

BC Geological Survey  
Assessment Report  
30368

LINCUTTING AND INDUCED POLARIZATION SURVEY

ASSESSMENT REPORT

ON THE

HOLY CROSS PROPERTY  
OMINECA MINING DIVISION  
BRITISH COLUMBIA

TENURE #551476

NTS: 093F076 and 93F086  
53° 47.5' North Latitude  
124° 58' West Longitude  
(centre)

OWNER: GOLDEN CROSS RESOURCES

OPERATOR: GOLDEN CROSS RESOURCES

AUTHOR: J. CHAPMAN, P. Geo.

November 22, 2008

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**Appendix A** Scott Geophysics, Report on 2007 IP and Magnetometer Survey

## SUMMARY

The Holy Cross Gold property consists of a single mineral tenure covering 2,005.5 hectares located in the Omineca Mining Division of north central British Columbia. It is located approximately 145 kilometres west of Prince George and is readily accessed by a network of forest service and secondary logging roads from the village of Fraser Lake, 33 kilometres north of the property. Under a Property Purchase Agreement dated September 26, 2006, Golden Cross purchased a 100% interest in the Holy Cross property.

The claim area is underlain by andesite flows of the middle Jurassic age Hazelton Group which are overlain by upper Eocene to late Cretaceous age Ootsa Lake Group rhyolite, rhyodacite and tuff. The rhyolite is exposed in a series of three northwesterly trending domes that outcrop between Bentzi Lake and the peak of Holy Cross Mountain. Outside of the claim area minor sedimentary rocks of the Cretaceous age Skeena Group and Eocene age Endako Group basalts locally cap the older units. The claim is cut by several prominent linear features, interpreted as regional structures, two of which intersect close to a rhyolite dome.

Argillic alteration is widespread and is locally overprinted by silicification, most evident in the banded rhyolite flow units and rhyolite breccias that occur as prominent, resistant knolls and hilltops. Silicification is locally accompanied by fracture controlled drusy quartz, zones of quartz-healed breccias, veins of banded quartz-jasper-chalcedony secondary brecciation, and specular hematite. Sericitization is primarily restricted to within a few tens of meters of the silicified zones.

Gold mineralization was first discovered on the Holy Cross prospect in 1987 by Noranda Exploration Company, Ltd. Between 1988 and 1989 Noranda completed geological mapping, geochemical sampling, and magnetometer and IP surveys, followed-up by extensive trenching, clearing, and road building in preparation for drilling. Noranda identified several areas of silicified quartz veined rhyolite with rare visible gold, and obtained numerous anomalous gold values from grab samples. A sample collected from the Discovery zone returned a gold concentration of 1.0 gram per ton over 8.5 metres. Other companies, including Kennecott Canada, Cogema Resources and Phelps Dodge Corporation of Canada Ltd., subsequently conducted limited exploration in the vicinity of the prospect and confirmed the style and degree of precious metal mineralization, with gold concentrations of up to 24.02 grams per ton gold and silver concentrations up to 50.0 gram per ton silver.

Results of previous exploration has revealed widespread epithermal style alteration of silicified felsic tuffs. Intense silicification and secondary brecciation occur in zones up to 10 meters wide within banded rhyolite. Silicification is accompanied by fracture controlled drusy quartz, zones of secondary brecciation, 1 cm to 10 cm veins of banded quartz with jasper and less commonly chalcedony, quartz healed breccias and specular hematite. Gold and silver mineralization is associated with banded, vuggy quartz veinlets, and in discrete narrow structural zones. Gold values ranged from trace levels to a high of 2,912 ppb and silver values ranged from 74 ppb to 36,500 ppb.

The 2007 program consisted of line cutting, and 22 line kilometres of induced polarization and magnetometer surveying at a cost of \$72,009.38. The work was carried out between August 1, 2007 and October 30, 2007. Results of the IP survey indicate a

number of features including high and low responses for chargeability, resistivity and total magnetic field strength. This data will assist in the geological interpretation of a terrain that is largely till covered, and the identification of areas potentially containing metallic sulphides (generally higher chargeability response areas) and areas of silicification (generally higher resistivity response areas).

Geologic evidence suggests the Holy Cross property has potential to host a low sulphidation epithermal style gold-silver deposit based on the geologic setting and style and intensity of alteration.



## 1 INTRODUCTION

The Holy Cross property has the potential to host low sulphidation epithermal gold mineralization within a sequence of Jurassic to Eocene aged volcanics and sediments. Previous work has included mapping, soil and rock sampling, along with some excavator trenching. During the 2007 program approximately 22 line kilometres of grid were cut to facilitate an IP and magnetometer survey. This work was initiated on August 1, 2007 and complete on October 31, 2007.

## 2 PROPERTY DESCRIPTION AND LOCATION

The Holy Cross property is located in the Omineca Mining Division of north-central British Columbia, approximately 145 kilometres west of Prince George, BC and 33 kilometres south of the village of Fraser Lake, between Bentzi Lake and Holy Cross Mountain (Figure 2). The property initially consisted of a single modified-grid mineral claim totalling 25 cells, or 477.545 hectares, located on National Topographic System map-sheet 093F15W centered at 53 degrees 47.5 minutes North Latitude and 124 degrees 58 minutes West Longitude. Additional claim cells were subsequently located to cover favourable ground and all cells were amalgamated into the current land base covering 2,005.5 Ha.

Table 3.1 – Claim List

Claim Name	Tenure No.	Area (Ha)	Expiry
HOLY CROSS	551476	2005.548	Apr 28, 2010

The claim is located in the Omineca Mining Division, British Columbia and is registered in the name of Golden Cross Resources Inc. Disturbance from previous exploration activities on the property have not been reclaimed, all historic trenches remain open or have sloughed in. Logging operations are active throughout the region. Work conducted by Golden Cross in 2006 and 2007 was completed under work permit number MX-13-132.










The Holy Cross claim cells were amalgamated in November 2006. Sufficient exploration work has been conducted to extend the expiry date until April 28, 2010. To keep the title valid after this period, annual exploration expenditures of \$16,044 per year will be required.

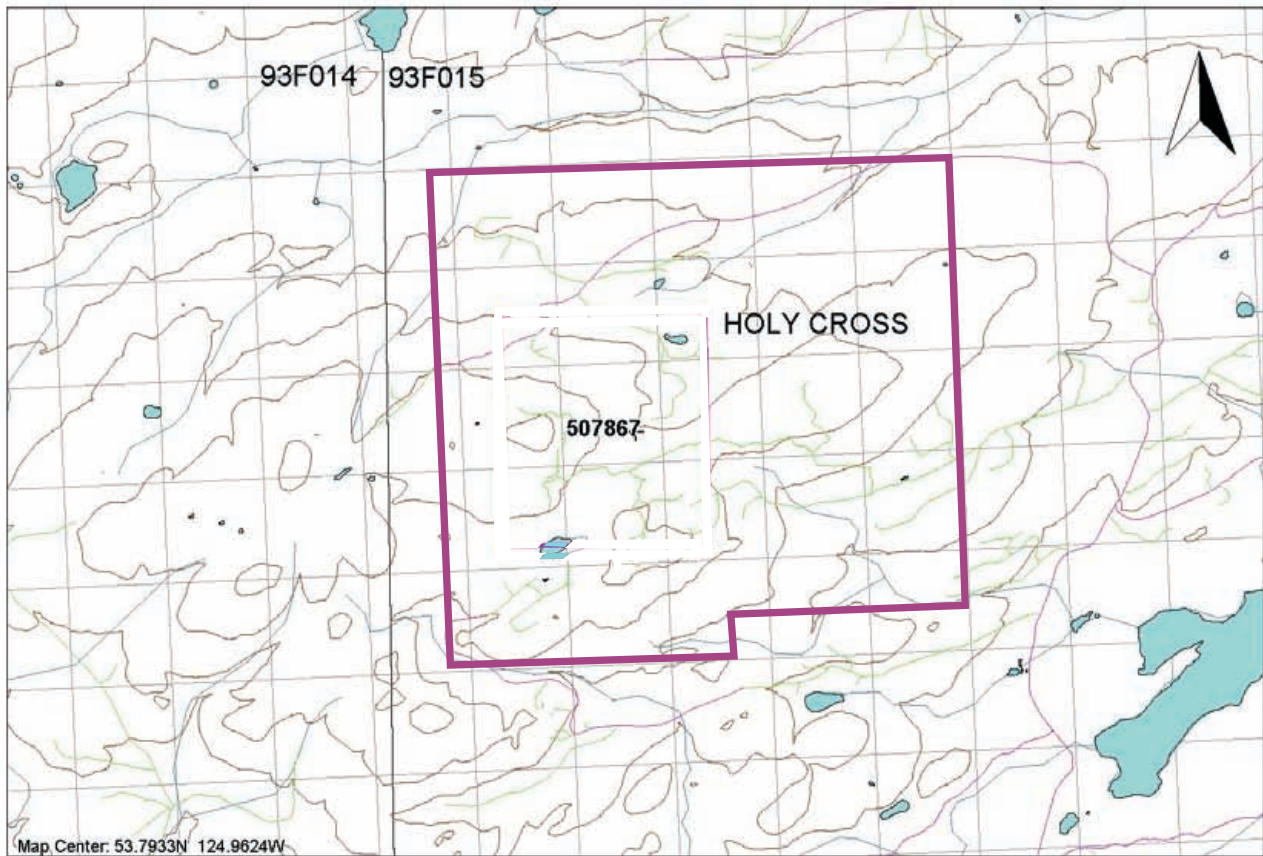


GLOBAL GEOLOGICAL SERVICES INC.



**Figure 1  
HOLY CROSS PROPERTY  
LOCATION MAP**

-  **Holy Cross Claim Location**
-  Gravel Road
-  Paved Road
-  Rough Road
-  **Contours**
-  **Lakes**
-  **Rivers**
-  **1:50K - mapsheet boundary**
-  **UTM Grid Lines (1 km grid)**



0 Metres 2500



### **3 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The Holy Cross property is located approximately 145 kilometres west of Prince George, BC and 33 kilometres south of the village of Fraser Lake, within the Nechako Plateau (part of the much larger Interior Plateau) region of central British Columbia. The property covers a series of northeast-southwest trending, gentle to moderately sloping hills on the eastern side of Holy Cross Mountain, northwest of Bentzi Lake. Elevations range from 1150 to 1400 meters.

The property covers an area of forested and logged hillsides with local ponds and streams draining the hills. Remaining forest cover consists primarily of pine, much of it recently infected by the Mountain Pine Beetle.

Access to the Holy Cross property is provided by the Holy Cross Forest Service Road that leaves highway 167.5 kilometres east of Fraser Lake. At kilometre 38 on the Holy Cross Forest Service Road, a branch road leads west onto the Holy Cross claim. Foot trails provide access to other areas on the property.

Supplies and fuel may be sourced in the village of Fraser Lake 33 kilometres to the north, the town of Vanderhoof 70 kilometres to the northeast, or the city of Prince George, 145 kilometres to the east.

The Holy Cross property enjoys a temperate continental climate with warm summers and cold winters. Snowfall accumulation in this part of the province averages 0.5 meters in depth. Surface exploration work on the Holy Cross property is best carried out between April and late September.

### **4 HISTORY**

There is no record of exploration work in the general area around the Holy Cross property prior to it being staked by Noranda Exploration Company, Ltd. ("Noranda") in 1987. The original claims were staked after a reconnaissance exploration program discovered a rhyolite dome with one sample containing visible gold (L. Erdman, personal communication, 2006) and several samples with anomalous concentrations of gold. Noranda explored the property during 1988-89 with geological mapping, extensive soil sampling, trenching and geophysical surveys (IP and magnetometer). They identified several areas of pervasively silicified, quartz veined rhyolite with anomalous gold concentrations. Trench 1 (TR-1), located at the Discovery outcrop, excavated a silicified rhyolite breccia. Detailed sampling in this area returned 1.0 gram per ton gold over 8.5 metres (Barber, 1989).

In 1988 Noranda established 105.7 line kilometres of grid and collected 3,170 soil samples. All samples were analyzed for lead, zinc, copper, silver and gold and 621 of these were also analyzed for arsenic, antimony, molybdenum and barium. Geochemical maps were plotted for copper, lead, zinc, silver and gold and zones of anomalous copper, silver and gold were identified. A total of 467 grab samples were collected from outcrop and float and analyzed by 30 element ICP plus gold by Atomic Absorption ("AA"). Silicified rhyolite and rhyolite breccia returned favourable results. A grab sample of a silicified rhyolite with drusy quartz veins returned 7.125 gram per ton gold and 4.8 gram per ton silver (Church and Savell, 1988). Stream sediments were also collected

wherever a road or grid line crossed a creek. A total of 26 silt samples were collected and analyzed. No anomalous values were returned. A magnetometer survey was completed on the Holy Cross and PB grids (Savell and Bradish, 1988) but results from the Holy Cross portion of the survey were not available in the public record. Nine trenches were excavated, however no results were available in the public record.

In 1989 Noranda completed geological and geochemical surveys, and also an IP and magnetometer survey. A total of 770 rock samples and 1137 soil samples were collected and analyzed for gold, silver and copper. In general, anomalous gold values occurred within larger areas of anomalous silver and copper values. Data from the magnetometer and IP surveys does not appear in the assessment records. An additional 17 trenches (Trench 10 to 26) were excavated on a variety of geological, geochemical and geophysical targets. Barber (1989) states that "in general (*the trenched*) IP anomalies are due to pyrite and/or silicification in the host rocks and (*the trenched*) geochemical anomalies indicate areas of alteration." The best result from this trenching program was 240 ppb gold over 2 meters. Noranda's assessment work on the area eventually lapsed and the claims were forfeited.

The area was simultaneously staked in 1994 by Kennecott Canada and Cogema Resources, resulting in a claim dispute. Prior to conceding the ground, Kennecott Canada conducted geological mapping and geochemical surveys. During October 1994, Cogema Resources conducted reconnaissance rock and soil sampling. Reports documenting the work completed by Cogema Resources and by Kennecott Canada are not publicly available.

