



BC Geological Survey  
Assessment Report  
37601



Ministry of Energy and Mines  
BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geophysical Modeling

TOTAL COST: \$11,760.00

AUTHOR(S): Jacques Houle, P.Eng.

SIGNATURE(S): 

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-8-231

YEAR OF WORK: 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5698919, 5705032

PROPERTY NAME: Jasper

CLAIM NAME(S) (on which the work was done): 342740, 546913, 546919, 546921, 546926, 546927, 546930, 546931, 546932

COMMODITIES SOUGHT: Cu,Pb,Zn,Ag,Au

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092C037, -080, -081, -088, -174, -175, -176, -243, -254, -256

MINING DIVISION: Victoria

NTS/BCGS: 092C15E / 092C088

LATITUDE: 48 ° 50 '12 " LONGITUDE: 124 ° 35 '3 " (at centre of work)

OWNER(S):

1) Nitinat Minerals Corporation

2)

MAILING ADDRESS:

70 York Street, Suite 1710

Toronto, Ontario M5J 1S9

OPERATOR(S) [who paid for the work]:

1) Nitinat Minerals Corporation

2)

MAILING ADDRESS:

70 York Street, Suite 1710

Toronto, Ontario M5J 1S9

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

intermediate volcanics, felsic volcanics, mafic volcanics, basalt, andesite, basaltic andesite, dacite, rhyodacite, lapilli tuff, crystal tuff, massive, breccia, granodiorite, quartz diorite, stocks, Triassic, Jurassic, volcanogenic massive sulphides, epithermal veins, quartz-calcite-sulphide veins, fiammi, flow banding, shearing, foliation, silica, calcite, chlorite, epidote, hematite, magnetite, pyrite, chalcopyrite, sphalerite, galena, sub-horizontal, conductor

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 642,2163,3025,3649,3671,5857,5965,10388, 11196,12260,12530,13916,16700,16813,17105,24087,24232,24716,25863,26467,26798,27088,27322,27657,29659,30452,31000

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
<b>Ground, mapping</b>	_____		
<b>Photo interpretation</b>	_____		
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
<b>Magnetic</b>	_____		
<b>Electromagnetic</b>	_____		
<b>Induced Polarization</b>	_____		
<b>Radiometric</b>	_____		
<b>Seismic</b>	_____		
<b>Other</b>	<b>EM Modeling and Inversion (6615 ha)</b>	<b>all claims pre-reductions/abandonment</b>	<b>\$11,760.00</b>
<b>Airborne</b>	_____		
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
<b>Soil</b>	_____		
<b>Silt</b>	_____		
<b>Rock</b>	_____		
<b>Other</b>	_____		
<b>DRILLING (total metres; number of holes, size)</b>			
<b>Core</b>	_____		
<b>Non-core</b>	_____		
<b>RELATED TECHNICAL</b>			
<b>Sampling/assaying</b>	_____		
<b>Petrographic</b>	_____		
<b>Mineralographic</b>	_____		
<b>Metallurgic</b>	_____		
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
<b>Line/grid (kilometres)</b>	_____		
<b>Topographic/Photogrammetric (scale, area)</b>	_____		
<b>Legal surveys (scale, area)</b>	_____		
<b>Road, local access (kilometres)/trail</b>	_____		
<b>Trench (metres)</b>	_____		
<b>Underground dev. (metres)</b>	_____		
<b>Other</b>	_____		
		<b>TOTAL COST:</b>	<b>\$11,760.00</b>

**2018 Assessment Report for  
Geophysical Modeling**

**April 2018 – July 2018**

**On the**

**Jasper Property**

**Victoria Mining Division**

**BCGS 092C088  
NTS 092C/15E**

**UTM Zone 10N 5410500N 383750E**

**For**

**Nitinat Minerals Corporation**

**70 York Street, Suite 1710, Toronto, Ontario M5J1S9**

**Report written by**

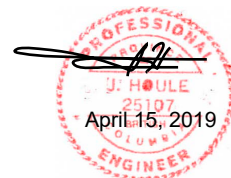
**Jacques Houle, P.Eng.**

**Mineral Exploration Consulting**

**6552 Peregrine Road, Nanaimo, B.C. V9V 1P8**

**July 23, 2018**

**Revised April 15, 2019**



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## **Introduction**

### **Property location, access and physiography**

The Jasper Property claims are in the Victoria Mining Division, west-central Vancouver Island, BC, Canada, as shown in Figures 1 and 2. The Property is approximately 80 kilometres northwest of Victoria and is centered at latitude 48° 50' and longitude 124° 35' in NTS 092C 15E or BCGS 092C 088. The southern portion of the claims overlie most of Four Mile Creek and its tributaries, which flow south to the Caycuse River. The northern portion of the claims overlie most of Jasper Creek, Granite Creek, and their tributaries which flow northwest into the Nitinat River.

Steep incised drainages with rugged relief to approximately 300 meters characterize the physiography of the area. Much of the region has been logged in recent years and young second growth forest and logging roads occur over most of the claims. Climatic conditions are temperate with abundant rainfall in fall, winter and spring. Snow is seasonally present on the upper elevations during the period of mid- December to mid-February. Summer conditions can be dry and hot from mid- July to the end of August. Local temporary closures of the woods may occur during times of extreme forest fire danger. Generally, mild West Coast climatic conditions allow for a long exploration field season.

All weather logging road access is from the north via Port Alberni, approximately 45 kilometres, or from the east via Cowichan Lake (25 kilometres) and Duncan (50 kilometres) with driving times of about 90 minutes from either Port Alberni or Duncan to the Property. The Jasper Creek and Granite logging roads access the northern portion of the Property and Caycuse Main the southern portion. The Jasper and Granite roads have been partially deactivated and helicopter or foot access is currently required to access much of the northern property, including the Jasper Showing. Caycuse Main logging road from Lake Cowichan was recently made inaccessible to motor vehicles by a landslide in 2013 or 2014 which washed out a bridge on the southern part of the property, and helicopter or foot access is currently required to access the Pan Showing and all the Main Grid area of the property.

### **Property definition, owner, operator, geology and history**

The Jasper Property consists of the Jas 3 legacy mineral claim and eight cell mineral claims that together comprise nine contiguous claims which cover 3978 hectares (Table 1 - Mineral Title Status). Mineral title location maps of the Property at two scales are shown in Figures 1 and 2. The Property is 100% owned and operated by Nitinat Minerals Corporation., Free Miners License No. 232291. The Jasper Property is subject to a purchase agreement dated December 1, 2007 whereby Nitinat acquired 100% interest in the Property from Inspiration Mining Corp. in exchange for special warrants. The Jas 3 legacy mineral claim is in good standing until August 25, 2022, seven cell mineral claims until August 25, 2019 and cell mineral claim 1067847 until April 11, 2020.

The surface rights over the mineral claims of the Jasper Property are held by the B.C. government as crown land. Crown timber licenses over much of the Property are held by various logging companies. Communities and Reserves of the Dididat First Nation

are situated along the mouths of the Nitinat and Caycuse Rivers where they drain into Nitinat Lake, northwest and southwest of the Property respectively. A No Staking Reserve extends from these reserves along the northern boundary of the Jasper Property.

**Table 1 – Jasper Mineral Claims Title Status as of April 15, 2019**

Title Number	Claim Name	Owner	Title Type	Issue Date	Good To Date	Status	Area (ha)
342740	JAS 3	232921 (100%)	Mineral	1995/DEC/19	2022/AUG/25	GOOD	300
546919		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	148.78
546921		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	233.8995
546926		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	63.8048
546927		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	42.5453
546930		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	425.2334
546931		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	488.8157
546932		232921 (100%)	Mineral	2006/DEC/08	2019/AUG/25	GOOD	531.1546
1067847	Jasper Main	232921 (100%)	Mineral	2019/ARP/11	2020/APR/11	GOOD	1743.820
Totals	9 claims						3978.056

The Jasper Property is hosted in a belt of rocks mapped as upper Triassic to lower Jurassic Bonanza group, immediately underlain by rocks of the middle Triassic Vancouver group. The belt trends southeasterly from Nitinat Lake through Gordon River, south of Cowichan Lake. The Bonanza belt is flanked to the west and east by Paleozoic Sicker Group rocks which host the economically important Myra Falls Massive Sulphide district located approximately 120 kilometres to the northwest, and the Lara Massive Sulphide district located approximately 50 kilometres to the east, respectively.

The Bonanza Group in the area of the Jasper Property consists of a variety of maroon to gray-green, feldspar phyric basalt and andesite flows and dacite and felsic lapilli tuff containing various minor gabbro, andesite and dacite dykes. There is a lack of lithological continuity and distinct marker beds are absent. In the basal part of the sequence, sedimentary rocks are found interbedded with lapilli and crystal tuffs, indicating a sub-aqueous environment. It may be significant that work in 2005-06 by G.T. Nixon of the B.C. Geological Survey ("BCGS") has proposed this same geological horizon in northern Vancouver Island as a favourable setting for volcanogenic massive sulphide deposits.

Granodiorite Island Intrusion stocks surround the Jasper Property and are mapped in the northeast portions of the property. The coeval stocks are regular to elongate in shape with steep sides and are generally exposed as rounded outcrops. The major lithology is granodiorite to quartz-diorite and most of the stocks are rich in mafic inclusions, particularly in marginal zones where magmatic intrusive breccias occur.

Numerous RGS anomalies and MINFILE occurrences are found in the Alberni-Cowichan area and both porphyry and VMS styles of mineralization have been reported by BCGS geologists. Porphyry style Cu-Mo occurrences are commonly associated with high level sub-volcanic dykes and sills belonging to the Island Intrusion or Catface intrusive suites. The Lara VMS belt occurs in the eastern portion of the region hosted in rocks mapped as Sicker Group. Massey and Friday (BCGS) note VMS mineral potential where

reported "sulphidic argillites are found interbedded with tuffs" in the basal part of the Bonanza sequence in the Alberni - Cowichan area.

No Property scale geologic map has been compiled for the MINFILE occurrences located on the Property from the detailed mapping that has been done on a local scale by various companies over the years. A compilation of this nature goes beyond the scope of this technical report and would best be done by correlation of geologic units with 2015 mapping information and inputting data into a GIS spatial database system.

From historical mapping, the Property geological setting can be described as follows: The Jasper Property is mainly underlain by mafic to felsic volcanic rocks that have been previously mapped as Bonanza group. The north-central portion of the Property (Jasper showing) is underlain by a northwest trending sequence of intermediate flows and flow breccias that are flanked to the east by mafic flows. Units appear to have a moderate dip to the southwest. A wedge-shaped body of felsic volcanic flows overlies the mafic rocks to the east. Felsite dykes intrude the intermediate and mafic volcanics, some of which may be feeders to the younger felsic flows. The intermediate and mafic flows and flow breccias are massive and bedding orientation is impossible to determine. Minor thin intercalations of pyritic argillite are present locally within the volcanic sequence.

The central and southern portions of the Property (Jasper 1, Tam 16, South Four Mile Creek, Camp View, Camp Creek, South Camp Creek Road and Pan showings) are underlain by mafic and intermediate volcanic sequences. Felsic volcanics occur at higher elevations on the eastern portion of the claims. Local foliation is oriented north-south. Within the alteration zone, protoliths are obliterated in macroscopic outcrop scale and individual units are difficult to correlate and map.

The northeast portions of the Property (Avalin prospect and Tenas and Gillespie showings) are sequentially underlain by Triassic Vancouver Group rocks consisting of mafic volcanics, tuffs and breccias of the Triassic Karmutsen Formation, limestone of the Quatsino Formation, and black argillites of the Parson Bay Formation. All rocks are highly folded, faulted and intruded by lower Jurassic intermediate to mafic dykes that are coeval with the Bonanza volcanics and by felsite dykes, either Jurassic or younger.

An apparent major fault suture cuts Vancouver Island from the mouth of the Carmanah River on the West Coast to Parksville on the East. All the MINFILE occurrences lie along this major fault structure. A north trending gossanous alteration zone with a strike length greater than four kilometers underlies the Jasper Property along the fault from the Caycuse Creek drainage in the south to the Nitinat Valley in the north. The alteration zone is characterized by moderate to intense argillization and silicification accompanied by ubiquitous pyrite flooding. The alteration zone is generally concordant with the foliation and stratigraphy throughout its strike length. Based on the huge volume of intensely altered rock present, a very major period of hydrothermal activity has taken place along the strike length of the system. The Main Grid area is partially underlain by the intense alteration zone. In the Pan area, ferricrete and locally thick till commonly overlie the alteration zone and have the effect of "masking" residual soil anomalies.

Steeply dipping, cross cutting, north trending fractures, shears and fault gouge zones are prevalent within the alteration zone and form the recessive valley containing Four Mile Creek. Coincident narrow fault and fracture zones often emanate as a conjugate set at right angles to the main north trending fault system and control second order

drainages that are the side creeks of the main Four Mile Creek drainage system. Offsets of all structures are not known as units had not been mapped across structures until 2015. Local brittle faulting commonly causes minor offsets to massive sulphide lenses in outcrop at the Jasper Showing.

Approximately twelve Cu, Zn +/- Pb, Ag, Au sulphide showing areas had been relocated or discovered, and sampled by the Arnex/Inspiration programs carried out between 1994 and 2004 (Birkeland, 2004 ARIS 27657). The two showings of principal interest in the central portion of the Property are the Jasper Showing (MINFILE 092C080) and the Pan Showing (MINFILE 092C088). In 2004 and 2010, geo-referenced soil geochemistry surveys were completed in the Main Grid area of the Property (Figure 2), with results for selected target and indicator elements Au, Ag, Cu, Pb, Zn, Mo shown in Figures 3 to 8 and summarized in Figure 12. In 2007, Inspiration completed geochronology work (Houle, 2008 ARIS 29659) establishing the Jurassic age of sulphide mineralization at Jasper. In 2008, after acquisition of the property from Inspiration, Nitinat completed a magnetic and electro-magnetic airborne geophysical survey over the Jasper Property (Houle, 2008 ARIS 30452), shown in Figures 9 to 11. In 2010, airborne geophysical anomalies were prospected, an additional copper skarn showing was relocated and sampled (Avalin MINFILE 092C 037), and additional new Cu, Zn +/-Pb, Ag, Au sulphide showings were discovered and sampled (Burgert and Houle, 2010 ARIS 31908), and soil geochemistry coverage of the Main Grid area started in the early 2000's was completed, shown in Figures 3 to 8. In 2011 mechanized trenching and detailed geological mapping and rock chip sampling was completed at four road-accessible sulphide showings, and a three-hole 162 metre definition diamond drilling program was completed at the Pan South Showing (Houle, 2011 ARIS 32906). In 2015, detailed 1:2000 scale GPS grid-based geological mapping and concurrent whole rock lithogeochemical sampling was completed over the Main Grid Area, a new Zn +/- Cu, Pb, Ag, Au, Cd, Te, Bi massive sulphide occurrence (Zincy) in subcrop was discovered and sampled (Houle, 2015 ARIS 35671). In 2017, modeling and inversion of the 2008 airborne magnetic and EM data detected a pervasive sub-horizontal conductive horizon at depths of 300 to 500 metres below surface interpreted to exist beneath much of the Jasper Property but has never been tested by drilling (Houle, 2017 ARIS 37078).

This report documents all the work completed in 2018, and includes some data from earlier work programs, shown where appropriate.

### **List of claims and work completed**

From April 21 to May 9, 2018 intermittently the author, Jacques Houle P.Eng., researched, established and executed a strategy to maintain the Jasper Property in good standing for Nitinat Minerals Corp. As recommended in the 2017 technical assessment report, a property-wide geophysical modeling of the deep, horizontal conductive horizon was initiated to better interpret the lateral extent, depth and varying thickness of the that horizon. Trent Pezzot, P.Geo. of Geosci Data Analysis Ltd. was engaged to extend the 2.5D EM inversion work commenced in 2017 over all the property claims, which he commenced on May 7, 2018 and continued intermittently until July 4, 2018. The key aspects of the 2018 geophysical modeling and inversion work appear in Appendix 1, and follows up work completed in 2017 (Houle, ARIS 37078).

This technical report was subsequently completed by the author intermittently from July 5, 2018 to July 27, 2018. The 2018 cost statement for the technical assessment work program appears in Appendix 2; and the MTO statements of work supported by and described in this technical report appear in Appendix 3. In January – March 2019, the technical report was reviewed and rejected and a section 33 order was issued by the BC Mineral Titles Branch, resulting in forfeiture of claim 546913. On April 11, 2019, the author re-selected the area previously covered by claim 546913 with a new claim 1067847. The 2018 technical report was subsequently amended to correct deficiencies, to update the claims, and was submitted to MTO for documentation and PAC credit.

## **Technical Data, Interpretation, Conclusions and Recommendations**

### 2018 Geophysical Modeling Highlights:

The reader is referred to Appendix 1 of this report which contains the Phase 2 EM Interpretation Memo and Resistivity Cross Sections by Trent Pezzot, P.Geo., in their entireties. The author has utilized and interpreted portions of that work, as well as work completed and documented in previous reports for completing this technical report.

In 2017, magnetic inversion established low susceptibility bodies coincident with polymetallic zones surrounded by narrow, vertical high susceptibility pipes. Preliminary electromagnetic inversion established a 2 Layer resistivity model consisting of a thick high resistivity layer from surface to 300-600 m. depth overlying a thin, sub-horizontal to undulating low resistivity (high conductivity) layer. The deep high conductivity layer could represent a sedimentary, replacement, epithermal or metallic sulphide horizon, and has never been tested by drilling.

In 2018, the electromagnetic inversion analysis was expanded across the entire area surveyed in 2008 and refined to help identify the thickest and shallowest portions of the high conductivity layer. This work identified 5 clusters of high conductivity, of which 4 are located on the existing Jasper Property. The fifth cluster is located beyond the present boundary of the Jasper Property.

The largest and most intense high conductivity cluster (#2) measures approximately 2 km by 2 km in area and underlies 11 of the 15 documented base/precious metal sulphide occurrences and is centred on the Main Grid area of the Jasper Property, interestingly located between and excluding the Jasper MINFILE 092C080 and the Pan MINFILE 092C088. Three of the other clusters (#1, #3 and #4) are located one immediately north and two immediately south of the largest cluster and may represent faulted offsets of a single semi-continuous north-south trending conductive horizon 7.5 km in length. The 3 shallow drill holes completed in 2011 near the Pan showing intersected vein-type sulphides consisting mainly of sphalerite (non-conductive) mineralization and were located precisely between clusters #2, #3 and #4.

The 2017-2018 geophysical modeling and inversion programs, particularly the EM work, has identified a previously unknown sub-horizontal conductive horizon at depths of 500 to 750 metres below surface underlying portions of the Jasper Property. This horizon does not appear to be exposed at surface and has never been tested by diamond

does not appear to be exposed at surface and has never been tested by diamond drilling. In cluster #2 located in the Central portion of the Main Grid area of the property, the conductive layer is horizontal to very gently undulating and lies approximately 500 metres below surface. It appears to be slightly off-set by NW-SE trending cross faults, which also appear to constrain the low magnetic susceptibility body underlying the soil geochemistry and mineral occurrences along the Four Mile Creek valley.

#### Conclusions and Recommendations:

Several key observations with resulting conclusions have been refined for the Jasper Main Grid area resulting from the successful completion of the 2018 geophysical modeling and inversion program, with reference to Figures 24 and 25:

1. Lithological contacts strike N-S, are offset by cross faults which strike NW-SE, and have unknown tops orientations, and uncertain but probably westerly dip directions
2. Main lithology is intermediate volcanics (andesite or basaltic andesite), and two other apparently conformable lithological horizons occur, 250 to 500 apart and each 250 to 500 metres in horizontal thickness, including an eastern felsic volcanic (dacite or rhyodacite) horizon and a western mafic volcanic (basalt) horizon separated by a central intermediate volcanic horizon
3. The lithological horizons are offset by three cross faults 1 to 1.5 km apart, with the southern fault having a left-lateral apparent displacement, the central fault a right-lateral apparent displacement, and the northern fault an undetermined displacement; no evidence was found for the inferred major N-S fault suggested in previous work
4. Fifteen polymetallic sulphide zones discovered in rocks over a 2.75 km. strike length, of which eleven zones occur within or along the contacts of the central intermediate volcanic horizon, one zone occurs within the eastern felsic volcanic horizon, and three zones occur within or immediately west of the western mafic volcanic horizon
5. The 2.25 km. length by 0.5 km wide polymetallic soil geochemistry anomaly is coincident with the polymetallic zones in rocks, also coincident with areas of low magnetic susceptibility, roughly coincident with the central intermediate volcanic horizon, and appears to be truncated into two sub-zones by the central fault
6. A pervasive sub-horizontal conductive horizon at depths of 500 to 750 metres below surface has been interpreted to exist in 4 clusters beneath the Jasper Property, and 1 cluster beyond the property boundary, but has never been tested by drilling
7. Possible target deposit types are many and variable, and may include the following:
  - a. Noranda/Kuroko Massive Sulphide Cu-Pb-Zn – BC Deposit Profile G06
  - b. Epithermal Au-Ag-Cu High Sulphidation – BC Deposit Profile H04
  - c. Epithermal Au-Ag Low Sulphidation – BC Deposit Profile H05
  - d. Polymetallic Veins Ag-Pb-Zn-Au – BC Deposit Profile I05
  - e. Cu+/-Ag Quartz Veins – BC Deposit Profile I06
  - f. Cu Skarns – BC Deposit Profile K01
  - g. Pb-Zn Skarns – BC Deposit Profile K02
  - h. Subvolcanic Cu-Ag-Au (As-Sb) – BC Deposit Profile L01
  - i. Porphyry Cu-Mo-Au – BC Deposit Profile L04

A road-based reconnaissance diamond drilling program is recommended to adequately test the sub-horizontal conductive horizon in Cluster #2 where it is coincident with the area of low magnetic susceptibility and underlies the soil geochemical anomalies and 11 of 15 known polymetallic mineral occurrences with 4 widely spaced near-vertical NQ holes, each up to 750 m. in depth. Downhole EM surveys should be included as part of the drilling program. These proposed holes are shown in Figures 12 and 13.

The drilling program will require rehabilitation of the Caycuse Main Road on the Jasper Property to provide access either from Port Alberni via Nitinat Lake in the west or from Lake Cowichan in the east and establishing a temporary camp at the 2004 Camp Site near the centre of the main grid and proposed drilling area. Although the eastern access from Lake Cowichan has been used in the recent past, it is a 90-minute drive each way by pickup truck to the site of the recent washout along the eastern side of Four Mile Creek, plus a 30-minute hike to Main Grid area. The western access from Nitinat Lake has been inaccessible for many years due to one or more washouts along western side of Four Mile Creek, but if that road was rehabilitated and/or realigned it would be a much shorter distance and driving time from Nitinat Lake to the Property. A foot reconnaissance survey by qualified and experienced road engineers of both possible road routes is recommended prior to deciding which route is best to rehabilitate.

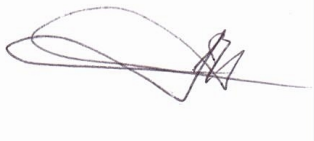
The alternative to repairing either access road route is to complete the proposed drilling program using helicopter support, based from a staging area with road access from either Lake Cowichan or Alberni from a camp at the staging area or on the Property. No cost estimate has been made for a helicopter-supported drilling program.

**Table 2 – Proposed Work Program for the Jasper Property**

<b>Item</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Schedule</b>	<b>Program Cost</b>
Project planning	10 days for 1 senior geologist	\$1,000 per day	Summer	\$ 10,000
Access road survey	10 days for 2 road engineers	\$2,000 per day	Summer	\$ 20,000
Access road rehab.	15 days backhoe + bridges, culverts	\$10,000 per day	Fall	\$ 150,000
Diamond Drilling	4 holes 3,000 metres + downhole EM	\$200 per metre	Fall	\$ 600,000
Compilation, Reports	10 days for 1 sr. + 1 jr. geologist	\$1,500 per day	Winter	\$ 15,000
Contingency	estimate			\$ 55,000
<b>Totals</b>				<b>\$ 850,000</b>

Additional work programs may be recommended conditional upon results.

Respectfully submitted by:



Jacques Houle, P.Eng.

## Author's Qualifications

I, Jacques Houle, P.Eng. do hereby certify that:

I am currently self-employed as a consulting geologist by:  
Jacques Houle, P.Eng. Mineral Exploration Consulting  
6552 Peregrine Road, Nanaimo, British Columbia, Canada V9V 1P8

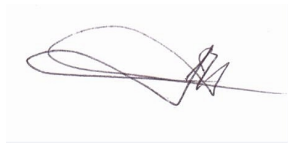
I graduated with a Bachelor's of Applied Science degree in Geological Engineering with specialization in Mineral Exploration from the University of Toronto in 1978.

I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia, the Society of Economic Geologists, the Association for Mineral Exploration British Columbia, the Association of Applied Geochemists, and the Vancouver Island Exploration Group; I am also a member of the Technical Advisory Committee for Geoscience B.C., and of the advisory committee for the Earth Science Department of Vancouver Island University.

I have worked as a geologist for 40 years since graduating from university, including 5 years as a mine geologist in underground gold and silver mines, 15 years as an exploration manager, 3 years as a government geologist and 15 years as a mineral exploration consultant.

I previously worked on the Jasper Property in 2004, 2009, 2010, 2011 and 2015; and I am independent of Nitinat Minerals Corporation.

Dated this 23<sup>rd</sup> day of July, 2018  
Amended this 15<sup>th</sup> day of April 2019

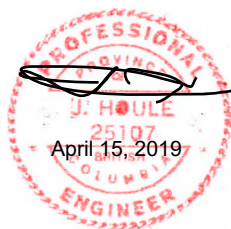


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Signature of Author

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Jacques Houle, P.Eng  
Printed name of Author



## References

### B. C. Ministry of Energy and Mines websites:

Assessment Reports

<http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx>

Landowner Notification

<http://www.empr.gov.bc.ca/Titles/MineralTitles/Admin/Notices/Pages/LandownerNotification.aspx>

MapPlace

<http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/Pages/default.aspx>

Mineral Deposit Profiles

<http://www.empr.gov.bc.ca/Mining/Geoscience/MineralDepositProfiles/Pages/default.aspx>

MINFILE

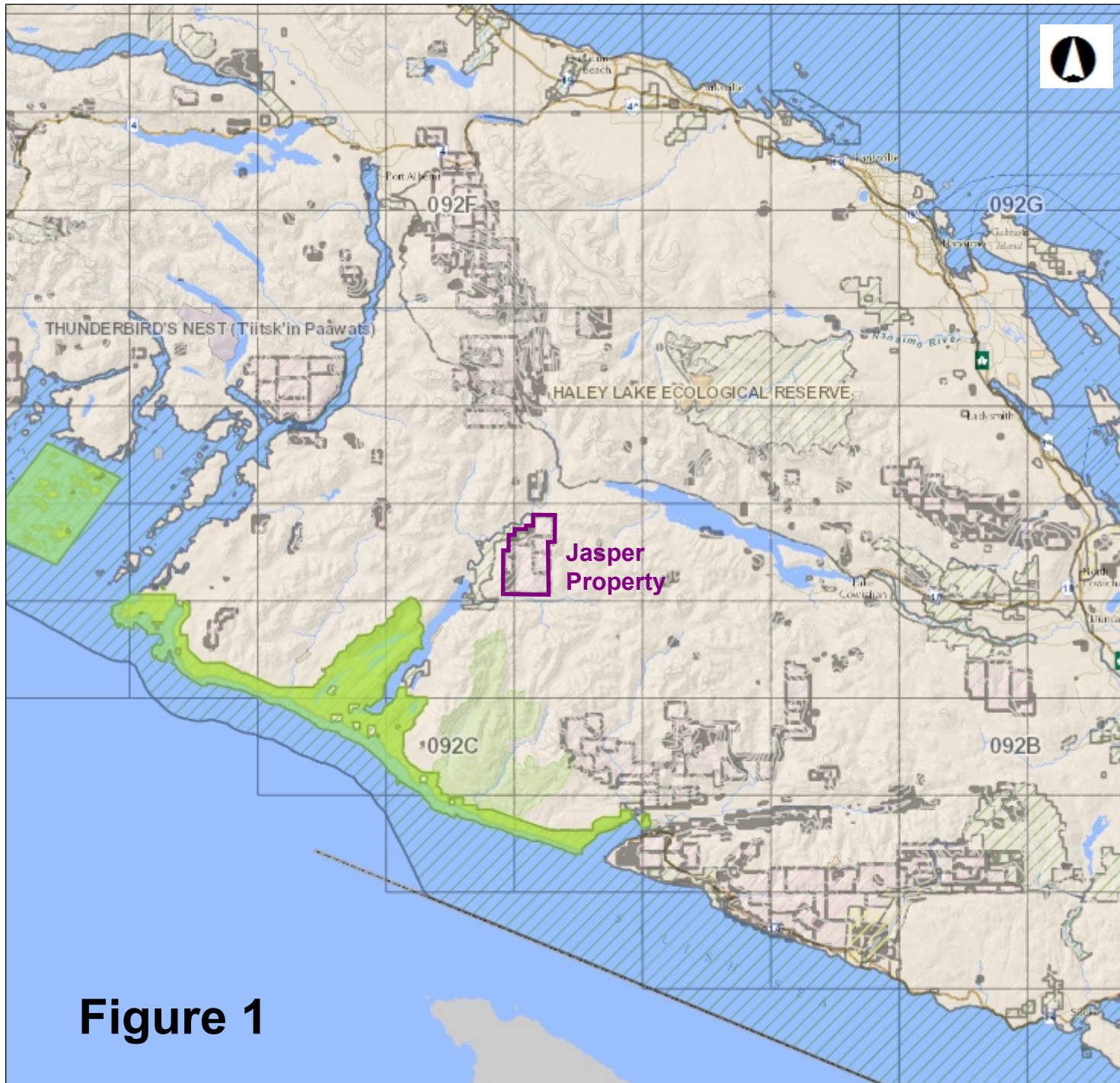
<http://www.em.gov.bc.ca/Mining/Geolsurv/Minfile/>

Ministry Publications

<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Pages/default.aspx>

Mineral Titles Online

<https://www.mtonline.gov.bc.ca/mtov/home.do>



### Jasper Property Location Legend

- National Parks - Outlined
- National Parks - Colour Fill
- Ecological Reserves - Tantal
- Protected Areas - Tantal
- Recreation Areas - Tantal
- Conservancy Areas - Tantal
- Mapsheet Grid (1:20,000)
- Mapsheet Grid (1:250,000)
- Contours - (1:250,000)
- FCODE
- Contour - Index
- Contour - Intermediate
- Area of Exclusion
- Area of Indefinite Contours

0 20.32 40.64 km

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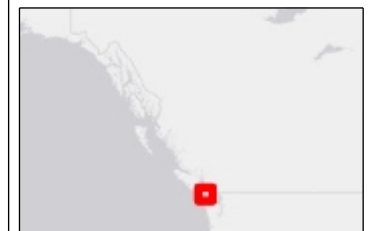
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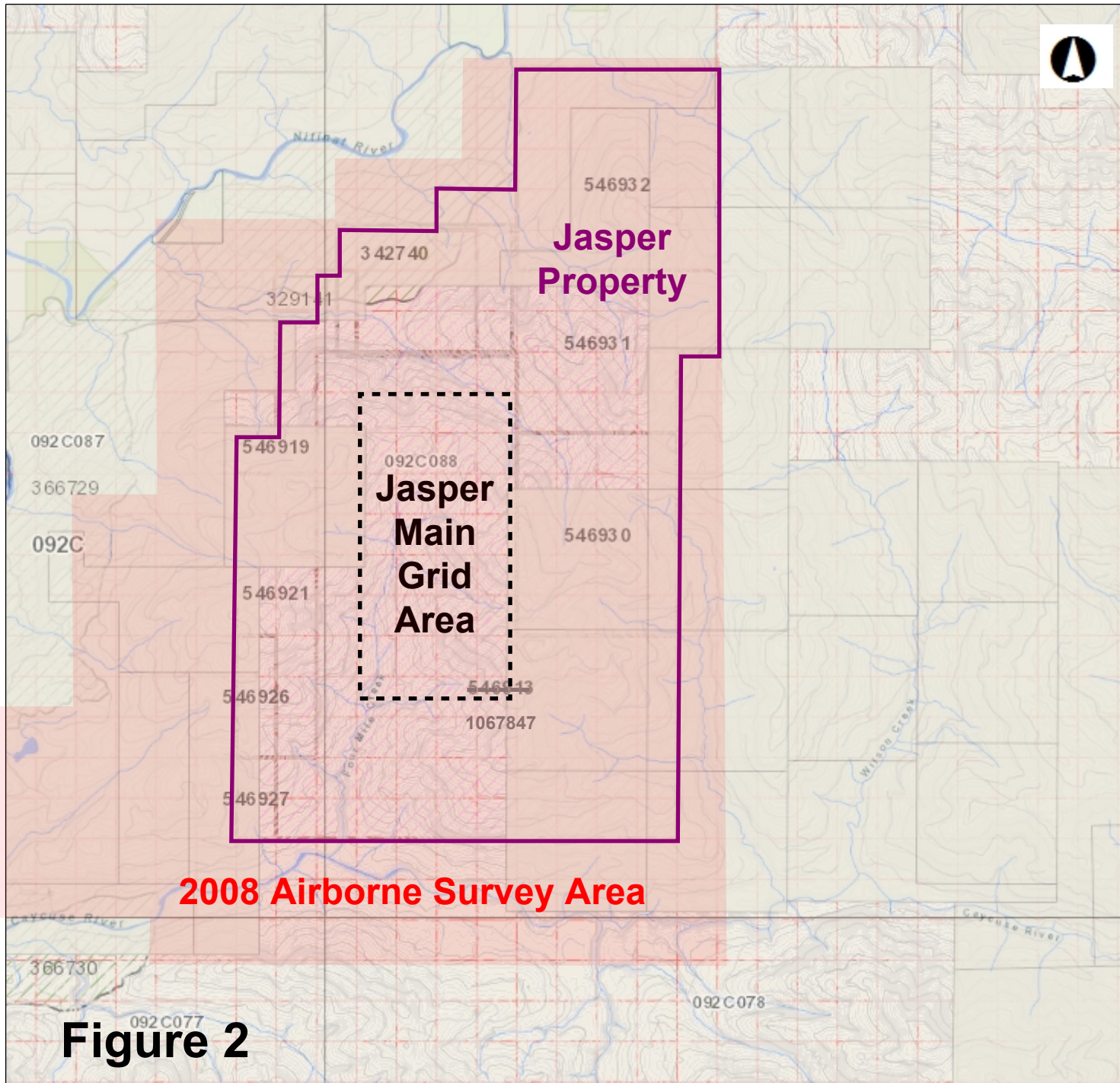
Datum: NAD83

Projection: Web Mercator

#### Key Map of British Columbia



**Figure 1**



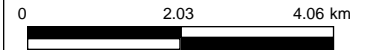
**Figure 2**



**Jasper Property Location**

**Legend**

- National Parks - Outlined
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  - Protected Areas - Tantalis -
  - Recreation Areas - Tantalis
  - Conservancy Areas - Tantal
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  - Mapsheet Grid (1:250,000)
  - Land Act Primary Parcels - 1 Filled
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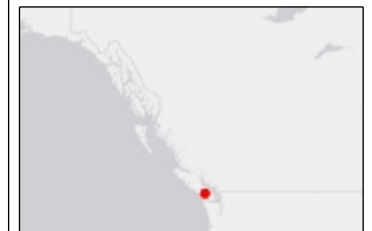
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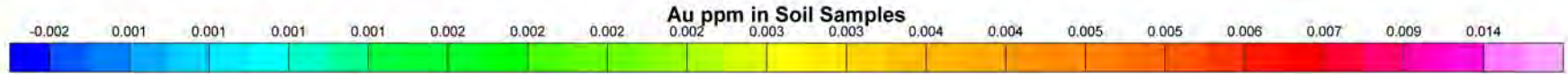
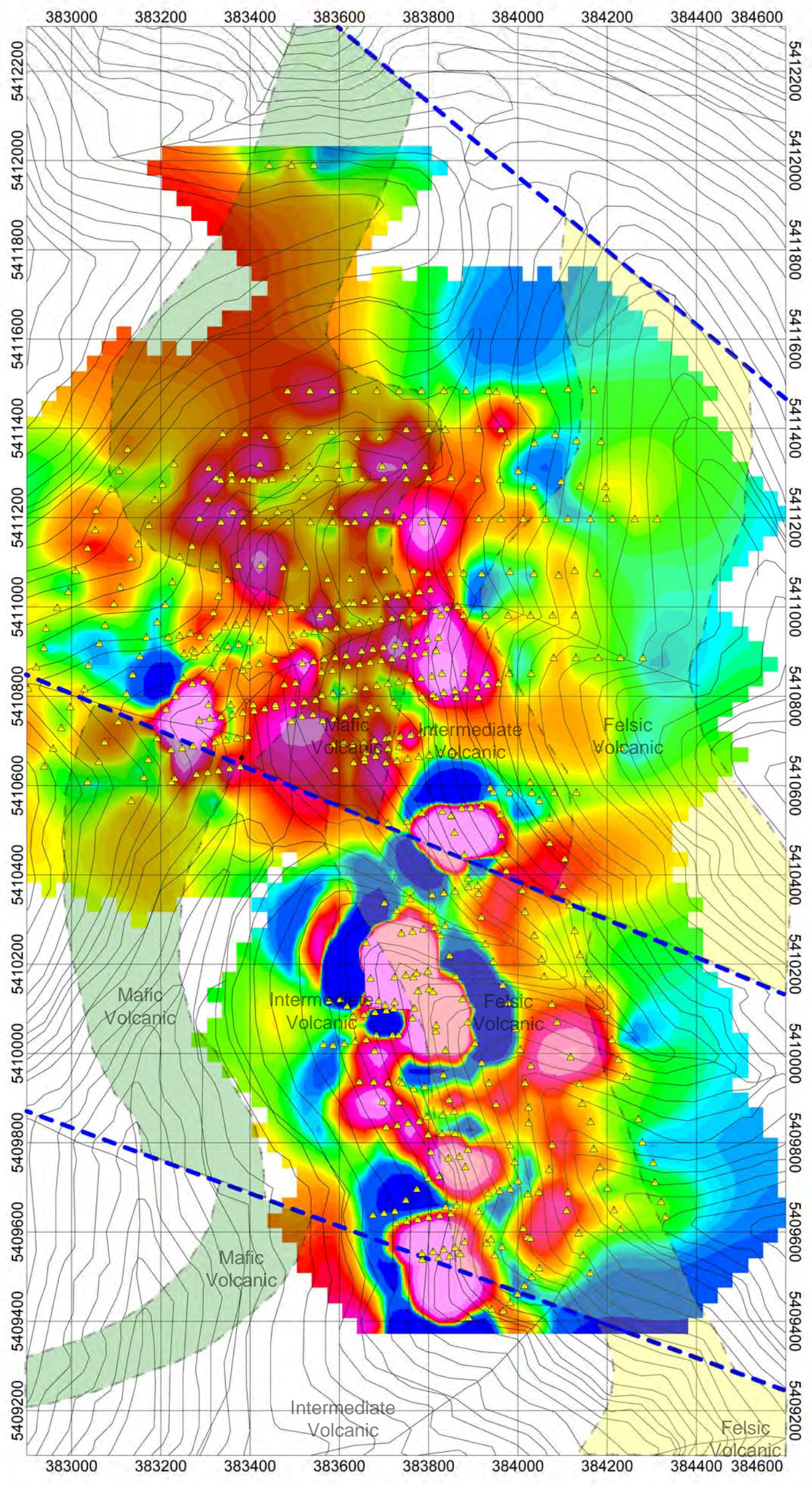
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Datum: NAD83

