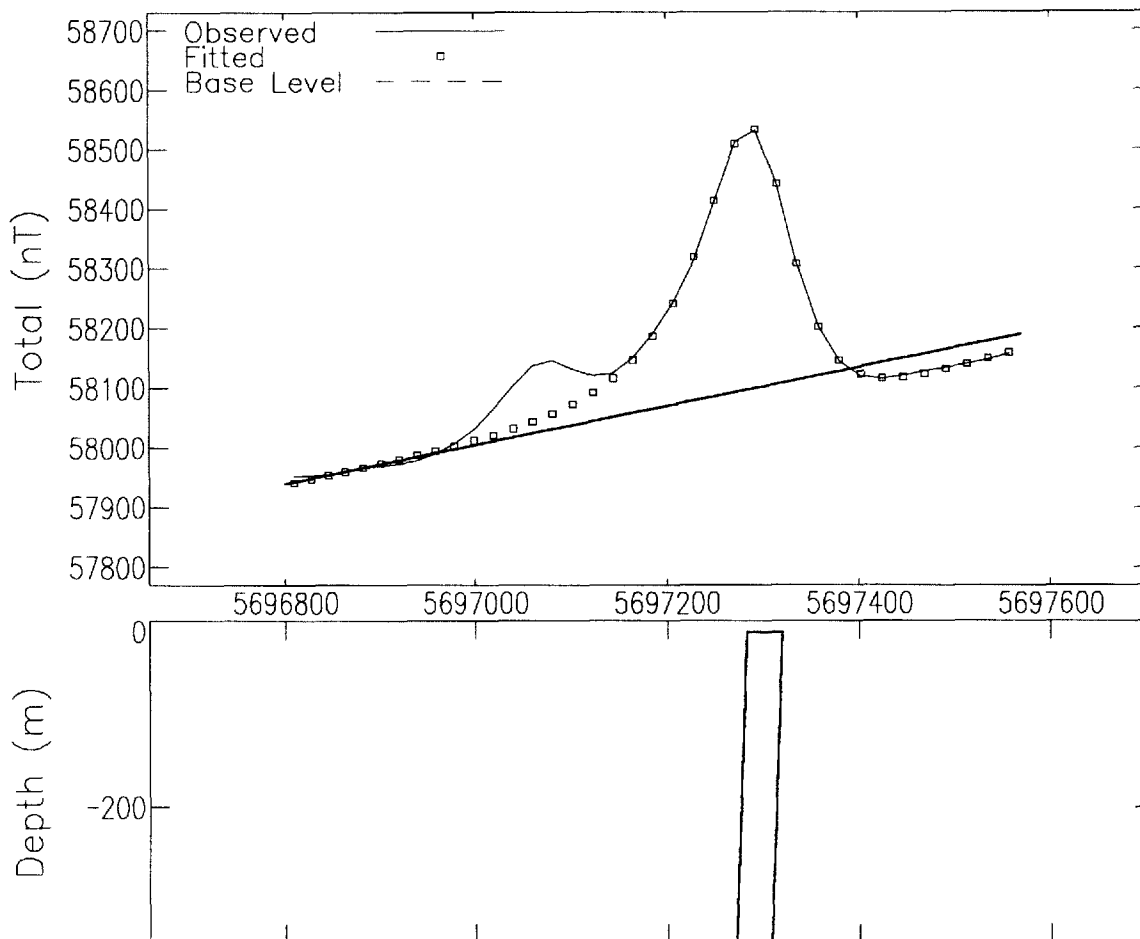
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	38 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 42

14401L 03



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	12.5 m
Half Width	F	19.0 m
Half Length	X	200 m
Offset	X	-50.0 m
Dip	F	92 deg
Thickness	F	392 m
Susceptibility	F	0.00685 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5697301 m
Cross Position	X	667567.4 m
Base Level	F	58102.02 nT
Base Slope	F	.3165625 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