Cogema Resources optioned the property to Phelps Dodge Corporation of Canada ("Phelps Dodge") in 1995. Subsequent sampling by Phelps Dodge included a grab sample from TR-1 that returned 9.6 gram per ton gold and 28.1 gram per ton silver, and chip samples averaging 1.8 gram per ton gold and 47.8 gram per ton silver over 4 meters. Two samples collected approximately 800 meters east of TR-1 returned 206 ppb and 264 ppb gold with 7.3 gram per ton and 50.0 gram per ton silver respectively. In 1997 Phelps Dodge completed geologic mapping, prospecting and rock sampling. Eighteen rock samples were collected and analyzed by 30 element ICP and gold by AA. The best sample, a banded quartz vein in rhyolite, returned 54 ppb gold and 49.3 ppm arsenic (Fox, 1998). No further work was recommended and the property was returned to Cogema Resources. Cogema's assessment work credit on the area eventually lapsed and the claims were forfeited in 1999.

A claim covering the key showings at the Holy Cross was staked by Geoffrey Goodall in February 2000. In December 2000 the property was optioned to Tuscany Minerals Ltd. ("Tuscany"). Goodall completed a rock geochemical sampling program in 2000 and 2001 on behalf of Tuscany. Sixty-six rock samples were collected and submitted to ALS Chemex for analysis. As the quantity of samples was too small to statistically determine anomalous thresholds, a value of 10 ppb was considered to be weakly anomalous. Twenty four of the samples collected are considered anomalous, ranging from 10 ppb to 2402 ppb gold. Approximately 10% of the samples returned gold concentrations greater than 100 ppb. Silver concentrations ranged from detection limit to 20.8 grams per ton silver. Tuscany returned the property to Goodall in 2002 and there was no other work completed until Golden Cross initiated exploration in the fall of 2006.

The Holy Cross claim (year 2000) lapsed in 2005 and the area was staked by L. Erdman. Since that time the claim has been maintained in good standing by paying

cash in lieu of work. Erdman sold the claim to Aegean Marine Consultants Ltd. ("Aegean"), a private company wholly owned by Goodall, in May, 2006. Aegean subsequently entered into a property purchase agreement with Golden Cross Resources Inc. dated September 26, 2006. Under this agreement, Golden Cross purchased a 100% interest in the property for a cash payment of \$25,000 and issued 5,000,000 shares of the company to Aegean. Golden cross subsequently repurchased 3,150,000 of these shares from Aegean at \$0.0025 per share and cancelled them. In 2006 Golden Cross completed a program of excavator trenching and geochemical sampling at a cost of \$56,808 and in 2007 a program of 22 line kilometres of induced polarization and magnetometer surveying at a cost of \$70,975.

## **5 GEOLOGICAL SETTING**

### **5.1 Regional Geology**

The Holy Cross property is situated in the Nechako Plateau (part of the much larger Interior Plateau) region of central British Columbia within the Intermontane Belt which locally consists of late Paleozoic age to late Tertiary age sedimentary and volcanic rocks belonging to the Stikinia, Cache Creek and Quesnellia Terranes. The Yalakom and Fraser fault systems bound the Interior Plateau to the northeast and southwest. A third, northerly fault has been inferred from oil exploration data to bisect the plateau. The Anahim Volcanic Belt, which crosses the Interior Plateau in an east west direction, is composed of a series of alkaline and peralkaline volcanic centres of Miocene to Quaternary age which young from west to east.

The Nechako Plateau is an area of subdued relief. Glacial drift is extensive and bedrock exposure is limited to 5% to 10% of the area. The geology of the area was first mapped at a regional scale (1:250,000) by Tipper (1963). More detailed mapping in the area was conducted by Diakow and Webster (1994), Diakow et. al. (1997) and Lane (1994).

The Holy Cross claim lies centrally in the Stikinia Terrane and hosts three groups of volcanic-sedimentary rocks ranging in age from upper Cretaceous to Miocene. During Early to mid-Eocene time an extensional tectonic event resulted in basin and range style topography (Hannigan et. al., 1994). Hydrothermal activities during this period resulted in several localized areas of volcanic-hosted epithermal gold mineralization.

Lane, 1994 describes the geology in the region of the Holy Cross property. In this part of the Nechako Plateau the area is underlain by middle Jurassic age Hazelton Group andesite and reworked crystal tuff, conformably overlain by Cretaceous age Skeena Group chert pebble conglomerate, minor argillite, conglomerate, sandstone and



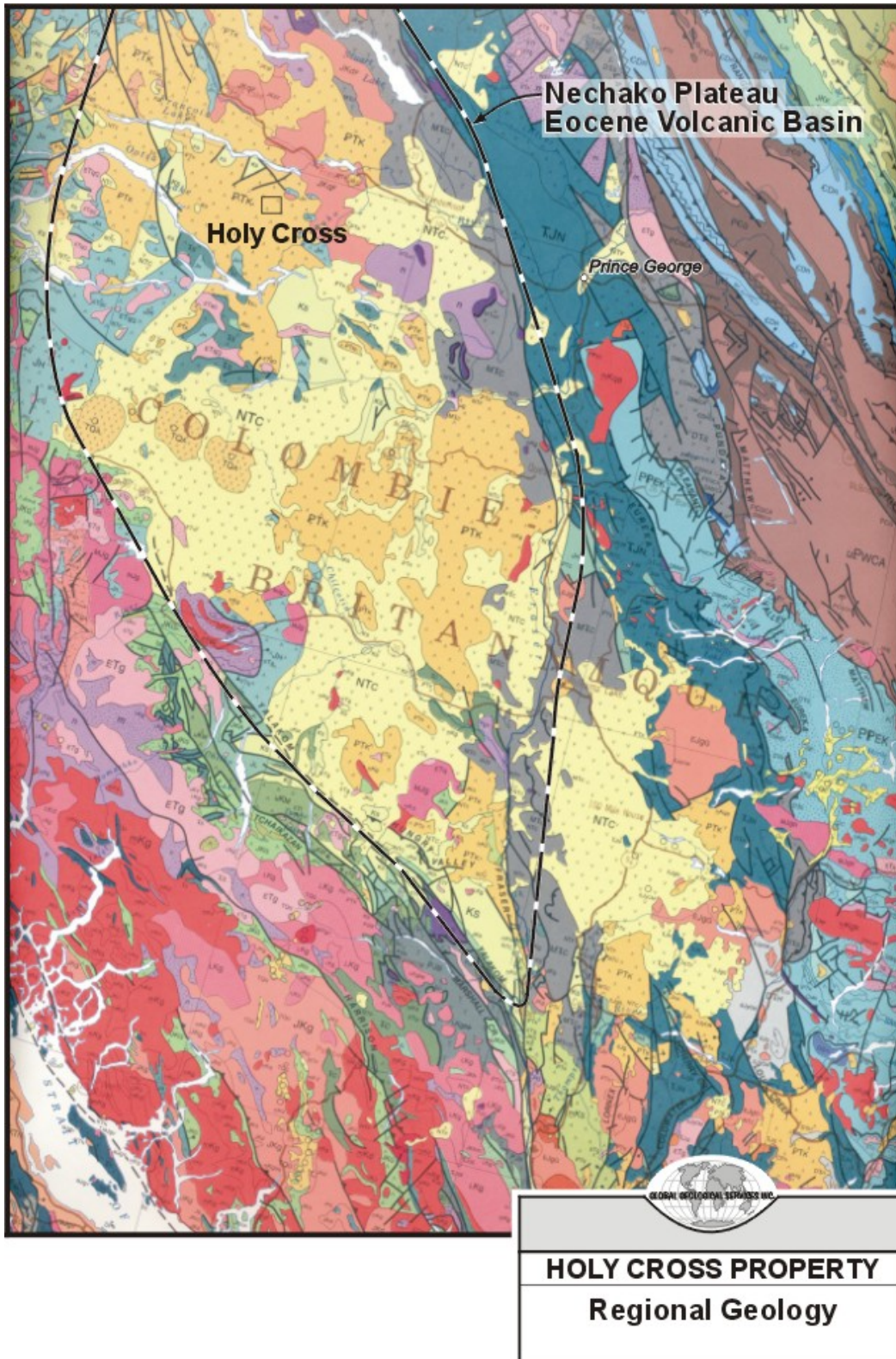


FIGURE 3 REGIONAL GEOLOGY MAP

mudstone, and hornblende phyric andesite flows of the Kasalka Group. Eocene to Late Cretaceous age Ootsa Lake Group maroon flow banded rhyolite, rhyolite breccia and andesite unconformably overlie the older rocks and flat lying Eocene to Oligocene age Endako Group andesite and basalt locally cap the older rocks. To the north, biotite quartz monzonite has intruded and metamorphosed rocks of the Hazelton Group, and plugs of diorite and gabbro are locally associated with the Endako Group.

## 5.2 Property Geology

The Holy Cross property is underlain by Mesozoic and Cenozoic age volcanic rocks. Jurassic age intermediate volcanic rocks are unconformably overlain by intermediate to felsic volcanics of the Ootsa Lake Group (Figure 4).

Banded rhyolite, rhyolite breccia, andesite and tuff outcrop on the Holy Cross claim. Previous work has described these rocks as belonging to the Eocene age Ootsa Lake Group; however it is possible that they are older, upper Cretaceous age Kasalka Group or Jurassic age Hazelton Group.

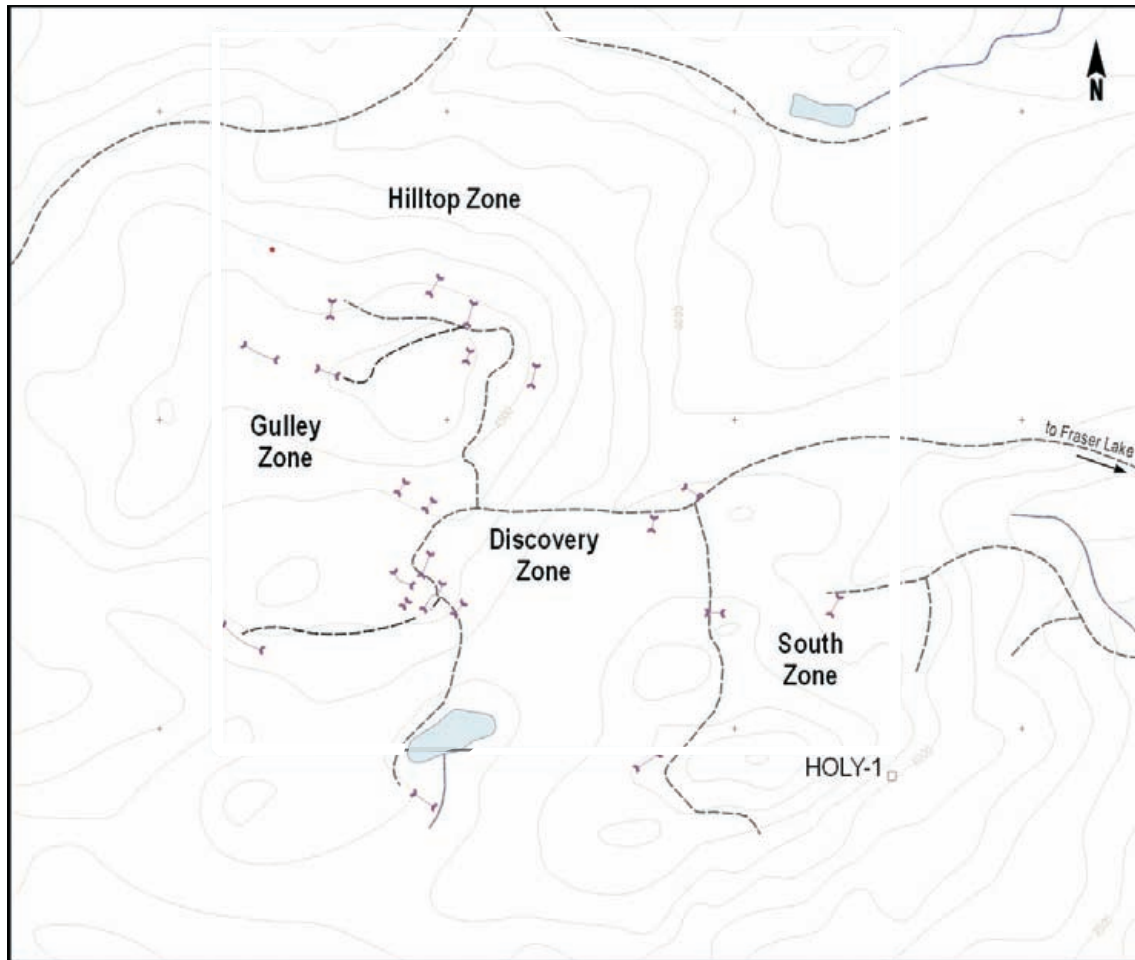
The banded rhyolite is dark purple to maroon where unaltered and light purple, tan, buff or cream where argillically altered. The bands are 1 to 2 mm in width and the unit commonly develops slaty cleavage.

Rhyolite breccias appear to be syn-depositional. They comprise 1 mm to 5 cm angular to subangular fractured fragments of light purple, buff, tan, and cream coloured banded rhyolite in a dark purple-maroon fine grained matrix. They are typically matrix supported where fragments are small, and fragment supported where the fragments are larger.

Interbedded with rhyolite and volumetrically less important are lapilli and ash tuffs, feldspar porphyritic andesite flows and andesitic tuffs. Lapilli tuffs are associated with the banded rhyolite, rhyolite breccia and feldspar phyric andesite. The lapilli tuffs exhibit a dark purple matrix usually with preferentially clay altered clasts. More significant clay or silica alteration results in light purple, light green or light grey matrix and clasts.


Noranda identified two prominent circular features and several prominent NE and ENE trending linear features from an interpretation of Landsat imagery (Barber, 1989). Field checks established that the circular features outlined rhyolite domes and the linear features were interpreted as fault structures. Two of the linear features intersect close to the inferred boundaries of the circular features and may be genetically related. Several of the linear features appear to be terminated by the circular features, whereas others cut across the circular features. Less prominent on Landsat imagery but visible on aerial photographs and ground surveys are a series of NNE and NNW trending linears. These appear to cut all rock types and are evidence of a late stage tectonic event.





0 500 1000 metres

-  Trench
-  Sample Location and Number
-  Topographic Contour (interval: 100 feet)
-  Road Access

<b>HOLY CROSS PROPERTY</b>

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**FIGURE 4 PROPERTY GEOLOGY MAP**

## **6 DEPOSIT TYPES**

The Holy Cross property has potential to host a low sulphidation epithermal style gold-silver deposit. These type of deposits represent an attractive target for gold exploration due to their potential to form world class deposits: either high grade bonanza vein deposits such as Hishikari, Japan (average grade 70 gram per ton gold (Hedenquist et. al , 1996), or large tonnage, low grade deposits such as Round Mountain, Nevada (277 Mt at 1.2 gram per ton gold (Sander and Einaudi, 1990).

