Aurora Platinum Corporation

Beep Mat - Aided Prospecting / Geological Mapping
And
Magnetometer / UTEM 3 Surveying
Of The
Rand Property

Claim No. 1242372, 1192778, 1192779
Foy & Bowell Townships
Sudbury Mining Division

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Exploration Geologist
June 12, 2003

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1. Introduction

The Rand property consists of a 624 ha claim block located along the North Range of the Sudbury Igneous Complex (Fig. 1). The eight (8) contiguous claims staked from August 31, 2000 to August 2, 2001 are held by Aurora Platinum Corporation of Vancouver, British Columbia. The location of the claims relative to the Foy Offset Dyke, the Main Mass of the SIC, an extensive Sudbury Breccia belt, and a prominent regional fault renders this ground highly prospective for the hosting of Ni – Cu sulphides.

The study area is lies along the southern (footwall) flank of the Foy Offset Dyke, approximately 5.5 km WNW of its mouth along the North Range of the Sudbury Igneous Complex (SIC). The property area is lithologically dominated by typical North Range footwall rocks consisting predominantly of Archean granites and gneisses with isolated metavolcanic / metasedimentary remnants. Claim #1192778 located within the northwestern portion of the property covers an ~ 325m strike-extension of the Foy Offset dyke. The SE – trending Crazy Creek Fault dissects the property with the Foy Offset exhibiting a ~ 350m left-lateral displacement along this regional structure.

This report encompasses the findings of beep mat – aided prospecting and 1:2,500 geological mapping programs geared towards the detection of Ni – Cu – PGM sulphides hosted within Sudbury breccia and splays / embayments emanating from the Foy Offset dyke. A surface UTEM 3 (Mag) survey, designed to detect sulphide mineralization to a depth of ~ 200m, blanketed the extensive WNW – trending Sudbury Breccia belt (~ 1.2 x 0.3 – 0.5 km) lying along the southern (footwall) flank of the Offset dyke. This geophysical work was conducted as part of a wider-scale program covering an extensive package of freehold patents controlled by Aurora Platinum Corp.

Systematic beep mat prospecting of the claims produced three (3) sulphide occurrences located at the eastern extremity of the Sudbury breccia belt developed within the northwestern portion of the Rand property. Similarly, the surface UTEM 3 survey detected a ~300m long, SE-trending, moderate to high conductance anomaly straddling the breccia belt's eastern extremity. This UTEM conductor correlates to a prominent AeroTEM anomaly trend (6 channel).

2. Location And Access

The property is located approximately 50 km north of the City of Sudbury, Ontario (Fig. 1). The claim block, straddling the Foy Twp / Bowell Twp boundary, is roughly centered at UTM 486,000mE and 5,175,800mN.

The study area can be accessed via the Pigeon Lake Road, a non-serviced gravel road emanating from the Nelson Lake Road approximately 6.5 km north of the Town of Val Therese, located along Highway 69 N (Regional Road 80). An ATV trail located along the Hydro transmission line, approximately 18 km up the Pigeon Lake Road, provides

final access to the property area. This WNW – trending ATV trail, following a wagon trail established between Nickel Lake and the Nickel Offsets Mine at the turn of the last century, dissects the northwestern extremity of the claim block at its approximately 6 km mark.

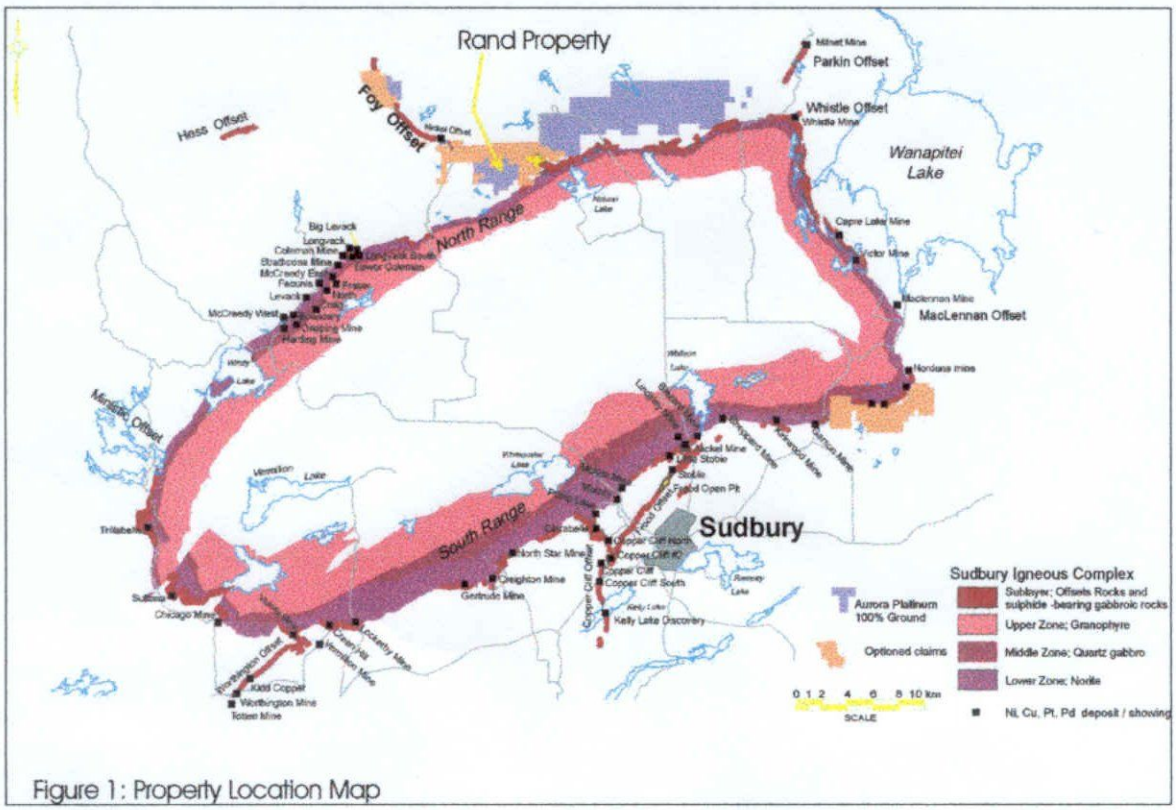


Figure 1: Property Location Map

3. Claim Status

The Rand property consists of a 624 ha claim block encompassing eight (8) contiguous claims (Figure 2) located in Foy and Bowell townships in the Sudbury Mining Division (G-Plan No. G-4049, G-4015). These claims staked from August 31, 2000 to August 2, 2001 (Table 1) are held by the Aurora Platinum Corporation residing at the following address: Suite # 1650, 701 West Georgia St, Vancouver, BC, V7Y 1C6.

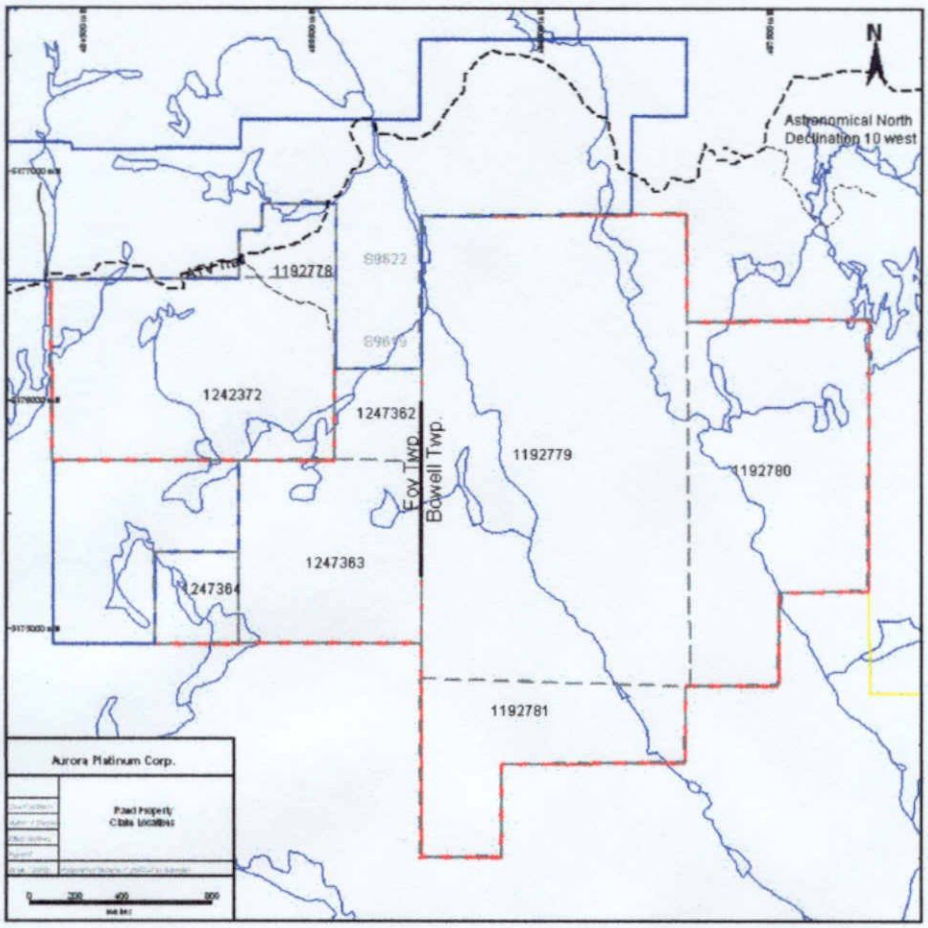
Table 1: Rand Project - Land Management Report

Claim No.	TWP	# Units	Area (ha)	Twp Description	Staking Date	Recording Date	Due Date	$ Due	$ Filed	$ Required
1192778	Foy	1	16	SW1/4, S1/2 Lot 1, Con3	Aug. 2 2001	Aug. 3 2001	Aug. 3 2003	400	0	400
1192779	Bowell	15	240	Pt. Of S1/2 Lot 11 & 10, Con 2 & 3	Aug. 2 2001	Aug. 7 2001	Aug. 7 2003	6,000	0	6,000
1192780	Bowell	7	112	N1/2 Lot 9, pt. Of S. Lot 9, Con 2	Aug. 2 2001	Aug. 7 2001	Aug. 7 2003	2,800	0	2,800
1192781	Bowell	4	64	NE & NW 1/4, N1/2 of Lot 10 et al, Con 1	Aug. 2 2001	Aug. 7 2001	Aug. 7 2003	1,600	0	1,600
1242372	Foy	6	96	N 1/2 Lot 2, Con 2	June 4 2001	June 22 2001	June 22 2003	2,400	0	2,400
1247362	Foy	1	16	SE1/4, N1/2 Lot 1, Con 2	Aug. 31 2000	Sept. 11 2000	Sept. 11 2004	0	800	0
1247363	Foy	4	64	S1/2 Lot 1, Con 2	Aug. 31 2000	Sept. 11 2000	Sept. 11 2004	0	3,200	0
1247364	Foy	1	16	SE1/4, S1/2 Lot 2, Con 2	Aug. 31 2000	Sept. 11 2000	Sept. 11 2004	0	800	0
8 claims		**39 Units**	**624 ha**			**Assessment Due:**		**$13,200**		**$13,200**

4. Exploration History

Although the study area has been repeatedly staked over the years based on its proximity to the Foy Offset Dyke, no field evidence of physical work (sampling, trenching) was observed during the course of the beep mat prospecting / geological mapping program. Similarly, a search of the assessment work files yielded only limited exploration activity restricted to the north central portion of the claim block (#1242372, #1192778). The bulk of the reported exploration work within the general property area applies to the Foy Offset dyke lying along the claim block's northern flank and the North Range of the Sudbury Igneous Complex located ~1.5 km south of the property.

A Geoterrex AEM survey flown by Wallbridge Mining in 1998 produced a strong response along the northeastern perimeter of claim #1242372. Ground follow-up with HLEM (Max-Min) and Pulse EM surveys confirmed this AEM anomaly in the form of an ~80m x 120m, roughly circular conductor lying ~ 40m below surface. Wallbridge drill tested this flat-lying conductive body with a 62m vertical borehole in October 1999 (Map 1). DDH #WMF-01 intersected an ~4.65m mineralized interval, characterized by 10 – 15% sulphides consisting predominantly of pyrrhotite with subordinate pyrite, hosted within gneissic quartz monzonite at a depth of 32.85 m.



A diamond drill hole (462m) was collared along the footwall flank of the Offset dyke within the central portion of claim #1192778 by Inco Exploration and Technical Services in September 1990 (DDH #855550). This north trending borehole (-43°) was designed to test a weak - moderate IP response with corresponding mild Mag High and moderate VLF conductor lying along the Foy Offset. The borehole yielded no economically significant sulphide mineralization and/or apparent explanation for the geophysical anomalies.

The study area was covered, as part of a regional scale survey, by an AeroTEM / Mag survey (100m line-spacing) flown for Aurora Platinum in November 2000 by Aeroquest Limited. This survey yielded a strong, two-line, ESE – trending conductor (6 channel) lying along the eastern margin of claim #1242372 (Map 1). The AeroTEM survey also produced two weak – moderate (2 – 4 channel), single-line anomalies within the central portion of claim #1192779.

5. Regional Geology

The study area lies along the southern (footwall) flank of the Foy Offset Dyke, approximately 5.5 km WNW of its mouth along the North Range of the Sudbury Igneous Complex (Figures 1 & 3). The claim block is located approximately 1.5 km north of the Main Mass contact of the Sudbury Igneous Complex (SIC).

The Early Proterozoic SIC (1850 Ma) lies at the present boundary between the Archean Superior Province and the Proterozoic Southern Province. In plan view the SIC is characterized by a NW – trending ellipse measuring approximately 27 km by 60 km in size. The Main Mass of the SIC consists of norite, quartz diorite, and granophyre, while Sublayer forms the base of the complex. Two breccia types are related to the genesis of the Sudbury Structure; the Footwall Breccia, also known as late granite breccia, lying at the SIC's lower contact, and the Sudbury Breccias or pseudotachylites, which are widespread in occurrence and present up to 80 km from the SIC. The footwall rocks along the northern flank of the SIC consist predominantly of Archean granites and gneisses with isolated metavolcanic / metasedimentary remnants. Mixing of said metavolcanics / metasediments has resulted in a variety of migmatites and hybrid gneisses.

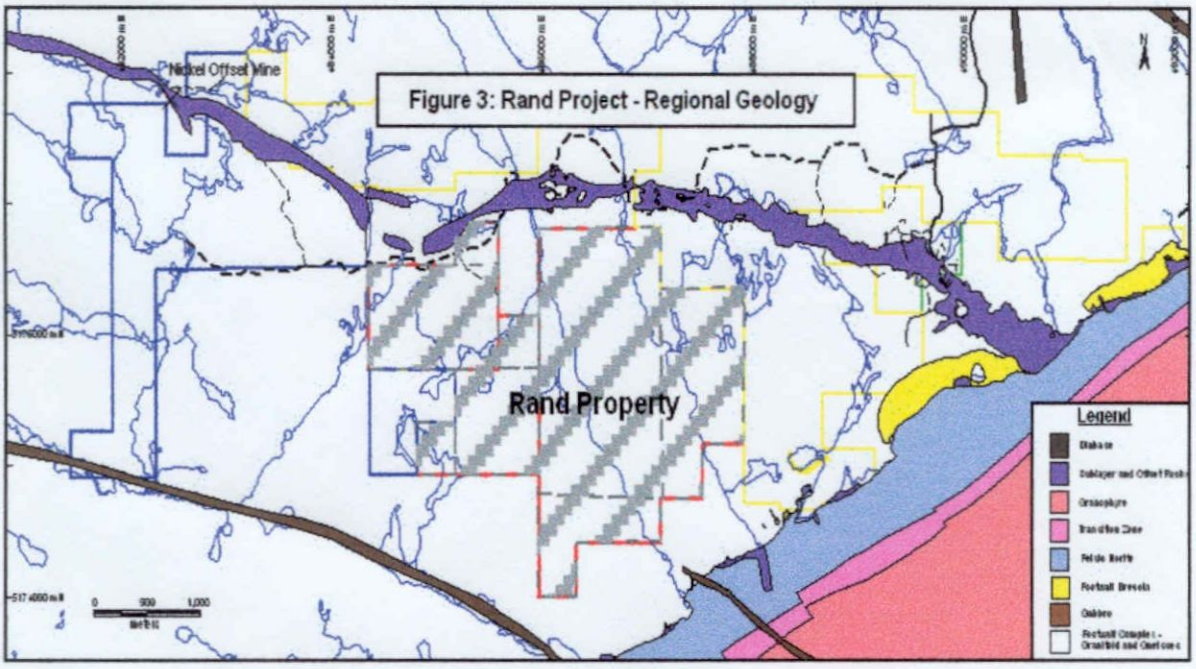


Figure 3: Rand Project - Regional Geology

The Sublayer can occur along the Main Mass / footwall contact where it is known as Contact Sublayer or as dykes intruding the footwall rocks known as Offset Dykes. Offset dykes can either emanate radially from the SIC (i.e.. Foy Offset) or lie concentrically along the margins of the SIC (i.e.. Manchester Offset). Offset dykes tend to have been emplaced along pre-existing Sudbury Breccia corridors / belts. The Contact Sublayer and Offset Dykes consist of gabbro to quartz diorite and are typically characterized by a variety of footwall derived inclusions and sulphide mineralization. The Contact Sublayer and Offset Dykes host much of the Ni – Cu orebodies of the Sudbury Camp but sulphide ores may also occur within Footwall Breccia and footwall rocks.

6. Property Geology

The following property geology description is based on 1:2,500 scale geological mapping; the author's geological knowledge of the property area based on working continuously in the area since August 2000; and published geological information. The geological mapping was implemented over an approximately 112 ha area encompassing claim #1192778 and the eastern and western portions of claims #1242372 and #1192779, respectively. The 1:2,500 mapping was conducted from August 20 – 24, 2001 by geologist Harold Tracanelli (P.O. Box 122, Onaping, Ontario), with assistance from geology student Monica Proudfoot.

The Rand claim block lies along the southern (footwall) flank of the Foy Offset Dyke, approximately 5.5 km WNW of its mouth along the North Range of the Sudbury Igneous Complex (Fig. 3). The property area is lithologically dominated by typical North Range footwall rocks consisting predominantly of Archean granites, migmatites, and gneisses with isolated metavolcanic / metasedimentary remnants. Claim #1192778 located within the northwestern portion of the property covers an ~ 325m strike-extension of the Foy Offset dyke (Map 1). An extensive WNW – trending Sudbury Breccia belt (~ 1.2 x 0.3 – 0.5 km) is developed along the footwall flank of the Offset dyke at this locality. The SE – trending Crazy Creek Fault dissects the property with the Foy Offset exhibiting a ~ 350m left-lateral displacement along this regional structure.

The Rand property is topographically characterized by hilly terrain with a maximum relief of ~75m and an average elevation of ~400m above sea level. The hills are separated by glacial drift covered valleys controlled by the SE-trending, regional Crazy Creek and Rand Creek faults. The hills are characterized by boulder – laden, hummocky ground characterized by 10% – 15% outcrop and the valleys by extensive sand flats / boulder fields providing < 5% outcrop exposure. Vegetation consist of jack pine, white pine, poplar, and maple along the ridges / sand flats and spruce, balsam, and alder in the lower swampy ground.

Table 5: Table Of Lithologic Units

CENOZOIC
- Pleistocene and Recent
  - Sand, gravel, boulders

PRECAMBRIAN
- Middle Proterozoic
  - Late Mafic Intrusive Rocks
    - Diabase, olivine diabase
- Early Proterozoic
  - Sudbury Igneous Complex
    - Foy Offset Dyke
      - Inclusion and sulphide – bearing quartz diorite
    - Sudbury Breccia
      - Pseudotachylite veins / bodies
  - Nipissing Intrusive Rocks
    - Gabbro, metagabbro (diabase)
- Archean (Superior Province)
  - Matachewan Intrusive Rocks
    - diabase, glomeroporphyritic diabase
  - Mafic Plutonic Rocks
    - gabbro, pyroxenite, anorthosite
  - Migmatites And Felsic Plutonic Rocks
    - Migmatites containing over 30% granitic mobilizate
    - Medium – coarse grained, equigranular to porphyritic quartz monzonite, granodiorite, and granite
  - Levack Gneiss Complex
    - Hornblende – plagioclase – quartz gneisses of granodiorite composition

The study area is primarily underlain by typical North Range footwall rocks consisting predominantly of Archean granites and migmatites with subordinate gneisses of granodioritic composition and isolated, small metavolcanic / metasedimentary remnants.

Mixing of said metavolcanics / metasediments has resulted in a variety of migmatites and hybrid gneisses.
The claims are lithologically dominated by highly heterogeneous, medium – coarse grained, weak – moderate semi-pervasively magnetic, gneissic granitoids of primarily quartz-monzonitic composition with subordinate granodioritic, granitic and tonolitic material. Granitoids range in fabric from moderately – strongly foliated to gneissic to migmatitic. Granitoids exhibiting better-developed gneissic fabric tend to exhibit stronger mafic component and/or melanocratic clots resulting in stronger magnetic susceptibilities. Foliation / gneissic fabric is relatively irregular in attitude but most commonly subhorizontal in nature. Granitoids encompass sporadic – 5%, locally 10-15%, dark grey, medium – fine grained, dioritic gneiss and/or amphibolitic xenoliths ranging from 5cm to 5m in diameter. Migmatitic material exhibits 10% – 40%, coarse grained to pegmatitic, quartzo-feldspathic mobilizate (neosome) occurring as irregular patches, foliation-concordant bands, and cross-cutting veins. Said veining commonly encompasses host fragments and/or exhibits ptygmatic folding. The granitoids are intruded by sporadic granite pegmatite dykes / pods and aplite dykes.

Claim #1192778 located within the northwestern portion of the property covers an ~ 325m strike-extension of the Foy Offset dyke. The ESE – trending Offset dyke ranges from ~110m – 160m in width and dips steeply (75° – 80°) to the north at this locality. The Offset dyke at this locality is characterized by medium – dark gray, fine – medium grained, inclusion-bearing amphibole (biotite) quartz diorite (IQD) encompassing 5% - 30%, locally up to 50% - 70%, predominantly granitoid / feldspathic inclusions with subordinate gneissic / diabase material and isolated coarse grained pyroxenitic inclusions. Inclusions average 0.5 – 5.0cm in diameter but inclusions in the 10 – 30cm diameter range common and mega-inclusions reaching up to 7m in diameter sporadically dispersed throughout the unit. In terms of thermal alteration / texture, inclusions range from fresh with sharp / regular contacts to fresh but thermally disaggregated in nature to moderately digested / assimilated with diffuse margins. Quartz diorite matrix component generally non-magnetic to weak semi-pervasively magnetic but IQD unit as a whole exhibits moderate – strong sporadic / patchy magnetism reflecting the variable magnetic susceptibilities of the inclusion population and the typical presence of trace – 1% disseminated / blebby pyrrhotite.

A swarm of NNE to NE - trending diabase dykes dissects the property area. These dykes, ranging from a few meters to 40m in width, appear for the most to reflect the Nipissing swarm but isolated glomeroporphyritic diabase dykes of probable Matachewan alliance also present. All dykes are crosscut by Sudbury Breccia veining (pseudotachylite) indicating that they pre-date the Sudbury Event.

The SE – trending Crazy Creek Fault dissects the property, with the Foy Offset exhibiting a ~ 350m left-lateral displacement along this regional structure. Within the study area said fault manifests itself in the form of a steep-sided, fault scarp – bounded, glacial drift – filled valley reaching 400m in width. A small stock of medium to coarse-grained gabbro / pyroxenite is spatially associated with the Crazy Creek fault at the northwestern extremity of claim #1192779.

7. Field Program Methodology

A beep mat - aided prospecting program was implemented in an intermittent fashion from June 24 to August 22, 2001 on claims # 1242372, # 1192778, and # 1192779. This fieldwork was conducted as part of a wider-scale program covering an extensive package of mining claims and freehold patents controlled by Aurora Platinum Corp. The fieldwork was conducted by geology students Jim Young (J-Y), Mike Hockins (M-H), Mike Fell (M-F), and John Livingstone (J-L) under the supervision of project geologist Yves Clement (1988 Kingsway, Sudbury, Ontario). A total of 34 geo-assistant days and 1 geologist-day were spent on the implementation of this beep mat-prospecting program.

The claims in question were also subjected to 1:2,500 geological mapping by geologist Harold Tracanelli (P.O. Box 122, Onaping, Ontario) and geo-assistant Monica Proudfoot from August 20 – 24, 2001 (9 man-days). All fieldwork was staged - out of a field camp established at Nickel Lake located in south-central Bowell Township.

The following sections elaborate on the methodology of the exploration program which included gridding, beep-mat prospecting, conductor detailing / sampling, and geological mapping / traditional prospecting phases. A detailed activity / manpower breakdown is presented in Appendix A and cost per activity and value of work per claim breakdowns are provided in Appendix G.

7.1 Control Grid

Control for the beep-mat prospecting and 1:2,500 geological mapping was provided through the establishment of a compass / hip-chain grid. A total of ~ 26.8 line-km of flagged, N-S trending gridlines were established at 100m spacing on the claims in question (Appendix A). Horizontal control was provided in the form of hip-chaining with labeled flag stations at 25m spacing. The gridlines were also blazed / spray-painted to ensure future localization and systematically GPS surveyed to provide optimal control. Grid implementation encompassed a total of five 12 geo-assistant days.

7.2 Beep Mat - Aided Prospecting

The beep mat prospecting program, covering an approximately 272 ha area, encompasses claims #1242372 and #1192778 and the western two-thirds of claim #1192779. The study area was systematically beep mat prospected by geo-assistants utilizing Model $BM4^{+}$ beep mats manufactured by Instrumentation GDD (Map 1). The Beep Mat is a portable electromagnetic survey instrument capable of detecting conductive / magnetic subcroppings / floats buried under up to 3m of overburden. Refer to Appendix F for theoretical / technical information pertaining to the Beep Mat instrument.

The claims in question were covered by a total of ~ 54.3 line-km of beep mat prospecting (Appendix A). This total includes ~ 27.6 km of beep-matting along the established gridlines and ~26.7 km of beep mat prospecting conducted utilizing pace and compass traverses located approximately half-way (50m) between the flagged gridlines. Although the beep-mat surveying utilized the flagged gridlines / compass traverses as control, the actual prospecting was not restricted to said lines / traverses with the beep matting typically being conducted in a serpentine pattern centred along the control lines. In areas of low relief / swampy ground prospecting focused on boulder fields and/or outcroppings distal to the control lines. This beep-mat prospecting program encompassed a total of 22 geo-assistant days.

Although this prospecting was conducted with the aid of beep mats, traditional prospecting was also emphasized in order to search for disseminated mineralization not detectable by the beep mat, alteration zones, and favorable structural environments such as shears and Sudbury breccia zones. In addition, prospecting focused on inclusion – bearing quartz diorite (IQD) floats / outcrops in the search for unrecognized splays / embayments off the Foy Offset Dyke.

7.3 Beep Mat Conductor Detailing / Sampling

Systematic beep mat prospecting of the claims produced three (3) sulphide occurrences corresponding to conductors #NRS-07, #NRS-08, and #NRS-09 in Table 2 (Appendix B) and on Map #1. These occurrences were subsequently subjected to detail beep-matting covering a ~ 50m radius centred on the discovery sites. Small hand-dug overburden pits were excavated to expose the mineralized occurrences detected at depths ranging from 10 – 85 cm by the beep-mat. The pits / showings were properly located on the control grid and by GPS (UTM). Two of the occurrences were subjected to channel sampling with the aid of a diamond saw, with a total of five (5) samples being collected. This phase of the program encompassed 3 geo-assistant days and 1 geologist-day.

7.4 Geological Mapping (1:2,500)

A geological mapping program was implemented over an approximately 112 ha area encompassing claim #1192778 and the eastern and western portions of claims #1242372 and #1192779, respectively. Control for the 1:2,500 mapping was provided by the flagged 100m grid and GPS measurements. The geological mapping was conducted from August 20 – 24, 2001 by geologist Harold Tracanelli (P.O. Box 122, Onaping, Ontario), with assistance from geology student Monica Proudfoot (9 man-days).

Traditional prospecting was also emphasized during the mapping program in order to search for disseminated mineralization not detectable by the beep mat, alteration zones, and favorable structural environments such as shears and Sudbury breccia zones. In addition, mapping focused on inclusion – bearing quartz diorite (IQD) floats / outcrops in the search for unrecognized splays / embayments off the Foy Offset Dyke.

The findings of the geological mapping / prospecting program are presented in the "Property Geology" section of the report and on Map 1.

8. Prospecting Results

The beep mat – aided prospecting discovered three (3) subcropping conductors within the northeastern portion of claim #1242372 (Map 1). Two (2) of the sulphide showings lie at the eastern extremity of the prominent Sudbury breccia belt (#NSR-08 & #NSR-09), while the third occurrence (#NSR-07) is located along the general trend of the AeroTEM anomaly (6 channel) lying to the east of the breccia belt. The mineralized occurrences were detected below 10cm – 85cm of overburden by the beep mat (Table 2 in Appendix B).

The beep mat conductors / showings were exposed by hand trenching and sampled with the aid of a diamond cut-off saw. Five (5) representative channel samples were collected from the three (3) sulphide occurrences (Table 2 in Appendix B). The samples were submitted to ALS Chemex in Mississauga, Ontario, where they were analyzed for Au, Pt, Pd, Ag, Cu, Pb, Ni, and Co. The precious metals were analyzed by the means of ICPMS, while the base metals were subjected to AA analysis.

Occurrence #NSR-07 is characterized by a moderate strength, 15m x 5m, NE – trending beep mat signature. Shallow hand trenching (10 – 25cm) exposed medium – coarse grained gneissic granitoid (+/- quartz monzonite) exhibiting trace – 2%, locally up to 5%, fine – medium grained pyrite with subordinate pyrrhotite and rare, very fine grained chalcopyrite. Sulphides present along hairline fractures, foliation planes, mafic segregation bands / cataclastic (granulated) seams, and associated with fine quartz / chlorite fracture-fills / crackle-fillings. Foliation / mafic seams exhibit a sub horizontal attitude. Three (3) channel samples (22cm – 87cm) collected from the #NSR-07 conductor (#666607 - #666609) yielded below detection limit precious metal values, along with very low copper and nickel values of 33 – 135 ppm and 7 – 34 ppm, respectively. This weak, quartz monzonite – hosted, sulphide occurrence lies along the northern flank of the ESE – trending AeroTEM anomaly (6 channel) and ~ 55m northwest of Wallbridge Mining's DDH #WMF-01 (1999). This vertical borehole (62m) intersected an ~4.65m mineralized interval, characterized by 10 –15% sulphides consisting predominantly of pyrrhotite with subordinate pyrite, hosted within gneissic quartz monzonite at a depth of 32.85 m. Traditional prospecting also yielded several subangular – subrounded, weakly gossaneous granitic boulders along the trend of the AeroTEM conductor. These rusty boulders are characterized by trace, locally 1-2%, fine – medium grained disseminated and blebby pyrite / pyrrhotite.

Beep Mat anomaly #NSR-08 detected at the southeastern extremity of the Sudbury breccia belt exhibits a moderate – strong pervasive response over a 25m x 12m area. This ESE – trending (115°) conductor was exposed by two trenches ranging from 30cm – 85cm in depth. Approximately 50% of the exposed subcrop is characterized by a

gossaneous cap reflecting 2 – 5%, locally 5 – 10%, pyrite (+/- weak pyrrhotite) hosted by Sudbury breccia developed within a gneissic granitoid. The pyrite occurs as fine – medium grained disseminations and rimming fragments within the breccia. Trace, locally 2-3%, blebby / foliation controlled pyrite also present within the gneissic granitoid / leucocratic gneiss host. Foliation is sub horizontal in nature. Two (2) channel samples (60cm – 70cm) collected from the #NSR-08 occurrence (#666605 - #666606) yielded below and/or just above detection limit precious metal values and mildly anomalous copper and cobalt values in the 342 – 395 ppm and 42 – 161 ppm range, respectively.

Conductor #NSR-09 consisting of a moderate strength beep mat response over a 5m x 3m area is also located at the southeastern extremity of the Sudbury breccia belt, approximately 100m northeast of #NSR-08. Trenching at this locality (30cm – 55cm) exposed gneissic quartz monzonite exhibiting trace – 2%, locally up to 5%, foliation and quartz / chlorite fracture-fill controlled pyrite. Isolated pseudotachylite stringers (0.5 – 1.5 cm) crosscut the quartz monzonite. No samples were collected from this occurrence.

The fact that the beep mat-prospecting program failed to yield any conductors within claim #1192779 appears to reflect, at least in part, the fact that ~60% of the eastern portion of the property is dominated by a thick glacial drift cover (sand flats). Similarly, this extensive glacial veneer impeded the ground follow-up of the two single-line AeroTEM anomalies lying within the northern half of this claim. Trace – 0.5% amounts of pyrite / pyrrhotite were observed associated with a diabase dyke and shearing developed within granite during traditional prospecting efforts at the eastern extremity of baseline 6+50 N.

9. Rand Geophysical Program

A surface UTEM 3 survey was implemented over the northern portion of the Rand property in February 2003. This deep penetration electromagnetic survey covered an ~ 124 ha area encompassing claim #1192778 in its entirety, ~ 80% of claim #1242372, and the northern portion of claim #1192779 (~25%). This survey was conducted as part of a wider-scale geophysical program covering an extensive package of freehold patents controlled by Aurora Platinum Corp.

Non-decaying Channel 1 UTEM anomalies, in addition to being indicative of the presence of economic sulphide mineralization, can also reflect a magnetic anomaly or poor geometric control, either survey station location or transmitter loop location. Consequently the Rand grid was covered by an integrated close-spacing ground magnetometer / differential GPS (DGPS) survey in order to facilitate the interpretation of the Channel 1 profiles and to ensure optimal topographical control for the reduction of the surface UTEM data. The magnetometer survey was also implemented to map the trace of the Foy Offset dyke /structural features and to search for economic sulphide mineralization exhibiting a pyrrhotite component.

The surface UTEM 3 (Mag) survey, designed to detect sulphide mineralization to a depth of ~ 200m, blanketed the extensive WNW – trending Sudbury Breccia belt (~ 1.2 x 0.3 – 0.5 km) lying along the southern (footwall) flank of the Foy Offset dyke at the northwestern extremity of the Rand property. The survey also covered the ~325m strike-extension of the Offset dyke dissecting claim #1192778. The UTEM survey was also designed to follow-up on the beep mat conductors / showings and on the strong AeroTEM anomalies (6 channel) located at the southwestern extremity of the Sudbury Breccia belt.

The following sections elaborate on the methodology / coverage of the individual geophysical surveys. Theoretical / technical information for the geophysical systems is provided in Appendix F and survey implementation cost details are presented in Appendix G.

9.1 Grid Preparation

Control for the surface UTEM and magnetometer surveys was provided through the establishment of cut grids. A total of 24 north – trending gridlines, ranging from ~250m – 1,000m in length, were established at 100m spacing across the area of interest. Picket stations were established at 25m intervals along the ~12.12 line-km of machete cut lines with the 50m and 100m grid stations being labeled with aluminum tags. The grid work was implemented at a cost of $265 per line-km by Glen McBride of Notre Dame du Nord, Quebec from January 20 - 26, 2003.

9.2 Magnetometer / DGPS Survey Methodology

The magnetometer / DGPS surveying was conducted by ClearView Geophysics of Brampton, Ontario from February 20 - 24, 2003. The Mag survey was implemented utilizing a pair of GEM Systems GSM-19 "overhauser effect" proton precession magnetometers (0.01 nT resolution). One of the instruments served as a base station to monitor diurnal variations in the earth's magnetic field. Readings at the base station were collected at 3-second intervals. Refer to Appendix F for further technical information on the GSM 19 magnetometer. The total field Mag survey encompassed ~ 11 line-km of surveying with magnetic readings being recorded at 12.5m intervals along the north - trending lines spaced 100m apart.

Grid stations were surveyed to sub-metre accuracy utilizing a Trimble Pro XR DGPS (rover receiver) operating in conjunction with a base station set up at the office of Bull Surveying in Sudbury. Horizontal and vertical accuracies of ~50cm and ~95cm, respectively can be expected with post processed differential correction of the data. Approximately 12.12 line-km of gridline were DGPS surveyed with UTM coordinates (NAD 27) and elevations being collected at 25m stations. Details regarding the implementation cost of this integrated Mag / DGPS survey are provided in Appendix G.

9.3 Magnetometer Survey Results

The following interpretative notes on the Rand property magnetometer survey are provided by geophysical consultant Bob Lo of Thornhill, Ontario. The post processing / contouring of the magnetic data was also conducted by this consulting firm. The raw and corrected magnetic data, along with the DGPS readings, are tabulated in Appendix D. The posted and contoured magnetic values are depicted on Map 2 (1:2,500) and Map 3 (1:5,000), respectively.

The economic sulphides in the Sudbury Basin are often associated with pyrrhotite, which is magnetic. Thus, the ground magnetic survey was conducted to help search for magnetic anomalies, which may be due to mineralization associated with pyrrhotite. In addition, magnetic surveys are useful as an aid to map geology. Specifically, in this environment, it would be used to determine if faulted portions of the Foy dyke are on the property and to determine the extent of the Sudbury breccia. It is envisaged that the Foy Dyke will show up as a long, more or less, continuous magnetic feature.

From geological mapping, a portion of the Foy Offset Dyke is located on the northern end of lines 78W to 81W. Examination of the magnetic data there shows a fairly complex and varied magnetic signature. The responses on L78W have a sharp magnetic low over, or just to the south of the mapped position of the dyke. On L79W, the magnetic response over the dyke is a more "normal' magnetic high. This apparently complex magnetic signature may be due to a lack of measurements over the dyke.

No long linear feature was detected by this survey. This indicates that other than the mapped location of the Foy Dyke, that other faulted portions of the Foy Dyke were not located. And it does not appear that other magnetic anomalies, which may be due to, say, concentrations of pyrrhotite, were located by this survey.

9.4 Surface UTEM 3 Survey Methodology

A surface UTEM 3 survey was implemented over an approximately 124 ha area encompassing claim #1192778 in its entirety, ~ 80% of claim #1242372, and the northern portion of claim #1192779 (~25%). The UTEM 3 system consists of a deep penetration electromagnetic survey utilizing a large, fixed, horizontal transmitter loop as its source. The survey was conducted from February 21 – March 2 by Lamontagne Geophysics Ltd of Kingston, Ontario. Theoretical / technical information for the UTEM system is provided in Appendix F and details regarding the implementation cost of the survey are provided in Appendix G.