Projection: Web Mercator

**Key Map of British Columbia**

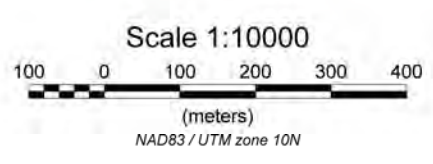




 Faults Interpreted

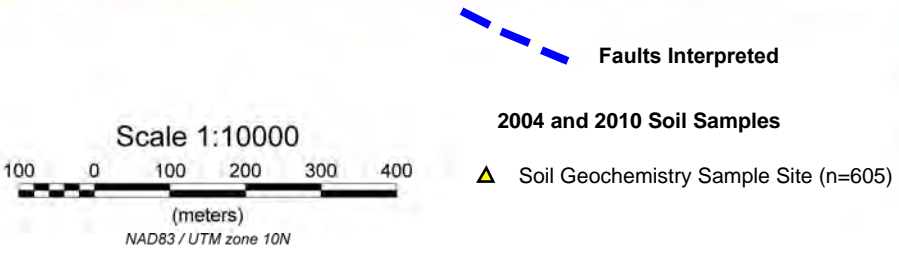
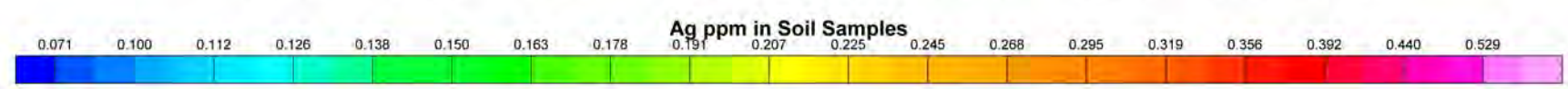
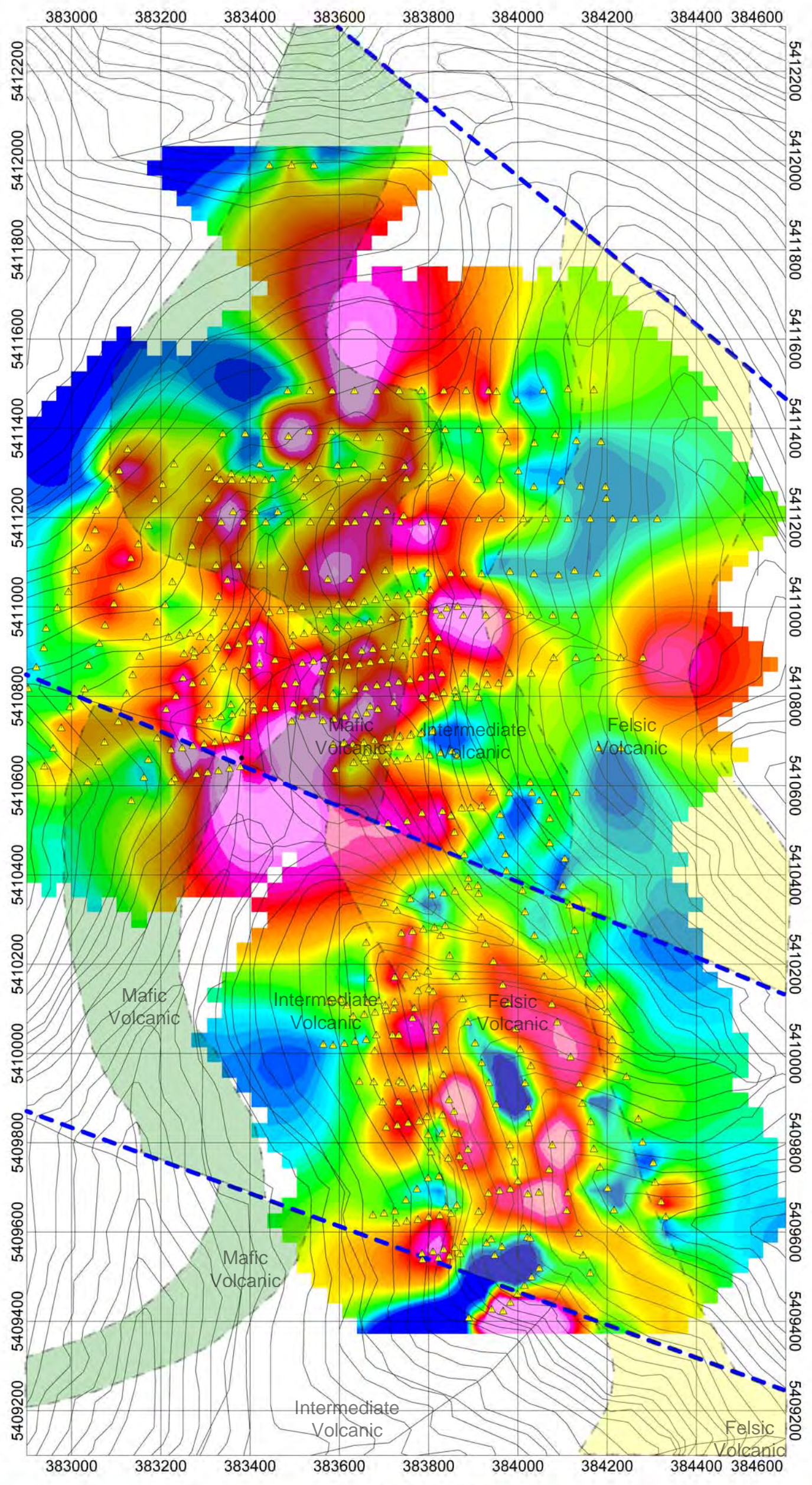
 2004 and 2010 Soil Samples

 Soil Geochemistry Sample Site (n=605)



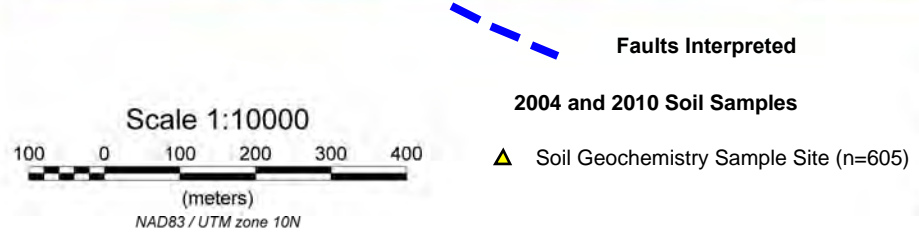
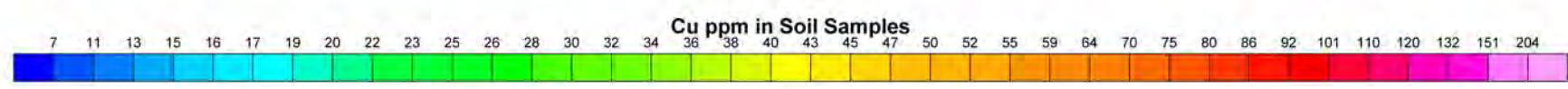
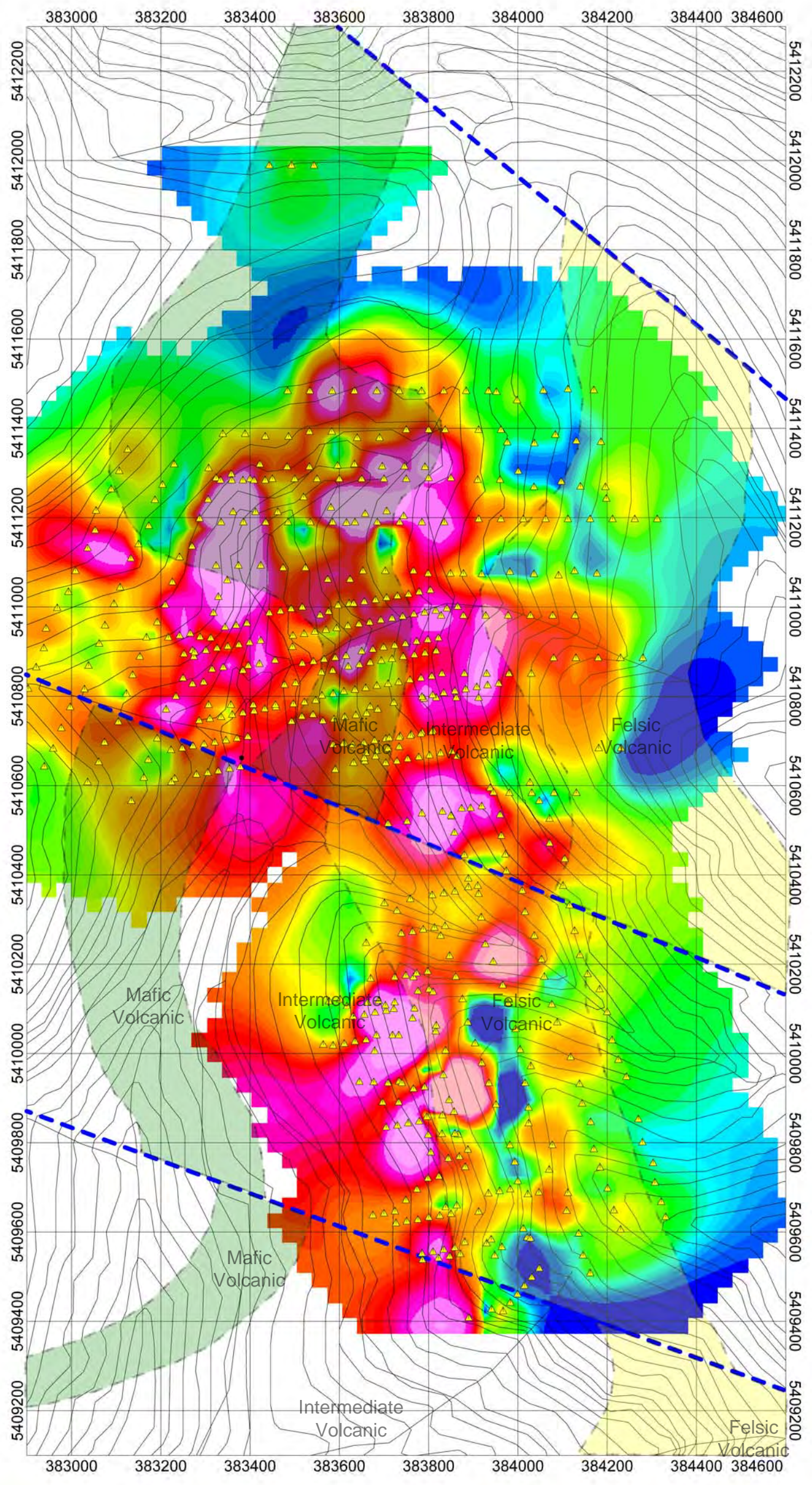
**Figure 3**

Nitinat Minerals Corporation
Jasper Property Main Grid 2004-2010 Gold in Soil Samples
Jacques Houle, P.Eng.



**Figure 4**

Nitinat Minerals Corporation  
 Jasper Property Main Grid  
 2004-2010 Silver in Soil Samples  
 Jacques Houle, P.Eng.



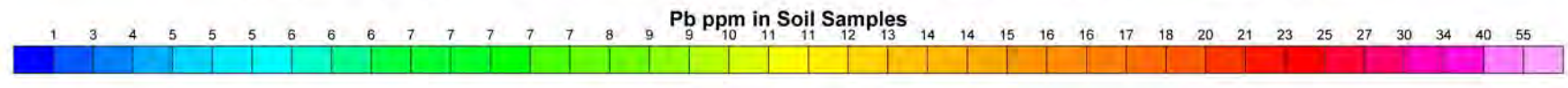
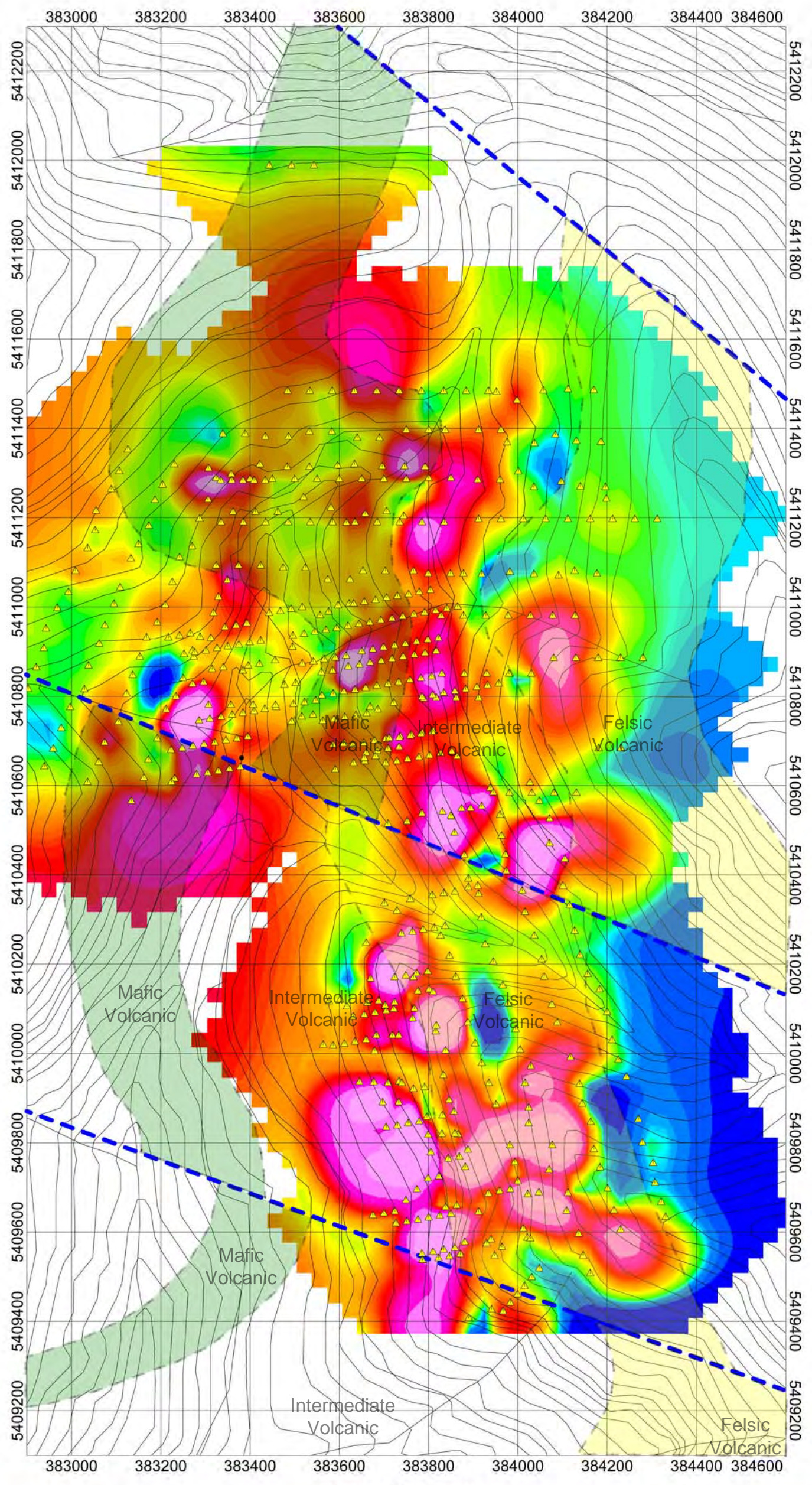
**Figure 5**

**Nitinat Minerals Corporation**


**Jasper Property Main Grid**

**2004-2010 Copper in Soil Samples**

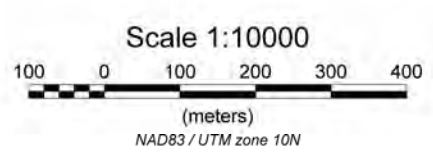
**Jacques Houle, P.Eng.**



 Faults Interpreted

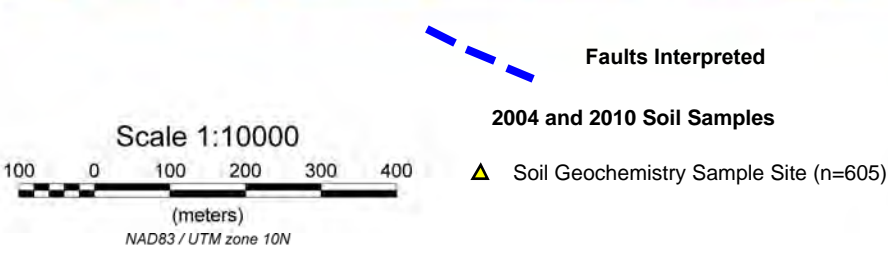
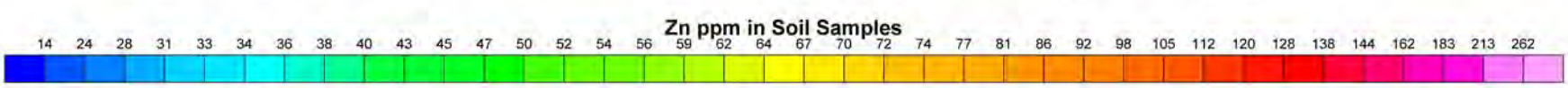
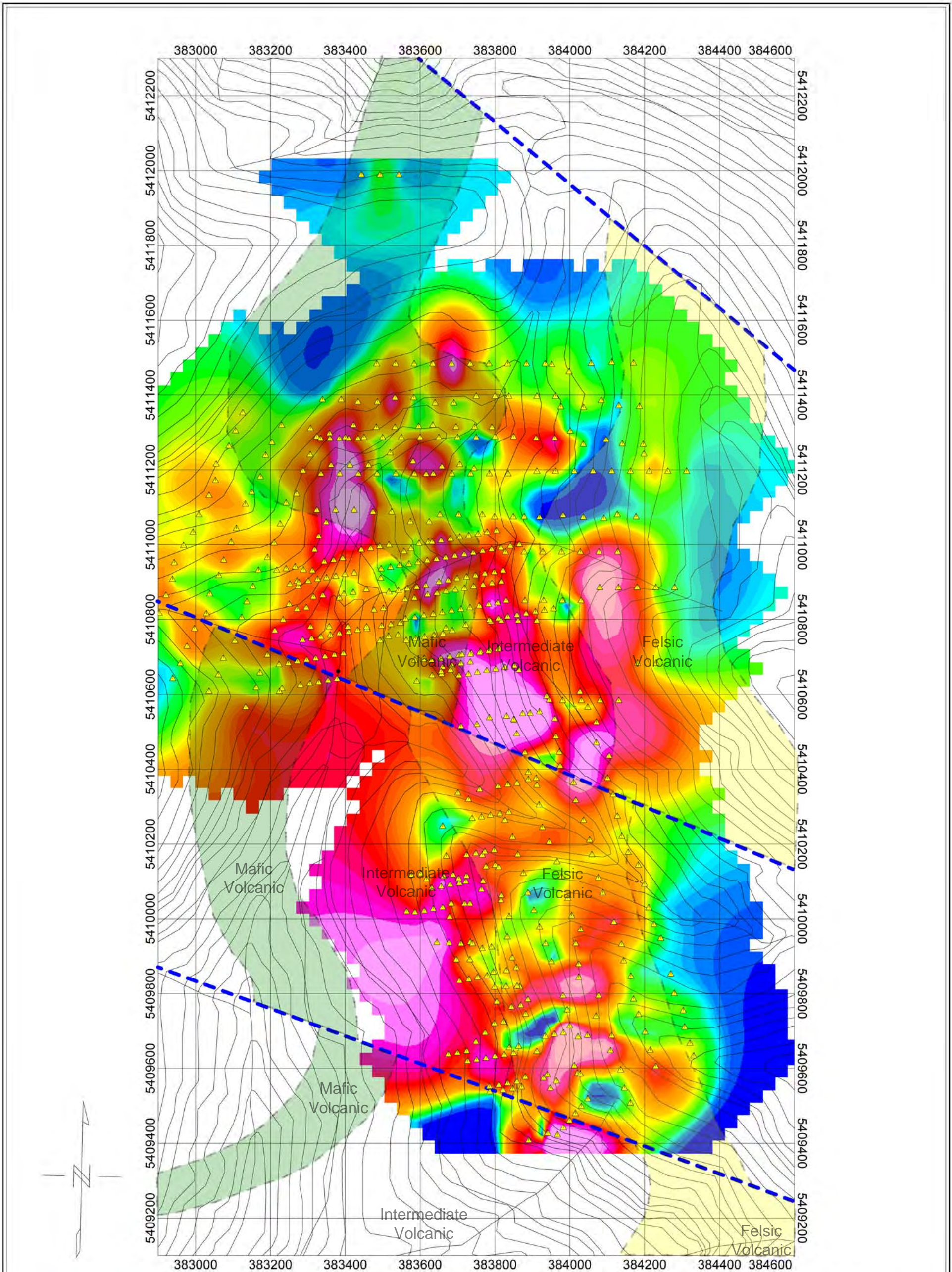
 2004 and 2010 Soil Samples

 Soil Geochemistry Sample Site (n=605)



**Figure 6**

Nitinat Minerals Corporation  
 Jasper Property Main Grid  
 2004-2010 Lead in Soil Samples  
 Jacques Houle, P.Eng.

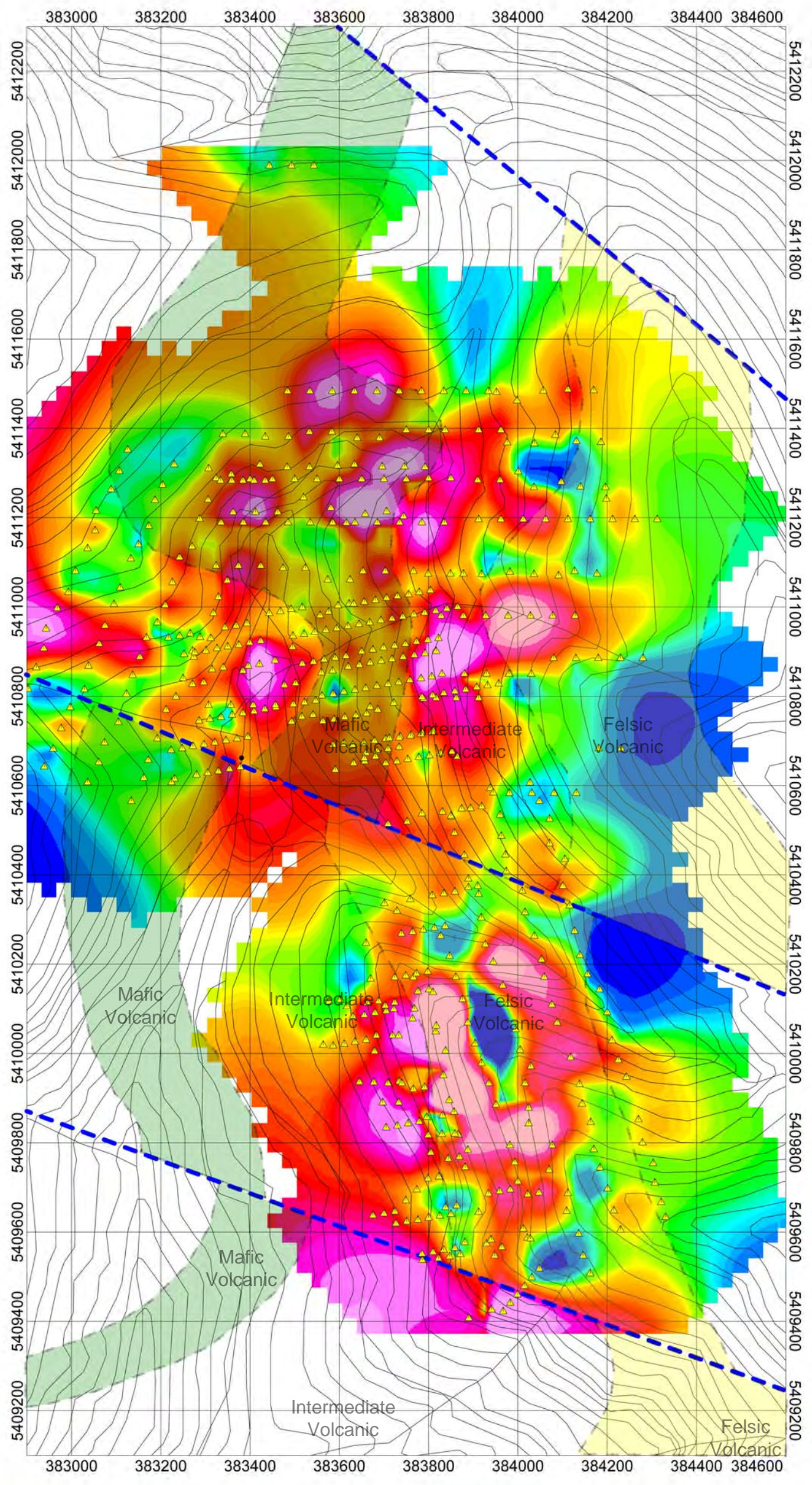


**Figure 7**

**Nitinat Minerals Corporation**


**Jasper Property Main Grid**  
**2004-2010 Zinc in Soil Samples**

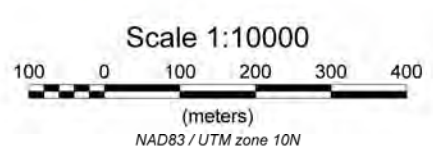
**Jacques Houle, P.Eng.**



 Faults Interpreted

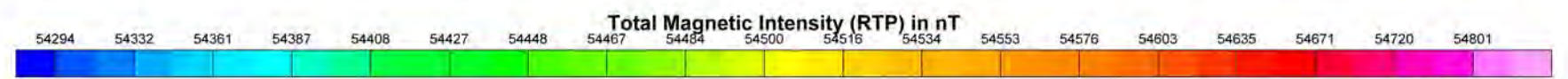
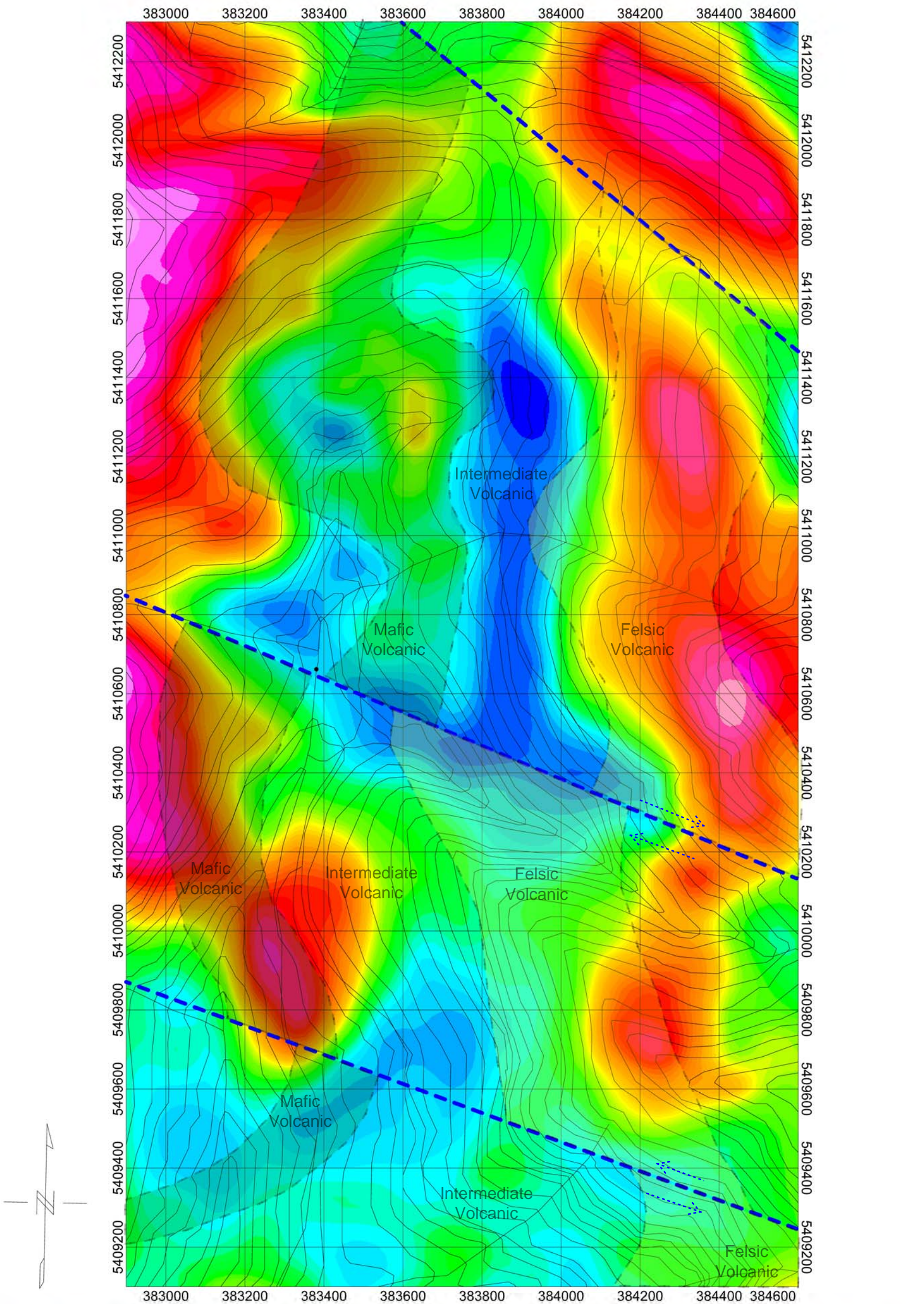
**2004 and 2010 Soil Samples**

 Soil Geochemistry Sample Site (n=605)

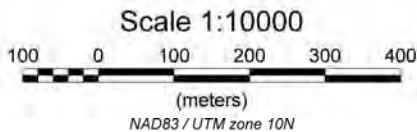


**Figure 8**

Nitinat Minerals Corporation  
 Jasper Property Main Grid  
 2004-2010 Molybdenum in Soil Samples  
 Jacques Houle, P.Eng.



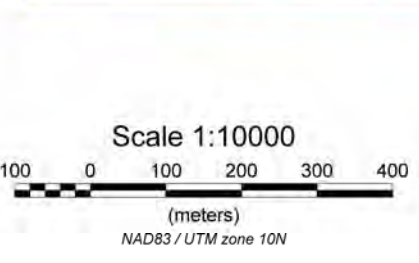
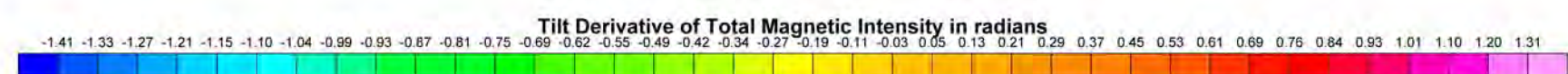
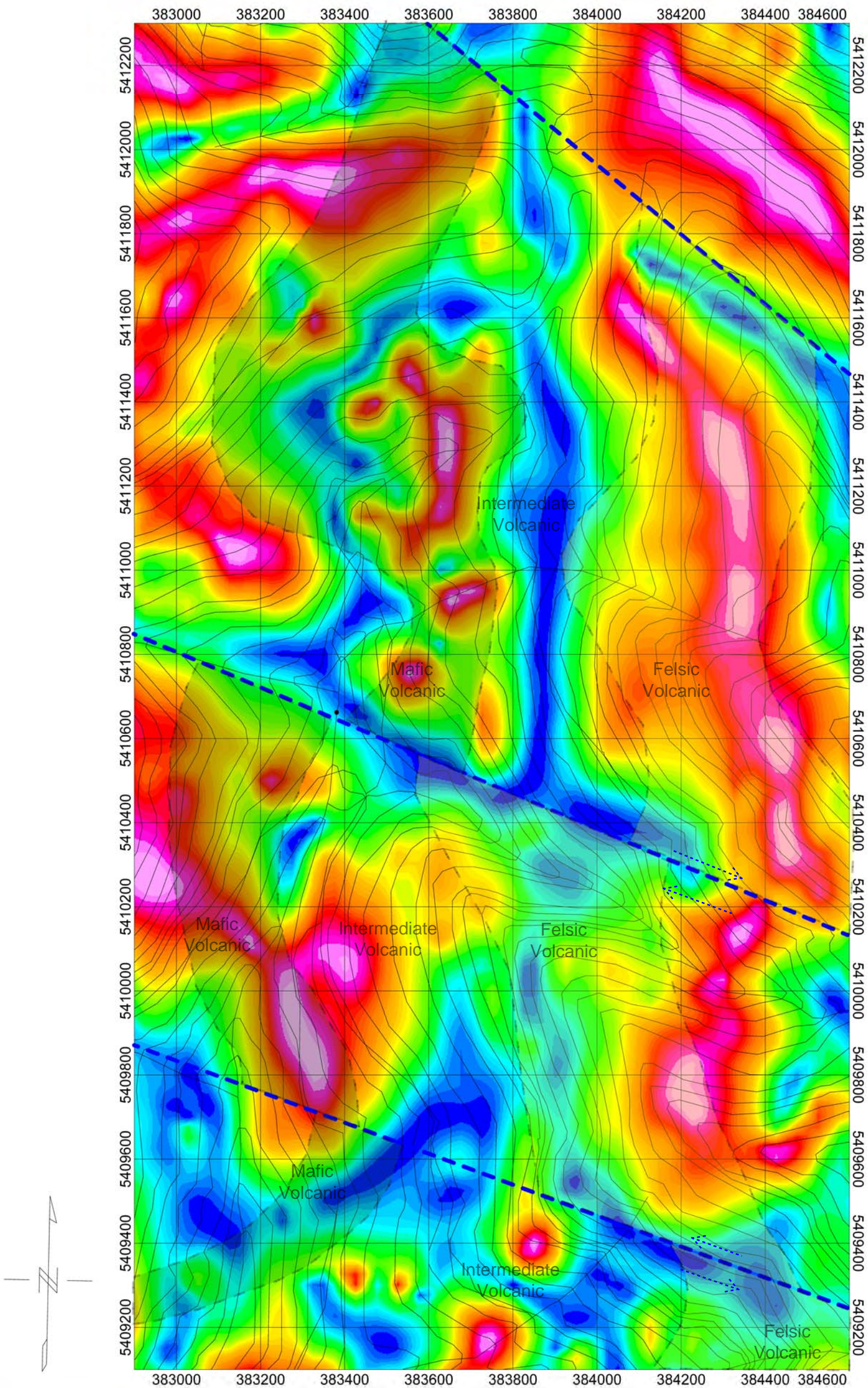
Faults Interpreted




2008 Airborne Magnetic & EM Survey by Aeroquest

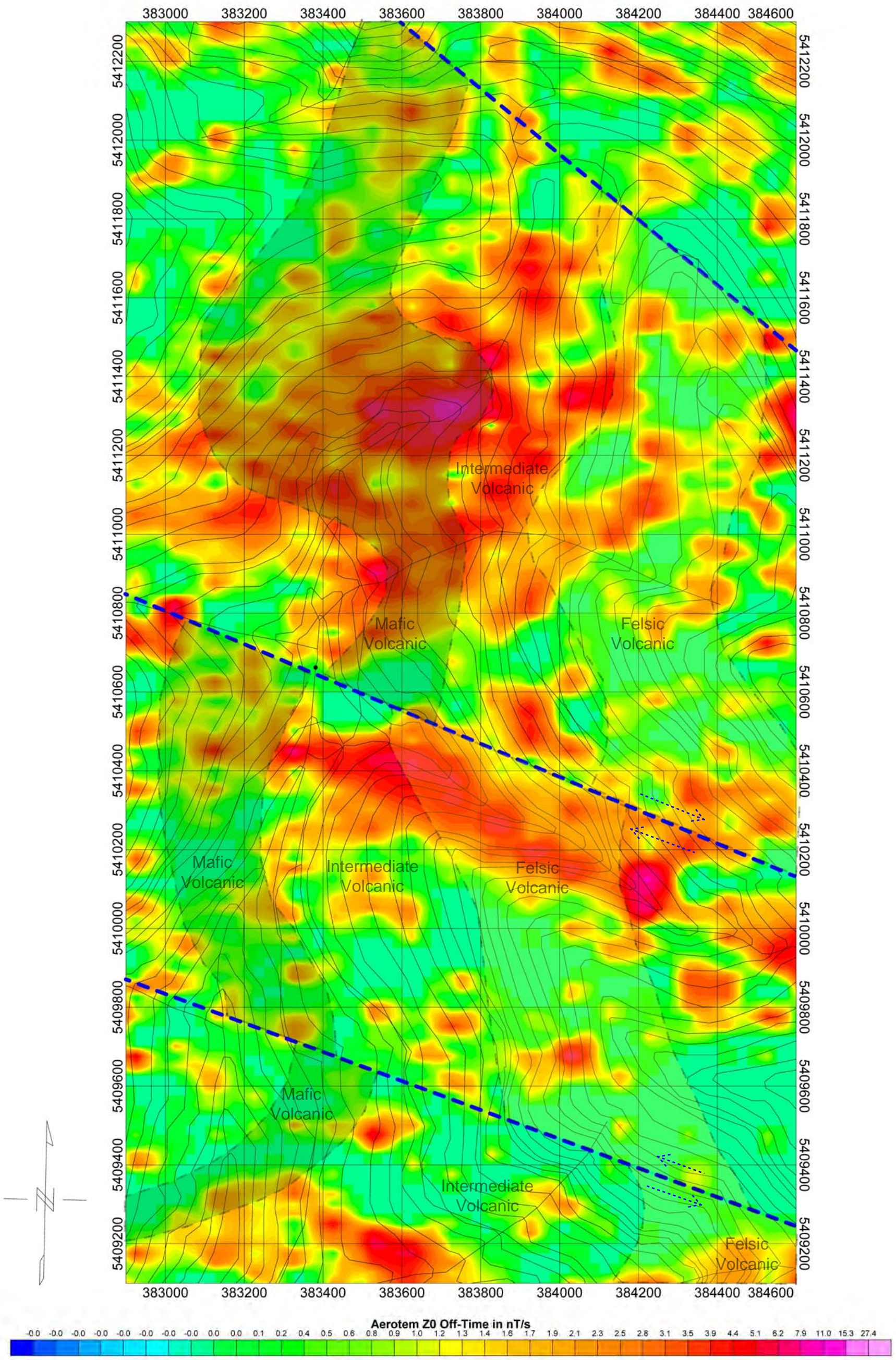
**Figure 9**

Nitinat Minerals Corporation
Jasper Property Main Grid 2008 Total Magnetic Intensity (Reduced to Pole)
<i>Jacques Houle, P.Eng.</i>




 **Faults Interpreted**  
 2008 Airborne Magnetic & EM Survey by Aeroquest

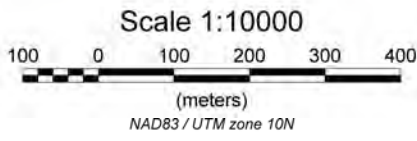
**Figure 10**  
 Nitinat Minerals Corporation  
 Jasper Property Main Grid  
 2008 Tilt Derivative of Total Magnetic Intensity  
 Jacques Houle, P.Eng.