Precious metal mineralization in low sulphidation epithermal systems is typically volcanic hosted in back arc tectonic settings (Corbett and Leach, 1998). It is associated with a variety of quartz vein textures and grain sizes. These systems typically have banded and/or brecciated quartz-chalcedony-adularia-sericite vein systems with irregular zones of stockwork veining and hydrothermal breccia (White and Hedenquist, 1995). Chalcedony and/or quartz in these veins typically display open-space crustiform, colloform, cockade and bladed textures. Sulphide concentrations are normally <5%. Metals include gold, silver, arsenic, antimony, mercury, zinc, lead and selenium associated with electrum, argentite and pyrite, with lesser and variable amounts of sphalerite, chalcopyrite, galena, rare tetrahedrite and sulphosalt minerals. Other geochemical characteristics include an anomalously high concentration of potassium, a high gold to silver ratio and an anomalously low concentration of copper (White and Hedenquist, 1995).

Low sulphidation systems are genetically associated with, and commonly hosted by, strike slip faults and associated jogs, splays and extensional veins (Corbett and Leach, 1998) and regional scale fracture systems related to grabens, calderas and flow-dome complexes.

## **7 MINERALIZATION**

The Holy Cross property exposes alteration and mineralization typical to a low sulphidation epithermal system.

Argillic alteration is widespread, is restricted to Ootsa Lake felsic volcanic rocks, and is locally overprinted by silicification in zones ranging up to 10 meters wide and containing 1% to 5% disseminated euhedral pyrite. Minor arsenopyrite, chalcopyrite and pyrrhotite and rare visible gold have also been observed. Alteration has been mapped over the entire property, centered on the resistant knoll in the middle of the Holy Cross claim.

Silicification is most evident in the banded rhyolite flow units and rhyolite breccias that occur as prominent, resistant knolls and hilltops. It is locally accompanied by fracture controlled drusy quartz, zones of quartz healed breccias, 1 cm to 10 cm veins of banded quartz cut by jasper and less commonly chalcedony veins, secondary brecciation, and specular hematite. The banded quartz with jasper and/or chalcedony veins suggest several episodes of silicification. Sericitization is primarily restricted to within a few tens of meters of silicified zones.

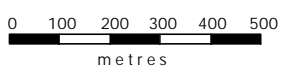
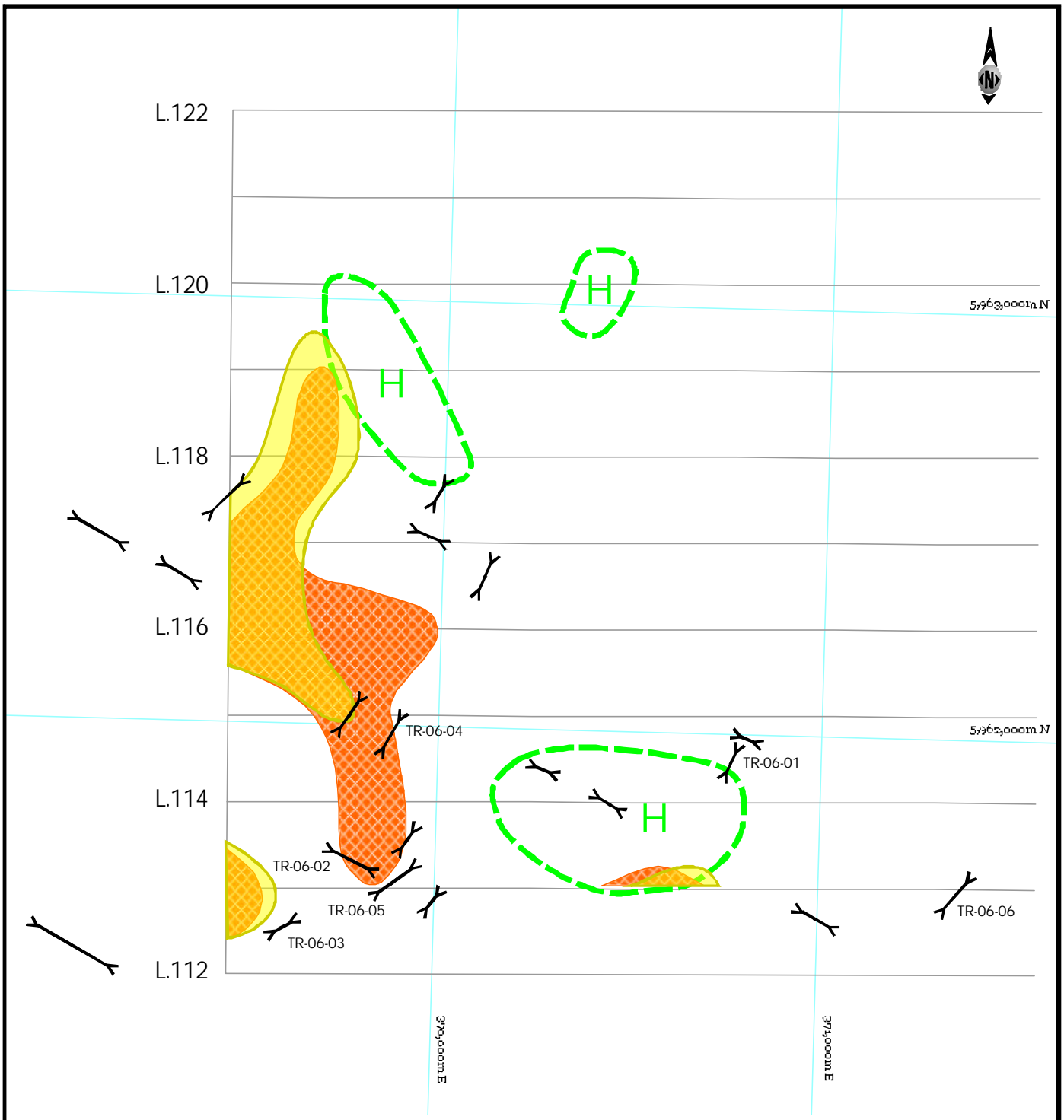
Gold and silver mineralization is associated with banded, vuggy quartz veinlets and the silicified volcanic rocks. A grab sample 300 meters to the north of Trench 1 (TR-1) returned a value of 24.02 gram per ton gold and 20.8 gram per ton silver (Goodall, 2002) and at the Discovery zone a grab sample returned 9.56 gram per ton gold and 9.5 gram per ton silver (Payne 1996). TR-1, located at the Discovery zone, exposes banded, pyritic quartz-jasper veins up to 10 centimetres in width occurring at an intersection of two lineaments trending approximately 035° and 120°. The quartz-jasper veins contain 10% to 15% disseminated pyrite within quartz and massive grey chalcedony. Intense silicification forms an alteration halo that extends for tens of meters outboard of the veins. An 8.5 meter sample collected by Noranda (Barber, 1989) returned 1.0 gram per ton gold and chip samples collected by Phelps Dodge (Payne, 1996) averaged 1.8 gram per ton gold and 47.8 gram per ton silver over 4 meters.

## **8 EXPLORATION**




Approximately 15 kilometres of a 20 kilometre grid was established in 2006 in preparation for a geophysical survey. During the 2007 program all 20km of these lines had to be recut due to blowdown and heavy snowfall. A total of twenty-two (22) line kilometres of induced polarization and magnetometer surveying was completed in October 2007.

## **9 GEOPHYSICS**

Twenty-two (22) line kilometres of induced polarization and magnetometer surveying was completed in October 2007. The strongest resistivity and chargeability anomalies are located along the western third of the grid area. This anomaly trends north-northwest over a distance of 1200m, and is locally up to 400m wide. A strong resistivity anomaly between lines 13 and 14 at the western end occurs in the vicinity of Tr-06-5 which returned a 1.5m chip sample with in excess of 2g/t gold. Silica alteration was observed within the rocks exposed by the trenching further enhancing the association of gold values with zones of silicification. A combined resistivity and chargeability anomaly extending over 800m occurs between lines 15 and 19. Additional coincident anomalies are located at the western end of line 13 and the central portion of line 12. These later anomalies have not been fully defined and will require an expanded IP survey to delineate. An interpretation of the 2007 geophysical survey is shown in figure 6, and the full report is attached as Appendix A.



**LEGEND**

-  Magnetics High
-  Resistivity High
-  Chargeability High

<b>GOLDEN CROSS RESOURCES INC.</b>	
Fig	<b>6</b>
Scale	as shown
Date	April, 2008
Author	Omineca M.D.
Drafter	Chapman
	A.G.B.
Holy Cross Property	
GEOPHYSICAL COMPILATION	
UTM	NAD83 Zone 11
NTS	093F15W

## 10 INTERPRETATIONS AND CONCLUSIONS

The geochemical programs previously carried out on the Holy Cross property have successfully confirmed the potential of the property to host a low sulphidation epithermal gold-silver mineralized system. The property has received relatively limited exploration since its discovery by Noranda in 1987. Exploration programs on the property from 1988 to 2002 merely re-confirmed the presence of gold mineralization at the Discovery zone. However additional areas of gold and silver have been detected in argillic and silica altered rhyolite flows and breccias on the resistant knolls and hilltops within the property boundaries.

Although Noranda completed both magnetometer and IP surveys during 1988 and 1989, the location of, and data from, those surveys is not available. However Barber (1989) reports that several of the trenches were excavated on large, widely scattered high chargeability, high resistivity IP anomalies and recommended that an additional IP survey be carried out, as well as continuing with the remainder of the trenching program outlined in 1989.

Intense silicification and secondary brecciation occur in zones of up to 10 meters wide within banded rhyolite. Silicification is accompanied by fracture controlled drusy quartz, zones of secondary brecciation, 1 cm to 10 cm veins of banded quartz with jasper and less commonly chalcedony, quartz healed breccias and specular hematite. Gold and silver mineralization is associated with banded, vuggy quartz veinlets, and in discrete narrow structural zones. Rock samples have returned gold concentrations ranging from 1.0 gram per ton Au over 8.5 meters to 24.02 gram per ton Au from a grab sample. Grab samples have returned elevated silver values ranging from 9.5 gram per ton Ag to 50.0 gram per ton Ag. All gold and/or silver mineralized samples were collected within a distance of 800 meters from the discovery outcrop and there is high potential for additional mineralized areas to be outlined.

## 11 RECOMMENDATIONS

An initial program of data compilation, Landsat interpretation and a geophysical IP survey is recommended to further evaluate the potential of the Holy Cross property as a host for low sulphidation epithermal gold-silver mineralization.

A second stage diamond drilling program would be warranted given positive results from the phase 1 program.

## 12 STATEMENT OF EXPENDITURES

Linecutting, Dave de Jong	9/16/2007 to 10/05/2008	\$16,767.92
IP and Mag Survey, Scott Geophysics	10/12/2008 to 10/25/2008	\$49,375.46
Geological Consultant, J. Chapman	9/01/2008 to 12/16/2008	<u>\$ 5,866.00</u>
Total		<u>\$72,009.38</u>

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Savell, M. and Bradish, L. 1989: Geophysical Report on the Holy Cross Property. Noranda Exploration Company, Limited, August 1989, Assessment Report Number 19,278.

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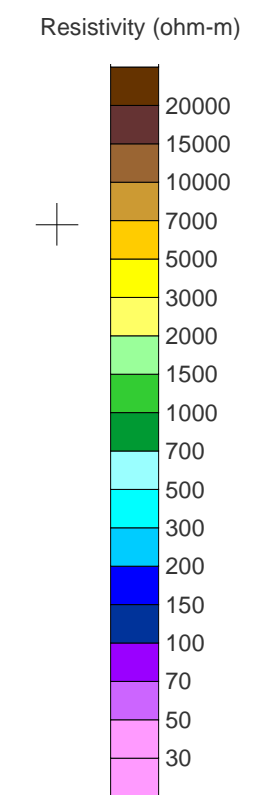
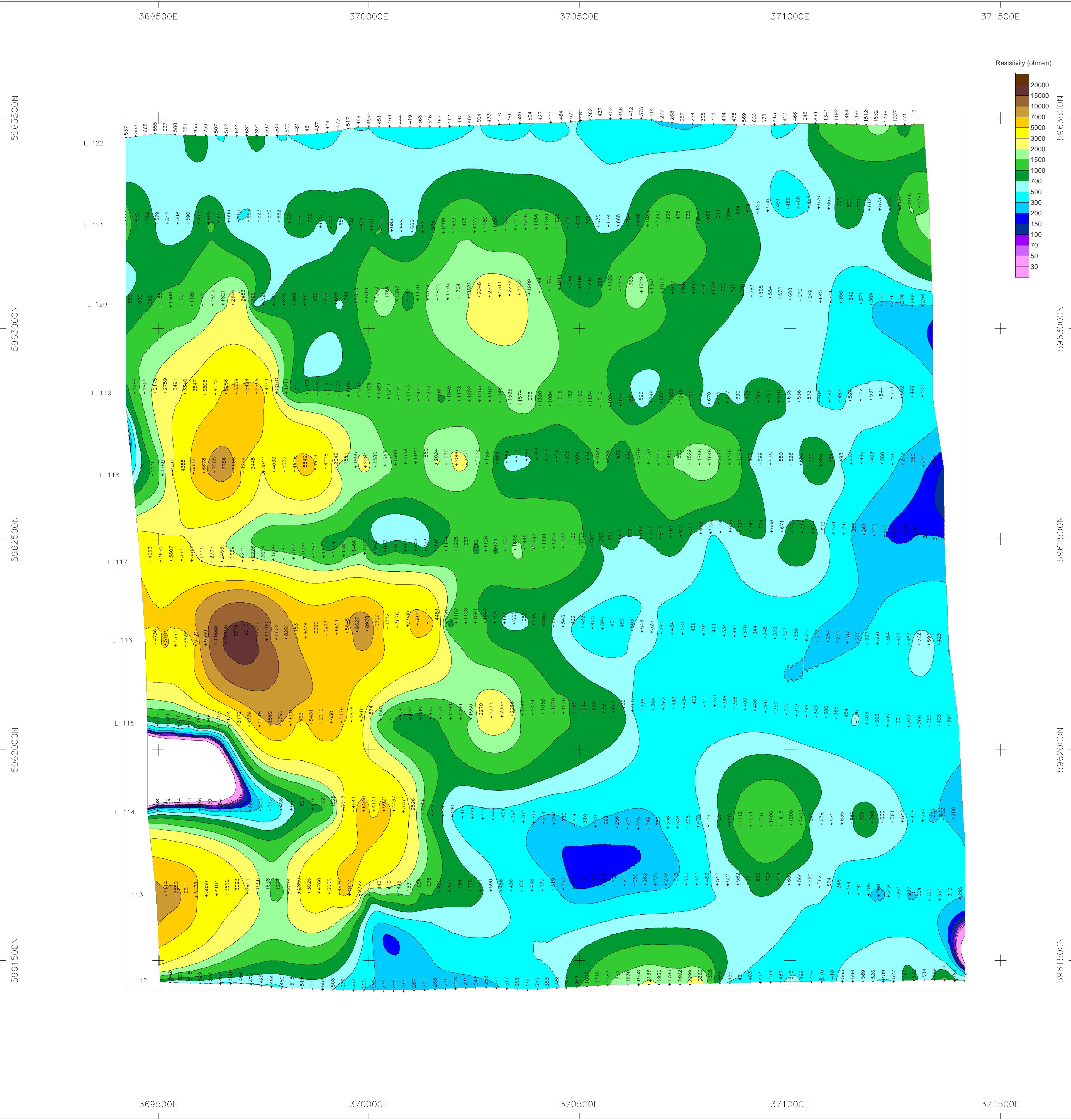
Tipper, H. 1963: Nechako River Map Area, British Columbia. Geological Survey of Canada Memoir 324, Ottawa, Ontario