Survey coverage, totalling ~12.12 line-km, encompasses 24 gridlines ranging from ~250m – 1,000m in length. A total of 579 UTEM readings were collected at 50m stations, with 25m detailing in anomalous areas, along the north – trending lines established at 100m spacing. All grid stations were DGPS surveyed to sub-metre

accuracy in order to ensure optimal topographical control for the reduction of the surface UTEM data. The vertical component UTEM 3 survey was implemented utilizing two receivers in 10-channel mode at an operating frequency of 31 hertz. A minimum of 1K stacking (1024 full-cycles / 2048 half-cycles) were collected at each survey station.

The Rand property UTEM survey, designed to detect sulphide mineralization to a depth of ~ 200m, was conducted in the inside-the-loop configuration utilizing three (3) transmitter loops averaging in 1.6 km x 2.4 km in size. The perimeters of the transmitter loops were established by GPS in order to provide optimal geometric control (Map 1). The loop centres were located to the north of the mapped location of the Offset dyke which was dipping steeply to the north. This geometry would provide good coupling to conductive bodies, which were more or less conformal with the general attitude of the dyke.

9.5 Surface UTEM 3 Survey Results

The UTEM 3 data was plotted / interpreted by geophysical consultant Bob Lo of Thornhill, Ontario. The line profiles (Hz) and the reduced data are provided in Appendix E and UTEM anomalies are depicted / categorized on Map 4.

The highlight of the surface UTEM survey consists of a ~300m long, SE – trending conductor located at the southeastern extremity of the extensive Sudbury breccia belt lying along the southern (footwall) flank of the Foy Offset dyke within the northwestern portion of the property (claim #1242372). This moderate to high conductance UTEM trend, extending from L 78+00W to L 80+00W, corresponds to a prominent AeroTEM conductor. A Channel 1 UTEM response located at L 78+00W / 10+15N correlates to a strong AeroTEM line anomaly (6 channel) and beep mat conductor #NSR-07.

Geophysical consultant Bob Lo provides the following interpretative notes on the Rand property UTEM 3 survey:

L 78W / 9+00N, L 78W / 10+15N, L 79W / 10+15N, L 80W / 10+75N – This group of EM anomalies correlate to known airborne responses. Some show moderate to high conductance as they are seen into the channel one UTEM response. If the geology of the area is favourable, they should be followed up by prospecting as the sources appears to be relatively shallow.

L 79W / 5+50N – This isolated anomaly is a channel one only response. It is also near the southern edge of the loop wire making geometry error a more likely explanation. The source, if real, appears to be relatively small and should be close to the surface.

L 86W / 5+75N, L 88W / 5+40N – A trace of an anomaly can be seen to the south end of line 87W to connect these two anomalies. Although they appear to be small, the high conductance inferred by the UTEM channel one response indicates sulphide

mineralisation in this region. If the geology of the area is favourable, some follow-up prospecting may be warranted.

10. Conclusion

The present exploration program established the presence of a ~ 300m long, SE – trending conductive trend lying at the eastern extremity of an extensive Sudbury breccia belt developed along the footwall flank of the Foy Offset dyke within the northwestern portion of the Rand property (claim #1242372). This zone is define by a strong AeroTEM conductor (6 channel), moderate to high conductance UTEM responses, and three (3) beep mat conductors / sulphide occurrences. The Rand Sudbury breccia belt appears to represent the most prominent breccia body identified to date along the entire extension of the Foy Offset dyke. Beep Mat conductor / showing #NSR-08, reflecting gneissic granitoid – hosted Sudbury breccia exhibiting 2% - 5%, locally 5% - 10%, pyrite (+/- pyrrhotite), yielded mildly anomalous copper and cobalt values in the 342 – 395 ppm and 42 – 161 ppm range, respectively

Wallbridge Mining's DDH #WMF-01 (1999) was collared at the southeastern extremity of the UTEM anomaly. This vertical borehole (62m) intersected an ~4.65m mineralized interval, characterized by 10 –15% sulphides consisting predominantly of pyrrhotite with subordinate pyrite, hosted within gneissic quartz monzonite at a depth of 32.85 m. This drill intersection produced mildly anomalous copper and nickel values in the 96 – 143 ppm and 110 – 211 ppm range, respectively.

Although the sampling of beep mat occurrence #NSR-08 and of DDH #WMF-01 only yielded mildly anomalous copper / nickel / cobalt values, the presence of considerable sulphide mineralization (5% - 15%) occurring within and/or proximate to an extensive Sudbury breccia body developed in close proximity to an Offset dyke, coupled with the presence of a corresponding AeroTEM / UTEM conductive trend, renders the study area of considerable economic interest. In the Sudbury Camp, Sudbury breccia belts constitute a highly favourable environment for the emplacement of Ni – Cu – PGM massive sulphides. Sudbury breccia zones can host Cu / PGM – rich Footwall-type mineralization and/or typical massive sulphides hosted within Offset (Sublayer) embayments / splays emplaced within the breccia bodies.

This target remains virtually untested based on the fact that the single Wallbridge Mining borehole only probed the eastern extremity of the conductive trend to a very shallow depth of 62m.

11. Recommendations

A mechanized trenching program is recommended for the detailing / delineation of the ~300m long, SE – trending conductive trend lying at the eastern extremity of the Sudbury breccia belt developed within the northwestern portion of the Rand property (claim #1242372). Trenching should address the AeroTEM anomalies, the surface UTEM responses, and the beep mat conductors / showings. The UTEM anomalies have been interpreted to reflect relatively shallow sources.

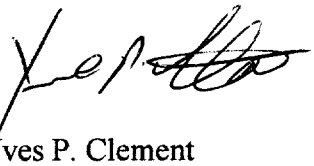
The relatively small, but high conductance, UTEM anomalies located at the southern extremity of lines 86 + 00W / 88 +00W should be followed-up with traditional / beep mat prospecting.

The eastern portion of claim #1192779 and claims #1192780 / #1192781 should be covered by a reconnaissance geology / beep mat prospecting program in order to determine their economic potential in a timely fashion.

11. References

Card, K.D., Meyn, H.D., 1969. Geology of the Leinster – Bowell Area. Ontario Department of Mines, Geological Report 65.

Clement, Y., 2002. Beep Mat – Aided Prospecting of the Rand Property, Foy Township. Aurora Platinum Corp Assessment Report.



Yves P. Clement
Senior Project Geologist
Aurora Platinum Corp
June 12, 2003

Statement Of Qualifications

I, Yves P. Clement do hereby certify that:

1 – I am a geological technologist residing at 422 St-George Street, Sudbury, Ontario, P3B 2L6

2 – I graduated from Cambrian College, Sudbury with a Geological Technology Diploma in 1986.

3 – I partly fulfilled the requirements for a B.Sc. in geology from Lake Superior State University, Michigan (1986 – 1987).

4 – I have practiced my profession continuously since 1988.

5 – My report on the Rand property of Aurora Platinum Corp is based on data collected under my supervision from June 24, 2001 to March 2, 2003, my knowledge of the geology of the area based on working continuously in the area since August 2000, my property visits, and a review of published and unpublished information on the property and general study area.

6 – I have no direct interest in the Rand Property of Aurora Platinum Corp or adjacent properties and I do not expect to acquire any.

Yves P. Clement
June 12, 2003

APPENDIX A

Daily Beep Mat Prospecting Log

Table 4: Daily Beep Mat Prospecting Log

Line No.	Claims (s)	From	To	Control Grid (Line Flagging)				Beep Mat Prospecting				
				Date	Length (m)	Man-Days	Geological Assistant	Date	Flagged Lines (m)	Compass Traverses (m)	Man-Days	Geological Assistant
78+00 W	1242372	11+25 N	3+25 N	24-Jun-01	800	0.25	M-F	2-Jul-01	800		0.25	M-F
	1192778	14+75 N	11+25 N	8-Aug-01	350	0.10	J-Y	9-Aug-01	350		0.1	J-Y
78+50 W	1242372	11+25 N	3+25 N					2-Jul-01		800	0.25	J-L
	1192778	14+75 N	11+25 N					9-Aug-01		350	0.1	M-H
79+00 W	1242372	11+25 N	3+25 N	24-Jun-01	800	0.25	M-F	2-Jul-01	800		0.25	J-L
	1192778	14+75 N	11+25 N	8-Aug-01	350	0.10	J-Y	9-Aug-01	350		0.1	M-H
79+50 W	1242372	11+25 N	3+25 N					2-Jul-01		800	0.25	M-F
	1192778	14+75 N	11+25 N					9-Aug-01		350	0.1	J-Y
80+00 W	1242372	11+25 N	3+25 N	24-Jun-01	800	0.25	J-L	2-Jul-01	800		0.25	M-F
	1192778	14+75 N	11+25 N	8-Aug-01	350	0.10	M-H	9-Aug-01	350		0.1	J-Y
80+50 W	1242372	11+25 N	3+25 N					2-Jul-01		800	0.25	J-L
	1192778	14+75 N	11+25 N					9-Aug-01		350	0.1	M-H
81+00 W	1242372	11+25 N	3+25 N	24-Jun-01	800	0.25	J-L	10-Jul-01	800		0.25	J-L
	1192778	14+75 N	11+25 N	8-Aug-01	350	0.10	M-H	9-Aug-01	350		0.1	M-H
81+50 W	1242372	11+25 N	3+25 N					10-Jul-01		800	0.25	M-F
	1192778	13+50 N	11+25 N					9-Aug-01		225	0.1	J-Y
82+00 W	1242372	11+25 N	3+25 N	25-Jun-01	800	0.25	J-L	10-Jul-01	800		0.25	M-F
	1192778	13+50 N	11+25 N	8-Aug-01	225	0.10	M-H	9-Aug-01	225		0.1	J-Y
82+50 W	1242372	11+25 N	3+25 N					10-Jul-01		800	0.25	J-L
	1192778	13+50 N	11+25 N	8-Aug-01				9-Aug-01		225	0.1	M-H
83+00 W	1242372	11+25 N	3+25 N	25-Jun-01	800	0.25	J-L	10-Jul-01	800		0.25	J-L
83+50 W	1242372	11+25 N	3+25 N					10-Jul-01		800	0.25	M-F
84+00 W	1242372	11+25 N	3+25 N	25-Jun-01	800	0.25	M-F	10-Jul-01	800		0.25	M-F
84+50 W	1242372	11+25 N	3+25 N					10-Jul-01		800	0.25	J-L
85+00 W	1242372	11+25 N	3+25 N	25-Jun-01	800	0.25	M-F	11-Jul-01	800		0.25	J-L
85+50 W	1242372	11+25 N	3+25 N					11-Jul-01		800	0.25	M-F
86+00 W	1242372	11+25 N	3+25 N	25-Jun-01	800	0.25	M-F, J-L	11-Jul-01	800		0.25	M-F
86+50 W	1242372	11+25 N	3+25 N					11-Jul-01		800	0.25	J-L
87+00 W	1242372	11+25 N	3+25 N	28-Jun-01	800	0.25	M-F	11-Jul-01	800		0.25	J-L
87+50 W	1242372	11+25 N	3+25 N					11-Jul-01		800	0.25	M-F
88+00 W	1242372	11+25 N	3+25 N	28-Jun-01	800	0.25	M-F	11-Jul-01	800		0.25	M-F
88+50 W	1242372	11+25 N	3+25 N					11-Jul-01		800	0.25	J-L
89+00 W	1242372	11+25 N	3+25 N	28-Jun-01	800	0.25	J-L	14-Jul-01	800		0.25	J-L
89+50 W	1242372	11+25 N	3+25 N					14-Jul-01		800	0.25	M-F
90+00 W	1242372	11+25 N	3+25 N	28-Jun-01	800	0.25	J-L	14-Jul-01	800		0.25	M-F

Line No.	Claims (s)	From	To	Control Grid (Line Flagging)				Beep Mat Prospecting				
				Date	Length (m)	Man-Days	Geological Assistant	Date	Flagged Lines (m)	Compass Traverses (m)	Man-Days	Geological Assistant
90+50 W	1242372	11+25 N	3+25 N					14-Jul-01		800	0.25	M-F, J-L
64+00 W	1192779	14+75 N	3+75 S	10-Aug-01	1850	0.75	M-F	11-Aug-01	1850		1	J-Y
64+50 W	1192779	14+75 N	3+75 S					11-Aug-01		1850	1	M-H
65+00 W	1192779	14+75 N	3+75 S	11-Aug-01	1850	1.00	M-F	13-Aug-01	1850		1	M-F
65+50 W	1192779	14+75 N	3+75 S					13-Aug-01		1850	1	J-L
66+00 W	1192779	14+75 N	3+75 S	11-Aug-01	1850	1.00	J-L	16-Aug-01	1850		1	J-L
66+50 W	1192779	14+75 N	3+75 S					16-Aug-01		1850	1	M-F
67+00 W	1192779	14+75 N	3+75 S	14-Aug-01	1850	1.00	J-L	17-Aug-01	1850		1	M-F
67+50 W	1192779	14+75 N	3+75 S					17-Aug-01		1850	1	J-L
68+00 W	1192779	14+75 N	3+75 S	14-Aug-01	1850	1.00	M-F	18-Aug-01	1850		1	J-L
68+50 W	1192779	14+75 N	3+75 S					18-Aug-01		1850	1	M-F
69+00 W	1192779	14+75 N	3+75 S	15-Aug-01	1850	1.00	M-F	20-Aug-01	1850		1	M-F
69+50 W	1192779	14+75 N	3+75 S					20-Aug-01		1850	1	J-L
70+00 W	1192779	14+75 N	3+75 S	15-Aug-01	1850	1.00	J-L	22-Aug-01	1850		0.5	J-L
70+50 W	1192779	14+75 N	3+75 S					17-Aug-01		1850	0.5	M-H
71+00 W	1192779	14+75 N	3+75 S	10-Aug-01	1850	1.00	J-L	17-Aug-01	1850		0.75	J-Y
71+50 W	1192779	14+75 N	3+75 S					17-Aug-01		1850	0.5	M-H
B.L. 6+50 N	1192779	64+00 W	72+00 W	10-Aug-01	800	0.50	M-F	17-Aug-01	800		0.25	J-Y
					27.6 Km	**12.0 Days**			**27.6 km**	**26.7 km**	**22.0 Days**	

APPENDIX B

Beep Mat Conductor Details
&
Sample Descriptions / Analytical Results

Table 2: Rand Property - Beep Mat Conductor Details

Beep-Mat Conductor #	Claim No.	Date Detected	Operator	Grid Location		UTM Coordinates		Anomaly Source	Conductor Dimensions (m)	Trend	Depth (cm)	Pit(s) Dimensions (m)	Sample No.	Conductor Summary
				Easting	Northing	Easting	Northing							
NSR-07	1242372	7/2/2001	M-F	77+55W	9+55N	485577	5176342	Bedrock	15 x 5	25	10 - 40	5 x 2 x 0.25 0.75 x 0.4 x 0.25	666607 - 666609 (3)	Gneissic quartz-monzonite exhibiting tr-2%, locally up to 5%, foliation and qtz/chl fracture-fill pyrite.
NSR-08	1242372	7/10/2001	M-F	82+00W	9+50N	485242	5176318	Bedrock	25 x 12	115	30 - 85	4 x 0.95 x 0.70 1 x 0.8 x 0.3	666605 - 666606 (2)	Gneissic granitoid - hosted Sudbury breccia exhibiting 2-5%, locally 10%, pyrite.
NSR-09	1242372	7/10/2001	J-L	80+95W	9+85N	485325	5176370	Bedrock	5 x 3		30 - 55	1.5 x 0.8 x 0.4	n.s.	Gneissic quartz-monzonite exhibiting tr-2%, locally up to 5%, foliation and qtz/chl fracture-fill pyrite.

Aurora Platinum Corp.

Rand Project

Beep-Mat Conductor Sampling

Table 3

Sample #	Beep-Mat Conductor #	Claim No.	Date	Sampled by	Grid Coordinates		UTM Coordinates		Sample Type	Size (cm)	Trend	Au ppb	Pt ppb	Pd ppb	Cu ppm	Pb ppm	Ag ppm	Ni ppm	Co ppm
					West	North	East	North											
666605	NRS-08	1242372	7/19/2001	Y-C	82+00	9+50	485242	5176318	Channel	60 x 5 x 5	321	1	3.5	<1	342	6	<0.2	88	161
666606	NRS-08	1242372	7/19/2001	Y-C	82+00	9+50	485242	5176318	Channel	70 x 5.5 x5	119	<1	1	<1	395	5	<0.2	17	42
666607	NRS-07	1242372	7/19/2001	Y-C	77+55	9+55	485577	5176342	Channel	87 x 5 x 4.5	220	<1	<0.5	<1	33	9	<0.2	7	16
666608	NRS-07	1242372	7/19/2001	Y-C	77+55	9+55	485578	5176339	Channel	22 x 2.5 x 4	287	<1	0.5	<1	80	18	<0.2	20	19
666609	NRS-07	1242372	7/19/2001	Y-C	77+55	9+55	485577	5176344	Channel	65 x 3.5 x 5	204	<1	0.5	<1	135	5	<0.2	34	25

Beep-Mat Conductor Sampling

Sample #	SAMPLE DESCRIPTIONS
666605	Approximately 50% of sample consists of gossaneous material. Gneissic granitoid - hosted Sudbury breccia exhibiting 2-5%, locally 10%, fg-mg disseminated and fragment-rimming pyrite.
666606	Cataclastic(granulated) gneissic granitoid / leucocratic gneiss exhibiting trace, locally 2-3%, blebby / foliation controlled pyrite (vwk po). Foliation subhorizontal.
666607	Mg-cg, gneissic granitoid of +/- quartz monzonite composition. Rock exhibits foliation - subconcordant, mafic, cataclastic(+/- granulated) seams exhibiting trace, locally 2-3%, pyrite. Seams(2-10mm) exhibit subhorizontal attitude.
666608	Light pinkish-orange, mg-vcg, gneissic granitoid of +/- quartz monzonite composition. Sample exhibits trace-2%, locally 5%, fracture, foliation, and fine qtz/chlorite fracture-fill / crackle-fill controlled pyrite (+/- po) and very rare vfg cpy.
666609	Mg-cg, intermediate gneiss exhibiting 1-2%, locally 2-5%, fg-mg disseminated / foliation controlled pyrite and sporadic magnetite blebs. Pyrite most commonly present within mafic segregation bands. Foliation subhorizontal.

APPENDIX C

Certificates Of Analysis

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga
Ontario, Canada L4W 2S3
PHONE: 905-624-2806 FAX: 905-624-6163

To: AURORA PLATINUM CORP.

P.O. BOX 10102, 1650 - 701 W. GEORGIA ST.
VANCOUVER, BC
V7Y 1C6

Project : A71111/A71220
Comments: ATTN: DAN INNES CC: MIKE BYRON

Page Number : 1
Total Pages : 1
Certificate Date: 20-AUG-2001
Invoice No. : I0122092
P.O. Number :
Account : SGY

CERTIFICATE OF ANALYSIS A0122092

SAMPLE	PREP CODE	Au ppb ICP-MS	Pt ppb ICP-MS	Pd ppb ICP-MS	Cu ppm	Pb ppm	Ag ppm Aqua R	Ni ppm	Co ppm
666605	205 226	1	3.5	< 1	342	6	< 0.2	88	161
666606	205 226	< 1	1.0	< 1	395	5	< 0.2	17	42
666607	205 226	< 1	< 0.5	< 1	33	9	< 0.2	7	16
666608	205 226	< 1	0.5	< 1	80	18	< 0.2	20	19
666609	205 226	< 1	0.5	< 1	135	5	< 0.2	34	25
666610	205 226								
666611	205 226								
666612	205 226								
666613	205 226								
666614	205 226								
666615	205 226								
666616	205 226								
666617	205 226								
666618	205 226								
666619	205 226								
666620	205 226								
666621	205 226								
666622	205 226								
666623	205 226								
666624	205 226								
666625	205 226								
666626	205 226								
666627	205 226								
666628	205 226								
666629	205 226								
666630	205 226								
666631	205 226								
666632	205 226								
666633	205 226								
666634	205 226								
666635	205 226								
666636	205 226								
666637	205 226								
666638	205 226								
666639	205 226								

CERTIFICATION:

APPENDIX D

Magnetometer / DGPS Survey Data

/ ---
/ CSV EXPORT [05/14/03]
/ DATABASE [G:\Aurora Platinum\Foy Offset\Surface surveys - Winter 2003\ground_mag.gdb : SUPER]
/ ---
/

/Line	Station	East	North	Elevation	RawMag	CorMag
-8900	500	484454.39	5175970.17	388.3	56733.93	57081.64
-8900	512.5	484453.19	5175982.19	387.71	56725.03	57072.48
-8900	525	484451.99	5175994.2	387.12	56956.49	57304.16
-8900	537.5	484450.29	5176006.75	388.13	57098.29	57445.96
-8900	550	484448.6	5176019.3	389.15	57063.84	57412.05
-8900	562.5	484448.46	5176031.96	391.85	56989.07	57336.94
-8900	575	484448.32	5176044.62	394.54	57145.38	57493.42
-8900	587.5	484448.63	5176056.88	394.92	57090.11	57438.56
-8900	600	484448.94	5176069.14	395.3	57016.45	57364.68
-8900	612.5	484446.39	5176081.05	396.89	57064.84	57412.96
-8900	625	484443.83	5176092.97	398.49	57004.17	57352.2
-8900	637.5	484443.43	5176105.65	399.04	56835.75	57183.97
-8900	650	484443.02	5176118.34	399.59	56828.73	57176.68
-8900	662.5	484443.2	5176131.11	398.28	56631.22	56979.58
-8900	675	484443.38	5176143.88	396.98	56663.63	57011.76
-8900	687.5	484444.3	5176156.46	395.83	56991.52	57340.35
-8900	700	484445.23	5176169.05	394.67	56535.12	56883.83
-8900	712.5	484445.25	5176181.93	392.38	56667.21	57016.47
-8900	725	484445.26	5176194.81	390.09	56893.06	57242.35
-8900	737.5	484446.34	5176206.8	388.57	56947.9	57296.5
-8900	750	484447.42	5176218.79	387.05	57159.66	57507.69
-8900	762.5	484448.49	5176230.78	385.54	57285.92	57633.66
-8900	775	484449.57	5176242.77	384.02	57289.66	57637.06
-8900	787.5	484448.8	5176255.62	384.13	57334.53	57682.43
-8900	800	484448.02	5176268.47	384.24	57261.66	57609.65
-8900	812.5	484446.81	5176280.62	384.1	57056.56	57404.5
-8900	825	484445.59	5176292.77	383.95	56994.71	57342.89
-8900	837.5	484444.88	5176305.86	384.22	56952.82	57301.05
-8900	850	484444.17	5176318.95	384.48	56870.04	57218.71
-8900	862.5	484445.13	5176330.9	388.63	56976.02	57325.29
-8900	875	484446.09	5176342.85	392.78	56984.28	57333.14
-8900	887.5	484445.68	5176354.99	396.21	56984.86	57333.73
-8900	900	484445.27	5176367.14	399.65	57037.77	57386.97
-8900	912.5	484445.29	5176379.74	400.07	57079.58	57428.01
-8900	925	484445.31	5176392.34	400.5	57062.81	57411.58
-8900	937.5	484444.92	5176404.6	399.44	57083.76	57432.24
-8900	950	484444.54	5176416.86	398.39	57082.49	57431.11
-8900	962.5	484444.6	5176429.57	400.4	57135.34	57484.26
-8900	975	484444.67	5176442.28	402.41	57184.58	57533.8
-8900	987.5	484445.89	5176454.91	403.77	57466.96	57816.3
-8900	1000	484447.11	5176467.54	405.13	57349.63	57699.22
-8900	1012.5	484448.04	5176479.77	404.25	57612.3	57961.88
-8900	1025	484448.96	5176491.99	403.36	57876.01	58225.75
-8900	1037.5	484449.86	5176504.18	402.34	57089.17	57438.82
-8900	1050	484450.76	5176516.36	401.32	57241.73	57591.18
-8800	500	484471.84	5175950.81	391.45	56650.68	56997.18

/Line	Station	East	North	Elevation	RawMag	CorMag
-8800	512.5	484474.26	5175962.96	389.05	56816.25	57162.57
-8800	525	484476.68	5175975.11	386.65	56800.19	57146.32
-8800	537.5	484480.55	5175985.59	387.21	56824.34	57170.53
-8800	550	484484.42	5175996.06	387.77	56788.3	57134.65
-8800	562.5	484488.31	5176008.71	388.02	56625.6	56972.02
-8800	575	484492.2	5176021.37	388.28	56315.83	56662.06
-8800	587.5	484496.1	5176031.14	393.58	55887.26	56233.41
-8800	600	484499.93	5176041.36	399.21	57076.43	57422.14
-8800	612.5	484503.04	5176053.59	402.16	56843.12	57188.63
-8800	625	484506.15	5176065.81	405.12	57021.05	57366.56
-8800	637.5	484508.23	5176077.97	405.24	57015.34	57360.52
-8800	650	484510.31	5176090.13	405.35	56785.41	57118.32
-8800	662.5	484512.18	5176103.45	406.49	56700.6	57045.48
-8800	675	484514.05	5176116.77	407.62	57029.63	57374.79
-8800	687.5	484515.03	5176128.88	407.15	57462.04	57807.1
-8800	700	484516	5176141	406.69	57192.22	57537.43
-8800	712.5	484517.2	5176153.84	406.16	57296.19	57641.06
-8800	725	484518.39	5176166.68	405.64	57496.4	57841.08
-8800	737.5	484518.86	5176179.17	406.02	57914.01	58259.26
-8800	750	484519.33	5176191.65	406.41	57065.83	57410.6
-8800	762.5	484518.13	5176204.73	403.98	56908.57	57253.74
-8800	775	484516.93	5176217.81	401.55	56825.56	57171
-8800	787.5	484515.01	5176229.9	398.44	57080.54	57425.71
-8800	800	484513.09	5176242	395.34	56983.9	57329.11
-8800	812.5	484512.38	5176253.08	390.27	56893.41	57238.98
-8800	825	484511.67	5176264.15	385.2	56905.08	57250.64
-8800	837.5	484513.71	5176276.54	385.15	57006	57351.12
-8800	850	484515.76	5176288.92	385.1	57125.02	57470.29
-8800	862.5	484519.76	5176300.38	386.58	57250.92	57596.26
-8800	875	484523.76	5176311.85	388.05	57188.28	57533.78
-8800	887.5	484528.32	5176322.89	390.5	57197.73	57543.43
-8800	900	484532.87	5176333.94	392.95	57191.86	57537.41
-8800	912.5	484536.64	5176345.57	394.93	57080.97	57426.78
-8800	925	484540.41	5176357.2	396.91	57032.13	57378.36
-8800	937.5	484543.46	5176368.92	400.64	57149.31	57495.18
-8800	950	484546.51	5176380.63	404.37	57333.03	57678.82
-8800	962.5	484546.27	5176393.17	405.18	57086	57432.46
-8800	975	484546.03	5176405.72	405.99	57242.88	57589.13
-8800	987.5	484545.54	5176417.81	403	57055.79	57402.01
-8800	1000	484545.05	5176429.91	400	57225.53	57571.96
-8800	1012.5	484545.51	5176442.4	400.38	57215.14	57562.3
-8800	1025	484545.96	5176454.89	400.77	57224.73	57572.52
-8800	1037.5	484547.23	5176466.95	399.91	57172.01	57520.13
-8800	1050	484548.5	5176479	399.05	57324.58	57673.27
-8800	1062.5	484550.45	5176491.45	400.73	57398.08	57746.67
-8800	1075	484552.4	5176503.9	402.41	57557.13	57903.57
-8800	1087.5	484554.35	5176516.52	404.83	57467.96	57816
-8700	500	484707.3	5175951.61	399.74	56633.2	56976.11
-8700	512.5	484709.26	5175963.93	400.5	56784.15	57126.95
-8700	525	484711.21	5175976.24	401.25	56369.24	56712.06
-8700	537.5	484711.61	5175988.56	400.69	56886.73	57228.92

/Line	Station	East	North	Elevation	RawMag	CorMag
-8700	550	484712.01	5176000.88	400.12	56521.99	56864.21
-8700	562.5	484712.9	5176013.67	401.73	58570.49	58913.47
-8700	575	484713.78	5176026.46	403.33	56331.11	56673.8
-8700	587.5	484715.06	5176038.24	402.73	56143.67	56486.88
-8700	600	484716.33	5176050.02	402.13	56386.22	56729.02
-8700	612.5	484716.44	5176062.67	403.14	56479.71	56821.62
-8700	625	484716.55	5176075.33	404.15	56211.96	56553.79
-8700	637.5	484716.55	5176087.65	405.24	56225.39	56567.65
-8700	650	484716.55	5176099.97	406.33	56247.25	56589.55
-8700	662.5	484716.2	5176112.8	406.44	56274.41	56617.26
-8700	675	484715.84	5176125.64	406.54	56380.62	56723.45
-8700	687.5	484715.72	5176137.78	406.5	56430.49	56773.45
-8700	700	484715.59	5176149.91	406.46	56450.89	56793.88
-8700	712.5	484714.59	5176162.57	404.66	56552.31	56895.17
-8700	725	484713.6	5176175.23	402.86	56733.16	57075.81
-8700	737.5	484713.26	5176187.43	403.47	56916.52	57259.19
-8700	750	484712.91	5176199.63	404.08	56641.17	56984.08
-8700	762.5	484711.72	5176212.15	404.47	57050.16	57393.68
-8700	775	484710.54	5176224.68	404.86	57667.72	58010.56
-8700	787.5	484709.5	5176236.69	404.5	57092.34	57434.72
-8700	800	484708.45	5176248.7	404.13	57423.37	57764.96
-8700	812.5	484707.53	5176261.35	403.24	57058.13	57399.13
-8700	825	484706.61	5176273.99	402.34	56742.05	57083.7
-8700	837.5	484704.97	5176286.35	404.72	56621.58	56963.36
-8700	850	484703.33	5176298.71	407.1	57322.51	57665.3
-8700	862.5	484702.54	5176311.27	407.67	56802.7	57134.98
-8700	875	484701.75	5176323.82	408.24	57095.39	57437.96
-8700	887.5	484701.77	5176336.39	409.12	57339.45	57681.36
-8700	900	484701.78	5176348.96	410	57369.49	57711.23
-8700	912.5	484701.54	5176361.55	411.54	57519.65	57860.78
-8700	925	484701.29	5176374.14	413.08	57337.58	57678.31
-8700	937.5	484698.57	5176386.14	412.87	57392.46	57733.44
-8700	950	484695.84	5176398.14	412.65	57455.95	57797.32
-8700	962.5	484693.26	5176410.59	412.49	57256.84	57598.79
-8700	975	484690.68	5176423.03	412.33	57241.46	57583.01
-8700	987.5	484687.88	5176434.23	411.35	57250.5	57591.82
-8700	1000	484685.07	5176445.43	410.37	57238.67	57580.1
-8700	1012.5	484681.78	5176457.8	410.19	56738.64	57079.83
-8700	1025	484678.48	5176470.18	410.01	56999.27	57341.2
-8700	1037.5	484676.44	5176483.3	411.57	57391.03	57733.17
-8700	1050	484674.4	5176496.42	413.12	57622.37	57964.4
-8700	1062.5	484670.71	5176507.86	409.94	57339.17	57681.04
-8700	1075	484667.01	5176519.3	406.77	57036.68	57378.98
-8600	500	484782.67	5175935.55	385.95	56371.1	56714.93
-8600	512.5	484775.34	5175944.81	386.44	56446.13	56789.6
-8600	525	484768.02	5175954.07	386.94	56842.91	57186.28
-8600	537.5	484761.76	5175964.48	391.51	56933.83	57276.77
-8600	550	484755.5	5175974.89	396.09	57056.38	57399.65
-8600	562.5	484752.48	5175986.89	396.31	56809.71	57152.98
-8600	575	484749.46	5175998.89	396.53	56822.58	57166.15
-8600	587.5	484745.59	5176010.12	397.8	56304.56	56647.85

/Line	Station	East	North	Elevation	RawMag	CorMag
-8600	600	484741.73	5176021.34	399.08	56354.32	56697.97
-8600	612.5	484739.23	5176033.2	400.2	56568.88	56912.69
-8600	625	484736.73	5176045.06	401.33	56581.41	56925.4
-8600	637.5	484735	5176057.64	401.88	56303.82	56647.63
-8600	650	484733.26	5176070.23	402.43	56015.01	56358.22
-8600	662.5	484731.38	5176082.18	403.8	56069.61	56413.12
-8600	675	484729.5	5176094.13	405.16	56196	56539.26
-8600	687.5	484729.26	5176107.07	405.7	56251.46	56594.32
-8600	700	484729.01	5176120.02	406.24	56620.47	56963.35
-8600	712.5	484732.74	5176132.04	405.67	56592.81	56935.35
-8600	725	484736.47	5176144.06	405.1	56205.01	56547.42
-8600	737.5	484743.97	5176153.81	405.81	56290.8	56633.71
-8600	750	484751.47	5176163.56	406.52	56320.54	56663.56
-8600	762.5	484759.14	5176173.99	405.73	56355.82	56698.95
-8600	775	484766.8	5176184.43	404.94	56509.75	56851.96
-8600	787.5	484768.04	5176196.38	403.21	56304.65	56646.55
-8600	800	484769.28	5176208.33	401.48	56459.36	56800.64
-8600	812.5	484768.58	5176220.81	400.53	56367.18	56708.79
-8600	825	484767.88	5176233.3	399.59	56382.56	56724.48
-8600	837.5	484765.91	5176245.54	398.95	56429.82	56771.94
-8600	850	484763.93	5176257.77	398.31	56477.07	56819.93
-8600	862.5	484762.47	5176270.46	398.5	56498.46	56841.53
-8600	875	484761.02	5176283.16	398.68	56589.43	56932.85
-8600	887.5	484759.11	5176295.59	398.46	56586.05	56929.38
-8600	900	484757.21	5176308.02	398.24	56755.07	57098.5
-8600	912.5	484755.83	5176319.82	402.85	56946.46	57290.03
-8600	925	484754.45	5176331.63	407.46	57466.56	57810.33
-8600	937.5	484753.98	5176344.4	407	59124.21	59467.34
-8600	950	484753.52	5176357.18	406.54	56218.11	56561.54
-8600	962.5	484753.41	5176369.63	408.18	56946.42	57289.39
-8600	975	484753.3	5176382.09	409.81	57011.33	57354.67
-8600	987.5	484754.38	5176395.09	409.96	56702.17	57045.41
-8600	1000	484755.45	5176408.08	410.1	57027.88	57370.78
-8600	1012.5	484755.08	5176419.88	408.42	57347.5	57689.87
-8600	1025	484755.09	5176431.64	408.02	56548.27	56891.75
-8600	1037.5	484755.01	5176443.82	406.37	56814.54	57158.43
-8600	1050	484754.92	5176456.01	404.71	57501.52	57845.38
-8600	1062.5	484755.46	5176468.63	403.7	56817.17	57160.35
-8600	1075	484756.01	5176481.25	402.69	56898.01	57241.13
-8600	1087.5	484755.72	5176494.03	405.48	56897.43	57240.03
-8600	1100	484755.44	5176506.8	408.26	56782.69	57125.02
-8600	1112.5	484756.08	5176519.95	407.92	57188.15	57531.11
-8500	525	484794.81	5176029.9	386.71	56502.34	56849.75
-8500	537.5	484792.86	5176039.38	388.56	56631.56	56978.7
-8500	550	484790.92	5176048.87	390.41	56727.85	57075.69
-8500	562.5	484788.97	5176058.85	392.73	57571.17	57919.28
-8500	575	484787.03	5176068.83	395.04	57427.18	57774.91
-8500	587.5	484783.69	5176077.42	397.3	56661.47	57009.52
-8500	600	484780.34	5176086.01	399.55	57003.13	57351.35
-8500	612.5	484777.63	5176095.3	400.52	56712.29	57060.08
-8500	625	484774.91	5176104.59	401.5	57334.09	57682.31

/Line	Station	East	North	Elevation	RawMag	CorMag
-8500	637.5	484775.27	5176114.11	403.34	56396.4	56744.43
-8500	650	484775.63	5176123.63	405.18	56655.75	57003.77
-8500	662.5	484776.23	5176133.3	405.83	56470.55	56818.71
-8500	675	484776.84	5176142.97	406.48	56683.71	57032.02
-8500	687.5	484777.59	5176152.71	406.76	56206.03	56553.91
-8500	700	484778.34	5176162.44	407.05	56876.6	57224.84
-8500	712.5	484781.06	5176174.52	406	57490.62	57838.74
-8500	725	484783.77	5176186.59	404.94	56451.67	56799.56
-8500	737.5	484786.69	5176198.23	404.14	56554	56901.83
-8500	750	484789.6	5176209.87	403.34	56205.78	56553.78
-8500	762.5	484793.7	5176221.85	402.17	56086.66	56434.71
-8500	775	484797.81	5176233.82	401.01	56281.64	56629.66
-8500	787.5	484803.34	5176244.23	400.13	56712.9	57060.63
-8500	800	484808.88	5176254.64	399.25	56430.72	56778.79
-8500	812.5	484815.04	5176267.29	399.76	56790.66	57138.74
-8500	825	484821.19	5176279.94	400.26	57615.68	57963.27
-8500	837.5	484828.63	5176289.21	399.77	57667.93	58015.69
-8500	850	484836.06	5176298.49	399.29	56616.22	56964.67
-8500	862.5	484841.78	5176303.33	400.93	56360.97	56709.2
-8500	875	484847.51	5176308.17	402.58	57558.51	57907.23
-8500	887.5	484853.23	5176313	404.22	57194.82	57543.88
-8500	900	484858.95	5176317.84	405.86	56166.74	56515.88
-8500	912.5	484865.86	5176327.72	404.48	57881.57	58231.02
-8500	925	484872.78	5176337.6	403.1	56372.64	56722.41
-8500	937.5	484874.27	5176349.82	402.71	56556.69	56905.86
-8500	950	484875.76	5176362.04	402.31	56279.06	56628.22
-8500	962.5	484876.87	5176371.56	402.69	56425.36	56775.15
-8500	975	484877.98	5176381.09	403.07	56556.19	56905.68
-8500	987.5	484878.32	5176393.27	404.66	56560.3	56910.21
-8500	1000	484878.66	5176405.44	406.26	56818.61	57168.66
-8500	1012.5	484881.2	5176417.62	405.37	56980.75	57330.64
-8500	1025	484883.74	5176429.79	404.47	56489.21	56838.79
-8500	1037.5	484885.27	5176442.35	405.59	56760.53	57110.52
-8500	1050	484886.8	5176454.91	406.7	56710.84	57060.62
-8500	1062.5	484885.63	5176467.39	408.76	57677.63	58027.22
-8500	1075	484884.46	5176479.88	410.82	59119.02	59452.34
-8500	1087.5	484883.93	5176492.89	412.2	56817.07	57166.52
-8500	1100	484883.39	5176505.9	413.58	56928.35	57278.19
-8500	1112.5	484882.91	5176518.39	412.53	56878.07	57227.73
-8400	450	484947.27	5176007.5	386.08	56887.5	57230.86
-8400	462.5	484950.77	5176019.33	388.25	57717.26	58061.76
-8400	475	484954.26	5176031.15	390.41	57257.44	57603.56
-8400	487.5	484956.83	5176039.99	393.01	57843.06	58188.34
-8400	500	484959.4	5176048.82	395.61	58598.11	58943.18
-8400	512.5	484958.52	5176058.99	394.76	57330.21	57675.95
-8400	525	484957.63	5176069.15	393.91	58009.01	58339.09
-8400	537.5	484957.78	5176079.53	394.36	60304	60650.12
-8400	550	484957.92	5176089.9	394.81	55420.21	55766.52
-8400	562.5	484958.01	5176099.74	394.33	57208.31	57554.22
-8400	575	484958.1	5176109.58	393.85	58522.44	58868.09
-8400	587.5	484958.68	5176119.73	394.13	57002.11	57347.82