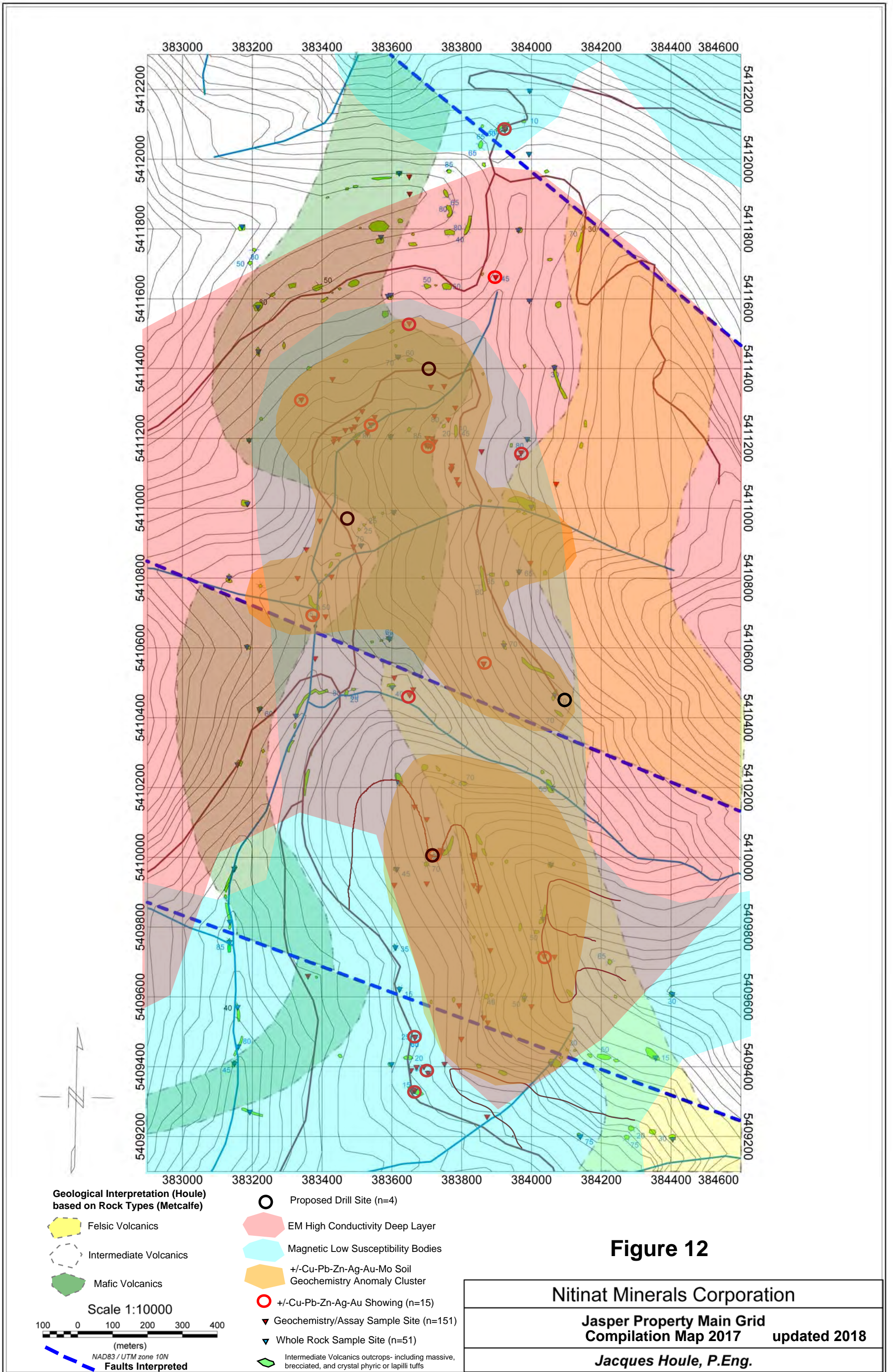


**Figure 11**

Nitinat Minerals Corporation
Jasper Property Main Grid 2008 Aerotem Z0 Off-Time
Jacques Houle, P.Eng.

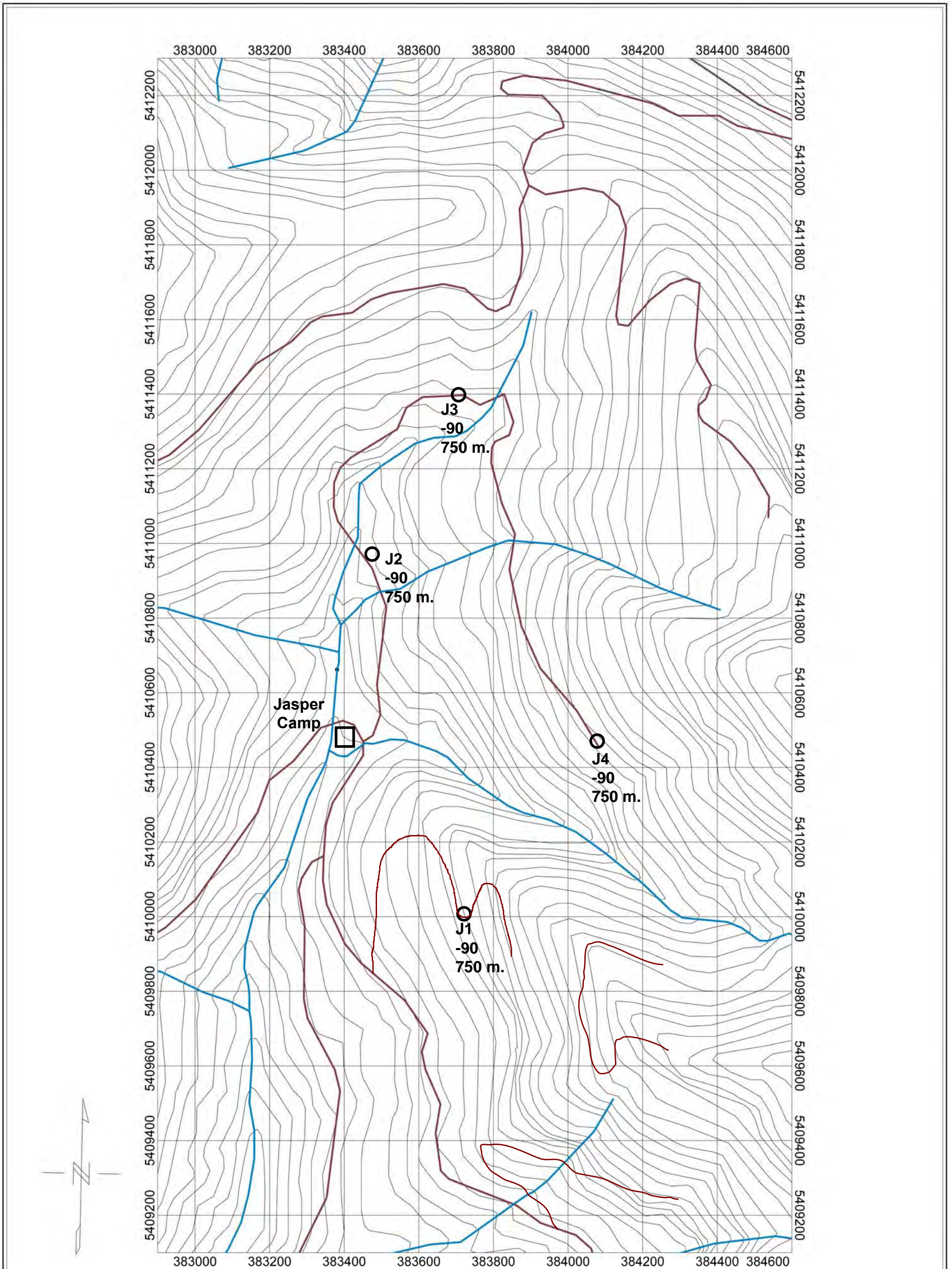
 Faults Interpreted  
 2008 Airborne Magnetic &  
 EM Survey by Aeroquest





**Figure 12**

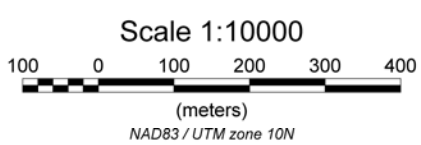
<b>Nitinat Minerals Corporation</b>	
<b>Jasper Property Main Grid Compilation Map 2017</b>	<b>updated 2018</b>
<b>Jacques Houle, P.Eng.</b>	



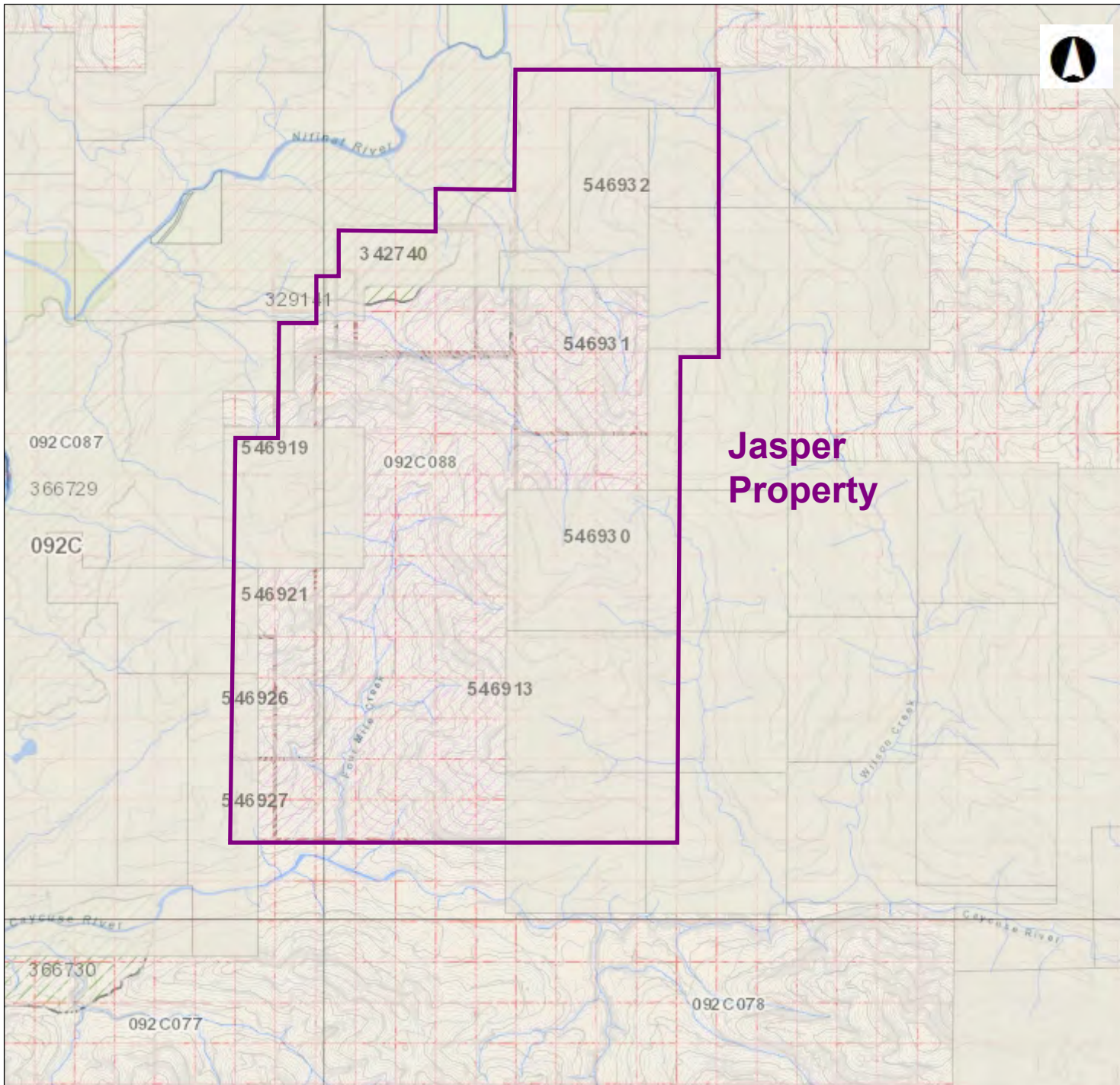
**Figure 13**

**Proposed Drill Site (n=4)**

**J1 ○**



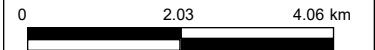
Nitinat Minerals Corporation
Jasper Property Main Grid Proposed Drill Sites 2017 updated 2018
Jacques Houle, P.Eng.



## Jasper Property Location

### Legend

- National Parks - Outlined
  - National Parks - Colour Fill
  - Ecological Reserves - Tanta
  - Protected Areas - Tantalis
  - Recreation Areas - Tantalis
  - Conservancy Areas - Tantal
  - Mapsheet Grid (1:20,000)
  - Mapsheet Grid (1:250,000)
  - Land Act Primary Parcels - Filled
- Contours - (1:20,000)
- FCODE
- Contour - Index
  - Contour - Index Indefinite
  - Contour - Index Depression



1: 100,000

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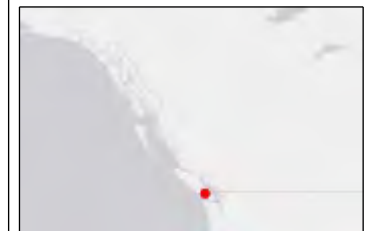
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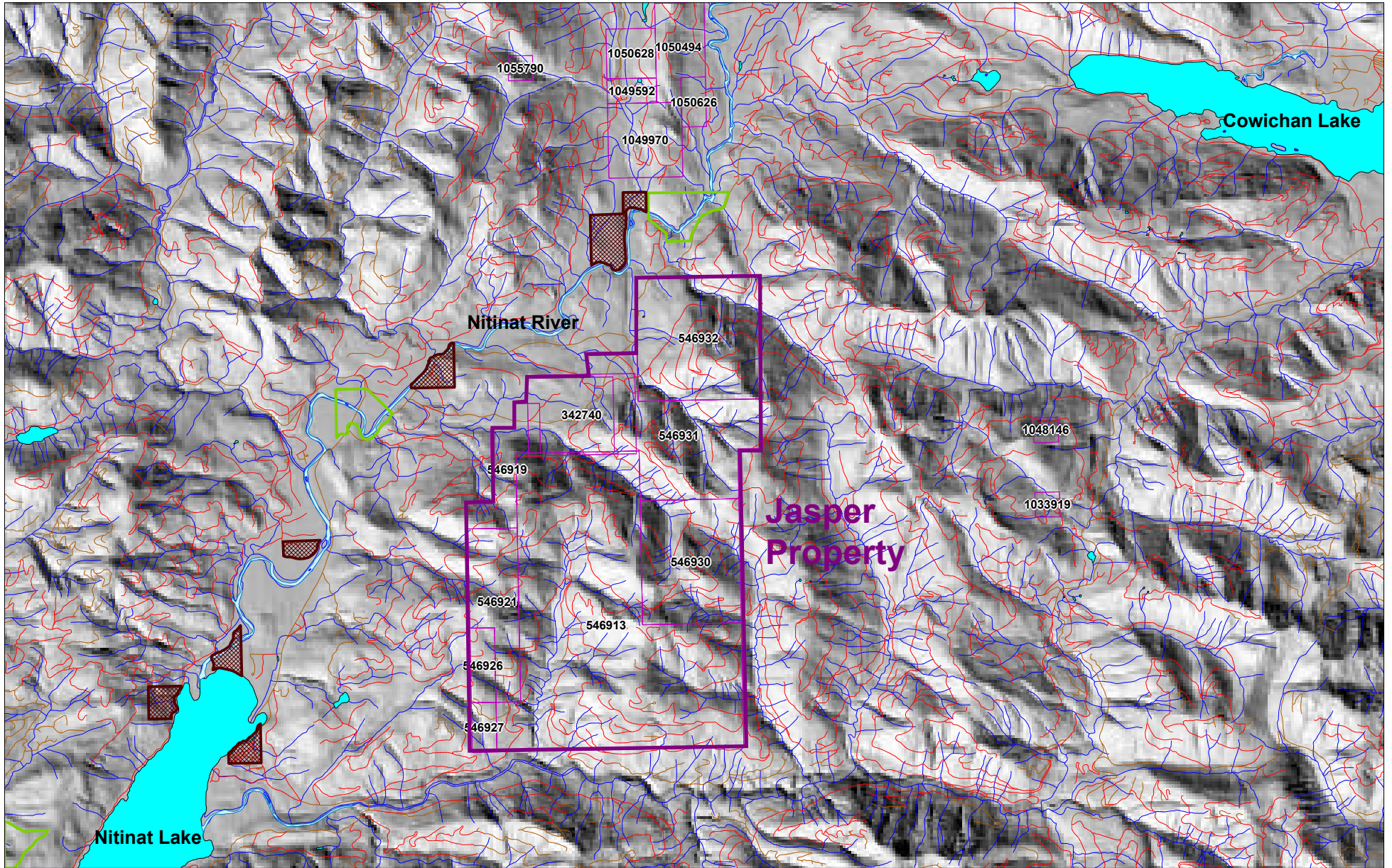
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Datum: NAD83

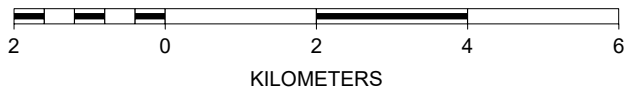
Projection: Web Mercator

### Key Map of British Columbia





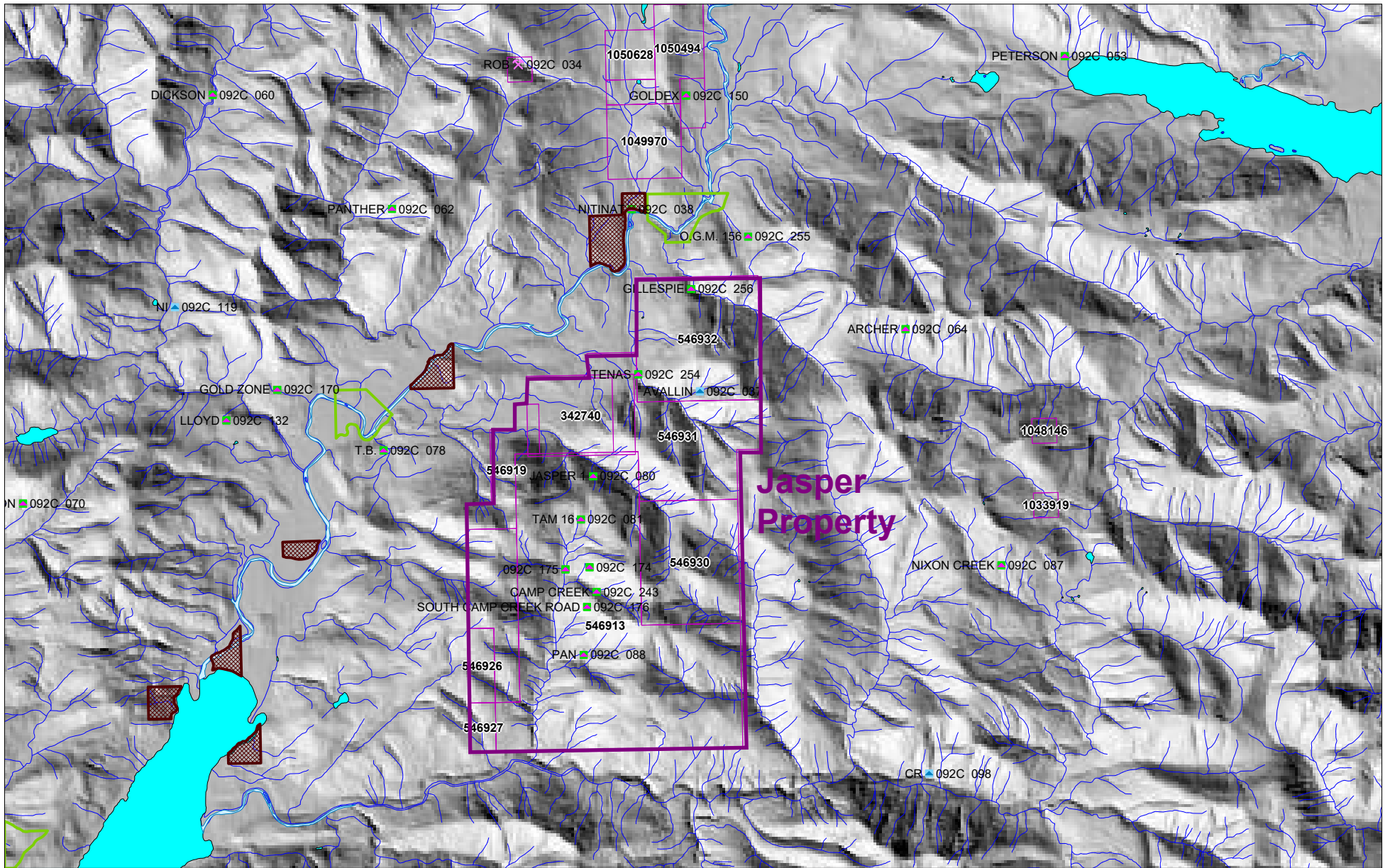
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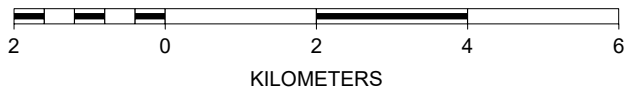
## Jasper Property Infrastructure

Legend from BC MapPlace





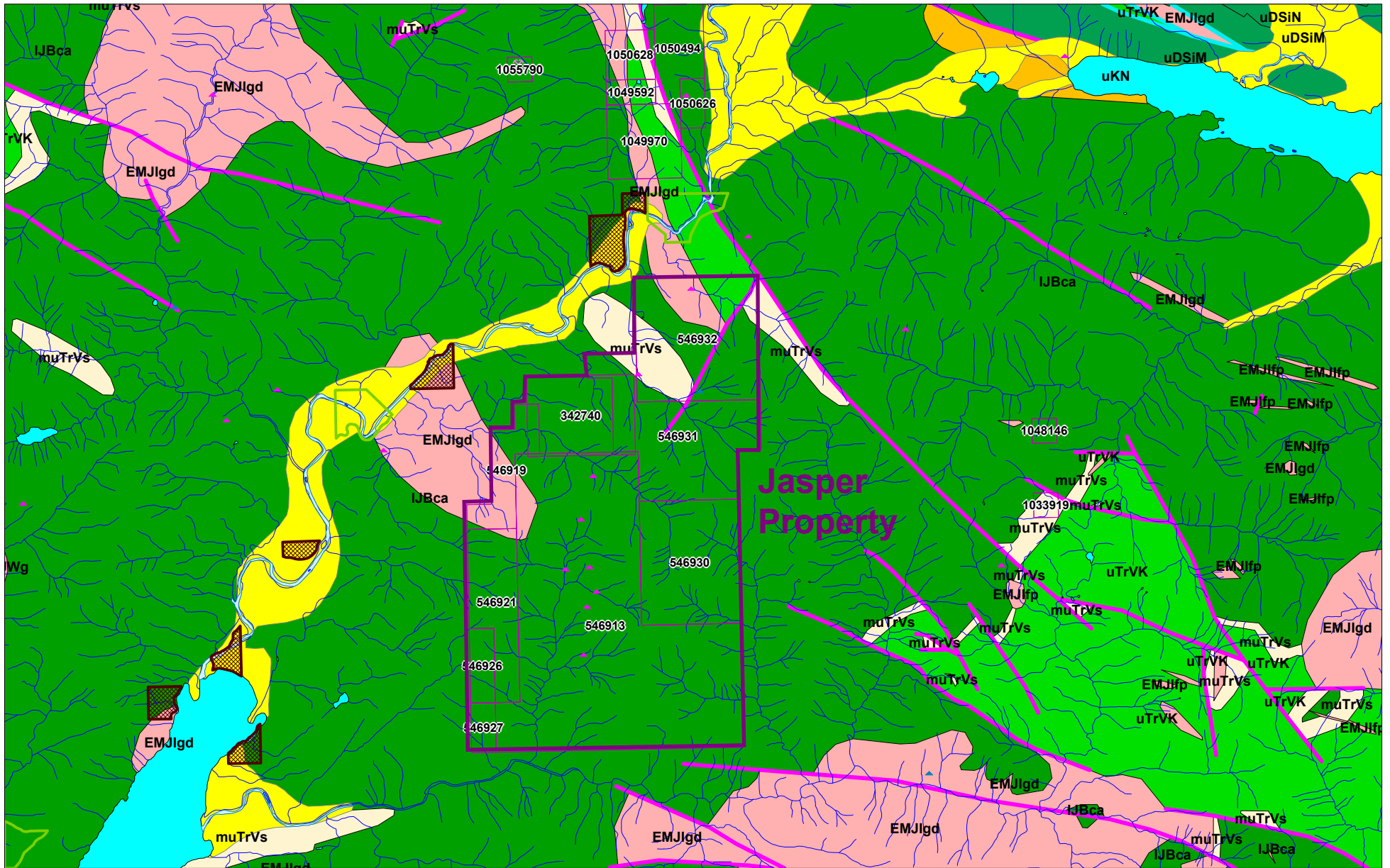
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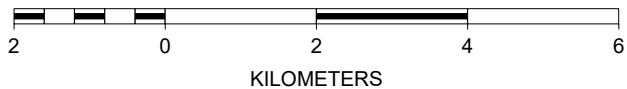
## Jasper Property MINFILE's

Legend from BC MapPlace





SCALE 1 : 100,000



# Jasper Property BCGS 2005 Geology

Legend from BC MapPlace



**2018 Jasper Assessment Report**

**Appendix 1 – Geophysical Data**

# **GeoSci Data Analysis Ltd.**

2060 148<sup>th</sup> Street, Surrey, B.C., Canada, V4A 8L5

Email: geosci@telus.net

Tel / Fax : (604) 535 - 4255

## **Memorandum**

**To:** Nitinat Minerals Corporation

**Attn:** Jacques Houle

**From:** E. Trent Pezzot

**Date:** July 4, 2018

**Re: Phase 2 EM Interpretation – Jasper Property**

---

An interpretation of an airborne magnetic and time domain electromagnetic survey, flown in 2008 over the Jasper Property in west central Vancouver Island, was completed and documented in a report dated October 17, 2017. Analysis focused on the application of 3D magnetic and 2.5D EM inversion programs which built models showing possible subsurface distributions of the magnetic and resistivity/conductivity properties that might produce the observed data. The EM study focused on twenty-two (22) high amplitude, low conductance anomalous responses, identified by the contractor, Aeroquest International. Nineteen (19) of these combined to delineate three (3) trends reflecting vertical conductors. While the EM inversions supported the Aeroquest interpretation they also detected the presence of a deep, horizontal conductive layer. The EM study was expanded beyond its' initial scope and found evidence of the deep conductive layer across much of the property. It was postulated that this response may represent a metallic sulphide target, possibly a VMS, epithermal or volcanic horizon that acts as the source of the massive sulphide mineralization found on the property.

In May, 2018 Nitinat requested an extension of the 2.5D EM inversion analysis over the remainder of the Jasper property data not completed in 2017. The primary objective of this study is to map the newly identified, deep conductive layer, finding the thickest and shallowest portions for testing by diamond drilling.

This memorandum documents the results of this study and makes recommendations for drill testing based on the geophysical modelling. The targets defined should be reviewed by the project geologists to compare to geological and geochemical data and targets.

## DATA PROCESSING

The EM study was initially organized as an extension to the 2017 work. The remaining data was divided into five (5) blocks overlapping the six (6) areas studied in 2017 (Figure 1).

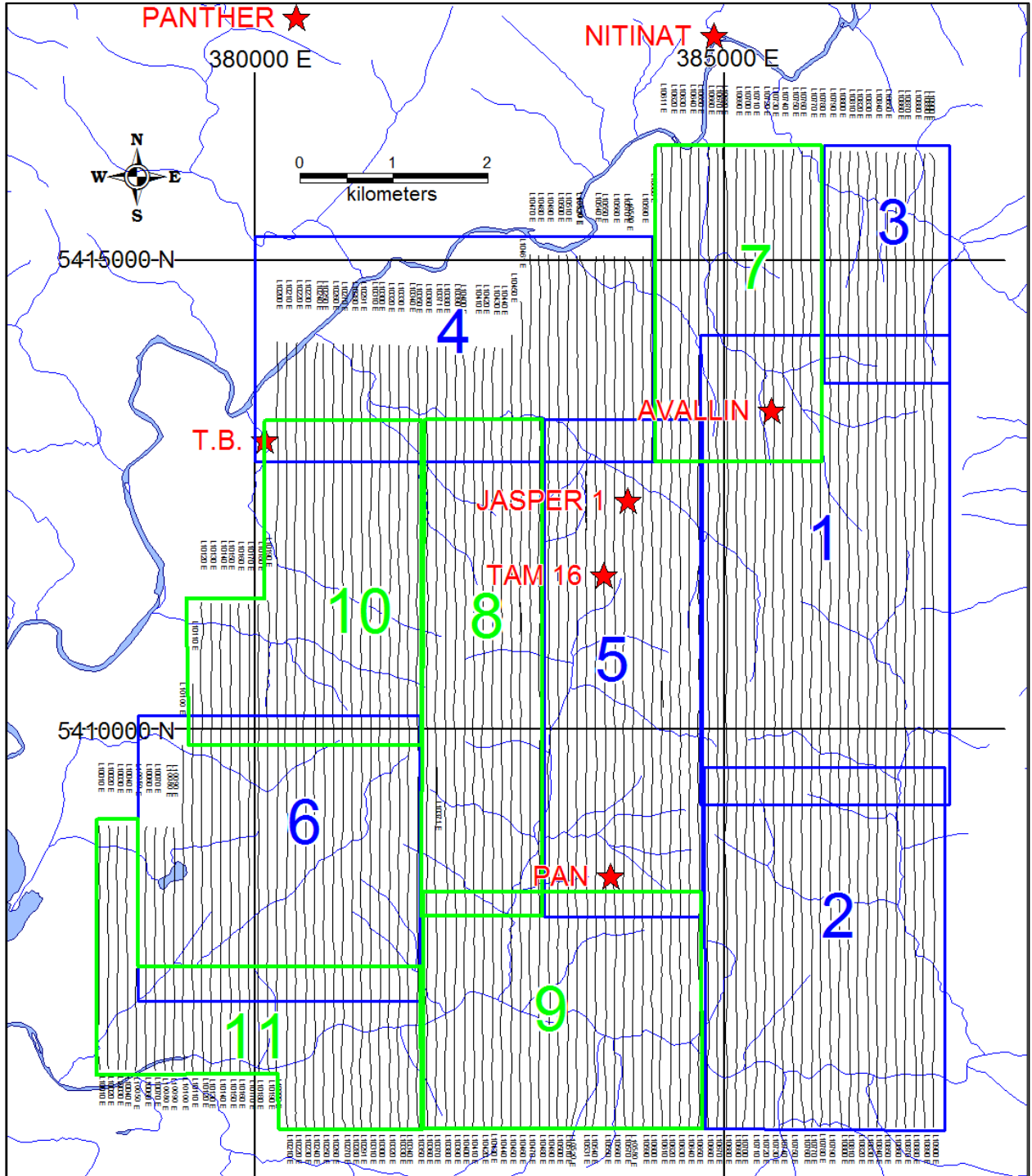


Figure 1: EM Inversion Study Blocks – Blocks 1-6 (Blue) completed October, 2017. Blocks 7-11 (green) completed May, 2018

- Block 7: 10780-10611 (5412850N – 5416500N (north end of line) – fills in gap between blocks 3 and 4.
- Block 8: 10480 – 10360 (5407800N – 5413300N) - lies west of and parallel to block 5.
- Block 9: 10650 – 10360 (5405750N (south end of line) to 5408250N) – west of block 2, south of block 5 and block 8.
- Block 10 – 10100 – 10340 (5409850N – 5413300N) - west of block 8 in gap between blocks 4 and 6.
- Block 11: 10350 – 10010 (5405750N – 5407450N – Extends south and west of block 6.

Line data was extracted from the database, formatted into appropriate line segments and processed through the ArjunAir 2.5 EM Inversion program using the same parameters used in the 2017 study.

Results were analogous to those obtained in 2017, showing the presence of a deep, horizontal conductive layer across much of the property. However, the inversion models were somewhat consistent. In some cases only the top of the conductive layer was mapped. In some cases, the target horizon was not observed even though it was seen on lines on both sides. These inconsistencies are primarily attributed to the conductive horizon being near the limits of the depth of investigation for the survey. These effects are exaggerated when the survey lines are too short to properly define deep targets.

A second complication arose when line segments were stitched together. Although resistive/conductive trends and features extended across segments, they often exhibited different absolute values in the two segments. This, combined with edge effects in the inversions often produced apparent breaks and discontinuities near the inversion segment boundaries that were not realistic. These effects are partially attributed to the inversion calculating different background resistivities for the different sections.

The inversion segments were merged, calculating average values in the overlap areas. While this alleviated some of the misties the relative amplitudes of trends and features that crossed inversion boundaries were not properly resolved.

A second inversion procedure was initiated to help mitigate these problems. Data was averaged along the survey lines, increasing the station spacing for the input data to 100 metres. This provided two benefits:

- The increased station spacing smoothed over high spatial frequency responses associated with near surface features and emphasized the low spatial frequency responses associated with deeper features.
- The lower number of input data stations allowed the inversion algorithm to process entire survey lines, thereby calculating a single background resistivity for the entire line.

The full line (coarser) inversions worked well. They produced a more consistent model in the overlap portions of the segmented models. They also applied a consistent background for the entire line, revealing the relative resistivity of different trends along the survey lines.

The depth of investigation was extended slightly in the full line inversions when compared to the shorter segment inversions. Several instances are noted where the coarse inversion modelled the deep conductive target as a discrete layer when the line segment inversions only detected the top of the layer.

While there are still some inconsistencies between models generated along adjacent lines, these effects are significantly diminished in the coarse inversion models.

Figure 2 below compares the short segment inversions and the merged segment inversions to the coarse inversion model for line 10490. This example is typical of the results for the entire project and illustrates the effects discussed above.