White, N.C. and Hedenquist, J.W. 1995: Epithermal Gold Deposits: Styles, Characteristics and Exploration. *Society of Economic Geologists, Newsletter*, No.23, 1, pages 1, 3-19

**APPENDIX A**

Scott Geophysics Holy Cross IP Survey Report





**SURVEY SPECIFICATIONS**

survey performed Oct/07  
 receiver Scintrex IPR12  
 transmitter GDD Tx11  
 pulse time 2 seconds  
 Mx receive window 690-1050 msecs

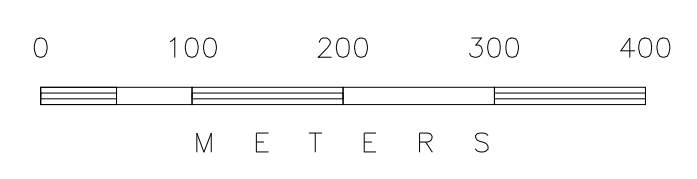
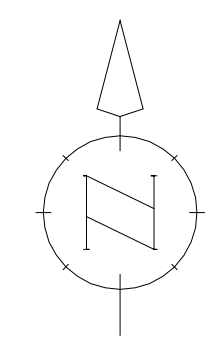
array pole dipole  
 a spacing 25 metres  
 n separations 1, 2, 3, 4, 5  
 current electrode W of potentials

Contoured value Filtered resistivity  
 Filtered values n = 1 to 5

Log contour intervals:  
 30, 50, 70, 100, 150, 200, 300, 500,  
 1000, 1500, 2000, ..., 20000 (ohm-m)

Note: The filter applied to this data is the standard Fraser triangular filter whereby one value is selected at n=1, two values at n=2, three values at n=3, etc. The plotted value is the average of the average values of the n separations and is plotted at the n=1 data point.

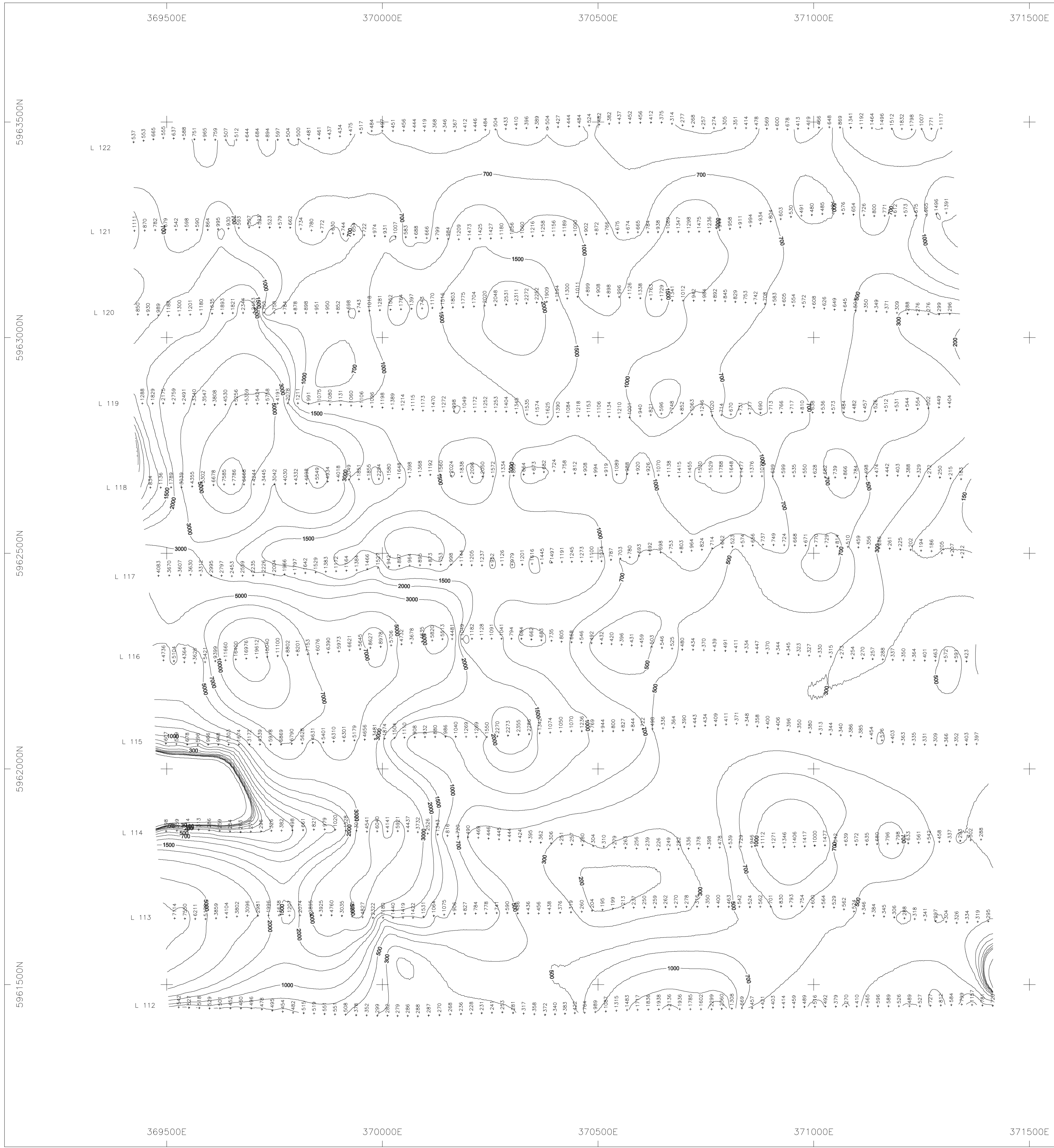
GPS corrected grid - WGS84 datum



GOLDEN CROSS RESOURCES INC.

HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Resistivity Contour Plan  
 Triangular Filtered Values  
 First to Fifth Separations

DRAWN BY: ars      DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.



**SURVEY SPECIFICATIONS**

survey performed Oct/07  
 receiver Scintrex IPR12  
 transmitter GDD Tx11  
 pulse time 2 seconds  
 Mx receive window 690-1050 msecs

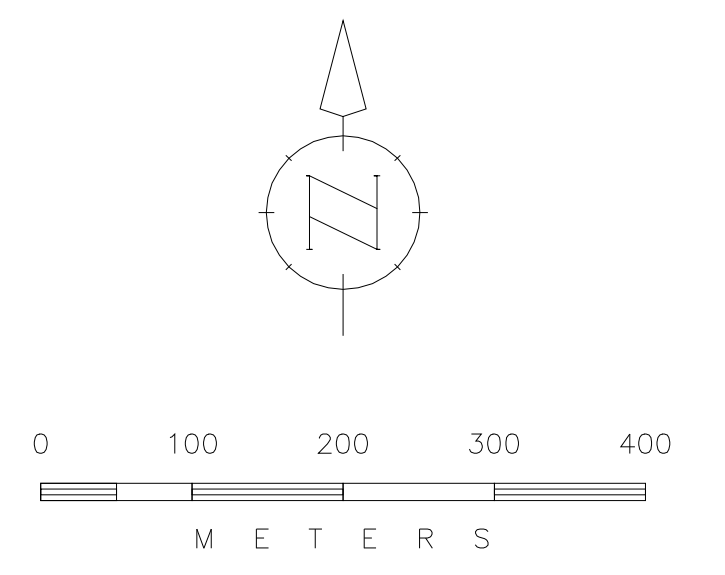
array pole dipole  
 a spacing 25 metres  
 n separations 1, 2, 3, 4, 5  
 current electrode W of potentials

Contoured value Filtered resistivity  
 Filtered values n = 1 to 5

Log contour intervals:  
 30, 50, 70, 100, 150, 200, 300, 500,  
 1000, 1500, 2000, ..., 20000 (ohm-m)

Note: The filter applied to this data is the standard Fraser triangular filter whereby one value is selected at n=1, two values at n=2, three values at n=3, etc. The plotted value is the average of the average values of the n separations and is plotted at the n=1 data point.

GPS corrected grid - WGS84 datum

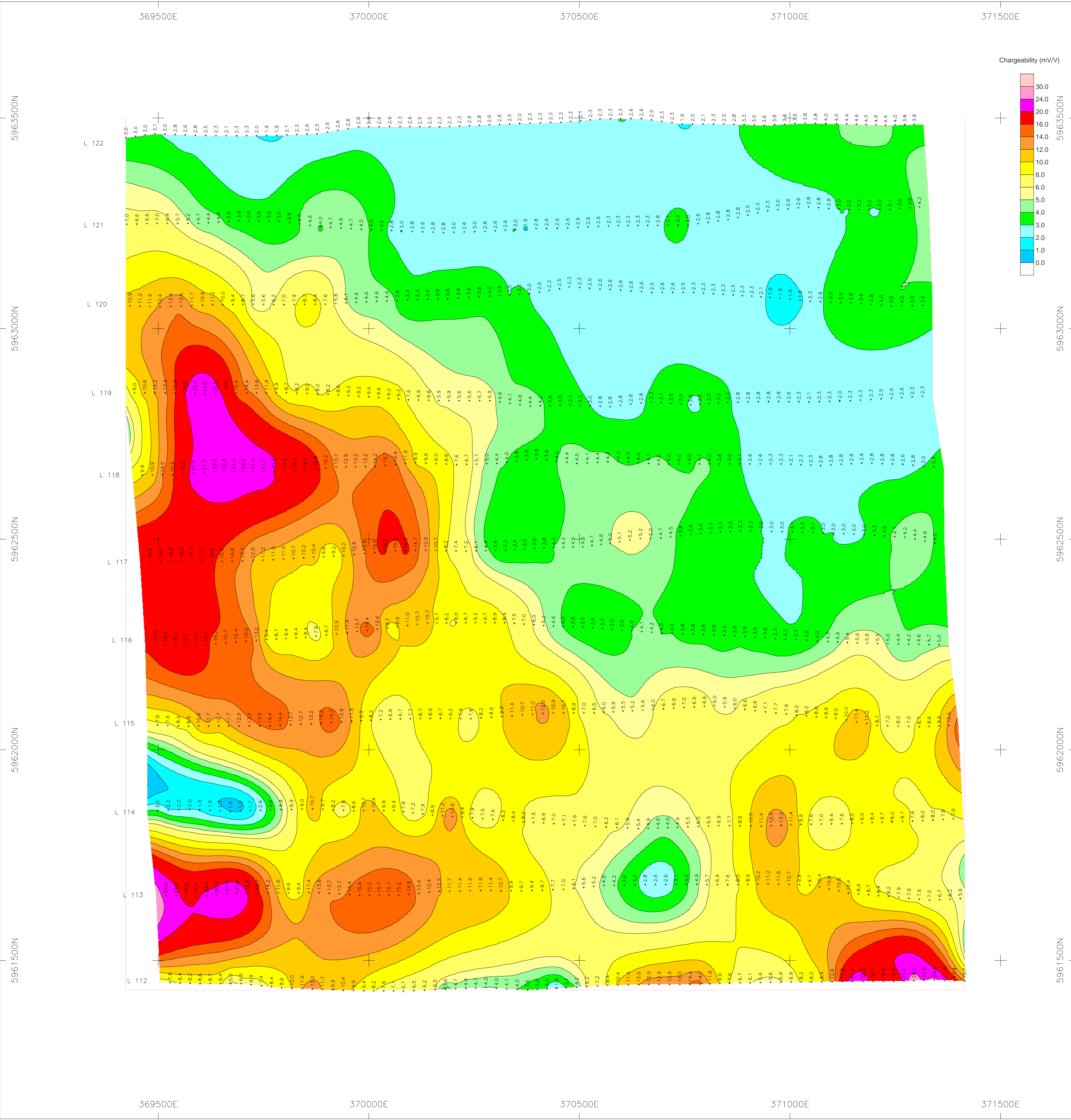


GOLDEN CROSS RESOURCES INC.

HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Resistivity Contour Plan  
 Triangular Filtered Values  
 First to Fifth Separations

DRAWN BY: ars	DATE: Oct/07
SCOTT GEOPHYSICS LTD.	