/Line	Station	East	North	Elevation	RawMag	CorMag
-8400	600	484959.26	5176129.89	394.41	57020.52	57365.38
-8400	612.5	484960.08	5176140.26	395.4	57438.7	57783.33
-8400	625	484960.9	5176150.64	396.4	56630.32	56974.31
-8400	637.5	484960.71	5176155.51	396.62	57005.66	57349.35
-8400	650	484960.53	5176160.38	396.83	56810.68	57154.65
-8400	662.5	484960.34	5176165.26	397.05	56670.44	57014.7
-8400	675	484960.15	5176170.13	397.27	56847.14	57191.23
-8400	687.5	484959	5176179.88	400	57130.97	57475.88
-8400	700	484957.84	5176189.62	402.73	58103.88	58448.74
-8400	712.5	484957.82	5176200.19	404.42	57391.13	57736.36
-8400	725	484957.79	5176210.75	406.1	56640.99	56986.12
-8400	737.5	484958.6	5176221.04	406.4	56752.43	57097.2
-8400	750	484959.42	5176231.33	406.71	56878.18	57222.88
-8400	762.5	484958.85	5176241.32	406.99	56492.73	56837.39
-8400	775	484958.28	5176251.31	407.26	56543.67	56888.16
-8400	800	484956.74	5176271.67	407.39	56543.24	56887.66
-8400	812.5	484956.63	5176281.92	407.98	56436.65	56781.16
-8400	825	484956.52	5176292.16	408.57	56679.4	57024.25
-8400	837.5	484955.59	5176302.67	408.99	56320.13	56664.76
-8400	850	484954.66	5176313.18	409.4	56244.31	56588.92
-8400	862.5	484953.89	5176322.72	408.64	56366.32	56710.54
-8400	875	484953.12	5176332.27	407.89	56213.13	56557.37
-8400	887.5	484952.73	5176342.43	405.54	56140.27	56484.77
-8400	900	484952.34	5176352.59	403.2	56157.49	56502.32
-8400	912.5	484951.52	5176363.6	403.81	56269.43	56613.9
-8400	925	484950.69	5176374.61	404.42	56249.8	56594.64
-8400	937.5	484949.31	5176384	406.47	57204.84	57549.15
-8400	950	484947.93	5176393.38	408.51	56851.51	57195.59
-8400	962.5	484945.86	5176403.65	409.35	56683.11	57011.22
-8400	975	484943.79	5176413.92	410.19	56528.77	56873.26
-8400	987.5	484943.7	5176422.59	411.09	56572.81	56917.64
-8400	1000	484943.61	5176431.26	411.99	56882.73	57227.63
-8400	1012.5	484941.91	5176442.34	411.02	56912.37	57256.6
-8400	1025	484940.21	5176453.41	410.06	56568.05	56911.79
-8400	1037.5	484938.62	5176462.78	409.75	56433.69	56777.86
-8400	1050	484937.03	5176472.15	409.44	57311.91	57655.75
-8400	1062.5	484936.54	5176481.95	408.89	56649.57	56993.71
-8400	1075	484936.04	5176491.74	408.35	56516.72	56861.07
-8400	1087.5	484936.17	5176502.06	408.3	56453.66	56797.95
-8400	1100	484936.31	5176512.38	408.24	56497.82	56841.9
-8400	1112.5	484936.01	5176525.19	408.45	56504.55	56849.07
-8300	500	485042.34	5175917.74	384.57	56512.42	56857.06
-8300	512.5	485045.9	5175930.89	384.41	56347.25	56691.77
-8300	525	485049.46	5175944.04	384.25	56526.5	56871.22
-8300	537.5	485052.79	5175955.09	384.94	56334.16	56678.83
-8300	550	485056.11	5175966.14	385.62	53201.95	53546.58
-8300	550	485056.11	5175966.14	385.62	53208	53553.05
-8300	562.5	485059.46	5175977.71	386.98	57283.9	57628.64
-8300	575	485062.82	5175989.29	388.34	57688.32	58026.72
-8300	587.5	485064.11	5176002.28	388.74	57174.72	57519.36
-8300	600	485065.4	5176015.26	389.14	56489.6	56834.21

/Line	Station	East	North	Elevation	RawMag	CorMag
-8300	612.5	485064.41	5176027.98	389.02	56570.93	56915.7
-8300	625	485063.41	5176040.71	388.91	56562.36	56906.99
-8300	637.5	485061.85	5176052.14	389.49	56592.87	56936.25
-8300	650	485060.29	5176063.57	390.07	57091.47	57436.27
-8300	662.5	485059.16	5176075.86	391.11	56847.2	57192.14
-8300	675	485058.04	5176088.14	392.14	56807.95	57152.58
-8300	687.5	485060.61	5176100.21	394.08	56738.68	57082.7
-8300	700	485063.19	5176112.29	396.02	56408.21	56752.2
-8300	712.5	485064.32	5176122.42	399.28	56495.51	56839.75
-8300	725	485065.45	5176132.55	402.54	56707.51	57051.65
-8300	737.5	485066.34	5176144.84	404.09	56456.86	56801.24
-8300	750	485067.24	5176157.13	405.63	56846.27	57190.02
-8300	762.5	485067.79	5176169.29	407.43	57033.32	57376.95
-8300	775	485068.35	5176181.46	409.22	56730.4	57074.5
-8300	787.5	485067.97	5176193.97	410.46	56613.82	56957.88
-8300	800	485067.6	5176206.48	411.69	56746.32	57090.68
-8300	812.5	485066.61	5176218.37	412.24	56949.57	57294.24
-8300	825	485065.63	5176230.26	412.78	56893.59	57237.86
-8300	837.5	485062.63	5176241.57	414.44	57034.85	57378.9
-8300	850	485059.63	5176252.88	416.11	57109.24	57453.5
-8300	862.5	485056.9	5176265.68	416.35	57207	57550.95
-8300	875	485054.16	5176278.48	416.58	57278.52	57622.89
-8300	887.5	485050.69	5176290.46	416.41	59432.3	59776.38
-8300	900	485047.21	5176302.44	416.25	55656.41	56000.07
-8300	912.5	485046.13	5176313.38	416.98	55995.58	56339.26
-8300	925	485045.05	5176324.31	417.7	56618.96	56963.05
-8300	937.5	485042.77	5176337.03	416.93	57214.88	57558.81
-8300	950	485040.48	5176349.74	416.16	56321.41	56665.85
-8300	962.5	485039.67	5176362.29	415.94	56622.86	56966.91
-8300	975	485038.86	5176374.83	415.72	57172.76	57516.76
-8300	987.5	485037.09	5176387.12	412.34	56368.44	56712.52
-8300	1000	485035.33	5176399.41	408.95	56051.27	56395.63
-8300	1012.5	485035.61	5176410.5	410.92	56231.95	56575.94
-8300	1025	485035.89	5176421.59	412.89	56766.03	57110.2
-8300	1037.5	485035.85	5176434.36	414.58	56507.71	56851.93
-8300	1050	485035.82	5176447.12	416.28	56910.57	57255.07
-8300	1062.5	485035.97	5176459.37	417.33	57066.96	57411.26
-8300	1075	485036.13	5176471.62	418.38	57005.54	57334.71
-8300	1087.5	485036.98	5176484.41	420.48	56762.29	57106.24
-8300	1100	485037.94	5176497.29	422.48	57532.39	57875.79
-8300	1112.5	485037.13	5176508.7	423.37	57334.49	57677.94
-8300	1125	485036.31	5176520.11	424.25	56801.06	57144.89
-8200	500	485066.59	5175946.36	386.18	56691.71	57036.9
-8200	512.5	485073.66	5175957.27	388.14	56255.18	56600.08
-8200	525	485080.73	5175968.18	390.1	56146.6	56491.64
-8200	537.5	485087.07	5175978.63	391.49	57795.53	58140.82
-8200	550	485093.42	5175989.07	392.87	54815.08	55160.23
-8200	562.5	485098.84	5176000.83	392.66	57134.24	57479.88
-8200	575	485104.27	5176012.58	392.45	56758.76	57104.5
-8200	587.5	485110.95	5176024.67	392.38	56450.14	56796.17
-8200	600	485117.62	5176036.77	392.31	56291.27	56636.8

/Line	Station	East	North	Elevation	RawMag	CorMag
-8200	612.5	485123.44	5176047.38	392.12	56444.82	56791.01
-8200	625	485129.26	5176057.99	391.93	56455.53	56801.64
-8200	637.5	485135.1	5176067.93	393.55	56525.48	56872.1
-8200	650	485140.94	5176077.86	395.16	56832.22	57179.52
-8200	662.5	485146.02	5176089.1	396.53	56721.01	57068.48
-8200	675	485151.1	5176100.34	397.9	56608.57	56956.21
-8200	687.5	485155.99	5176112.5	399.13	56526.22	56874.1
-8200	700	485160.88	5176124.65	400.36	56803.04	57151.3
-8200	712.5	485165.65	5176135.65	401.69	57171.71	57519.89
-8200	725	485170.41	5176146.65	403.02	56468.26	56816.71
-8200	737.5	485174.9	5176158.51	404.97	57917.74	58266.24
-8200	750	485179.39	5176170.36	406.91	56527.02	56875.83
-8200	762.5	485183.51	5176182.1	407.29	56277.05	56625.99
-8200	775	485187.62	5176193.84	407.66	57757.76	58106.91
-8200	787.5	485192.46	5176205.62	408.49	58140.01	58489.11
-8200	800	485197.31	5176217.4	409.31	56219.47	56568.47
-8200	812.5	485202.4	5176228.89	410.03	56812.15	57161.59
-8200	825	485207.49	5176240.39	410.75	57533.08	57882.9
-8200	837.5	485210.84	5176252.75	411.62	56494.38	56844.19
-8200	850	485214.2	5176265.11	412.48	58081.35	58431.87
-8200	862.5	485220.17	5176276.57	410.45	56522.17	56872.51
-8200	875	485226.13	5176288.03	408.42	56385.23	56735.82
-8200	887.5	485231.15	5176299.79	407.46	56564.43	56914.82
-8200	900	485236.16	5176311.55	406.49	56768.48	57119.04
-8200	912.5	485239.43	5176323.56	406.72	56487.99	56839.27
-8200	925	485242.7	5176335.58	406.94	56704.17	57055.1
-8200	937.5	485242.19	5176348.21	408.71	56560.86	56911.26
-8200	950	485241.67	5176360.85	410.47	56600.61	56951.52
-8200	962.5	485240.66	5176372.56	409.13	56761.15	57112.22
-8200	975	485239.65	5176384.27	407.79	57005.97	57357.93
-8200	987.5	485237.42	5176397.58	404.85	57095.05	57447.75
-8200	1000	485235.18	5176410.89	401.91	57676.92	58029.57
-8200	1012.5	485236.05	5176423.23	404.01	57926.51	58279.23
-8200	1025	485236.93	5176435.57	406.11	57007.99	57361.45
-8200	1037.5	485238.68	5176447.2	409	56696.01	57049.55
-8200	1050	485240.43	5176458.82	411.89	56757.15	57110.81
-8200	1062.5	485240.17	5176471.8	412.73	56674.53	57027.95
-8200	1075	485239.92	5176484.78	413.57	56711.22	57064.76
-8200	1087.5	485238.96	5176497.42	414.79	56736.63	57090.57
-8200	1100	485238.01	5176510.06	416.01	56734.78	57088.79
-8200	1112.5	485237.82	5176521.79	413.6	56708.49	57062.06
-8200	1125	485237.63	5176533.52	411.19	56699.28	57053.43
-8200	1137.5	485237.42	5176545.96	409.32	56733.23	57087.85
-8200	1150	485237.2	5176558.41	407.45	56685.66	57039.89
-8200	1162.5	485238.16	5176567.85	404.44	56674.28	57028.69
-8200	1175	485239.12	5176577.28	401.42	56689.78	57044.15
-8200	1187.5	485236.41	5176588.6	402.17	56713.53	57068.36
-8200	1200	485233.69	5176599.91	402.92	56679.84	57034.52
-8200	1212.5	485231.54	5176612.28	406.4	56927.46	57283.5
-8200	1225	485229.38	5176624.65	409.88	56645.88	57002.46
-8200	1237.5	485226.55	5176636.46	409.42	56704.19	57060.37

/Line	Station	East	North	Elevation	RawMag	CorMag
-8200	1250	485223.71	5176648.27	408.96	56746.33	57102.39
-7900	500	485353.98	5175917.51	380.1	59735.76	60072.62
-7900	512.5	485355.58	5175932.34	382.19	57413.69	57751.25
-7900	525	485357.18	5175947.16	384.27	56947.08	57284.47
-7900	537.5	485360.09	5175959.25	383.38	56831.44	57168.14
-7900	550	485363.01	5175971.35	382.49	56659.56	56995.96
-7900	562.5	485364.58	5175983.7	382.83	56448.56	56783.79
-7900	575	485366.15	5175996.05	383.16	56353.74	56689.08
-7900	587.5	485367.41	5176007.38	384.63	56342.23	56679.48
-7900	600	485368.66	5176018.7	386.11	56377.07	56714.99
-7900	612.5	485369.71	5176029.84	389.34	56638.32	56976.23
-7900	625	485370.77	5176040.97	392.56	56722.03	57058.91
-7900	637.5	485372.87	5176052.72	391.89	55455.92	55792.3
-7900	650	485374.97	5176064.47	391.23	55453.72	55789.79
-7900	662.5	485376.67	5176076.33	392.03	56592.87	56929.16
-7900	675	485378.38	5176088.19	392.84	56590.07	56926.18
-7900	687.5	485380.7	5176100.13	392.63	56554.12	56890.8
-7900	700	485383.02	5176112.08	392.43	56459.42	56796.36
-7900	712.5	485382.37	5176122.31	391.47	57061.03	57397.98
-7900	725	485381.72	5176132.54	390.51	56518.43	56855.51
-7900	737.5	484914.24	5176175.29	388.24	56334.75	56672.52
-7900	750	485380.37	5176155.96	390.27	56346.14	56683.55
-7900	762.5	485380.69	5176168.67	390.3	56436.69	56774.84
-7900	775	485381.01	5176181.39	390.34	56407.61	56745.67
-7900	787.5	485381.98	5176193.12	390.31	56371.73	56709.19
-7900	800	485382.95	5176204.84	390.28	56326.39	56664.22
-7900	812.5	485385.25	5176216.45	391.42	56302.87	56640.4
-7900	825	485387.55	5176228.06	392.57	56522.91	56860.96
-7900	837.5	485390.29	5176240.54	393.89	56390.29	56727.09
-7900	850	485393.02	5176253.02	395.21	56347.21	56684.25
-7900	862.5	485395.9	5176265.55	395.48	56359.26	56696.11
-7900	875	485398.77	5176278.09	395.74	56395.3	56732.56
-7900	887.5	485400.72	5176290.25	395.01	56412.29	56749.94
-7900	900	485402.68	5176302.42	394.29	56363.76	56701.39
-7900	912.5	485403.83	5176314.63	394.1	56468.55	56806.32
-7900	925	485404.98	5176326.85	393.91	56494.67	56831.74
-7900	937.5	485405.82	5176334.78	395.15	56438.14	56775.29
-7900	950	485406.67	5176342.7	396.39	56527.69	56864.33
-7900	962.5	485407.47	5176358.28	395.07	56472.54	56809.75
-7900	975	485408.28	5176373.85	393.74	56531.97	56869.31
-7900	987.5	485410.38	5176386.19	393.93	56529.3	56866.15
-7900	1000	485412.47	5176398.53	394.11	56536.52	56873.42
-7900	1012.5	485413.14	5176410.65	394.69	56554.51	56890.84
-7900	1025	485413.8	5176422.77	395.27	56561.99	56898.15
-7900	1037.5	485414.73	5176434.94	396.28	56570.09	56906.11
-7900	1050	485415.67	5176447.11	397.29	56581.65	56917.64
-7900	1062.5	485416.6	5176459.28	398.31	56753.35	57088.76
-7900	1075	485417.53	5176471.45	399.32	56628.35	56963.83
-7900	1087.5	485417.7	5176483.77	399.92	56542.75	56878.48
-7900	1100	485417.87	5176496.09	400.53	56568.61	56904.14
-7900	1112.5	485417.65	5176508.78	401.9	56668.8	57004.01

/Line	Station	East	North	Elevation	RawMag	CorMag
-7900	1125	485417.42	5176521.47	403.27	56673.98	57009.12
-7900	1137.5	485417.32	5176533.15	403.34	56642.75	56977.61
-7900	1150	485417.21	5176544.84	403.41	56605.08	56939.7
-7900	1162.5	485418.22	5176556.31	404.88	56636.17	56970.24
-7900	1175	485419.24	5176567.78	406.35	56668.51	57002.27
-7900	1187.5	485419.73	5176580.08	409.45	56652.67	56985.98
-7900	1200	485420.23	5176592.37	412.55	56721.32	57054.4
-7900	1212.5	485420.12	5176604.41	411.42	56740.32	57072.95
-7900	1225	485420.01	5176616.45	410.29	56732.37	57064.86
-7900	1237.5	485419.95	5176627.06	409.46	56663.6	56996.08
-7900	1250	485419.88	5176637.68	408.62	56692.06	57024.02
-7900	1262.5	485420.49	5176650.49	411.46	56710.99	57043.64
-7900	1275	485421.1	5176663.3	414.3	56625.9	56957.75
-7900	1287.5	485421.33	5176676.03	414.88	56680.27	57011.4
-7900	1300	485421.57	5176688.76	415.47	56758.74	57089.35
-7900	1312.5	485422.33	5176702.49	413.76	56799.98	57131.32
-7900	1325	485423.09	5176716.22	412.06	56974.18	57304.9
-7900	1337.5	485423.65	5176726.26	409.56	57291.4	57622.41
-7900	1350	485424.21	5176736.3	407.06	56763.39	57094.38
-7900	1362.5	485424.25	5176748.73	406.1	57291.54	57622.66
-7900	1375	485424.29	5176761.17	405.13	57745.27	58076.99
-7900	1387.5	485424.94	5176773.33	401.76	57883.6	58216.01
-7900	1400	485425.58	5176785.48	398.38	57953.17	58285.4
-7900	1412.5	485429.55	5176796.53	397.44	57581.17	57913.35
-7900	1425	485433.51	5176807.57	396.49	57755.25	58087.68
-7900	1437.5	485432.73	5176819.64	397.13	59093.98	59426.1
-7900	1450	485431.96	5176831.72	397.77	58076.67	58408.87
-7900	1462.5	485431.82	5176844.43	397.95	58401.33	58733.72
-7800	500	485558.95	5175868.16	375.32	56547.46	56888.46
-7800	512.5	485556.9	5175880.62	375.82	56474.54	56815.19
-7800	525	485554.85	5175893.08	376.31	56575.89	56916.36
-7800	537.5	485553.52	5175905.5	375.51	56560.53	56901.48
-7800	550	485552.18	5175917.93	374.72	56505.86	56846.58
-7800	562.5	485550.96	5175930.14	374.66	56718.94	57059.22
-7800	575	485549.74	5175942.35	374.6	56469.89	56810.46
-7800	587.5	485548.7	5175954.25	375.87	56584.15	56924.06
-7800	600	485547.67	5175966.16	377.14	57175.99	57515.79
-7800	612.5	485547.16	5175978.84	378.72	56241.45	56581.34
-7800	625	485546.65	5175991.51	380.29	56501.97	56842.29
-7800	637.5	485546.2	5176004.29	380.96	56454.04	56795.08
-7800	650	485545.75	5176017.06	381.62	56670.3	57011.82
-7800	662.5	485545.5	5176078.9	387.51	56942.14	57283.3
-7800	675	485545.24	5176140.75	393.4	56586.56	56927.54
-7800	687.5	485545.46	5176103.25	392.19	56600.41	56941.79
-7800	700	485545.68	5176065.74	390.98	56656.18	56997.34
-7800	712.5	485545.85	5176079.93	392.75	56759.43	57100.25
-7800	725	485546.03	5176094.11	394.51	56195.38	56536.33
-7800	737.5	485546.02	5176105.44	393.53	56793.23	57133.62
-7800	750	485546	5176116.77	392.55	56601.83	56941.8
-7800	762.5	485546.21	5176081.9	388.97	56701.89	57041.91
-7800	775	485546.42	5176047.03	385.39	56550.82	56891.08

/Line	Station	East	North	Elevation	RawMag	CorMag
-7800	787.5	485545.26	5176106.8	389.85	56393.57	56734.24
-7800	800	485544.1	5176166.57	394.3	56684.9	57025.76
-7800	812.5	485544.44	5176179.29	396.53	56555	56895.85
-7800	825	485544.79	5176192.01	398.77	56538.43	56879.32
-7800	837.5	485543.88	5176204.94	398.92	56677.56	57017.98
-7800	850	485542.97	5176217.87	399.07	56838.95	57179.42
-7800	862.5	485543.19	5176230.26	399.7	56959.82	57299.99
-7800	875	485543.4	5176242.65	400.34	56868.75	57208.55
-7800	887.5	485543	5176254.76	402.08	56855.76	57195.83
-7800	900	485542.6	5176266.86	403.83	57036.18	57376.59
-7800	912.5	485542.92	5176279.27	404.14	57063.76	57403.53
-7800	925	485543.24	5176291.68	404.45	57339.83	57679.31
-7800	937.5	485542.4	5176303.95	404.89	56811.11	57150.9
-7800	950	485541.55	5176316.22	405.34	56838.17	57178.08
-7800	962.5	485541.08	5176328.58	406.28	56691.19	57030.54
-7800	975	485540.61	5176340.94	407.23	56571.08	56910.93
-7800	987.5	485540.53	5176353.76	406.1	56397.05	56737.42
-7800	1000	485540.44	5176366.58	404.97	56143.54	56483.38
-7800	1012.5	485540.62	5176378.84	404.91	55578.54	55918.75
-7800	1025	485540.8	5176391.1	404.85	56925.67	57266.49
-7800	1037.5	485540.63	5176403.9	405.17	56386.18	56727.26
-7800	1050	485540.46	5176416.7	405.49	56419.06	56760.18
-7800	1062.5	485540.32	5176429.29	405.41	56504.1	56845.05
-7800	1075	485540.17	5176441.87	405.33	56563.8	56904.67
-7800	1087.5	485539.4	5176453.63	404.33	56612.41	56953.32
-7800	1100	485538.63	5176465.39	403.33	56677.56	57018.46
-7800	1112.5	485538.73	5176478.13	401.45	56650.66	56991.49
-7800	1125	485538.83	5176490.88	399.58	56663.65	57004.44
-7800	1137.5	485539.3	5176504.4	397.63	56668.63	57009.27
-7800	1150	485539.76	5176517.92	395.68	56812.1	57152.12
-7800	1162.5	485538.47	5176530.27	394.69	57226.51	57566.18
-7800	1175	485537.19	5176542.62	393.69	56757.23	57097.41
-7800	1187.5	485536.34	5176554.79	394	56645.4	56986.74
-7800	1200	485535.48	5176566.96	394.31	56598.16	56939.81
-7800	1212.5	485534.63	5176579.13	394.62	56812.49	57154.02
-7800	1225	485533.77	5176591.3	394.93	56572.57	56913.36
-7800	1237.5	485534.96	5176603.17	399.87	56574.23	56914.07
-7800	1250	485536.16	5176615.03	404.8	56654.57	56994.63
-7800	1262.5	485535	5176626.56	409.22	56971.99	57311.93
-7800	1275	485533.83	5176638.1	413.63	56882.32	57222.84
-7800	1287.5	485532.98	5176650.34	413.3	56698.87	57040.64
-7800	1300	485532.14	5176662.58	412.97	56650.34	56992.53
-7800	1312.5	485533.3	5176675	412.81	56542.82	56884.86
-7800	1325	485534.45	5176687.41	412.65	56550.65	56892.14
-7800	1337.5	485537.8	5176698.43	413.65	56498.76	56839.81
-7800	1350	485541.15	5176709.44	414.65	56553.05	56894.31
-7800	1362.5	485542.13	5176722.8	413.13	56770.73	57111.57
-7800	1375	485543.11	5176736.16	411.6	56799.39	57140.41
-7800	1387.5	485544	5176748.04	408.45	56709.19	57049.94
-7800	1400	485544.88	5176759.91	405.29	57363.12	57704.27
-7300	1200	486037.62	5176554.5	353.89	56484.87	56830.81

/Line	Station	East	North	Elevation	RawMag	CorMag
-7300	1212.5	486034.28	5176565.9	353.11	56481.25	56827.36
-7300	1225	486030.93	5176577.31	352.32	56476.19	56822.08
-7300	1237.5	486027.29	5176590.46	353	56481.31	56827.31
-7300	1250	486023.65	5176603.6	353.67	56486.49	56833.1
-7300	1262.5	486022.65	5176615.72	353.5	56489.43	56835.42
-7300	1275	486021.65	5176627.84	353.32	56500.37	56846.47
-7300	1287.5	486019.74	5176640.62	353.1	56469.66	56816.23
-7300	1300	486017.83	5176653.39	352.87	56422.57	56769.09
-7300	1312.5	486014.77	5176665.19	353.44	56419.98	56766.03
-7300	1325	486011.7	5176676.98	354	56443.1	56788.87
-7300	1337.5	486010.22	5176688.78	354.14	56496.6	56842.5
-7300	1350	486008.75	5176700.57	354.29	56380.88	56726.89
-7300	1362.5	486007.23	5176712.89	354.01	56391.35	56737.49
-7300	1375	486005.71	5176725.22	353.73	56423.59	56769.34
-7300	1387.5	486003.11	5176737.38	353.54	56388.73	56734.29
-7300	1400	486000.52	5176749.54	353.35	56380.95	56726.31
-7300	1412.5	485999.32	5176760.79	354	56378.78	56724.31
-7300	1425	485998.11	5176772.04	354.65	56332.94	56678.31
-7300	1437.5	485998.09	5176785.25	355.21	56343.18	56687.76
-7300	1450	485998.07	5176798.45	355.78	56360.53	56705.2
-7200	1200	486136.89	5176536.44	373.81	56880.87	57227.53
-7200	1212.5	486136.73	5176547.96	372.98	56896.16	57242.4
-7200	1225	486136.57	5176559.48	372.15	56781.58	57127.92
-7200	1237.5	486136.84	5176572.33	371.26	56600.48	56947.32
-7200	1250	486137.11	5176585.17	370.37	56759.68	57106.52
-7200	1262.5	486138.04	5176597.49	368.75	56619.16	56966.1
-7200	1275	486138.98	5176609.81	367.13	56900.83	57248.21
-7200	1287.5	486139.4	5176622.87	367.52	56796.47	57144.1
-7200	1300	486139.81	5176635.92	367.91	56857.54	57205.26
-7200	1312.5	486139.92	5176648.5	368.82	56832.39	57179.57
-7200	1325	486140.04	5176661.09	369.72	56665.74	57013.3
-7200	1337.5	486139.48	5176673.52	371.04	56446.26	56794.27
-7200	1350	486138.93	5176685.94	372.35	56679.96	57027.63
-7200	1362.5	486138.58	5176699.04	373.07	56936.29	57283.91
-7200	1375	486138.23	5176712.14	373.78	57070.72	57418.61
-7200	1387.5	486137.52	5176724.62	373.65	56818.78	57166.7
-7200	1400	486136.8	5176737.1	373.53	56886.13	57233.9
-7200	1412.5	486137.2	5176748.63	374.59	56625.22	56973.15
-7200	1425	486137.61	5176760.16	375.65	56648.59	56995.92
-7200	1437.5	486135.98	5176772.85	377.66	56667.11	57014.75
-7200	1450	486134.36	5176785.53	379.67	56800.54	57147.98
-7200	1462.5	486133.48	5176798.14	378.25	56935.72	57282.97
-7100	1200	486233.91	5176541.25	391.71	56748.47	57092.01
-7100	1212.5	486234.06	5176553	388.89	56706.85	57050.63
-7100	1225	486234.22	5176564.74	386.07	56674.22	57017.45
-7100	1237.5	486234.84	5176576.69	382.51	56666.39	57011.2
-7100	1250	486235.47	5176588.64	378.94	56394.52	56737.52
-7100	1262.5	486235.16	5176601.79	379.1	56277.08	56621.54
-7100	1275	486234.86	5176614.95	379.25	57102.61	57447.97
-7100	1287.5	486234.76	5176626.81	378.93	56686.87	57032.53
-7100	1300	486234.66	5176638.68	378.6	56852.76	57198.89

/Line	Station	East	North	Elevation	RawMag	CorMag
-7100	1312.5	486234.66	5176651.07	379.26	56763.44	57109.96
-7100	1325	486234.65	5176663.46	379.91	56812.4	57156.98
-7100	1337.5	486234.55	5176677.07	380.45	56221.95	56565.87
-7100	1350	486234.44	5176690.68	380.99	56530.09	56873.12
-7100	1362.5	486234.25	5176703.11	383.75	56717.9	57062.14
-7100	1375	486234.06	5176715.53	386.5	56816.5	57162.76
-7100	1387.5	486233.93	5176728.24	387.25	56952.67	57298.57
-7100	1400	486233.8	5176740.95	388	56600.6	56944.38
-7100	1412.5	486233.39	5176753.12	390.86	56682.33	57026.93
-7100	1425	486232.97	5176765.29	393.72	56778.22	57123.66
-7100	1437.5	486233.74	5176778.5	397.29	56676.12	57022.55
-7100	1450	486234.51	5176791.7	400.85	57058.48	57404.99
-7100	1462.5	486233.42	5176803.46	402.93	57302.23	57648.13
-7000	1200	486299.92	5176533.1	395.08	56471.76	56815.8
-7000	1212.5	486299.65	5176543.79	389.91	56560	56903.07
-7000	1225	486299.37	5176554.47	384.75	56577.29	56920.68
-7000	1237.5	486299.34	5176566.65	384.63	56655.92	56999.96
-7000	1250	486299.31	5176578.84	384.5	56865.32	57210.09
-7000	1262.5	486298.64	5176591.87	386.28	57056.84	57401.44
-7000	1275	486297.97	5176604.9	388.06	56715.21	57059.63
-7000	1287.5	486298.06	5176617.16	387.37	56821.79	57165.36
-7000	1300	486298.16	5176629.42	386.67	56680.56	57023.9
-7000	1312.5	486297.9	5176641.46	390.4	56933.65	57276.65
-7000	1325	486297.63	5176653.5	394.14	57131.17	57475.05
-7000	1337.5	486298.23	5176666.28	396.51	57305.18	57649.17
-7000	1350	486298.84	5176679.05	398.88	57163.53	57506.28
-7000	1362.5	486298.59	5176691.62	399.27	56848.52	57190.28
-7000	1375	486298.33	5176704.18	399.66	56877.65	57219.48
-7000	1387.5	486298.44	5176716.79	399.42	56772.6	57114.81
-7000	1400	486298.55	5176729.39	399.18	56826	57169.68
-7000	1412.5	486298.79	5176741.57	398.64	56877.58	57220.75
-7000	1425	486299.02	5176753.75	398.11	56908.01	57251.39
-7000	1437.5	486298.71	5176765.92	397.55	56545.63	56889.64
-7000	1450	486298.41	5176778.1	396.98	56534.69	56879.61
-6900	1200	486448.19	5176523.14	391.8	56513.13	56847.08
-6900	1212.5	486446.21	5176534.97	390.58	56582.69	56915.71
-6900	1225	486444.23	5176546.81	389.35	56680.01	57011.64
-6900	1237.5	486443.48	5176559.66	390.27	56734.55	57066.69
-6900	1250	486442.74	5176572.51	391.2	56797.42	57129.35
-6900	1262.5	486442.53	5176585.28	390.84	57091.22	57424.1
-6900	1275	486442.31	5176598.04	390.48	57278.92	57612.8
-6900	1287.5	486440.94	5176610.02	392.26	57240.63	57575.75
-6900	1300	486439.56	5176622	394.03	56916.06	57251.98
-6900	1312.5	486438.69	5176635.07	394.9	56419.44	56755.58
-6900	1325	486437.81	5176648.14	395.77	56579.19	56915.53
-6900	1337.5	486437.38	5176660.99	396.06	56619.56	56955.17
-6900	1350	486436.94	5176673.85	396.35	56539.81	56875.24
-6900	1362.5	486436.3	5176686.54	397.05	56638.62	56973.23
-6900	1375	486435.67	5176699.23	397.74	56709.67	57043.83
-6900	1387.5	486434.78	5176711.57	398.22	56800.62	57134.01
-6900	1400	486433.88	5176723.91	398.7	56955.89	57288.71

/Line	Station	East	North	Elevation	RawMag	CorMag
-6900	1412.5	486432.76	5176736.46	399.17	57326.61	57659.46
-6900	1425	486431.63	5176749.02	399.65	56814.5	57148.9
-6900	1437.5	486430.75	5176761.71	399.63	56959.71	57294.27
-6900	1450	486429.87	5176774.39	399.62	56878.25	57213.08
-6900	1462.5	486429.07	5176786.82	400.76	56923.42	57258.71
-6900	1475	486428.26	5176799.26	401.9	56971.1	57306.44
-6800	1200	486527.54	5176512.2	398.89	56839.96	57162.73
-6800	1212.5	486527.04	5176524.87	400.42	56789.09	57128.84
-6800	1225	486526.55	5176537.53	401.95	56749.57	57088.66
-6800	1237.5	486525.68	5176549.79	402.01	56759.18	57098.2
-6800	1250	486524.81	5176562.04	402.06	56779.94	57118.49
-6800	1262.5	486523.91	5176574.76	401.14	56909.05	57247.04
-6800	1275	486523.01	5176587.48	400.23	56911.73	57248.95
-6800	1287.5	486522.18	5176599.53	400.11	56482.86	56819.68
-6800	1300	486521.34	5176611.58	399.99	56542.27	56878.6
-6800	1312.5	486521.08	5176623.97	397.82	56592.48	56927.32
-6800	1325	486520.82	5176636.37	395.64	56571.02	56906.12
-6800	1337.5	486520.77	5176648.89	396.17	56645.8	56981.75
-6800	1350	486520.71	5176661.41	396.71	56682.58	57019.09
-6800	1362.5	486520.51	5176674.34	396.08	56759.9	57096.89
-6800	1375	486520.3	5176687.27	395.45	57043.38	57381.48
-6800	1387.5	486520.05	5176699.85	394.89	57030.65	57368.58
-6800	1400	486519.8	5176712.43	394.34	56654.53	56992.35
-6800	1412.5	486519.9	5176725.17	393.82	56873.51	57212.05
-6800	1425	486520	5176737.92	393.3	57076.83	57414.77
-6800	1437.5	486518.7	5176750.1	393.28	57030.74	57369.83
-6800	1450	486517.41	5176762.28	393.27	56679.73	57018.38
-6800	1462.5	486516.92	5176774.74	395.95	56674.68	57013.21
-6800	1475	486516.43	5176787.2	398.63	56810.7	57148.46
-6800	1487.5	486517.22	5176799.89	399.43	56766.9	57104.28
-6700	1200	486583.68	5176507.27	391.18	56571.99	56918.62
-6700	1212.5	486583.48	5176519.22	392.27	56551.24	56896.74
-6700	1225	486583.28	5176531.17	393.36	56564.69	56910.01
-6700	1237.5	486583.29	5176543.63	394.44	56557.64	56904.37
-6700	1250	486583.29	5176556.08	395.53	56572.82	56919.5
-6700	1262.5	486584.25	5176568.51	394.71	56579.05	56923.65
-6700	1275	486585.21	5176580.94	393.89	56574.93	56920.65
-6700	1287.5	486584.8	5176593.71	391.79	56557.26	56904.04
-6700	1300	486584.39	5176606.49	389.7	56558.39	56904.99
-6700	1312.5	486585.29	5176618.53	389.37	56559.28	56906.07
-6700	1325	486586.18	5176630.57	389.04	56597.47	56944.12
-6700	1337.5	486585.99	5176643.33	391.35	56810.76	57157.71
-6700	1350	486585.8	5176656.09	393.66	56671.05	57017.18
-6700	1362.5	486586.62	5176669.37	394.52	57640.42	57985.5
-6700	1375	486587.44	5176682.64	395.38	56472.96	56818.66
-6700	1387.5	486588.2	5176694.34	394.27	56643.91	56989
-6700	1400	486588.96	5176706.04	393.17	56736.37	57081.52
-6700	1412.5	486589.53	5176718.46	392.33	56944.49	57286.82
-6700	1425	486590.1	5176730.89	391.49	57218.01	57562.25
-6700	1437.5	486590.42	5176743.24	390.93	56856.45	57201.89
-6700	1450	486590.75	5176755.6	390.36	56838.05	57181.64