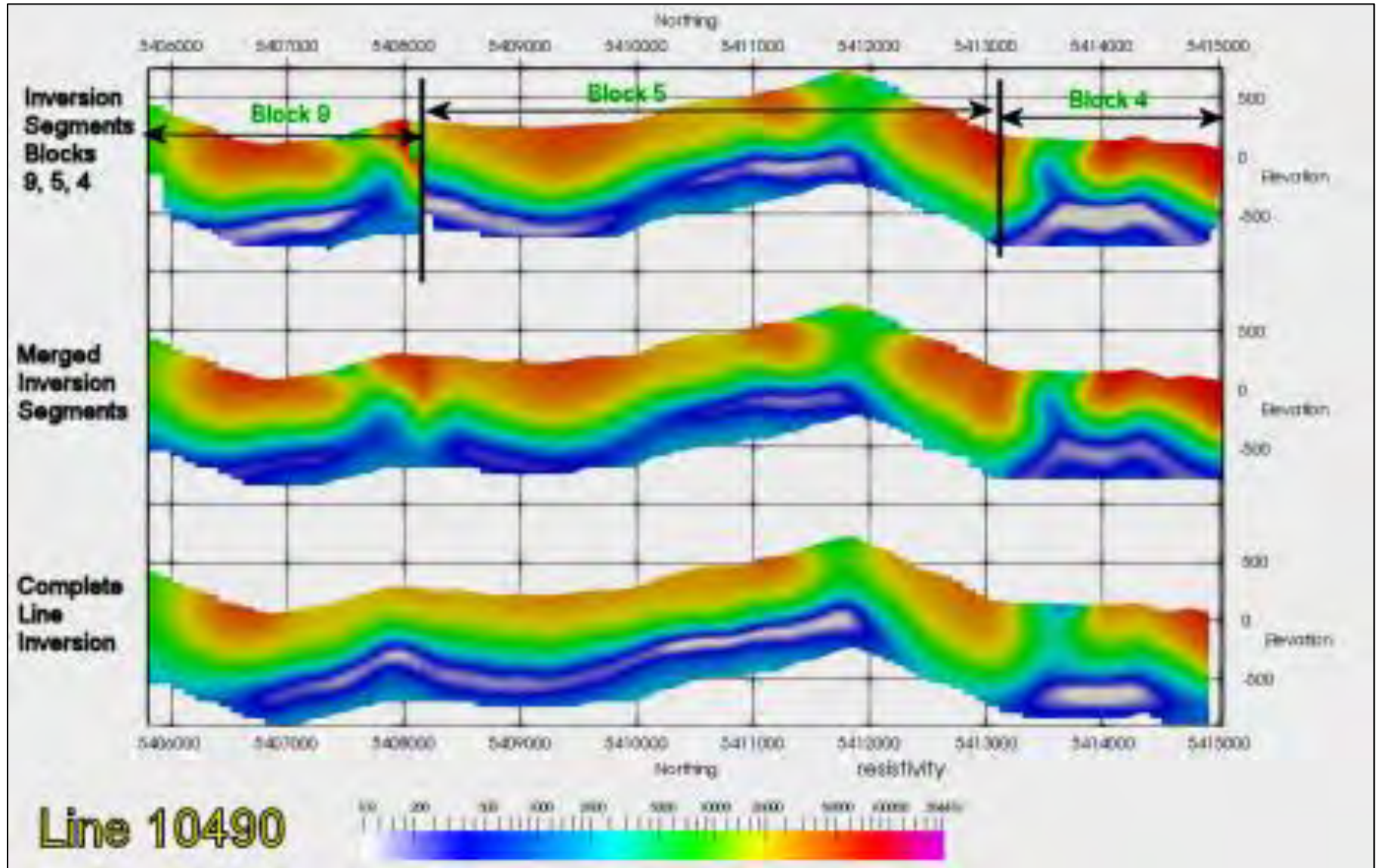
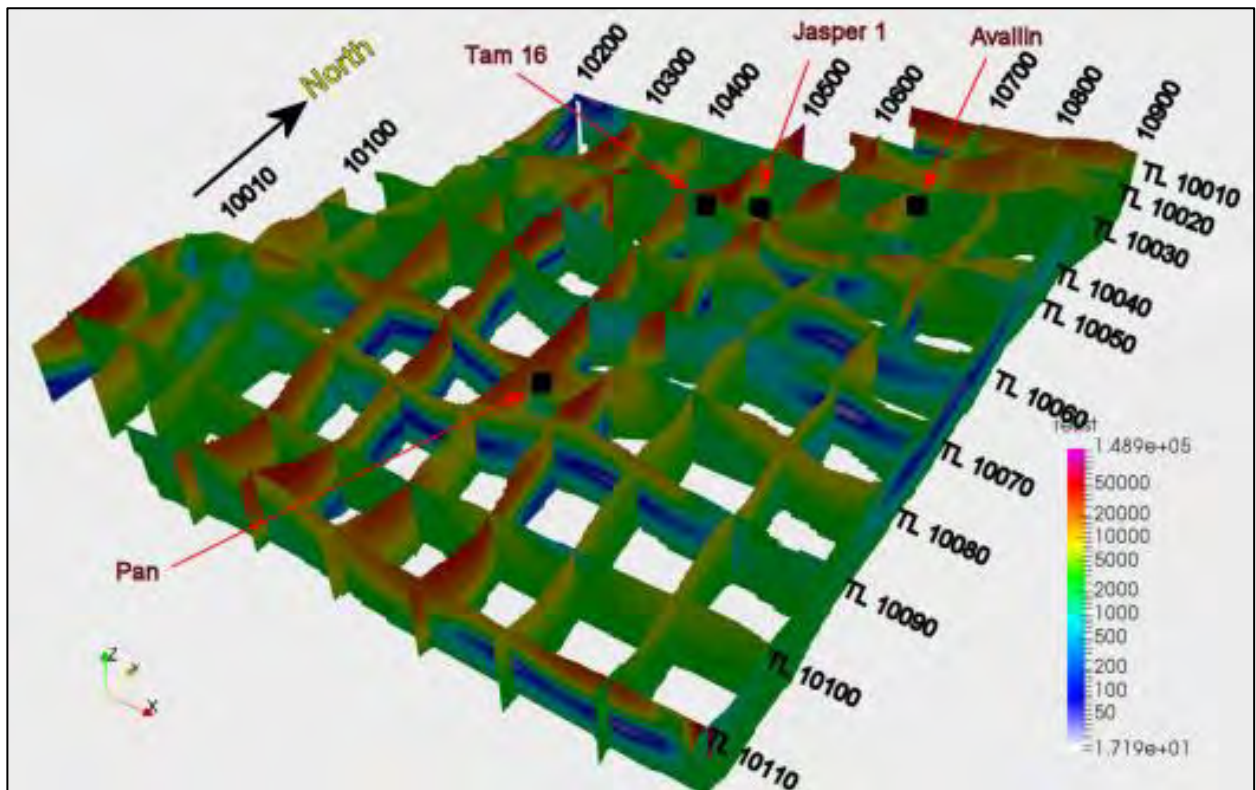


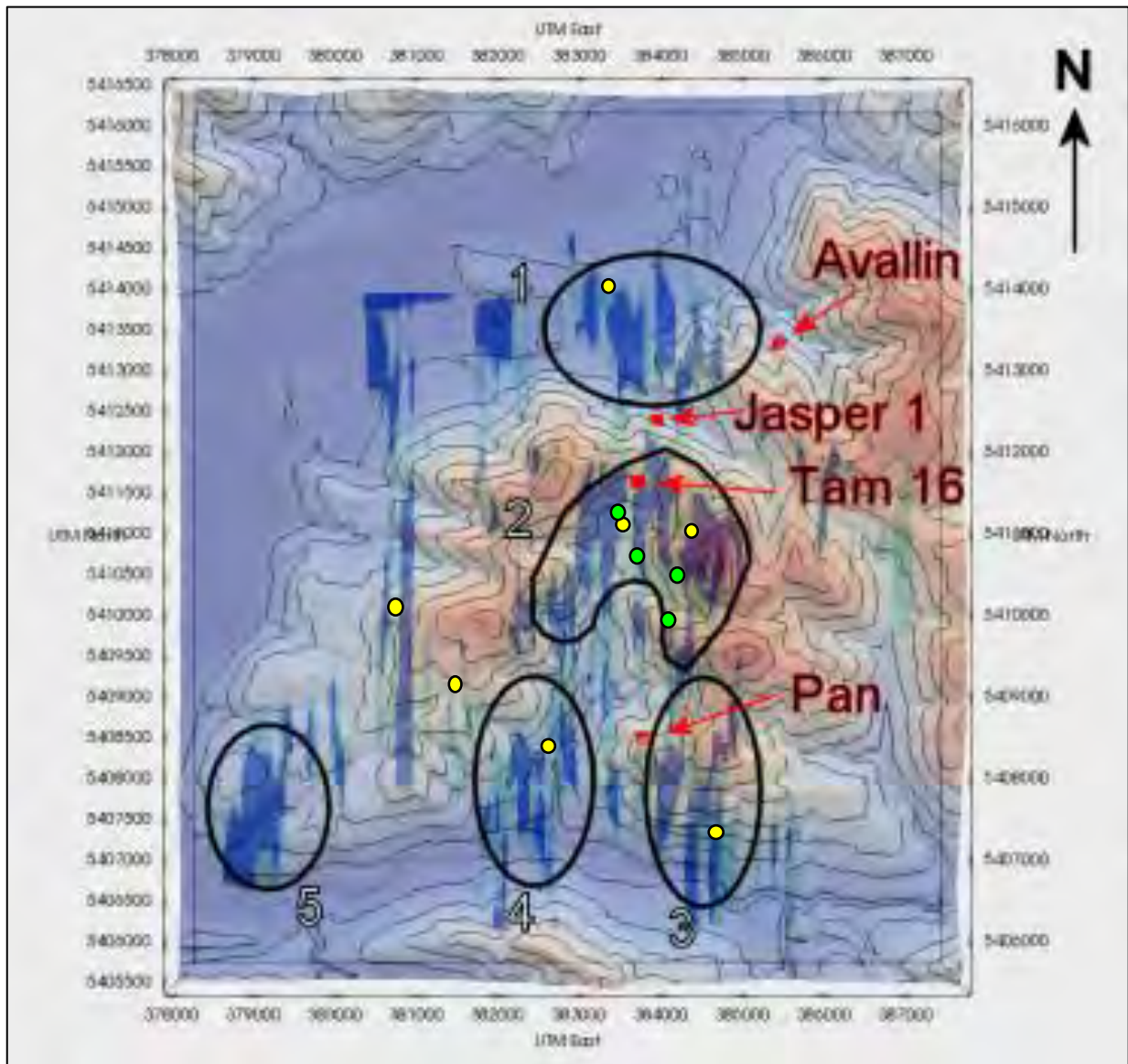
Figure 2: Line 10490 – Top Panel – Line Segment inversions (Blocks 9, 5, 4). Middle Panel: merged Inversion segments with averaging in overlap portions. Bottom Panel: Coarse inversion across entire line.

The inversion results are best reviewed as individual cross-sections showing the subsurface distribution of the modelled apparent resistivity. These can be presented as single, stand-alone images (as shown in Figure 2) or they can be positioned in the 3D space (Figure 3). These displays are analogous to geological cross-sections although the electrical resistivity characteristics mapped are not necessarily associated with discrete geological units. Different geological units might possess similar resistivity characteristics and be indistinguishable while minor facies changes or alteration effects within a single unit might produce discrete electrical units.



**Figure 3: Inversion Resistivity Cross-sections plotted in 3D space. Plotted lines are spaced at 1000m intervals.**

The line inversion results can also be presented as a three-dimensional model. Although this is a useful tool for illustrating the relative position and shape of the resistive and conductive units it has limitations. Because the inversion models are calculated for individual lines, there is no consideration for effects from source bodies located off the line. All interpreted sources are placed directly below the line. This results in “gaps” in the model between the survey lines and typically produces long, linear structures along the survey lines which are not likely representative of the geological reality.



**Figure 4: Line Inversion models converted to 3D block model, view from top with DEM colour map and contours draping over the ground surface. Blue = 200 ohm-m isosurface. Translucent Blue = 400 ohm-m isosurface. ● Proposed ddh locations (Pezzot) ● Proposed ddh locations (Houle)**

Although the deep conductive response is relatively widespread across most of the property, this type of display illustrates how the very highly conductive portions of the unit (< 200 ohm-m) be grouped into five (5) clusters. The four clusters located in the middle of the property appear to be closely related to large magnetic low bodies, identified as ML-2 and ML-3 in the previous interpretation report. They are located between the two strong, NNW striking magnetic features described in the 2017 report. This display also highlights a narrow conductive response mapped across lines 10220 to 10260 between clusters 4 and 5. This trend is anomalous in that it is so well defined on 5 adjacent lines then completely absent on the adjacent lines.

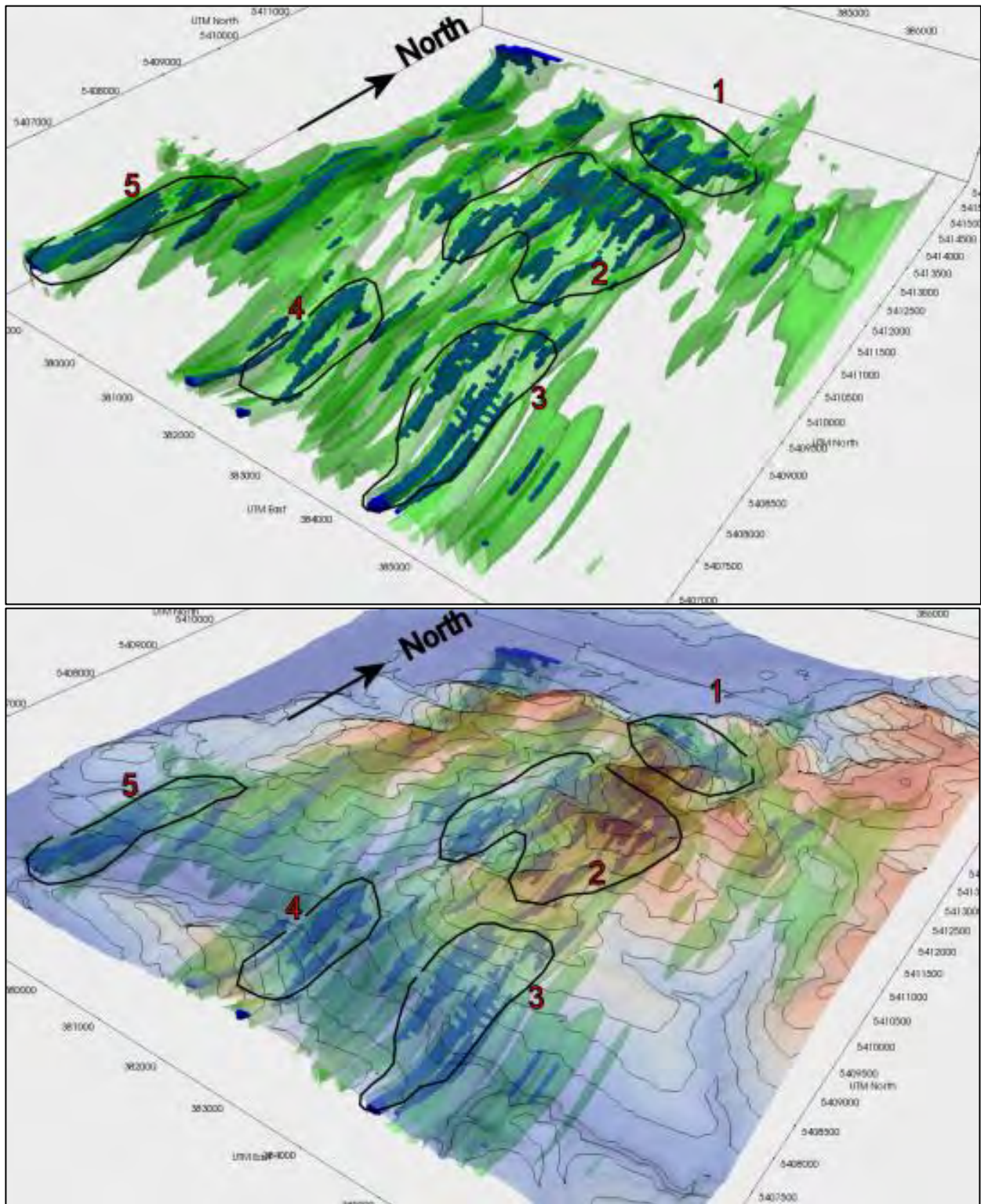


Figure 5: Line Inversion models converted to 3D block model. Elevated view from SE. Blue = 200 ohm-m isosurface. Translucent Green = 1000 ohm-m isosurface. Bottom panel includes DEM colour contour map and contours draped over ground surface.

The resistivity cross-sections from the full line inversions are presented as Appendix 1 attached to this memo. A review of these images is recommended to identify areas where the target deep conductive layer is best defined and correlate those instances with surface and drill hole geological information. Line segment and merged segment models are provided in vtk format as separate digital files.

A geological identification of the source of the conductive response should be the current priority. Areas where the target is the thickest and comes closest to the surface should be tested by drilling. Depending on these results, further delineation of the conductive horizon may be warranted.

Depth to the target horizon can be established by direct measurements on the inversion cross-sections presented in Appendix 1.

Thickness of the target horizon is not as easily estimated. In a few instances (lines 10330E, 10510E for example), there are indications that the inversion is detecting the bottom of the horizon. In most cases (line 10450E for example), the inversion detects only the top of the horizon and no estimate of the thickness is available.

My review of the inversion models has highlighted two other factors that should be considered.

Although the target horizon appears to form a broad, thin and smoothly undulating blanket that generally lies from 600 to 800 metres deep, the inversions delineate several areas where the zone appears to be offset vertically. These responses most are prevalent from line 10400 to 10670 but examples can be found across the entire grid. These offsets can be traced between survey lines and generally align to suggest the presence of northwesterly striking faults. Many of these fault responses coincide with magnetically mapped structures and topographic features. Line 10600, presented below as Figure 6 is representative of this type of response.

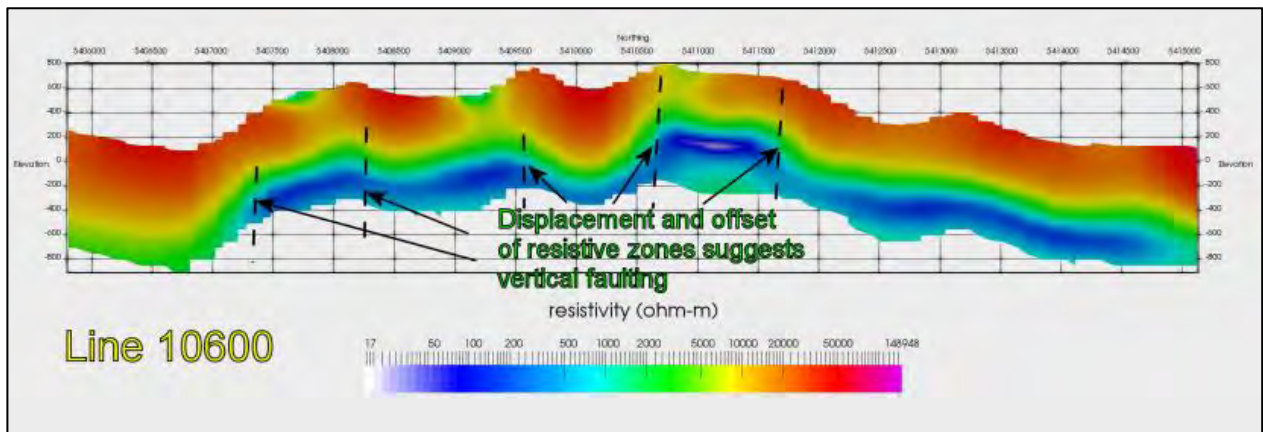
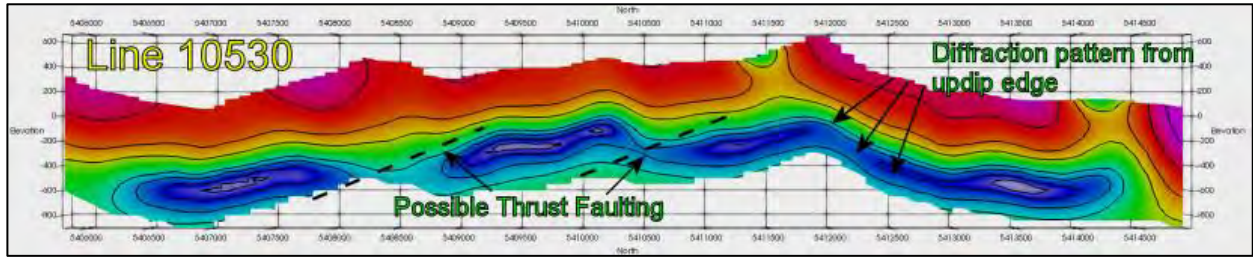


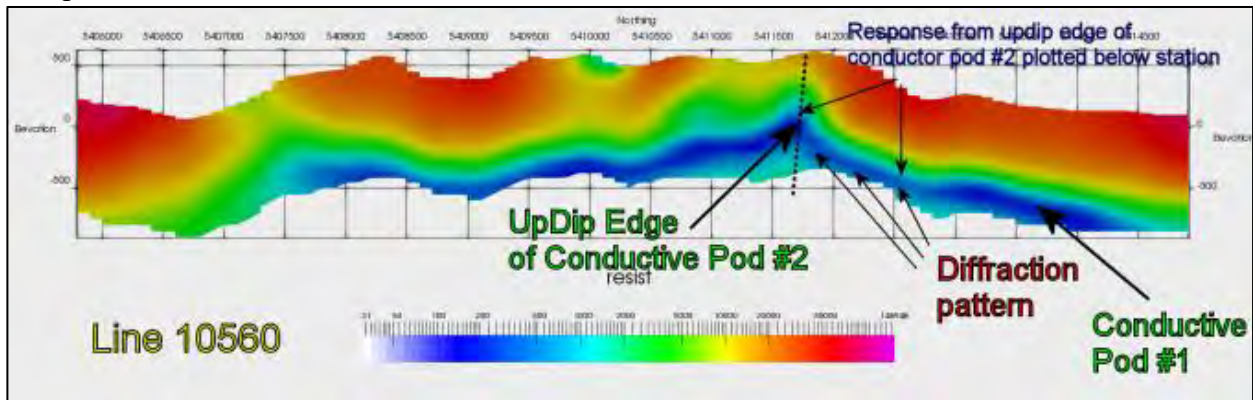
Figure 6: Line 10600 Resistivity Cross-section. Vertical displacements suggest faulting

An argument can be made that these displacements might reflect a series of low angle faults. Line 10530, presented below as Figure 7, illustrates this interpretation.

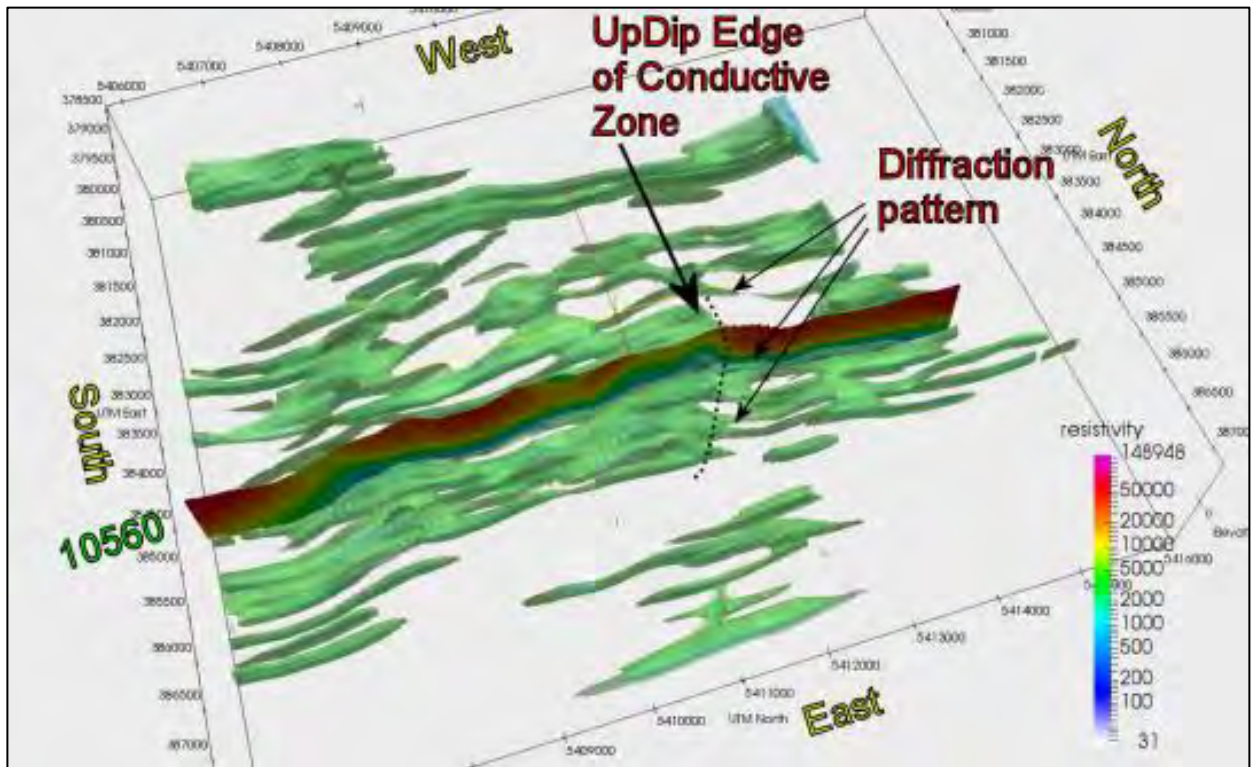


**Figure 7: Line 10530 Resistivity Cross-section. Offsets suggest thrust faulting.**

The updip edge of conductive pod #2 (as outlined on Figures 4 and 5) appears to be controlled by one of these northwesterly striking faults. Several of the inversion cross-sections mapping this structure suggest the presence of a thin, northerly dipping conductive layer to the north of this pod. This response is believed to be erroneous and is attributed to a diffraction pattern, generated because the response to the conductive lense is still present in the data to the north. The inversion process interprets a conductor at increasing distances as it moves to the north and plots it directly below the measuring station. These diffraction type patterns should not be interpreted as buried conductive zones.



**Figure 8: Inversion Cross-section Line 10560.**



**Figure 9: Inversion Cross-section Line 10560. 3D resistivity model. Light Blue isosurface = 200 ohm-m. Translucent Green isosurface = 500 ohm-m.**

Based on a review of the geophysical data, the following locations are considered priority sites for drill testing. These recommendations should be reviewed by the project geologists and correlated with geological, geochemical and drilling information for priority assignments.

Pod #2 appears to be the most interesting portion of the target horizon. It is broken into several smaller sections, possibly as a result of faulting. It appears to be associated with the shallow southerly dipping, low magnetic body, MH3. The northern (updip) edge of the pod approaches to within about 550 metres of the surface. Two locations are flagged to test this target.

- Line 10550E: collar at 383730E/5411200N, angle 75°N – target at 600m depth.
- Line 10640E: collar at 384640E/5411000N, angle 75°S, target at 500m depth.

Pod #1 appears to wrap around the northern edge of magnetic anomaly ML-2. The horizon is relatively deep, typically > 800 metres however comes closer to the surface in a couple of areas. Recommendations for a test drill hole are:

- Line 10510E: collar 383320E/5414200N, angle 90°, target at 600m depth.

Pods #3 and #4 both form southerly dipping zones, roughly paralleling the ground surfaces. In this area, depth to the horizon is estimated around 800 metres. There are a couple of points in

each area where vertical structures (faulting) exert an upward influence on the deep horizon, possibly bringing it to within 600 metres of the surface.

- Pod #3, Line 10640E: collar 384640E/5407100N, angle 60°N, target at 600m depth.
- Pod #4, Line 10390E: collar 382140E/5408100N, angle 75°N, target at 600m depth.

In addition to the narrow and linear attributes, the conductor between pods 4 and 5 is also anomalous in that the inversions appear to be detecting the bottom of the zone. The horizon generally lies between 600m and 700m depth but may approach to around 550m on line 10230E. A drill hole recommendation for this target is

- Line 10230E: collar at 380520E/5410000N, angle 90°, target at 550m depth.

The target horizon comes closest to the ground surface on line 10330E. Although this location is not associated with one of the clusters of extremely low resistivity it falls within the broader definition of the conductive blanket. Testing at this location is recommended at:

- Line 10330E: collar at 381530E/5409100N, angle 60°N, target at 400m depth.

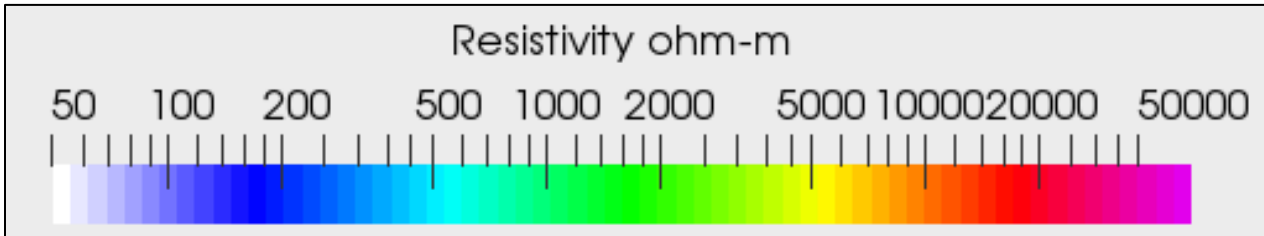
The collar and dip recommendations listed above are relatively flexible. They can likely be repositioned to test nearby geological or geochemical targets or resolve accessibility concerns.

## Resistivity Cross-sections

Viewed looking from East, North to the right.

Contour Intervals at 50, 100, 200, 500, 1000, 5000, 10000, 25000 and 50000 ohm-metres

All Cross-sections coloured with following colour bar





Line contours on the cross-sections are drawn at 50, 100, 200, 500, 1000, 5000, 10000, 25000 and 50000 ohm-metres

**Note:** Lines 300 and 310 were mislabeled during the original survey. The line sequence when plotted from west to east is: ....., 10280E, 10291E, 10310E, 10300E, 10320E, 10340E ....., The plot order of the images below reflects the true nature of the line positioning.

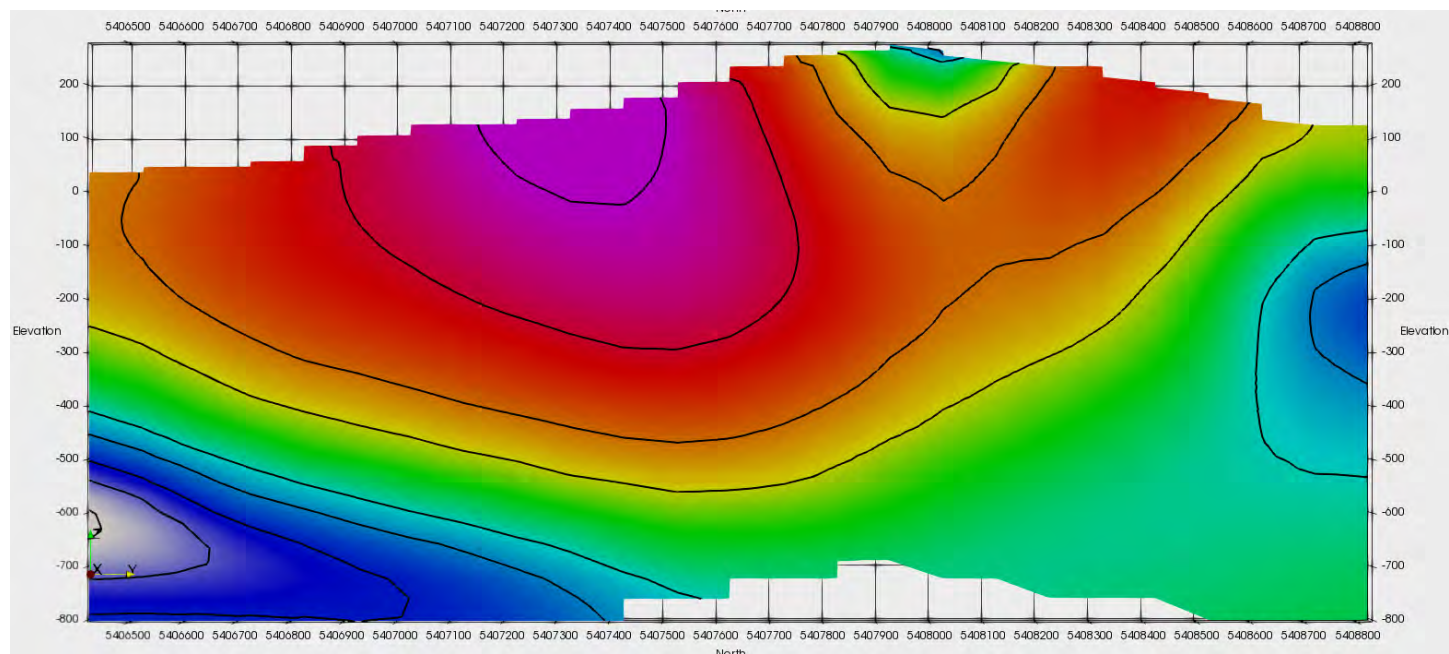
Four survey lines were flown in two overlapping segments:

10370 and 10371, 10460 and 10461, 10530 and 10531, 10610 and 10611. These line segments were joined into merged lines (identified as 10370E, 10460E, 10530E, and 10610E) and run through the inversion algorithm.