**SURVEY SPECIFICATIONS**

survey performed Oct/07  
 receiver Scintrex IPR12  
 transmitter GDD Tx11  
 pulse time 2 seconds  
 Mx receive window 690-1050 msec

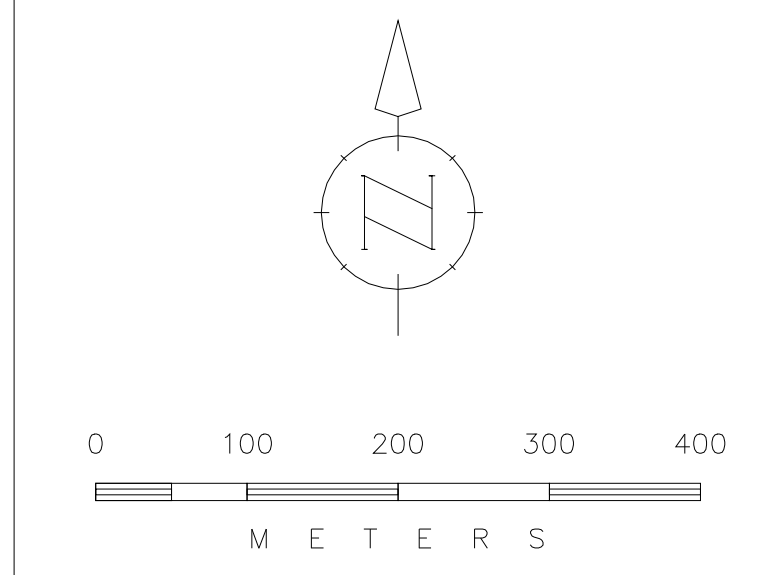
array pole dipole  
 a spacing 25 metres  
 n separations 1, 2, 3, 4, 5  
 current electrode W of potentials

Contoured value Filtered chargeability  
 Filtered values n = 1 to 5

Contour intervals:  
 0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0,  
 12.0, 16.0, 20.0, 24.0, 30.0 (mV/Volt)

Note: The filter applied to this data is the standard Fraser triangular filter whereby one value is selected at n=1, two values at n=2, three values at n=3, etc. The plotted value is the average of the average values of the n separations and is plotted at the n=1 data point.

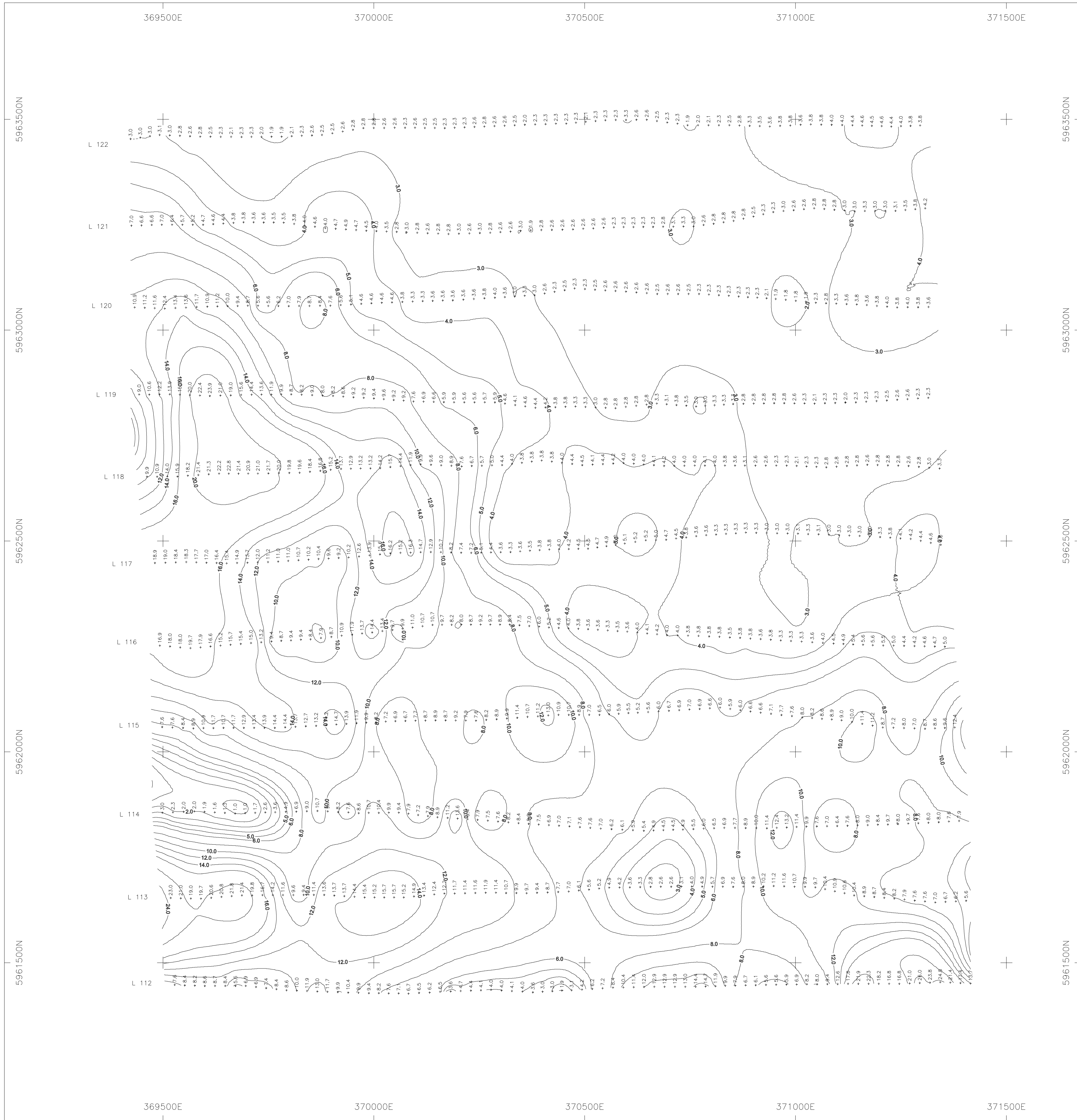
GPS corrected grid - WGS84 datum



GOLDEN CROSS RESOURCES INC.

HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Chargeability Contour Plan  
 Triangular Filtered Values  
 First to Fifth Separations

DRAWN BY: ars      DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.



**SURVEY SPECIFICATIONS**

survey performed Oct/07  
 receiver Scintrex IPR12  
 transmitter GDD Tx11  
 pulse time 2 seconds  
 Mx receive window 690-1050 msec

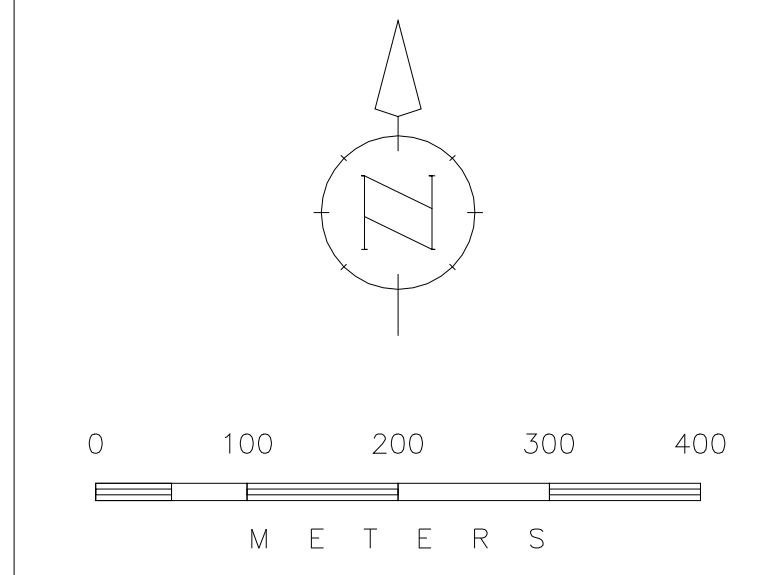
array pole dipole  
 a spacing 25 metres  
 n separations 1, 2, 3, 4, 5  
 current electrode W of potentials

Contoured value Filtered chargeability  
 Filtered values n = 1 to 5

Contour intervals:  
 0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0,  
 12.0, 16.0, 20.0, 24.0, 30.0 (mV/Volt)

Note: The filter applied to this data is the standard Fraser triangular filter whereby one value is selected at n=1, two values at n=2, three values at n=3, etc. The plotted value is the average of the average values of the n separations and is plotted at the n=1 data point.

GPS corrected grid - WGS84 datum



GOLDEN CROSS RESOURCES INC.

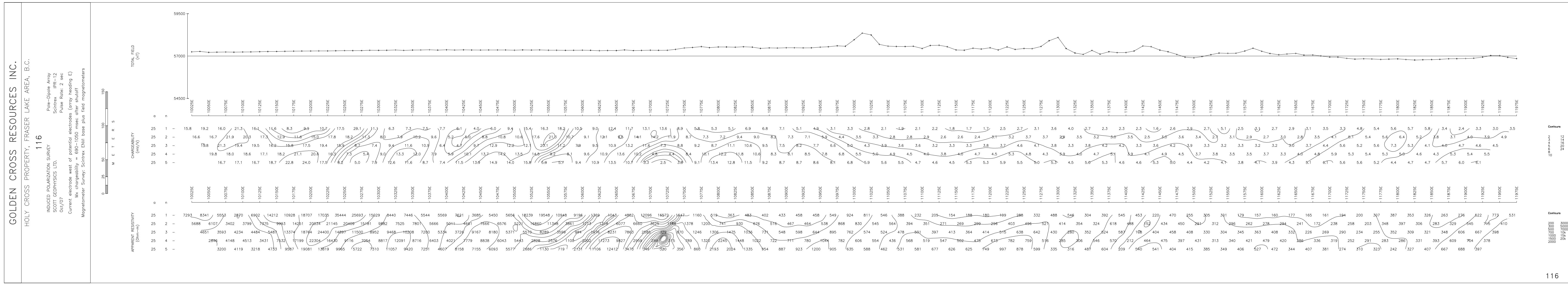
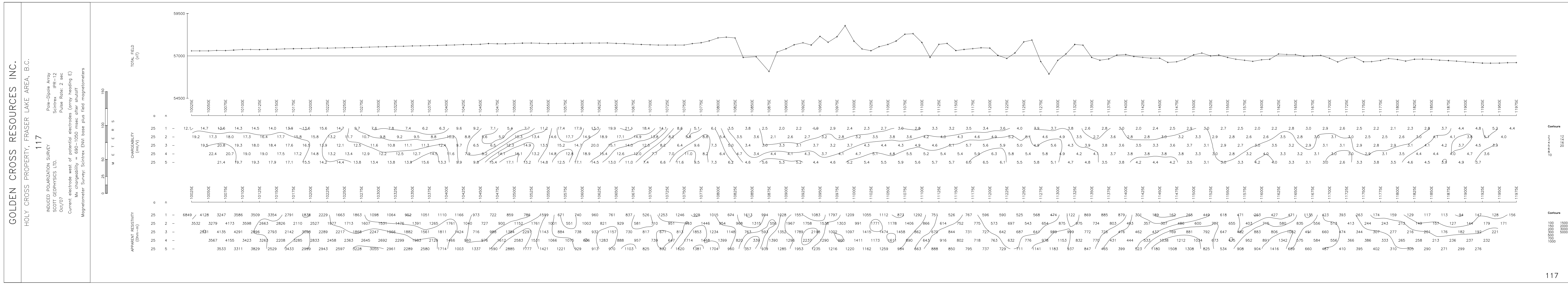
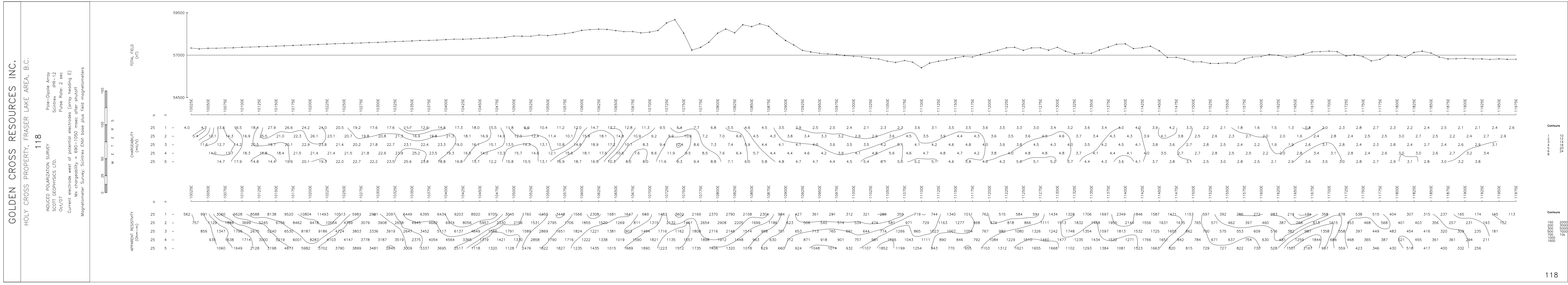
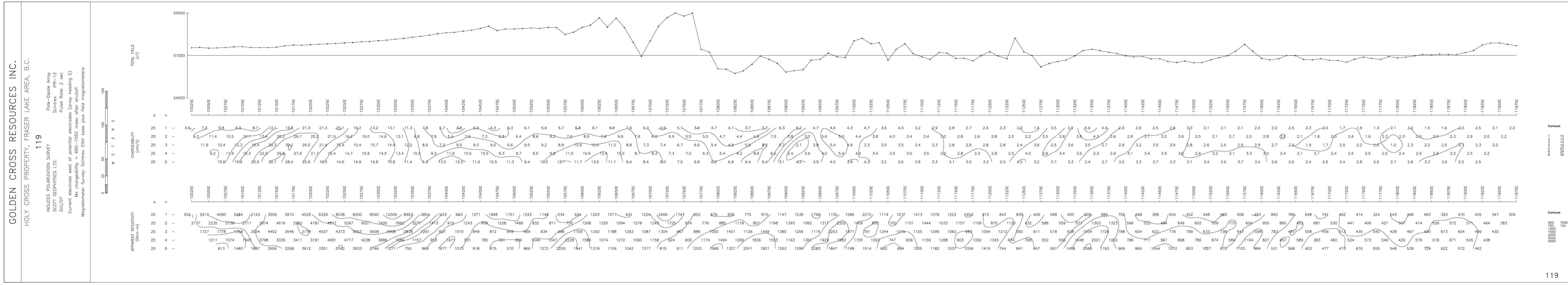
HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Chargeability Contour Plan  
 Triangular Filtered Values  
 First to Fifth Separations

DRAWN BY: ars      DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.