/Line	Station	East	North	Elevation	RawMag	CorMag
-6700	1462.5	486591.34	5176768.13	390.68	56811.11	57154.37
-6700	1475	486591.94	5176780.67	390.99	56850.85	57195.53
-6700	1487.5	486592.54	5176793.44	390.73	56861.76	57209.16
-6700	1500	486593.14	5176806.21	390.47	56929.15	57273.58
-6600	1200	486713.57	5176501.73	380.3	56650.3	56997.38
-6600	1212.5	486712.43	5176513.28	378.17	56688.1	57034.5
-6600	1225	486711.28	5176524.82	376.04	56637.11	56982.03
-6600	1237.5	486710.25	5176537.14	373.59	56652.2	56998.34
-6600	1250	486709.22	5176549.47	371.13	56646.9	56994.84
-6600	1262.5	486707.61	5176561.35	367.82	56581.73	56926.3
-6600	1275	486706.01	5176573.23	364.52	56562.69	56907.73
-6600	1287.5	486704.48	5176585.88	362.94	56538.67	56886.48
-6600	1300	486702.95	5176598.53	361.37	56555.07	56902.33
-6600	1312.5	486702.78	5176611.18	359.49	56563.13	56908.95
-6600	1325	486702.6	5176623.82	357.61	56546.39	56892.04
-6600	1337.5	486701.92	5176636.19	356.8	56571.09	56918.72
-6600	1350	486701.24	5176648.56	355.99	56593.94	56941.2
-6600	1362.5	486701.07	5176661.53	357.85	56680.31	57024.71
-6600	1375	486700.91	5176674.5	359.71	56659.79	57004.17
-6600	1387.5	486699.44	5176687.37	358.88	56526.19	56872.88
-6600	1400	486697.96	5176700.24	358.06	56576.37	56924.68
-6600	1412.5	486698.57	5176712.84	359.75	56579.38	56926.89
-6600	1425	486699.18	5176725.43	361.44	56657.42	57004.68
-6600	1437.5	486700.26	5176737.2	363.81	56660.56	57006.7
-6600	1450	486701.34	5176748.97	366.17	56616.51	56961.95
-6600	1462.5	486702.38	5176762.19	366.78	56765.53	57112.14
-6600	1475	486703.42	5176775.4	367.4	56832.24	57178.29
-6600	1487.5	486703.63	5176787.47	364.26	56749.43	57094.7
-6600	1500	486703.84	5176799.55	361.12	56631.89	56979.7
-6600	1512.5	486703.96	5176811.54	358.69	56672.46	57019.43
-6500	1200	486806.03	5176511.99	355.03	56564.39	56912.99
-6500	1212.5	486804.8	5176524.17	355.17	56584.67	56933.19
-6500	1225	486803.56	5176536.34	355.32	56635.54	56986.82
-6500	1237.5	486801.6	5176549.04	354.77	56615.97	56964.48
-6500	1250	486799.64	5176561.75	354.23	56584.55	56932.17
-6500	1262.5	486798.25	5176574.22	353.86	56573.93	56923.82
-6500	1275	486796.85	5176586.69	353.49	56582.99	56930.56
-6500	1287.5	486794.93	5176598.84	354.44	56623.51	56973.57
-6500	1300	486793.01	5176610.98	355.39	56633.93	56982.42
-6500	1300	486793.01	5176610.98	355.39	56632.38	56982.21
-6500	1312.5	486790.43	5176621.36	357.92	56627.28	56977.31
-6500	1325	486787.85	5176631.74	360.45	56629.64	56978.68
-6500	1337.5	486786.61	5176646.97	357.35	56651.45	57001.34
-6500	1350	486785.38	5176662.2	354.24	56664.75	57014.44
-6500	1362.5	486783.76	5176674.88	353.53	56650.9	57001.42
-6500	1375	486782.13	5176687.57	352.83	56680.53	57030.98
-6500	1387.5	486780.29	5176700.45	352.58	56705.62	57056.88
-6500	1400	486778.44	5176713.32	352.33	56742.68	57092.14
-6500	1412.5	486779.66	5176725.02	352.62	56767.72	57117.42
-6500	1425	486780.88	5176736.72	352.9	56790.24	57141.14
-6500	1437.5	486782.59	5176748.46	352.89	56825.29	57176.61

/Line	Station	East	North	Elevation	RawMag	CorMag
-6500	1450	486784.3	5176760.2	352.89	56852.71	57203.53
-6500	1462.5	486786.6	5176767.73	353.65	56864.21	57214.88
-6500	1475	486788.9	5176775.27	354.41	56871.59	57223.5
-6500	1487.5	486790.43	5176786.4	353.89	56899.97	57250.97
-6500	1500	486791.95	5176797.54	353.37	56880.65	57231.36
-6500	1512.5	486793.47	5176808.67	352.84	56892.01	57243.66
-6400	1300	486888.7	5176589.37	351.66	56663.09	57013
-6400	1312.5	486889.96	5176601.87	352.06	56656.95	57007.74
-6400	1325	486891.23	5176614.37	352.45	56670.57	57020.73
-6400	1337.5	486890.86	5176627.46	352.31	56666.39	57017.35
-6400	1350	486890.5	5176640.56	352.17	56693.12	57043.02
-6400	1362.5	486890.85	5176652.9	352.17	56702.29	57053.27
-6400	1375	486891.21	5176665.24	352.16	56730.65	57081.76
-6400	1387.5	486892.05	5176677.86	353.61	56755.49	57105.5
-6400	1400	486893.9	5176689.93	357.12	56737.41	57089.19
-6400	1412.5	486893.98	5176702.46	356.03	56731.81	57082.21
-6400	1425	486894.07	5176714.98	354.94	56758.31	57108.13
-6400	1437.5	486894.4	5176727.57	354.89	56757.47	57107.72
-6400	1450	486894.73	5176740.16	354.84	56763.79	57112.76
-6400	1462.5	486895.86	5176753.06	355.53	56760.95	57112.25
-6400	1475	486896.99	5176765.96	356.23	56754.85	57106.25
-6400	1487.5	486896.98	5176778	355.43	56752.16	57102.25
-6400	1500	486896.98	5176790.03	354.62	56734.69	57084.11
-6400	1512.5	486897	5176803.24	355.93	56733.2	57083.62
-6300	1200	486963.24	5176506.41	354.76	56676.73	56996.85
-6300	1212.5	486963.78	5176519.08	355.07	56712.27	57032.33
-6300	1225	486964.32	5176531.75	355.39	56723.41	57043.43
-6300	1237.5	486966	5176543.77	355.73	56751.93	57071.91
-6300	1250	486967.67	5176555.78	356.07	56787.92	57107.85
-6300	1262.5	486967.7	5176568.54	356.64	56814.78	57134.66
-6300	1275	486967.74	5176581.29	357.21	56849.01	57168.85
-6300	1287.5	486968.07	5176594.16	358.07	56849.49	57169.28
-6300	1300	486968.39	5176607.03	358.93	56857.47	57177.2
-6300	1312.5	486969.95	5176619.07	357.3	56888.8	57208.48
-6300	1325	486971.5	5176631.11	355.67	56898.41	57218.05
-6300	1337.5	486971.7	5176643.39	355.76	56908.04	57227.63
-6300	1350	486971.9	5176655.68	355.86	56903.47	57223.02
-6300	1362.5	486973.66	5176667.88	355.37	56829.99	57149.49
-6300	1375	486975.42	5176680.07	354.88	56789.65	57109.1
-6300	1387.5	486975.96	5176692.62	356.74	56721.45	57040.85
-6300	1400	486976.51	5176705.16	358.6	56762.05	57081.4
-6300	1412.5	486977.27	5176718	357.52	56755.66	57074.96
-6300	1425	486978.03	5176730.84	356.44	56825.38	57144.63
-6300	1437.5	486979.64	5176743.05	358.5	56757.21	57076.37
-6300	1450	486981.24	5176755.27	360.56	56833.6	57152.69
-6300	1462.5	486982.31	5176767.45	361.1	56854.37	57173.41
-6300	1475	486983.38	5176779.63	361.64	56815.4	57134.39
-6300	1487.5	486984.13	5176792.53	360.01	56871.8	57190.75
-6300	1500	486984.88	5176805.42	358.37	56819.14	57138.04
-6200	1200	487102.41	5176482.24	355.86	56686.68	57007.39
-6200	1212.5	487102.78	5176494.93	356.39	56703.71	57024.47

/Line	Station	East	North	Elevation	RawMag	CorMag
-6200	1225	487103.14	5176507.61	356.93	56696.25	57017.06
-6200	1237.5	487103.33	5176519.49	355.92	56707.94	57028.8
-6200	1250	487103.51	5176531.37	354.91	56707.83	57028.73
-6200	1262.5	487102.47	5176544.87	355.47	56720.18	57041.13
-6200	1275	487101.44	5176558.37	356.02	56732.77	57053.77
-6200	1287.5	487101.53	5176570.38	355.53	56733.34	57054.38
-6200	1300	487101.62	5176582.38	355.05	56712.6	57033.69
-6200	1312.5	487101.88	5176595.17	354.87	56738.45	57059.59
-6200	1325	487102.39	5176607.61	355.09	56817.02	57138.21
-6200	1337.5	487102.47	5176620.05	354.91	56751.78	57073.02
-6200	1350	487102.56	5176632.5	354.73	56725.2	57046.49
-6200	1362.5	487101.97	5176644.68	355.21	56781.15	57102.5
-6200	1375	487101.5	5176656.69	356.1	56743.63	57065.02
-6200	1387.5	487101.67	5176669.04	356.23	56744.47	57065.91
-6200	1400	487101.85	5176681.4	356.36	57039.97	57361.46
-6200	1412.5	487101.95	5176693.96	356.06	56839.77	57161.3
-6200	1425	487102.05	5176706.52	355.75	56813	57134.57
-6200	1437.5	487101.65	5176718.95	356.13	56716.4	57038.01
-6200	1450	487101.25	5176731.37	356.51	56861.72	57183.39
-6200	1462.5	487101.12	5176744.05	356.42	56762.24	57083.95
-6200	1475	487100.99	5176756.74	356.34	56850.82	57172.58
-6200	1487.5	487100.66	5176769.63	356.36	56748.65	57070.46
-6200	1500	487100.32	5176782.53	356.38	56782.33	57104.18
-6200	1512.5	487099.45	5176794.84	356.65	56735.94	57057.84
-6200	1525	487098.57	5176807.15	356.92	56739.79	57061.74
-8100	500	485274.15	5175921.38	378.88	500	56358.52
-8100	512.5	485272.93	5175933.79	380.49	512.5	56395.87
-8100	525	485271.71	5175946.19	382.1	525	56456.36
-8100	537.5	485268.65	5175959.04	381.76	537.5	56449.55
-8100	550	485265.58	5175971.9	381.43	550	56147.65
-8100	562.5	485262.64	5175984.08	382.5	562.5	56008.03
-8100	575	485259.69	5175996.26	383.57	575	56334.03
-8100	587.5	485256.38	5176007.56	386.42	587.5	56444.75
-8100	600	485253.06	5176018.87	389.27	600	56464.27
-8100	612.5	485249.64	5176031.08	390	612.5	56362.87
-8100	625	485246.22	5176043.28	390.73	625	56123.12
-8100	637.5	485241.84	5176054.94	392.01	637.5	56183.3
-8100	650	485237.46	5176066.6	393.3	650	56867.33
-8100	662.5	485236	5176078.76	393.83	662.5	56526.1
-8100	675	485234.53	5176090.93	394.36	675	56474.27
-8100	687.5	485233.94	5176101.3	399.86	687.5	56255.42
-8100	700	485233.34	5176111.67	405.35	700	56664.55
-8100	712.5	485232.52	5176126.38	401.9	712.5	56659.28
-8100	725	485231.69	5176141.1	398.46	725	56649.2
-8100	737.5	485231.67	5176153.71	399.12	737.5	56650.37
-8100	750	485231.66	5176166.32	399.78	750	55921.45
-8100	762.5	485233.44	5176178.95	401.37	762.5	55544.03
-8100	775	485235.23	5176191.58	402.95	775	55452.46
-8100	787.5	485236.46	5176204.02	403.28	787.5	55141.98
-8100	800	485237.69	5176216.46	403.61	800	55135.7
-8100	812.5	485240.13	5176228.63	404.37	812.5	56088.2

/Line	Station	East	North	Elevation	RawMag	CorMag
-8100	825	485242.57	5176240.81	405.13	825	56112.16
-8100	837.5	485245.92	5176253.36	405.55	837.5	56196.65
-8100	850	485249.27	5176265.9	405.97	850	56261.95
-8100	862.5	485251.1	5176278.01	406.27	862.5	56335.78
-8100	875	485252.94	5176290.12	406.58	875	56443.78
-8100	887.5	485253.43	5176302.12	406.64	887.5	54576.92
-8100	900	485253.92	5176314.11	406.7	900	57350.75
-8100	912.5	485256.72	5176326.3	405.69	912.5	56727.68
-8100	925	485259.53	5176338.5	404.69	925	56472.51
-8100	937.5	485260.43	5176351.07	405.74	937.5	56477.79
-8100	950	485261.32	5176363.64	406.78	950	55013.49
-8100	962.5	485261.9	5176375.81	406.24	962.5	56497.12
-8100	975	485262.47	5176387.99	405.7	975	56565.26
-8100	987.5	485263.17	5176400.11	403.32	987.5	56573.93
-8100	1000	485263.88	5176412.22	400.94	1000	56628.31
-8100	1012.5	485262.73	5176424.34	401.26	1012.5	56616.54
-8100	1012.5	485262.73	5176424.34	401.26	1012.5	56621.18
-8100	1025	485261.59	5176436.46	401.58	1025	56457.62
-8100	1037.5	485262.35	5176448.89	403.86	1037.5	56831.52
-8100	1050	485263.11	5176461.32	406.13	1050	56616.04
-8100	1062.5	485263.99	5176474.01	406.51	1062.5	56539.86
-8100	1075	485264.87	5176486.69	406.9	1075	56554.97
-8100	1087.5	485265.29	5176498.01	404	1087.5	56579.61
-8100	1100	485265.72	5176509.33	401.09	1100	56584.83
-8100	1112.5	485266.48	5176521.85	400.02	1112.5	56586.27
-8100	1125	485267.24	5176534.37	398.95	1125	56608.78
-8100	1137.5	485267.29	5176547.18	398.23	1137.5	56577.74
-8100	1150	485267.33	5176559.98	397.5	1150	56807.02
-8100	1162.5	485267.35	5176572.23	401.71	1162.5	56772.53
-8100	1175	485267.37	5176584.48	405.92	1175	56831.96
-8100	1187.5	485265.9	5176596.62	408.81	1187.5	56684.94
-8100	1200	485264.42	5176608.76	411.7	1200	56640.44
-8100	1212.5	485261.07	5176620.63	411.92	1212.5	56649.71
-8100	1225	485257.71	5176632.5	412.14	1225	56587.95
-8100	1237.5	485254.67	5176644.58	412.23	1237.5	56833.97
-8100	1250	485251.62	5176656.66	412.31	1250	56538.68
-8100	1262.5	485250.23	5176668.81	412.84	1262.5	58082.28
-8000	1275	485315.43	5176663.83	415.03	56735.24	57175.24
-8000	1262.5	485314.77	5176651.54	414.83	56631.02	57071.02
-8000	1250	485314.11	5176639.26	414.63	56607	57047
-8000	1237.5	485314.38	5176626.2	413.51	56289.24	56729.24
-8000	1225	485314.65	5176613.14	412.4	56631.99	57071.99
-8000	1212.5	485315.36	5176601.34	410.03	56630.16	57070.16
-8000	1200	485316.08	5176589.55	407.66	55343.35	55783.35
-8000	1200	485316.08	5176589.55	407.66	55316.78	55756.78
-8000	1187.5	485316.23	5176577.79	404.13	56666.3	57106.3
-8000	1187.5	485316.23	5176577.79	404.13	56634.96	57074.96
-8000	1175	485316.38	5176566.04	400.59	56652.29	57092.29
-8000	1162.5	485316.68	5176553.42	399.4	56582.13	57022.13
-8000	1150	485316.98	5176540.8	398.21	56558.08	56998.08
-8000	1137.5	485316.94	5176528.36	397.14	56553.24	56993.24

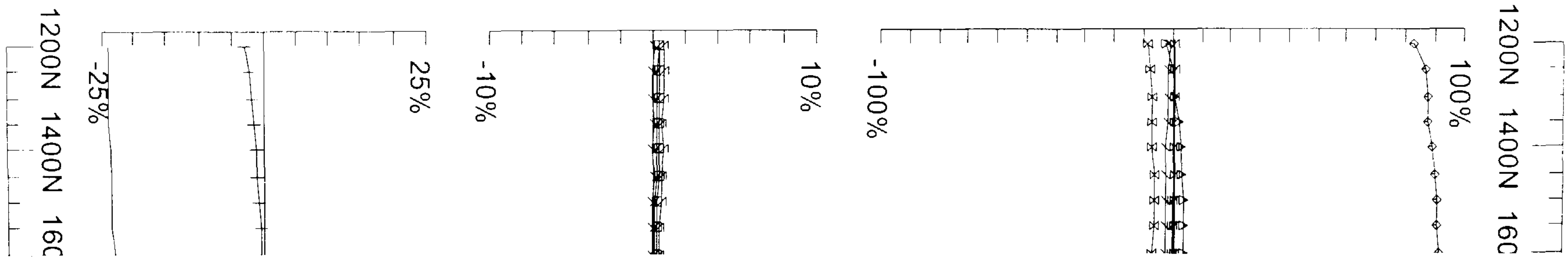
/Line	Station	East	North	Elevation	RawMag	CorMag
-8000	1125	485316.9	5176515.92	396.07	56470.06	56910.06
-8000	1112.5	485316.73	5176504.25	395.28	56820.23	57260.23
-8000	1100	485316.57	5176492.59	394.5	56726.11	57166.11
-8000	1087.5	485317.85	5176479.45	394.07	56555.34	56995.34
-8000	1075	485319.14	5176466.31	393.64	56596.3	57036.3
-8000	1075	485319.14	5176466.31	393.64	56586.76	57026.76
-8000	1062.5	485319.74	5176453.9	394.49	56521.66	56961.66
-8000	1050	485320.34	5176441.49	395.33	56534.09	56974.09
-8000	1037.5	485320.95	5176429.08	396.18	56524.11	56964.11
-8000	1025	485321.55	5176416.67	397.03	56534.7	56974.7
-8000	1012.5	485321.04	5176403.8	397.64	56466.93	56906.93
-8000	1000	485320.54	5176390.94	398.26	56473.28	56913.28
-8000	987.5	485320.29	5176378.85	399.98	56174.31	56614.31
-8000	975	485320.03	5176366.76	401.69	56409.71	56849.71
-8000	962.5	485319.95	5176354.13	401.49	56483.35	56923.35
-8000	950	485319.87	5176341.51	401.28	56457.85	56897.85
-8000	937.5	485318.79	5176328.25	401.52	56426.61	56866.61
-8000	925	485317.7	5176314.98	401.77	56412.18	56852.18
-8000	912.5	485317.55	5176303.3	400.83	56431.9	56871.9
-8000	900	485317.4	5176291.63	399.9	56393.78	56833.78
-8000	887.5	485316.04	5176279.2	399.72	56436.95	56876.95
-8000	875	485314.67	5176266.77	399.54	56179.55	56619.55
-8000	862.5	485314.32	5176253.95	399.69	56325.56	56765.56
-8000	850	485313.98	5176241.12	399.83	56296.61	56736.61
-8000	837.5	485312.84	5176228.95	397.55	56284.72	56724.72
-8000	825	485311.7	5176216.77	395.28	56251.03	56691.03
-8000	812.5	485311.6	5176204.54	394.91	55942.81	56382.81
-8000	800	485311.5	5176192.31	394.54	56161.05	56601.05
-8000	787.5	485309.98	5176180.43	394.92	56211.78	56651.78
-8000	775	485308.47	5176168.56	395.3	56567.64	57007.64
-8000	762.5	485307.54	5176155.1	395.84	56599.5	57039.5
-8000	750	485306.62	5176141.64	396.38	56406.99	56846.99
-8000	737.5	485305.57	5176129.3	394.6	56255.59	56695.59
-8000	725	485304.52	5176116.96	392.82	56152.14	56592.14
-8000	712.5	485303.3	5176104.79	390.44	56334.89	56774.89
-8000	700	485302.07	5176092.61	388.05	56326.81	56766.81
-8000	687.5	485300.85	5176080.27	385.98	56217.64	56657.64
-8000	675	485299.63	5176067.92	383.91	56264.44	56704.44
-8000	662.5	485298.45	5176055.05	384.01	56019.79	56459.79
-8000	650	485297.26	5176042.19	384.12	55719.57	56159.57
-8000	650	485297.26	5176042.19	384.12	55719.36	56159.36
-8000	637.5	485295.11	5176029.8	383.38	56103.34	56543.34
-8000	625	485292.96	5176017.41	382.64	56110.38	56550.38
-8000	612.5	485291.98	5176004.77	384.47	58601.66	59041.66
-8000	600	485291.01	5175992.13	386.3	55458.38	55898.38
-8000	600	485291.01	5175992.13	386.3	54941.64	55381.64
-8000	600	485291.01	5175992.13	386.3	55468.02	55908.02
-8000	587.5	485289.41	5175979.92	385.34	55767.99	56207.99
-8000	587.5	485289.41	5175979.92	385.34	54936.45	55376.45
-8000	587.5	485289.41	5175979.92	385.34	55735.6	56175.6
-8000	575	485287.8	5175967.72	384.38	56525.16	56965.16

/Line	Station	East	North	Elevation	RawMag	CorMag
-8000	562.5	485287.61	5175955	382.81	56202.11	56642.11
-8000	550	485287.42	5175942.28	381.23	56370.07	56810.07
-8000	537.5	485287.09	5175929.96	379.47	56259.91	56699.91
-8000	525	485286.77	5175917.63	377.7	56396.79	56836.79
-8000	512.5	485286.65	5175906.02	377.65	55813.11	56253.11
-8000	500	485286.52	5175894.41	377.61	56433.2	56873.2

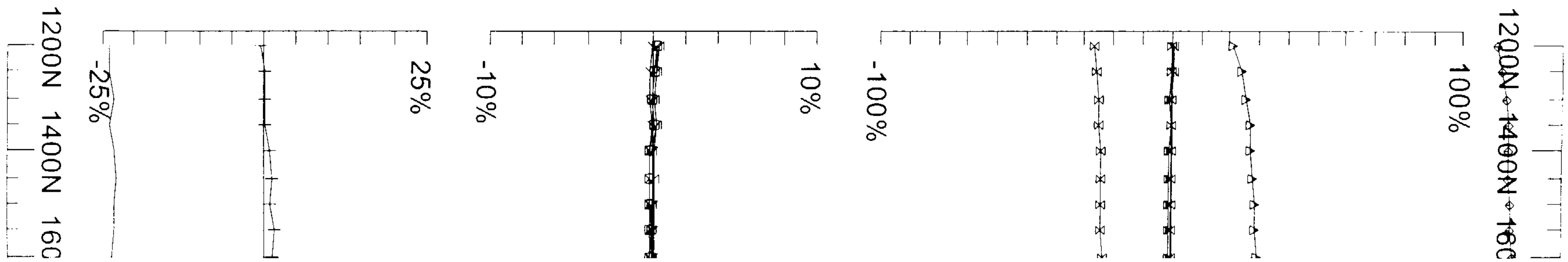
APPENDIX E

Surface UTEM 3 Survey

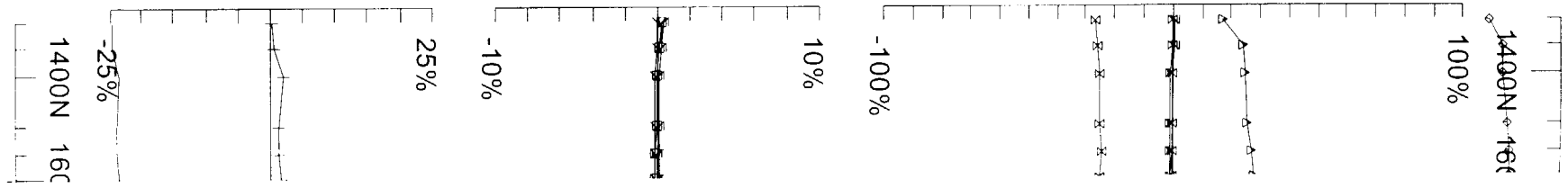
Line Profiles and Tabulated Results



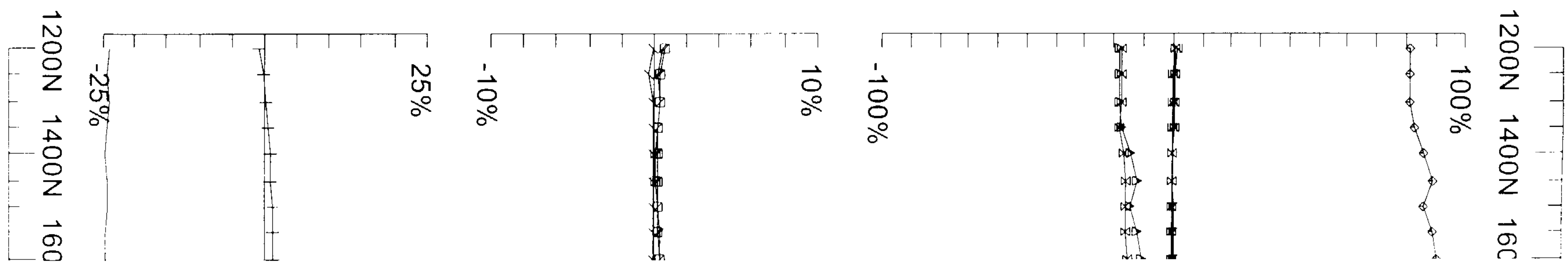
Loop: 2	Secondary, (Chn - Ch1)/lHpl	UTEM Survey at: Foy Property
Line: 6200W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



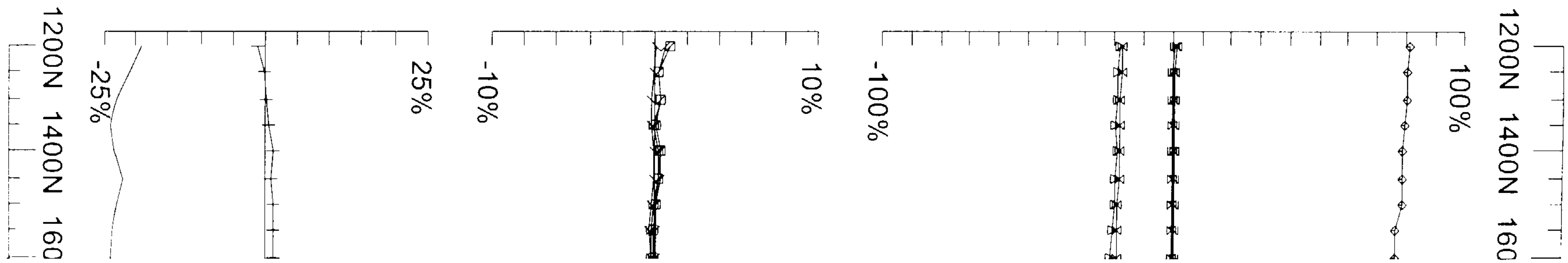
Loop: 2	Secondary, (Chn - Ch1)/IHpl	UTEM Survey at: Foy Property
Line: 6300W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



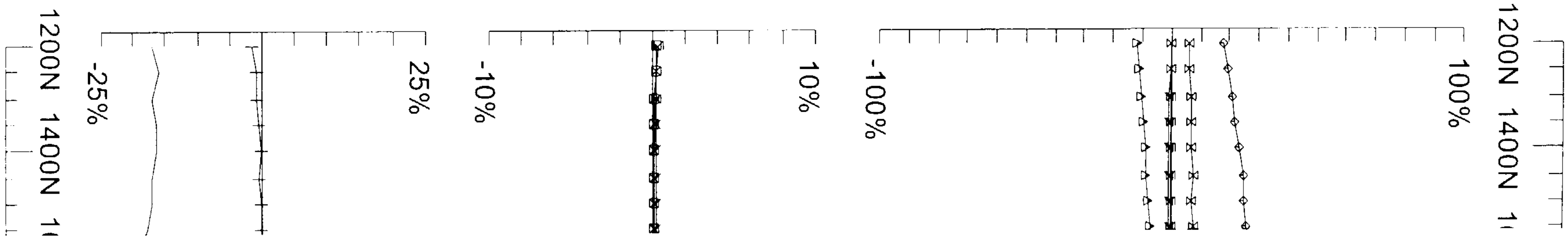
Loop: 2	Secondary, (Chn - Ch1)/IHpI	UTEM Survey at: Foy Property
Line: 6400W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



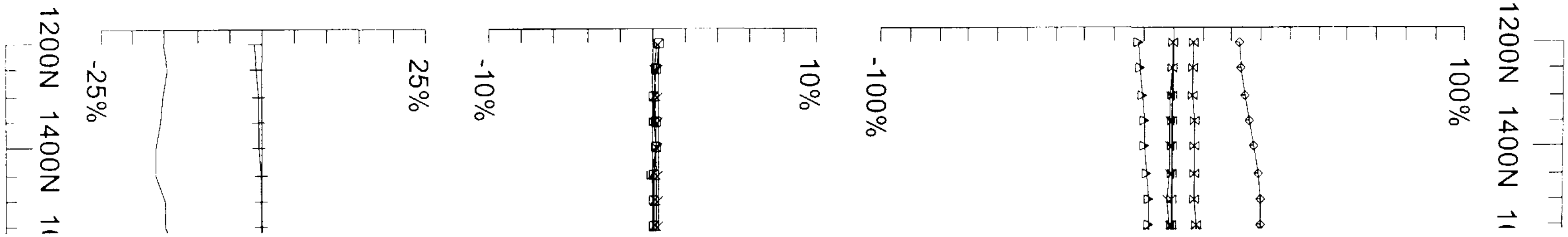
Loop: 2 Line: 6500W Compt: Hz	Secondary, (Chn - Ch1)/lHpl Contin. Norm at depth of 0 m Base Freq. 30.974 Hz	UTEM Survey at: Foy Property For: Aurora Platinum Corp LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



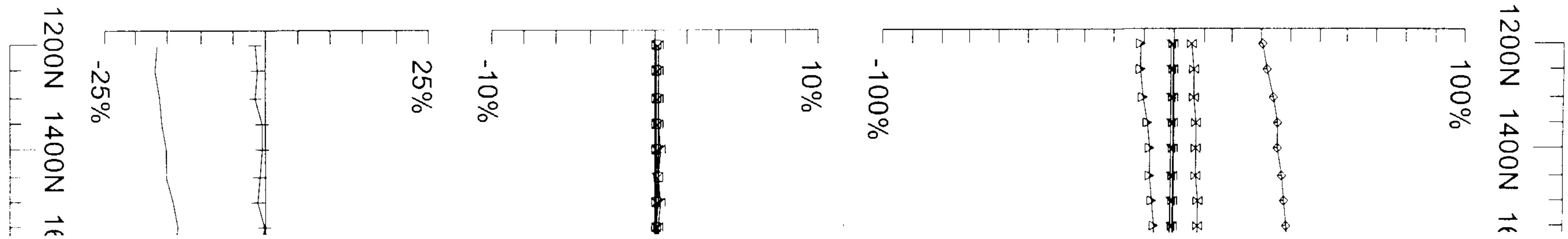
Loop: 2 Line: 6600W Compt: Hz	Secondary, (Chn - Ch1)/lHpl Contin. Norm at depth of 0 m Base Freq. 30.974 Hz	UTEM Survey at: Foy Property For: Aurora Platinum Corp LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



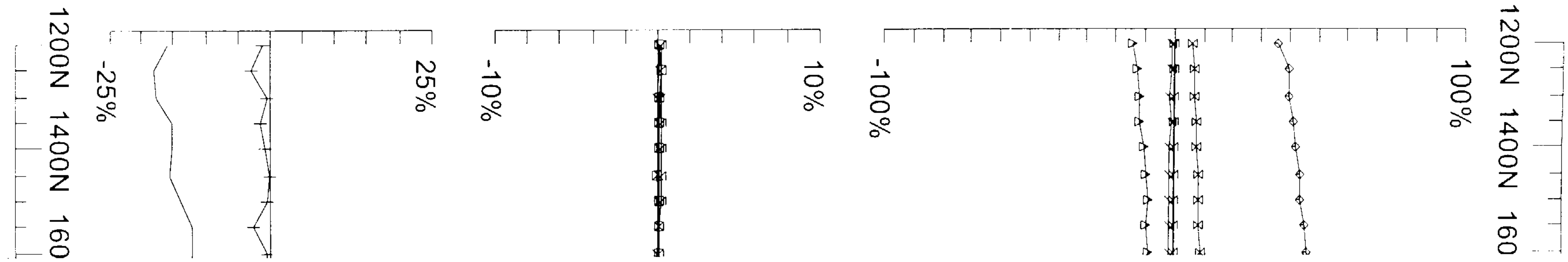
Loop: 3	Secondary, (Chn - Ch1)/lHpl	UTEM Survey at: Foy Property
Line: 6700W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed: 1/1/48 Reduced: 14/3/3 Plotted: 15/3/3



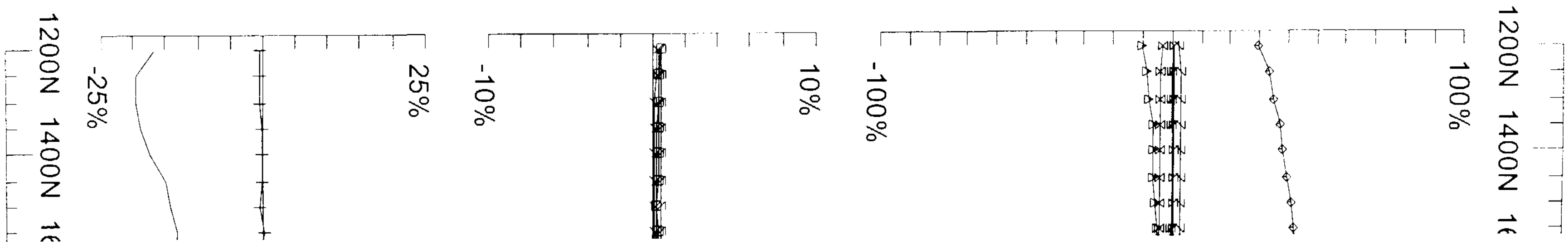
Loop: 3	Secondary, (Chn - Ch1)/lHpl	UTEM Survey at: Foy Property
Line: 6800W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 1/1/48 Reduced : 14/3/3 Plotted : 15/3/3



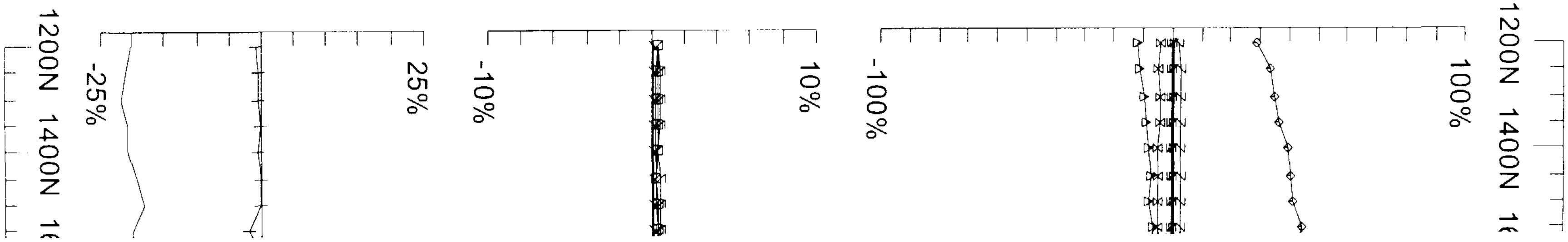
Loop: 3	Secondary, (Chn - Ch1)/IHpl	UTEM Survey at: Foy Property
Line: 6900W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 2/1/48 Reduced : 14/3/3 Plotted : 15/3/3



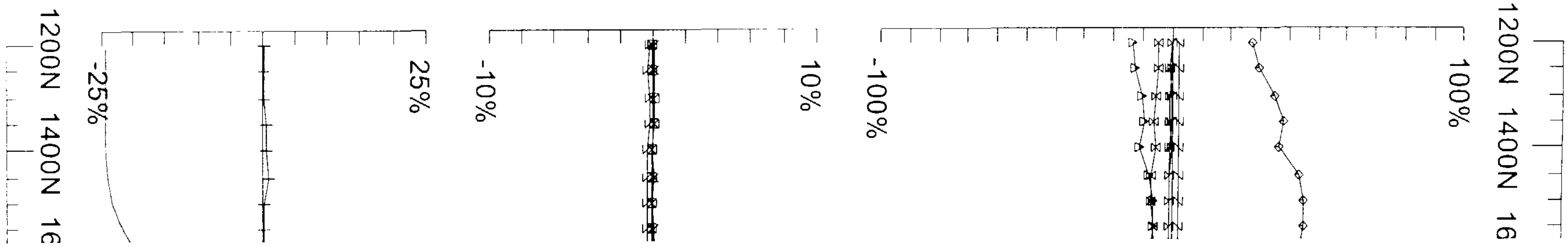
Loop: 3	Secondary, (Chn - Ch1)/IHpl	UTEM Survey at: Foy Property
Line: 7000W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 2/1/48 Reduced : 14/3/3 Plotted : 15/3/3



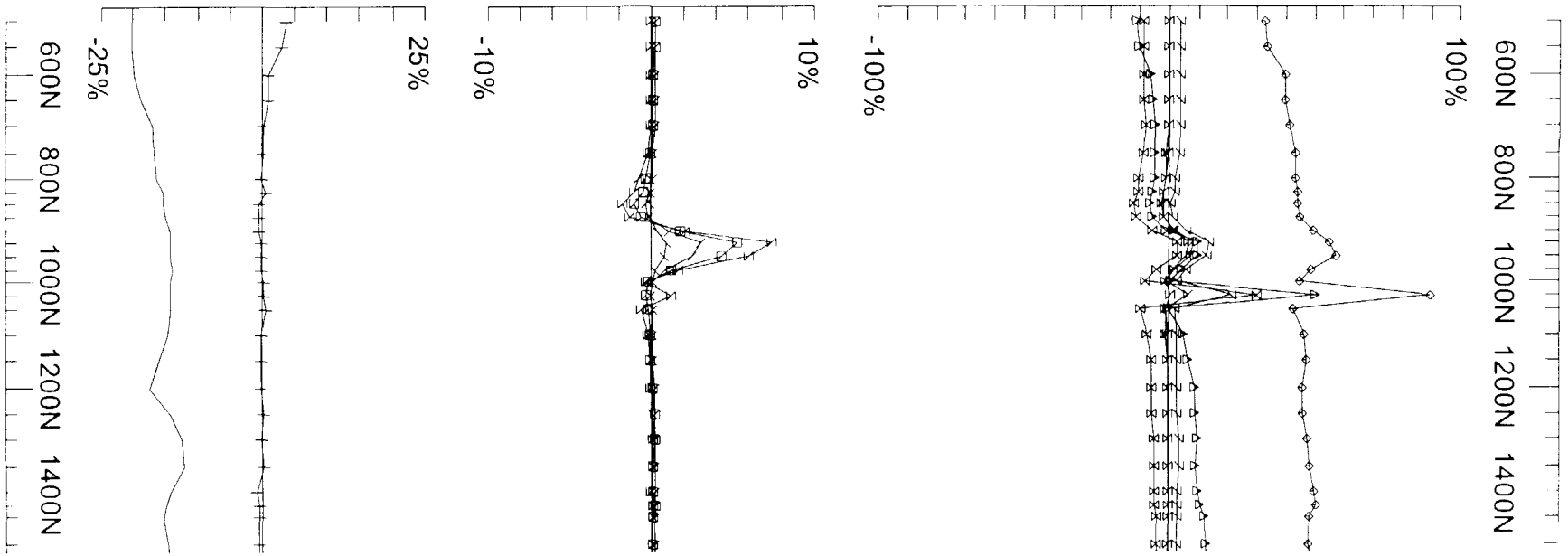
Loop: 3	Secondary, (Chn - Ch1)/lHpl	UTEM Survey at: Foy Property
Line: 7100W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 3/1/48 Reduced : 14/3/3 Plotted : 15/3/3