-  Proposed drill hole locations and orientations (Pezzot)
-  Proposed drill hole locations and orientations (Houle)

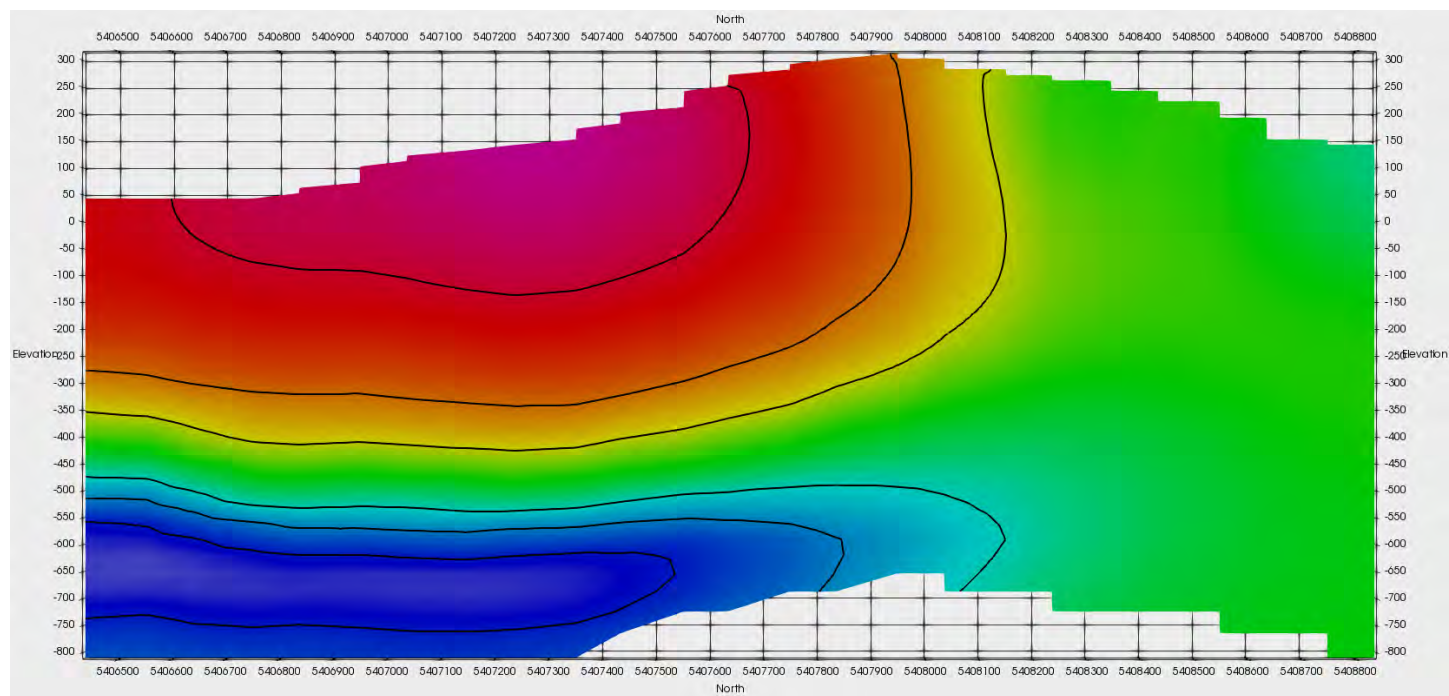
Line 10010E

378300 E



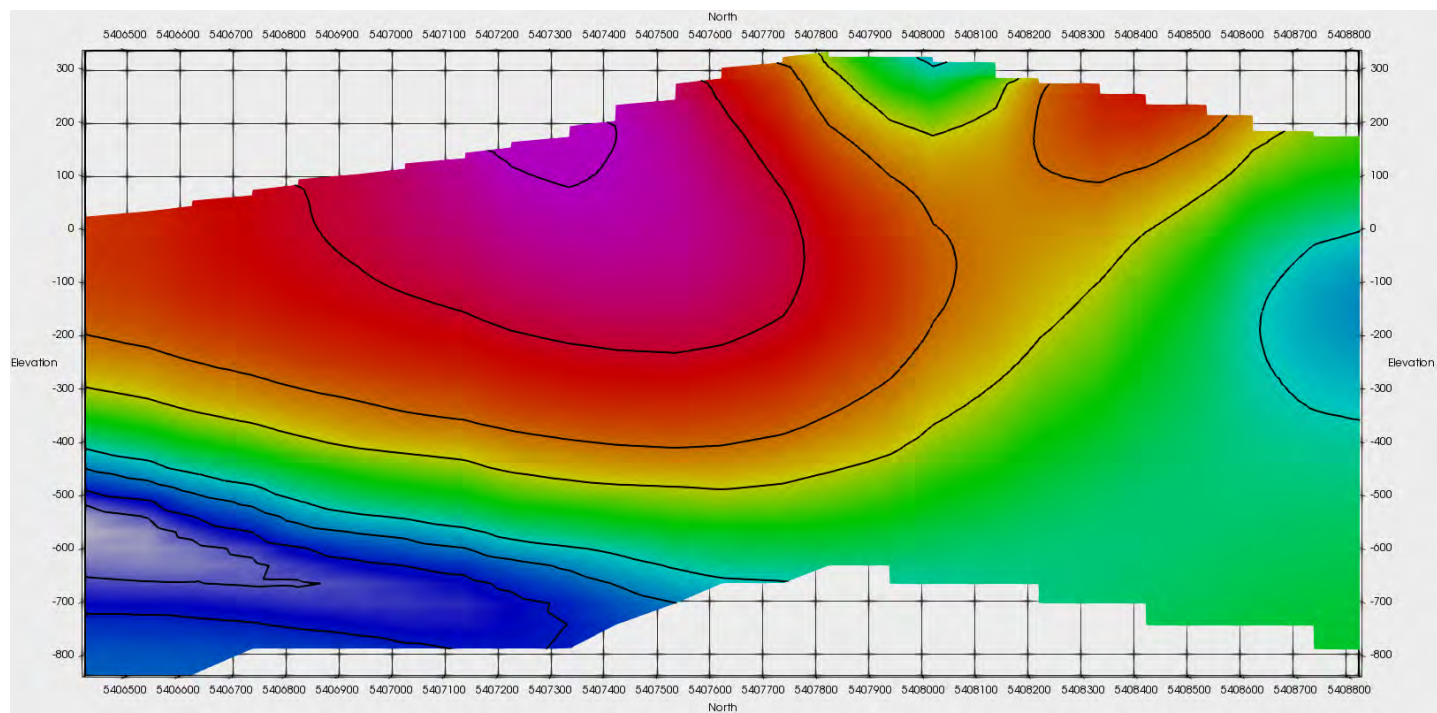
Line 10020E

378400E



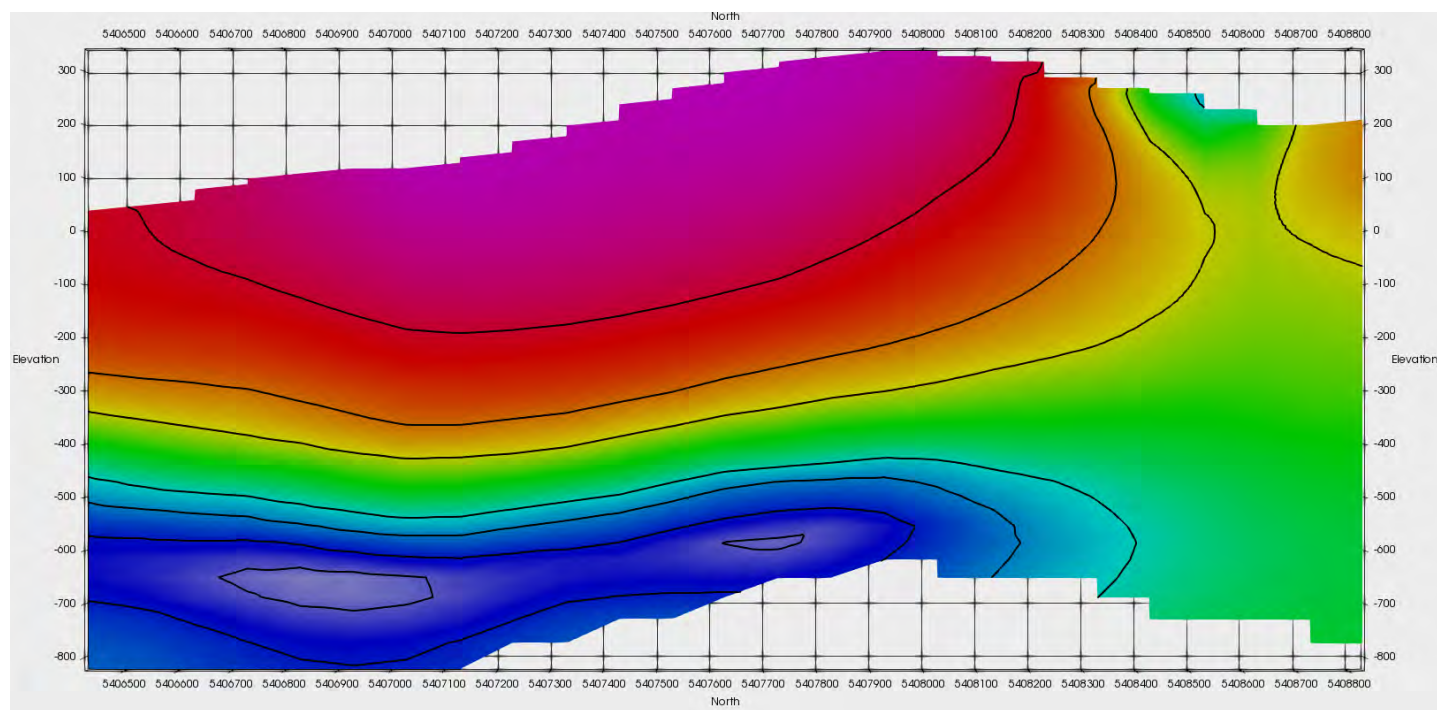
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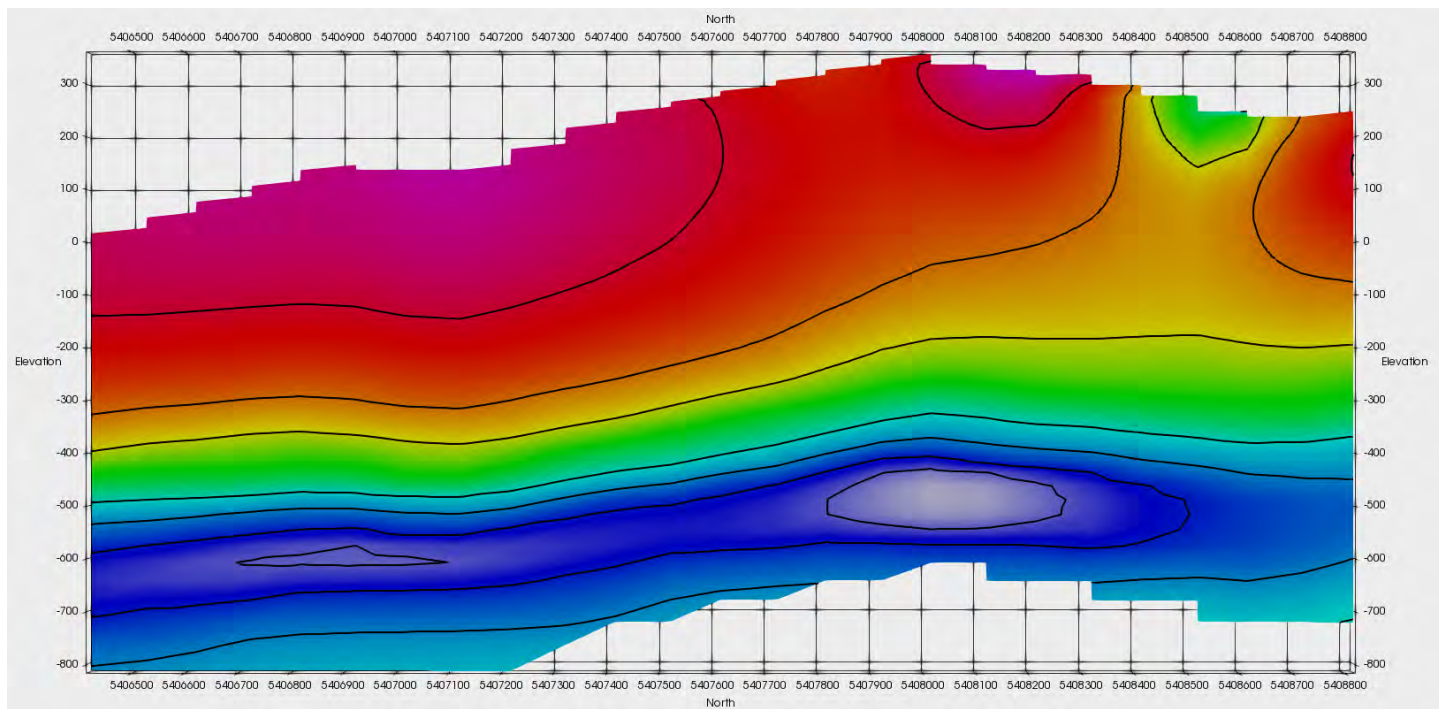
Line 10040E

378600E



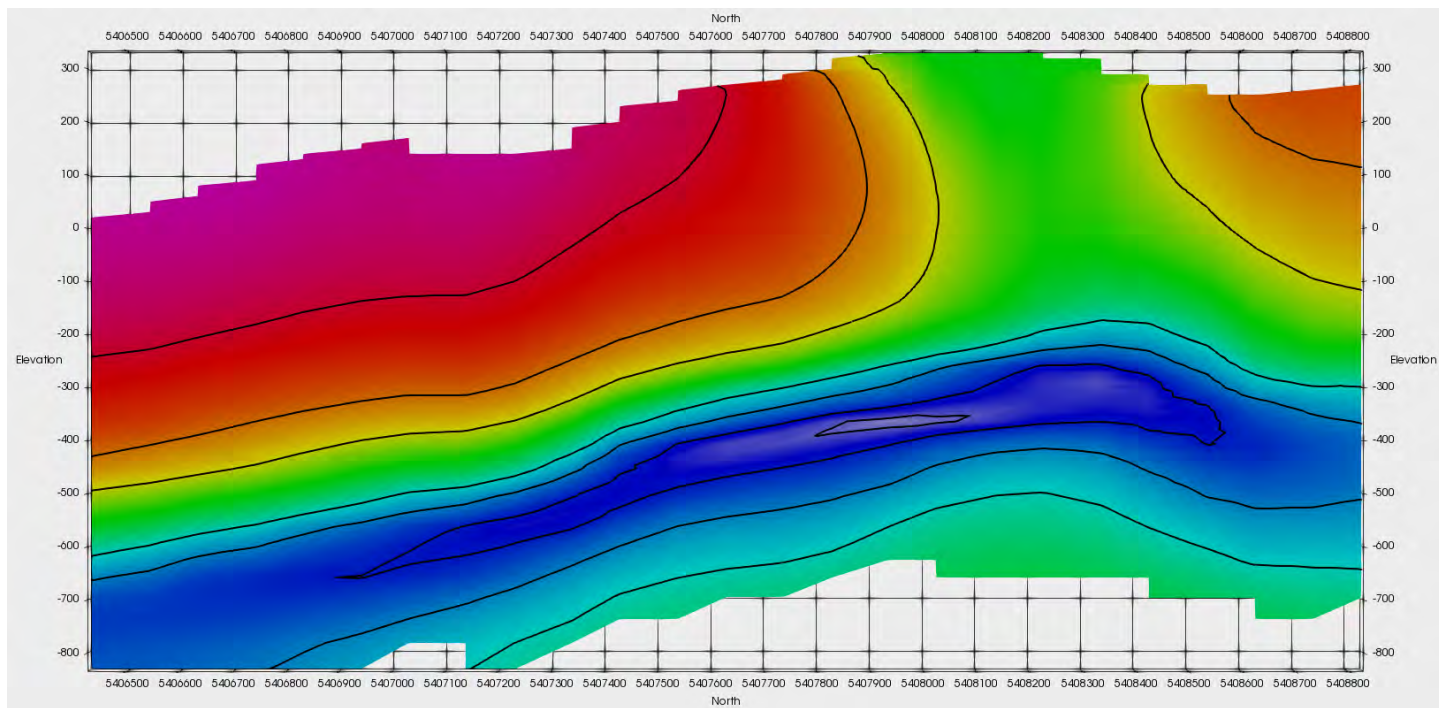
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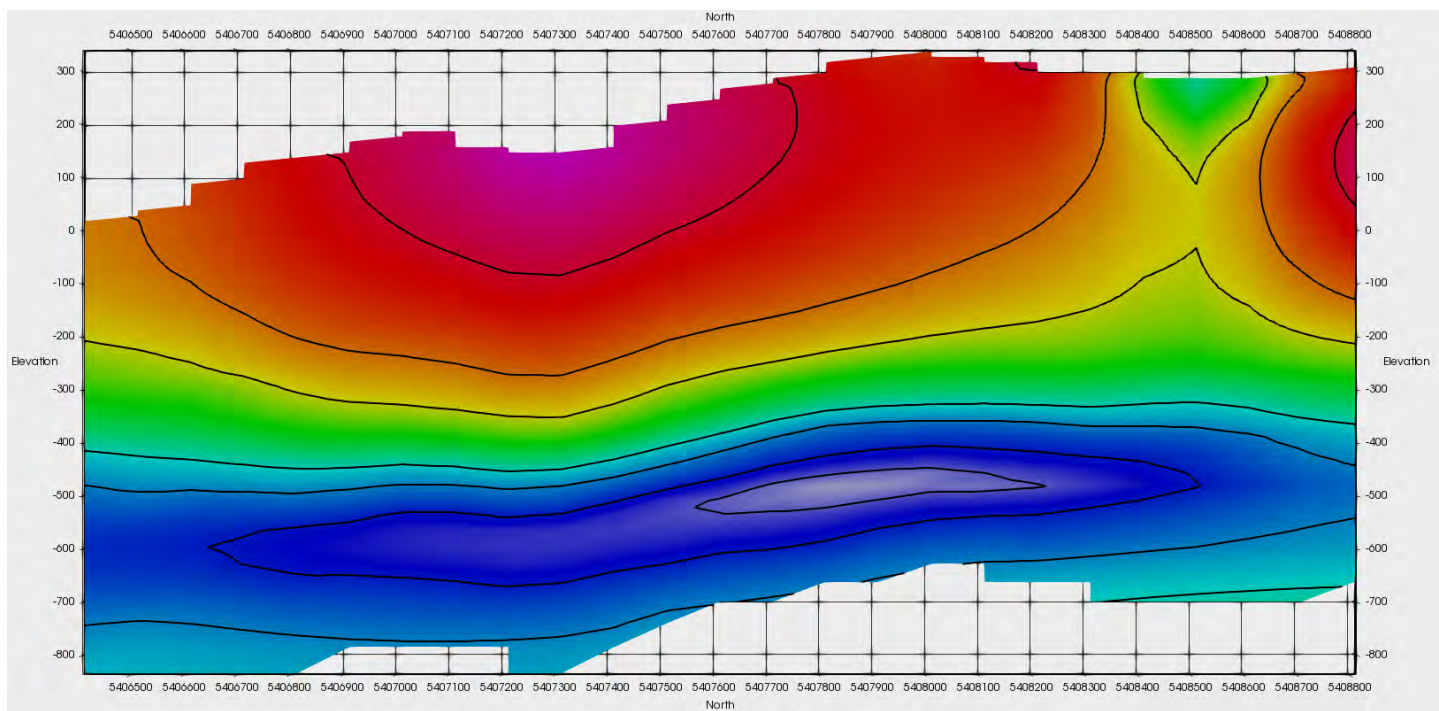
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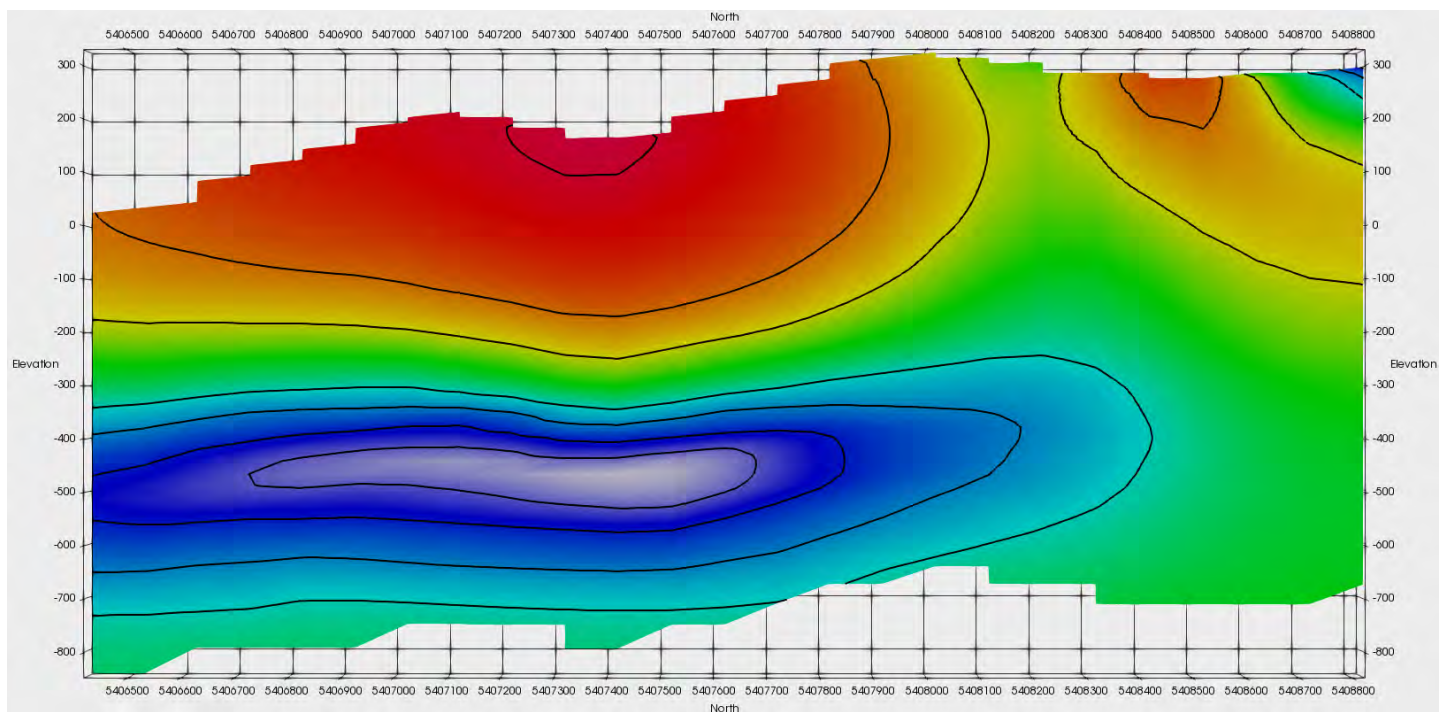
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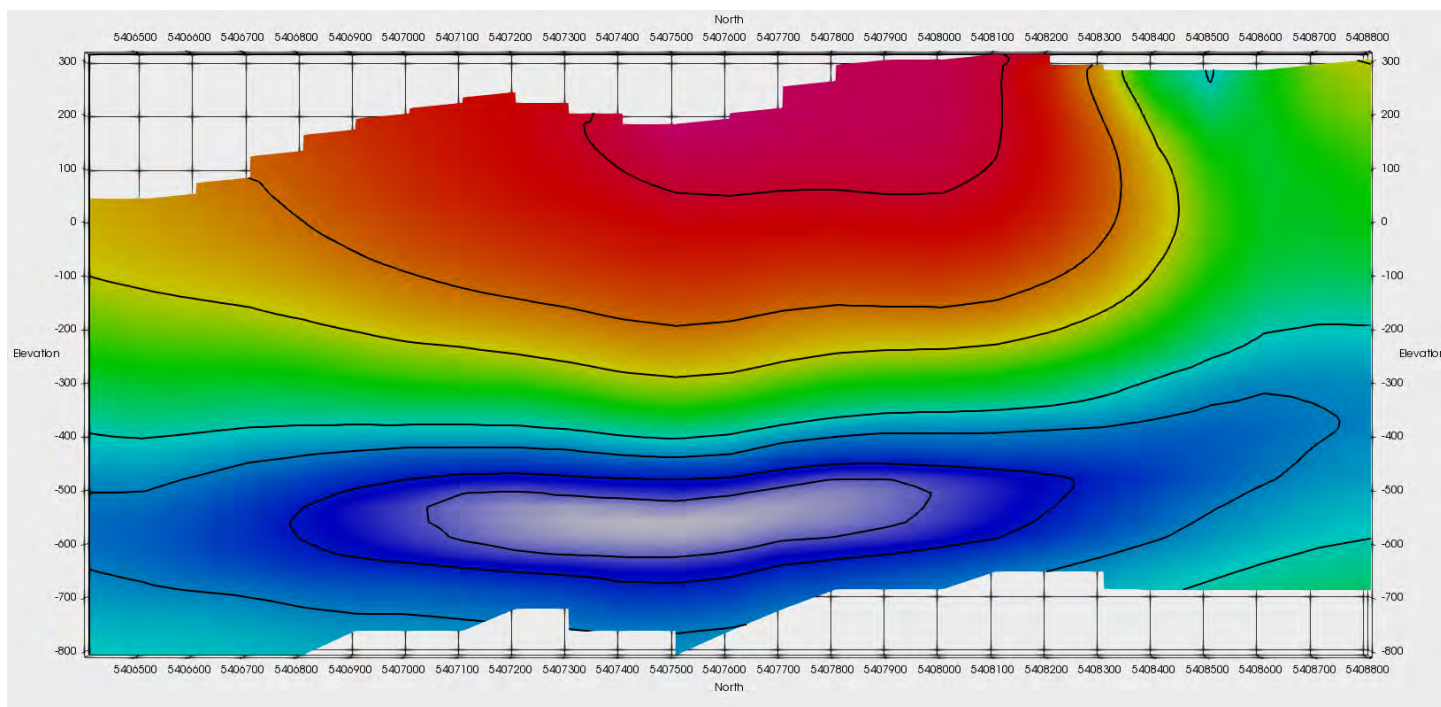
Line 10080E

379000E



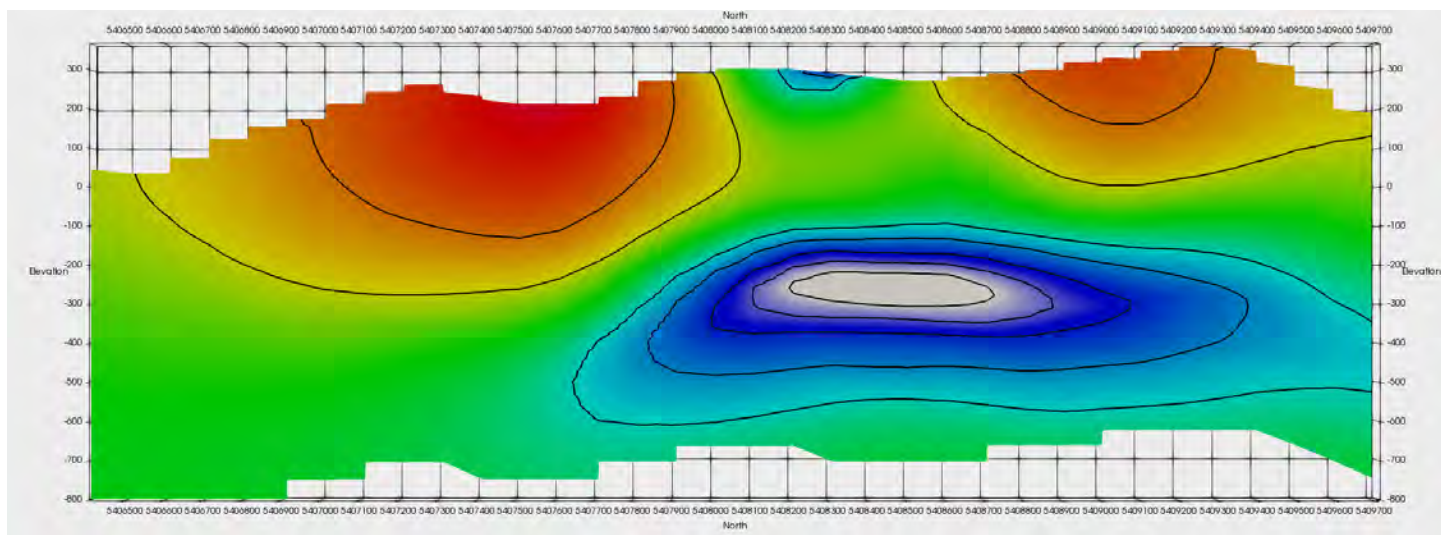
Line 1009E

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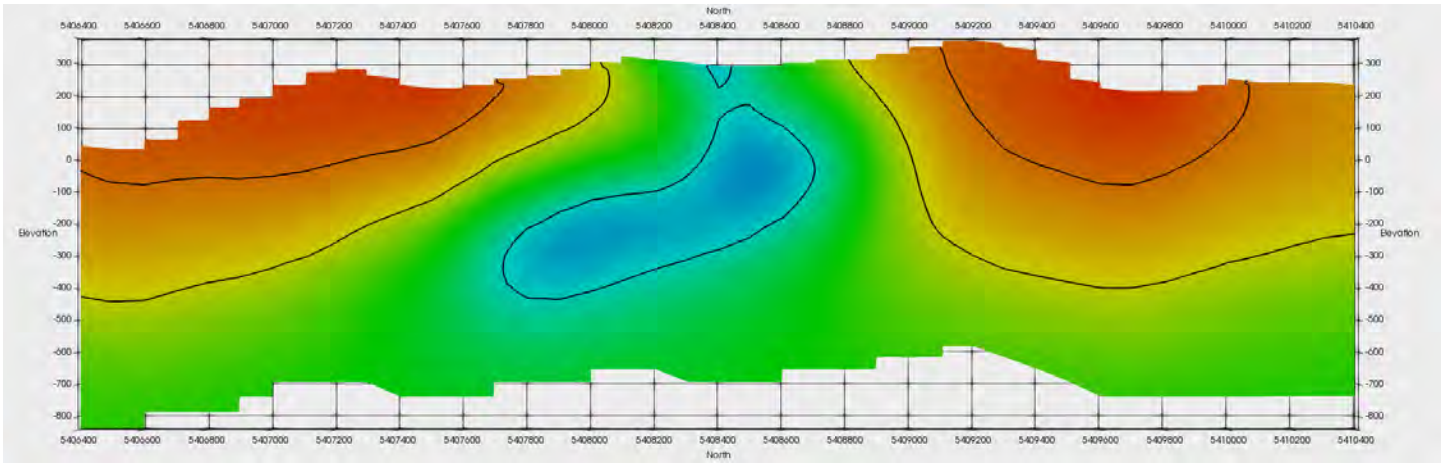
Line 1010E

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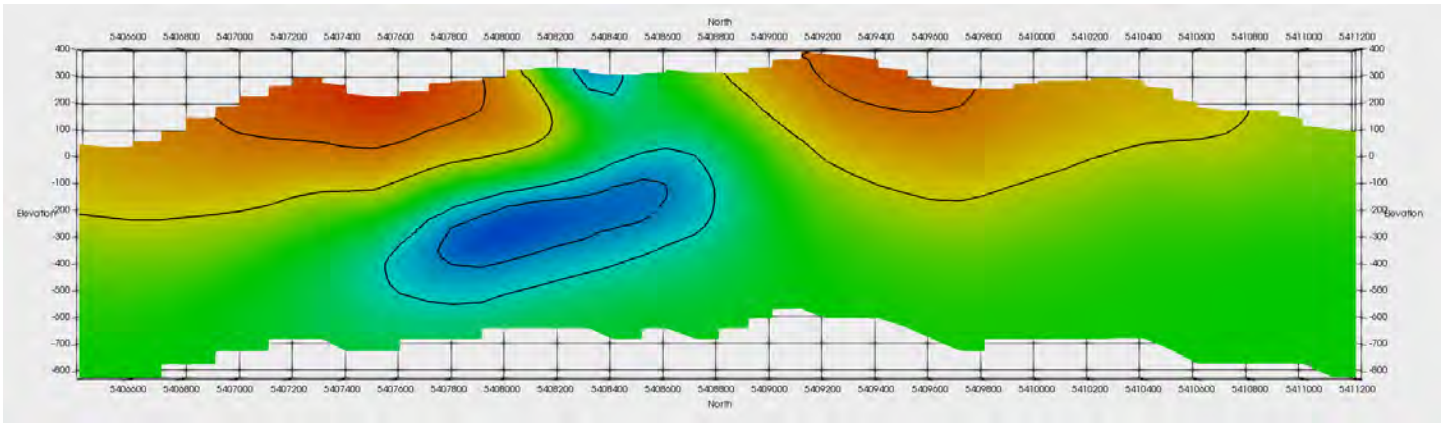
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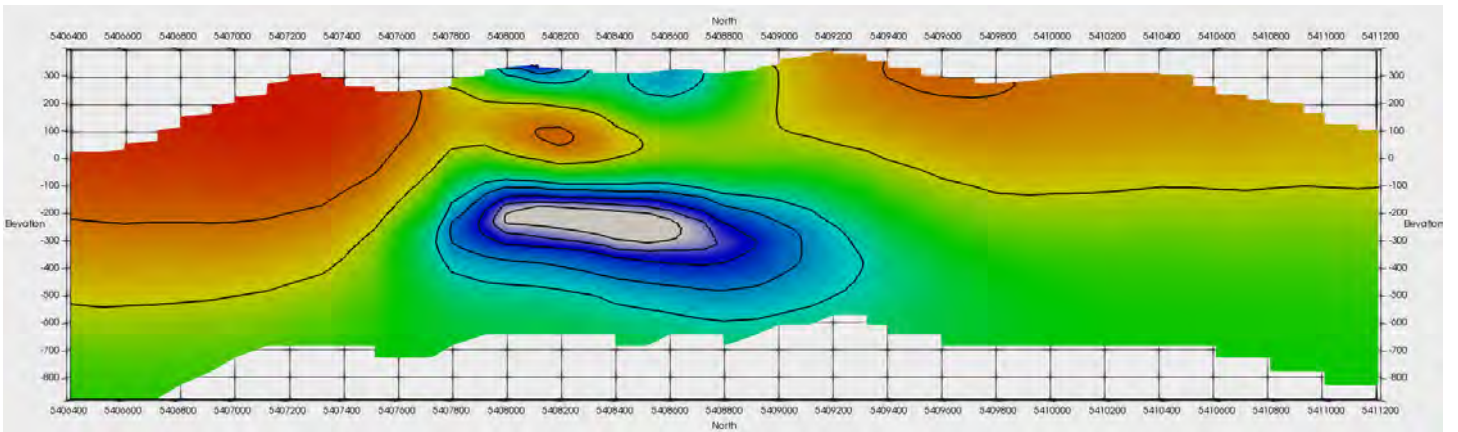
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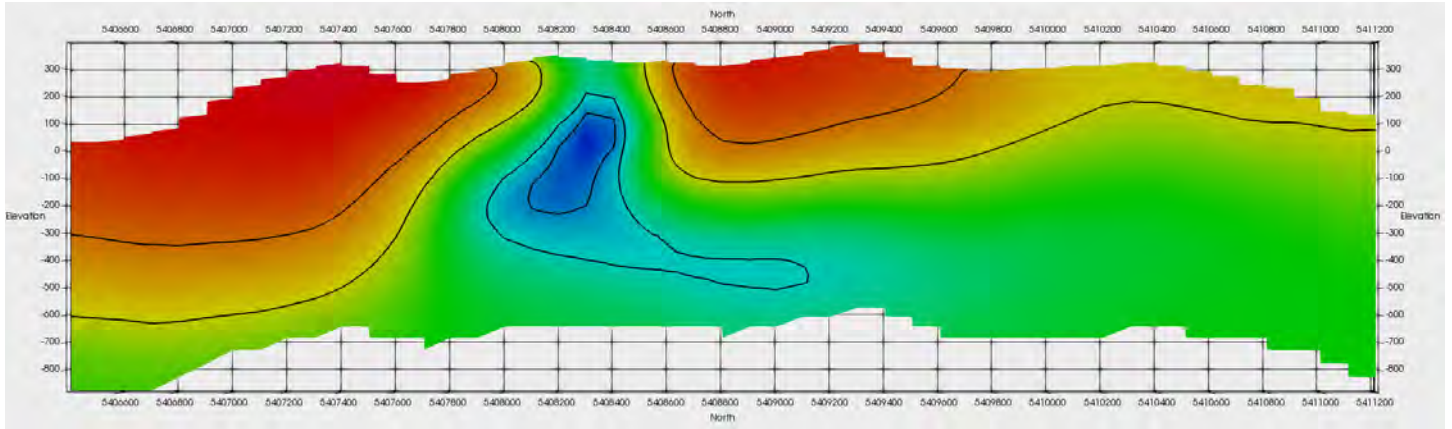
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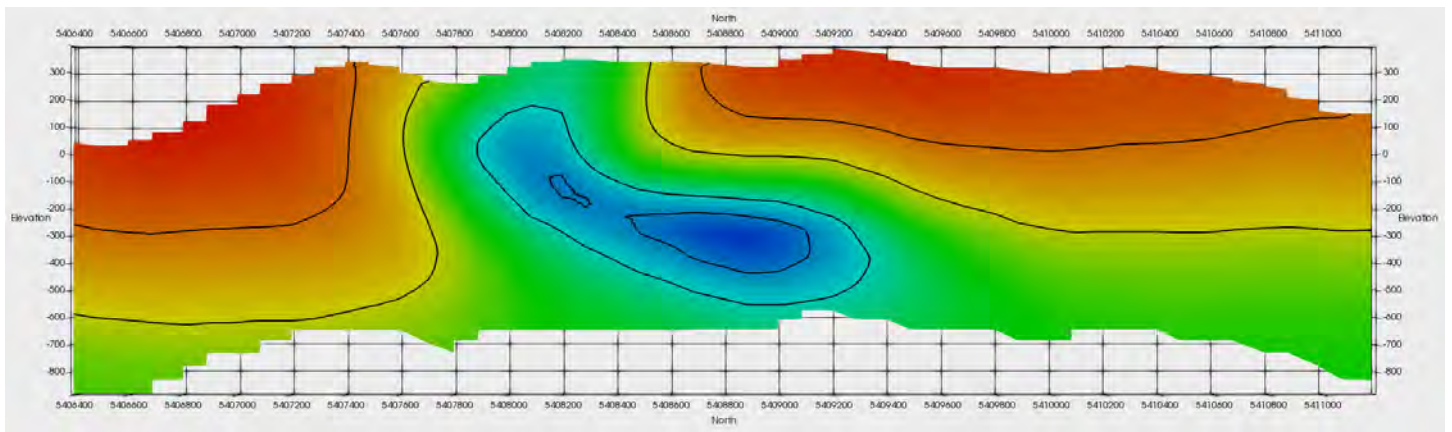
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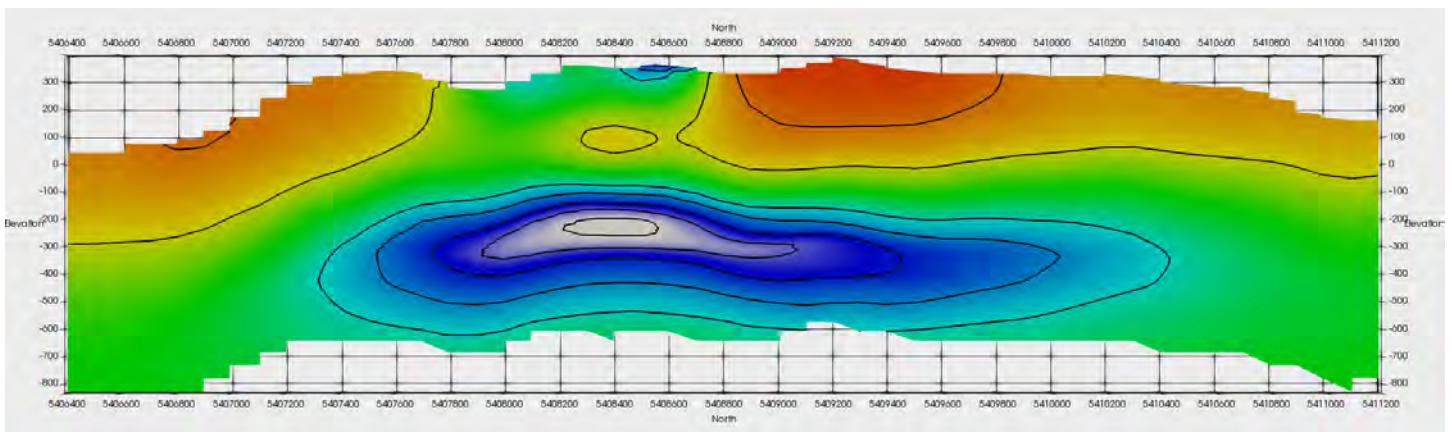
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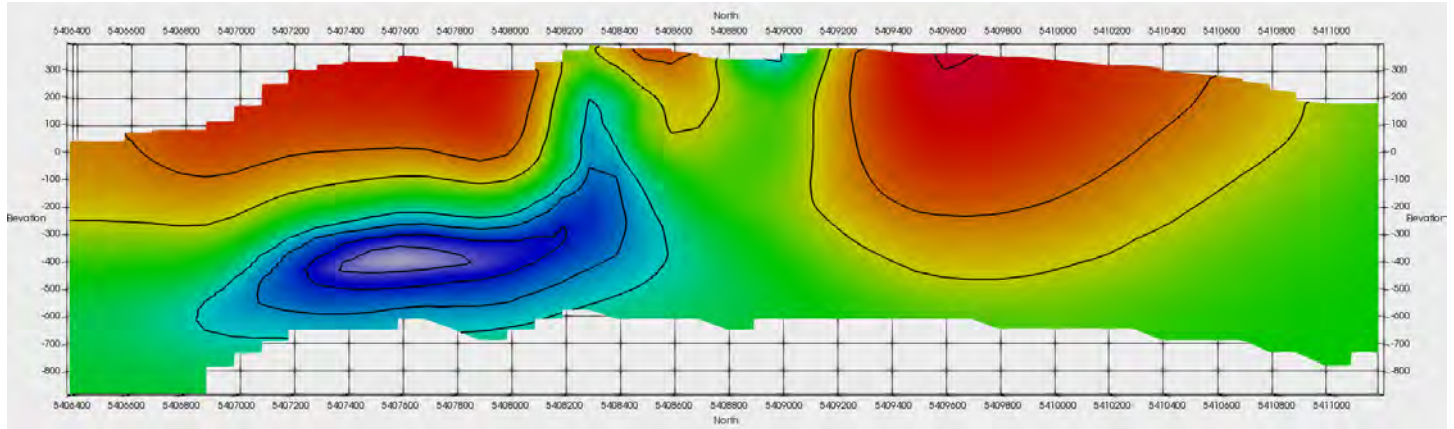
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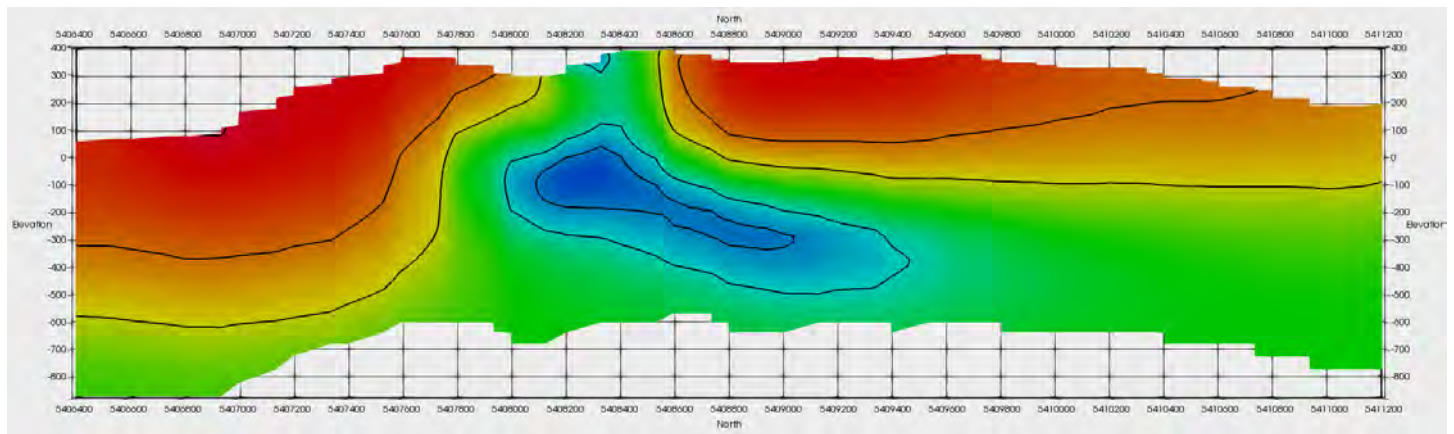
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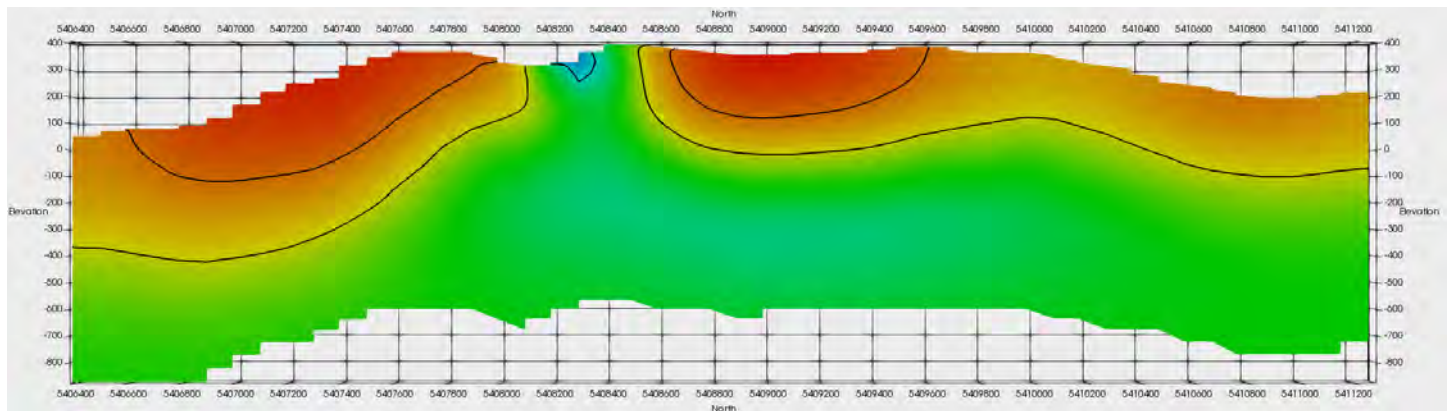
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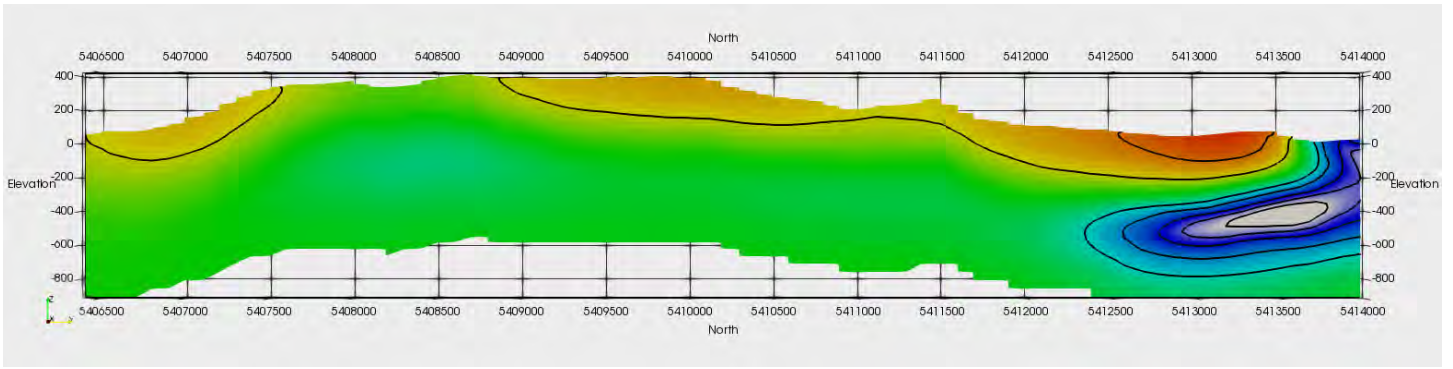
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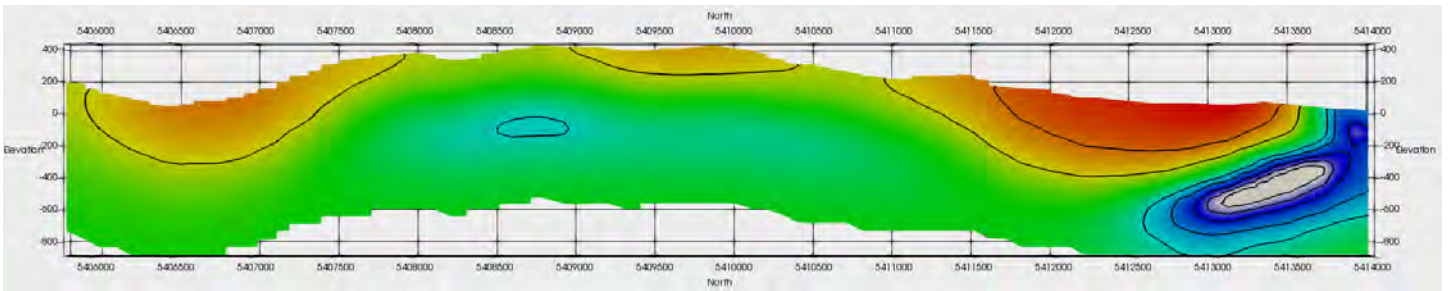
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**380200E**