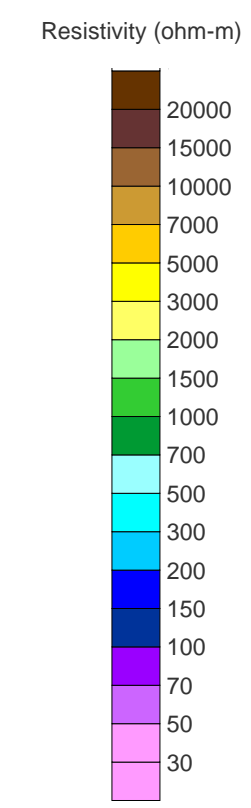
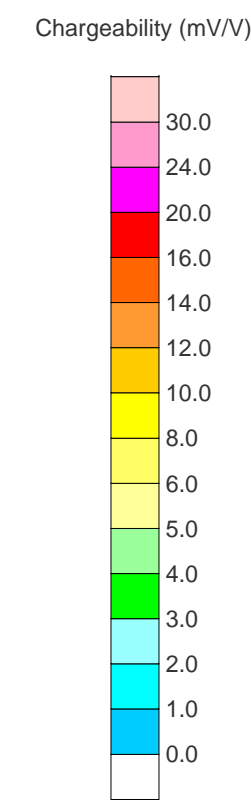




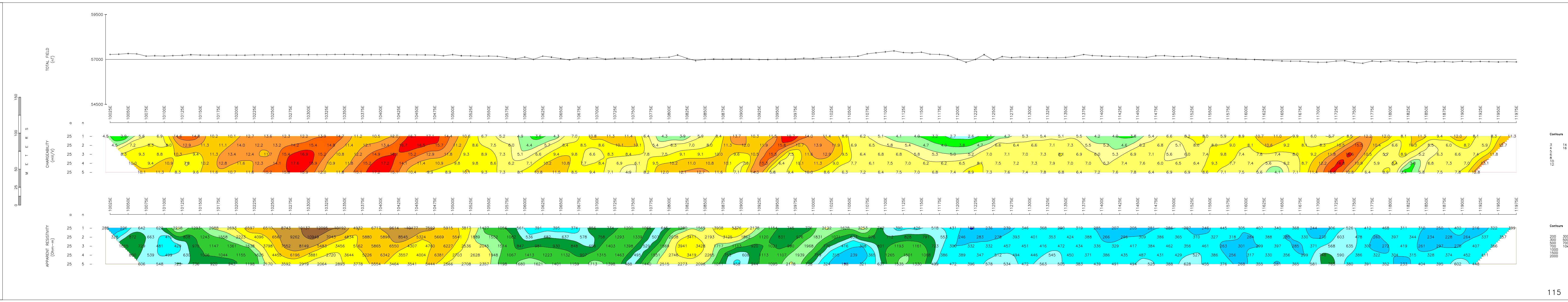




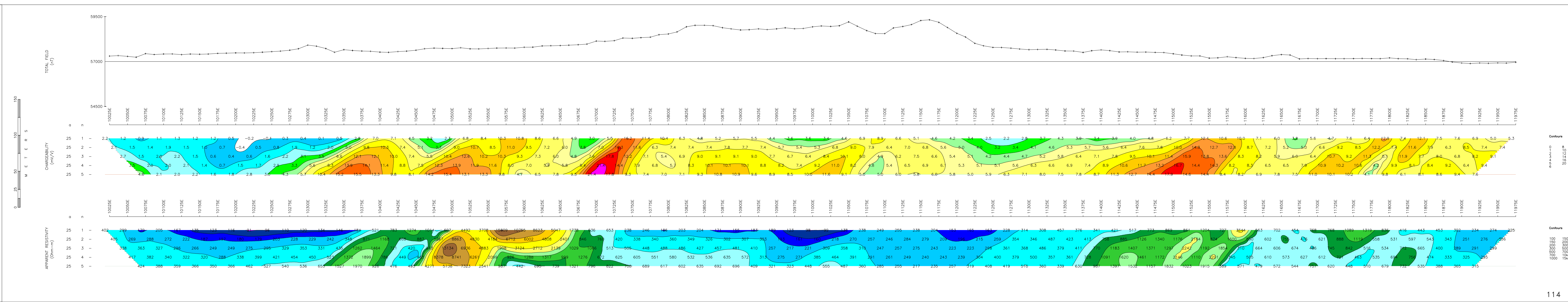




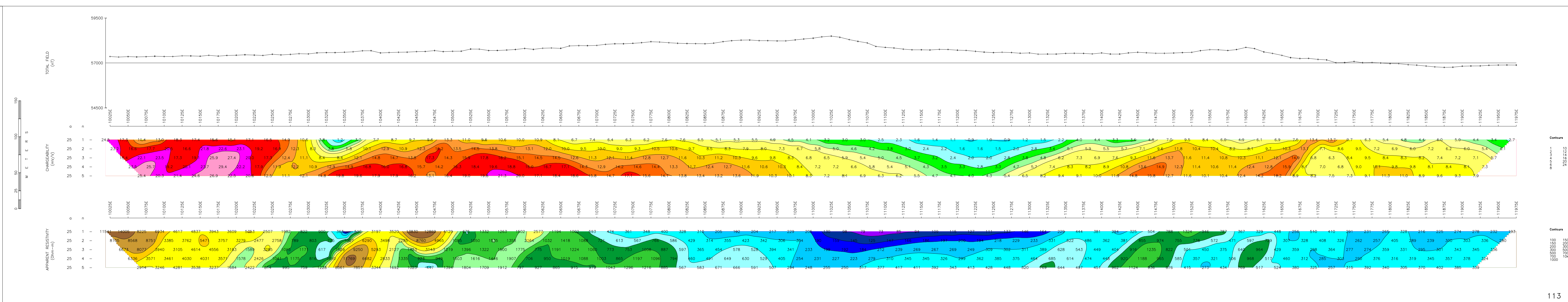
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 HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.  
 115  
 INDUCED POLARIZATION SURVEY  
 SCOTT GEOPHYSICS LTD.  
 04/07  
 Pole-Dipole Array  
 Spacing: 100m  
 Pulse Rate: 2 sec  
 Current electrode west of potential electrodes (array heading E)  
 Magnometer Survey: Schlumberger DNI base plus field magnetometers



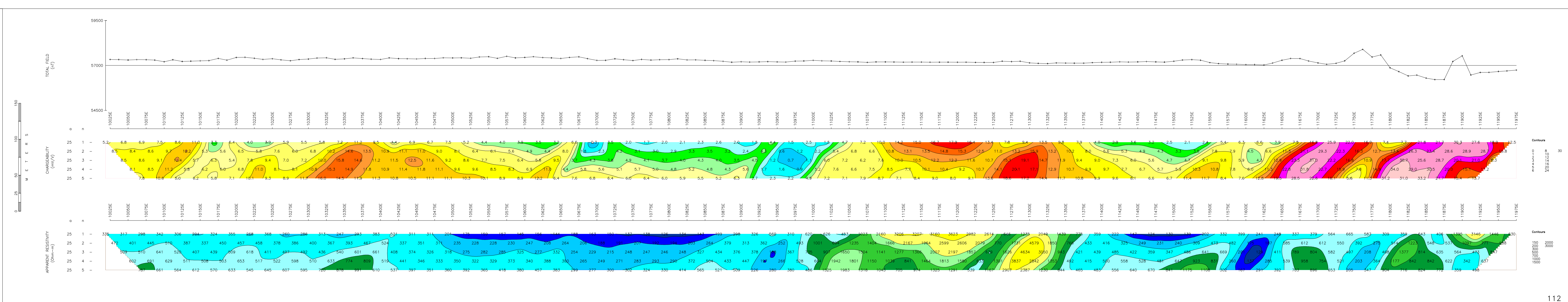
**GOLDEN CROSS RESOURCES INC.**  
 HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.  
 114  
 INDUCED POLARIZATION SURVEY  
 SCOTT GEOPHYSICS LTD.  
 04/07  
 Pole-Dipole Array  
 Spacing: 100m  
 Pulse Rate: 2 sec  
 Current electrode west of potential electrodes (array heading E)  
 Magnometer Survey: Schlumberger DNI base plus field magnetometers



**GOLDEN CROSS RESOURCES INC.**  
 HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.  
 113  
 INDUCED POLARIZATION SURVEY  
 SCOTT GEOPHYSICS LTD.  
 04/07  
 Pole-Dipole Array  
 Spacing: 100m  
 Pulse Rate: 2 sec  
 Current electrode west of potential electrodes (array heading E)  
 Magnometer Survey: Schlumberger DNI base plus field magnetometers



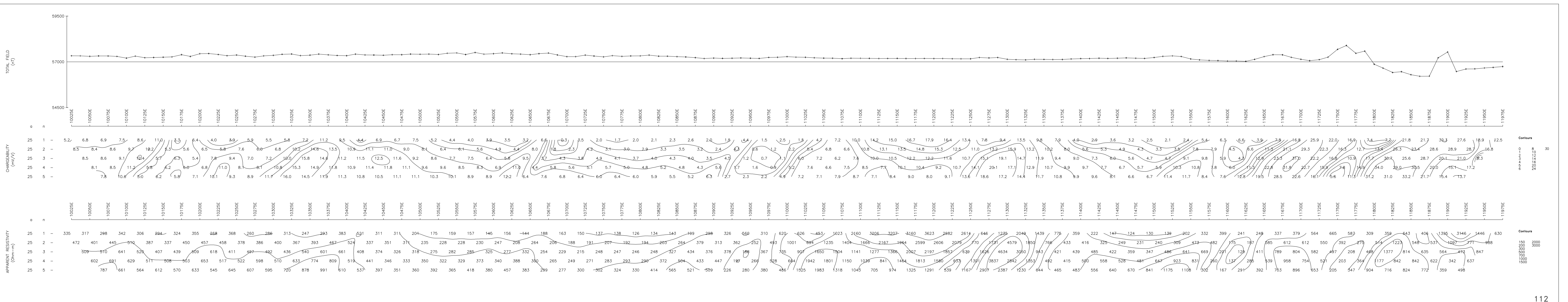
**GOLDEN CROSS RESOURCES INC.**  
 HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.  
 112  
 INDUCED POLARIZATION SURVEY  
 SCOTT GEOPHYSICS LTD.  
 04/07  
 Pole-Dipole Array  
 Spacing: 100m  
 Pulse Rate: 2 sec  
 Current electrode west of potential electrodes (array heading E)  
 Magnometer Survey: Schlumberger DNI base plus field magnetometers





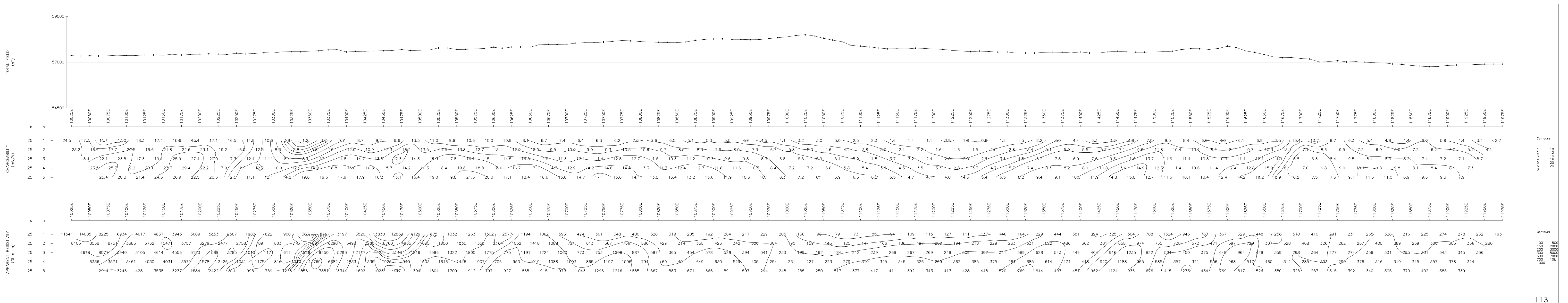
**GOLDEN CROSS RESOURCES INC.**  
**HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.**  
**112**

INDUCED POLARIZATION SURVEY  
 SITE: HOLY CROSS  
 CLIENT: GOLDEN CROSS RESOURCES LTD.  
 DATE: 2012-07-07  
 PROJECT: FRASER LAKE AREA  
 CURRENT ELECTRODE WEST OF POTENTIAL ELECTRODES (ARRAY HEADING E)  
 M. CHARGEABILITY = 650-1000 msec. after shut-off  
 MAGNETOMETER SURVEY: SCHLUMBERGER DMI base plus field magnetometers



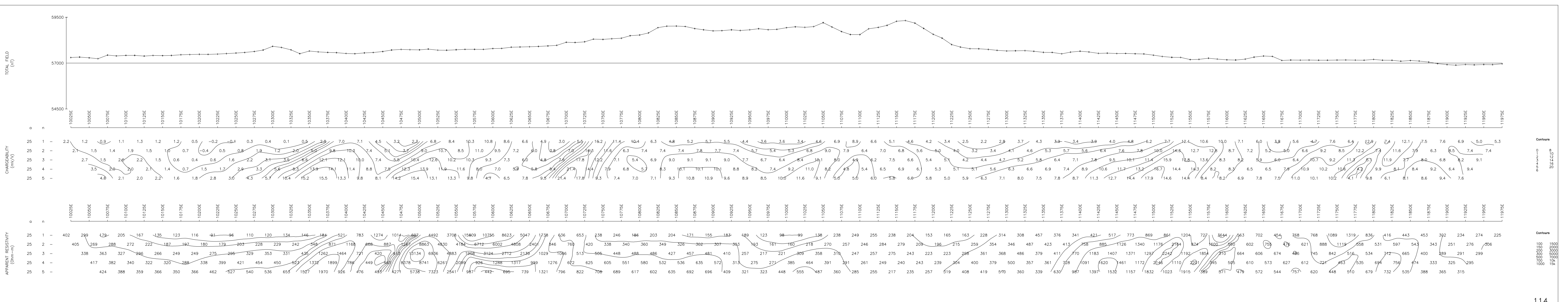
**GOLDEN CROSS RESOURCES INC.**  
**HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.**  
**113**

INDUCED POLARIZATION SURVEY  
 SITE: HOLY CROSS  
 CLIENT: GOLDEN CROSS RESOURCES LTD.  
 DATE: 2012-07-07  
 PROJECT: FRASER LAKE AREA  
 CURRENT ELECTRODE WEST OF POTENTIAL ELECTRODES (ARRAY HEADING E)  
 M. CHARGEABILITY = 650-1000 msec. after shut-off  
 MAGNETOMETER SURVEY: SCHLUMBERGER DMI base plus field magnetometers