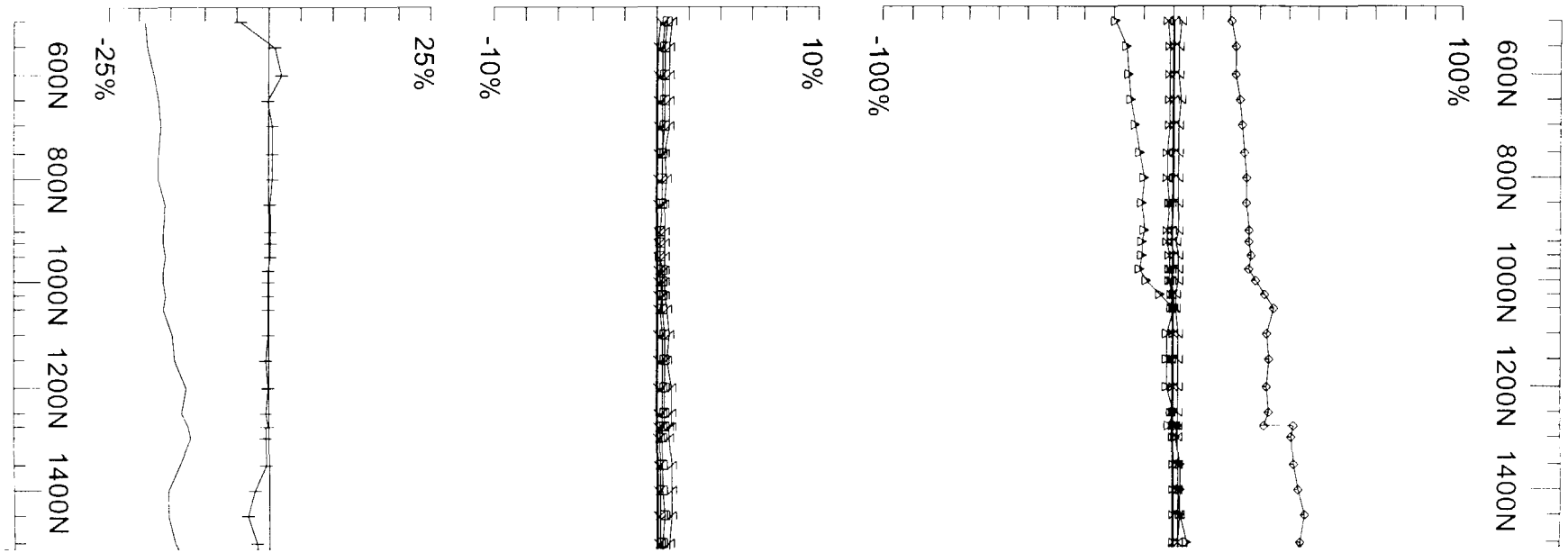
Loop: 3	Secondary, (Chn - Ch1)/IHpl	UTEM Survey at: Foy Property
Line: 7200W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Plotted : 15/3/3



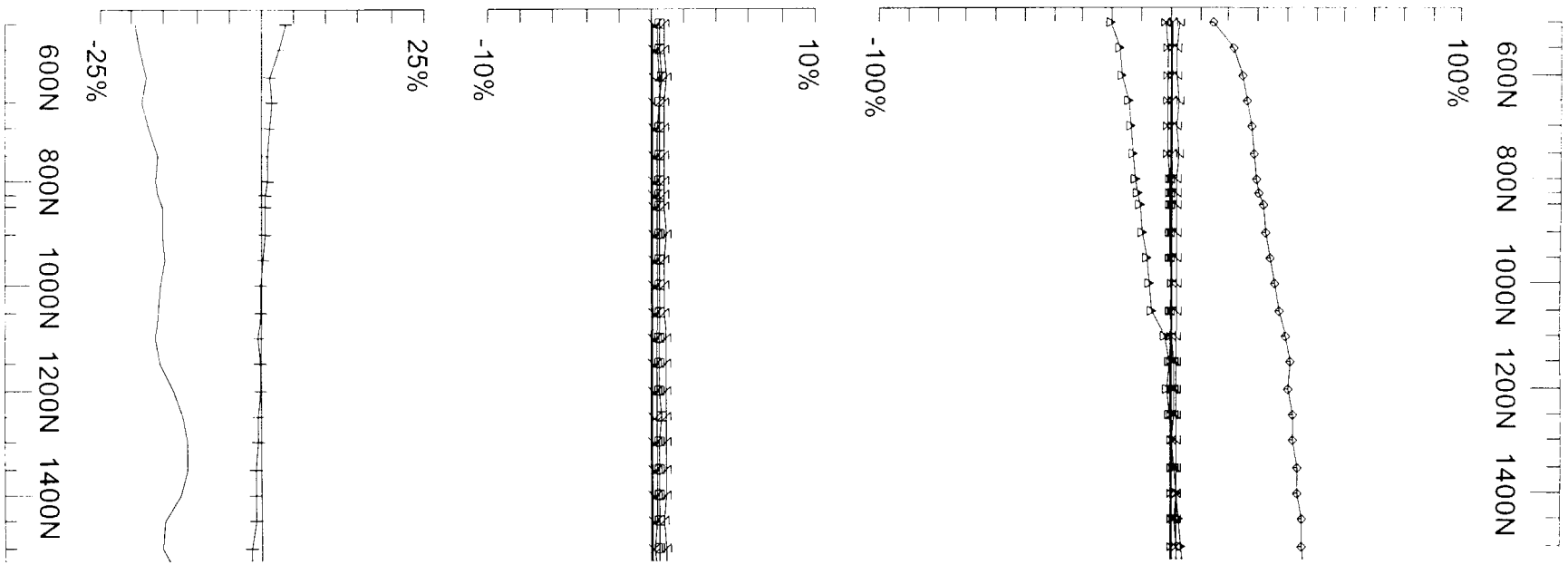
Loop: 3	Secondary, (Chn - Ch1)/IHpl	UTEM Survey at: Foy Property
Line: 7300W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 1/2/47 Reduced : 14/3/3 Plotted : 15/3/3



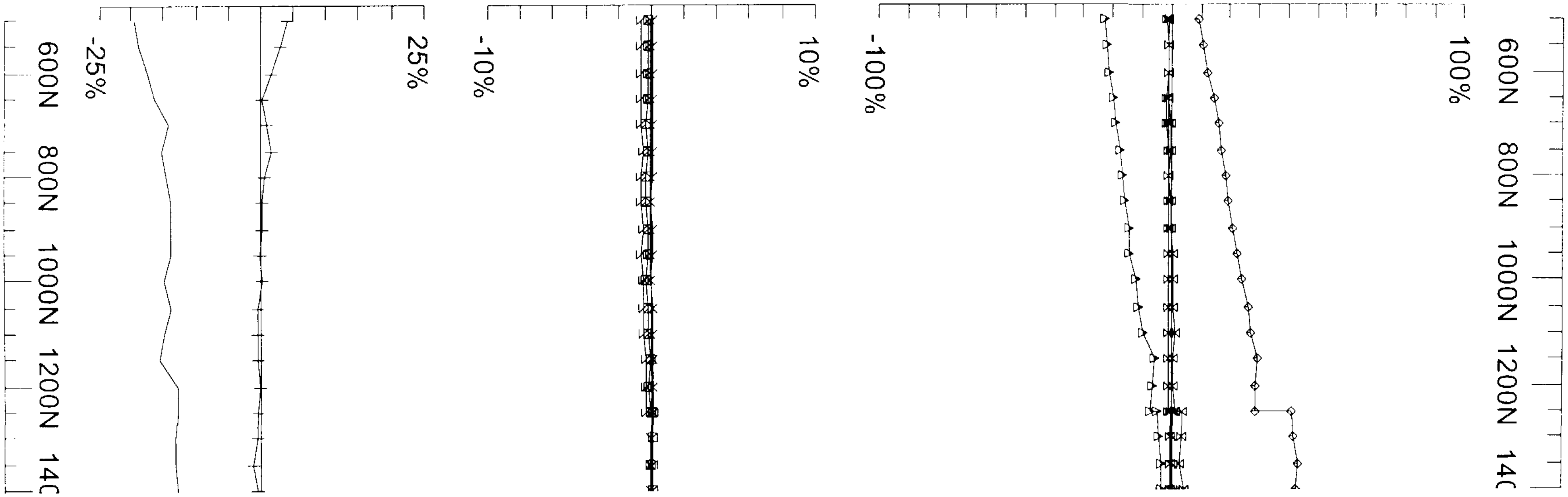
Loop: 4	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: Foy Property
Line: 7800W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE Job 0312 Surveyed : 3/2/26 Reduced : 14/3/3 Plotted : 14/3/3



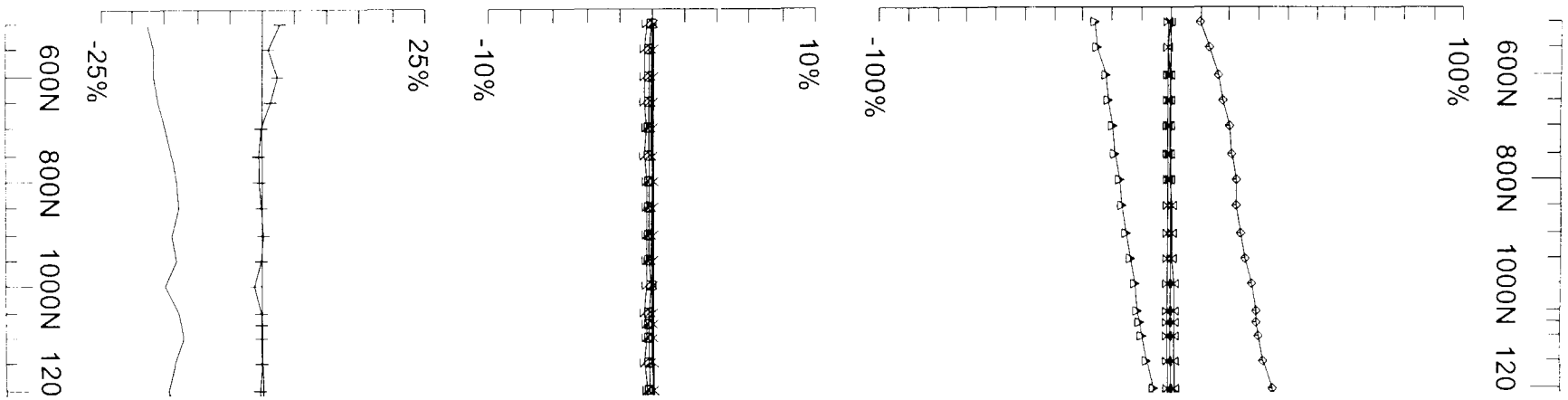
Loop: 4	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: Foy Property
Line: 7900W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed : 6/1/48, Reduced : 14/3/3, Plotted : 14/3/3



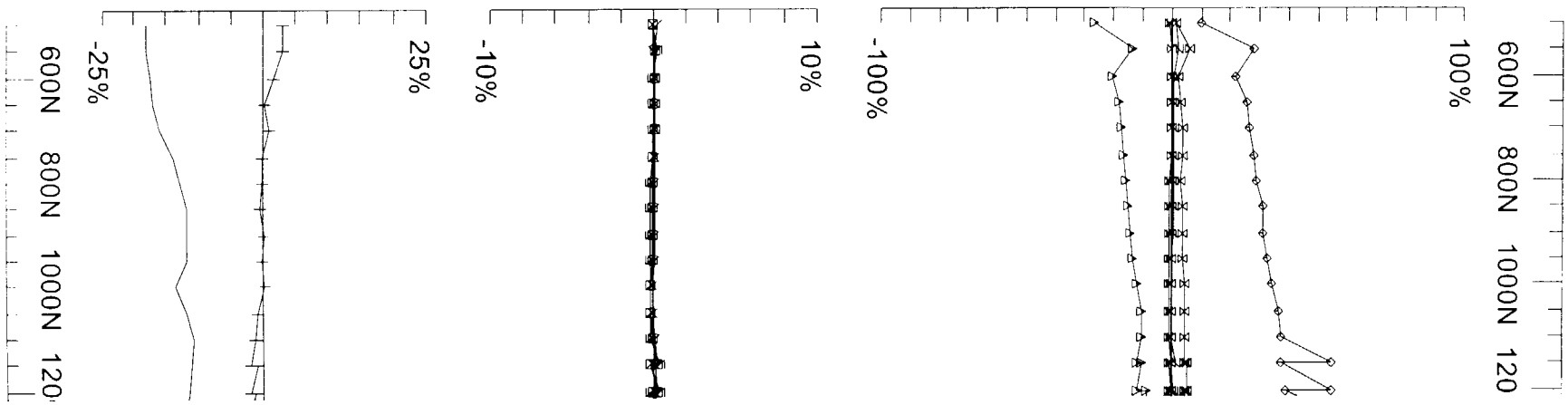
Loop: 4	Secondary, (Chn - Ch1)/IHpI	UTEM Survey at: Foy Property
Line: 8000W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed : 6/1/48, Reduced : 14/3/3, Plotted : 14/3/3



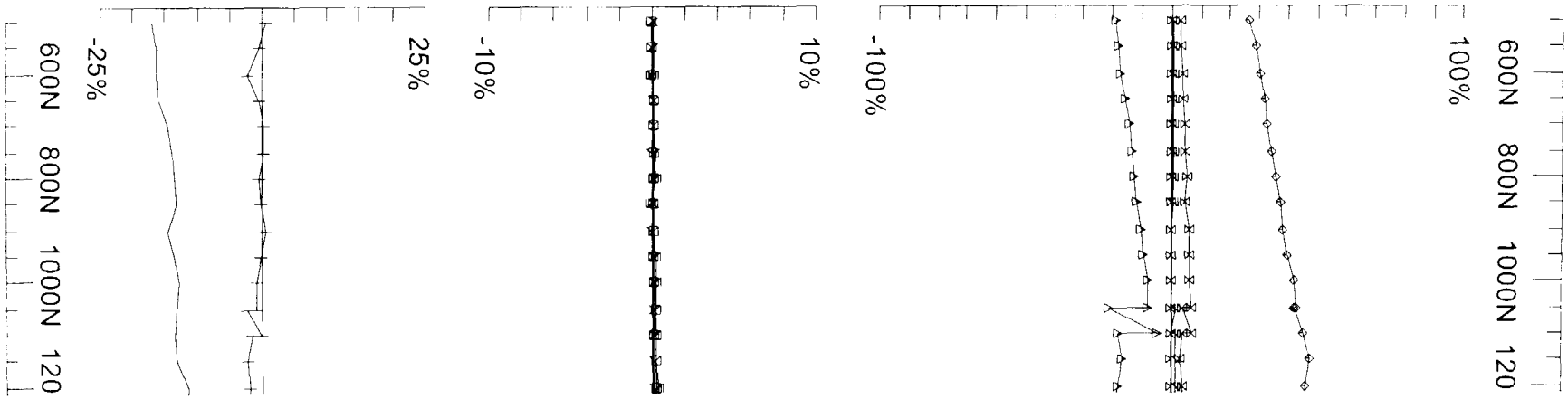
Loop: 4 Line: 8100W Compt: Hz	Secondary, (Chn - Ch1)/lHpl Contin. Norm at depth of 0 m Base Freq. 30.974 Hz	UTEM Survey at: Foy Property For: Aurora Platinum Corp LAMONTAGNE GEOPHYSICS LTD GEOPHYSIQUE LTEE Job 0312 Surveyed : 7/1/48 Reduced : 14/3/3 Plotted : 14/3/3



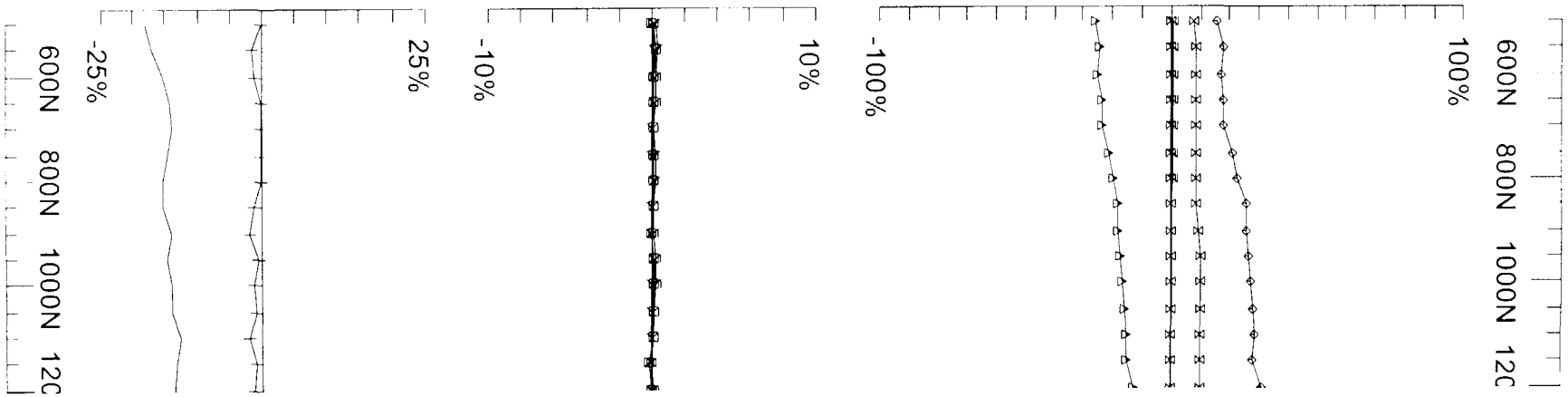
Loop: 4 Line: 8200W Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Contin. Norm at depth of 0 m Base Freq. 30.974 Hz	UTEM Survey at: Foy Property For: Aurora Platinum Corp LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE Job 0312 Surveyed : 7/1/48 Reduced : 14/3/3 Plotted : 14/3/3



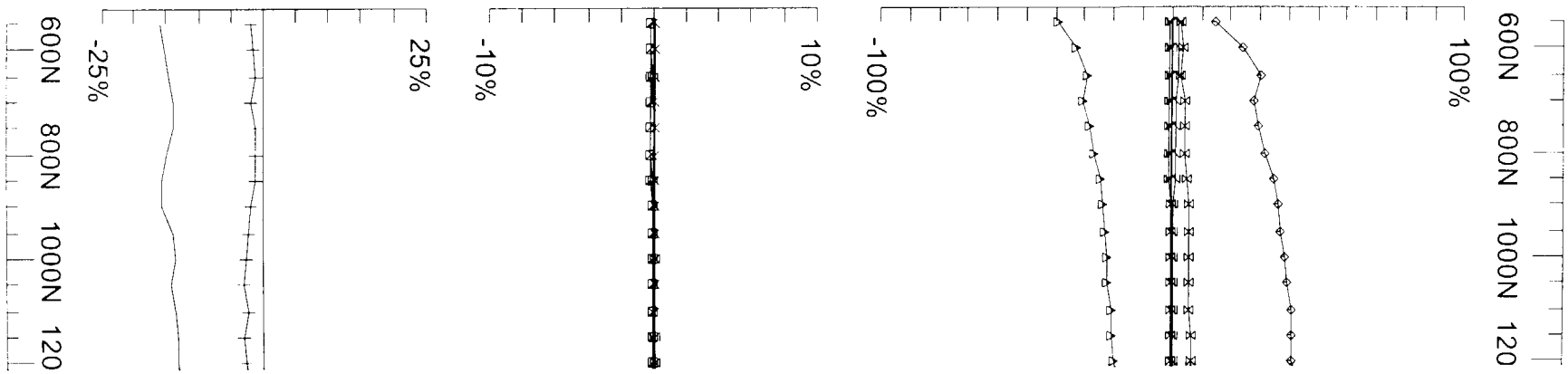
Loop: 4 Line: 8300W Compt: Hz	Secondary, (Chn - Ch1)/IHpI Contin. Norm at depth of 0 m Base Freq. 30.974 Hz	UTEM Survey at: Foy Property For: Aurora Platinum Corp LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE Job 0312 Plotted : 14/3/3



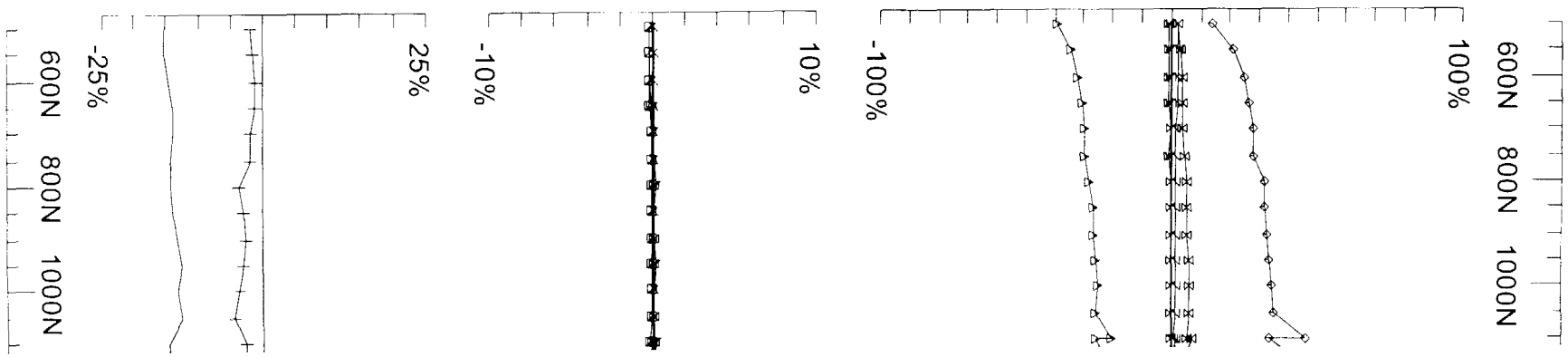
Loop: 4	Secondary, (Chn - Ch1)/IHpI	UTEM Survey at: Foy Property
Line: 8400W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 Plotted : 14/3/3



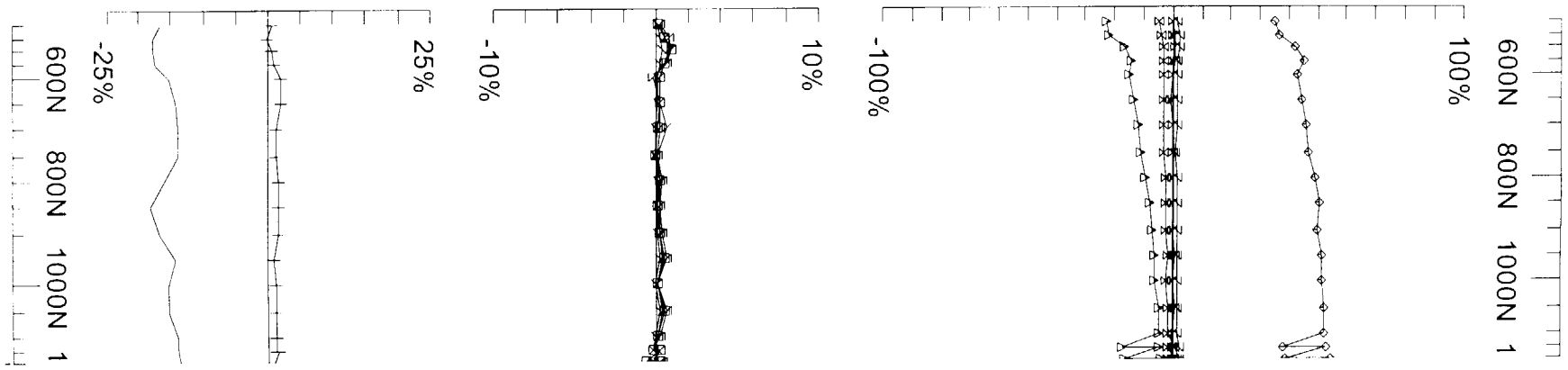
Loop: 4	Secondary, (Chn - Ch1)/IHpI	UTEM Survey at: Foy Property
Line: 8500W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed : 10/1/48, Reduced : 14/3/3, Plotted : 14/3/3



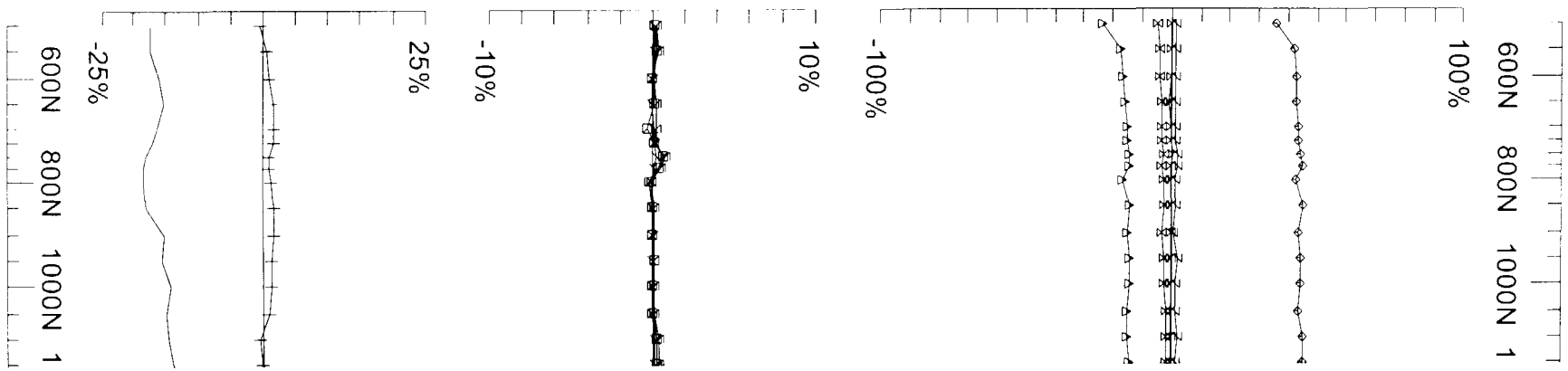
Loop: 4	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: Foy Property
Line: 8600W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed : 9/1/48, Reduced : 14/3/3, Plotted : 14/3/3



Loop: 4	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: Foy Property
Line: 8700W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE Job 0312 Surveyed : 9/1/48 Reduced : 14/3/3 Plotted : 14/3/3



Loop: 4	Secondary, (Chn - Ch1)/IHpI	UTEM Survey at: Foy Property
Line: 8800W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed 7/1/48, Reduced 14/3/3, Plotted 14/3/3



Loop: 4	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: Foy Property
Line: 8900W	Contin. Norm at depth of 0 m	For: Aurora Platinum Corp
Compt: Hz	Base Freq. 30.974 Hz	LAMONTAGNE GEOPHYSICS LTD / GEOPHYSIQUE LTEE — Job 0312 — Surveyed : 7/1/48, Reduced : 14/3/3, Plotted : 14/3/3

/ Note on Geosoft formatted data
/ All of this data has been transfered into Geosoft format. Please note that LGL uses a right-handed coordinate system.
/ For this data set:
/ (x,y,z) are East, North and Up
/ This should mean that geosoft will plot the data correctly
/ For accurate reduction the GPS coordinates have been shifted.
/ UTM coordinates are shifted by:
/ eastings = (GPSeasting - 470000)
/ northings = (GPSnorthing - 5170000)
/ UTEM/GEOSOFT
/ Digital Data Format
/ The data is presented in the following form:
/ Ch1 reduced
/ secondary field
/ i) with shifted GPS coordinates
/ b) continuously normalized data
/ therefore:
/ Channels 2-10 represent the differences between these channels and Channel 1
/ Channel 1 itself represents the difference from the computed primary.
/ as would be plotted in the standard 3 axis
/ The format of the files is as follows:
/ line 1{first line states the line number
/ x y z stn Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 Ch10 |Hp| Hpc/Hpl u v w
/ where:
/ x,y,z are the coordinates of the station.
/ stn is the station number
/ Ch1-ch10 are the ten UTEM channels ordered from late to early time
/ |Hp| is the magnitude of the primary field coupling. It is in Volts per unit area per unit dB/dt carried in the Tx Loop.
/ That is the voltage that would be measured in a maximally coupled unit area coil if the loop current was changing at the rate of 1 Amp per second.
/ Hpc/Hpl is the component of the primary field coupling as defined above, in the direction of the UTEM coil
/ u v w These are the direction cosines which specify the direction of the coil. If the coil direction is given by the unit vectorc^ then:
/ u=(c^¥x^) v=(c^¥y^) and w=(c^¥z^)
/
line -6200.00

7102.41	6482.24	355.86	1200	-2.649E+00	8.823E-02	3.904E-01	4.206E-01	6.928E-01	1.127E+00	-9.657E-01	-8.697E+00	-2.437E+00	8.346E+01	6.750E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7103.51	6531.37	354.91	1250	-2.045E+00	5.650E-02	3.322E-01	4.228E-01	6.467E-01	1.141E+00	-1.257E+00	-8.021E+00	2.224E-02	8.714E+01	6.358E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7101.62	6582.38	355.05	1300	-1.651E+00	6.855E-02	2.871E-01	4.446E-01	7.040E-01	1.179E+00	-1.391E+00	-7.216E+00	1.261E+00	8.792E+01	6.050E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7102.56	6632.50	354.73	1350	-1.459E+00	1.414E-01	3.317E-01	4.649E-01	6.147E-01	1.274E+00	-1.541E+00	-6.535E+00	2.371E+00	8.781E+01	5.810E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7101.85	6681.40	356.36	1400	-1.066E+00	6.927E-02	2.660E-01	4.286E-01	6.457E-01	1.208E+00	-1.798E+00	-6.491E+00	3.042E+00	8.934E+01	5.627E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7101.25	6731.37	356.51	1450	-1.076E+00	1.274E-01	3.049E-01	4.312E-01	6.190E-01	1.234E+00	-1.866E+00	-6.311E+00	3.598E+00	9.064E+01	5.474E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7100.32	6782.53	356.38	1500	-6.610E-01	4.341E-02	1.829E-01	3.313E-01	5.135E-01	1.114E+00	-2.231E+00	-6.084E+00	4.158E+00	9.098E+01	5.347E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
7098.90	6832.32	357.37	1550	-2.798E-01	2.832E-02	1.777E-01	2.935E-01	4.375E-01	1.075E+00	-2.229E+00	-6.293E+00	3.956E+00	9.128E+01	5.249E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-6300.00																	
6963.24	6506.41	354.76	1200	-2.331E-01	-3.168E-02	3.278E-01	2.677E-01	4.500E-01	8.298E-02	1.032E+00	-2.627E+01	2.098E+01	1.111E+02	6.864E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6967.67	6555.78	356.07	1250	2.587E-01	-8.103E-02	2.251E-01	9.814E-02	2.978E-01	-1.106E-01	6.660E-01	-2.558E+01	2.428E+01	1.131E+02	6.510E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6968.39	6607.03	358.93	1300	5.605E-01	-1.189E-01	1.625E-01	-3.982E-02	1.704E-01	-3.212E-01	4.093E-01	-2.502E+01	2.610E+01	1.143E+02	6.239E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6971.90	6655.68	355.86	1350	5.485E-01	-6.377E-02	2.552E-01	7.921E-02	2.963E-01	-1.432E-01	4.845E-01	-2.482E+01	2.728E+01	1.153E+02	6.019E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00

6976.51	6705.16	358.60	1400	1.244E+00	-1.099E-01	1.501E-01	-7.464E-02	7.158E-02	-3.386E-01	1.023E-01	-2.431E+01	2.802E+01	1.151E+02	5.841E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6981.24	6755.27	360.55	1450	1.312E+00	-1.029E-01	1.803E-01	-8.691E-02	1.029E-01	-3.632E-01	8.337E-02	-2.400E+01	2.877E+01	1.155E+02	5.691E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6984.88	6805.42	358.37	1500	1.218E+00	-1.241E-01	1.338E-01	-1.564E-01	5.183E-02	-4.438E-01	2.038E-02	-2.428E+01	2.912E+01	1.165E+02	5.566E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6990.03	6844.80	358.62	1550	1.711E+00	-6.293E-02	1.671E-01	-1.421E-01	-2.274E-03	-5.068E-01	-5.540E-02	-2.401E+01	2.948E+01	1.162E+02	5.477E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-6400.00																	
6888.70	6589.37	351.66	1300	5.335E-01	-5.638E-02	2.912E-01	2.254E-01	3.690E-01	3.963E-02	8.816E-01	-2.634E+01	1.768E+01	1.089E+02	6.658E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6890.50	6640.56	352.17	1350	8.332E-01	-4.980E-02	2.916E-01	1.690E-01	3.470E-01	1.007E-03	8.257E-01	-2.582E+01	2.429E+01	1.141E+02	6.426E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6893.90	6689.93	357.11	1400	2.303E+00	-9.453E-02	1.798E-01	-1.620E-02	1.404E-01	-2.917E-01	2.911E-01	-2.489E+01	2.532E+01	1.137E+02	6.245E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6896.98	6790.03	354.61	1500	1.290E+00	-9.480E-02	1.952E-01	-4.391E-02	9.389E-02	-3.655E-01	1.025E-01	-2.493E+01	2.609E+01	1.157E+02	5.972E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6899.19	6840.73	354.85	1550	1.585E+00	-1.115E-01	1.379E-01	-1.403E-01	4.623E-02	-5.684E-01	-8.411E-02	-2.427E+01	2.768E+01	1.164E+02	5.867E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-6500.00																	
6806.03	6511.99	355.03	1200	-6.891E-01	5.219E-02	5.298E-01	6.509E-01	6.901E-01	1.170E+00	1.662E+00	-1.699E+01	-1.807E+01	8.187E+01	7.680E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6799.64	6561.75	354.23	1250	1.066E-01	-2.297E-01	3.546E-01	4.016E-01	4.410E-01	8.621E-01	1.200E+00	-1.705E+01	-1.758E+01	8.198E+01	7.429E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6793.01	6610.98	355.39	1300	5.181E-01	-1.404E-02	3.626E-01	4.004E-01	4.022E-01	8.101E-01	1.185E+00	-1.713E+01	-1.785E+01	8.157E+01	7.265E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6785.38	6662.20	354.24	1350	6.811E-01	-4.442E-02	3.143E-01	3.225E-01	3.028E-01	6.659E-01	9.558E-01	-1.762E+01	-1.738E+01	8.359E+01	7.153E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6778.44	6713.31	352.33	1400	1.045E+00	-6.254E-02	2.818E-01	2.524E-01	2.022E-01	5.777E-01	3.329E-01	-1.638E+01	-1.403E+01	8.674E+01	7.075E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6784.30	6760.20	352.89	1450	9.493E-01	-5.997E-02	2.931E-01	2.391E-01	1.931E-01	5.563E-01	3.260E-02	-1.515E+01	-1.164E+01	8.955E+01	6.902E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6791.95	6797.54	353.36	1500	1.467E+00	-6.264E-03	3.482E-01	3.190E-01	2.490E-01	6.158E-01	4.999E-01	-1.561E+01	-1.384E+01	8.608E+01	6.748E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6797.88	6845.17	352.43	1550	1.277E+00	-1.160E-03	3.866E-01	3.383E-01	2.739E-01	6.395E-01	7.685E-02	-1.515E+01	-1.146E+01	8.942E+01	6.606E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
line	-6600.00																	
6713.57	6501.73	380.30	1200	-9.105E-01	1.728E-01	7.590E-01	9.714E-01	1.008E+00	1.440E+00	1.626E+00	-1.677E+01	-1.791E+01	8.146E+01	8.892E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6709.22	6549.47	371.13	1250	-1.354E-01	-5.615E-02	3.044E-01	3.377E-01	3.080E-01	6.363E-01	8.430E-01	-1.741E+01	-1.833E+01	8.133E+01	8.681E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6702.95	6598.53	361.36	1300	3.353E-01	-1.511E-01	4.213E-01	4.905E-01	4.311E-01	7.825E-01	1.041E+00	-1.765E+01	-1.867E+01	8.079E+01	8.554E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6701.24	6648.56	355.99	1350	6.757E-01	-1.088E-01	1.945E-01	1.732E-01	5.845E-02	3.021E-01	7.303E-01	-1.803E+01	-1.921E+01	8.002E+01	8.394E-04	-9.95E-01	0.00E+00	0.00E+00	1.00E+00
6697.96	6700.24	358.06	1400	1.460E+00	-1.076E-02	3.738E-01	4.092E-01	2.939E-01	6.491E-01	1.006E+00	-1.776E+01	-1.880E+01	7.973E+01	8.322E-04	-9.95E-01	0.00E+00	0.00E+00	1.00E+00
6701.33	6748.97	366.17	1450	1.239E+00	-2.007E-02	3.568E-01	3.521E-01	2.242E-01	5.259E-01	9.454E-01	-1.799E+01	-1.974E+01	7.917E+01	8.171E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
6703.84	6799.55	361.12	1500	1.520E+00	-1.028E-01	1.745E-01	1.099E-01	8.667E-03	2.388E-01	7.420E-01	-1.823E+01	-1.958E+01	7.903E+01	7.999E-04	-9.95E-01	0.00E+00	0.00E+00	1.00E+00
6706.42	6848.98	357.01	1550	1.594E+00	-2.693E-01	1.582E-01	5.633E-02	-6.887E-02	1.713E-01	6.827E-01	-1.862E+01	-2.054E+01	7.737E+01	7.849E-04	-9.94E-01	0.00E+00	0.00E+00	1.00E+00
line	-6700.00																	
6583.68	6507.27	391.18	1200	-1.422E+00	2.200E-01	3.795E-01	3.331E-01	3.582E-01	3.478E-01	3.233E-01	6.385E+00	-1.151E+01	1.859E+01	8.875E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6583.29	6556.08	395.53	1250	-7.167E-01	2.189E-01	3.524E-01	2.600E-01	2.804E-01	2.145E-01	-9.969E-02	6.666E+00	-1.072E+01	1.962E+01	8.495E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
6584.39	6606.49	389.70	1300	-6.343E-01	2.198E-01	3.240E-01	2.143E-01	2.205E-01	9.531E-02	-2.719E-01	7.011E+00	-9.880E+00	2.144E+01	8.235E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
6585.80	6656.09	393.66	1350	-4.408E-01	2.172E-01	3.330E-01	2.039E-01	1.698E-01	4.432E-02	-3.999E-01	7.102E+00	-9.547E+00	2.246E+01	8.013E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
6588.96	6706.04	393.17	1400	6.988E-02	2.070E-01	2.944E-01	1.563E-01	1.687E-01	2.564E-02	-6.156E-01	7.424E+00	-8.697E+00	2.352E+01	7.869E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
6590.75	6755.60	390.36	1450	-1.868E-01	1.983E-01	3.310E-01	1.918E-01	1.414E-01	2.339E-02	-6.361E-01	7.655E+00	-8.155E+00	2.523E+01	7.744E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
6593.14	6806.21	390.47	1500	9.720E-02	1.991E-01	3.053E-01	1.198E-01	1.156E-01	-6.351E-02	-7.721E-01	7.588E+00	-7.893E+00	2.552E+01	7.641E-04	-9.96E-01	0.00E+00	0.00E+00	1.00E+00
line	-6800.00																	
6527.54	6512.20	398.89	1200	-1.150E+00	2.356E-01	4.140E-01	3.689E-01	4.136E-01	4.194E-01	2.452E-01	7.202E+00	-1.146E+01	2.278E+01	8.194E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6524.81	6562.04	402.06	1250	-5.127E-01	2.003E-01	3.692E-01	2.444E-01	2.462E-01	2.499E-01	-1.061E-01	7.179E+00	-1.112E+01	2.372E+01	7.790E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6521.34	6611.58	399.99	1300	-4.530E-01	2.161E-01	3.753E-01	2.062E-01	1.561E-01	4.141E-02	-4.546E-01	7.434E+00	-1.015E+01	2.548E+01	7.477E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6520.71	6661.40	396.71	1350	-3.237E-01	1.938E-01	4.396E-01	2.243E-01	1.833E-01	7.332E-02	-5.571E-01	7.790E+00	-9.574E+00	2.708E+01	7.246E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6519.80	6712.43	394.34	1400	-1.920E-01	2.626E-01	4.496E-01	2.317E-01	2.386E-01	2.350E-03	-6.414E-01	8.122E+00	-9.003E+00	2.867E+01	7.049E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6517.41	6762.27	393.27	1450	5.851E-02	2.343E-01	3.666E-01	8.899E-02	6.551E-02	-1.587E-01	-8.316E-01	8.266E+00	-8.631E+00	3.003E+01	6.874E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
6518.01	6812.59	400.23	1500	-1.096E-01	2.494E-01	3.986E-01	1.270E-01	7.656E-02	-1.166E-01	-1.043E+00	8.236E+00	-7.989E+00	3.064E+01	6.736E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
line	-6900.00																	
6448.19	6523.14	391.80	1200	-1.243E+00	1.608E-01	3.225E-01	1.739E-01	3.507E-01	3.012E-01	-2.532E-01	6.780E+00	-1.111E+01	3.054E+01	7.580E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6442.74	6572.52	391.20	1250	-1.125E+00	1.678E-01	2.581E-01	1.830E-01	2.980E-01	1.325E-01	-3.318E-01	7.133E+00	-1.078E+01	3.257E+01	7.184E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00