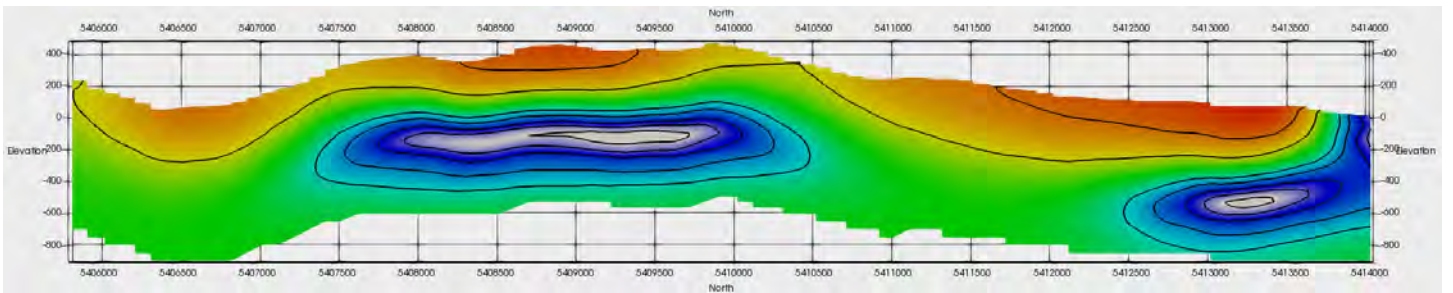
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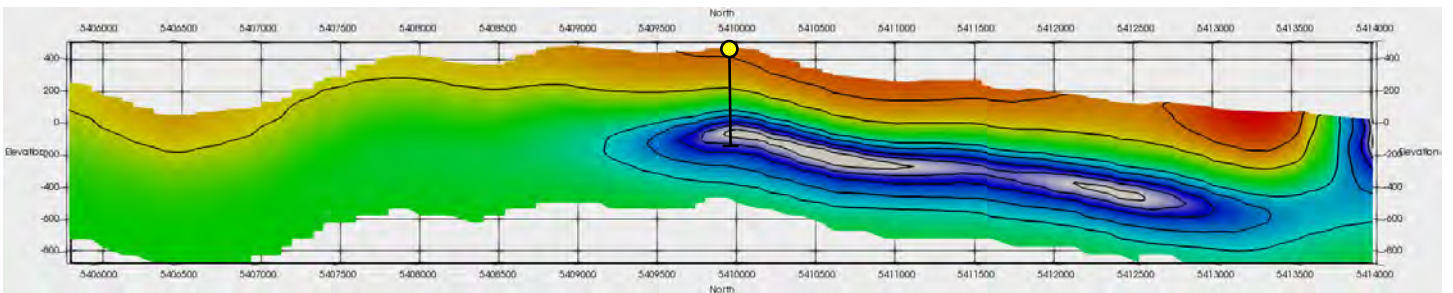
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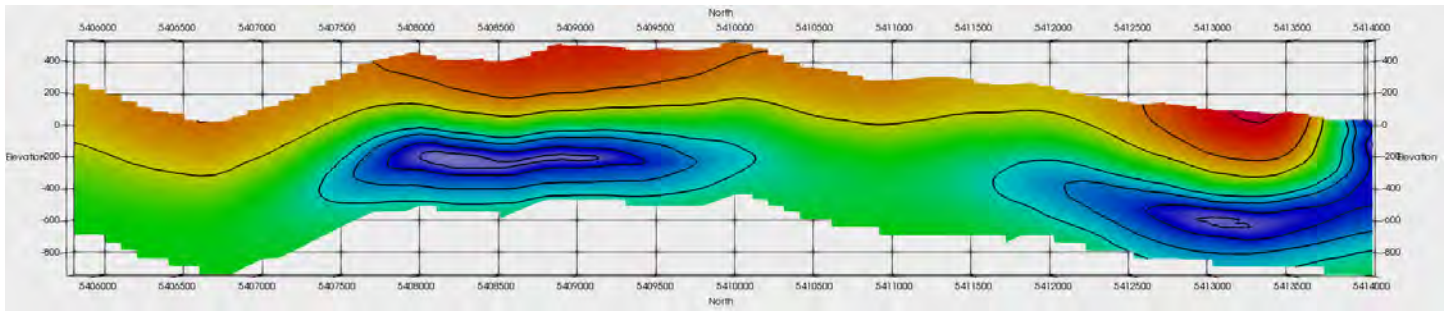
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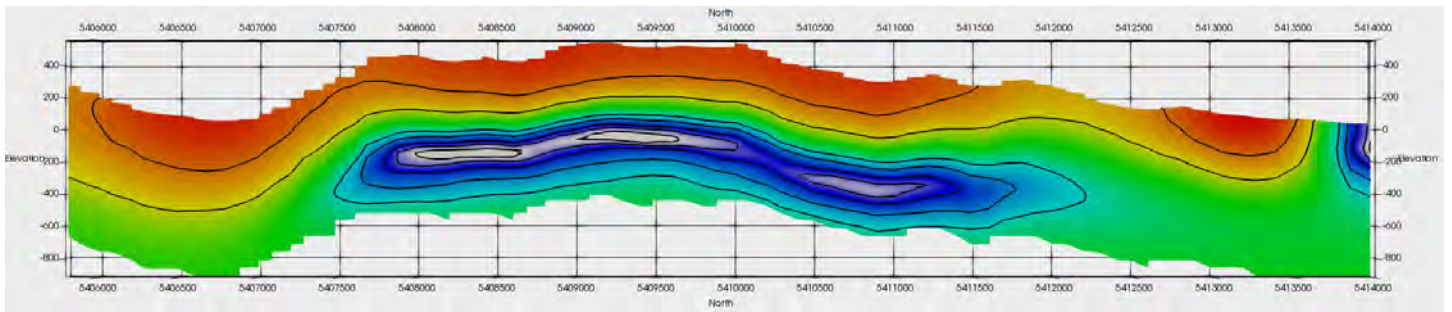
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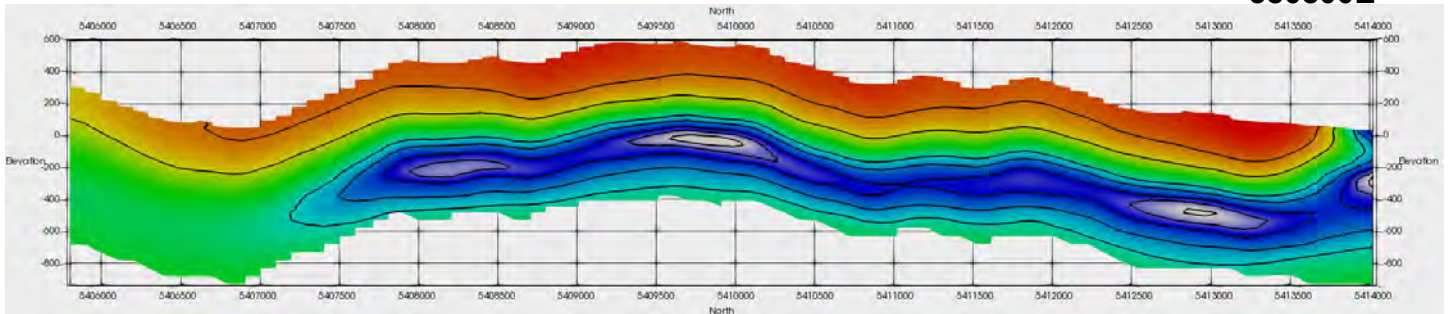
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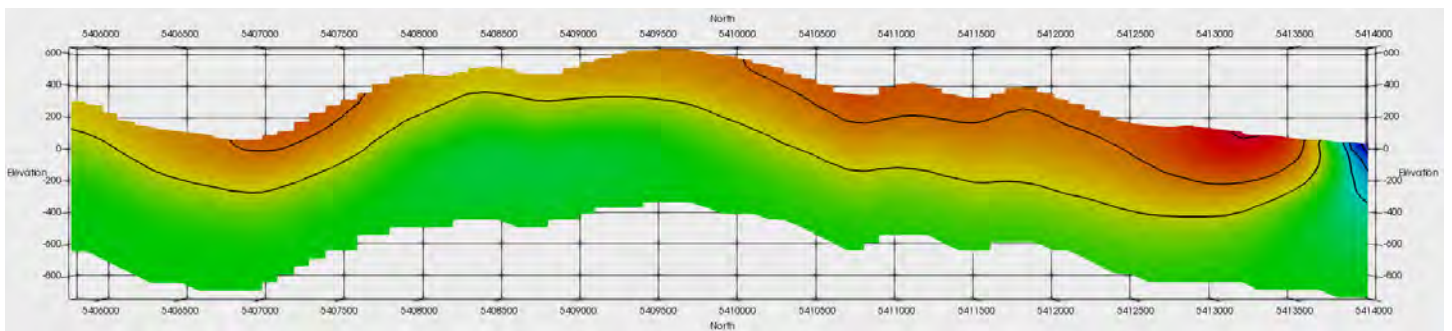
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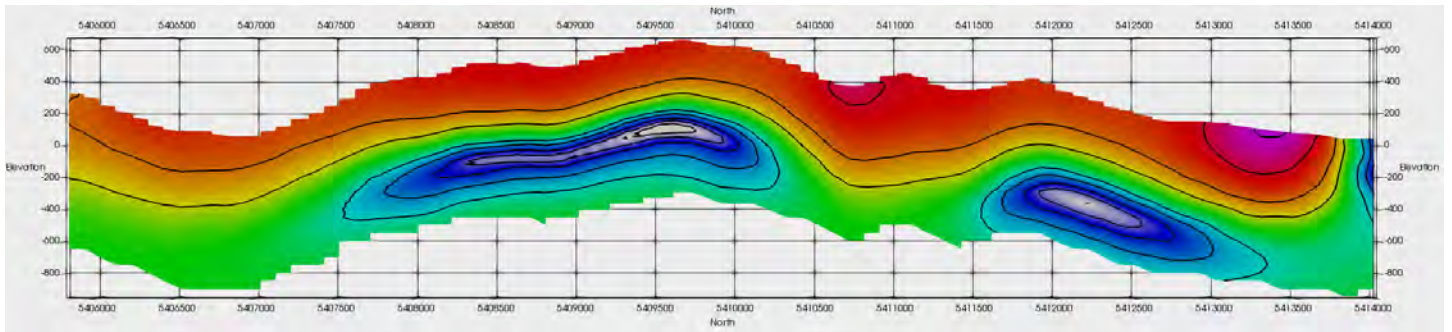
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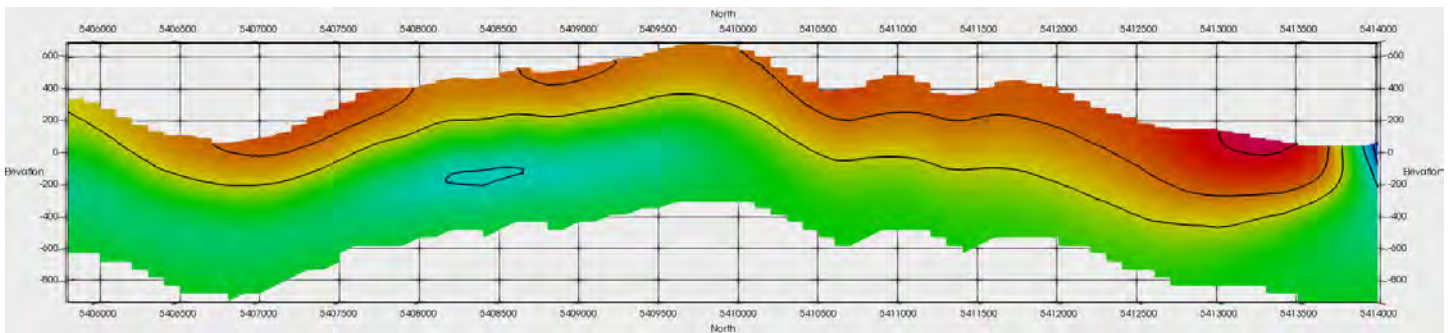
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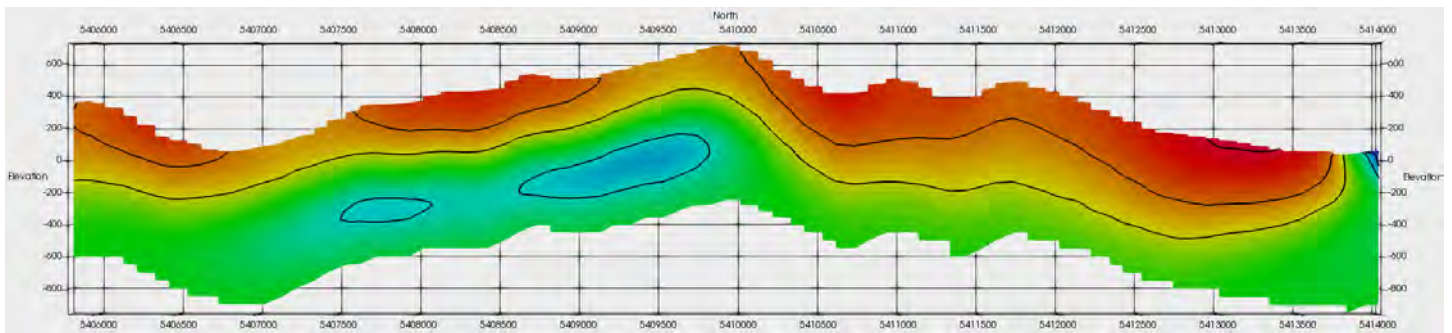
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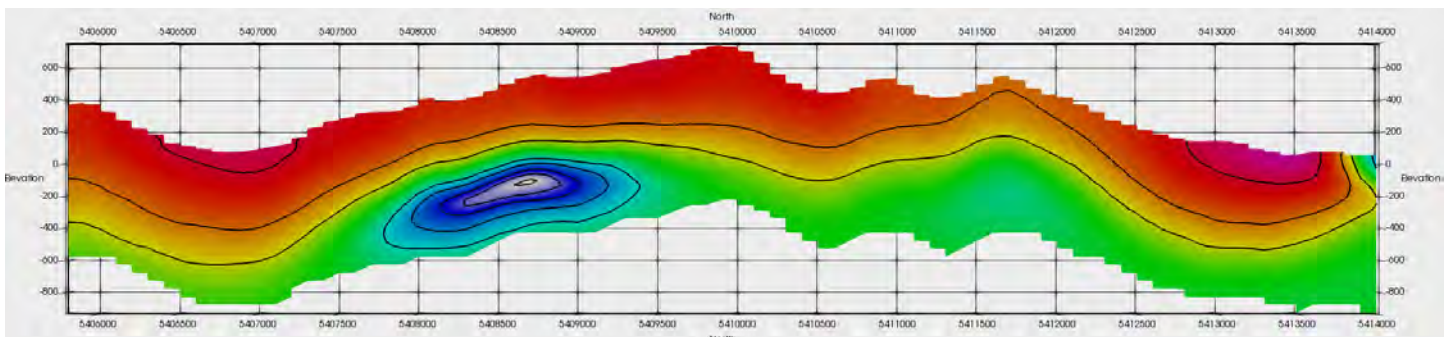
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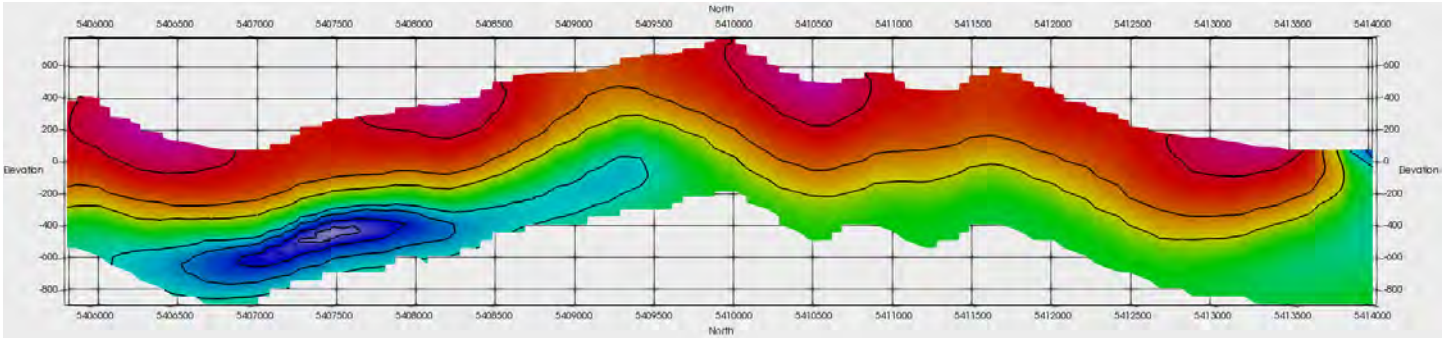
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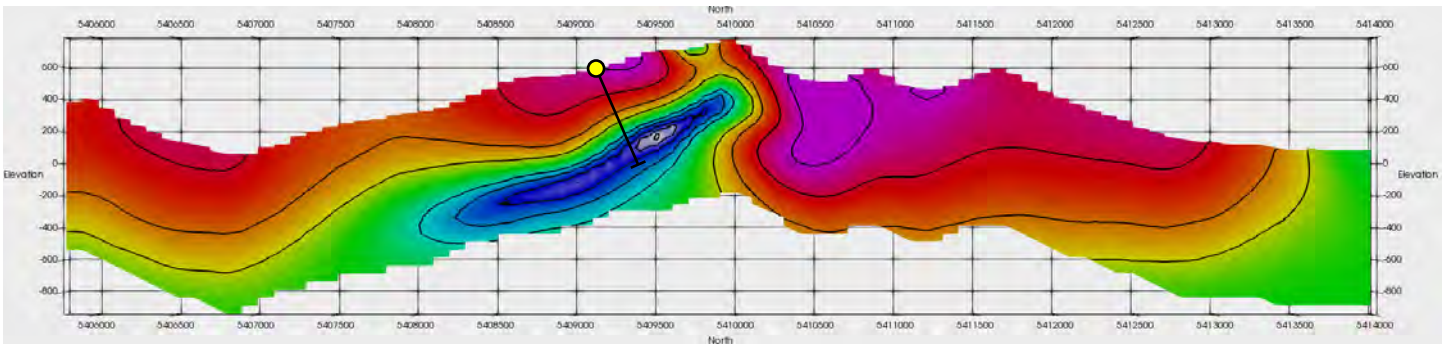
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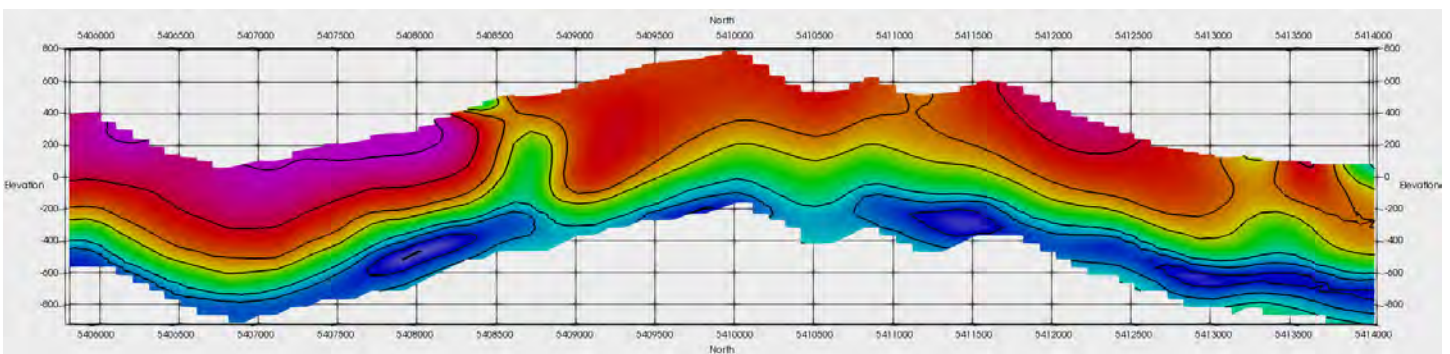
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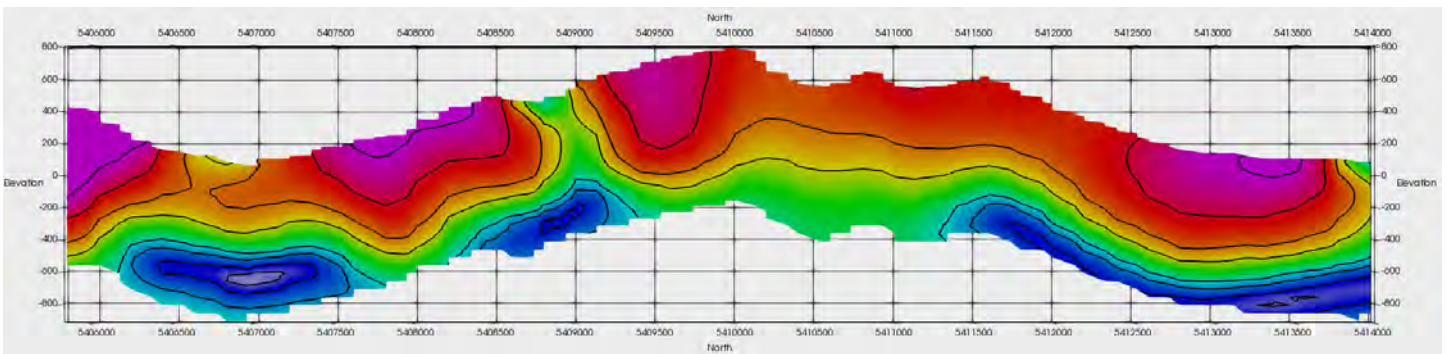
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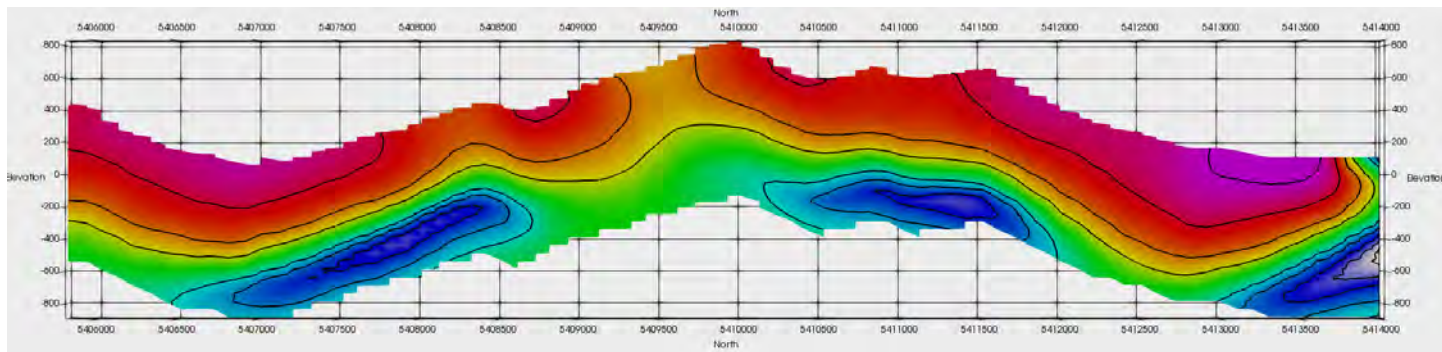
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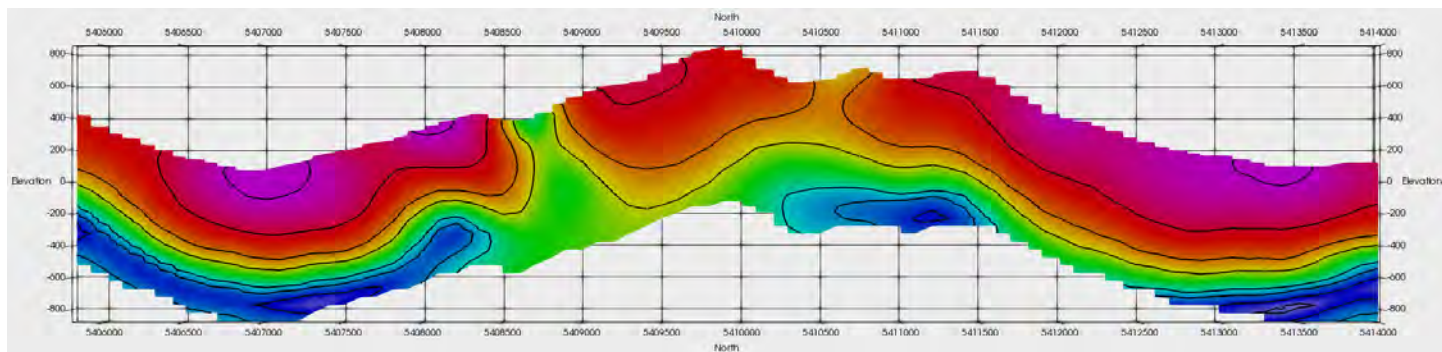
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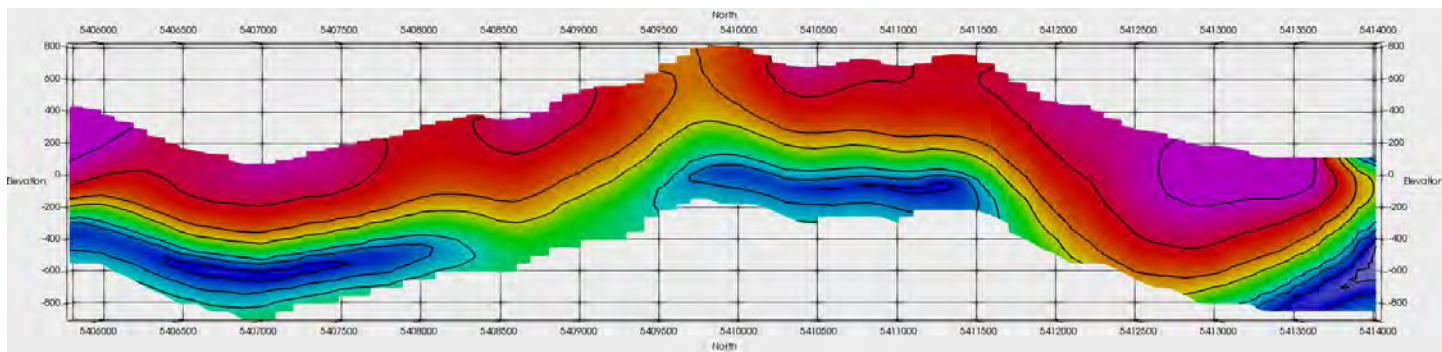
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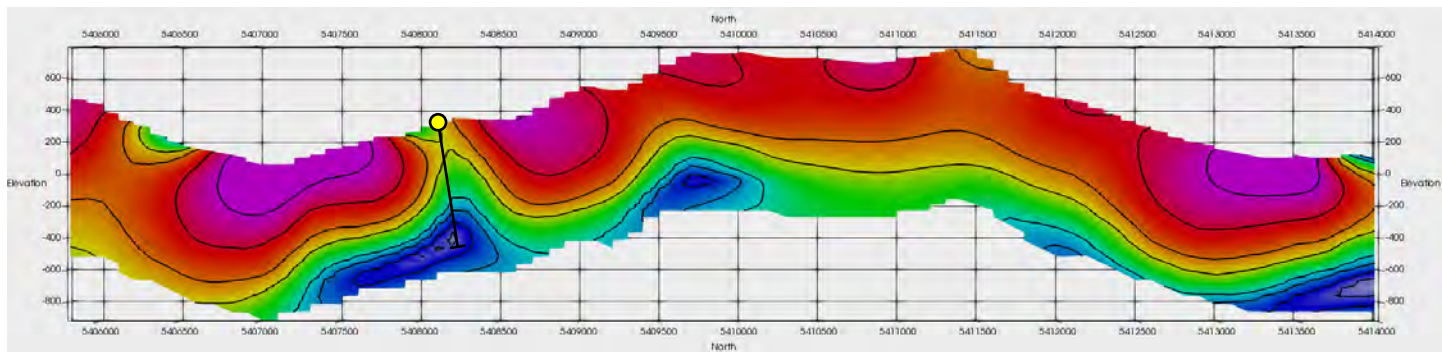
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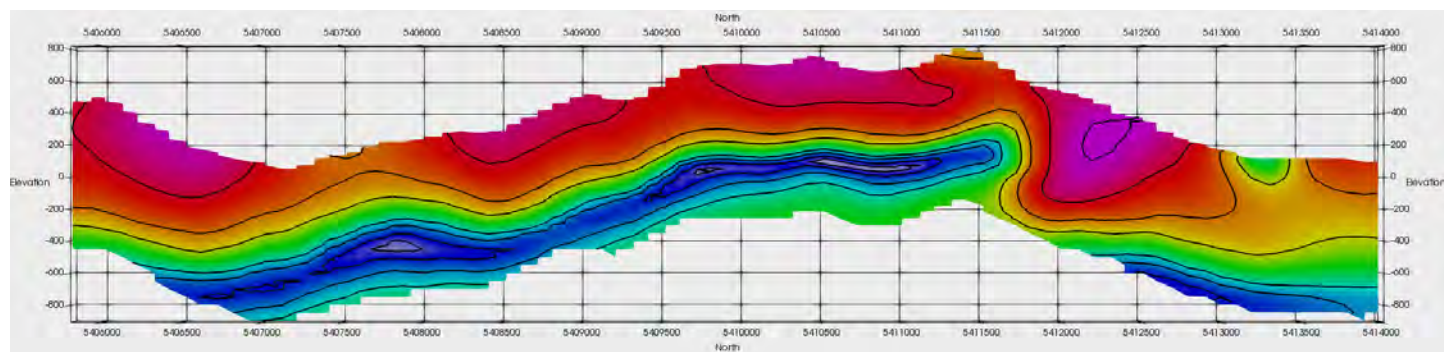
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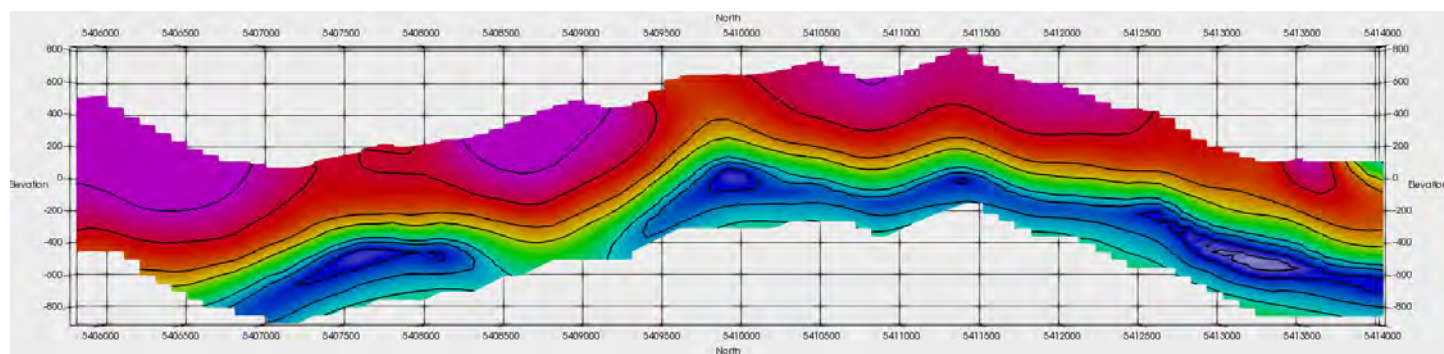
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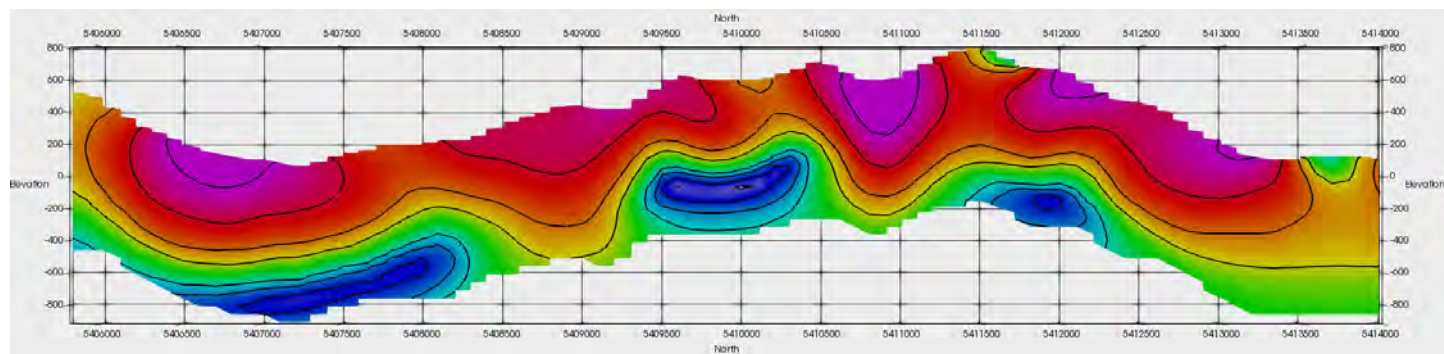