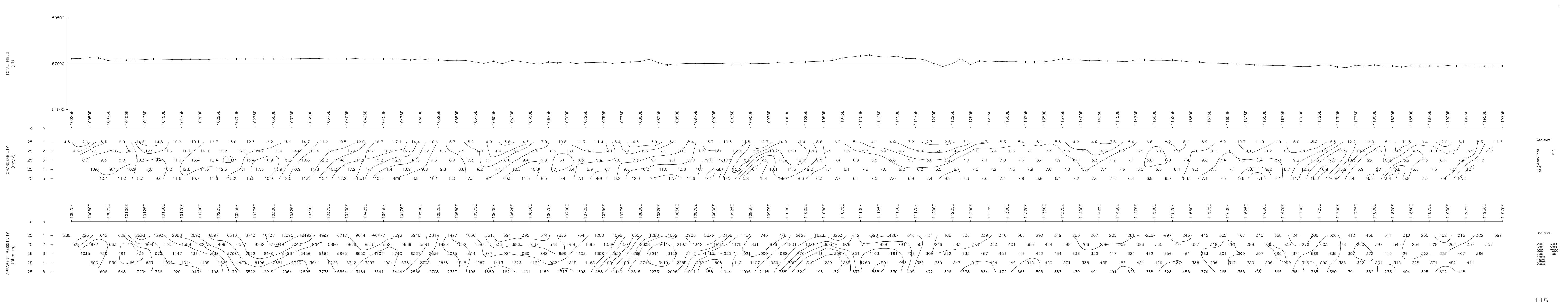
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**HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.**  
**114**

INDUCED POLARIZATION SURVEY  
 SITE: HOLY CROSS  
 CLIENT: GOLDEN CROSS RESOURCES LTD.  
 DATE: 2012-07-07  
 PROJECT: FRASER LAKE AREA  
 CURRENT ELECTRODE WEST OF POTENTIAL ELECTRODES (ARRAY HEADING E)  
 M. CHARGEABILITY = 650-1000 msec. after shut-off  
 MAGNETOMETER SURVEY: SCHLUMBERGER DMI base plus field magnetometers

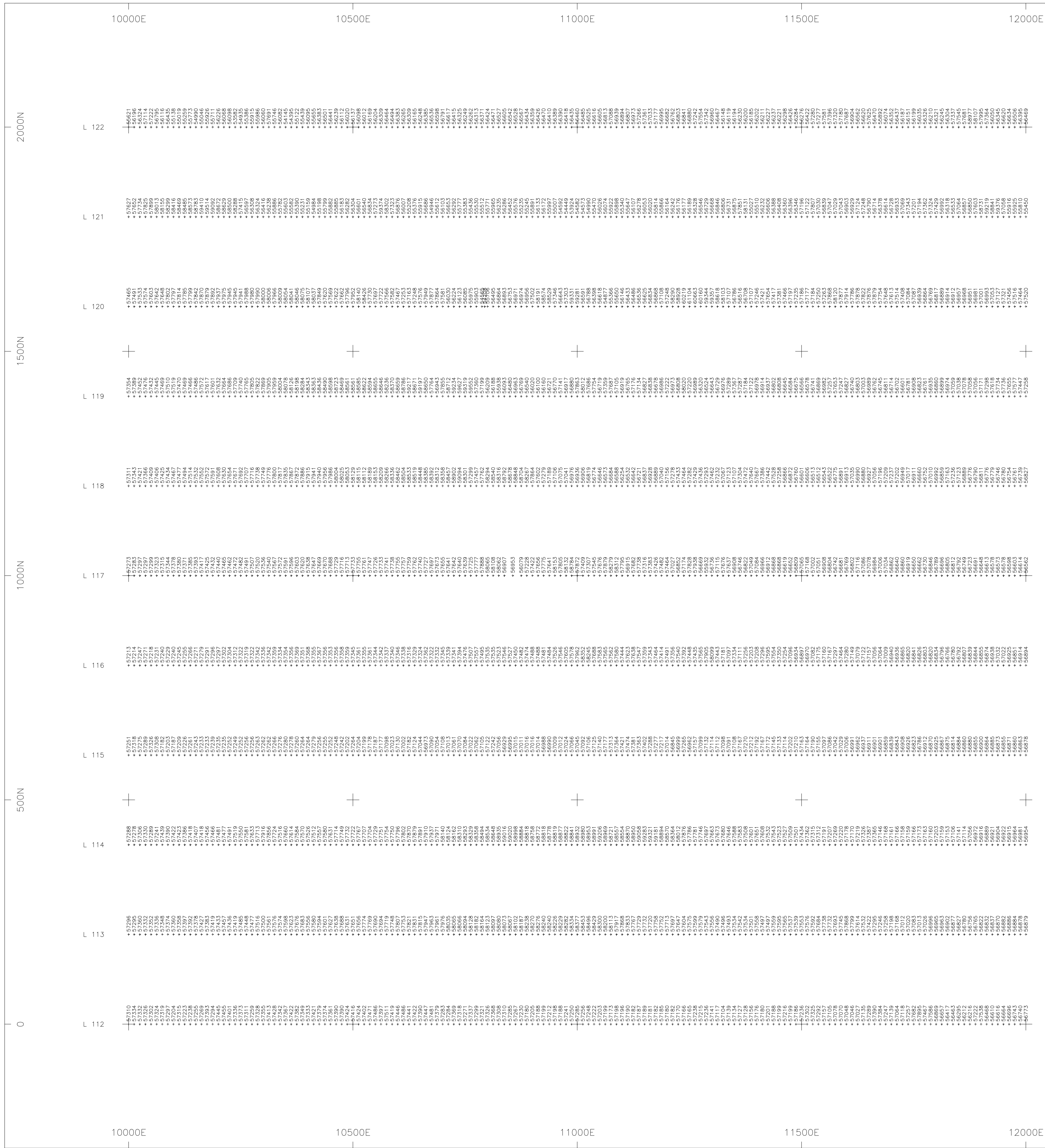


**GOLDEN CROSS RESOURCES INC.**  
**HOLY CROSS PROPERTY, FRASER LAKE AREA, B.C.**  
**115**

INDUCED POLARIZATION SURVEY  
 SITE: HOLY CROSS  
 CLIENT: GOLDEN CROSS RESOURCES LTD.  
 DATE: 2012-07-07  
 PROJECT: FRASER LAKE AREA  
 CURRENT ELECTRODE WEST OF POTENTIAL ELECTRODES (ARRAY HEADING E)  
 M. CHARGEABILITY = 650-1000 msec. after shut-off  
 MAGNETOMETER SURVEY: SCHLUMBERGER DMI base plus field magnetometers

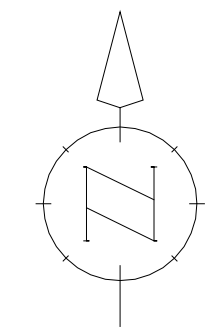
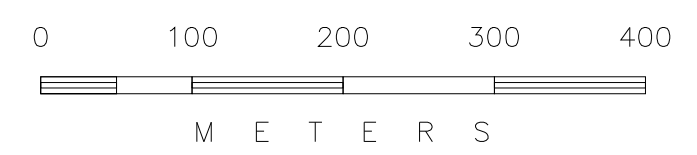






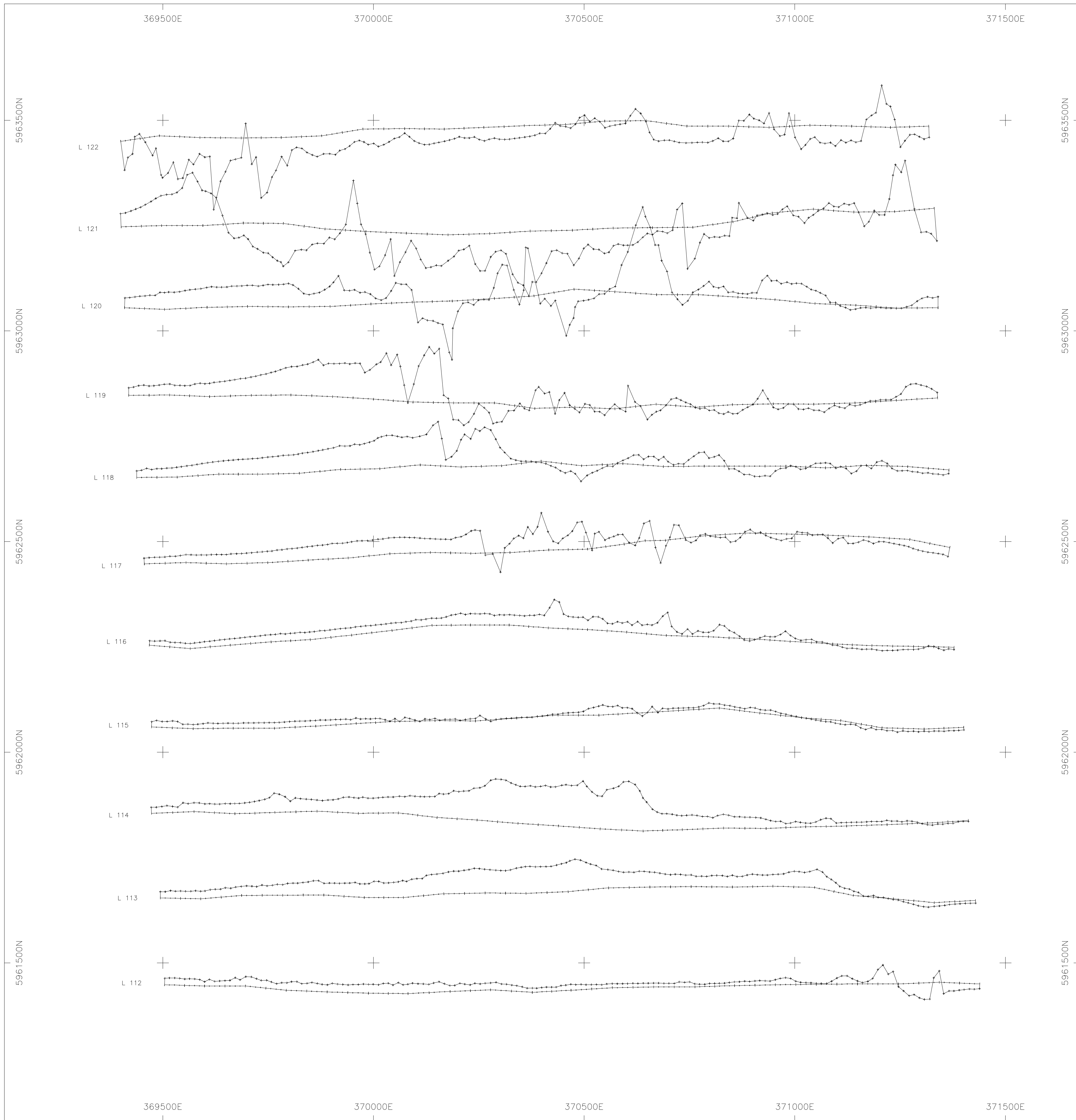
SURVEY SPECIFICATIONS  
 survey performed Oct/07  
 survey magnetometer Scintrex ENVI  
 base magnetometer Scintrex ENVI  
 type proton  
 measurement total field  
 units nanoTeslas  
 diurnal corrections base station  
 data interval 12.5 metres

NOTE: The line numbers are as written on the pickets. The Northing on the map is the approximate distance from line 112.



GOLDEN CROSS RESOURCES INC.  
 HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Magnetometer Survey  
 Data Posting

DRAWN BY: ars DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.

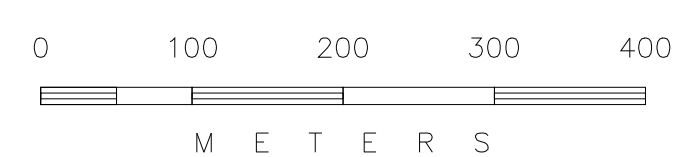
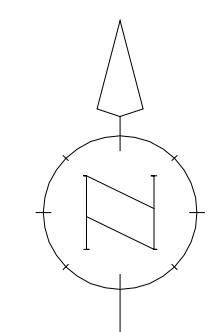


SURVEY SPECIFICATIONS

survey performed	Oct/07
survey magnetometer	Scintrex ENVI
base magnetometer	Scintrex ENVI
type	proton
measurement	total field
units	nanoTeslas
diurnal corrections	base station
data interval	12.5 metres