6439.56	6622.00	394.03	1300	-1.204E+00	1.405E-01	2.749E-01	1.858E-01	3.103E-01	1.277E-01	-6.518E-01	7.525E+00	-1.001E+01	3.497E+01	6.876E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6436.94	6673.85	396.35	1350	-4.636E-01	1.596E-01	2.819E-01	1.948E-01	3.084E-01	1.692E-01	-7.970E-01	7.775E+00	-8.502E+00	3.599E+01	6.619E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6433.88	6723.91	398.70	1400	-4.161E-01	1.349E-01	2.711E-01	2.054E-01	3.851E-01	1.810E-01	-7.713E-01	8.185E+00	-7.818E+00	3.652E+01	6.414E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6429.87	6774.39	399.62	1450	-6.193E-01	1.354E-01	2.620E-01	2.288E-01	3.361E-01	2.664E-01	-8.178E-01	8.372E+00	-7.454E+00	3.821E+01	6.239E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6426.74	6824.54	404.51	1500	-8.729E-01	1.126E-01	2.549E-01	1.629E-01	3.603E-01	1.519E-01	-8.698E-01	8.674E+00	-6.827E+00	3.875E+01	6.091E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
line	-7000.00																	
6299.92	6533.10	395.08	1200	-9.243E-01	1.230E-01	2.160E-01	1.875E-01	2.815E-01	3.781E-02	-6.219E-01	6.622E+00	-1.409E+01	3.614E+01	7.062E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6299.31	6578.84	384.50	1250	-2.637E+00	1.576E-01	2.631E-01	2.441E-01	3.039E-01	1.123E-01	-5.402E-01	7.554E+00	-1.265E+01	4.036E+01	6.707E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6298.16	6629.42	386.67	1300	-2.573E-01	6.393E-02	2.712E-01	1.054E-01	1.794E-01	1.241E-02	-1.116E+00	7.530E+00	-1.172E+01	4.031E+01	6.391E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6298.84	6679.04	398.88	1350	-1.321E+00	1.283E-01	2.869E-01	1.861E-01	2.617E-01	9.452E-02	-9.145E-01	7.884E+00	-1.160E+01	4.189E+01	6.144E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6298.54	6729.39	399.18	1400	-5.833E-01	8.141E-02	2.204E-01	1.170E-01	2.507E-01	-3.844E-02	-1.202E+00	8.321E+00	-1.007E+01	4.240E+01	5.948E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6298.41	6778.10	396.98	1450	-1.233E-01	8.778E-02	2.389E-01	6.284E-02	2.210E-01	-3.390E-02	-1.359E+00	8.602E+00	-9.477E+00	4.371E+01	5.796E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6299.54	6828.52	406.22	1500	-4.496E-01	8.726E-02	2.164E-01	8.096E-02	2.470E-01	-7.641E-02	-1.467E+00	8.898E+00	-8.729E+00	4.446E+01	5.662E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-7100.00																	
6233.91	6541.25	391.70	1200	-4.506E-01	2.342E-01	3.831E-01	5.125E-01	5.921E-01	7.045E-01	2.935E+00	-3.098E+00	-1.001E+01	2.992E+01	6.949E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6235.47	6588.65	378.94	1250	-4.396E-01	2.155E-01	3.816E-01	4.364E-01	5.423E-01	6.570E-01	3.100E+00	-4.000E+00	-8.143E+00	3.423E+01	6.580E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6234.66	6638.68	378.60	1300	-3.737E-01	1.778E-01	3.781E-01	4.544E-01	5.605E-01	7.454E-01	3.086E+00	-3.856E+00	-7.496E+00	3.576E+01	6.273E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6234.44	6690.68	380.99	1350	1.799E-01	1.777E-01	3.438E-01	3.605E-01	5.827E-01	6.481E-01	3.098E+00	-3.947E+00	-6.237E+00	3.802E+01	6.024E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6233.80	6740.95	388.00	1400	-3.623E-02	1.771E-01	3.239E-01	3.783E-01	6.116E-01	7.055E-01	3.258E+00	-4.099E+00	-6.259E+00	3.893E+01	5.831E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6234.51	6791.70	400.85	1450	-8.443E-02	1.633E-01	3.000E-01	3.715E-01	5.904E-01	7.468E-01	3.208E+00	-3.923E+00	-5.694E+00	3.980E+01	5.670E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6233.61	6839.68	404.25	1500	-1.638E-01	1.833E-01	2.991E-01	3.165E-01	6.124E-01	7.857E-01	3.359E+00	-4.024E+00	-4.906E+00	4.146E+01	5.548E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-7200.00																	
6136.89	6536.44	373.81	1200	-6.871E-01	2.026E-01	3.681E-01	4.650E-01	4.707E-01	6.760E-01	2.914E+00	-3.710E+00	-1.191E+01	2.957E+01	7.053E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6137.10	6585.17	370.37	1250	-4.789E-01	2.093E-01	3.138E-01	4.133E-01	5.278E-01	6.592E-01	3.052E+00	-4.194E+00	-1.043E+01	3.363E+01	6.632E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6139.81	6635.92	367.91	1300	-3.871E-01	1.939E-01	3.061E-01	4.174E-01	5.150E-01	6.504E-01	3.148E+00	-4.011E+00	-9.256E+00	3.518E+01	6.296E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6138.93	6685.94	372.35	1350	5.107E-03	2.048E-01	3.333E-01	4.135E-01	5.725E-01	6.240E-01	3.104E+00	-3.774E+00	-8.348E+00	3.689E+01	6.044E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6136.80	6737.10	373.53	1400	-2.377E-01	1.866E-01	3.036E-01	3.742E-01	4.938E-01	6.700E-01	3.238E+00	-4.555E+00	-7.373E+00	4.007E+01	5.839E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6134.36	6785.53	379.67	1450	1.931E-01	1.851E-01	3.034E-01	3.532E-01	5.307E-01	6.211E-01	3.244E+00	-4.284E+00	-7.076E+00	4.068E+01	5.686E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6131.44	6835.51	384.40	1500	-9.247E-02	1.883E-01	3.231E-01	3.907E-01	5.230E-01	6.681E-01	3.368E+00	-4.379E+00	-7.299E+00	4.154E+01	5.557E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-7300.00																	
6037.62	6554.50	353.89	1200	2.747E-01	6.548E-02	1.159E-01	6.932E-02	-1.625E-01	-7.407E-02	2.190E+00	-4.299E+00	-1.331E+01	2.733E+01	7.047E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
6023.65	6603.60	353.67	1250	3.697E-01	1.141E-01	1.475E-01	5.786E-02	-2.111E-01	-1.646E-01	2.333E+00	-4.762E+00	-1.240E+01	3.015E+01	6.681E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6017.83	6653.39	352.87	1300	3.866E-01	6.136E-02	1.390E-01	8.552E-02	-1.764E-01	-2.152E-01	2.608E+00	-5.403E+00	-1.029E+01	3.536E+01	6.384E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6008.75	6700.57	354.29	1350	8.008E-01	8.577E-02	7.575E-02	8.937E-02	-1.604E-01	-2.031E-01	2.627E+00	-5.708E+00	-8.985E+00	3.845E+01	6.180E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6000.52	6749.54	353.35	1400	6.640E-01	2.977E-02	6.125E-02	-1.309E-02	-2.649E-01	-1.907E-01	2.700E+00	-5.299E+00	-1.042E+01	3.740E+01	6.012E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5998.07	6798.45	355.78	1450	9.820E-01	8.270E-02	1.835E-01	-5.715E-02	-2.542E-01	-2.236E-01	2.811E+00	-6.618E+00	-7.423E+00	4.386E+01	5.870E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
6002.08	6848.02	358.60	1500	5.489E-01	3.536E-02	6.621E-02	-5.193E-02	-2.155E-01	-2.784E-01	2.826E+00	-6.526E+00	-6.440E+00	4.578E+01	5.738E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-7900.00																	
5353.98	5917.51	380.10	500	-4.244E+00	2.174E-01	5.058E-01	6.764E-01	9.693E-01	1.137E+00	3.173E+00	-1.278E+00	-1.910E+01	2.042E+01	8.875E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5363.01	5971.35	382.49	550	1.258E+00	1.624E-01	4.684E-01	6.105E-01	8.847E-01	1.004E+00	2.840E+00	-8.555E-01	-1.563E+01	2.181E+01	8.115E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5368.66	6018.70	386.11	600	2.085E+00	1.774E-01	4.718E-01	6.185E-01	8.967E-01	1.040E+00	2.908E+00	-6.428E-01	-1.453E+01	2.228E+01	7.623E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5374.97	6064.47	391.23	650	1.542E-01	1.776E-01	4.758E-01	5.968E-01	8.713E-01	1.009E+00	2.953E+00	-7.626E-01	-1.360E+01	2.389E+01	7.267E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5383.02	6112.08	392.43	700	8.186E-01	1.296E-01	4.430E-01	5.211E-01	8.715E-01	9.035E-01	2.775E+00	-9.455E-01	-1.210E+01	2.449E+01	6.995E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5380.37	6155.96	390.27	750	8.479E-01	1.134E-01	3.928E-01	4.410E-01	6.128E-01	6.771E-01	2.729E+00	-1.384E+00	-1.102E+01	2.510E+01	6.722E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5382.95	6204.84	390.28	800	8.049E-01	1.455E-01	4.047E-01	4.584E-01	6.831E-01	6.788E-01	2.594E+00	-1.042E+00	-9.534E+00	2.645E+01	6.507E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5393.02	6253.02	395.21	850	5.453E-01	1.528E-01	3.738E-01	4.044E-01	5.794E-01	6.335E-01	2.410E+00	-6.043E-01	-1.034E+01	2.598E+01	6.392E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5402.68	6302.42	394.29	900	4.803E-01	1.447E-01	3.502E-01	3.103E-01	5.361E-01	5.461E-01	2.244E+00	-1.413E+00	-9.465E+00	2.678E+01	6.304E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00

5404.98	6326.85	393.91	925	2.989E-01	1.359E-01	3.358E-01	3.168E-01	5.467E-01	4.826E-01	2.096E+00	-1.095E+00	-9.784E+00	2.715E+01	6.250E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5406.67	6342.70	396.39	950	3.213E-01	1.385E-01	3.431E-01	3.205E-01	5.985E-01	6.003E-01	2.300E+00	-7.210E-01	-9.742E+00	2.782E+01	6.218E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5408.28	6373.85	393.74	975	5.218E-02	1.224E-01	3.481E-01	3.708E-01	5.619E-01	6.137E-01	2.471E+00	-7.786E-01	-1.117E+01	2.657E+01	6.152E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5412.47	6398.53	394.11	1000	1.036E-01	1.511E-01	3.498E-01	3.930E-01	5.836E-01	5.693E-01	2.446E+00	-8.777E-01	-8.452E+00	2.893E+01	6.128E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5413.79	6422.77	395.27	1025	-2.704E-02	1.240E-01	3.871E-01	3.974E-01	5.884E-01	6.070E-01	2.042E+00	-1.135E-01	-4.018E+00	3.272E+01	6.085E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5414.61	6447.18	394.66	1050	7.070E-02	1.273E-01	3.520E-01	4.089E-01	6.397E-01	6.633E-01	2.042E+00	2.905E-01	1.050E+00	3.512E+01	6.041E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5417.87	6496.09	400.52	1100	1.485E-01	1.563E-01	3.889E-01	5.110E-01	8.238E-01	9.321E-01	2.319E+00	6.616E-01	-1.573E+00	3.342E+01	5.972E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5417.21	6544.84	403.41	1150	-1.775E-01	1.592E-01	4.247E-01	5.171E-01	7.485E-01	8.642E-01	2.423E+00	4.278E-01	-1.528E+00	3.366E+01	5.884E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5420.23	6592.37	412.55	1200	-2.172E-02	1.649E-01	4.510E-01	5.681E-01	9.576E-01	9.430E-01	2.595E+00	1.156E+00	-1.314E+00	3.315E+01	5.830E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
5419.88	6637.68	408.62	1250	-2.386E-01	1.609E-01	4.377E-01	5.892E-01	9.282E-01	9.912E-01	2.822E+00	5.079E-01	5.994E-01	3.386E+01	5.774E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5421.10	6663.30	414.30	1275	-4.598E-02	1.828E-01	4.688E-01	6.265E-01	9.923E-01	1.146E+00	2.766E+00	9.009E-01	-3.973E-01	3.247E+01	5.748E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
5421.10	6663.30	414.30	1275	-3.777E-01	8.022E-02	3.008E-01	4.479E-01	8.911E-01	1.084E+00	2.709E+00	2.069E+00	2.598E+00	4.221E+01	5.748E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
5421.57	6688.76	415.47	1300	-3.558E-01	8.537E-02	3.278E-01	4.082E-01	8.540E-01	1.040E+00	2.525E+00	2.491E+00	2.126E+00	4.199E+01	5.723E-04	-9.97E-01	0.00E+00	0.00E+00	1.00E+00
5424.21	6736.29	407.06	1350	-1.696E-01	9.676E-02	2.989E-01	4.816E-01	9.206E-01	1.016E+00	2.629E+00	2.269E+00	3.039E+00	4.253E+01	5.710E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5425.58	6785.48	398.38	1400	-2.243E+00	1.027E-01	3.092E-01	4.800E-01	9.743E-01	1.086E+00	2.717E+00	2.314E+00	3.661E+00	4.401E+01	5.688E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-8000.00																	
5286.52	5894.41	377.61	500	4.080E+00	2.014E-01	4.696E-01	6.312E-01	8.538E-01	1.063E+00	3.051E+00	-1.085E+00	-2.014E+01	1.506E+01	8.954E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5287.42	5942.28	381.23	550	3.030E+00	1.769E-01	4.754E-01	6.332E-01	8.766E-01	1.070E+00	2.925E+00	-9.112E-01	-1.716E+01	2.254E+01	8.075E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5291.01	5992.13	386.30	600	1.292E+00	1.991E-01	5.544E-01	7.301E-01	9.451E-01	1.121E+00	2.828E+00	-6.285E-01	-1.588E+01	2.494E+01	7.428E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5297.26	6042.19	384.11	650	1.905E+00	1.810E-01	5.024E-01	5.903E-01	8.854E-01	1.056E+00	2.943E+00	-4.924E-01	-1.428E+01	2.724E+01	6.962E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5302.07	6092.61	388.05	700	1.586E+00	1.575E-01	4.452E-01	5.442E-01	8.095E-01	9.872E-01	2.906E+00	-5.914E-01	-1.343E+01	2.841E+01	6.599E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5306.62	6141.64	396.38	750	1.037E+00	1.615E-01	4.614E-01	5.690E-01	8.114E-01	9.627E-01	2.945E+00	-4.799E-01	-1.237E+01	2.926E+01	6.322E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5311.50	6192.31	394.54	800	1.036E+00	1.663E-01	4.120E-01	5.610E-01	8.104E-01	9.605E-01	2.923E+00	1.210E-01	-1.191E+01	3.031E+01	6.099E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5311.70	6216.77	395.28	825	7.282E-01	1.776E-01	4.057E-01	5.111E-01	8.039E-01	1.025E+00	2.778E+00	3.746E-01	-1.075E+01	3.108E+01	5.997E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5313.98	6241.12	399.83	850	7.477E-01	1.693E-01	4.797E-01	5.190E-01	8.508E-01	1.032E+00	2.855E+00	-1.302E-01	-9.670E+00	3.224E+01	5.912E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5317.40	6291.63	399.90	900	6.807E-01	1.668E-01	4.755E-01	5.400E-01	1.000E+00	1.040E+00	2.845E+00	2.619E-01	-8.995E+00	3.326E+01	5.760E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5319.87	6341.51	401.28	950	2.872E-01	1.925E-01	4.327E-01	5.086E-01	8.855E-01	9.305E-01	2.916E+00	4.091E-01	-7.702E+00	3.436E+01	5.631E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5320.54	6390.94	398.26	1000	1.859E-01	1.281E-01	4.019E-01	5.398E-01	8.043E-01	9.836E-01	2.645E+00	1.106E+00	-6.519E+00	3.615E+01	5.517E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5320.35	6441.49	395.33	1050	-2.660E-02	1.046E-01	3.852E-01	5.145E-01	8.659E-01	8.279E-01	2.849E+00	2.514E-01	-6.173E+00	3.785E+01	5.413E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5316.57	6492.59	394.50	1100	-2.700E-01	1.804E-01	4.299E-01	5.775E-01	9.372E-01	9.512E-01	2.562E+00	1.335E+00	-1.288E+00	4.053E+01	5.304E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5316.98	6540.80	398.21	1150	7.485E-02	1.561E-01	4.049E-01	5.982E-01	9.942E-01	9.788E-01	2.693E+00	1.432E+00	5.576E-01	4.138E+01	5.231E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5316.08	6589.55	407.66	1200	-6.734E-02	1.677E-01	4.285E-01	6.288E-01	9.470E-01	1.083E+00	2.755E+00	1.685E+00	-2.565E-01	4.135E+01	5.158E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5314.11	6639.26	414.63	1250	-1.617E-01	1.417E-01	4.192E-01	6.472E-01	9.376E-01	1.153E+00	2.654E+00	1.519E+00	4.052E-01	4.215E+01	5.087E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5318.42	6689.16	418.19	1300	-2.420E-01	1.693E-01	3.735E-01	5.412E-01	9.567E-01	1.164E+00	2.737E+00	1.357E+00	8.051E-01	4.287E+01	5.056E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5321.29	6737.45	419.48	1350	-8.358E-01	1.075E-01	4.470E-01	5.499E-01	9.548E-01	1.044E+00	2.607E+00	2.062E+00	1.454E+00	4.404E+01	5.028E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5323.80	6786.56	413.63	1400	-6.275E-01	1.424E-01	3.972E-01	5.828E-01	1.007E+00	1.223E+00	2.534E+00	2.449E+00	2.202E+00	4.435E+01	5.008E-04	-9.98E-01	0.00E+00	0.00E+00	1.00E+00
5328.68	6837.68	400.60	1450	-6.090E-01	1.271E-01	3.862E-01	5.602E-01	8.580E-01	9.982E-01	2.523E+00	2.141E+00	3.019E+00	4.532E+01	5.009E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5329.29	6891.29	399.22	1500	-1.455E+00	1.518E-01	3.517E-01	5.724E-01	9.334E-01	1.051E+00	2.372E+00	2.394E+00	3.997E+00	4.603E+01	4.984E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-8100.00																	
5274.15	5921.38	378.88	500	4.176E+00	3.439E-02	7.916E-02	-2.041E-01	-5.369E-01	#########	-7.584E-01	-1.089E+00	-2.222E+01	9.820E+00	8.365E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5265.58	5971.90	381.43	550	3.069E+00	6.672E-02	1.098E-01	-1.846E-01	-5.460E-01	-8.668E-01	-5.885E-01	-8.976E-01	-2.165E+01	1.090E+01	7.560E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5253.06	6018.87	389.27	600	1.737E+00	6.062E-02	1.159E-01	-1.972E-01	-5.721E-01	-9.689E-01	-7.635E-01	-7.119E-01	-2.102E+01	1.307E+01	6.979E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5237.46	6066.60	393.30	650	2.189E-01	4.870E-02	1.257E-01	-1.927E-01	-5.402E-01	-9.792E-01	-7.871E-01	-5.459E-01	-1.968E+01	1.543E+01	6.505E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5233.34	6111.67	405.35	700	1.070E+00	5.749E-02	8.717E-02	-2.194E-01	-5.279E-01	-9.877E-01	-7.176E-01	3.075E-02	-1.833E+01	1.639E+01	6.173E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5231.66	6166.32	399.78	750	1.739E+00	6.734E-02	1.029E-01	-1.735E-01	-4.034E-01	-8.745E-01	-6.644E-01	1.028E-02	-1.729E+01	1.776E+01	5.871E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5237.69	6216.46	403.61	800	7.199E-01	5.389E-02	1.028E-01	-2.433E-01	-5.271E-01	-8.101E-01	-6.132E-01	-3.026E-01	-1.631E+01	1.931E+01	5.670E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5249.27	6265.90	405.97	850	4.484E-01	7.178E-02	5.078E-02	-2.549E-01	-5.310E-01	-8.848E-01	-6.487E-01	-8.837E-02	-1.549E+01	2.014E+01	5.532E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00

5253.92	6314.11	406.70	900	2.588E-01	2.275E-02	7.780E-02	-1.927E-01	-4.653E-01	-9.520E-01	-6.539E-01	3.570E-01	-1.406E+01	2.162E+01	5.402E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5261.32	6363.64	406.78	950	1.243E-01	3.305E-02	8.551E-02	-1.935E-01	-4.970E-01	-7.956E-01	-6.428E-01	7.633E-01	-1.364E+01	2.264E+01	5.303E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5263.88	6412.22	400.94	1000	2.589E-01	1.744E-02	6.468E-02	-2.283E-01	-4.834E-01	-7.163E-01	-7.007E-01	8.192E-01	-1.150E+01	2.456E+01	5.210E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5263.11	6461.32	406.13	1050	-2.209E-01	7.401E-02	9.155E-02	-1.615E-01	-3.645E-01	-8.900E-01	-7.009E-01	1.079E+00	-1.059E+01	2.647E+01	5.112E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5265.72	6509.33	401.09	1100	-1.509E-01	7.351E-02	1.055E-01	-1.158E-01	-3.804E-01	-7.949E-01	-7.644E-01	1.567E+00	-8.994E+00	2.750E+01	5.046E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5267.33	6559.98	397.50	1150	-1.727E-01	1.332E-01	1.270E-01	-2.071E-02	-2.989E-01	-6.923E-01	-8.153E-01	1.029E+00	-4.931E+00	2.999E+01	4.983E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5264.42	6608.76	411.70	1200	-5.926E-02	8.275E-02	7.659E-02	-1.262E-01	-3.482E-01	-6.647E-01	-6.238E-01	1.146E+00	-6.245E+00	2.939E+01	4.906E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5250.96	6655.16	412.26	1250	-3.519E-01	7.558E-02	1.142E-01	-6.905E-03	-3.052E-01	-6.247E-01	-7.547E-01	1.745E+00	-7.149E+00	2.941E+01	4.808E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5250.96	6655.16	412.26	1250	-4.064E-01	7.614E-02	1.343E-01	8.752E-02	1.248E-01	-1.353E-02	1.333E+00	3.856E+00	-4.557E+00	4.161E+01	4.808E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5246.04	6704.56	409.14	1300	-4.631E-01	5.071E-02	8.966E-02	8.878E-02	1.570E-01	9.362E-02	1.257E+00	4.131E+00	-3.505E+00	4.270E+01	4.748E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5244.27	6754.18	410.46	1350	-9.910E-01	-4.044E-04	1.471E-01	4.165E-02	1.156E-01	-1.344E-01	1.113E+00	3.715E+00	-3.292E+00	4.392E+01	4.703E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-8200.00																	
5066.59	5946.35	386.18	500	3.007E+00	1.222E-01	1.677E-01	-4.964E-02	-3.289E-01	-6.515E-01	-1.317E-01	-8.381E-01	-2.606E+01	1.039E+01	7.456E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5093.42	5989.07	392.87	550	9.451E-01	6.738E-02	1.717E-01	-1.258E-01	-3.766E-01	-7.535E-01	-2.957E-01	-7.226E-01	-2.468E+01	1.369E+01	6.899E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5117.62	6036.77	392.31	600	2.367E+00	6.712E-02	1.532E-01	-1.194E-01	-3.515E-01	-7.746E-01	-2.455E-01	2.316E-01	-2.212E+01	1.640E+01	6.441E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5140.94	6077.86	395.16	650	1.492E+00	6.157E-02	1.520E-01	-1.213E-01	-3.894E-01	-7.689E-01	-2.935E-01	2.119E-02	-2.068E+01	1.860E+01	6.150E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5160.88	6124.65	400.36	700	-6.441E-02	6.977E-02	1.474E-01	-7.987E-02	-3.291E-01	-6.857E-01	-2.508E-01	3.567E-01	-1.940E+01	2.057E+01	5.887E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5179.39	6170.35	406.91	750	-4.834E-01	5.647E-02	1.783E-01	-1.339E-01	-4.042E-01	-6.692E-01	-2.768E-01	5.018E-01	-1.869E+01	2.134E+01	5.688E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5197.31	6217.40	409.31	800	-4.043E-01	8.044E-02	1.540E-01	-1.461E-01	-2.967E-01	-8.046E-01	-2.180E-01	3.926E-01	-1.711E+01	2.267E+01	5.532E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5214.19	6265.11	412.48	850	-1.083E-01	2.834E-02	1.415E-01	-1.088E-01	-3.335E-01	-6.429E-01	-4.337E-01	1.127E+00	-1.625E+01	2.316E+01	5.409E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5236.16	6311.55	406.49	900	3.573E-01	3.699E-02	1.290E-01	-1.473E-01	-2.943E-01	-7.764E-01	-4.083E-01	1.327E+00	-1.459E+01	2.482E+01	5.344E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5241.67	6360.85	410.47	950	1.944E-01	6.170E-02	9.827E-02	-1.796E-01	-3.213E-01	-7.558E-01	-3.163E-01	1.258E+00	-1.321E+01	2.627E+01	5.234E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5235.18	6410.89	401.91	1000	-9.951E-01	9.940E-02	1.342E-01	-5.570E-02	-2.841E-01	-5.870E-01	-3.618E-01	1.439E+00	-1.184E+01	2.877E+01	5.106E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5240.42	6458.82	411.89	1050	1.467E-01	7.214E-02	1.146E-01	-1.369E-01	-3.719E-01	-7.510E-01	-3.916E-01	1.526E+00	-1.067E+01	2.963E+01	5.029E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5239.92	6484.78	413.57	1075	1.337E-01	9.055E-02	8.267E-02	-1.408E-01	-2.941E-01	-7.154E-01	-3.274E-01	1.661E+00	-9.891E+00	3.033E+01	4.983E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5238.01	6510.06	416.01	1100	-5.351E-02	7.598E-02	1.006E-01	-1.463E-01	-2.954E-01	-6.435E-01	-6.456E-01	1.803E+00	-9.181E+00	3.096E+01	4.936E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5237.20	6558.41	407.45	1150	6.139E-02	1.154E-01	5.226E-02	-1.067E-01	-3.510E-01	-7.062E-01	-6.279E-01	2.078E+00	-7.493E+00	3.269E+01	4.871E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5233.69	6599.91	402.92	1200	-2.173E-01	8.363E-02	9.393E-02	-1.321E-01	-3.297E-01	-7.405E-01	-6.091E-01	1.637E+00	-5.200E+00	3.523E+01	4.810E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5223.71	6648.27	408.96	1250	-1.416E-01	5.992E-02	1.672E-01	-4.362E-02	-2.614E-01	-5.871E-01	6.155E-02	2.611E+00	-7.491E+00	3.514E+01	4.725E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5212.37	6696.77	404.56	1300	-2.919E-01	6.126E-02	7.302E-02	-7.315E-02	-2.397E-01	-6.157E-01	-1.305E-01	3.130E+00	-7.411E+00	3.589E+01	4.648E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5203.63	6746.38	409.31	1350	-3.709E-01	8.572E-02	8.276E-02	-1.640E-01	-3.991E-01	-7.913E-01	-1.537E-01	2.555E+00	-7.147E+00	3.726E+01	4.583E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-8300.00																	
5042.34	5917.74	384.57	500	3.208E+00	4.195E-02	3.146E-01	5.010E-02	-1.428E-02	-2.562E-01	1.870E+00	2.081E+00	-2.631E+01	1.041E+01	7.937E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5056.11	5966.14	385.62	550	3.262E+00	5.647E-02	1.564E-01	1.064E-01	2.838E-01	5.625E-01	2.505E+00	6.598E+00	-1.351E+01	2.826E+01	7.149E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5065.40	6015.26	389.14	600	1.895E+00	1.004E-01	2.031E-01	1.320E-01	4.430E-02	-1.003E-01	1.123E+00	2.864E+00	-2.015E+01	2.212E+01	6.570E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5060.29	6063.57	390.07	650	5.177E-01	7.658E-02	1.531E-01	6.934E-02	9.618E-02	-1.883E-01	1.012E+00	3.597E+00	-1.806E+01	2.627E+01	6.126E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5063.19	6112.29	396.02	700	1.101E+00	9.473E-02	1.836E-01	7.677E-02	5.931E-02	-1.658E-01	1.019E+00	3.805E+00	-1.734E+01	2.659E+01	5.786E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5067.24	6157.13	405.63	750	1.890E-02	9.943E-02	1.897E-01	4.356E-02	4.486E-03	-1.493E-01	9.043E-01	3.819E+00	-1.604E+01	2.833E+01	5.535E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5067.60	6206.48	411.69	800	-9.459E-02	5.542E-02	1.500E-01	-6.635E-02	-1.112E-01	-2.880E-01	7.812E-01	3.700E+00	-1.551E+01	2.937E+01	5.307E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5059.63	6252.88	416.11	850	-4.199E-01	4.276E-02	1.732E-01	4.082E-02	-1.396E-01	-2.382E-01	6.497E-01	3.884E+00	-1.440E+01	3.118E+01	5.120E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5047.21	6302.44	416.25	900	5.222E-01	1.405E-02	8.147E-02	-4.758E-02	-1.661E-01	-3.327E-01	6.648E-01	4.274E+00	-1.373E+01	3.187E+01	4.950E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5040.48	6349.74	416.16	950	-2.916E-02	3.624E-02	7.444E-02	-4.163E-02	-1.603E-01	-4.427E-01	3.885E-01	4.304E+00	-1.288E+01	3.331E+01	4.819E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5035.33	6399.41	408.95	1000	5.001E-01	4.233E-02	9.361E-03	-1.859E-01	-1.877E-01	-4.444E-01	4.422E-01	4.805E+00	-1.195E+01	3.478E+01	4.706E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
5035.82	6447.12	416.28	1050	-5.892E-01	3.411E-02	5.288E-02	-7.199E-02	-1.697E-01	-3.619E-01	2.912E-01	4.791E+00	-9.863E+00	3.686E+01	4.615E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5037.94	6497.29	422.48	1100	-9.439E-01	5.820E-02	7.777E-02	-6.548E-02	-1.413E-01	-2.466E-01	2.309E-01	4.916E+00	-9.864E+00	3.765E+01	4.534E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
5035.39	6548.45	420.89	1150	-1.679E+00	1.203E-01	2.835E-01	3.283E-01	4.428E-01	5.237E-01	1.501E+00	5.041E+00	-1.147E+01	5.506E+01	4.463E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
line	-8400.00																	