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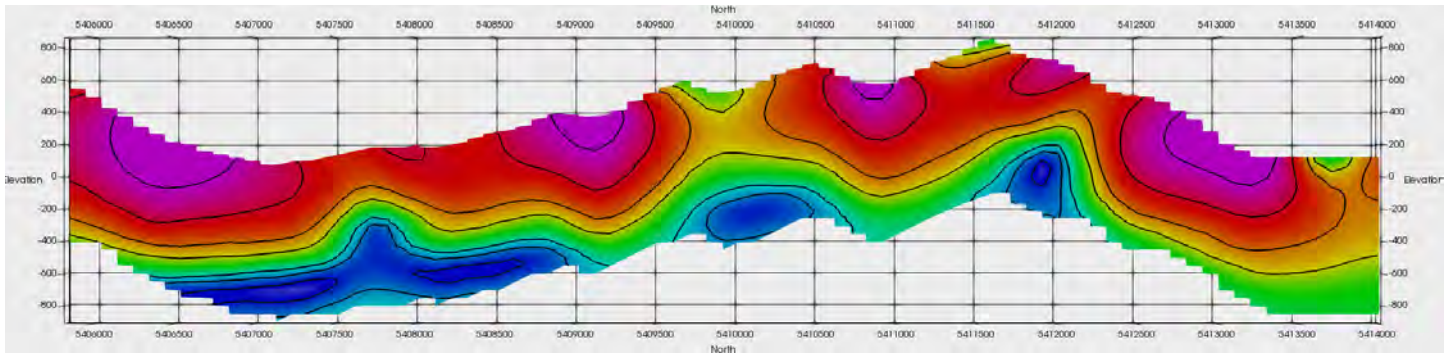
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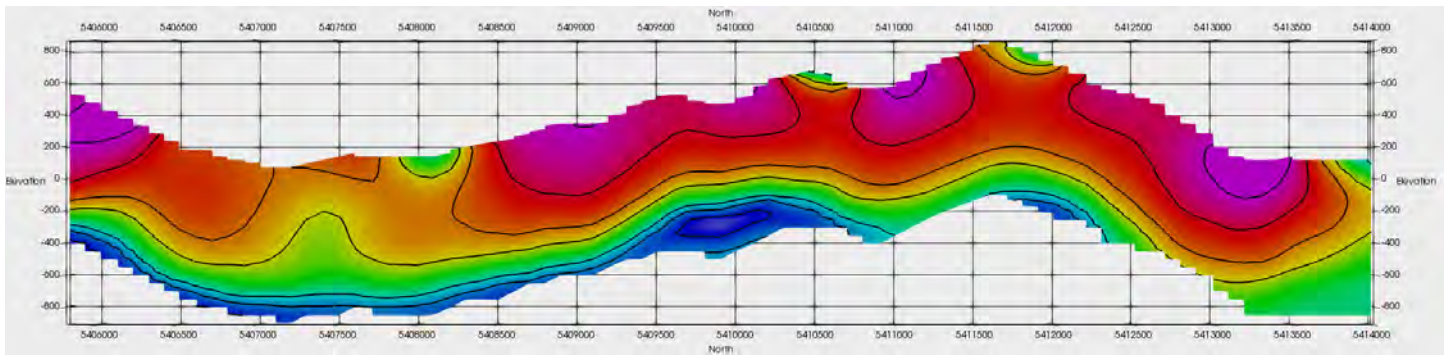
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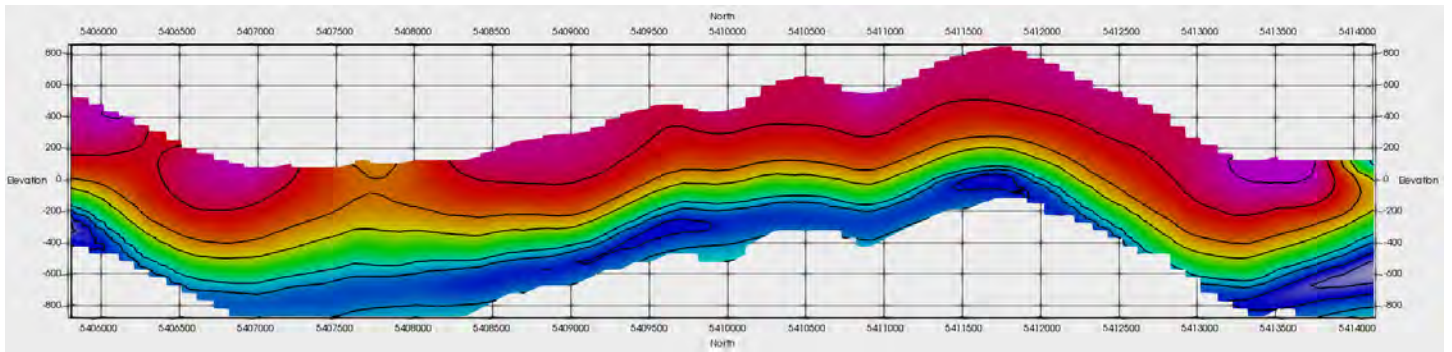
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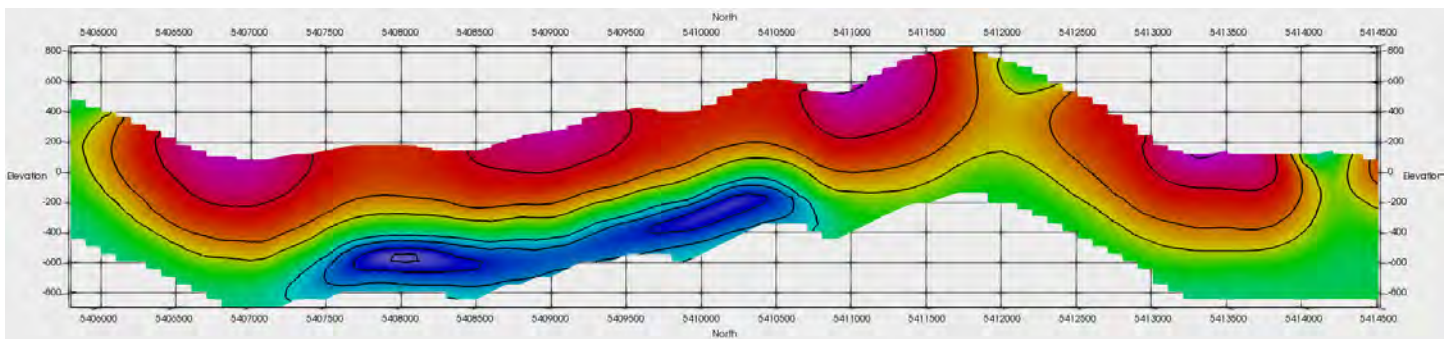
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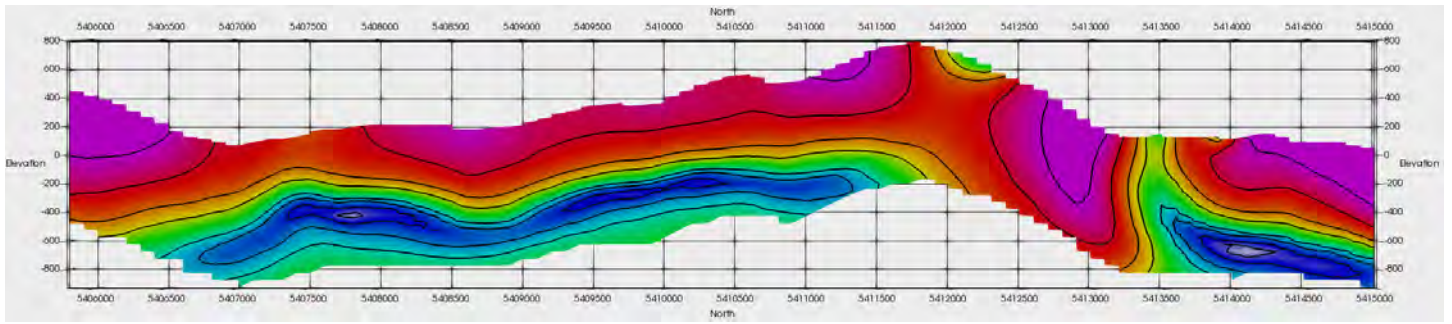
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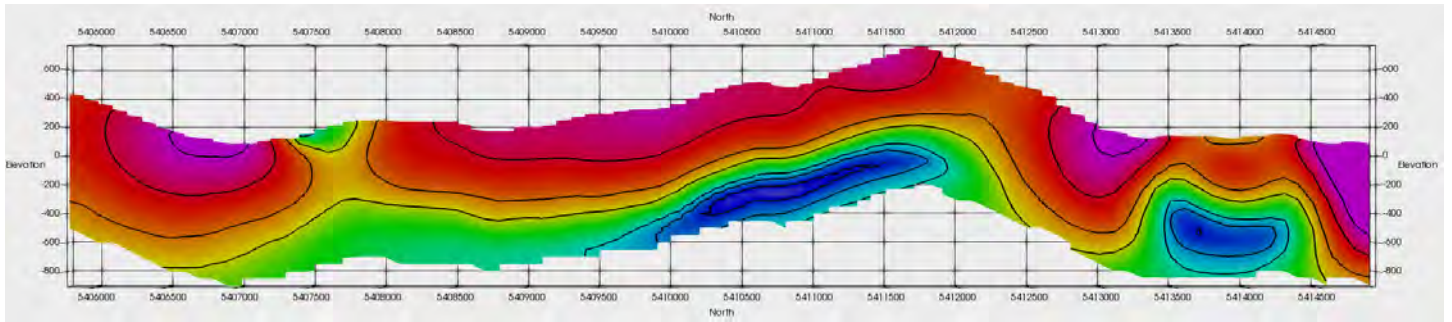
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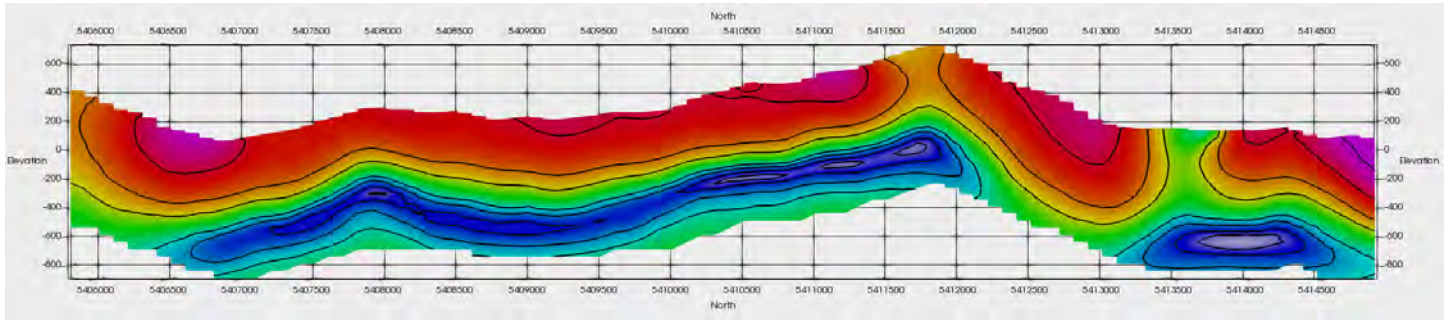
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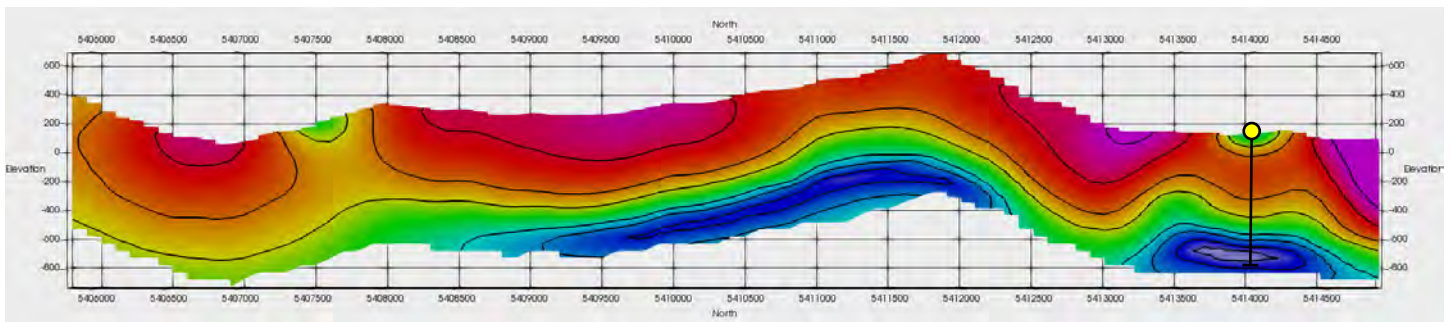
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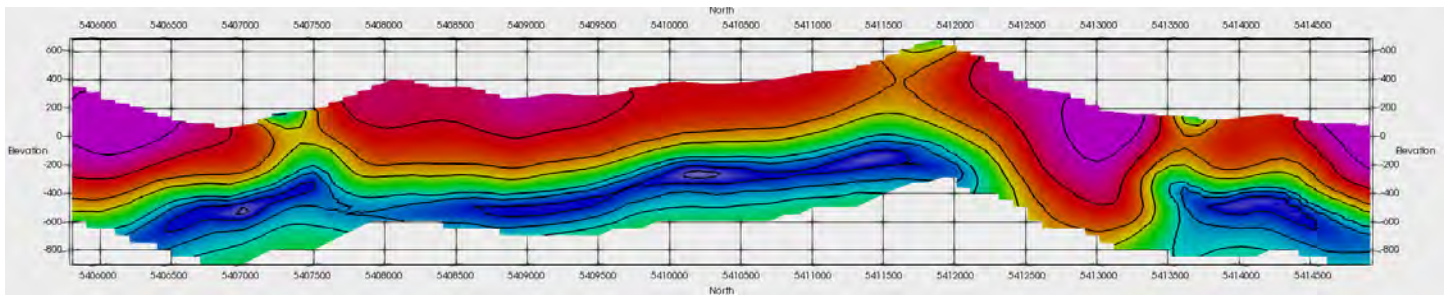
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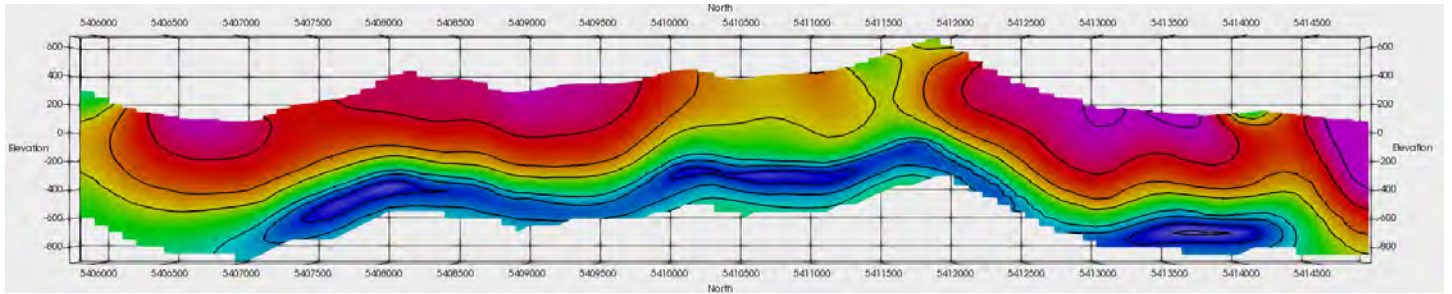
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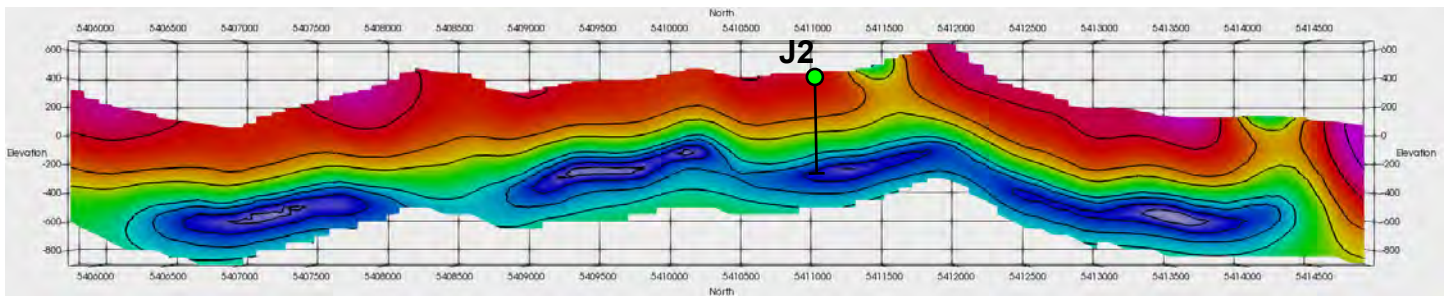
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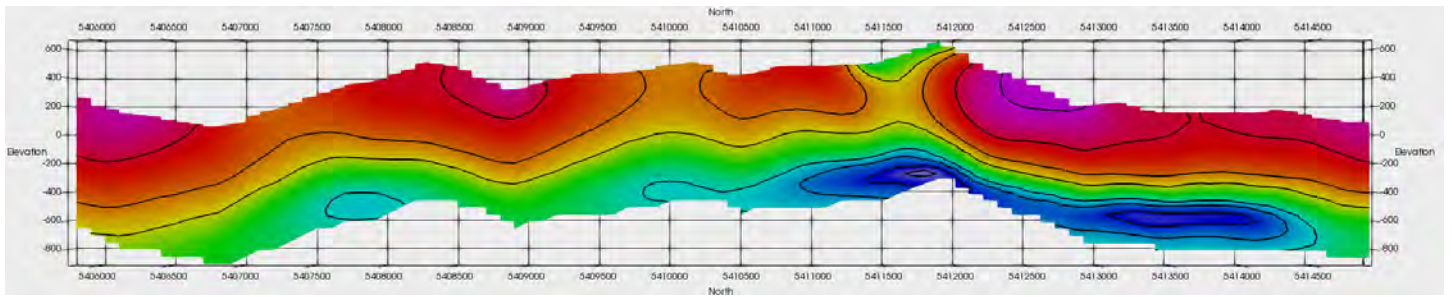
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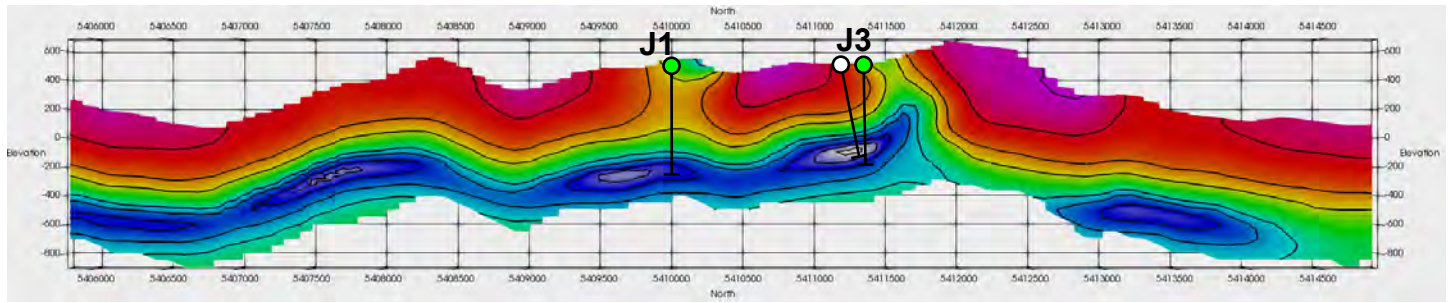
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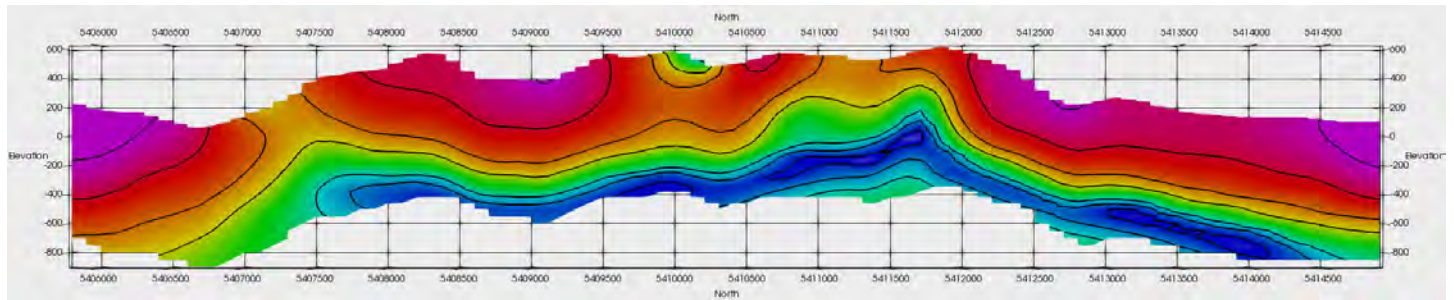
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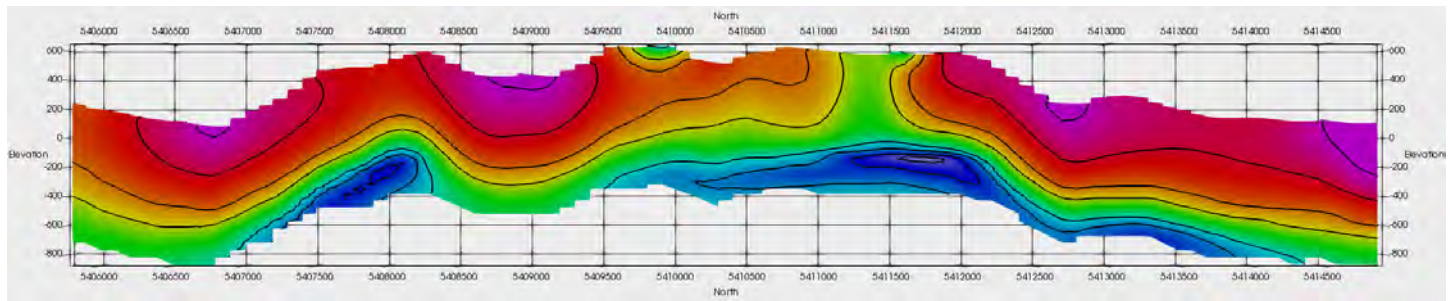
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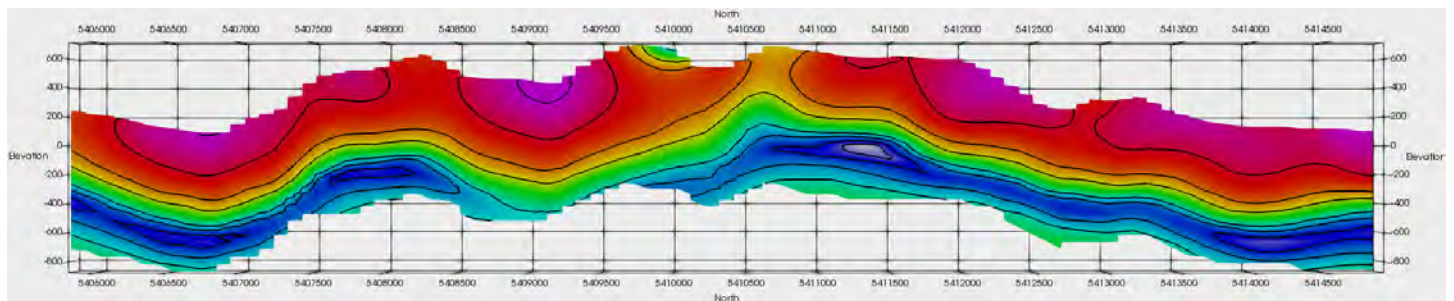
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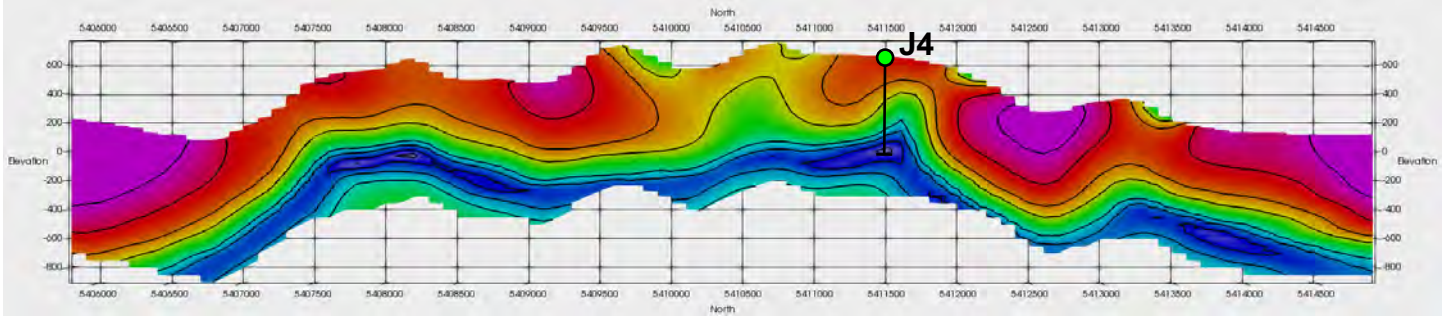
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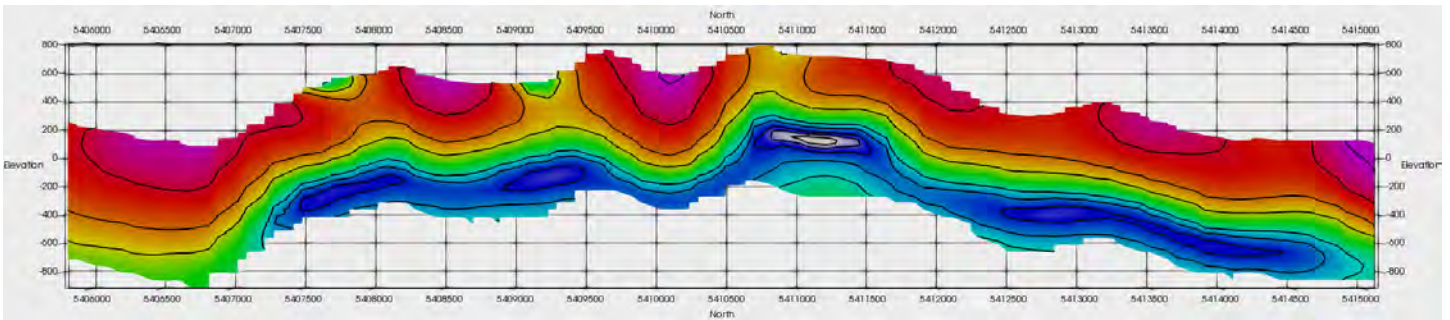
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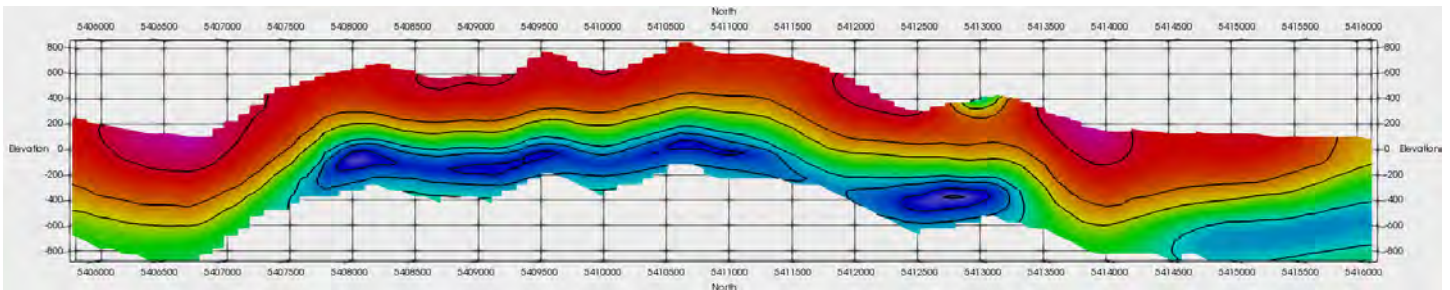
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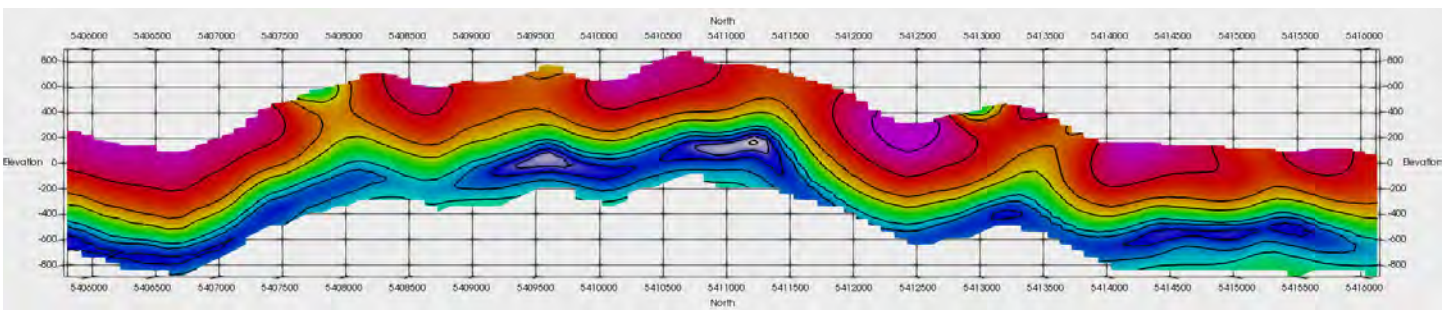
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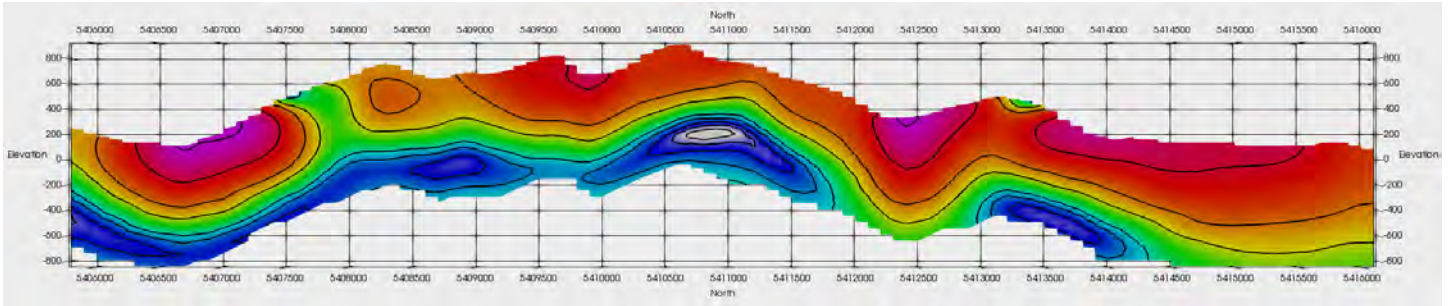
Line 10620E