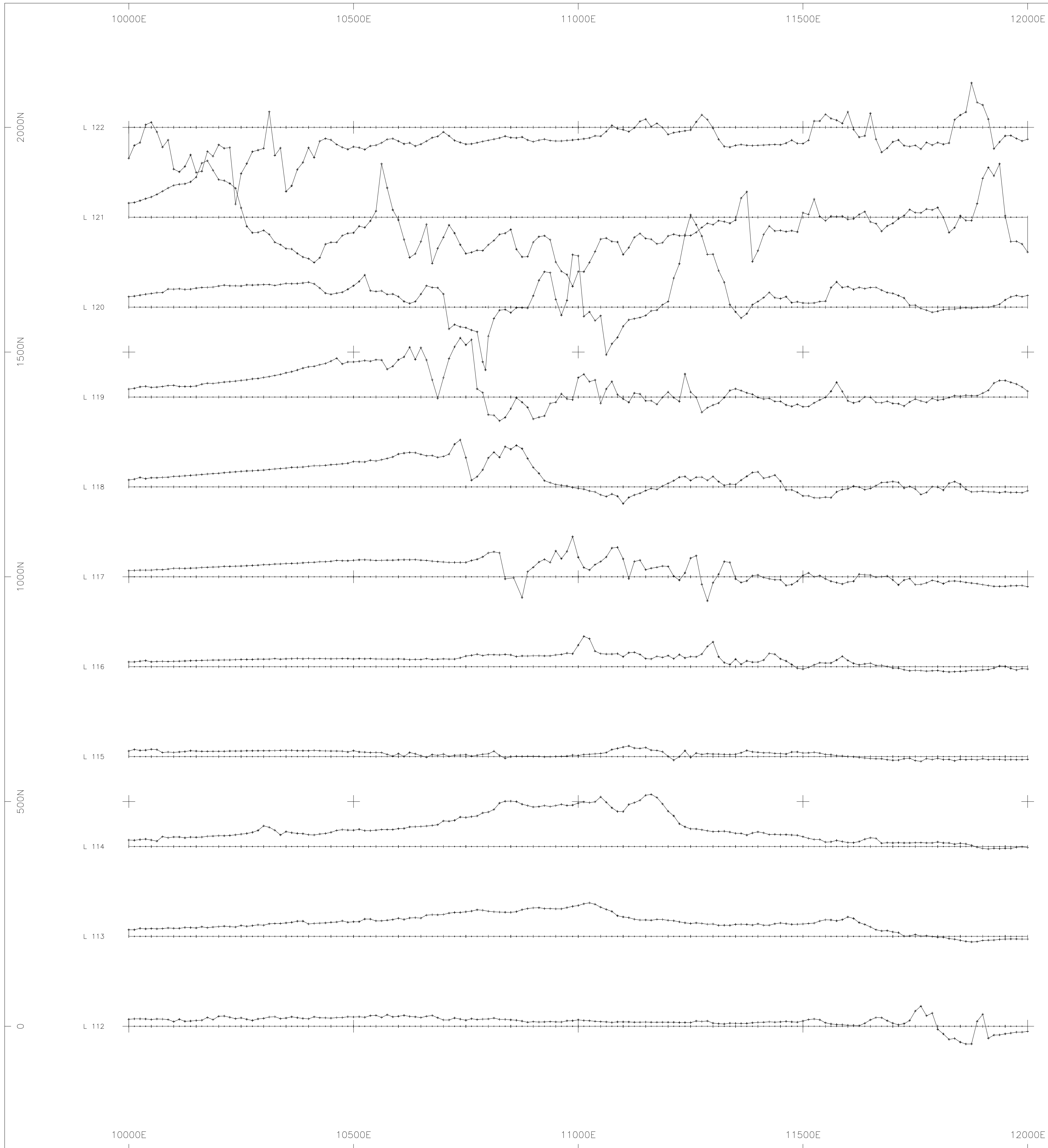
profile base 57000 nT  
 profile scale 1000 nT/cm  
 (at 1:5000 scale)

GPS corrected coordinates - WGS84 datum



GOLDEN CROSS RESOURCES INC.  
 HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Magnetometer Survey  
 Profiles

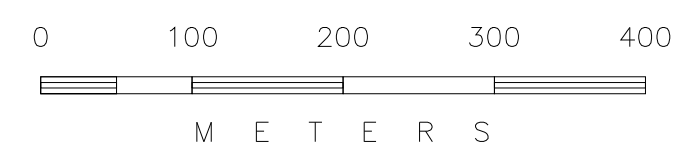
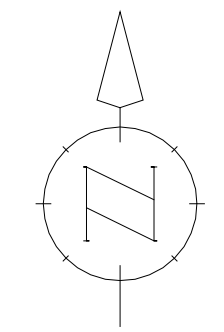
DRAWN BY: ars	DATE: Oct/07
SCOTT GEOPHYSICS LTD.	



**SURVEY SPECIFICATIONS**  
 survey performed Oct/07  
 survey magnetometer Scintrex ENVI  
 base magnetometer Scintrex ENVI  
 type proton  
 measurement total field  
 units nanoTeslas  
 diurnal corrections base station  
 data interval 12.5 metres

profile base 57000 nT  
 profile scale 1000 nT/cm  
 (at 1:5000 scale)

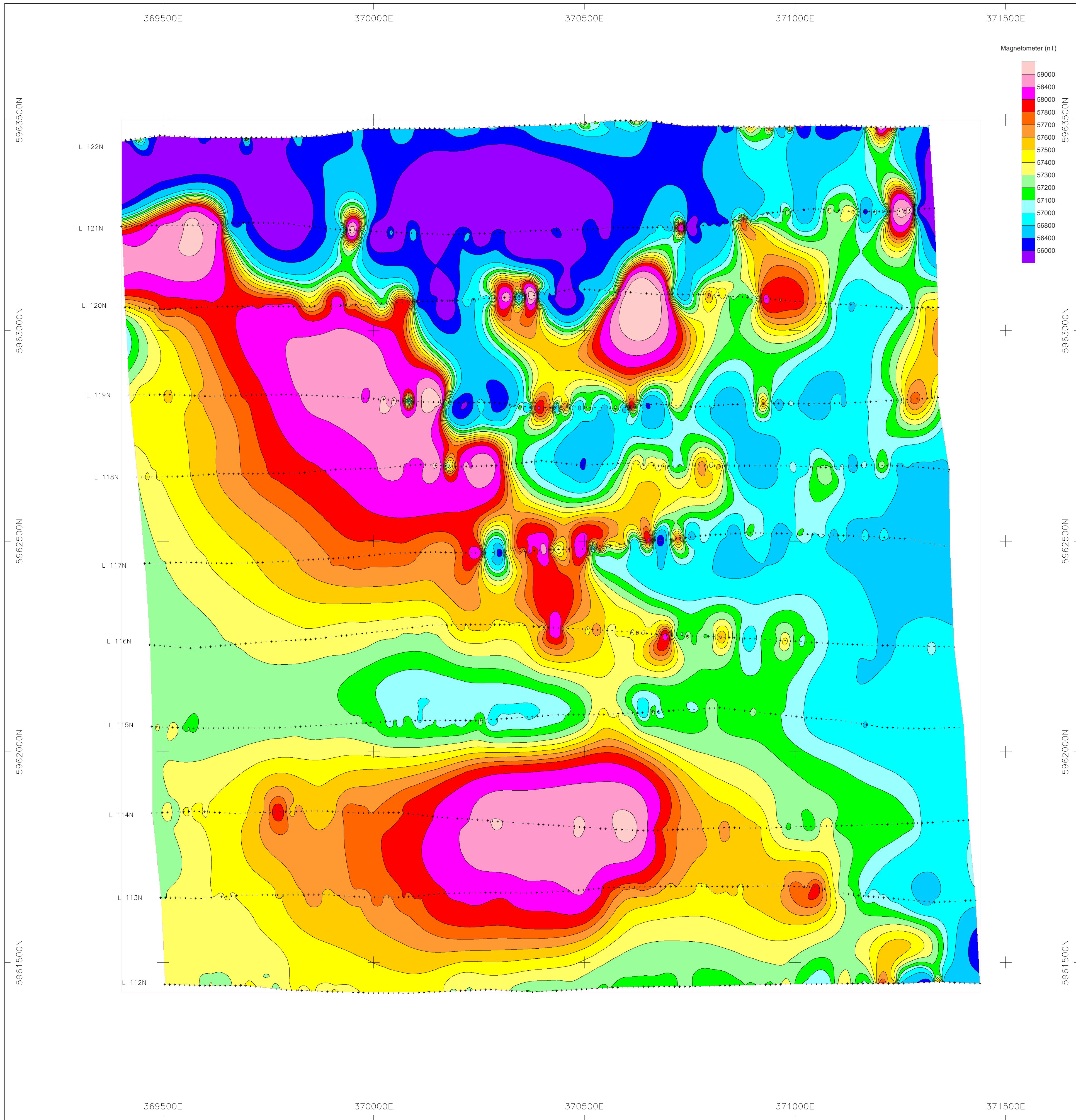
NOTE: The line numbers are as written on the pickets. The Northing on the map is the approximate distance from line 112.



GOLDEN CROSS RESOURCES INC.  
 HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Magnetometer Survey  
 Profiles

DRAWN BY: ars      DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.



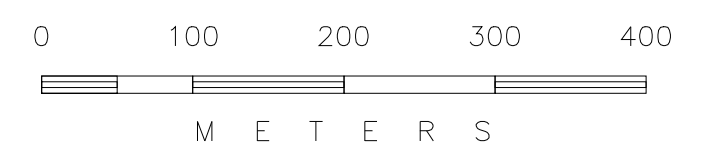
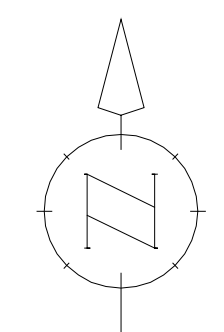
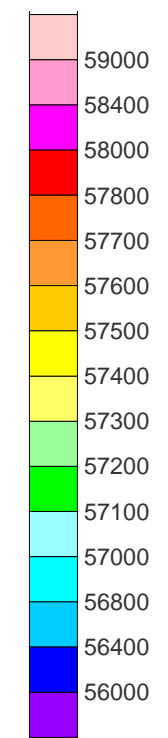


SURVEY SPECIFICATIONS

survey performed Oct/07  
 survey magnetometer Scintrex ENVI  
 base magnetometer Scintrex ENVI  
 type proton  
 measurement total field  
 units nanoTeslas  
 diurnal corrections base station  
 data interval 12.5 metres

GPS corrected grid - WGS84 datum

Magnetometer (nT)



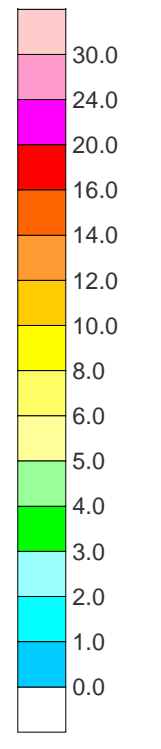
GOLDEN CROSS RESOURCES INC.

HOLY CROSS PROPERTY  
 FRASER LAKE AREA, B.C.  
 Magnetometer Survey  
 Contour Plan

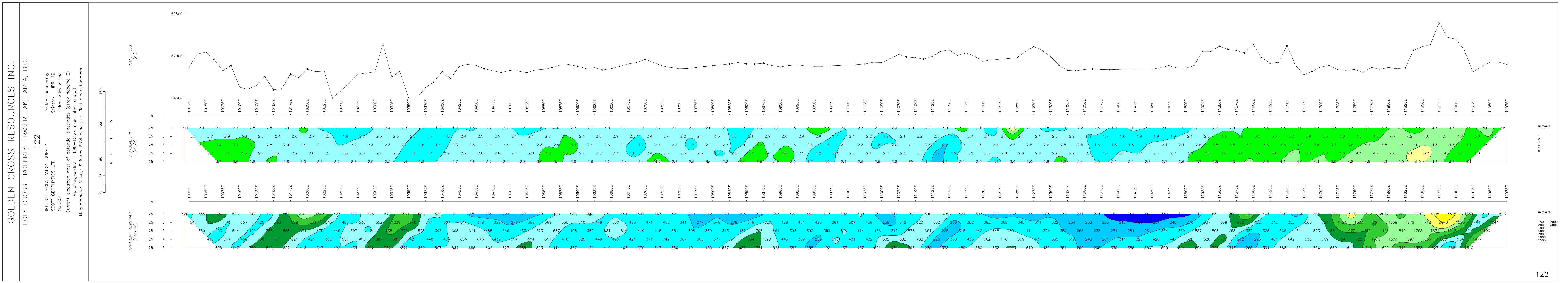
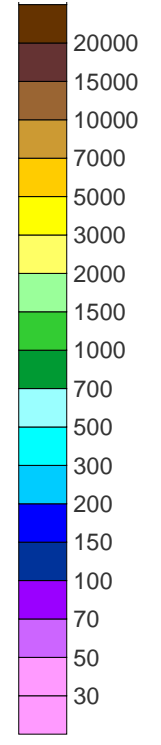
DRAWN BY: ars      DATE: Oct/07  
 SCOTT GEOPHYSICS LTD.



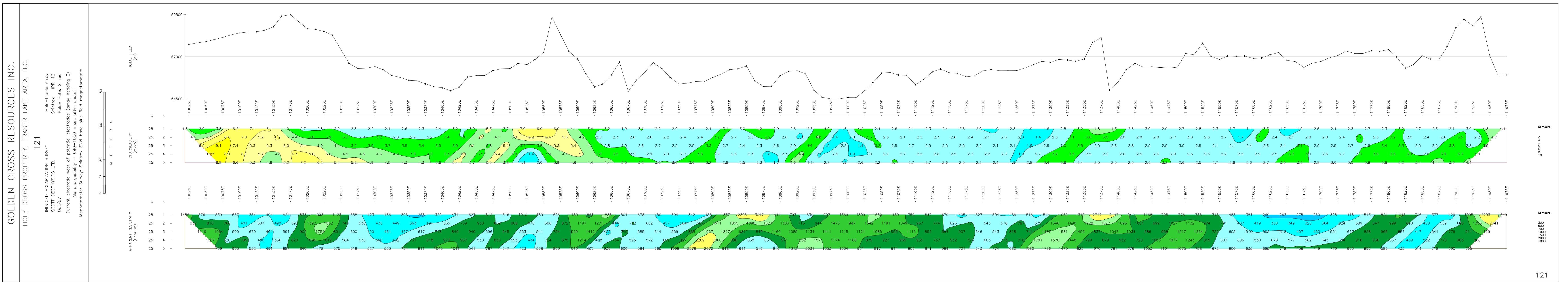
Chargeability (mV/V)



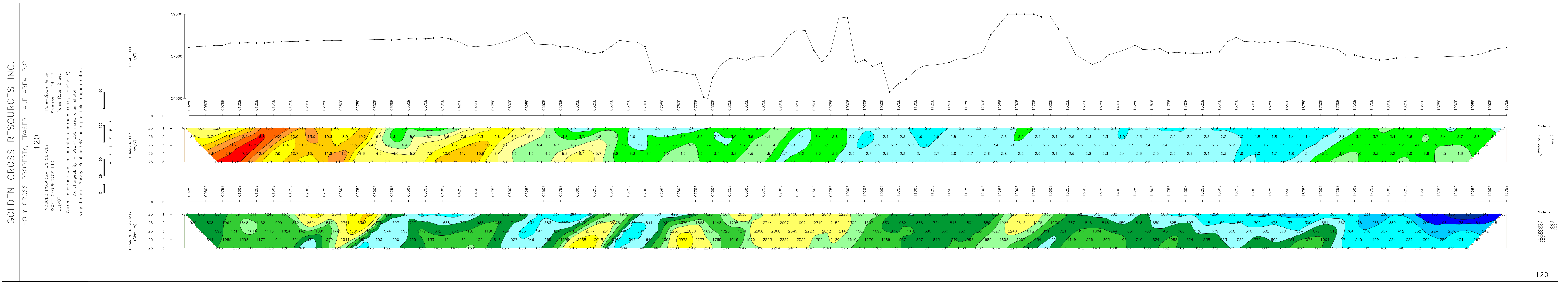
Resistivity (ohm-m)



122



121



120