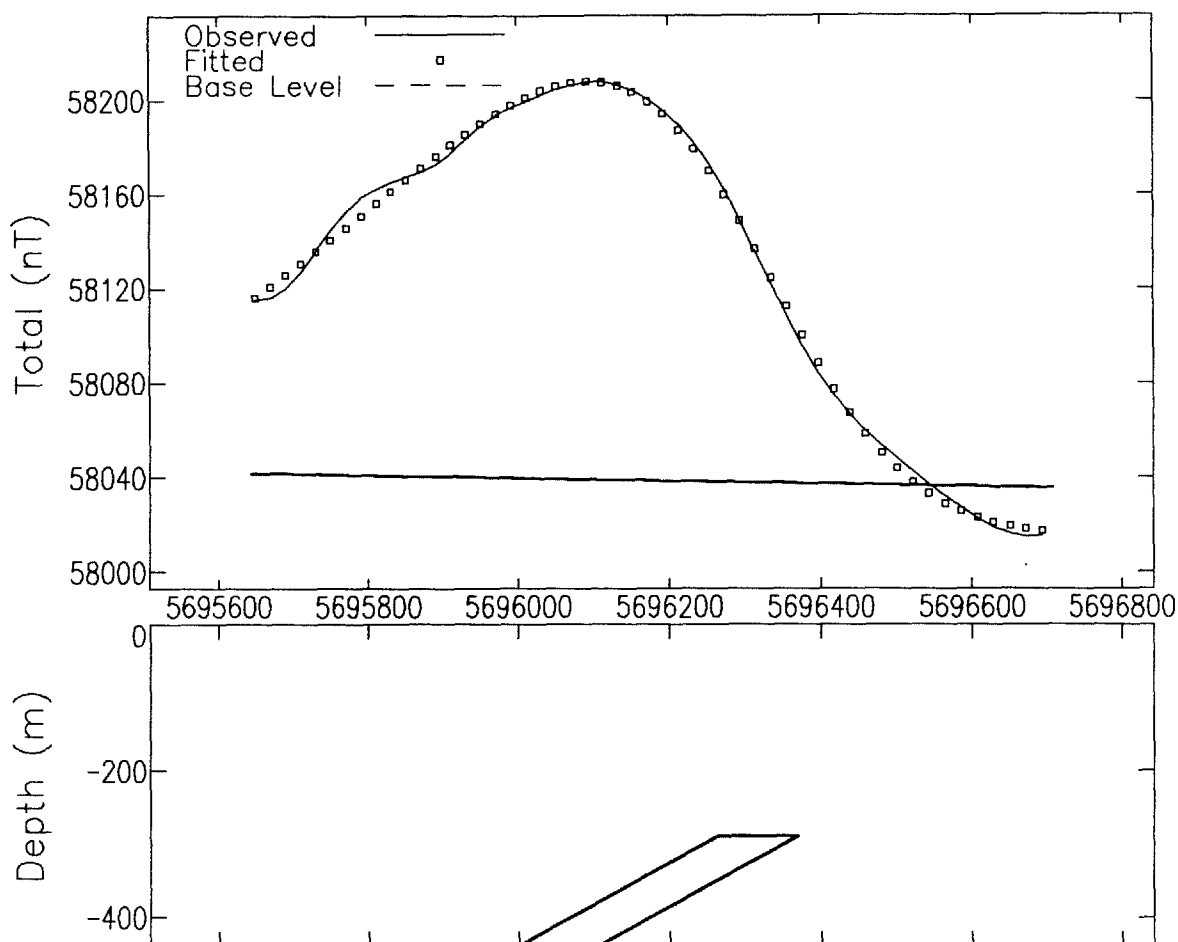
Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	10 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

Mistassini Model 43

13502L 01



MODEL PARAMETERS:

Model Type		Tabular2
Depth	F	290 m
Half Width	F	54.0 m
Half Length	X	375 m
Offset	X	25.0 m
Dip	F	151 deg
Thickness	F	364 m
Susceptibility	F	0.0128 emu
Remnance Ratio	X	0
Remnance Incl	X	0 deg
Remnance Decl	X	0 deg
Main Position	F	5696317 m
Cross Position	X	665513.3 m
Base Level	F	58037.73 nT
Base Slope	F	-0.0058334 nT/m
Base Curvature	X	0 nT/m ²

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

GEOMAGNETIC FIELD:

Field Strength	57500 nT
Inclination	75 deg
Declination	-21 deg

COORDINATES:

Sensor Height	42 m
Strike Perp	20 deg
Line Direction	26 deg
Main Direction	13 deg
Main Offset	
Cross Direction	103 deg
Cross Offset	

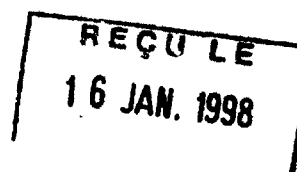


GM 55400

Programme d'exploration minière

du Moyen-Nord

Volet 2



Rapport d'exploration

Pour : INCO EXPLORATION

Projet : MISTASSINI

94 MN-01

SNRC : 32 P/03,06,07

Canton

Date : MARS 95