384400E



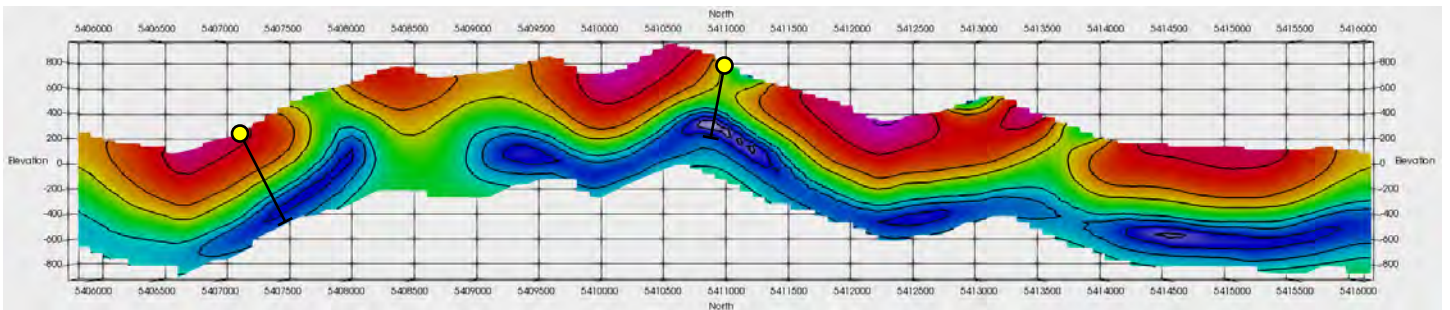
Line 10630E

384500E



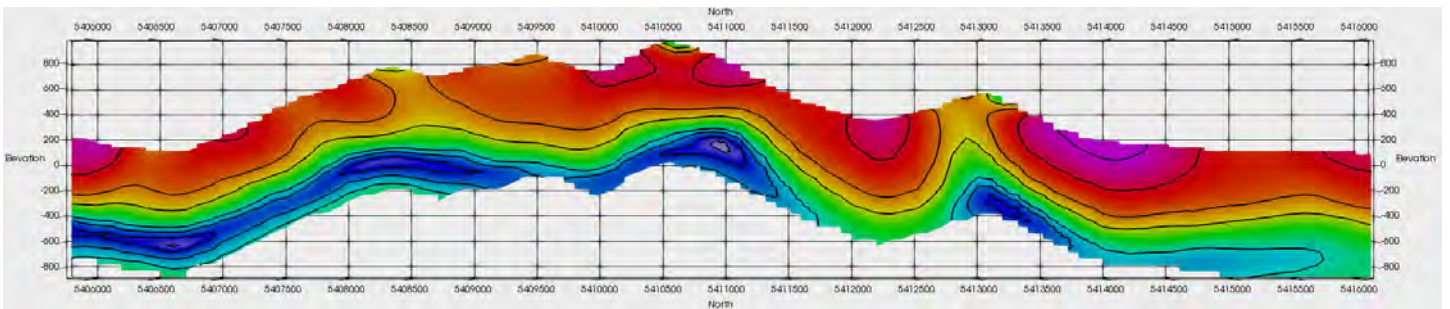
Line 10640E

384600E



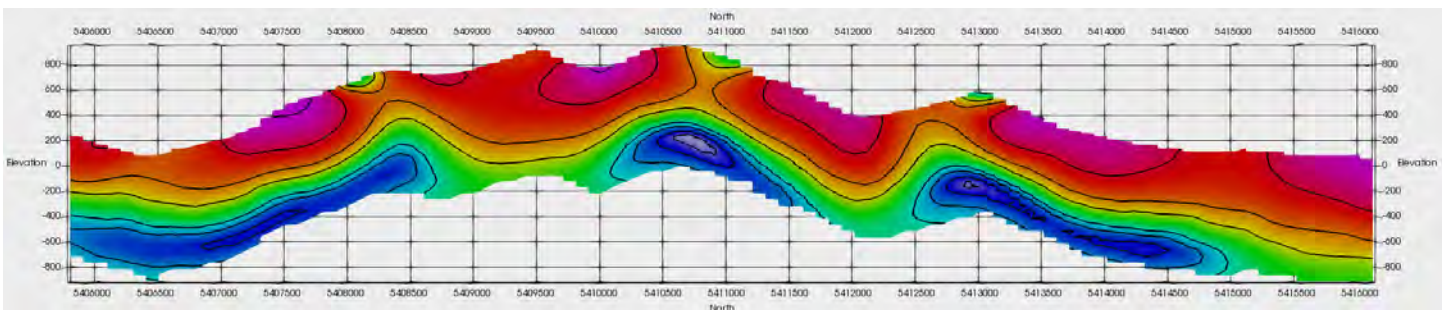
Line 10650E

384700E



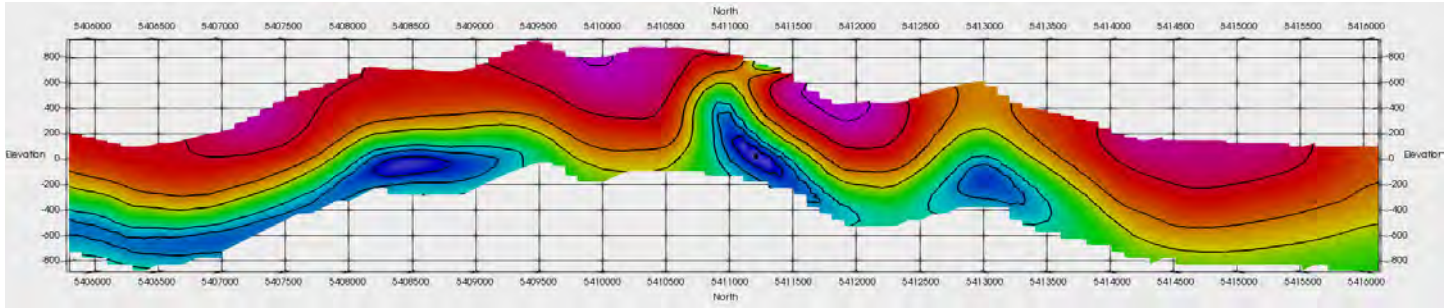
Line 10660E

384800E



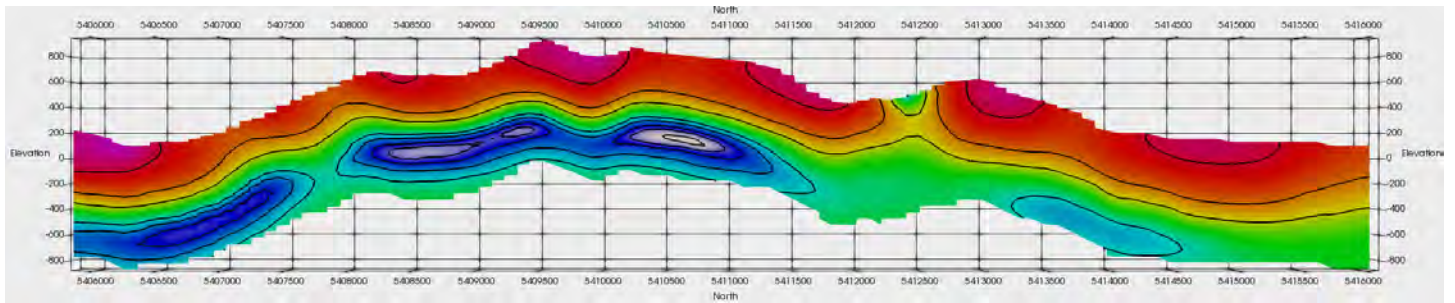
Line 10670E

384900E



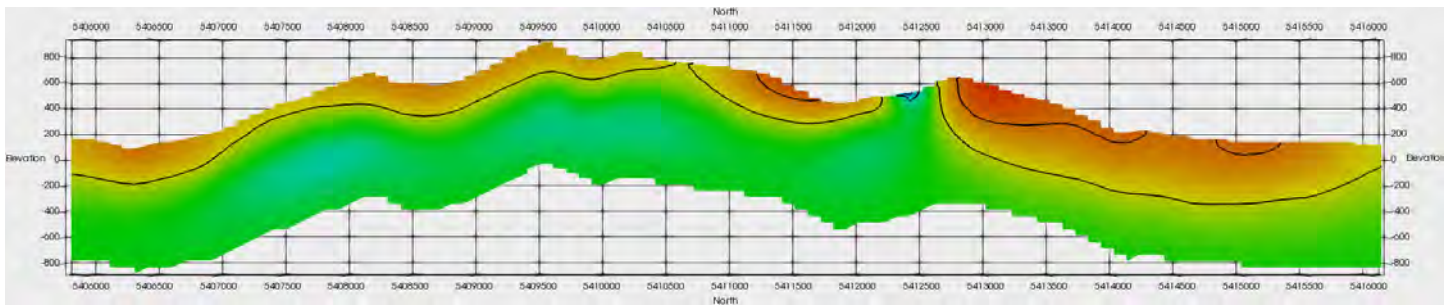
Line 10680E

385000E



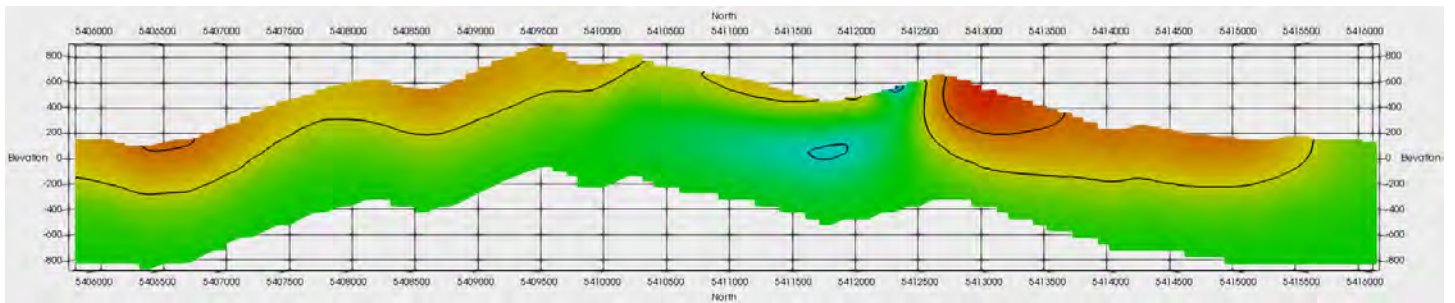
Line 10690E

385100E



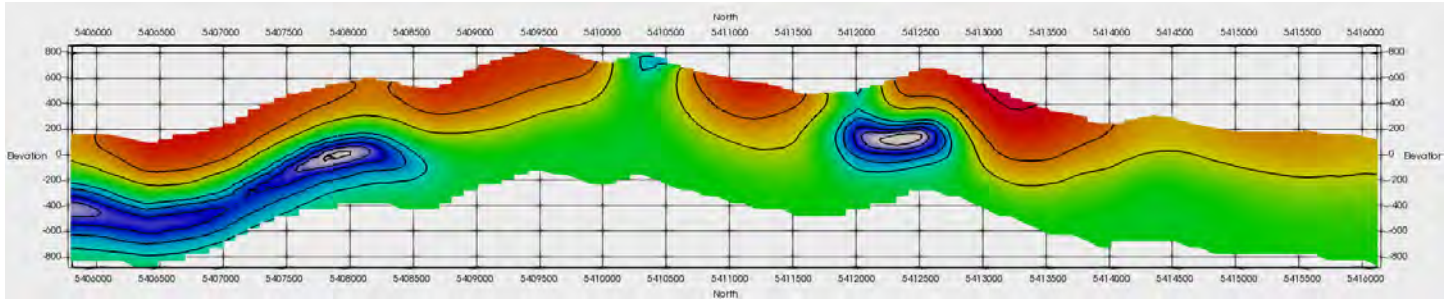
Line 10700E

385200E



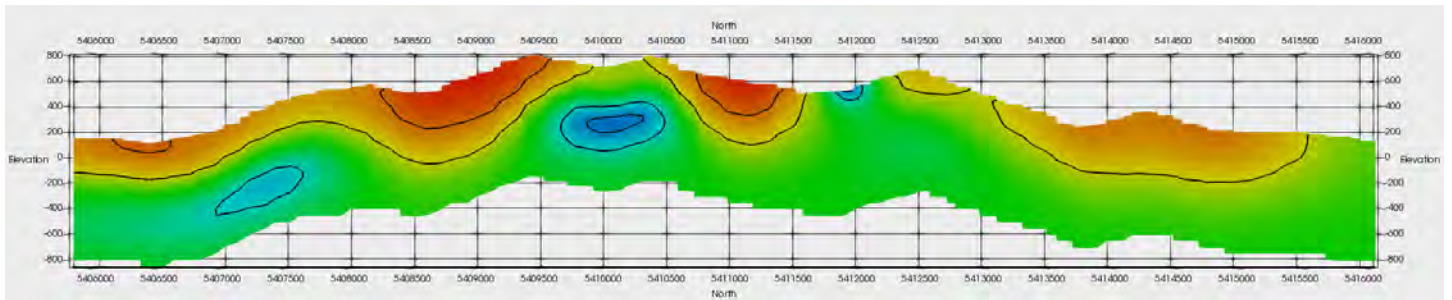
Line 10710E

385300E



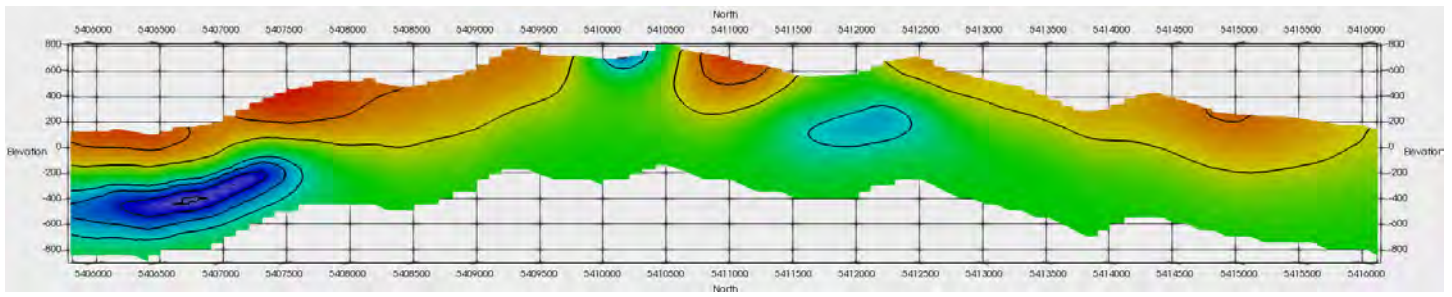
**Line 10720E**

**385400E**



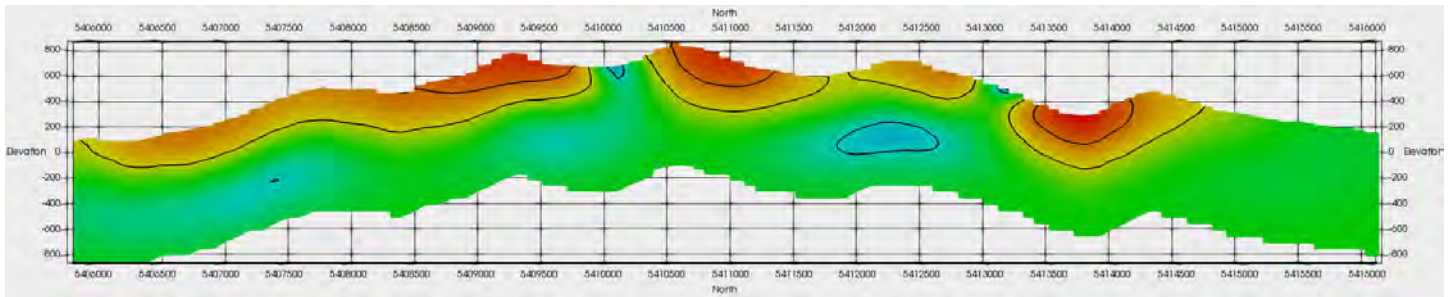
**Line 10730E**

**385500E**



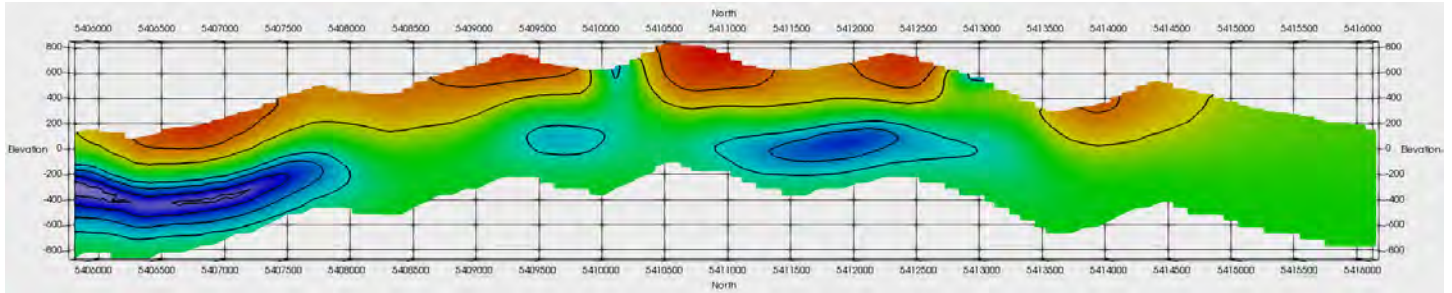
**Line 10740E**

**385600E**



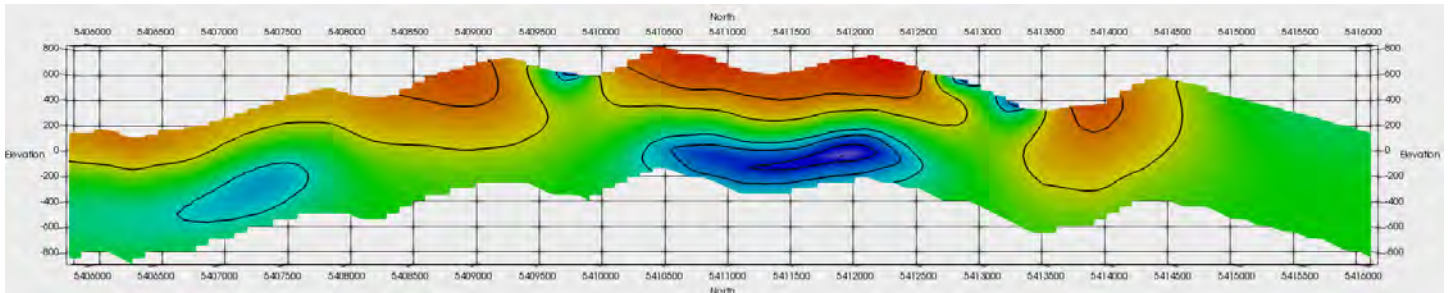
**Line 10750E**

**385700E**



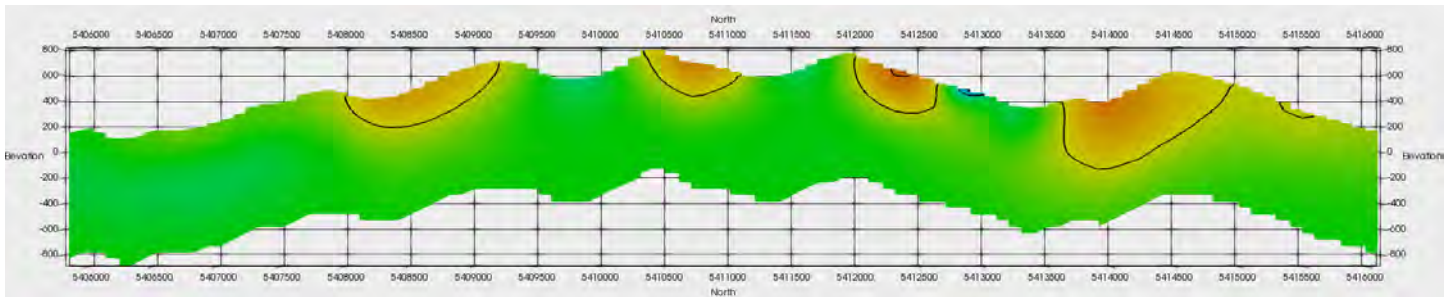
Line 10760E

385800E



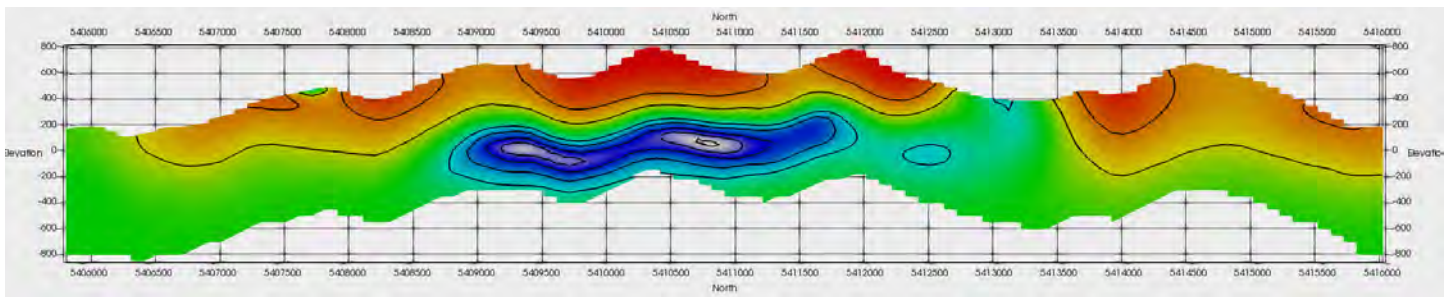
Line 10770E

385900E



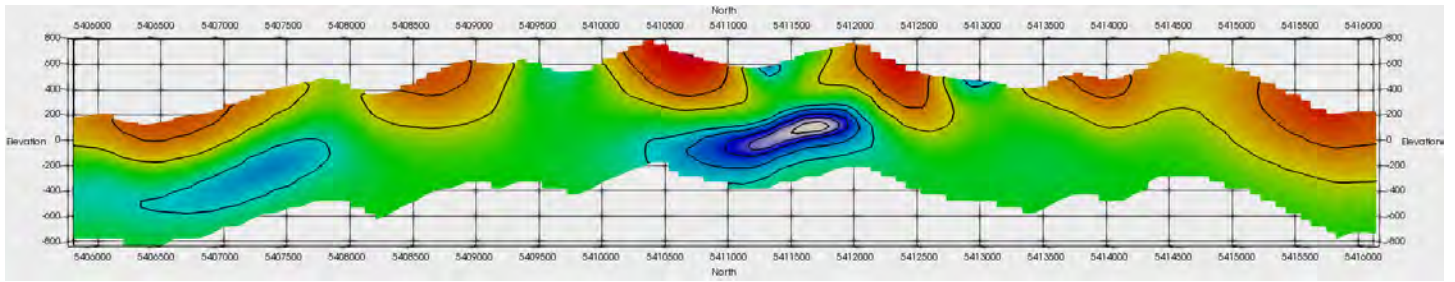
Line 10780E

386000E



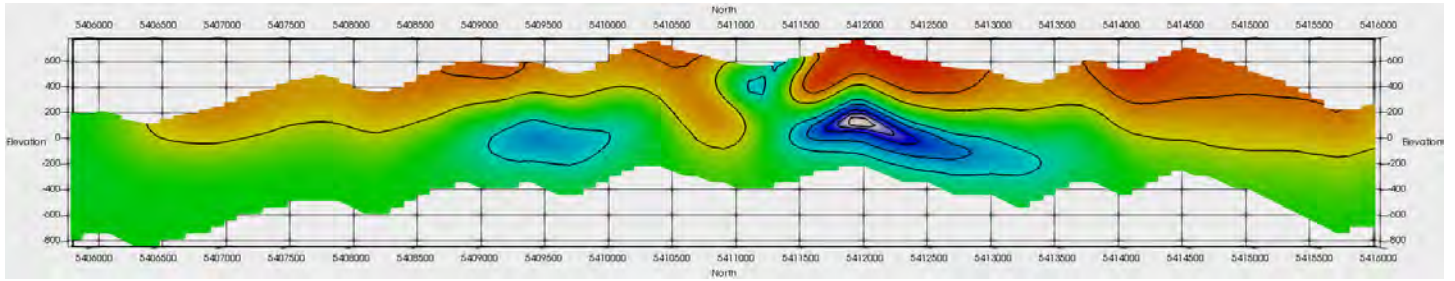
Line 10790E

386100E



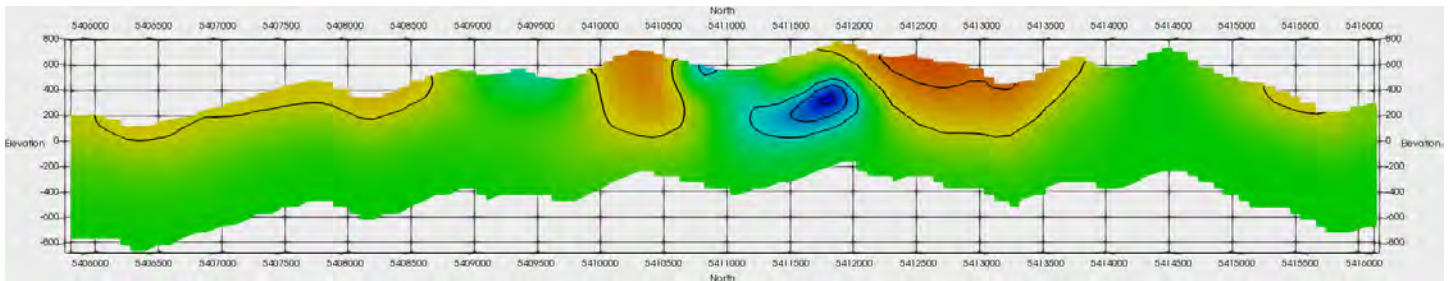
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**386200E**



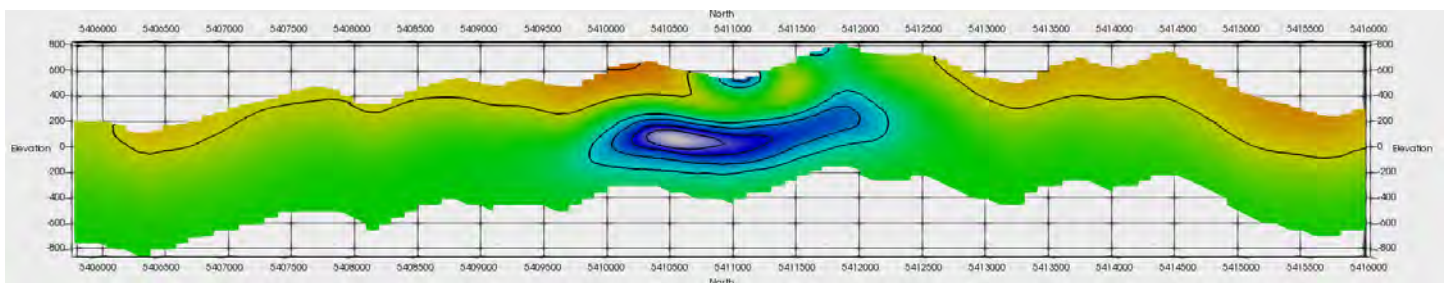
**Line 10810E**

**386300E**



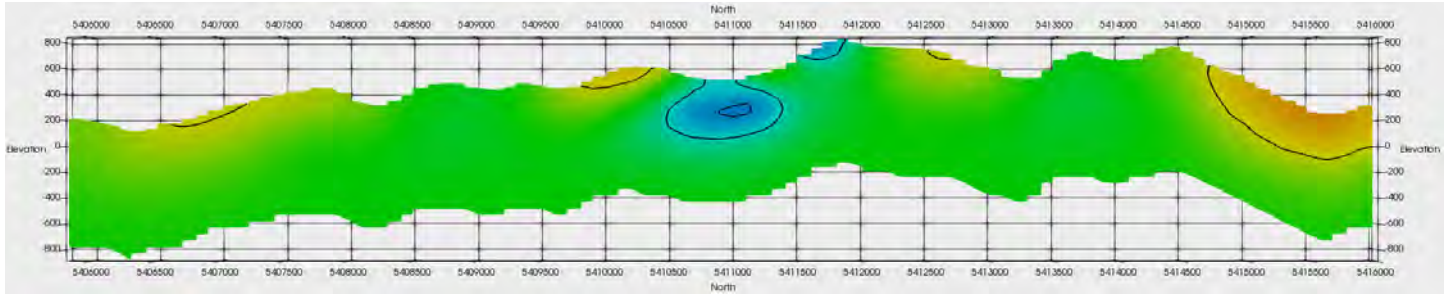
**Line 10820E**

**386400E**



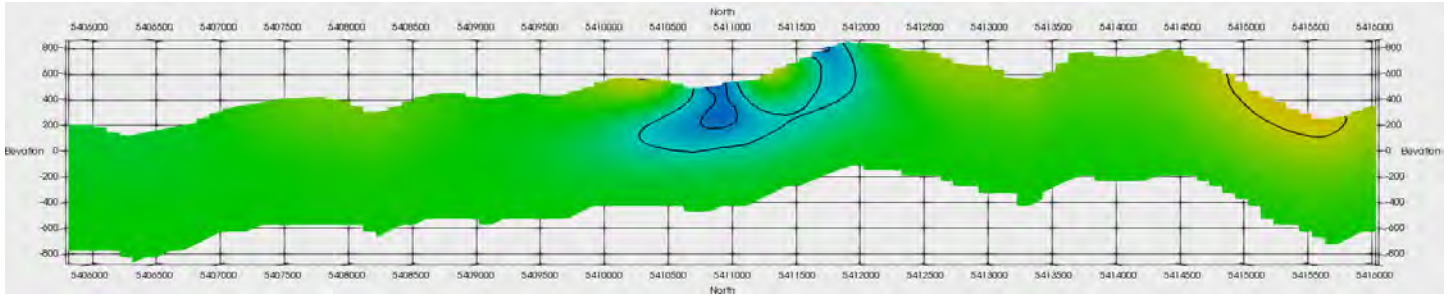
**Line 10830E**

**386500E**



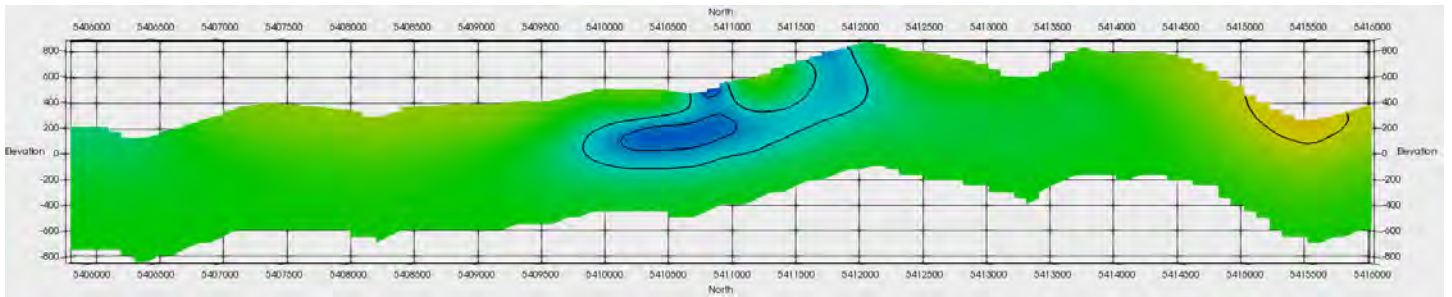
Line 10840E

386600E



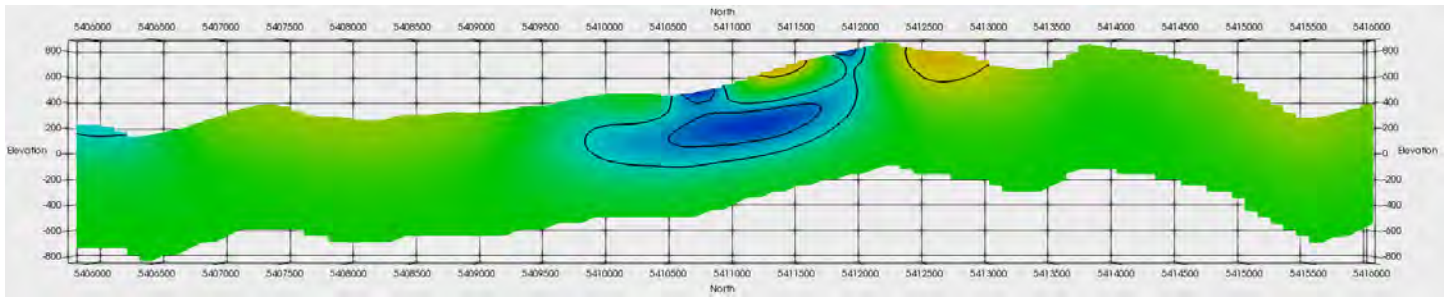
Line 10850E

386700E



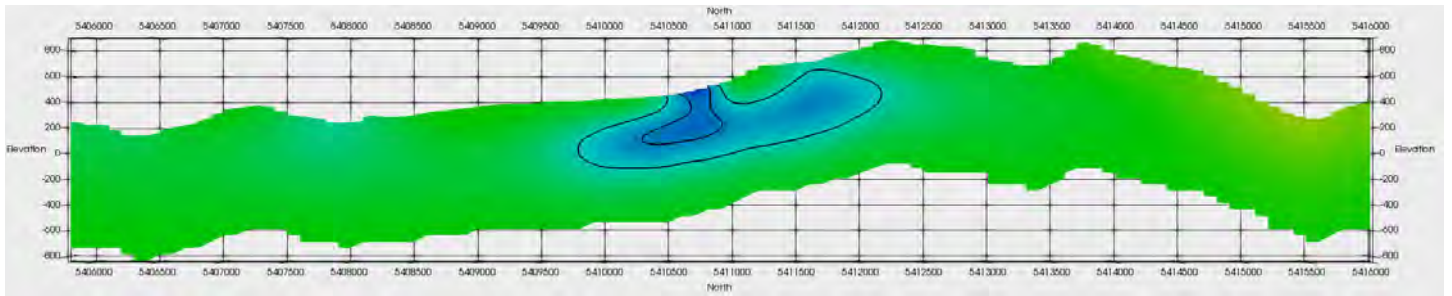
Line 10860E

386800E



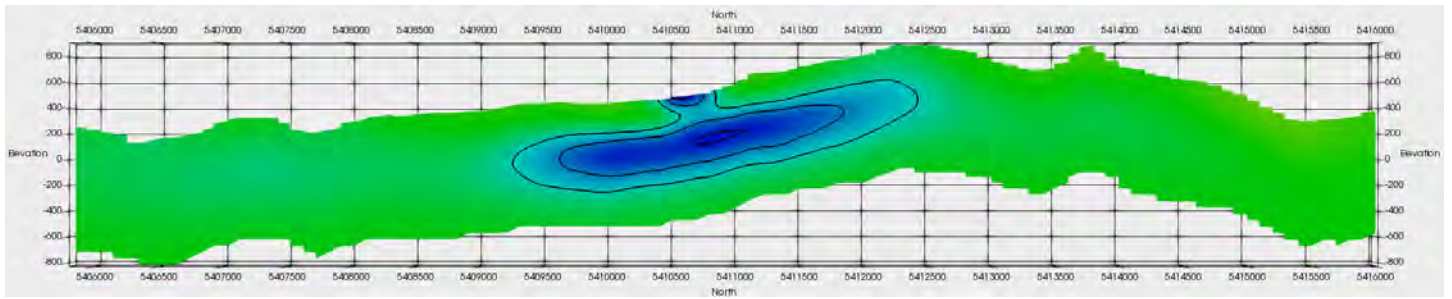
Line 10870E

386900E



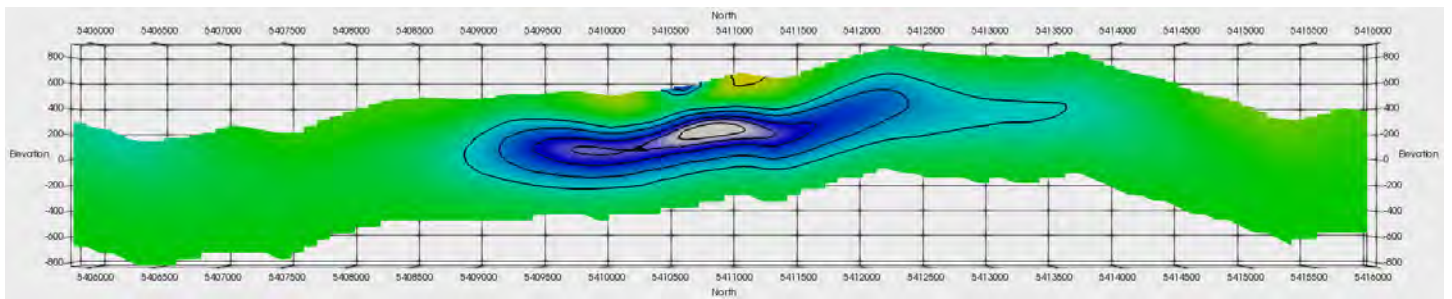
**Line 10880E**

**387000E**



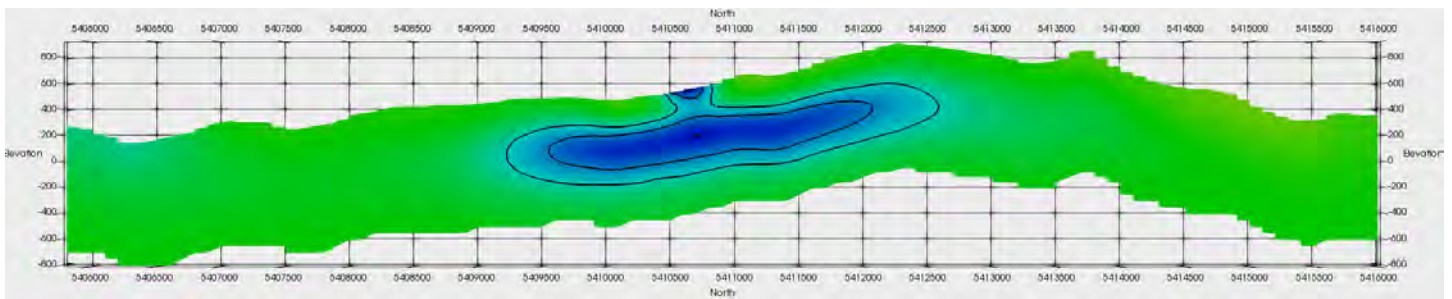
**Line 10890E**

**387100E**



**Line 10900E**

**387200E**



**2018 Jasper Assessment Report**  
**Appendix 2 – Assessment Cost Data**

## Jasper Property 2018 Assessment Cost Report

Exploration Work type	Comment	Days			Totals
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>				
General Research	Jacques Houle, P.Eng. -Apr 21 to May 9, 2018	0.5	\$924.00	\$462.00	
Geophysical modeling	Trent Pezzot, P.Geo. - May 7 to May 31, 2018	5.0	\$1,575.00	\$7,875.00	
Geophysical modeling	Trent Pezzot, P.Geo. - June 1 to July 4, 2018	1.0	\$1,575.00	\$1,575.00	
Report preparation	Jacques Houle, P.Eng. -July 5 - July 22, 2018	2.0	\$924.00	\$1,848.00	
				<b>\$11,760.00</b>	<b>\$11,760.00</b>
<b>TOTAL Expenditures</b>					<b>\$11,760.00</b>
Assessment Item	Assessment Event and Filing Date		Applied	PAC debit	Expenditures
Research, Geophysical modeling	5698919 - June 1, 2018		\$11,896.22	\$3,559.22	\$8,337.00
Geophys. modeling, Report prep.	5705032 - July 22, 2018		\$4,873.15	\$1,450.15	\$3,423.00