4954.26	6031.15	390.41	500	5.791E-01	9.806E-02	2.141E-01	3.860E-02	7.001E-02	-1.684E-01	8.038E-01	3.246E+00	-1.895E+01	2.694E+01	6.322E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4957.63	6069.15	393.91	550	-2.248E-01	6.991E-02	1.720E-01	4.142E-02	5.791E-02	-1.334E-01	8.243E-01	3.518E+00	-1.801E+01	2.925E+01	5.997E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4958.10	6109.58	393.85	600	-2.051E+00	5.676E-02	1.928E-01	5.983E-02	8.793E-02	-1.053E-03	7.141E-01	4.296E+00	-1.742E+01	3.078E+01	5.713E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4960.90	6150.64	396.40	650	-2.081E-01	9.451E-02	1.939E-01	8.065E-02	8.395E-02	-7.963E-02	8.044E-01	4.348E+00	-1.512E+01	3.202E+01	5.477E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4957.84	6189.62	402.73	700	5.224E-01	1.112E-01	1.724E-01	1.330E-01	1.200E-01	9.805E-02	8.293E-01	4.775E+00	-1.406E+01	3.287E+01	5.286E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4959.42	6231.33	406.71	750	3.421E-01	3.562E-02	2.544E-01	1.688E-01	1.229E-01	-7.225E-03	8.891E-01	5.056E+00	-1.326E+01	3.455E+01	5.116E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4956.74	6271.67	407.39	800	-2.919E-01	8.485E-02	1.467E-01	1.364E-01	2.626E-01	1.746E-01	6.371E-01	5.485E+00	-1.211E+01	3.664E+01	4.976E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4954.65	6313.18	409.40	850	1.987E-01	9.258E-02	1.681E-01	9.032E-02	5.421E-02	1.542E-01	6.119E-01	5.250E+00	-1.140E+01	3.745E+01	4.853E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4952.34	6352.59	403.20	900	5.730E-01	6.181E-02	1.963E-01	1.322E-01	1.121E-01	2.526E-01	3.650E-01	6.255E+00	-1.038E+01	3.887E+01	4.753E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4947.93	6393.38	408.51	950	-1.333E-01	9.096E-02	9.322E-02	1.156E-01	2.368E-01	1.116E-01	4.561E-01	6.814E+00	-9.047E+00	4.051E+01	4.661E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4943.61	6431.26	411.99	1000	-7.724E-01	1.817E-01	1.201E-01	2.001E-01	3.484E-01	5.232E-01	4.410E-01	6.569E+00	-7.809E+00	4.271E+01	4.586E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4937.03	6472.15	409.43	1050	-6.356E-01	1.127E-01	1.721E-01	3.238E-01	2.763E-01	3.871E-01	3.083E-01	6.967E+00	-7.410E+00	4.318E+01	4.517E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4937.03	6472.15	409.43	1050	-2.047E+00	1.188E-01	3.052E-01	2.767E-01	3.501E-01	3.256E-01	2.120E+00	4.190E+00	-2.134E+01	4.276E+01	4.517E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4936.31	6512.38	408.24	1100	1.350E-01	9.355E-02	1.489E-01	2.106E-01	2.915E-01	5.534E-01	5.947E-02	7.533E+00	-4.301E+00	4.536E+01	4.458E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4936.31	6512.38	408.24	1100	-1.299E+00	1.335E-01	2.671E-01	2.295E-01	3.213E-01	3.321E-01	1.858E+00	4.013E+00	-1.809E+01	4.562E+01	4.458E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4934.42	6564.38	409.29	1150	-2.068E+00	1.449E-01	2.888E-01	2.466E-01	3.065E-01	2.503E-01	1.850E+00	3.642E+00	-1.656E+01	4.831E+01	4.392E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-8500.00																	
4800.29	6010.00	385.98	500	7.270E-02	1.543E-01	2.176E-01	6.580E-02	1.422E-01	5.582E-02	9.776E-01	8.046E+00	-2.595E+01	1.550E+01	6.551E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4790.92	6048.87	390.41	550	-1.511E+00	1.843E-01	3.657E-01	2.168E-01	2.621E-01	3.672E-01	8.421E-01	8.696E+00	-2.421E+01	1.816E+01	6.185E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4780.33	6086.01	399.55	600	-9.482E-01	1.519E-01	2.986E-01	1.645E-01	2.487E-01	1.759E-01	1.102E+00	8.657E+00	-2.457E+01	1.740E+01	5.903E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4775.63	6123.63	405.18	650	-8.999E-02	1.162E-01	2.739E-01	1.834E-01	2.381E-01	2.581E-01	1.043E+00	8.554E+00	-2.358E+01	1.807E+01	5.664E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4778.34	6162.44	407.05	700	5.215E-02	5.451E-02	2.000E-01	8.172E-02	1.003E-01	1.520E-01	9.113E-01	8.609E+00	-2.337E+01	1.859E+01	5.453E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4789.60	6209.87	403.34	750	-5.586E-02	2.479E-02	2.159E-01	8.234E-02	2.019E-01	1.129E-01	6.122E-01	9.213E+00	-2.116E+01	2.130E+01	5.234E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4808.88	6254.64	399.25	800	6.026E-03	1.041E-01	2.453E-01	1.253E-01	1.791E-01	3.476E-01	6.334E-01	9.160E+00	-1.957E+01	2.332E+01	5.055E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4836.06	6298.49	399.29	850	-1.189E+00	6.184E-02	2.045E-01	8.184E-02	1.678E-01	2.750E-01	5.101E-01	9.118E+00	-1.759E+01	2.582E+01	4.904E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4858.95	6317.84	405.86	900	-1.716E+00	4.665E-02	1.380E-01	5.642E-02	9.698E-02	2.186E-01	3.006E-01	9.254E+00	-1.773E+01	2.572E+01	4.840E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4875.76	6362.04	402.31	950	-4.110E-01	1.255E-01	2.782E-01	1.687E-01	2.815E-01	3.491E-01	4.012E-01	1.010E+01	-1.677E+01	2.659E+01	4.727E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4878.66	6405.44	406.26	1000	-1.041E+00	5.297E-02	1.911E-01	1.141E-01	2.340E-01	2.514E-01	4.089E-01	1.012E+01	-1.607E+01	2.763E+01	4.635E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4886.80	6454.90	406.70	1050	-5.313E-01	6.016E-02	1.494E-01	8.011E-02	1.394E-01	2.036E-01	4.327E-01	1.025E+01	-1.521E+01	2.812E+01	4.545E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4883.39	6505.90	413.58	1100	-1.582E+00	6.517E-02	1.366E-01	1.062E-01	1.637E-01	2.734E-01	2.303E-01	1.075E+01	-1.503E+01	2.900E+01	4.468E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4883.11	6555.83	410.12	1150	-6.820E-01	-2.707E-02	2.248E-02	-7.681E-02	-2.083E-02	8.591E-02	1.334E-01	1.075E+01	-1.499E+01	2.827E+01	4.406E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-8600.00																	
4755.50	5974.89	396.09	550	-1.673E+00	1.002E-01	5.456E-02	-1.476E-01	-1.380E-01	-5.286E-01	2.812E+00	3.166E+00	-3.901E+01	1.515E+01	7.006E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4741.73	6021.34	399.08	600	-1.296E+00	1.178E-01	1.040E-01	-7.304E-02	-7.756E-02	-4.186E-01	2.160E+00	3.763E+00	-3.242E+01	2.466E+01	6.483E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4733.26	6070.23	402.43	650	-9.149E-01	2.029E-01	5.298E-02	-1.490E-01	6.185E-02	-4.647E-01	2.448E+00	3.184E+00	-2.919E+01	3.059E+01	6.065E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4729.01	6120.02	406.24	700	-1.665E+00	1.289E-01	6.046E-02	-1.351E-01	-1.437E-01	-4.503E-01	1.981E+00	4.553E+00	-3.015E+01	2.844E+01	5.735E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4751.47	6163.56	406.52	750	-1.031E+00	9.040E-02	9.026E-02	-1.385E-01	-9.631E-02	-3.764E-01	1.755E+00	4.682E+00	-2.815E+01	3.021E+01	5.474E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4769.28	6208.33	401.48	800	-9.871E-01	6.749E-02	8.681E-02	-1.140E-01	-9.817E-02	-2.560E-01	1.609E+00	5.035E+00	-2.642E+01	3.258E+01	5.259E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4763.93	6257.77	398.31	850	-1.033E+00	8.306E-02	1.191E-01	-9.201E-02	-3.985E-02	-2.084E-01	1.591E+00	5.317E+00	-2.417E+01	3.555E+01	5.085E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4757.21	6308.02	398.24	900	-1.567E+00	7.514E-02	1.539E-01	-2.495E-03	1.479E-02	-6.510E-02	1.325E+00	6.290E+00	-2.328E+01	3.728E+01	4.944E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4753.52	6357.18	406.54	950	-2.167E+00	1.101E-01	1.724E-01	6.966E-02	2.818E-02	7.643E-02	1.271E+00	6.201E+00	-2.262E+01	3.820E+01	4.829E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4755.07	6408.12	408.83	1000	-2.490E+00	1.114E-01	2.072E-01	5.647E-02	8.061E-02	-6.022E-02	1.332E+00	6.749E+00	-2.179E+01	3.948E+01	4.724E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4754.92	6456.01	404.71	1050	-2.820E+00	8.147E-02	1.723E-01	2.556E-03	5.003E-02	-3.799E-03	1.360E+00	6.582E+00	-2.190E+01	4.054E+01	4.644E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4755.44	6506.80	408.26	1100	-2.068E+00	6.936E-02	1.658E-01	1.338E-02	5.692E-03	1.933E-02	1.301E+00	6.331E+00	-2.028E+01	4.140E+01	4.571E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4756.70	6558.60	409.81	1150	-2.693E+00	6.207E-02	1.856E-01	2.587E-02	8.102E-02	6.319E-02	1.214E+00	7.054E+00	-1.987E+01	4.155E+01	4.508E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-8700.00																	
4707.30	5951.61	399.74	500	-1.576E+00	1.004E-01	6.298E-02	-1.261E-01	-9.451E-02	-5.262E-01	2.909E+00	2.785E+00	-3.930E+01	1.443E+01	7.391E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00

4712.01	6000.88	400.12	550	-1.293E+00	1.254E-01	1.116E-01	-6.990E-02	-7.841E-02	-4.148E-01	2.449E+00	3.468E+00	-3.468E+01	2.154E+01	6.734E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4716.33	6050.02	402.13	600	-1.138E+00	1.340E-01	6.886E-02	-1.370E-01	-1.449E-01	-3.236E-01	2.163E+00	3.756E+00	-3.219E+01	2.514E+01	6.248E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4716.55	6099.97	406.33	650	-1.040E+00	1.338E-01	1.085E-01	-9.225E-02	-3.919E-02	-2.881E-01	2.325E+00	3.965E+00	-3.033E+01	2.702E+01	5.875E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4715.59	6149.91	406.46	700	-1.580E+00	1.389E-01	1.510E-01	-4.807E-02	-2.930E-03	-1.656E-01	2.155E+00	4.308E+00	-2.962E+01	2.846E+01	5.588E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4712.91	6199.63	404.08	750	-1.607E+00	1.261E-01	1.550E-01	-1.497E-02	1.717E-02	-2.281E-01	2.119E+00	5.202E+00	-2.964E+01	2.868E+01	5.364E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4708.45	6248.70	404.13	800	-3.363E+00	1.467E-01	2.230E-01	4.764E-02	8.617E-02	-2.182E-02	1.985E+00	5.752E+00	-2.789E+01	3.201E+01	5.189E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4703.33	6298.71	407.10	850	-2.636E+00	9.390E-02	1.722E-01	-2.048E-02	-3.086E-02	-1.001E-02	1.907E+00	5.702E+00	-2.680E+01	3.232E+01	5.047E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4701.78	6348.96	410.00	900	-2.335E+00	1.150E-01	2.102E-01	5.490E-02	8.245E-02	-1.678E-02	2.101E+00	5.642E+00	-2.611E+01	3.317E+01	4.926E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4695.84	6398.14	412.65	950	-2.858E+00	1.569E-01	2.763E-01	7.375E-02	1.642E-01	-9.315E-02	2.038E+00	6.379E+00	-2.599E+01	3.354E+01	4.837E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4685.06	6445.43	410.37	1000	-3.353E+00	1.037E-01	1.774E-01	3.963E-02	5.031E-02	-1.060E-03	1.867E+00	6.319E+00	-2.517E+01	3.486E+01	4.779E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4674.40	6496.42	413.12	1050	-4.238E+00	8.013E-02	2.127E-01	5.611E-02	1.410E-01	-1.884E-02	1.949E+00	6.259E+00	-2.530E+01	3.522E+01	4.730E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4659.46	6541.75	402.16	1100	-2.485E+00	3.346E-02	9.191E-02	-1.200E-01	-6.394E-02	-1.418E-01	1.303E+00	5.343E+00	-2.008E+01	4.623E+01	4.714E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4659.46	6541.75	402.16	1100	-2.529E+00	1.110E-01	2.384E-01	5.086E-02	1.501E-01	-9.694E-02	1.861E+00	7.071E+00	-2.558E+01	3.406E+01	4.714E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-8800.00																	
4471.84	5950.81	391.45	500	6.729E-01	8.490E-02	2.763E-01	1.587E-01	2.458E-01	4.529E-02	1.920E+00	-4.334E+00	-2.254E+01	3.537E+01	7.974E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4476.68	5975.11	386.65	525	-1.258E-02	2.725E-01	6.336E-01	6.151E-01	8.036E-01	5.722E-01	2.580E+00	-3.874E+00	-2.162E+01	3.686E+01	7.616E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4484.42	5996.06	387.77	550	7.925E-01	4.028E-01	8.756E-01	9.643E-01	9.299E-01	1.002E+00	2.669E+00	-3.114E+00	-1.664E+01	4.241E+01	7.339E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4492.28	6020.92	387.95	575	1.019E+00	2.409E-01	5.678E-01	5.397E-01	6.635E-01	4.645E-01	2.011E+00	-3.281E+00	-1.422E+01	4.528E+01	7.055E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4499.93	6041.35	399.21	600	2.324E+00	1.297E-01	3.275E-01	2.703E-01	-1.406E-01	1.766E-01	1.637E+00	-3.117E+00	-1.435E+01	4.359E+01	6.849E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4510.31	6090.13	405.35	650	2.065E+00	1.122E-01	2.744E-01	2.234E-01	2.653E-01	-4.309E-01	1.455E+00	-2.880E+00	-1.327E+01	4.517E+01	6.451E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4516.00	6141.00	406.69	700	1.496E+00	7.069E-02	7.486E-01	1.299E-01	2.629E-01	8.213E-02	1.516E+00	-2.663E+00	-1.154E+01	4.675E+01	6.142E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4519.33	6191.65	406.41	750	1.616E+00	2.471E-02	1.312E-01	2.289E-02	1.053E-01	4.242E-03	1.312E+00	-2.881E+00	-1.092E+01	4.756E+01	5.907E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4513.09	6242.00	395.34	800	1.660E+00	1.513E-01	3.333E-01	3.294E-01	3.942E-01	2.619E-01	1.753E+00	-2.094E+00	-9.590E+00	4.931E+01	5.760E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4515.76	6288.92	385.10	850	1.672E+00	7.934E-02	2.180E-01	1.517E-01	2.586E-01	1.209E-01	1.519E+00	-2.288E+00	-7.583E+00	5.081E+01	5.615E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4532.87	6333.94	392.95	900	1.784E+00	1.208E-01	3.149E-01	2.643E-01	3.916E-01	2.660E-01	1.659E+00	-2.017E+00	-7.147E+00	5.069E+01	5.443E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4546.51	6380.63	404.37	950	1.241E+00	2.428E-01	4.873E-01	5.358E-01	7.003E-01	4.530E-01	2.066E+00	-1.217E+00	-6.331E+00	5.161E+01	5.301E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4545.05	6429.91	400.00	1000	1.580E+00	5.087E-02	1.349E-01	9.198E-02	1.971E-01	2.217E-02	1.469E+00	-1.943E+00	-5.809E+00	5.203E+01	5.230E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4548.50	6479.00	399.05	1050	1.376E+00	2.243E-01	4.951E-01	5.447E-01	7.568E-01	5.273E-01	2.012E+00	-1.169E+00	-4.884E+00	5.265E+01	5.153E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4556.31	6529.14	407.25	1100	1.396E+00	4.861E-02	1.884E-01	1.122E-01	2.298E-01	1.878E-01	1.481E+00	-1.686E+00	-4.488E+00	5.281E+01	5.068E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
line	-8900.00																	
4454.39	5970.17	388.30	500	-2.319E-01	9.354E-02	3.016E-01	1.962E-01	2.766E-01	1.267E-01	2.031E+00	-4.316E+00	-2.310E+01	3.596E+01	7.778E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4448.60	6019.30	389.15	550	6.036E-01	1.263E-01	3.382E-01	2.819E-01	3.661E-01	1.810E-01	1.824E+00	-3.628E+00	-1.685E+01	4.260E+01	7.268E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4448.94	6069.15	395.30	600	1.013E+00	4.501E-03	9.887E-02	-6.380E-02	6.281E-02	-1.432E-01	1.410E+00	-3.693E+00	-1.614E+01	4.296E+01	6.870E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4443.02	6118.35	399.59	650	1.696E+00	7.128E-02	2.496E-01	1.233E-01	2.646E-01	-4.738E-01	1.564E+00	-2.902E+00	-1.581E+01	4.305E+01	6.608E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4445.23	6169.05	394.67	700	1.919E+00	7.427E-02	2.574E-01	-3.382E-01	2.430E-01	9.623E-02	1.821E+00	-2.832E+00	-1.488E+01	4.394E+01	6.361E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4445.26	6194.81	390.09	725	1.710E+00	7.795E-02	2.328E-01	1.470E-01	2.040E-01	2.911E-02	1.701E+00	-2.853E+00	-1.450E+01	4.434E+01	6.261E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4446.76	6218.03	385.96	750	1.002E+00	3.192E-01	6.925E-01	7.675E-01	9.025E-01	8.603E-01	2.518E+00	-1.872E+00	-1.422E+01	4.515E+01	6.172E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4449.57	6242.77	384.02	775	1.250E+00	1.592E-01	3.898E-01	3.723E-01	5.170E-01	3.358E-01	2.212E+00	-2.638E+00	-1.414E+01	4.533E+01	6.080E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4448.02	6268.47	384.24	800	1.513E+00	-1.874E-02	4.639E-02	-7.367E-02	-1.259E-03	-1.747E-01	1.713E+00	-2.445E+00	-1.599E+01	4.335E+01	6.023E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4444.17	6318.95	384.48	850	1.663E+00	2.128E-02	1.153E-01	1.373E-03	9.272E-02	-1.324E-01	1.585E+00	-2.352E+00	-1.361E+01	4.555E+01	5.941E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4445.27	6367.14	399.65	900	1.653E+00	5.875E-03	7.803E-02	-6.267E-02	3.955E-02	-3.904E-02	1.068E+00	-2.687E+00	-1.449E+01	4.446E+01	5.863E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4444.54	6416.86	398.39	950	1.605E+00	4.307E-02	1.678E-01	7.821E-02	1.875E-01	-4.147E-02	2.402E+00	-1.828E+00	-1.412E+01	4.469E+01	5.803E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4447.11	6467.54	405.13	1000	1.388E+00	1.263E-02	1.206E-01	7.996E-03	1.050E-01	-8.585E-02	1.809E+00	-2.095E+00	-1.384E+01	4.469E+01	5.736E-04	-1.00E+00	0.00E+00	0.00E+00	1.00E+00
4450.76	6516.36	401.32	1050	1.126E+00	2.453E-02	1.208E-01	4.790E-02	1.493E-01	-1.159E-01	1.760E+00	-1.617E+00	-1.465E+01	4.412E+01	5.670E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00
4452.26	6565.85	403.29	1100	-3.387E-01	1.246E-01	3.242E-01	3.273E-01	3.977E-01	1.622E-01	2.258E+00	-1.102E+00	-1.464E+01	4.596E+01	5.628E-04	-9.99E-01	0.00E+00	0.00E+00	1.00E+00

APPENDIX F

Geophysical Systems – Theoretical / Technical Info

UTEM 3 System
GSM-19 Magnetometer
Beep Mat – Model BM4+

UTEM 3 System

(Lamontagne Geophysics Ltd)

The UTEM SYSTEM

The UTEM System

UTEM Data Reduction and Plotting Conventions

Data Presentation

The UTEM SYSTEM

UTEM uses a large, fixed, horizontal transmitter loop as its source. Loops range in size from 300m x 300m up to as large as 4km x 4km. Smaller loops are generally used over conductive terrain or for shallow sounding work. The larger loops are only used over resistive terrain. The UTEM receiver is typically synchronized with the transmitter at the beginning of a survey day and operates remotely after that point. The clocks employed - one in each of the receiver and transmitter - are sufficiently accurate to maintain synchronization.

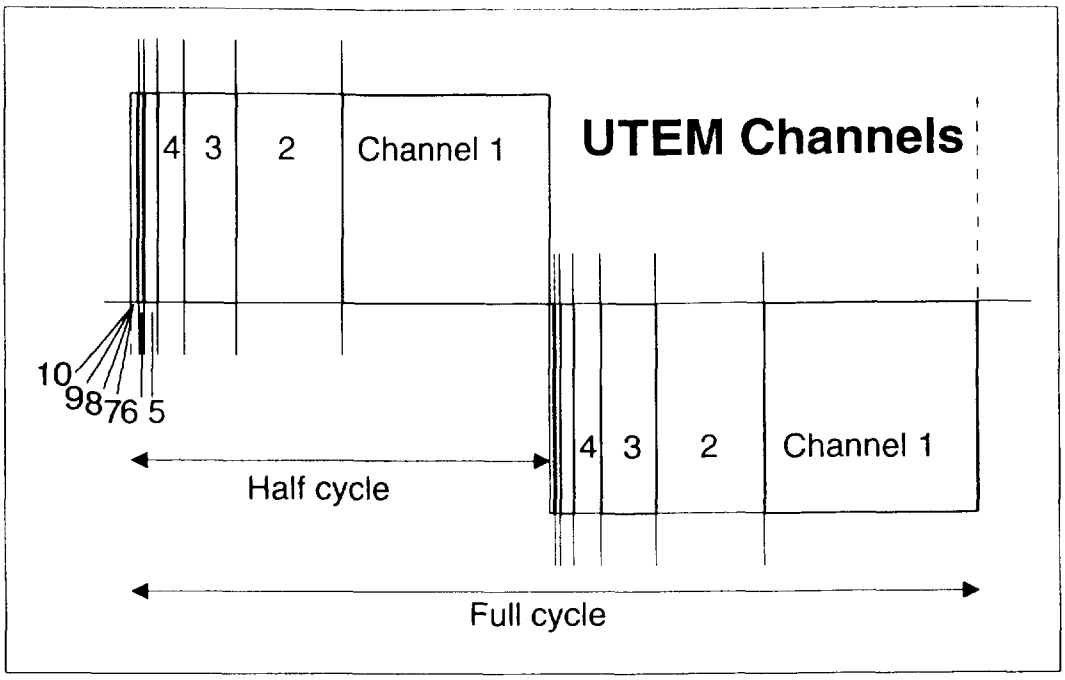
Measurements are routinely taken to a distance of 1.5 to twice the loop dimensions, depending on the local noise levels, and can be continued further. Lines are typically surveyed out from the edge of the loop but may also be read across the loop wire and through the centre of the loop, a configuration used mainly to detect horizontal conductors. BHUTEM - the borehole version of UTEM -surveys have been carried out to depths up to 3000+ metres.

System Waveform

The UTEM transmitter passes a low-frequency (4 Hz to 90 Hz) current of a precisely regulated triangular waveform through the transmitter loop. The frequency can be set to any value within the operating range of the transmitter, however, it is usually set at 31 Hz to minimize power line (60 Hz in North America) effects. Since a receiver coil responds to the time derivative of the magnetic field, the UTEM system really "sees" the step response of the ground. UTEM is the only time domain system which measures the step response of the ground. All other T.D.E.M. systems to date transmit a modified step current and "see" the (im)pulse response of the ground at the receiver. In practice, the transmitted UTEM waveform is tailored to optimize signal-to-noise. Deconvolution techniques are employed within the system to produce an equivalent to the conceptual "step response" at the receiver.

System Sampling

The UTEM receiver measures the time variation of the magnetic field in the direction of the receiver coil at 10 delay times (channels). UTEM channels are spaced in a binary, geometric progression across each half-cycle of the received waveform. Channel **10** is the earliest channel and it is $1/2^{10}$ of the half-cycle wide. Channel **1**, the latest channel, is $1/2^{1}$ of the half-cycle wide (see Figure below). The measurements obtained for each of 10 channels are accumulated over many half-cycles. Each final channel value, as stored, is the average of the measurements for that time channel. The number of half-cycles averaged generally ranges between 2048 (1024 full-cycles - 1K in UTEM jargon) to 32768 (16K) depending on the level of ambient noise and the signal strength.



System Configurations

For surface work the receiver coil is mounted on a portable tripod and oriented. During a surface UTEM survey the vertical component of the magnetic field (Hz) of the transmitter loop is always measured. Horizontal in-line (Hx) and cross-line (Hy) components are also measured if more detailed information is required. The UTEM System is also capable of measuring the two horizontal components of the electric field, Ex and Ey. A dipole sensor comprised of two electrodes is used to measure the electric field components. This is generally used for outlining resistive features to which the magnetic field is not very sensitive.

BHUTEM surveys employ a receiver coil that is smaller in diameter than the surface coil. The borehole receiver coil forms part of a down-hole receiver package used to measure the axial (along-borehole) component of the magnetic field of the transmitter loop. Due to the distance between coil and receiver in borehole surveys the signal must be transmitted up to the receiver. In BHUTEM the signal is transmitted to surface digitally using a kevlar-reinforced fibre-optic cable as a data link. Using a fibre-optic link avoids signal degradation problems and allows surveying of boreholes to 3000+m. The cable is also very light - the specific gravity is nearly 1.0 - making the cable handling hardware quite portable.

The EM Induction Process

Any time-varying transmitted ("primary") field induces current flow in conductive regions of the ground below and around the transmitter loop (i.e. in the earth or "half-space"). This current flow produces a measurable EM field, the secondary field, which has an inherent "inertia" that resists the change in primary field direction. This "inertial" effect is called self-inductance; it limits the rate at which current can change and is only dependent on the shape and size of a conductive path.

It takes a certain amount of time for the transmitted current flow to be redirected (reversed) and reestablished to full amplitude after the rate-of-change of the primary field reverses direction. This measurable reversal time is characteristic for a given conductor. In general, for a good conductor this time is greater than that of a poor conductor. This is because in a good conductor the terminal current level is greater, whereas its rate of change is limited by the inductance of the current path. The time-varying current causes an Emf in the sensor proportional to the time derivative of the current. This Emf decays with time - it vanishes when the reversal is complete - and the characteristic time of the Emf decay as measured by the sensor is referred to as the **decay time** of the conductor.

The large-scale current which is induced in the half-space by the primary field produces the half-space response as seen in typical UTEM profiles. This background response is influenced by the finite conductivity of the surrounding rock. Other currents may be induced in locally more conductive zones (conductors) that have longer decay times than the half-space response. The responses of these conductors are superimposed upon the background response. The result is that the UTEM receiver detects:

- the primary field waveform, a square-wave
- the half-space (background) response of the surrounding rock
- a slight-to-large response due to any conductors present.

The result is that in the presence of conductors the primary field waveform is substantially (and anomalously) distorted.

UTEM DATA REDUCTION and PLOTTING CONVENTIONS

The UTEM data as it appears in the data files is in total field, **continuously** normalized form. In this form, the magnetic field data collected by the **receiver is** expressed as a % of the calculated primary magnetic field vector magnitude **at the** station. These are total field values - the UTEM system measures during **the "on-**time" and as such samples both the primary and secondary fields.

For plotting purposes, the reduced magnetic field data (as it appears in the **data file)** are transformed to other formats as required. The following is provided **as a** description of the various plotting formats used for the display of UTEM data. A plotting format is defined by the choice of the *normalization* and *field type* parameters selected for display.

NORMALIZATION

UTEM results are always expressed as a % of a normalizing field at some point in space.

In **continuously normalized** form the normalizing factor (the denominator) is the magnitude of the computed local primary field vector. As the primary exciting field magnitude diminishes with increasing distance from the transmitter loop the response is continuously amplified as a function of offset from the loop. Although this type of normalization considerably distorts the response shape, it permits anomalies to be easily identified at a wide range of distances from the loop.

Note: An optional form of continuous normalization permits the interpreter to normalize the response to the magnitude of the primary field vector at a fixed depth below each station. This is useful for surface profiles which come very close to the loop. Without this adjustment option, the normalizing field is so strong near the loop that the secondary effects become too small in the presence of such a large primary component. In such circumstances interpretation is difficult, however; by "normalizing at some depth" the size of the normalizing field, near the loop in particular, is reduced and the resulting profile can be more effectively interpreted to a very close distance from the transmitter wire. The usual choice for the depth is the estimated target depth is used.

In **point normalized form** the normalizing factor is the magnitude of the computed primary field vector at a single point in space. When data is presented in this form, the point of normalization is displayed in the title block of the plot. Point normalized profiles show the non-distorted shape of the field profiles. Unfortunately, the very large range in magnitude of anomalies both near and far from the loop means that small anomalies, particularly those far from the loop, may be overlooked on this type of plot in favour of presenting larger amplitude anomalies.

Note: Selecting the correct plot scales is critical to the recognition of conductors over the entire length of a point normalized profile. Point normalized data is often used for interpretation where an analysis of the shape of a specific anomaly is required. Point normalized profiles are therefore plotted selectively as required during interpretation. An exception to this procedure occurs where surface data has been collected entirely inside a transmitter loop. The primary field does not vary greatly inside the loop, therefore, the benefits of continuous normalization are not required in the display of such results. In these cases data is often point normalized to a fixed point near the loop centre.

FIELD TYPE

The type of field may be either the **Total field** or the **Secondary field.** In general, it is the secondary field that is most useful for the recognition and interpretation of discrete conductors.

UTEM Results as Secondary Fields

Because the UTEM system measures during the transmitter on-time the determination of the secondary field requires that an estimate of the primary signal be subtracted from the observations. Two estimates of the primary signal are available:

1) UTEM Channel 1

One estimate of the primary signal is the value of the latest time channel observed by the UTEM System, channel 1. When Channel 1 is subtracted from the UTEM data the resulting data display is termed ***Channel 1 Reduced***. This reduction formula is used in situations where it can be assumed that all responses from any target bodies have decayed away by the latest time channel sampled. The Channel 1 value is then a reasonable estimate of the primary signal present during Channels 2....10.

In practice the ***Channel 1 Reduced*** form is most useful when the secondary response is very small at the latest delay time. In these cases channel 1 is indeed a good estimate of the primary field and using it avoids problems due to geometric errors or transmitter loop current/system sensitivity errors.

2) Calculated primary field

An alternate estimate of the primary field is obtained by computing the primary field from the known locations of the transmitter loop and the receiver stations. When the computed primary field is subtracted from the UTEM data the resulting data display is termed ***Primary Field Reduced*** .

The calculated primary field will be in error if the geometry is in error - misallocation of the survey stations or the loop vertices - or if the transmitter loop current/system sensitivity is in error. Misallocation errors from loop/station geometry may give rise to very large secondary field errors depending on the accuracy of the loop and station location method used. Transmitter loop current/system sensitivity error is rarely greater than 2%. ***Primary Field Reduced*** is plotted in situations where a large Channel 1 response is observed. In this case the assumption that the Channel 1 value is a reasonable estimate of the primary field effect is not valid.

Note: When UTEM data is plotted in the ***Channel 1 Reduced*** form the secondary field data for Channel 1 itself are always presented in ***Primary Field Reduced*** form and are plotted on a separate axis. This plotting format serves to show any long time-constant responses, magnetostatic anomalies and/or geometric errors present in the data.

Mathematical Formulations

In the following expressions:

$\mathbf{Rn_j}$ is the result plotted for the n^{th} UTEM channel,

$\mathbf{R1_j}$ is the result plotted for the latest-time UTEM channel, channel 1,

$\mathbf{Chn_j}$ is the raw component sensor value for the n^{th} channel at station j,

$\mathbf{Ch1_j}$ is the raw component sensor value for channel 1 at station j,

$\mathbf{H^P_j}$ is the computed primary field component in the sensor direction

$|\mathbf{H^P}|$ is the magnitude of the computed primary field at:
- a fixed station for the entire line (point normalized data)
- the local station of observation (continuously normalized data)
- a fixed depth below the station (continuously normalized at a depth).

Channel 1 Reduced Secondary Fields : Here, the latest time channel, Channel 1 is used as an "estimate" of the primary signal and channels 2-10 are expressed as:

$$Rn_j = (Chn_j - Ch1_j) / |H^P| \quad x\,100\%$$

Channel 1 itself is reduced by subtracting a calculation of the primary field observed in the direction of the coil, H^P as follows:

$$R1_j = (Ch1_j - H^P{}_j) / |H^P| \quad x\,100\%$$

Primary Field Reduced Secondary Fields : In this form all channels are reduced according to the equation used for channel 1 above:

$$Rn_j = (Chn_j - H^P{}_j) / |H^P| \quad x\,100\%$$

This type of reduction is most often used in cases where very good geometric control is available (leading to low error in the calculated primary field, $H^P{}_j$) and where very slowly decaying responses result in significant secondary field effects remaining in channel 1 observations.

UTEM Results as a Total Field

In certain cases results are presented as a % of the **Total Field**. This display is particularly useful, in borehole surveys where the probe may actually pass through a very good conductor. In these cases the shielding effect of the conductor will cause the observed (total) field to become very small below the intersection point. This nullification due to shielding effects on the total field is much easier to see on a separate ***Total Field*** plot. In cases where the amplitude of the anomalies relative to the primary field is small, suggesting the presence of poorly conductive bodies, the ***Total Field*** plot is less useful.

The data contained in the UTEM reduced data files is in ***Total Field***, continuously normalized form if:

$$Rn_j = Chn_j / |H^P| \quad x\,100\%$$

DATA PRESENTATION

All UTEM survey results are presented as profiles in an Appendix of this report. For BHUTEM surveys the requisite Vectorplots, presented as plan and section views showing the direction and magnitude of the calculated primary field vectors for each transmitter loop, are presented in a separate Appendix.

The symbols used to identify the channels on all plots as well as the mean delay time for each channel is shown in the table below.

UTEM System Mean Delay Times

10 Channel Mode @ 31 hz.(approx.)

(base freq: 30.974 hertz)

Channel #	Delay time (ms)	Plot Symbol
1	12.11	
2	6.053	
3	3.027	
4	1.513	
5	0.757	
6	0.378	
7	0.189	
8	0.095	
9	0.047	
10	0.024	

Notes on Standard plotting formats:

10 channel data in ***Channel 1 Reduced*** form - The data are usually displayed on three separate axes. This permits scale expansion, allowing for accurate determination of signal decay rates. The standard configuration is:

Bottom axis - Channel 1 (latest time) is plotted alone in ***Primary Field Reduced*** form using the same scale as the axis.

Center axis - The intermediate to late time channels, ch5 to ch2 are plotted on the center axis using a suitable scale.

Top axis - The early time channels, ch10 to ch6 and a repeat of ch5 for comparison are plotted on the top axis at a reduced scale. The earliest channels, ch8 to ch10, may not be plotted to avoid clutter.

10 channel data in ***Primary Field Reduced*** form: The data are displayed using a single axis plot format. Secondary effects are plotted using a Y axis on each data plot with peak to peak values up to 200%.

BHUTEM data plotted as total field profiles: Data are expressed directly as a percentage of the ***Total Field*** value. The Y axis on each single axis data plot shows peak values of up to 100%. These departures are always relative to the measured total field value at the observation station.

BHUTEM data plotted as secondary field profiles: Check the title block of the plot to determine if the data is in ***Channel 1 Reduced*** form or in ***Primary Field Reduced*** form.

Note that on all BHUTEM plots the ratio between the axial component of the primary field of the loop and the magnitude of the total primary field strength **(dc)** is plotted as a profile without symbols. In UTEM jargon this is referred to as the "primary field" and it is plotted for use as a polarity reference tool.

Note on sources of anomalous Ch1

This section outlines the possible sources of anomalous channel 1 which is not correlated to the Ch2-10 data plotted on the upper axes of a *channel 1 normalized* plot.

1) **Mislocation of the transmitter loop and/or survey stations**

Mislocating the transmitter loop and/or the survey stations results in an error in the calculated primary field at the station and appears as an anomalous Ch1 value not correlated to *channel 1 normalized* Ch2-10. The effect is amplified near the loop front. This can be seen in the profiles - the error in Ch1 generally increases approaching the loop. As a rule a 1% error in measurement of the distance from the loop will result in, for outside the loop surveys, an error in Ch1 of:

- 1% near the loop front (long-wire field varies as $1/r$)
- 3% at a distance from the loop front (dipolar field varies as $1/r^3$)
- 2% at intermediate distances (intermediate field varies as $\sim 1/r^2$)

Errors in elevation result in smaller errors but as they often affect the chainage they accumulate along the line.

The in-loop survey configuration generally diminishes geometric error since the field gradients are very low. At the centre of the loop the gradient in the vertical field is essentially zero so it is difficult to introduce geometric anomalies near the loop centre. Near the loop sides and at the closest approach of the lines to the wire mislocation of the loop and the station becomes more critical. Typically loop sides are designed to be >200m from any survey stations.

2) **Magnetostatic UTEM responses**

Magnetostatic UTEM responses arise over rocks which generate magnetic anomalies. Such magnetic materials will amplify the total (primary + secondary) field of the UTEM transmitter which is sensed by the receiver coil. The secondary field is generated by subtracting a computed primary which does not include magnetic effects. This can give rise to strong and abrupt channel 1 anomalies when the source of the magnetics is at surface. This is the case in a number of places on these grids. UTEM magnetostatic anomalies differ from DC magnetic anomalies in the following three major ways:

1) In the case of DC magnetics the field is dipping N and is very uniform over the scale of the survey area while the UTEM field inside the loop is vertical and it is stronger near the loop edges.
2) Most aeromagnetics are collected as total field while with UTEM we measure a given (in this case generally z,x) component.
3) DC magnetic instruments observe the total magnetization of the causative body which is due to its susceptibility as well as any remnant

magnetization. An AC method such as UTEM will not respond to the remnant portion of the magnetization.

The larger amplitude of the UTEM Ch1 response is explained by the fact that the UTEM primary field is often more favourably coupled (magnetostatically speaking) to magnetic mineralization as compared to the earths field. Another factor could be the presence of a reverse remnant component to the magnetization.
Note that positive (*negative*) magnetic anomalies will cause:
- positive (*negative*) Ch1 anomalies in data collected outside the loop
- negative (*positive*) Ch1 anomalies in data collected inside the loop

3) **Extremely good conductors**

An extremely good conductor will be characterized by a time constant much longer than the half-period (@ 30Hz >>16ms). This will give rise to an anomalous Ch1 which is not correlated to the Ch2-10 data plotted on the upper axes of a *channel 1 normalized* plot.

GSM-19 Magnetometer

(GEM System Inc.)

I. INTRODUCTION

The GSM-19 is a portable high sensitivity Overhauser effect* magnetometer/gradiometer designed for hand-held or base station use for geophysical, geotechnical, or archaeological exploration, long term magnetic field monitoring at Magnetic Observatories, volcanological and seismic research, etc. The GSM-19 is a secondary standard for measurement of the Earth's magnetic field, having 0.01 nT resolution, and 0.2 nT absolute accuracy over its full temperature range. The GSM-19 is a microprocessor based instrument with storing capabilities. Large memory storage is available (up to 2 Mbytes). Synchronized operation between hand held and base station units is possible, and the corrections for diurnal variations of magnetic field are done automatically. The results of the measurements are made available in serial form (RS-232-C interface) for collection by data acquisition systems, terminals or computers. Both on-line and post-operation transfers are possible. In gradiometer mode the measurement of two magnetic fields for determination of gradient is done concurrently with strict control of measuring intervals. The result is a high quality reading, independent of diurnal variations of magnetic field.
Optionally the addition of VLF sensor for combined magnetometer/gradiometer-VLF measurement is available.

II. THEORETICAL DESCRIPTION

The magnetic field measuring process consists of the following steps:

a) **Polarization.** A strong RF current is passed through the sensor creating polarization of a proton rich fluid in the sensor. In the case of the GSM-19 fast sampling family, polarization can be concurrent with other intervals of measurement. Keeping the RF on all the time increases the maximum data sampling rate to 5 Hz.
b) **Deflection.** A short pulse deflects the proton magnetization into the plane of precession.
c) **Pause.** The pause allows the electrical transients to die off, leaving a slowly decaying proton precession signal above the noise level.
d) **Counting**. The proton precession frequency is measured and converted into magnetic field units.
e) **Storage.** The results are stored in memory together with date, time, and coordinates of measurement. In base station mode, only the time and total field are stored.

**Overhauser Effect*
In contrast to a standard proton magnetometer sensor, where only a proton rich liquid is required to produce a precession signal, the Overhauser Effect sensor must also have a free radical added to the liquid. This free radical ensures the presence of free, unbound electrons that couple with protons, producing a two-spin system. A strong RF magnetic field is used to disturb the electron-proton coupling. By saturating free electron resonance lines, the polarization of protons in the sensor liquid is greatly increased. The Overhauser effect offers a more powerful method of proton polarization than standard DC polarization, i.e. stronger signals are achieved from smaller sensors, and with less power.

III. EARTH'S MAGNETIC FIELD

Appendix A shows the nominal distribution of the Earth's magnetic field, with dotted lines separating the equatorial and polar regions. In polar regions the inclination of the magnetic field vector is approximately vertical, while in equatorial regions it is horizontal. To obtain the best precession signal the sensor axis must be approximately at right angle to the magnetic field .*

In polar regions the sensor axis must be horizontal, in equatorial vertical.

Horizontal orientation of the sensor can be universal if the operator keeps the sensor oriented in an East-West direction (important only in equatorial regions).

Initially, the tuning of the instrument should agree with the nominal value of the magnetic field shown for the particular region in appendix B. After each reading the instrument will tune itself automatically. If large changes in magnetic field are encountered between successive readings, a warning will be given to the operator and it may be necessary to repeat the reading to obtain an accurate result.

Local ferromagnetic objects like screws, pocket knives, wristwatches, tools etc. may impair the quality of measurement or in drastic cases even destroy the proton precession signal by creating excessive gradients.

For best results, ferromagnetic objects should be kept away from the sensor.

In normal applications, the magnetometer console does not produce appreciable effects on measurements provided that the sensor is installed on the staff and kept at least at arms length from the operator and the console.

* Omnidirectional sensors, that do not need to be oriented are optionally available from GEM Systems

APPENDIX G - GSM-19T MAGNETOMETER/GRADIOMETER

THEORETICAL DESCRIPTION

Introduction

The GSM-19T is a portable standard proton magnetometer/gradiometer designed for handheld or base station use for geophysical, geotechnical or archaeological exploration, long term magnetic field monitoring at Magnetic Observatories, volcanological and seismic research, etc. The GSM-19T is a secondary for measurement of the Earth's magnetic field, having 0.2nT resolution, and 1nT absolute accuracy over its full temperature range.

The GSM-19T is a microprocessor based instruments with storing capabilities. Large memory storage is available (up to 2Mbytes). Synchronized operation between hand held and base station units is possible, and the corrections for diurnal variations of magnetic field are done automatically. The results of measurements are made available in serial form (RS-232-C interface) for collection by data acquisition systems, terminals or computers. Both on-line and post-operation transfer are possible.

The measurement of two magnetic fields for determination of gradient is done concurrently with strict control of measuring intervals. The result is a high quality gradient reading, independent of diurnal variations of magnetic field.

Optionally the addition of a VLF sensor for combined magnetometer/gradiometer-VLF measurement is available.

Magnetic Filed Measurement *

The magnetic field measuring process consist of the following steps:

a) Polarization: A strong DC current is passed through the sensor creating polarization of a proton-rich fluid in the sensor.

b) Pause: The pause allows the electrical transient to die off, leaving a slowly decaying proton precession signal above the noise level.

c) Counting: The proton precession frequency is measured and converted into magnetic field units.

d) Storage: The result are storage in memory together with date, time and coordinates of measurements. In base station mode, only the time and total field are stored.

* See Appendix A for sensor orientation requirements.

INSTRUMENT SPECIFICATIONS

MAGNETOMETER / GRADIOMETER

Resolution:	0.01nT (gamma), magnetic field and gradient.
Accuracy:	0.2nT over operating range.
Range:	20,000 to 120,000nT.
Gradient Tolerance:	Over 10, 000nT/m
Operating Interval:	3 seconds minimum, faster optional. Readings initiated from keyboard, external trigger, or carriage return via RS-232C.
Input / Output:	6 pin weatherproof connector, RS-232C, and (optional) analog output.
Power Requirements:	12V, 200mA peak (during polarization), 30mA standby. 300mA peak in gradiometer mode.
Power Source:	Internal 12V, 2.6Ah sealed lead-acid battery standard, others optional. An External 12V power source can also be used.
Battery Charger:	**Input:** 110 VAC, 60Hz. Optional 110 / 220 VAC, 50 / 60Hz. **Output:** dual level charging.
Operating Ranges:	Temperature: - 40°C to +60°C. Battery Voltage: **10.0V minimum to 15V maximum.** Humidity: **up to 90% relative, non condensing.**
Storage Temperature:	-50°C to +65°C.
Display:	LCD: 240 X 64 pixels, OR 8 X 30 characters. Built in heater for operation below -20°C.
Dimensions:	**Console:** 223 x 69 x 240mm. **Sensor Staff:** 4 x 450mm sections. **Sensor:** 170 x 71mm dia. **Weight:** console 2.1kg, Staff 0.9kg, Sensors 1.1kg each.
VLF	
Frequency Range:	15 - 30.0 kHz plus 57.9 kHz (Alaskan station)
Parameters Measured:	Vertical in-phase and out-of-phase components as percentage of total field. 2 relative components of horizontal field. Absolute amplitude of total field.
Resolution:	0.1%.
Number of Stations:	Up to 3 at a time.
Storage:	Automatic with: time, coordinates, magnetic field / gradient, slope, EM field, frequency, in- and out-of-phase vertical, and both horizontal components for each selected station.
Terrain Slope Range:	0° - 90° (entered manually).
Sensor Dimensions:	140 x 150 x 90 mm. (5.5 x 6 x 3 inches).

Sensor Weight: 1.0 kg (2.2 lb).

16 II

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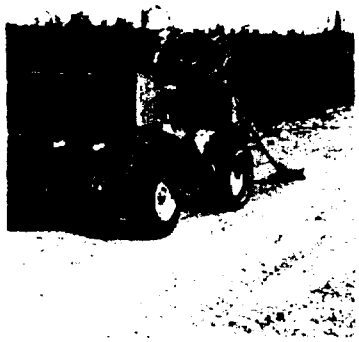
Beep Mat – Model BM4+

(Instrumentation GDD Inc.)

Instrumentation GDD



THE BEEP MAT

The Lazy Prospector's Way to Find Gold, Copper, Zinc, Titanium ... and Even Old Gas Tanks!

Tired of searching without success?

Try our fast track prospecting method and start finding! Scan the ground 10 feet deep at 30 km/h comfortably seated on a snowmobile or an ATV!

The Beep Mat can also be used to locate burried metal tanks and pipes.

CONTENTS

What is the Beep Mat?

The Beep Mat, model BM4+, is a powerful miniaturized electromagnetic survey instrument that efficiently and inexpensively detects conductive and magnetic outcrops or boulders hidden under up to 10 feet (3 meter) of overburden.

With the Beep Mat, you can sample as many conductive outcrops and floats in one season as a mining company drills in ten years of standard operation.

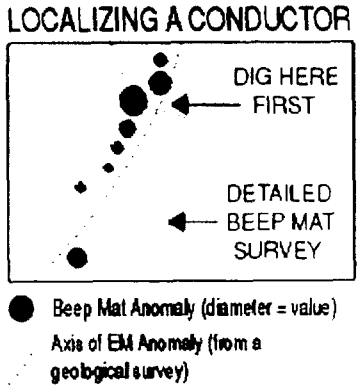
With the standard approach, less than 1% of all drilled geoscientific targets will warrant additionnal drilling. Sampling with the Beep Mat saves the cost of hundreds of barren

D.D.H. and upgrades the value of targets to be drilled.

With the Beep Mat you can map the geological potential of a promising horizon without having to remove the overburden.

How it works

- The Beep Mat sends different sound signals for magnetite and conductive materials, and their relative values are displayed to help pinpoint high values.
- Simultaneous measurements of the conductivity and susceptibility (magnetite content) are displayed.
- Detects sulfide floats, veinlets and conductors such as pyrite, pyrrhotite, chalcopyrite (Cu), graphite, pentlandite (Ni), galena (Ph), etc. and even silver (Ag) and gold (Au) nuggets.
- A red light with a sound signal indicates a conductor.
- Conductivity ratio displayed to qualify changes in the conductivity.
- Detects poor conductors inbedded into a highly magnetic formation.
- Detects veinlets with as little as 0.1% sulfides.



The Beep Mat Not Only Find Conductors, But It Also Cuts your Exploration Costs!

The following chart is a real eye-opener. By comparing the costs of surveys done with the Beep Mat to standard geophysical surveys, you will find that your prospecting dollars go miles farther with the Beep Mat. Also, your chances of finding a high value exploitable site

are thus multiplied at least tenfold.

COMPARING COSTS	Beep Mat Survey	Standard Geophysical Survey
Staking	Only when a showing is found	Always $100 per claim
Line cutting	None	Always $200 per km
Readings	Continuously at every 1/10 of a second	25-meter spacings
Plotting	Only the sites sampled	All readings are mapped
Stripping	With a shovel or explosives	With a bulldozer, at $ 100 per hour
Drilling	Only promising showings	All conductors
Typical cost per conductor	$ 500 to $2000 (sampled and assayed)	$20,000 to $50,000
Follow-up of conductors found by airborne surveys	Up to 80% (sampled and assayed)	1% to 5% (sampled and assayed)
Typical number of conductors sampled with a $200,000 budget	200 hidden conductive gossans	2 to 10 conductors

Specifications

Standard Components	
• Reading unit • Probe and cable • Charger • Spare cable (6 ft) • Carrying bag • User's guide • Calibration disks	
Options	- Protective plate - Snowmobile/ATV speaker - Longer cable
Reading unit	

Size	18 x 20 x 6.4 cm (7" x 8" x 2.5 in)
Weight	1.9 kg (4.2 lb)
Case	Robust plastic with leather casing
Display	Dot matrix LCD
Probe	
Size	30 x 91 x 7.6 cm (12 x 36 x 3 in)
Weight	3.6 kg (8 lb)
Case	Robust, shockproof, waterproof
Environmental	
Tested temperature	-50°C to 70°C (-58°F to 158°F)
Humidity	Operates on rainy, foggy and snowy days
Power	
Source	6-volt battery, rechargeable in 4 hours from a 12 VDC, 110 VAC or 220 VAC source
Battery daily autonomy	Up to 10 hours

Purchase and Rental Info

Interested by the Beep Mat?

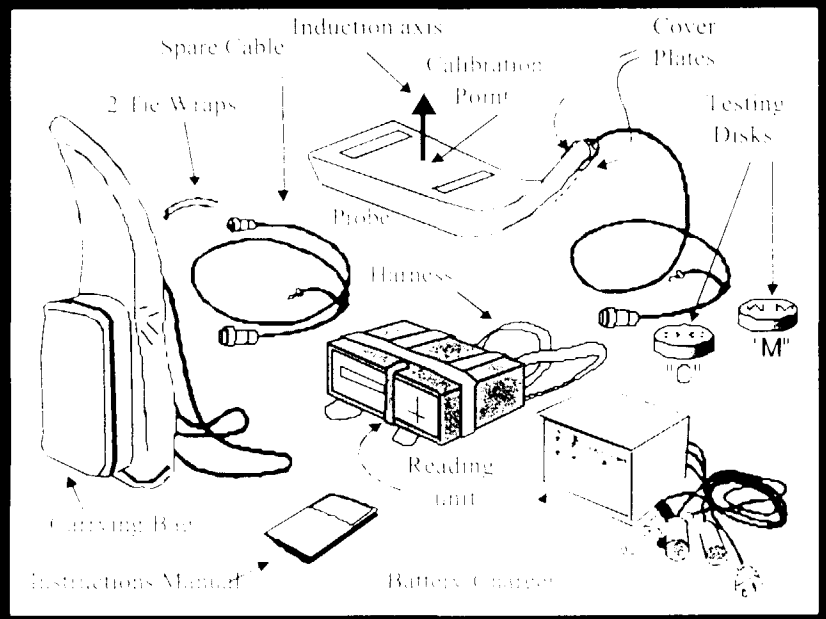
It is simple. You can rent it or purchase it. The choice is yours. Here is some information you will need to make a decision. If you have any questions, need more information, or want to place an order, please send us an email, a fax or simply call us (same local time as New York). We will be glad to answer all your questions rapidly in order to help you get the benefits of a Beep Mat as fast as possible.

Please contact:

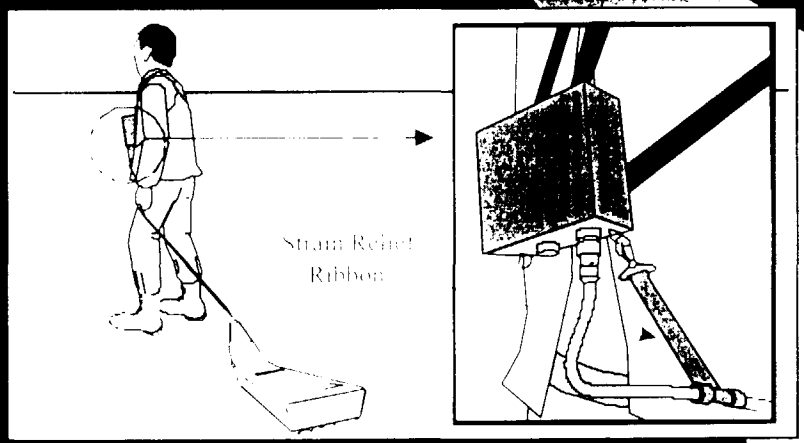
Pierre Gaucher, Eng., MBA
Instrumentation GDD inc.
3700 Blvd Chaudiere, Sainte-Foy
Quebec G1X 4B7, CANADA
Phone: 418-877-4249

3.The Beep Mat

- A single man EM coil – Beep Mat model BM4+ with all accessories from GDD: $10,000 each – Detects sulfides up to three meter below surface.

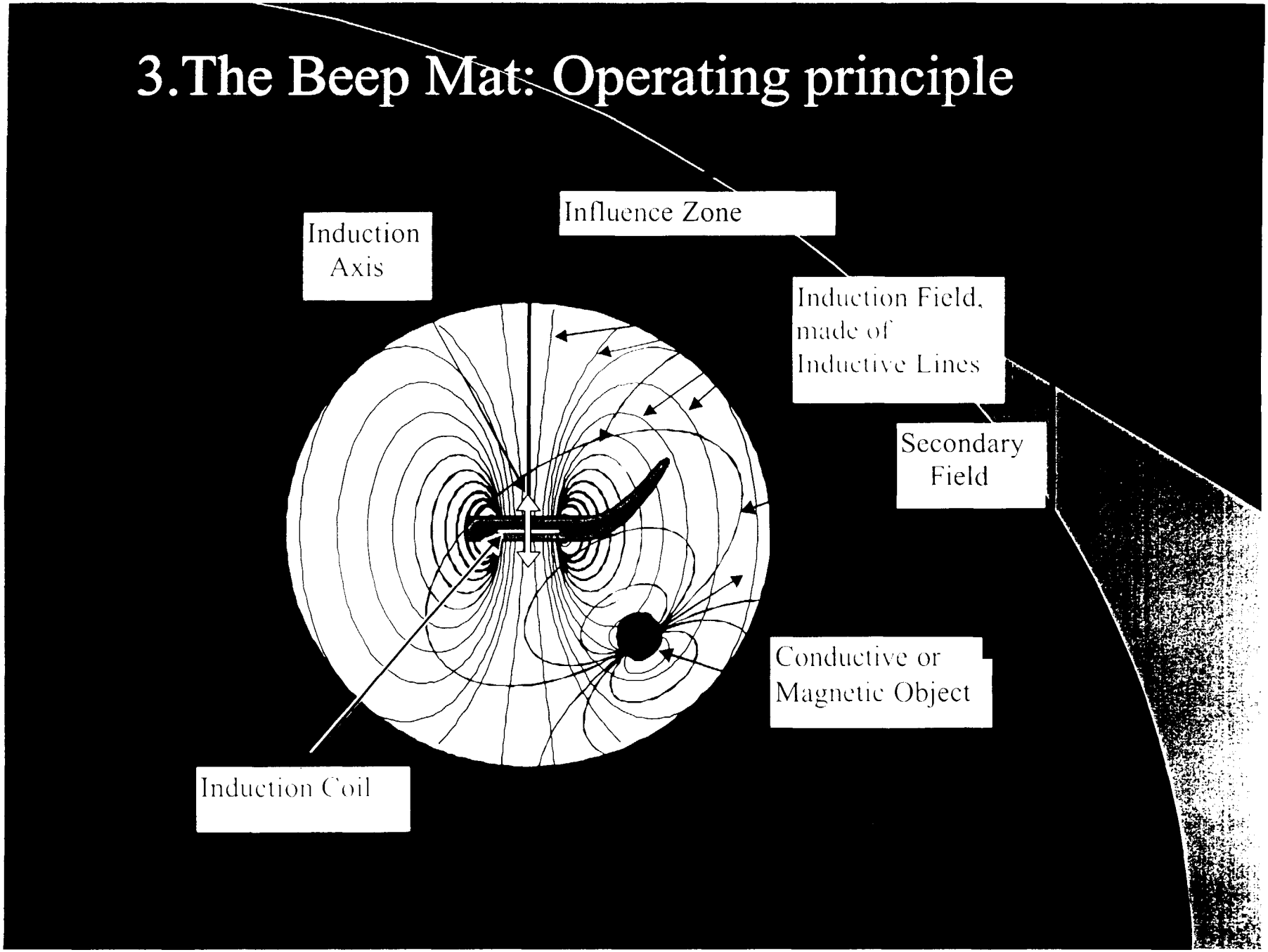


Beep Mat components



Typical use of the Beep Mat

3.The Beep Mat: Operating principle



APPENDIX G

Assessment Credit – Detailed Cost Breakdown

Rand Property

Detailed Cost Breakdown
For
Assessment Credit

Beep Mat Prospecting / Geological Mapping Costs

Salaries (Work Type)

Beep Mat Control Grid — $1,800.00
~27.6 line – km of flagged compass / hip-chain gridlines, including 800m baseline (Table 2)
- 12 geo-assistant days @ $150/day (M. Fell, J. Livingstone)

Beep Mat Prospecting — $3,300.00
~54.3 line-km of beep matting conducted along flagged lines and intermediate compass traverses (Table 3)
-22 geological assistant – days @ $150/day (M. Fell, J. Livingstone, J. Young, M. Hockins)

Beep Mat Conductor Detailing/Sampling — $725.00
-Detailed beep-matting / excavation / channel sampling of discovered beep mat conductors (Table 4, 5, 6)
-3 geo-assistant – days @ 150/day (M. Fell, J. Livingstone)
-1 geologist-day @ $275/day (Yves Clement – Project Geologist)

Geological Mapping / Prospecting — $2,050.00
- 1:5000 Geological Mapping / Prospecting of claim #1192778 and eastern and central portions of claims #1242372 and #1192779, respectively.
-4.5 geo-assistant days @ 150/day (M. Proudfoot)
-4.5 geologist-days @ $250/day (H. Tracanelli – Project Geologist)
-1.0 geologist-day (office) for plotting geology

Report / Map Preparation — $1,375.00
- 5 geologist-days @ 275/day (Yves Clement – Project Geologist)
(including Mag / UTEM maps / write-up)

Assays $121.00
-5 samples x $24.11 / sample

Field Supplies $179.00
-Flagging Tape (27 rolls @ $1.75)
-Hip-Chain Thread (14 rolls @ $2.00)
-Spray Paint (14 cans @ $5.25)
-Markers, Notebooks, Bug Dope ($30)

Food and Lodging $1,610.00
-46.0 geo-assistant days @ $35/day (includes food and camp services: propane, generator rental, radio rental…)

Truck Rental $1,112.00
-23 truck-days @ $1,450 per month
(46 geo-assistant days / 2 = 23 days)

ATV Rental $1,380.00
-46 geo-assistant days @ $30/day

Gasoline $370.00
-Truck:$140
-ATV: $230

Total Beep Mat / Mapping Costs: $14,022.00

Mag / DGPS And Surface UTEM 3 Survey Costs

Line Cutting (Mag / UTEM grid) $3,212.00
~12.12 line-km @ $265 per km
(Glen McBride; Notre Dame du Nord, Quebec)

Mag / DGPS Survey $1,375.00
~11.0 line-km @ $125 per km
(ClearView Geophysics; Brampton, Ontario)

Surface UTEM 3 Survey $9,719.00

-Rand property UTEM survey makes up ~13% (12.12 km) of a wide scale survey (92.8 km) implemented at a total cost of $74,416.92.

-Survey Cost includes: surveying / looping costs of $2,690 per day; Mob / Demob; Crew lodging / food, and truck and snowmobile rental.

(Lamontagne Geophysics Ltd; Kingston, Ontario)

Differential GPS Rental $552.00

-DGPS rental / data processing / reporting

(Bull Surveying Corporation; Sudbury, Ontario)

Geophysical Consultant $500.00

-1 day @ $500 per day

Survey supervision, anomaly interpretation, reporting

(BHL Earth Sciences; Thornhill, Ontario)

Total Mag / DGPS & UTEM Survey Costs: $15,358

Assessment Credit Total: $29,380

(Beep Mat / Mapping + Geophysics)

Value of Work Per Claim Breakdown

Work Type	Dollar Value Per Claim		
	1242372	1192778	1192779
Flagged Grid	1,008	108	684
Beep Mat Prospecting	1,848	198	1,254
Beep Mat Conductor Detailing	725	0	0
Geological Mapping / Prospecting	923	451	676
Report / Map Preparation	550	275	550
Analyses	121		
Field Supplies	100	10	69
Food and Lodging	913	141	556
Truck Rental	634	100	378
ATV Rental	787	124	469
Gasoline	211	33	126
Line Cutting	1,895	386	931
Mag / DGPS Survey	811	165	399
Surface UTEM 3 Survey	5,734	1,166	2,819
DGPS Rental	326	66	160
Geophysical Consultant	250	125	125
Total Per Claim	**$16,836**	**$3,348**	**$9,196**
	Grand Total: $29,380		

Work Report Summary

Transaction No: W0370.01034 **Status:** APPROVED
Recording Date: 2003-JUN-20 **Work Done from:** 2001-JUN-22
Approval Date: 2003-JUN-23 **to:** 2003-MAY-03

Client(s):

392684 AURORA PLATINUM CORP.

Survey Type(s):

ASSAY EM GEOL LC
MAG PROSP

Work Report Details:

Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
S 1192778	$3,348	$3,348	$800	$800	$1,600	1,600	$948	$948	2005-AUG-03
S 1192779	$9,196	$9,196	$12,000	$12,000	$0	0	$0	$0	2005-AUG-07
S 1192780	$0	$0	$2,800	$2,800	$0	0	$0	$0	2004-AUG-07
S 1192781	$0	$0	$1,600	$1,600	$0	0	$0	$0	2004-AUG-07
S 1242372	$16,836	$16,836	$4,800	$4,800	$5,604	5,604	$6,432	$6,432	2005-JUN-22
	$29,380	$29,380	$22,000	$22,000	$7,204	$7,204	$7,380	$7,380	

External Credits: $0

Reserve:

$7,380 Reserve of Work Report#: W0370.01034

$7,380 Total Remaining

Status of claim is based on information currently on record.

41I11NE2008 2.25849 BOWELL

900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

Date: 2003-JUN-23

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

Tel: (888) 415-9845
Fax:(877) 670-1555

AURORA PLATINUM CORP.
UNIT G-1988 KINGSWAY
SUDBURY, ONTARIO
P3B 4J8 CANADA

Submission Number: 2.25849
Transaction Number(s): W0370.01034

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

An excellent report and detailed costs are associated with this submission.

If you have any question regarding this correspondence, please contact BRUCE GATES by email at bruce.gates@ndm.gov.on.ca or by phone at (705) 670-5856.

Yours Sincerely,

Sheila Lessard (for)
Ron Gashinski,Senior Manager, Mining Lands Section

Cc: Resident Geologist

Michael James Byron
(Agent)

Aurora Platinum Corp.
(Assessment Office)

Assessment File Library

Aurora Platinum Corp.
(Claim Holder)

41I11NE2008 2.25849 BOWELL 200

ONTARIO CANADA

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

PROVINCIAL MINING RECORDER'S OFFICE

Mining Land Tenure Map

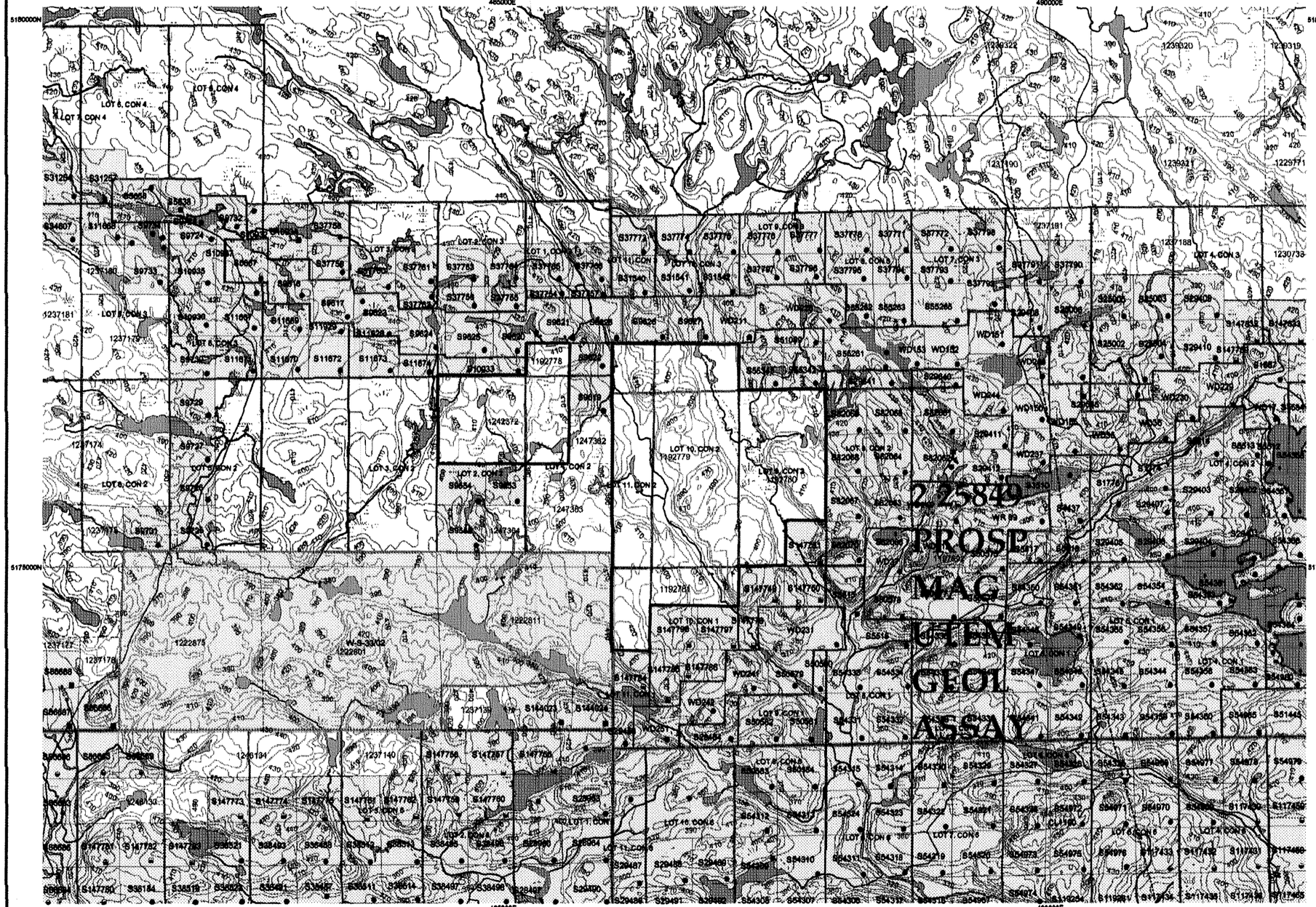
Date / Time of Issue: Mon Jun 23 11:43:47 EDT 2003

TOWNSHIP / AREA
BOWELL

PLAN
G-4015

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division	Sudbury
Land Titles/Registry Division	SUDBURY
Ministry of Natural Resources District	SUDBURY



UTM Zone 17
5000m grid

TOPOGRAPHIC

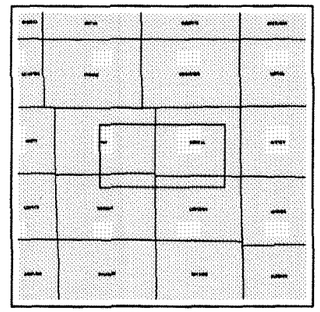
- Administrative Boundaries
- Township
- Concession, Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipeline
- Utilities
- Tower

Land Tenure

Freehold Patent
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Leasehold Patent
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation
- Uses Not Specified
- Surface And Mining Rights
- Surface Rights Only
- Mining Rights Only
- Land Use Permit
- Order In Council (Not open for staking)
- Water Power Lease Agreement
- 1234567 Mining Claim
- 1234567 Filed Only Mining Claims



LAND TENURE WITHDRAWALS

1234 Areas Withdrawn from Disposition

Mining Acts Withdrawal Types
- Wsm Surface And Mining Rights Withdrawn
- Ws Surface Rights Only Withdrawn
- Wm Mining Rights Only Withdrawn

Order In Council Withdrawal Types
- W'sm Surface And Mining Rights Withdrawn
- W's Surface Rights Only Withdrawn
- W'm Mining Rights Only Withdrawn

Ns IMPORTANT NOTICE

Scale 1:40000

700m 0m 2.1km

LAND TENURE WITHDRAWAL DESCRIPTIONS

Identifier	Type	Date	Description
6123	Wsm	Jan 1, 2001	AREA WITHDRAWN FROM STAKING
W-S-33/02	Wsm	Jun 18, 2002	Sec. 35 W-S-33/02 M+S 2002/06/18 195150
W.11/83	Ws	Sep 2, 1983	SEC.36/80 W.11/83 2/9/83 S.R.O.

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations

Contact Information:
Provincial Mining Recorders' Office
Willet Green Miller Centre 933 Ramsey Lake Road
Sudbury ON P3E 6B5
Home Page: www.mndm.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Toll Free
Tel: 1 (888) 415-9845 ext 5776
Fax: 1 (877) 670-1444

Map Datum: NAD 83
Projection: UTM (6 degree)
Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.

Legend

Beep Mat Conductors

- Conductor
- Flagged gridlines
- Intermediate Beep Mat Traverse

Geographic Features

- Esker
- Swamp

Geology

- Fault
- Sudbury Breccia
- Foy Offset Dyke (Quartz Diorite)
- 3 — Footwall Complex Rocks (Archean) Granitoids and Gneisses
- 9 — Diabase / Olivine Diabase
- 4 — Gabbro / Pyroxenite
- 8c — Quartz Diorite Dyke; 8a: Inclusion bearing; 8c: Fine grained, inclusion poor
- Geological Contact (Approximate)
- 3 — Boulders with Rock Type

Aurora Platinum Corp.

Rand Project - Sudbury, Ontario
Geology and Beep Mat Prospecting

Date: 16/6/2003
Author: Y. Clement
Office: Sudbury
Map 1
Scale: 1:2500
Projection: UTM Zone 17 (NAD 27 for Canada)

0 25 50 100 metres

AeroTEM Conductors: 6, 5, 4, 3, 2, 1

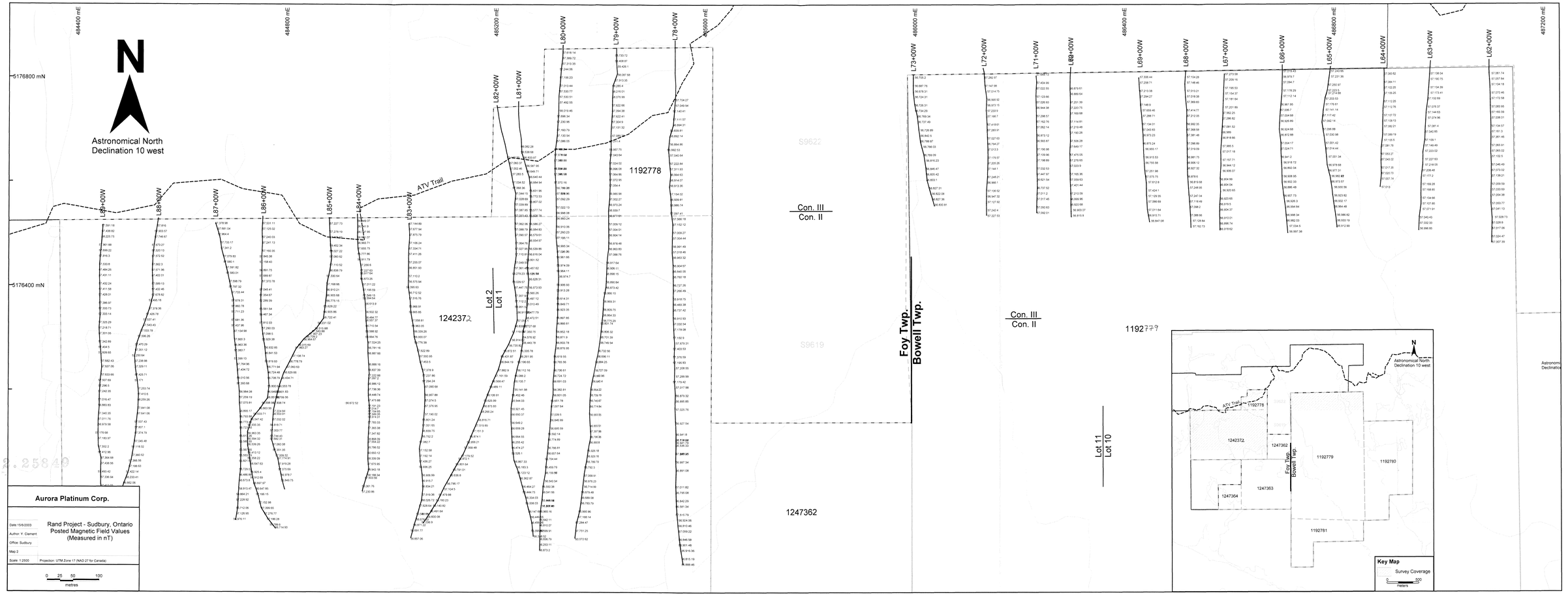
Foy Offset Dyke
ATV Trail
43 degrees
DDH#855550
(462 m)
1192778
Con. III
Con. II
S 9619
NSR-09
NSR-08
Samples
666606
666605
Mineralized Granite Boulder
Pyrite disseminations
NSR-07
Samples
666609
666608
666607
DDH# WMF-01
(62m Vertical)
Rusty Dioritic Gneiss
Foy Twp.
Bowell Twp.
1242372
Rusty Granitic Boulders with pyrite
1247362
Disseminated pyrite - limonite present in boulder
Granite Boulders with pyrrhotite - pyrite
Breccia
1247363
1247364
Lot 2
Lot 1
Sand Flats (Jack Pine Stand)
Mildly rusty gneisses
Jack Pine Flats
1192779
Trace to 1/2% pyrrhotite - pyrite
Trace to 1/2% pyrite
Flagged Baseline (090 degrees)
B.L. 6+50 N
Lot 11
Lot 10
Crazy Creek
1192780
1192781

N
Astronomical North
Declination 10 west

L16+00N
L14+00N
L12+00N
L10+00N
L8+00N
L6+00N
L4+00N
L2+00N
L0+00N
L2+00S
L4+00S

485000 mE
485400 mE
485800 mE
486200 mE
486600 mE
487000 mE
5176600 mN
5176200 mN
5175800 mN

Key Map
Survey Coverage
0 500 meters



Aurora Platinum Corp.

Date: 15/6/2003
Author: Y. Clement
Office: Sudbury
Map 2
Scale: 1:2500
Projection: UTM Zone 17 (NAD 27 for Canada)

Rand Project - Sudbury, Ontario
Posted Magnetic Field Values
(Measured in nT)

0 25 50 100
metres

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220

N

Astronomic North
Declination 10 west

1192778

ATV Trail

S9622

Con. III
Con. II

S9619

1242372

Lot 3
Lot 2

1247362

Foy Twp.
Bowell Twp.

Lot 11
Lot 10

S55343

Con. III
Con. II

1192779

1192780

1247363

1247364

1222811

1192781

2.25849

Aurora Platinum Corp.	
Date 15/5/2003	Rand Project - Sudbury, Ontario
Author: Y. Clement	Total Magnetic Field Contours
Office: Sudbury	Contour Intervals : 50, 250 & 1250 nT
Map 3	
Scale: 1:5000	Projection: UTM Zone 17 (NAD 27 for Canada)

0 75 150 300
metres

Loop #4

Loop #3

Loop #2

N

Astronomical North
Declination 10 west

1192778

ATV Trail

Con. III
Con. II

L73+00W
L72+00W
L71+00W
L70+00W
L69+00W
L68+00W
L67+00W
L66+00W
L65+00W
L64+00W
L63+00W
L62+00W

Con. III
Con. II

1242372

S9619

Foy Twp.

Bowell Twp.

L89+00W
L88+00W
L87+00W
L86+00W
L85+00W
L84+00W
L83+00W
L82+00W

Lot 2
Lot 1

L81+00W
L80+00W
L79+00W
L78+00W

1247362

Lot 11
Lot 10

1247363

1192779

1247364

1222811

Legend

Surface UTEM III Anomalies

UTEM Channels

- >10
- 4 - 9
- <3

LN (Amplitude)

- 3
- 2.25
- 1.5
- 0.75

Surface UTEM Transmitter Loop

Offset Dyke

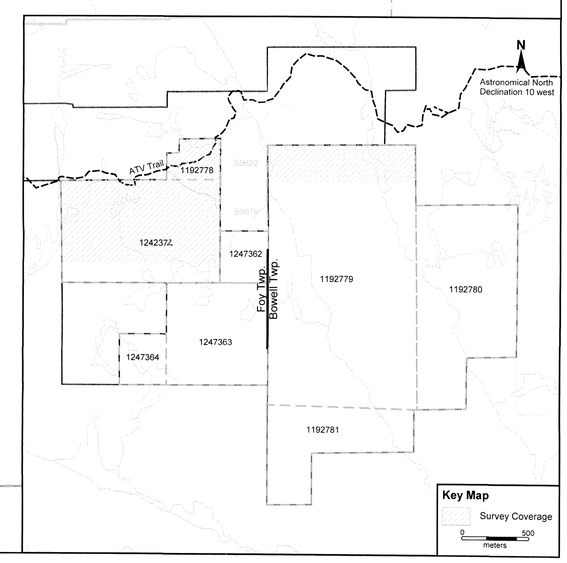
Sudbury Breccia

Aurora Platinum Corp.

2.25849

Date: 22/5/2003	Rand Project - Sudbury, Ontario Surface UTEM Survey Interpretation
Author: Y. Clement	
Office: Sudbury	
Map: 4	
Scale: 1:5000	Projection: UTM Zone 17 (NAD 27 for Canada)

0 75 150 300
metres



2.25849

Aurora Platinum Corp.

Date: 15/6/2003
Author: Y. Clement
Office: Sudbury
Map 5
Scale: 1:2500 Projection: UTM Zone 17 (NAD 27 for Canada)

Rand Project - Sudbury, Ontario
Grid Differential GPS Survey
(25 m stations)

0 25 50 100
metres

N
Astronomical North
Declination 10 west

485000 mE
485400 mE
485800 mE
486200 mE
486600 mE
487000 mE
5176400 mN
5176000 mN
L89+00W
L88+00W
L87+00W
L86+00W
L85+00W
L84+00W
L83+00W
L82+00W
L81+00W
L80+00W
L79+00W
L78+00W
L73+00W
L72+00W
L71+00W
L70+00W
L69+00W
L68+00W
L67+00W
L66+00W
L65+00W
L64+00W
L63+00W
L62+00W
ATV Trail
Lot 2
Lot 1
Con. III
Con. II
Foy Twp.
Bowell Twp.
Lot 11
Lot 10
1192778
1192779
1247362
1242372
S5622
S5616

Key Map
Survey Coverage
0 500
meters
1192780
1192781
1247363
1247364

41211382008 2.25849 BOWELL

250